



## Full wwPDB EM Validation Report ⓘ

Jun 3, 2024 – 03:58 PM EDT

PDB ID : 7UNG  
EMDB ID : EMD-26624  
Title : 48-nm repeat of the human respiratory doublet microtubule  
Authors : Gui, M.; Croft, J.T.; Zabeo, D.; Acharya, V.; Kollman, J.M.; Burgoyne, T.;  
Hoog, J.L.; Brown, A.  
Deposited on : 2022-04-11  
Resolution : 3.60 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

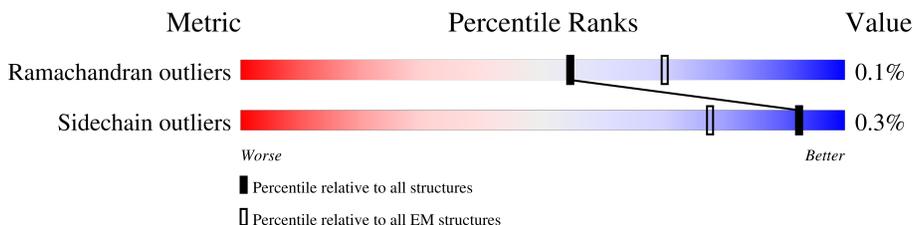
EMDB validation analysis : 0.0.1.dev92  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36.2

# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:  
*ELECTRON MICROSCOPY*

The reported resolution of this entry is 3.60 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



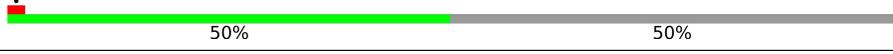
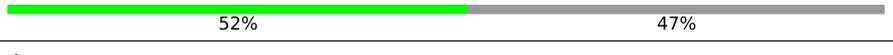
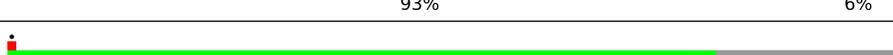
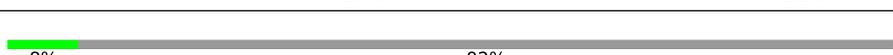
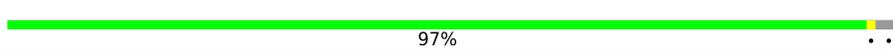
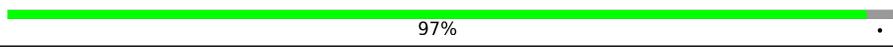
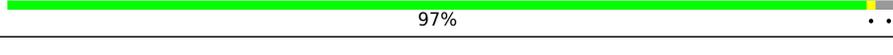
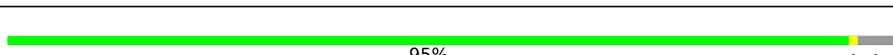
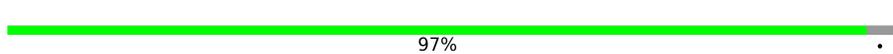
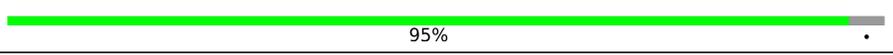
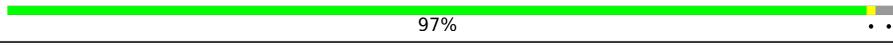
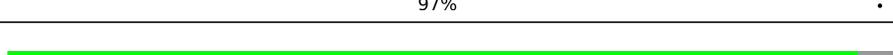
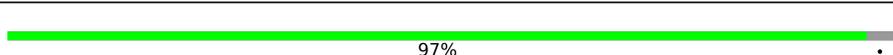
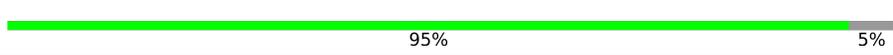
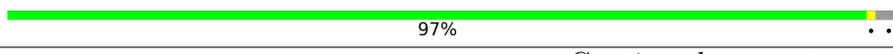
Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	0	229	23% (green), 77% (grey)
1	7	229	5% (red), 64% (green), 36% (grey)
2	1	833	33% (green), 67% (grey)
2	2	833	53% (green), 46% (grey)
3	3	514	58% (green), 42% (grey)
3	4	514	42% (green), 58% (grey)
4	5	376	99% (green), 1% (grey)
4	6	376	98% (green), 2% (grey)
5	8	194	5% (red), 86% (green), 13% (grey)

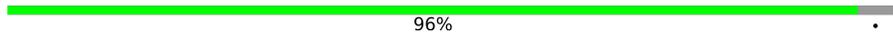
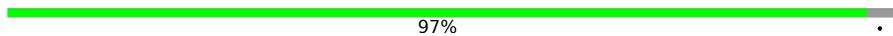
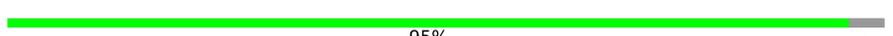
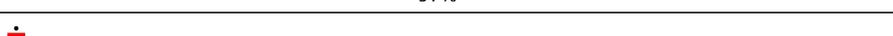
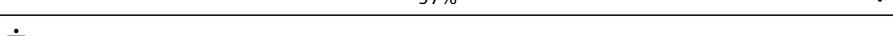
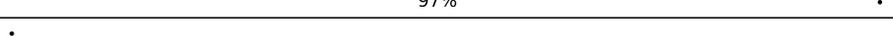
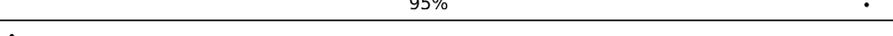
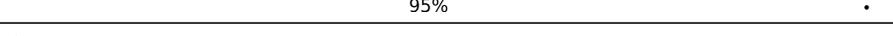
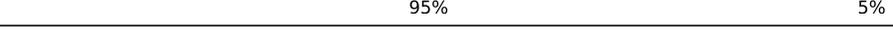
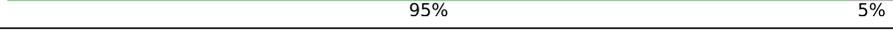
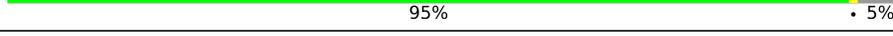
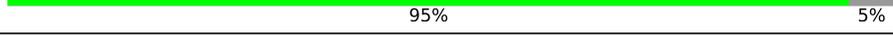
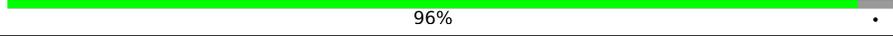
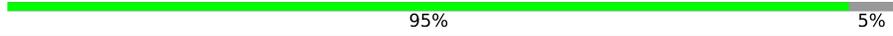
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Mol	Chain	Length	Quality of chain
5	9	194	 25% 75%
6	A	101	 50% 50%
7	A0	418	 52% 47%
7	A1	418	 93% 6%
7	A2	418	 93% 6%
7	A3	418	 80% 20%
7	A4	418	 8% 92%
8	AA	451	 96% ..
8	AC	451	 97% ..
8	AE	451	 97% .
8	AG	451	 97% ..
8	AI	451	 97% ..
8	AK	451	 97% .
8	AM	451	 96% ..
8	BA	451	 95% ..
8	BC	451	 97% .
8	BE	451	 95% .
8	BG	451	 97% ..
8	BI	451	 95% ..
8	BK	451	 97% .
8	BM	451	 96% .
8	CA	451	 95% .
8	CC	451	 97% .
8	CE	451	 95% 5%
8	CG	451	 97% ..

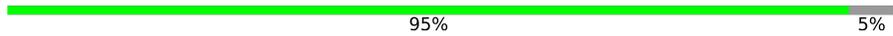
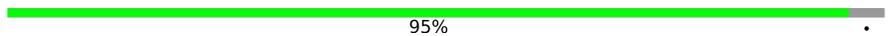
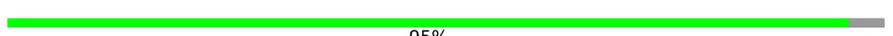
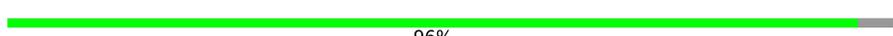
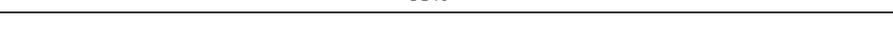
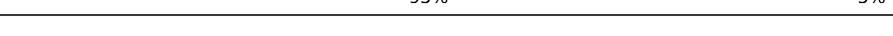
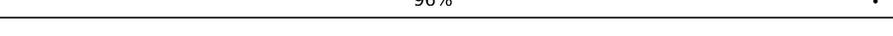
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Mol	Chain	Length	Quality of chain
8	CI	451	 96% .
8	CK	451	 97% .
8	CM	451	 95% .
8	DA	451	 84% 15%
8	DC	451	 95% 5%
8	DE	451	 95% .
8	DG	451	 95% 5%
8	DI	451	 95% 5%
8	DK	451	 95% 5%
8	DM	451	 95% .
8	EC	451	 97% .
8	EE	451	 97% .
8	EG	451	 97% .
8	EI	451	 97% .
8	EK	451	 97% .
8	EM	451	 97% .
8	FC	451	 95% .
8	FE	451	 95% .
8	FG	451	 95% 5%
8	FI	451	 95% 5%
8	FK	451	 95% . 5%
8	FM	451	 95% 5%
8	GC	451	 96% .
8	GE	451	 95% 5%
8	GG	451	 95% .

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Mol	Chain	Length	Quality of chain
8	GI	451	 95% 5%
8	GK	451	 95% .
8	GM	451	 96% .
8	HC	451	 95% . .
8	HE	451	 96% .
8	HG	451	 95% .
8	HI	451	 95% .
8	HK	451	 95% .
8	HM	451	 95% .
8	HO	451	 86% . 14%
8	IC	451	 95% . .
8	IE	451	 96% .
8	IG	451	 97% .
8	II	451	 96% .
8	IK	451	 97% .
8	IM	451	 96% .
8	IO	451	 95% .
8	JC	451	 97% .
8	JE	451	 95% 5%
8	JG	451	 95% 5%
8	JI	451	 95% 5%
8	JK	451	 95% . .
8	JM	451	 95% 5%
8	KC	451	 96% .
8	KE	451	 95% .

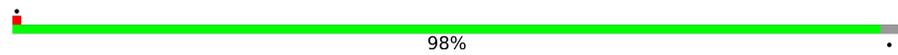
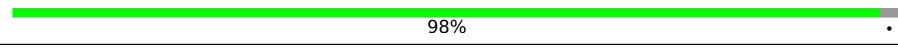
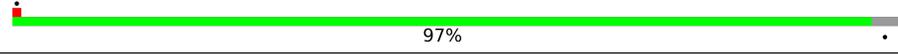
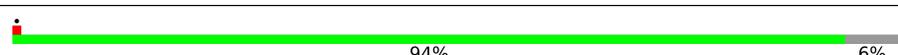
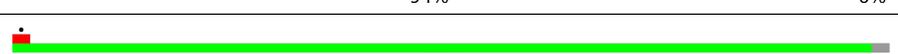
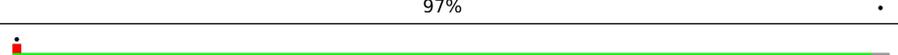
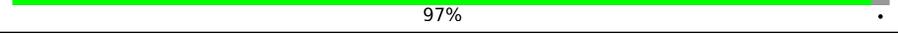
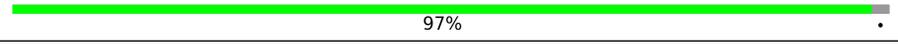
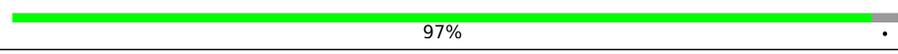
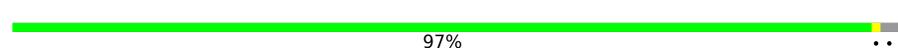
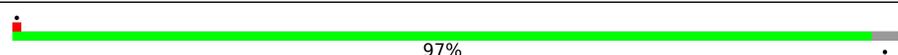
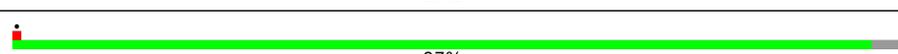
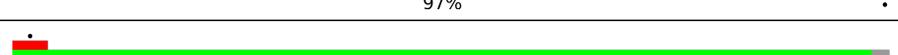
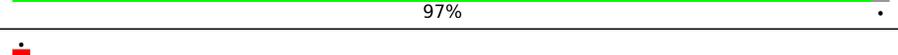
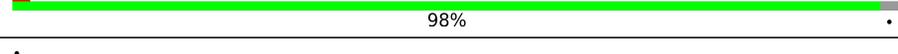
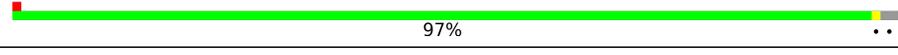
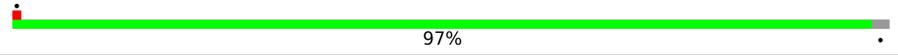
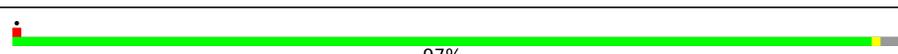
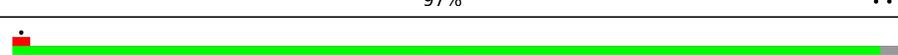
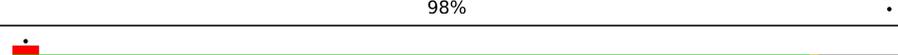
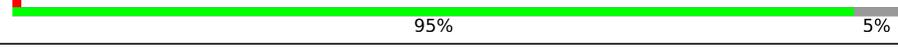
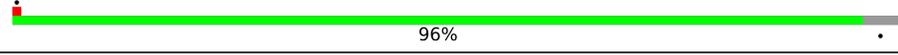
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Mol	Chain	Length	Quality of chain
8	KG	451	96%
8	KI	451	95% 5%
8	KK	451	95%
8	KM	451	96%
8	KO	451	95%
8	LC	451	96%
8	LE	451	97%
8	LG	451	95%
8	LI	451	96%
8	LK	451	96%
8	LM	451	95%
8	MC	451	97%
8	ME	451	95%
8	MG	451	95%
8	MI	451	96%
8	MK	451	97%
8	MM	451	98%
8	NC	451	97%
8	NE	451	96%
8	NG	451	96%
8	NI	451	97%
8	NK	451	96%
8	NM	451	96%
8	OC	451	97%
8	OE	451	97%

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Mol	Chain	Length	Quality of chain
8	OG	451	 98%
8	OI	451	 98%
8	OK	451	 97%
8	OM	451	 97%
8	OO	451	 94% 6%
8	PC	451	 97%
8	PE	451	 97%
8	PG	451	 97%
8	PI	451	 97%
8	PK	451	 97%
8	PM	451	 97%
8	PO	451	 97%
8	QC	451	 97%
8	QE	451	 98%
8	QG	451	 97%
8	QI	451	 97%
8	QK	451	 97%
8	QM	451	 97%
8	QO	451	 98%
8	RC	451	 90% 9%
8	RE	451	 95% 5%
8	RG	451	 96%
8	RI	451	 97%
8	RK	451	 97%
8	RM	451	 97%

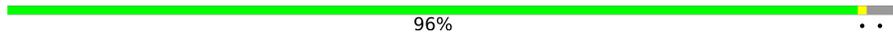
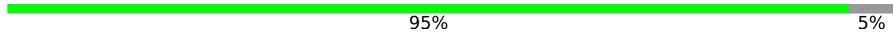
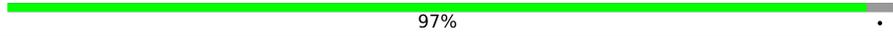
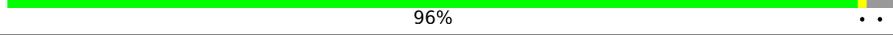
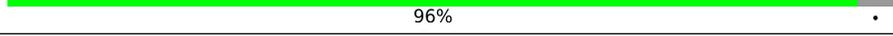
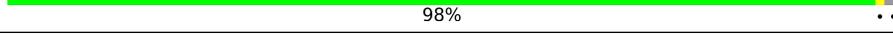
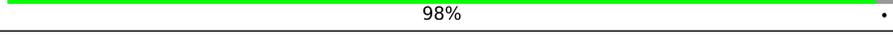
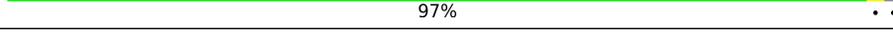
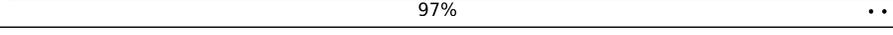
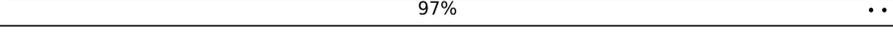
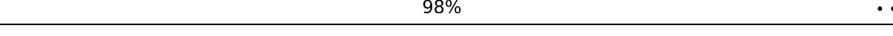
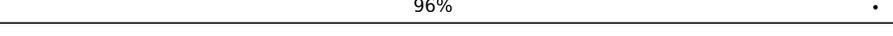
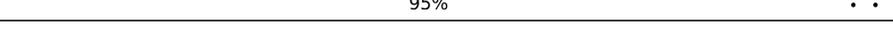
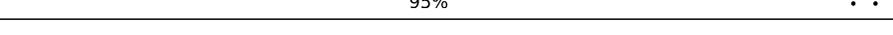
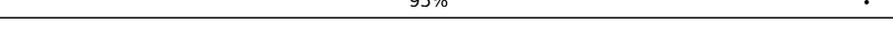
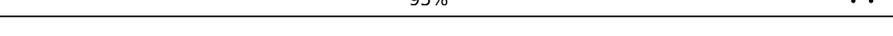
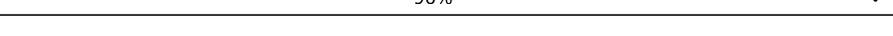
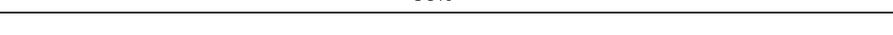
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Mol	Chain	Length	Quality of chain
8	RO	451	97%
8	SE	451	95% 5%
8	SG	451	95% 5%
8	SI	451	95%
8	SK	451	94%
8	SM	451	95%
8	SO	451	95%
8	TE	451	95% 5%
8	TG	451	95% 5%
8	TI	451	96%
8	TK	451	95% 5%
8	TM	451	95%
8	TO	451	95% 5%
8	UE	451	95%
8	UG	451	95%
8	UI	451	95%
8	UK	451	95%
8	UM	451	95%
8	UO	451	95%
8	VE	451	97%
8	VG	451	95%
8	VI	451	97%
8	VK	451	95%
8	VM	451	97%
8	VO	451	96%

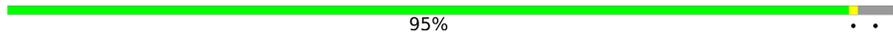
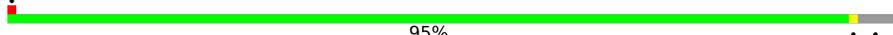
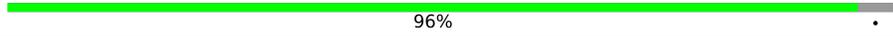
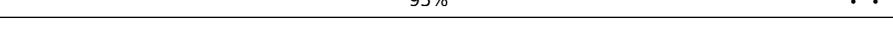
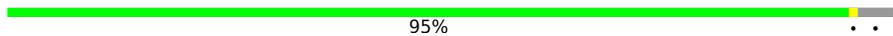
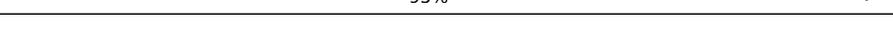
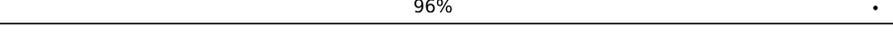
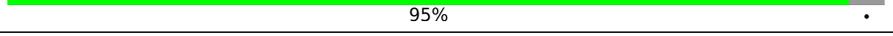
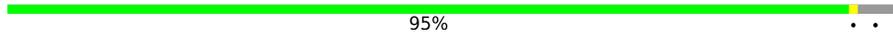
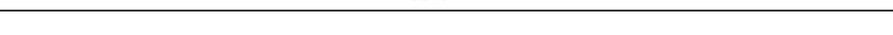
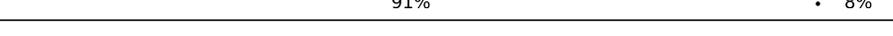
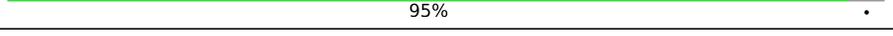
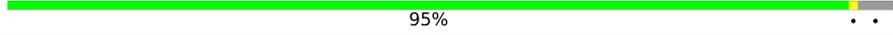
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Mol	Chain	Length	Quality of chain
8	WE	451	 96% ..
8	WG	451	 95% 5% .
8	WI	451	 97% .
8	WK	451	 95% 5% .
8	WM	451	 96% ..
8	WO	451	 96% .
9	AB	445	 98% ..
9	AD	445	 98% .
9	AF	445	 97% ..
9	AH	445	 97% ..
9	AJ	445	 97% ..
9	AL	445	 98% ..
9	BB	445	 96% .
9	BD	445	 95% ..
9	BF	445	 95% ..
9	BH	445	 95% .
9	BJ	445	 95% ..
9	BL	445	 96% .
9	CB	445	 96% ..
9	CD	445	 96% .
9	CF	445	 95% .
9	CH	445	 96% .
9	CJ	445	 95% .
9	CL	445	 96% .
9	DB	445	 95% ..

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Mol	Chain	Length	Quality of chain
9	DD	445	 95% . .
9	DF	445	 95% . .
9	DH	445	 96% .
9	DJ	445	 95% . .
9	DL	445	 95% .
9	EB	445	 96% .
9	ED	445	 95% . .
9	EF	445	 95% . .
9	EH	445	 95% . .
9	EJ	445	 95% . .
9	EL	445	 95% . .
9	EN	445	 96% .
9	FB	445	 95% .
9	FD	445	 96% .
9	FF	445	 95% .
9	FH	445	 95% . .
9	FJ	445	 96% .
9	FL	445	 95% . .
9	FN	445	 95% . .
9	GB	445	 91% . 8%
9	GD	445	 95% .
9	GF	445	 95% . .
9	GH	445	 96% .
9	GJ	445	 96% . .
9	GL	445	 95% .

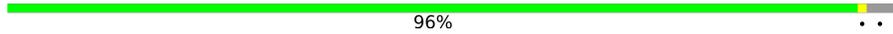
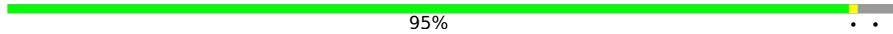
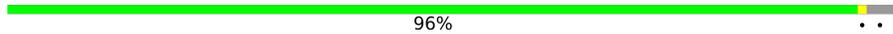
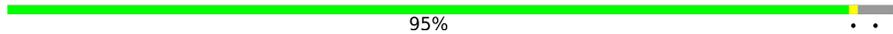
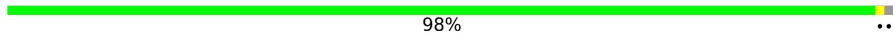
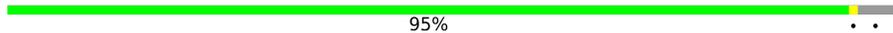
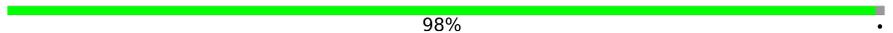
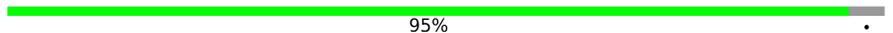
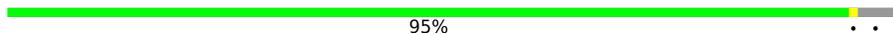
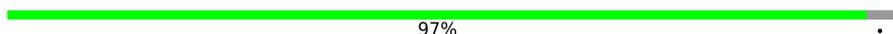
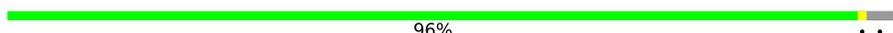
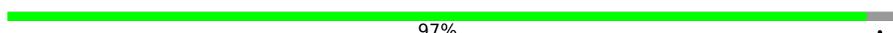
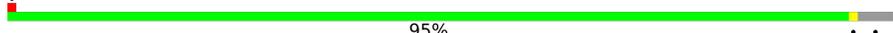
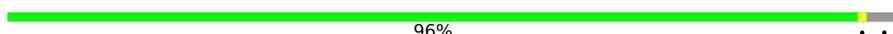
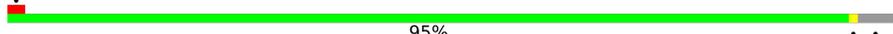
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Mol	Chain	Length	Quality of chain
9	GN	445	95% . .
9	HB	445	94% . .
9	HD	445	95% . .
9	HF	445	96% .
9	HH	445	95% .
9	HJ	445	95% . .
9	HL	445	94% . .
9	HN	445	94% . .
9	IB	445	91% 9%
9	ID	445	95% .
9	IF	445	96% . .
9	IH	445	95% .
9	IJ	445	96% .
9	IL	445	95% .
9	IN	445	95% . .
9	JB	445	95% . .
9	JD	445	96% .
9	JF	445	95% . .
9	JH	445	95% .
9	JJ	445	95% . .
9	JL	445	95% . .
9	JN	445	95% . .
9	KB	445	92% . 7%
9	KD	445	96% . .
9	KF	445	95% . .

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Mol	Chain	Length	Quality of chain
9	KH	445	 96%
9	KJ	445	 95%
9	KL	445	 96%
9	KN	445	 95%
9	LB	445	 98%
9	LD	445	 95%
9	LF	445	 98%
9	LH	445	 95%
9	LJ	445	 99%
9	LL	445	 95%
9	LN	445	 98%
9	MB	445	 96%
9	MD	445	 96%
9	MF	445	 97%
9	MH	445	 96%
9	MJ	445	 96%
9	ML	445	 96%
9	MN	445	 97%
9	NB	445	 95%
9	ND	445	 96%
9	NF	445	 96%
9	NH	445	 95%
9	NJ	445	 95%
9	NL	445	 95%
9	NN	445	 95%

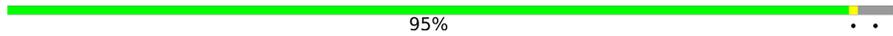
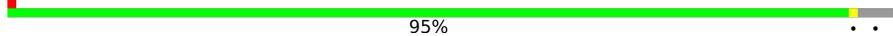
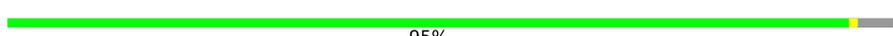
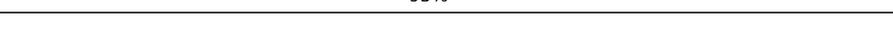
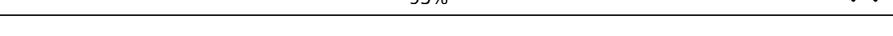
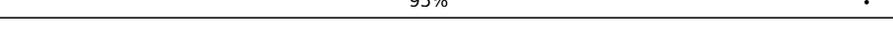
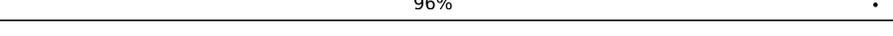
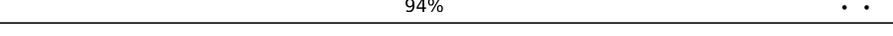
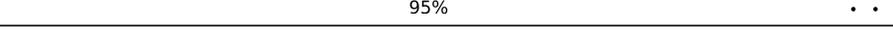
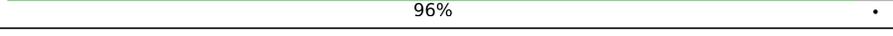
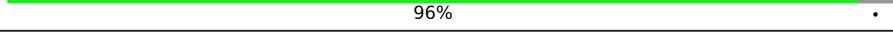
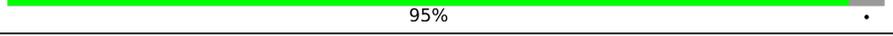
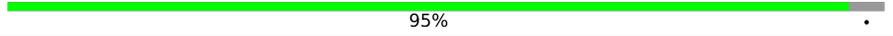
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Mol	Chain	Length	Quality of chain
9	OB	445	96%
9	OD	445	97%
9	OF	445	96%
9	OH	445	96%
9	OJ	445	97%
9	OL	445	96%
9	ON	445	96%
9	PD	445	96%
9	PF	445	96%
9	PH	445	95%
9	PJ	445	96%
9	PL	445	96%
9	PN	445	96%
9	QD	445	96%
9	QF	445	96%
9	QH	445	96%
9	QJ	445	96%
9	QL	445	96%
9	QN	445	96%
9	RD	445	95%
9	RF	445	96%
9	RH	445	95%
9	RJ	445	95%
9	RL	445	96%
9	RN	445	96%

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Mol	Chain	Length	Quality of chain
9	SD	445	 95% ..
9	SF	445	 95% ..
9	SH	445	 95% ..
9	SJ	445	 95% .
9	SL	445	 96% .
9	SN	445	 95% ..
9	TD	445	 95% .
9	TF	445	 96% .
9	TH	445	 95% ..
9	TJ	445	 95% ..
9	TL	445	 95% ..
9	TN	445	 95% ..
9	TP	445	 94% 5% .
9	UD	445	 95% ..
9	UF	445	 95% ..
9	UH	445	 95% .
9	UJ	445	 96% .
9	UL	445	 94% ..
9	UN	445	 95% ..
9	UP	445	 96% .
9	VD	445	 96% .
9	VF	445	 95% .
9	VH	445	 95% ..
9	VJ	445	 95% .
9	VL	445	 95% .

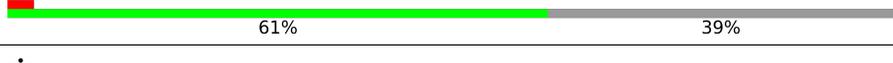
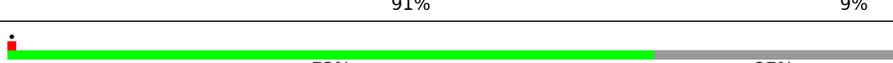
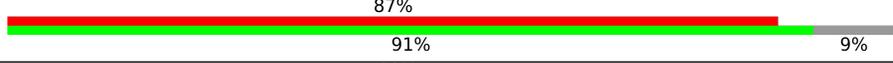
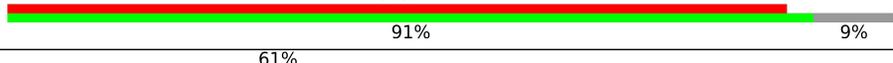
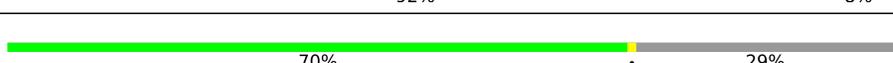
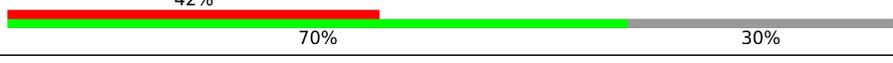
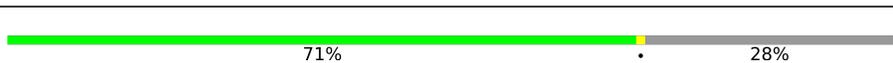
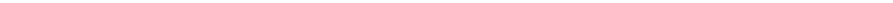
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Mol	Chain	Length	Quality of chain
9	VN	445	95%
9	VP	445	95%
9	WD	445	95%
9	WF	445	95%
9	WH	445	96%
9	WJ	445	95%
9	WL	445	95%
9	WN	445	96%
9	WP	445	95%
10	B	495	36%
10	C	495	72%
11	B0	430	45%
11	B1	430	91%
11	B2	430	91%
11	B3	430	82%
11	B4	430	12%
11	B5	430	12%
11	B6	430	79%
11	B7	430	84%
11	B8	430	86%
11	B9	430	43%
12	C0	490	7%
12	C1	490	22%
12	C2	490	15%
12	C3	490	16%

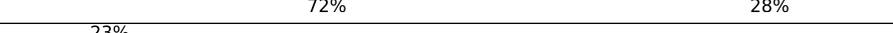
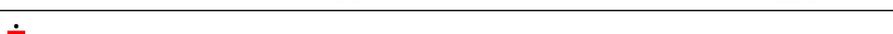
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Mol	Chain	Length	Quality of chain
12	C4	490	
13	D	485	
14	D0	435	
14	D1	435	
14	D2	435	
14	D3	435	
14	D5	435	
14	D6	435	
14	D7	435	
14	D8	435	
15	E	301	
15	F	301	
16	F0	222	
16	F1	222	
16	F2	222	
16	F3	222	
16	F4	222	
16	F5	222	
16	F6	222	
16	F7	222	
16	F8	222	
16	G0	222	
16	G1	222	
16	G2	222	
16	G3	222	

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Mol	Chain	Length	Quality of chain
16	G4	222	 71% 28%
16	G5	222	 9% 70% 30%
16	G6	222	 70% 29%
16	G7	222	 72% 28%
16	G8	222	 63% 70% 30%
16	H0	222	 70% 29%
16	H1	222	 72% 28%
16	H2	222	 23% 70% 30%
17	G	121	 11% 76% 22%
18	H	275	 29% 71%
18	I	275	 27% 53% 47%
18	J	275	 8% 53% 47%
18	K	275	 22% 52% 47%
18	L	275	 8% 52% 47%
18	M	275	 17% 52% 47%
18	N	275	 9% 52% 47%
19	I1	150	 58% 41%
20	J1	284	 29% 71%
20	J2	284	 79% 20%
20	J3	284	 79% 20%
20	J4	284	 71% 28%
20	J5	284	 23% 77%
21	K1	134	 82% 17%
22	L1	147	 86% 14%
22	L2	147	 61% 39%

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Mol	Chain	Length	Quality of chain
23	M1	201	9% 51% 49%
23	M2	201	50% 50%
23	M3	201	50% 49%
23	M4	201	50% 49%
24	O	382	7% 93%
24	P	382	96% ..
24	Q	382	10% 90%
24	R	382	19% 57% 43%
24	S	382	15% 43% 57%
25	T	640	75% 24%
25	U	640	76% 24%
25	V	640	76% 24%
26	W	749	5% 81% 18%
26	X	749	6% 93% 6%
26	Y	749	5% 93% 6%
26	Z	749	5% 68% 32%
27	XA	193	96% .
27	XB	193	96% ..
27	XC	193	96% ..
27	XD	193	96% ..
27	XE	193	95% ..
27	XF	193	96% .
27	XG	193	96% .
28	YB	257	86% 14%
28	YC	257	86% 14%

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Mol	Chain	Length	Quality of chain
28	YD	257	85% 14%
28	YE	257	86% 14%
28	YF	257	85% 14%
28	YG	257	86% 14%
29	a	551	31% 68%
29	b	551	5% 61% 39%
29	c	551	8% 51% 48%
29	d	551	39% 60%
30	e	620	98%
30	f	620	98%
30	g	620	98%
31	h	256	57% 43%
31	i	256	5% 97%
31	j	256	5% 96%
31	k	256	98%
32	l	177	66% 34%
32	m	177	66% 34%
32	n	177	66% 34%
33	o	552	72% 27%
33	o1	552	7% 93%
33	p	552	28% 71%
34	q	169	66% 34%
34	r	169	66% 34%
34	s	169	66% 34%
35	y	136	46% 54%

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Mol	Chain	Length	Quality of chain
35	z	136	 82% 18%

## 2 Entry composition [i](#)

There are 38 unique types of molecules in this entry. The entry contains 1265783 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Protein CFAP95.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	0	52	418	265	75	77	1	0	0
1	7	146	1197	757	206	230	4	0	0

- Molecule 2 is a protein called EF-hand domain-containing family member B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	1	272	2226	1407	388	424	7	0	0
2	2	446	3607	2298	629	667	13	0	0

- Molecule 3 is a protein called Cilia- and flagella-associated protein 53.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	3	297	2514	1539	476	489	10	0	0
3	4	215	1837	1120	349	358	10	0	0

- Molecule 4 is a protein called Nucleoside diphosphate kinase 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	5	371	2943	1873	506	543	21	0	0
4	6	371	2943	1873	506	543	21	0	0

- Molecule 5 is a protein called Protein CFAP107.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	8	168	Total	C	N	O	S	0	0
			1414	909	251	251	3		
5	9	48	Total	C	N	O	S	0	0
			411	261	71	78	1		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
8	191	PHE	LEU	conflict	UNP Q8N1D5
9	191	PHE	LEU	conflict	UNP Q8N1D5

- Molecule 6 is a protein called Protein CFAP141.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	A	50	Total	C	N	O	S	0	0
			423	269	75	76	3		

- Molecule 7 is a protein called Tektin-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	A0	220	Total	C	N	O	S	0	0
			1771	1102	325	335	9		
7	A1	391	Total	C	N	O	S	0	0
			3185	1978	576	619	12		
7	A2	391	Total	C	N	O	S	0	0
			3185	1978	576	619	12		
7	A3	333	Total	C	N	O	S	0	0
			2715	1688	485	532	10		
7	A4	35	Total	C	N	O		0	0
			294	183	59	52			

- Molecule 8 is a protein called Tubulin alpha-1A chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AA	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	AC	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	AE	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	AG	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	AI	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	AK	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	AM	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	BA	432	Total	C	N	O	S	0	0
			3383	2143	575	643	22		
8	BC	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	BE	432	Total	C	N	O	S	0	0
			3383	2143	575	643	22		
8	BG	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	BI	432	Total	C	N	O	S	0	0
			3383	2143	575	643	22		
8	BK	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	BM	433	Total	C	N	O	S	0	0
			3387	2145	576	644	22		
8	CA	432	Total	C	N	O	S	0	0
			3385	2144	575	644	22		
8	CC	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	CE	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	CG	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	CI	431	Total	C	N	O	S	0	0
			3377	2140	574	641	22		
8	CK	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	CM	431	Total	C	N	O	S	0	0
			3377	2140	574	641	22		
8	DA	383	Total	C	N	O	S	0	0
			2978	1887	504	567	20		
8	DC	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	DE	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	DG	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	DI	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	DK	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	DM	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	EC	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	EE	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	EG	438	Total	C	N	O	S	0	0
			3423	2167	582	652	22		
8	EI	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	EK	438	Total	C	N	O	S	0	0
			3423	2167	582	652	22		
8	EM	438	Total	C	N	O	S	0	0
			3423	2167	582	652	22		
8	FC	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	FE	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	FG	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	FI	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	FK	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	FM	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	GC	435	Total	C	N	O	S	0	0
			3409	2158	579	650	22		
8	GE	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	GG	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	GI	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	GK	432	Total	C	N	O	S	0	0
			3385	2144	575	644	22		
8	GM	434	Total	C	N	O	S	0	0
			3402	2154	578	648	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	HC	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	HE	432	Total	C	N	O	S	0	0
			3385	2144	575	644	22		
8	HG	432	Total	C	N	O	S	0	0
			3385	2144	575	644	22		
8	HI	432	Total	C	N	O	S	0	0
			3385	2144	575	644	22		
8	HK	431	Total	C	N	O	S	0	0
			3377	2140	574	641	22		
8	HM	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	HO	389	Total	C	N	O	S	0	0
			3058	1935	520	582	21		
8	IC	433	Total	C	N	O	S	0	0
			3393	2148	576	647	22		
8	IE	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	IG	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	II	432	Total	C	N	O	S	0	0
			3385	2144	575	644	22		
8	IK	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	IM	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	IO	431	Total	C	N	O	S	0	0
			3377	2140	574	641	22		
8	JC	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	JE	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	JG	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	JI	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	JK	431	Total	C	N	O	S	0	0
			3377	2140	574	641	22		
8	JM	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	KC	433	Total	C	N	O	S	0	0
			3390	2148	576	644	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	KE	432	Total	C	N	O	S	0	0
			3385	2144	575	644	22		
8	KG	433	Total	C	N	O	S	0	0
			3390	2148	576	644	22		
8	KI	430	Total	C	N	O	S	0	0
			3373	2138	573	640	22		
8	KK	433	Total	C	N	O	S	0	0
			3390	2148	576	644	22		
8	KM	438	Total	C	N	O	S	0	0
			3423	2167	582	652	22		
8	KO	432	Total	C	N	O	S	0	0
			3383	2143	575	643	22		
8	LC	433	Total	C	N	O	S	0	0
			3389	2146	576	645	22		
8	LE	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	LG	434	Total	C	N	O	S	0	0
			3397	2150	577	648	22		
8	LI	436	Total	C	N	O	S	0	0
			3410	2158	580	650	22		
8	LK	433	Total	C	N	O	S	0	0
			3390	2148	576	644	22		
8	LM	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	MC	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	ME	432	Total	C	N	O	S	0	0
			3386	2146	575	643	22		
8	MG	432	Total	C	N	O	S	0	0
			3384	2145	575	642	22		
8	MI	433	Total	C	N	O	S	0	0
			3392	2149	576	645	22		
8	MK	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	MM	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	NC	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	NE	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	NG	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	NI	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	NK	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	NM	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	OC	441	Total	C	N	O	S	0	0
			3445	2180	585	658	22		
8	OE	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	OG	441	Total	C	N	O	S	0	0
			3445	2180	585	658	22		
8	OI	441	Total	C	N	O	S	0	0
			3445	2180	585	658	22		
8	OK	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	OM	441	Total	C	N	O	S	0	0
			3445	2180	585	658	22		
8	OO	422	Total	C	N	O	S	0	0
			3309	2092	563	632	22		
8	PC	441	Total	C	N	O	S	0	0
			3445	2180	585	658	22		
8	PE	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	PG	441	Total	C	N	O	S	0	0
			3445	2180	585	658	22		
8	PI	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	PK	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	PM	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	PO	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	QC	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	QE	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	QG	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	QI	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	QK	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	QM	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	QO	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	RC	411	Total	C	N	O	S	0	0
			3209	2029	547	612	21		
8	RE	430	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	RG	432	Total	C	N	O	S	0	0
			3384	2145	575	642	22		
8	RI	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	RK	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	RM	440	Total	C	N	O	S	0	0
			3436	2175	584	655	22		
8	RO	439	Total	C	N	O	S	0	0
			3429	2170	583	654	22		
8	SE	429	Total	C	N	O	S	0	0
			3365	2134	572	637	22		
8	SG	430	Total	C	N	O	S	0	0
			3373	2138	573	640	22		
8	SI	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	SK	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	SM	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	SO	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	TE	429	Total	C	N	O	S	0	0
			3365	2134	572	637	22		
8	TG	430	Total	C	N	O	S	0	0
			3373	2138	573	640	22		
8	TI	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		
8	TK	429	Total	C	N	O	S	0	0
			3365	2134	572	637	22		
8	TM	431	Total	C	N	O	S	0	0
			3379	2141	574	642	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	TO	429	3365	2134	572	637	22	0	0
8	UE	431	3379	2141	574	642	22	0	0
8	UG	432	3385	2144	575	644	22	0	0
8	UI	432	3385	2144	575	644	22	0	0
8	UK	431	3379	2141	574	642	22	0	0
8	UM	431	3379	2141	574	642	22	0	0
8	UO	431	3379	2141	574	642	22	0	0
8	VE	439	3429	2170	583	654	22	0	0
8	VG	433	3393	2148	576	647	22	0	0
8	VI	439	3429	2170	583	654	22	0	0
8	VK	431	3379	2141	574	642	22	0	0
8	VM	439	3429	2170	583	654	22	0	0
8	VO	431	3379	2141	574	642	22	0	0
8	WE	439	3429	2170	583	654	22	0	0
8	WG	430	3371	2137	573	639	22	0	0
8	WI	438	3423	2167	582	652	22	0	0
8	WK	430	3371	2137	573	639	22	0	0
8	WM	439	3429	2170	583	654	22	0	0
8	WO	431	3379	2141	574	642	22	0	0

- Molecule 9 is a protein called Tubulin beta-4B chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AB	437	Total 3433	C 2155	N 585	O 667	S 26	0	0
9	AD	437	Total 3433	C 2155	N 585	O 667	S 26	0	0
9	AF	437	Total 3433	C 2155	N 585	O 667	S 26	0	0
9	AH	437	Total 3433	C 2155	N 585	O 667	S 26	0	0
9	AJ	437	Total 3433	C 2155	N 585	O 667	S 26	0	0
9	AL	437	Total 3433	C 2155	N 585	O 667	S 26	0	0
9	BB	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	BD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	BF	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	BH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	BJ	430	Total 3373	C 2119	N 578	O 650	S 26	0	0
9	BL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	CB	428	Total 3361	C 2112	N 576	O 647	S 26	0	0
9	CD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	CF	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	CH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	CJ	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	CL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	DB	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	DD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	DF	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	DH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	DJ	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	DL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	EB	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	ED	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	EF	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	EH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	EJ	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	EL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	EN	428	Total 3361	C 2112	N 576	O 647	S 26	0	0
9	FB	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	FD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	FF	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	FH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	FJ	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	FL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	FN	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	GB	410	Total 3208	C 2016	N 548	O 619	S 25	0	0
9	GD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	GF	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	GH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	GJ	430	Total 3373	C 2119	N 578	O 650	S 26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	GL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	GN	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	HB	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	HD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	HF	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	HH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	HJ	428	Total 3361	C 2112	N 576	O 647	S 26	0	0
9	HL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	HN	425	Total 3339	C 2100	N 572	O 641	S 26	0	0
9	IB	407	Total 3197	C 2010	N 544	O 618	S 25	0	0
9	ID	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	IF	428	Total 3361	C 2112	N 576	O 647	S 26	0	0
9	IH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	IJ	429	Total 3368	C 2116	N 577	O 649	S 26	0	0
9	IL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	IN	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	JB	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	JD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	JF	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	JH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	JJ	426	Total 3348	C 2105	N 574	O 643	S 26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	JL	426	3348	2105	574	643	26	0	0
9	JN	426	3348	2105	574	643	26	0	0
9	KB	412	3222	2021	550	625	26	0	0
9	KD	431	3382	2124	579	653	26	0	0
9	KF	426	3348	2105	574	643	26	0	0
9	KH	431	3382	2124	579	653	26	0	0
9	KJ	426	3348	2105	574	643	26	0	0
9	KL	431	3382	2124	579	653	26	0	0
9	KN	426	3348	2105	574	643	26	0	0
9	LB	440	3456	2168	588	674	26	0	0
9	LD	426	3348	2105	574	643	26	0	0
9	LF	439	3451	2165	587	673	26	0	0
9	LH	426	3348	2105	574	643	26	0	0
9	LJ	443	3483	2183	591	683	26	0	0
9	LL	426	3348	2105	574	643	26	0	0
9	LN	440	3456	2168	588	674	26	0	0
9	MB	430	3373	2119	578	650	26	0	0
9	MD	432	3391	2129	580	656	26	0	0
9	MF	431	3382	2124	579	653	26	0	0
9	MH	432	3391	2129	580	656	26	0	0
9	MJ	432	3391	2129	580	656	26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	ML	432	3391	2129	580	656	26	0	0
9	MN	430	3373	2119	578	650	26	0	0
9	NB	428	3361	2112	576	647	26	0	0
9	ND	428	3361	2112	576	647	26	0	0
9	NF	430	3373	2119	578	650	26	0	0
9	NH	428	3361	2112	576	647	26	0	0
9	NJ	429	3368	2116	577	649	26	0	0
9	NL	428	3361	2112	576	647	26	0	0
9	NN	428	3361	2112	576	647	26	0	0
9	OB	431	3382	2124	579	653	26	0	0
9	OD	430	3373	2119	578	650	26	0	0
9	OF	432	3391	2129	580	656	26	0	0
9	OH	430	3373	2119	578	650	26	0	0
9	OJ	432	3391	2129	580	656	26	0	0
9	OL	430	3373	2119	578	650	26	0	0
9	ON	431	3382	2124	579	653	26	0	0
9	PD	430	3373	2119	578	650	26	0	0
9	PF	432	3391	2129	580	656	26	0	0
9	PH	426	3348	2105	574	643	26	0	0
9	PJ	430	3373	2119	578	650	26	0	0
9	PL	429	3368	2116	577	649	26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	PN	430	Total 3373	C 2119	N 578	O 650	S 26	0	0
9	QD	428	Total 3361	C 2112	N 576	O 647	S 26	0	0
9	QF	430	Total 3373	C 2119	N 578	O 650	S 26	0	0
9	QH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	QJ	429	Total 3368	C 2116	N 577	O 649	S 26	0	0
9	QL	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	QN	428	Total 3361	C 2112	N 576	O 647	S 26	0	0
9	RD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	RF	429	Total 3368	C 2116	N 577	O 649	S 26	0	0
9	RH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	RJ	428	Total 3361	C 2112	N 576	O 647	S 26	0	0
9	RL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	RN	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	SD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	SF	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	SH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	SJ	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	SL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	SN	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	TD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	TF	427	Total 3356	C 2109	N 575	O 646	S 26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	TH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	TJ	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	TL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	TN	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	TP	421	Total 3302	C 2074	N 567	O 635	S 26	0	0
9	UD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	UF	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	UH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	UJ	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	UL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	UN	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	UP	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	VD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	VF	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	VH	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	VJ	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	VL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	VN	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	VP	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	WD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	WF	426	Total 3348	C 2105	N 574	O 643	S 26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
9	WH	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	WJ	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	WL	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	WN	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	WP	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		

- Molecule 10 is a protein called Meiosis-specific nuclear structural protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	B	180	Total	C	N	O	S	0	0
			1507	921	287	289	10		
10	C	356	Total	C	N	O	S	0	0
			3062	1903	551	592	16		

- Molecule 11 is a protein called Tektin-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	B0	193	Total	C	N	O	S	0	0
			1574	958	294	315	7		
11	B1	392	Total	C	N	O	S	0	0
			3187	1956	586	630	15		
11	B2	391	Total	C	N	O	S	0	0
			3180	1951	585	629	15		
11	B3	354	Total	C	N	O	S	0	0
			2868	1760	521	572	15		
11	B4	51	Total	C	N	O	S	0	0
			412	255	76	80	1		
11	B5	51	Total	C	N	O		0	0
			254	152	51	51			
11	B6	354	Total	C	N	O		0	0
			1766	1058	354	354			
11	B7	391	Total	C	N	O		0	0
			1951	1169	391	391			
11	B8	392	Total	C	N	O		0	0
			1956	1172	392	392			
11	B9	193	Total	C	N	O		0	0
			962	576	193	193			

- Molecule 12 is a protein called Tektin-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	C0	33	Total	C	N	O		0	0
			285	171	54	60			
12	C1	336	Total	C	N	O	S	0	0
			2732	1683	495	541	13		
12	C2	393	Total	C	N	O	S	0	0
			3199	1968	584	632	15		
12	C3	394	Total	C	N	O	S	0	0
			3210	1974	588	633	15		
12	C4	219	Total	C	N	O	S	0	0
			1786	1111	321	341	13		

- Molecule 13 is a protein called Sperm-associated antigen 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	D	179	Total	C	N	O	S	0	0
			1459	919	260	271	9		

- Molecule 14 is a protein called Tektin-4.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	D0	266	Total	C	N	O	S	0	0
			2180	1326	409	432	13		
14	D1	396	Total	C	N	O	S	0	0
			3256	1989	616	632	19		
14	D2	398	Total	C	N	O	S	0	0
			3275	2000	620	636	19		
14	D3	317	Total	C	N	O	S	0	0
			2603	1596	492	498	17		
14	D5	317	Total	C	N	O		0	0
			1583	948	317	318			
14	D6	398	Total	C	N	O		0	0
			1987	1190	398	399			
14	D7	396	Total	C	N	O		0	0
			1976	1184	396	396			
14	D8	266	Total	C	N	O		0	0
			1327	794	266	267			

- Molecule 15 is a protein called Cilia- and flagella-associated protein 161.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	E	277	Total	C	N	O	S	0	0
			2227	1403	397	415	12		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	F	277	2227	1403	397	415	12	0	0

- Molecule 16 is a protein called Sperm acrosome-associated protein 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	F0	157	1263	788	225	240	10	0	0
16	F1	160	1289	805	231	243	10	0	0
16	F2	156	776	464	156	156		0	0
16	F3	157	1263	788	225	240	10	0	0
16	F4	160	1289	805	231	243	10	0	0
16	F5	156	776	464	156	156		0	0
16	F6	157	1263	788	225	240	10	0	0
16	F7	160	1289	805	231	243	10	0	0
16	F8	156	776	464	156	156		0	0
16	G0	159	1278	799	227	242	10	0	0
16	G1	158	1271	794	226	241	10	0	0
16	G2	156	776	464	156	156		0	0
16	G3	157	1263	788	225	240	10	0	0
16	G4	160	1289	805	231	243	10	0	0
16	G5	156	776	464	156	156		0	0
16	G6	157	1263	788	225	240	10	0	0
16	G7	160	1289	805	231	243	10	0	0
16	G8	156	776	464	156	156		0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
16	H0	157	Total	C	N	O	S	0	0
			1263	788	225	240	10		
16	H1	160	Total	C	N	O	S	0	0
			1289	805	231	243	10		
16	H2	156	Total	C	N	O		0	0
			776	464	156	156			

- Molecule 17 is a protein called Uncharacterized protein C15orf65.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	G	94	Total	C	N	O	S	0	0
			750	478	127	139	6		

- Molecule 18 is a protein called Protein FAM166B.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	H	80	Total	C	N	O	S	0	0
			619	405	108	103	3		
18	I	145	Total	C	N	O	S	0	0
			1080	698	187	189	6		
18	J	146	Total	C	N	O	S	0	0
			1085	701	188	190	6		
18	K	145	Total	C	N	O	S	0	0
			1080	698	187	189	6		
18	L	145	Total	C	N	O	S	0	0
			1080	698	187	189	6		
18	M	145	Total	C	N	O	S	0	0
			1080	698	187	189	6		
18	N	146	Total	C	N	O	S	0	0
			1085	701	188	190	6		

- Molecule 19 is a protein called UPF0686 protein C11orf1.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	I1	89	Total	C	N	O	S	0	0
			763	481	135	143	4		

- Molecule 20 is a protein called Isoform 2 of Cilia- and flagella-associated protein 77.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	J1	81	Total	C	N	O	S	0	0
			704	448	135	119	2		

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Mol	Chain	Residues	Atoms					AltConf	Trace
20	J2	226	Total	C	N	O	S	0	0
			1849	1169	349	323	8		
20	J3	226	Total	C	N	O	S	0	0
			1849	1169	349	323	8		
20	J4	205	Total	C	N	O	S	0	0
			1674	1064	313	290	7		
20	J5	65	Total	C	N	O	S	0	0
			514	324	94	93	3		

- Molecule 21 is a protein called Protein FAM183A.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	K1	111	Total	C	N	O	S	0	0
			945	594	179	170	2		

- Molecule 22 is a protein called Uncharacterized protein C5orf49.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	L1	127	Total	C	N	O	S	0	0
			1045	659	195	190	1		
22	L2	90	Total	C	N	O	S	0	0
			746	469	139	137	1		

- Molecule 23 is a protein called Protein FAM166C.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	M1	102	Total	C	N	O	S	0	0
			825	526	147	148	4		
23	M2	101	Total	C	N	O	S	0	0
			818	521	146	147	4		
23	M3	102	Total	C	N	O	S	0	0
			825	526	147	148	4		
23	M4	102	Total	C	N	O	S	0	0
			825	526	147	148	4		

- Molecule 24 is a protein called RIB43A-like with coiled-coils protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	O	25	Total	C	N	O	S	0	0
			212	129	51	31	1		
24	P	368	Total	C	N	O	S	0	0
			3089	1886	608	584	11		

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Mol	Chain	Residues	Atoms					AltConf	Trace
24	Q	40	Total	C	N	O	S	0	0
			327	203	56	67	1		
24	R	219	Total	C	N	O	S	0	0
			1816	1105	354	348	9		
24	S	165	Total	C	N	O	S	0	0
			1387	852	269	263	3		

- Molecule 25 is a protein called EF-hand domain-containing protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	T	484	Total	C	N	O	S	0	0
			3984	2570	666	734	14		
25	U	485	Total	C	N	O	S	0	0
			3992	2576	667	735	14		
25	V	485	Total	C	N	O	S	0	0
			3992	2576	667	735	14		

- Molecule 26 is a protein called EF-hand domain-containing family member C2.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	W	614	Total	C	N	O	S	0	0
			5064	3269	845	926	24		
26	X	701	Total	C	N	O	S	0	0
			5797	3742	964	1063	28		
26	Y	701	Total	C	N	O	S	0	0
			5797	3742	964	1063	28		
26	Z	510	Total	C	N	O	S	0	0
			4239	2739	702	776	22		

- Molecule 27 is a protein called Cilia- and flagella-associated protein 20.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	XA	186	Total	C	N	O	S	0	0
			1549	998	270	274	7		
27	XB	186	Total	C	N	O	S	0	0
			1549	998	270	274	7		
27	XC	186	Total	C	N	O	S	0	0
			1549	998	270	274	7		
27	XD	186	Total	C	N	O	S	0	0
			1549	998	270	274	7		
27	XE	186	Total	C	N	O	S	0	0
			1549	998	270	274	7		

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Mol	Chain	Residues	Atoms					AltConf	Trace
27	XF	186	Total	C	N	O	S	0	0
			1549	998	270	274	7		
27	XG	186	Total	C	N	O	S	0	0
			1549	998	270	274	7		

- Molecule 28 is a protein called Parkin coregulated gene protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	YB	220	Total	C	N	O	S	0	0
			1771	1147	301	314	9		
28	YC	220	Total	C	N	O	S	0	0
			1771	1147	301	314	9		
28	YD	220	Total	C	N	O	S	0	0
			1771	1147	301	314	9		
28	YE	220	Total	C	N	O	S	0	0
			1771	1147	301	314	9		
28	YF	220	Total	C	N	O	S	0	0
			1771	1147	301	314	9		
28	YG	220	Total	C	N	O	S	0	0
			1771	1147	301	314	9		

- Molecule 29 is a protein called Cilia- and flagella-associated protein 45.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	a	174	Total	C	N	O	S	0	0
			1467	898	279	280	10		
29	b	334	Total	C	N	O	S	0	0
			2878	1734	571	560	13		
29	c	284	Total	C	N	O	S	0	0
			2419	1475	454	472	18		
29	d	218	Total	C	N	O	S	0	0
			1858	1126	373	353	6		

- Molecule 30 is a protein called Cilia- and flagella-associated protein 52.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	e	610	Total	C	N	O	S	0	0
			4717	2978	827	882	30		
30	f	610	Total	C	N	O	S	0	0
			4717	2978	827	882	30		
30	g	610	Total	C	N	O	S	0	0
			4717	2978	827	882	30		

- Molecule 31 is a protein called Enkurin.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	h	146	Total	C	N	O	S	0	0
			1210	766	213	227	4		
31	i	250	Total	C	N	O	S	0	0
			2023	1290	350	373	10		
31	j	248	Total	C	N	O	S	0	0
			2010	1283	348	370	9		
31	k	250	Total	C	N	O	S	0	0
			2023	1290	350	373	10		

- Molecule 32 is a protein called Protein Flattop.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	l	117	Total	C	N	O	S	0	0
			908	577	159	168	4		
32	m	117	Total	C	N	O	S	0	0
			908	577	159	168	4		
32	n	117	Total	C	N	O	S	0	0
			908	577	159	168	4		

- Molecule 33 is a protein called Protein CFAP210.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	o	404	Total	C	N	O	S	0	0
			3471	2149	654	653	15		
33	o1	36	Total	C	N	O	S	0	0
			301	185	60	55	1		
33	p	158	Total	C	N	O	S	0	0
			1285	809	229	243	4		

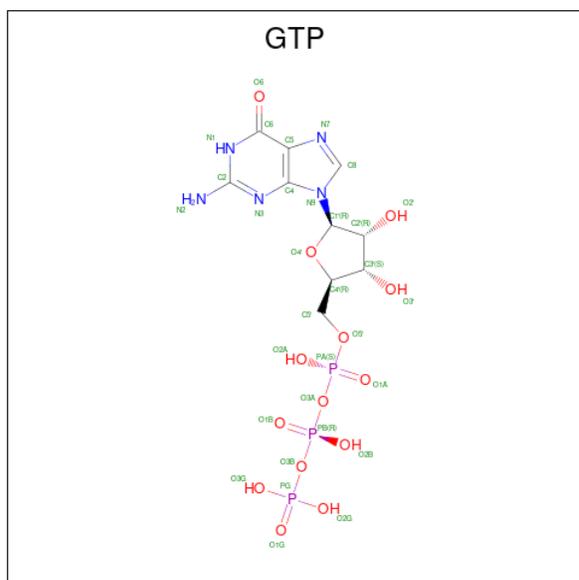
- Molecule 34 is a protein called Protein CFAP276.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	q	112	Total	C	N	O	S	0	0
			906	568	166	171	1		
34	r	112	Total	C	N	O	S	0	0
			906	568	166	171	1		
34	s	112	Total	C	N	O	S	0	0
			906	568	166	171	1		

- Molecule 35 is a protein called UPF0691 protein C9orf116.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	y	63	Total	C	N	O	S	0	0
			498	312	88	94	4		
35	z	111	Total	C	N	O	S	0	0
			891	559	163	165	4		

- Molecule 36 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula:  $C_{10}H_{16}N_5O_{14}P_3$ ).



Mol	Chain	Residues	Atoms					AltConf
36	AA	1	Total	C	N	O	P	0
			32	10	5	14	3	
36	AC	1	Total	C	N	O	P	0
			32	10	5	14	3	
36	AE	1	Total	C	N	O	P	0
			32	10	5	14	3	
36	AG	1	Total	C	N	O	P	0
			32	10	5	14	3	
36	AI	1	Total	C	N	O	P	0
			32	10	5	14	3	
36	AK	1	Total	C	N	O	P	0
			32	10	5	14	3	
36	AM	1	Total	C	N	O	P	0
			32	10	5	14	3	
36	BA	1	Total	C	N	O	P	0
			32	10	5	14	3	
36	BC	1	Total	C	N	O	P	0
			32	10	5	14	3	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
36	BE	1	Total 32	C 10	N 5	O 14	P 3	0
36	BG	1	Total 32	C 10	N 5	O 14	P 3	0
36	BI	1	Total 32	C 10	N 5	O 14	P 3	0
36	BK	1	Total 32	C 10	N 5	O 14	P 3	0
36	BM	1	Total 32	C 10	N 5	O 14	P 3	0
36	CA	1	Total 32	C 10	N 5	O 14	P 3	0
36	CC	1	Total 32	C 10	N 5	O 14	P 3	0
36	CE	1	Total 32	C 10	N 5	O 14	P 3	0
36	CG	1	Total 32	C 10	N 5	O 14	P 3	0
36	CI	1	Total 32	C 10	N 5	O 14	P 3	0
36	CK	1	Total 32	C 10	N 5	O 14	P 3	0
36	CM	1	Total 32	C 10	N 5	O 14	P 3	0
36	DA	1	Total 32	C 10	N 5	O 14	P 3	0
36	DC	1	Total 32	C 10	N 5	O 14	P 3	0
36	DE	1	Total 32	C 10	N 5	O 14	P 3	0
36	DG	1	Total 32	C 10	N 5	O 14	P 3	0
36	DI	1	Total 32	C 10	N 5	O 14	P 3	0
36	DK	1	Total 32	C 10	N 5	O 14	P 3	0
36	DM	1	Total 32	C 10	N 5	O 14	P 3	0
36	EC	1	Total 32	C 10	N 5	O 14	P 3	0
36	EE	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
36	EG	1	Total 32	C 10	N 5	O 14	P 3	0
36	EI	1	Total 32	C 10	N 5	O 14	P 3	0
36	EK	1	Total 32	C 10	N 5	O 14	P 3	0
36	EM	1	Total 32	C 10	N 5	O 14	P 3	0
36	FC	1	Total 32	C 10	N 5	O 14	P 3	0
36	FE	1	Total 32	C 10	N 5	O 14	P 3	0
36	FG	1	Total 32	C 10	N 5	O 14	P 3	0
36	FI	1	Total 32	C 10	N 5	O 14	P 3	0
36	FK	1	Total 32	C 10	N 5	O 14	P 3	0
36	FM	1	Total 32	C 10	N 5	O 14	P 3	0
36	GC	1	Total 32	C 10	N 5	O 14	P 3	0
36	GE	1	Total 32	C 10	N 5	O 14	P 3	0
36	GG	1	Total 32	C 10	N 5	O 14	P 3	0
36	GI	1	Total 32	C 10	N 5	O 14	P 3	0
36	GK	1	Total 32	C 10	N 5	O 14	P 3	0
36	GM	1	Total 32	C 10	N 5	O 14	P 3	0
36	HC	1	Total 32	C 10	N 5	O 14	P 3	0
36	HE	1	Total 32	C 10	N 5	O 14	P 3	0
36	HG	1	Total 32	C 10	N 5	O 14	P 3	0
36	HI	1	Total 32	C 10	N 5	O 14	P 3	0
36	HK	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
36	HM	1	Total 32	C 10	N 5	O 14	P 3	0
36	HO	1	Total 32	C 10	N 5	O 14	P 3	0
36	IC	1	Total 32	C 10	N 5	O 14	P 3	0
36	IE	1	Total 32	C 10	N 5	O 14	P 3	0
36	IG	1	Total 32	C 10	N 5	O 14	P 3	0
36	II	1	Total 32	C 10	N 5	O 14	P 3	0
36	IK	1	Total 32	C 10	N 5	O 14	P 3	0
36	IM	1	Total 32	C 10	N 5	O 14	P 3	0
36	IO	1	Total 32	C 10	N 5	O 14	P 3	0
36	JC	1	Total 32	C 10	N 5	O 14	P 3	0
36	JE	1	Total 32	C 10	N 5	O 14	P 3	0
36	JG	1	Total 32	C 10	N 5	O 14	P 3	0
36	JI	1	Total 32	C 10	N 5	O 14	P 3	0
36	JK	1	Total 32	C 10	N 5	O 14	P 3	0
36	JM	1	Total 32	C 10	N 5	O 14	P 3	0
36	KC	1	Total 32	C 10	N 5	O 14	P 3	0
36	KE	1	Total 32	C 10	N 5	O 14	P 3	0
36	KG	1	Total 32	C 10	N 5	O 14	P 3	0
36	KI	1	Total 32	C 10	N 5	O 14	P 3	0
36	KK	1	Total 32	C 10	N 5	O 14	P 3	0
36	KM	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
36	KO	1	Total 32	C 10	N 5	O 14	P 3	0
36	LC	1	Total 32	C 10	N 5	O 14	P 3	0
36	LE	1	Total 32	C 10	N 5	O 14	P 3	0
36	LG	1	Total 32	C 10	N 5	O 14	P 3	0
36	LI	1	Total 32	C 10	N 5	O 14	P 3	0
36	LK	1	Total 32	C 10	N 5	O 14	P 3	0
36	LM	1	Total 32	C 10	N 5	O 14	P 3	0
36	MC	1	Total 32	C 10	N 5	O 14	P 3	0
36	ME	1	Total 32	C 10	N 5	O 14	P 3	0
36	MG	1	Total 32	C 10	N 5	O 14	P 3	0
36	MI	1	Total 32	C 10	N 5	O 14	P 3	0
36	MK	1	Total 32	C 10	N 5	O 14	P 3	0
36	MM	1	Total 32	C 10	N 5	O 14	P 3	0
36	NC	1	Total 32	C 10	N 5	O 14	P 3	0
36	NE	1	Total 32	C 10	N 5	O 14	P 3	0
36	NG	1	Total 32	C 10	N 5	O 14	P 3	0
36	NI	1	Total 32	C 10	N 5	O 14	P 3	0
36	NK	1	Total 32	C 10	N 5	O 14	P 3	0
36	NM	1	Total 32	C 10	N 5	O 14	P 3	0
36	OC	1	Total 32	C 10	N 5	O 14	P 3	0
36	OE	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
36	OG	1	Total 32	C 10	N 5	O 14	P 3	0
36	OI	1	Total 32	C 10	N 5	O 14	P 3	0
36	OK	1	Total 32	C 10	N 5	O 14	P 3	0
36	OM	1	Total 32	C 10	N 5	O 14	P 3	0
36	OO	1	Total 32	C 10	N 5	O 14	P 3	0
36	PC	1	Total 32	C 10	N 5	O 14	P 3	0
36	PE	1	Total 32	C 10	N 5	O 14	P 3	0
36	PG	1	Total 32	C 10	N 5	O 14	P 3	0
36	PI	1	Total 32	C 10	N 5	O 14	P 3	0
36	PK	1	Total 32	C 10	N 5	O 14	P 3	0
36	PM	1	Total 32	C 10	N 5	O 14	P 3	0
36	PO	1	Total 32	C 10	N 5	O 14	P 3	0
36	QC	1	Total 32	C 10	N 5	O 14	P 3	0
36	QE	1	Total 32	C 10	N 5	O 14	P 3	0
36	QG	1	Total 32	C 10	N 5	O 14	P 3	0
36	QI	1	Total 32	C 10	N 5	O 14	P 3	0
36	QK	1	Total 32	C 10	N 5	O 14	P 3	0
36	QM	1	Total 32	C 10	N 5	O 14	P 3	0
36	QO	1	Total 32	C 10	N 5	O 14	P 3	0
36	RC	1	Total 32	C 10	N 5	O 14	P 3	0
36	RE	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
36	RG	1	Total 32	C 10	N 5	O 14	P 3	0
36	RI	1	Total 32	C 10	N 5	O 14	P 3	0
36	RK	1	Total 32	C 10	N 5	O 14	P 3	0
36	RM	1	Total 32	C 10	N 5	O 14	P 3	0
36	RO	1	Total 32	C 10	N 5	O 14	P 3	0
36	SE	1	Total 32	C 10	N 5	O 14	P 3	0
36	SG	1	Total 32	C 10	N 5	O 14	P 3	0
36	SI	1	Total 32	C 10	N 5	O 14	P 3	0
36	SK	1	Total 32	C 10	N 5	O 14	P 3	0
36	SM	1	Total 32	C 10	N 5	O 14	P 3	0
36	SO	1	Total 32	C 10	N 5	O 14	P 3	0
36	TE	1	Total 32	C 10	N 5	O 14	P 3	0
36	TG	1	Total 32	C 10	N 5	O 14	P 3	0
36	TI	1	Total 32	C 10	N 5	O 14	P 3	0
36	TK	1	Total 32	C 10	N 5	O 14	P 3	0
36	TM	1	Total 32	C 10	N 5	O 14	P 3	0
36	TO	1	Total 32	C 10	N 5	O 14	P 3	0
36	UE	1	Total 32	C 10	N 5	O 14	P 3	0
36	UG	1	Total 32	C 10	N 5	O 14	P 3	0
36	UI	1	Total 32	C 10	N 5	O 14	P 3	0
36	UK	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
36	UM	1	Total 32	C 10	N 5	O 14	P 3	0
36	UO	1	Total 32	C 10	N 5	O 14	P 3	0
36	VE	1	Total 32	C 10	N 5	O 14	P 3	0
36	VG	1	Total 32	C 10	N 5	O 14	P 3	0
36	VI	1	Total 32	C 10	N 5	O 14	P 3	0
36	VK	1	Total 32	C 10	N 5	O 14	P 3	0
36	VM	1	Total 32	C 10	N 5	O 14	P 3	0
36	VO	1	Total 32	C 10	N 5	O 14	P 3	0
36	WE	1	Total 32	C 10	N 5	O 14	P 3	0
36	WG	1	Total 32	C 10	N 5	O 14	P 3	0
36	WI	1	Total 32	C 10	N 5	O 14	P 3	0
36	WK	1	Total 32	C 10	N 5	O 14	P 3	0
36	WM	1	Total 32	C 10	N 5	O 14	P 3	0
36	WO	1	Total 32	C 10	N 5	O 14	P 3	0

- Molecule 37 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
37	AA	1	Total 1	Mg 1	0
37	AC	1	Total 1	Mg 1	0
37	AE	1	Total 1	Mg 1	0
37	AG	1	Total 1	Mg 1	0
37	AI	1	Total 1	Mg 1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
37	AK	1	1	1	0
37	AM	1	1	1	0
37	BA	1	1	1	0
37	BC	1	1	1	0
37	BE	1	1	1	0
37	BG	1	1	1	0
37	BI	1	1	1	0
37	BK	1	1	1	0
37	BM	1	1	1	0
37	CA	1	1	1	0
37	CC	1	1	1	0
37	CE	1	1	1	0
37	CG	1	1	1	0
37	CI	1	1	1	0
37	CK	1	1	1	0
37	CM	1	1	1	0
37	DA	1	1	1	0
37	DC	1	1	1	0
37	DE	1	1	1	0
37	DG	1	1	1	0
37	DI	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
37	DK	1	1	1	0
37	DM	1	1	1	0
37	EC	1	1	1	0
37	EE	1	1	1	0
37	EG	1	1	1	0
37	EI	1	1	1	0
37	EK	1	1	1	0
37	EM	1	1	1	0
37	FC	1	1	1	0
37	FE	1	1	1	0
37	FG	1	1	1	0
37	FI	1	1	1	0
37	FK	1	1	1	0
37	FM	1	1	1	0
37	GC	1	1	1	0
37	GE	1	1	1	0
37	GG	1	1	1	0
37	GI	1	1	1	0
37	GK	1	1	1	0
37	GM	1	1	1	0
37	HC	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
37	HE	1	1	1	0
37	HG	1	1	1	0
37	HI	1	1	1	0
37	HK	1	1	1	0
37	HM	1	1	1	0
37	HO	1	1	1	0
37	IC	1	1	1	0
37	IE	1	1	1	0
37	IG	1	1	1	0
37	II	1	1	1	0
37	IK	1	1	1	0
37	IM	1	1	1	0
37	IO	1	1	1	0
37	JC	1	1	1	0
37	JE	1	1	1	0
37	JG	1	1	1	0
37	JI	1	1	1	0
37	JK	1	1	1	0
37	JM	1	1	1	0
37	KC	1	1	1	0
37	KE	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
37	KG	1	1	1	0
37	KI	1	1	1	0
37	KK	1	1	1	0
37	KM	1	1	1	0
37	KO	1	1	1	0
37	LC	1	1	1	0
37	LE	1	1	1	0
37	LG	1	1	1	0
37	LI	1	1	1	0
37	LK	1	1	1	0
37	LM	1	1	1	0
37	MC	1	1	1	0
37	ME	1	1	1	0
37	MG	1	1	1	0
37	MI	1	1	1	0
37	MK	1	1	1	0
37	MM	1	1	1	0
37	NC	1	1	1	0
37	NE	1	1	1	0
37	NG	1	1	1	0
37	NI	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
37	NK	1	1	1	0
37	NM	1	1	1	0
37	OC	1	1	1	0
37	OE	1	1	1	0
37	OG	1	1	1	0
37	OI	1	1	1	0
37	OK	1	1	1	0
37	OM	1	1	1	0
37	OO	1	1	1	0
37	PC	1	1	1	0
37	PE	1	1	1	0
37	PG	1	1	1	0
37	PI	1	1	1	0
37	PK	1	1	1	0
37	PM	1	1	1	0
37	PO	1	1	1	0
37	QC	1	1	1	0
37	QE	1	1	1	0
37	QG	1	1	1	0
37	QI	1	1	1	0
37	QK	1	1	1	0

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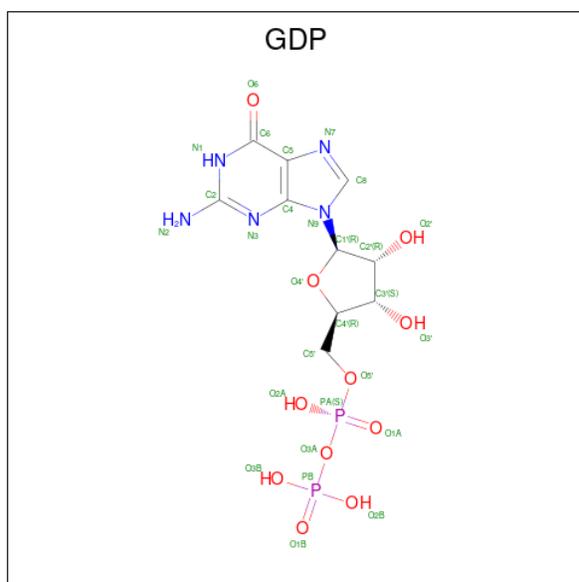
Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
37	QM	1	1	1	0
37	QO	1	1	1	0
37	RC	1	1	1	0
37	RE	1	1	1	0
37	RG	1	1	1	0
37	RI	1	1	1	0
37	RK	1	1	1	0
37	RM	1	1	1	0
37	RO	1	1	1	0
37	SE	1	1	1	0
37	SG	1	1	1	0
37	SI	1	1	1	0
37	SK	1	1	1	0
37	SM	1	1	1	0
37	SO	1	1	1	0
37	TE	1	1	1	0
37	TG	1	1	1	0
37	TI	1	1	1	0
37	TK	1	1	1	0
37	TM	1	1	1	0
37	TO	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
37	UE	1	1	1	0
37	UG	1	1	1	0
37	UI	1	1	1	0
37	UK	1	1	1	0
37	UM	1	1	1	0
37	UO	1	1	1	0
37	VE	1	1	1	0
37	VG	1	1	1	0
37	VI	1	1	1	0
37	VK	1	1	1	0
37	VM	1	1	1	0
37	VO	1	1	1	0
37	WE	1	1	1	0
37	WG	1	1	1	0
37	WI	1	1	1	0
37	WK	1	1	1	0
37	WM	1	1	1	0
37	WO	1	1	1	0

- Molecule 38 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula:  $C_{10}H_{15}N_5O_{11}P_2$ ).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
38	AB	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	AD	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	AF	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	AH	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	AJ	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	AL	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	BB	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	BD	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	BF	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	BH	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	BJ	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	BL	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	CB	1	Total	C	N	O	P	0
			28	10	5	11	2	
38	CD	1	Total	C	N	O	P	0
			28	10	5	11	2	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
38	CF	1	Total 28	C 10	N 5	O 11	P 2	0
38	CH	1	Total 28	C 10	N 5	O 11	P 2	0
38	CJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	CL	1	Total 28	C 10	N 5	O 11	P 2	0
38	DB	1	Total 28	C 10	N 5	O 11	P 2	0
38	DD	1	Total 28	C 10	N 5	O 11	P 2	0
38	DF	1	Total 28	C 10	N 5	O 11	P 2	0
38	DH	1	Total 28	C 10	N 5	O 11	P 2	0
38	DJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	DL	1	Total 28	C 10	N 5	O 11	P 2	0
38	EB	1	Total 28	C 10	N 5	O 11	P 2	0
38	ED	1	Total 28	C 10	N 5	O 11	P 2	0
38	EF	1	Total 28	C 10	N 5	O 11	P 2	0
38	EH	1	Total 28	C 10	N 5	O 11	P 2	0
38	EJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	EL	1	Total 28	C 10	N 5	O 11	P 2	0
38	EN	1	Total 28	C 10	N 5	O 11	P 2	0
38	FB	1	Total 28	C 10	N 5	O 11	P 2	0
38	FD	1	Total 28	C 10	N 5	O 11	P 2	0
38	FF	1	Total 28	C 10	N 5	O 11	P 2	0
38	FH	1	Total 28	C 10	N 5	O 11	P 2	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
38	FJ	1	28	10	5	11	2	0
38	FL	1	28	10	5	11	2	0
38	FN	1	28	10	5	11	2	0
38	GB	1	28	10	5	11	2	0
38	GD	1	28	10	5	11	2	0
38	GF	1	28	10	5	11	2	0
38	GH	1	28	10	5	11	2	0
38	GJ	1	28	10	5	11	2	0
38	GL	1	28	10	5	11	2	0
38	GN	1	28	10	5	11	2	0
38	HB	1	28	10	5	11	2	0
38	HD	1	28	10	5	11	2	0
38	HF	1	28	10	5	11	2	0
38	HH	1	28	10	5	11	2	0
38	HJ	1	28	10	5	11	2	0
38	HL	1	28	10	5	11	2	0
38	HN	1	28	10	5	11	2	0
38	IB	1	28	10	5	11	2	0
38	ID	1	28	10	5	11	2	0
38	IF	1	28	10	5	11	2	0
38	IH	1	28	10	5	11	2	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
38	IJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	IL	1	Total 28	C 10	N 5	O 11	P 2	0
38	IN	1	Total 28	C 10	N 5	O 11	P 2	0
38	JB	1	Total 28	C 10	N 5	O 11	P 2	0
38	JD	1	Total 28	C 10	N 5	O 11	P 2	0
38	JF	1	Total 28	C 10	N 5	O 11	P 2	0
38	JH	1	Total 28	C 10	N 5	O 11	P 2	0
38	JJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	JL	1	Total 28	C 10	N 5	O 11	P 2	0
38	JN	1	Total 28	C 10	N 5	O 11	P 2	0
38	KB	1	Total 28	C 10	N 5	O 11	P 2	0
38	KD	1	Total 28	C 10	N 5	O 11	P 2	0
38	KF	1	Total 28	C 10	N 5	O 11	P 2	0
38	KH	1	Total 28	C 10	N 5	O 11	P 2	0
38	KJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	KL	1	Total 28	C 10	N 5	O 11	P 2	0
38	KN	1	Total 28	C 10	N 5	O 11	P 2	0
38	LB	1	Total 28	C 10	N 5	O 11	P 2	0
38	LD	1	Total 28	C 10	N 5	O 11	P 2	0
38	LF	1	Total 28	C 10	N 5	O 11	P 2	0
38	LH	1	Total 28	C 10	N 5	O 11	P 2	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
38	LJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	LL	1	Total 28	C 10	N 5	O 11	P 2	0
38	LN	1	Total 28	C 10	N 5	O 11	P 2	0
38	MB	1	Total 28	C 10	N 5	O 11	P 2	0
38	MD	1	Total 28	C 10	N 5	O 11	P 2	0
38	MF	1	Total 28	C 10	N 5	O 11	P 2	0
38	MH	1	Total 28	C 10	N 5	O 11	P 2	0
38	MJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	ML	1	Total 28	C 10	N 5	O 11	P 2	0
38	MN	1	Total 28	C 10	N 5	O 11	P 2	0
38	NB	1	Total 28	C 10	N 5	O 11	P 2	0
38	ND	1	Total 28	C 10	N 5	O 11	P 2	0
38	NF	1	Total 28	C 10	N 5	O 11	P 2	0
38	NH	1	Total 28	C 10	N 5	O 11	P 2	0
38	NJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	NL	1	Total 28	C 10	N 5	O 11	P 2	0
38	NN	1	Total 28	C 10	N 5	O 11	P 2	0
38	OB	1	Total 28	C 10	N 5	O 11	P 2	0
38	OD	1	Total 28	C 10	N 5	O 11	P 2	0
38	OF	1	Total 28	C 10	N 5	O 11	P 2	0
38	OH	1	Total 28	C 10	N 5	O 11	P 2	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
38	OJ	1	28	10	5	11	2	0
38	OL	1	28	10	5	11	2	0
38	ON	1	28	10	5	11	2	0
38	PD	1	28	10	5	11	2	0
38	PF	1	28	10	5	11	2	0
38	PH	1	28	10	5	11	2	0
38	PJ	1	28	10	5	11	2	0
38	PL	1	28	10	5	11	2	0
38	PN	1	28	10	5	11	2	0
38	QD	1	28	10	5	11	2	0
38	QF	1	28	10	5	11	2	0
38	QH	1	28	10	5	11	2	0
38	QJ	1	28	10	5	11	2	0
38	QL	1	28	10	5	11	2	0
38	QN	1	28	10	5	11	2	0
38	RD	1	28	10	5	11	2	0
38	RF	1	28	10	5	11	2	0
38	RH	1	28	10	5	11	2	0
38	RJ	1	28	10	5	11	2	0
38	RL	1	28	10	5	11	2	0
38	RN	1	28	10	5	11	2	0

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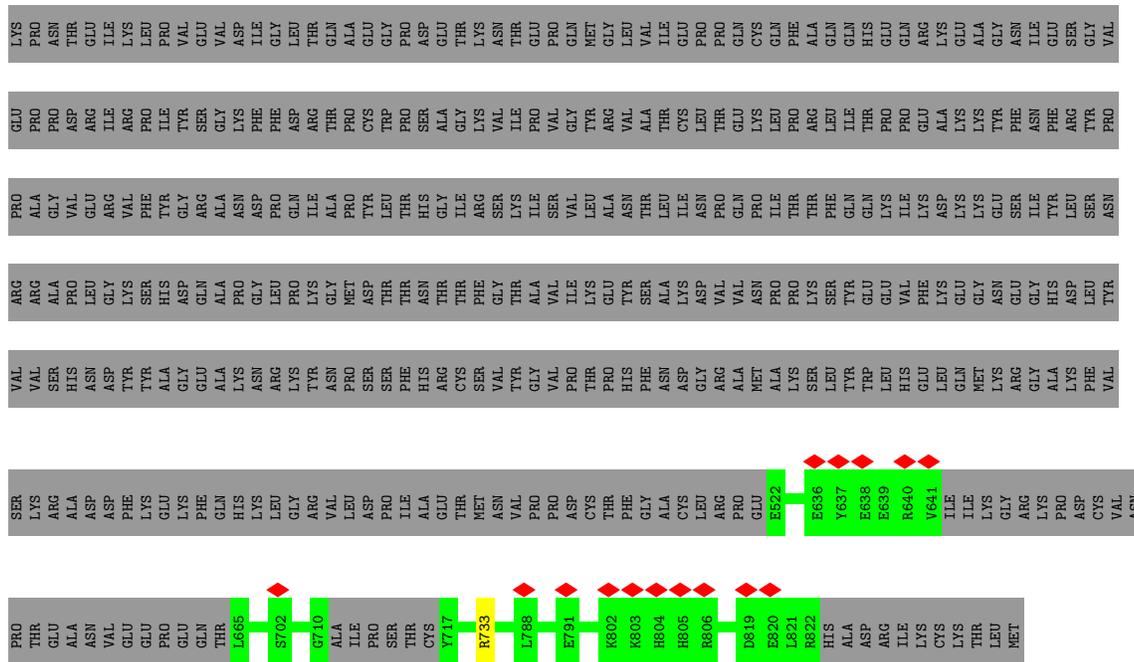
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
38	SD	1	28	10	5	11	2	0
38	SF	1	28	10	5	11	2	0
38	SH	1	28	10	5	11	2	0
38	SJ	1	28	10	5	11	2	0
38	SL	1	28	10	5	11	2	0
38	SN	1	28	10	5	11	2	0
38	TD	1	28	10	5	11	2	0
38	TF	1	28	10	5	11	2	0
38	TH	1	28	10	5	11	2	0
38	TJ	1	28	10	5	11	2	0
38	TL	1	28	10	5	11	2	0
38	TN	1	28	10	5	11	2	0
38	TP	1	28	10	5	11	2	0
38	UD	1	28	10	5	11	2	0
38	UF	1	28	10	5	11	2	0
38	UH	1	28	10	5	11	2	0
38	UJ	1	28	10	5	11	2	0
38	UL	1	28	10	5	11	2	0
38	UN	1	28	10	5	11	2	0
38	UP	1	28	10	5	11	2	0
38	VD	1	28	10	5	11	2	0

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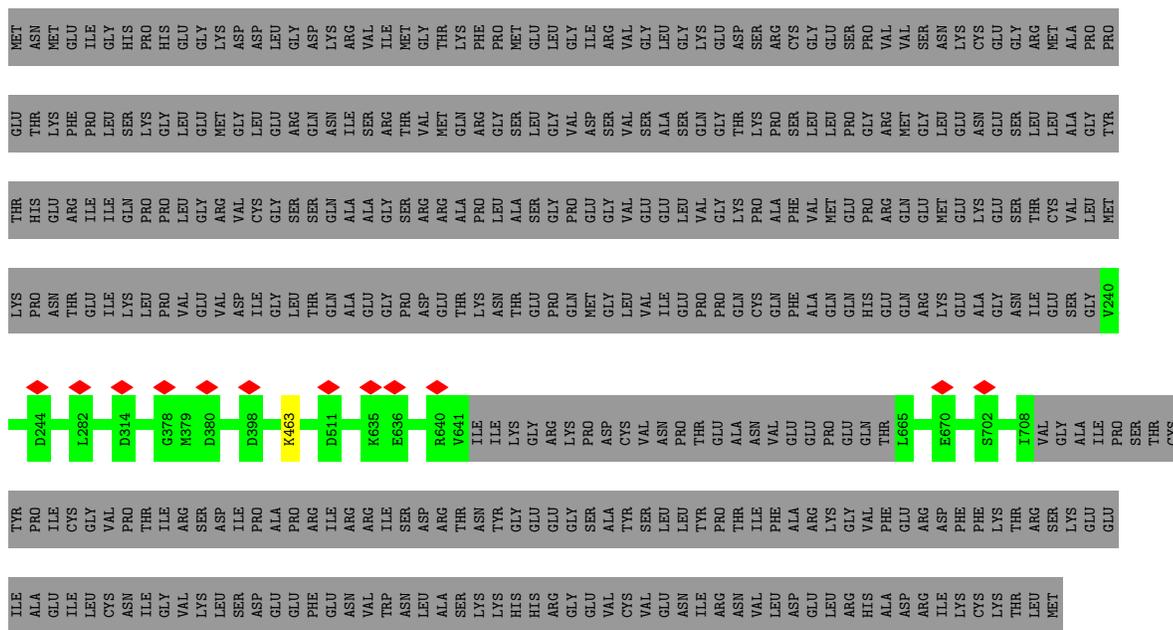
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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
38	VF	1	Total 28	C 10	N 5	O 11	P 2	0
38	VH	1	Total 28	C 10	N 5	O 11	P 2	0
38	VJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	VL	1	Total 28	C 10	N 5	O 11	P 2	0
38	VN	1	Total 28	C 10	N 5	O 11	P 2	0
38	VP	1	Total 28	C 10	N 5	O 11	P 2	0
38	WD	1	Total 28	C 10	N 5	O 11	P 2	0
38	WF	1	Total 28	C 10	N 5	O 11	P 2	0
38	WH	1	Total 28	C 10	N 5	O 11	P 2	0
38	WJ	1	Total 28	C 10	N 5	O 11	P 2	0
38	WL	1	Total 28	C 10	N 5	O 11	P 2	0
38	WN	1	Total 28	C 10	N 5	O 11	P 2	0
38	WP	1	Total 28	C 10	N 5	O 11	P 2	0





• Molecule 2: EF-hand domain-containing family member B



• Molecule 3: Cilia- and flagella-associated protein 53







• Molecule 5: Protein CFAP107



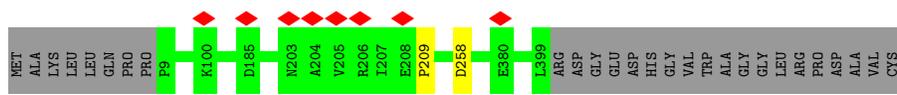
• Molecule 6: Protein CFAP141



• Molecule 7: Tektin-1

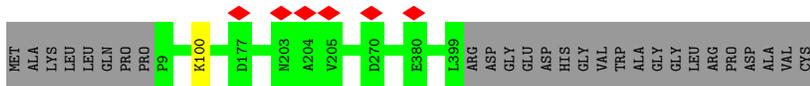


• Molecule 7: Tektin-1

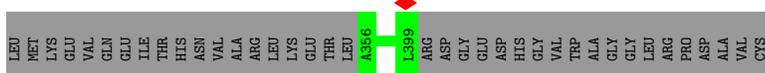
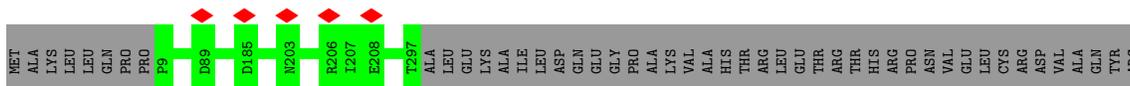
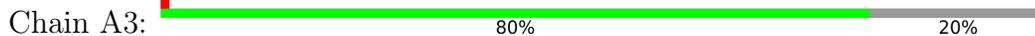


• Molecule 7: Tektin-1

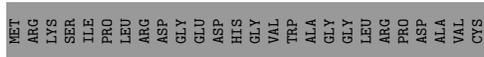




• Molecule 7: Tektin-1



• Molecule 7: Tektin-1



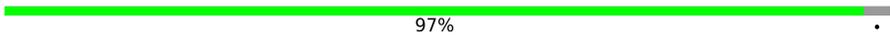
• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain

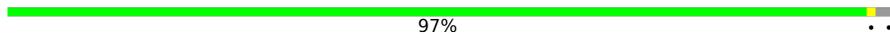


- Molecule 8: Tubulin alpha-1A chain

Chain AE:  97%

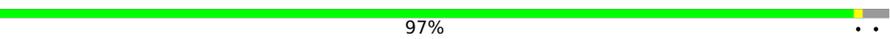


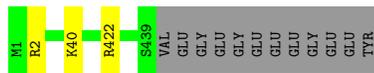
- Molecule 8: Tubulin alpha-1A chain

Chain AG:  97%

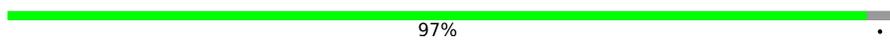


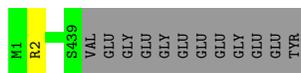
- Molecule 8: Tubulin alpha-1A chain

Chain AI:  97%

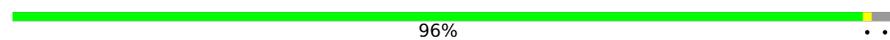


- Molecule 8: Tubulin alpha-1A chain

Chain AK:  97%

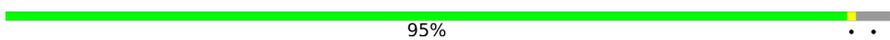


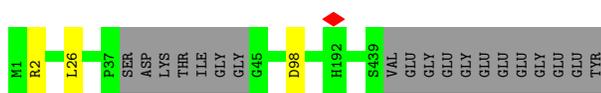
- Molecule 8: Tubulin alpha-1A chain

Chain AM:  96%

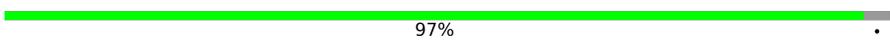


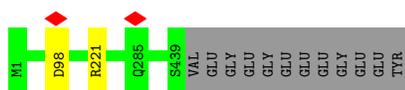
- Molecule 8: Tubulin alpha-1A chain

Chain BA:  95%

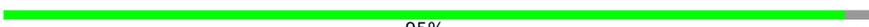


- Molecule 8: Tubulin alpha-1A chain

Chain BC:  97%



• Molecule 8: Tubulin alpha-1A chain

Chain BE:  95%

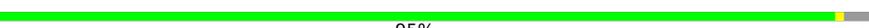


• Molecule 8: Tubulin alpha-1A chain

Chain BG:  97%

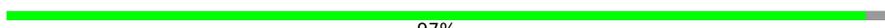


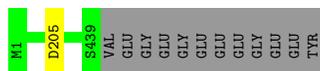
• Molecule 8: Tubulin alpha-1A chain

Chain BI:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain BK:  97%



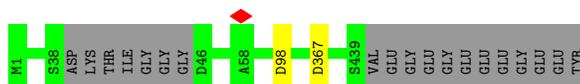
• Molecule 8: Tubulin alpha-1A chain

Chain BM:  96%

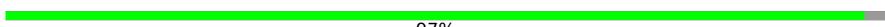


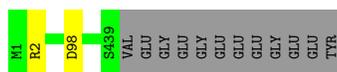
• Molecule 8: Tubulin alpha-1A chain

Chain CA:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain CC:  97%



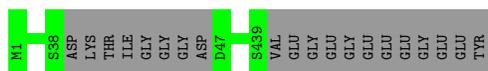
• Molecule 8: Tubulin alpha-1A chain



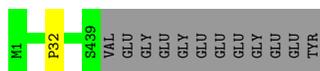
• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



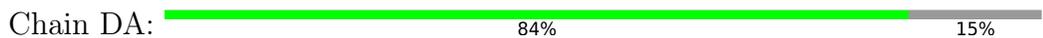
• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



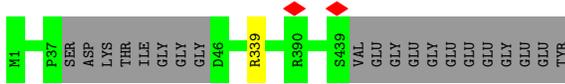
• Molecule 8: Tubulin alpha-1A chain





- Molecule 8: Tubulin alpha-1A chain

Chain DE: 95%



- Molecule 8: Tubulin alpha-1A chain

Chain DG: 95% 5%



- Molecule 8: Tubulin alpha-1A chain

Chain DI: 95% 5%



- Molecule 8: Tubulin alpha-1A chain

Chain DK: 95% 5%



- Molecule 8: Tubulin alpha-1A chain

Chain DM: 95%



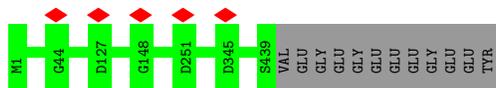
- Molecule 8: Tubulin alpha-1A chain

Chain EC: 97%



- Molecule 8: Tubulin alpha-1A chain

Chain EE: 97%



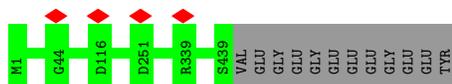
- Molecule 8: Tubulin alpha-1A chain

Chain EG: 97%



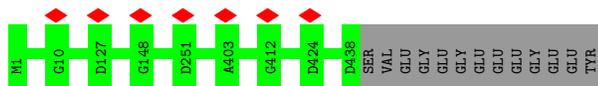
- Molecule 8: Tubulin alpha-1A chain

Chain EI: 97%



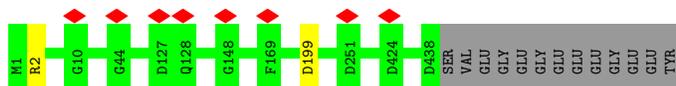
- Molecule 8: Tubulin alpha-1A chain

Chain EK: 97%



- Molecule 8: Tubulin alpha-1A chain

Chain EM: 97%



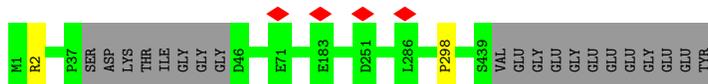
- Molecule 8: Tubulin alpha-1A chain

Chain FC: 95%



- Molecule 8: Tubulin alpha-1A chain

Chain FE: 95%



- Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



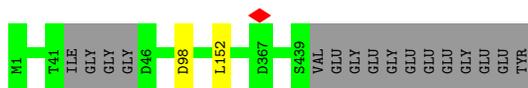
• Molecule 8: Tubulin alpha-1A chain



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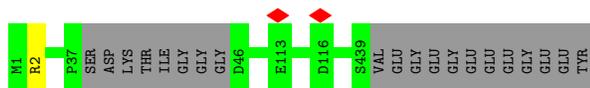
• Molecule 8: Tubulin alpha-1A chain



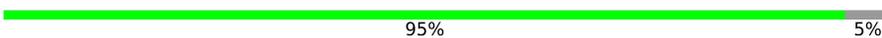
• Molecule 8: Tubulin alpha-1A chain



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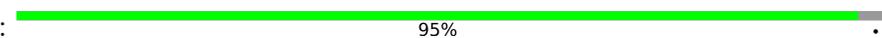


• Molecule 8: Tubulin alpha-1A chain

Chain GI:  95% 5%

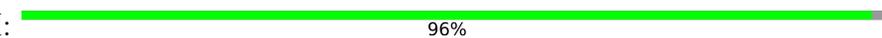


• Molecule 8: Tubulin alpha-1A chain

Chain GK:  95% .

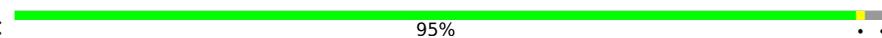


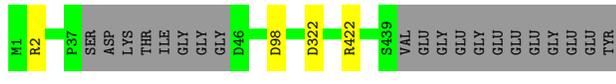
• Molecule 8: Tubulin alpha-1A chain

Chain GM:  96% .



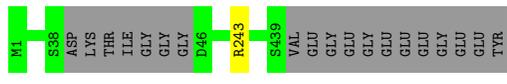
• Molecule 8: Tubulin alpha-1A chain

Chain HC:  95% . .



• Molecule 8: Tubulin alpha-1A chain

Chain HE:  96% .



• Molecule 8: Tubulin alpha-1A chain

Chain HG:  95% .



• Molecule 8: Tubulin alpha-1A chain

Chain HI:  95% .



• Molecule 8: Tubulin alpha-1A chain

Chain HK:  95%



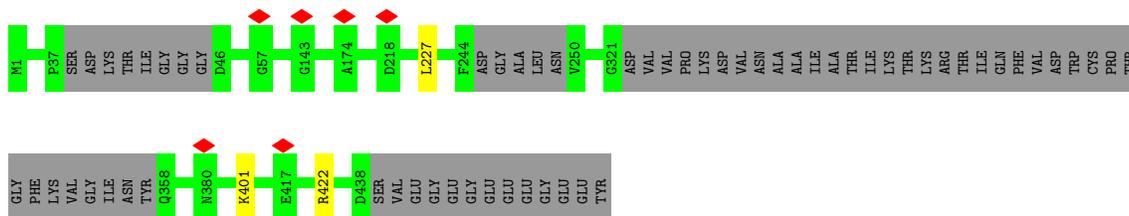
• Molecule 8: Tubulin alpha-1A chain

Chain HM:  95%

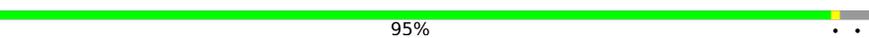


• Molecule 8: Tubulin alpha-1A chain

Chain HO:  86% 14%

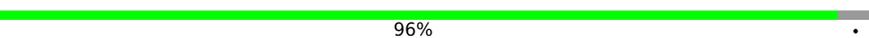


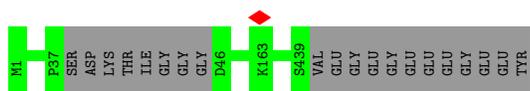
• Molecule 8: Tubulin alpha-1A chain

Chain IC:  95%

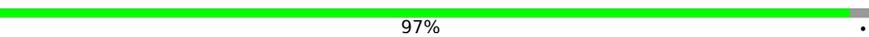


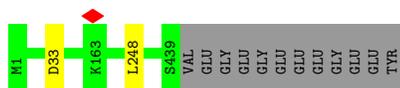
• Molecule 8: Tubulin alpha-1A chain

Chain IE:  96%

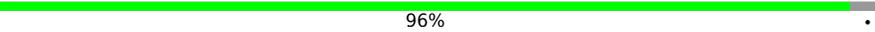


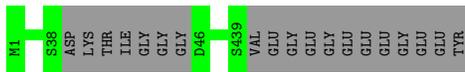
• Molecule 8: Tubulin alpha-1A chain

Chain IG:  97%



• Molecule 8: Tubulin alpha-1A chain

Chain II:  96%

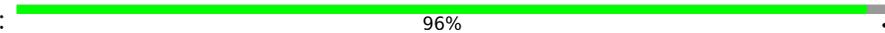


- Molecule 8: Tubulin alpha-1A chain

Chain IK:  97%

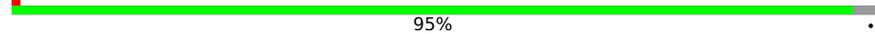


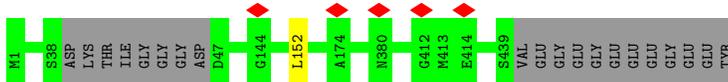
- Molecule 8: Tubulin alpha-1A chain

Chain IM:  96%

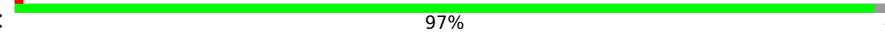


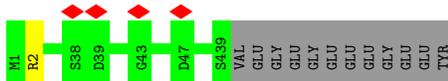
- Molecule 8: Tubulin alpha-1A chain

Chain IO:  95%

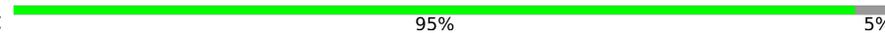


- Molecule 8: Tubulin alpha-1A chain

Chain JC:  97%



- Molecule 8: Tubulin alpha-1A chain

Chain JE:  95% 5%

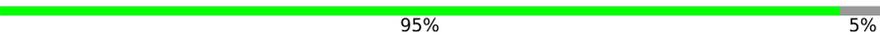


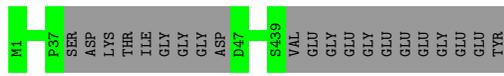
- Molecule 8: Tubulin alpha-1A chain

Chain JG:  95% 5%

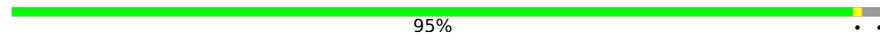


• Molecule 8: Tubulin alpha-1A chain

Chain JI:  95% 5%

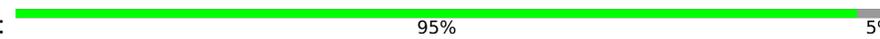


• Molecule 8: Tubulin alpha-1A chain

Chain JK:  95% 5%

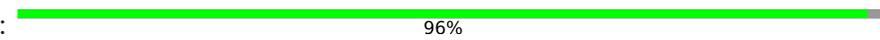


• Molecule 8: Tubulin alpha-1A chain

Chain JM:  95% 5%

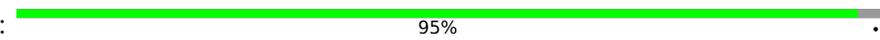


• Molecule 8: Tubulin alpha-1A chain

Chain KC:  96% 4%

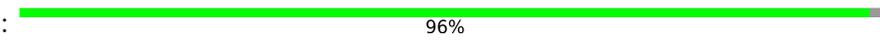


• Molecule 8: Tubulin alpha-1A chain

Chain KE:  95% 5%

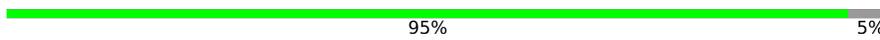


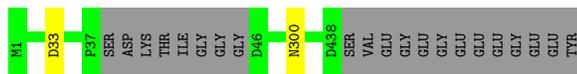
• Molecule 8: Tubulin alpha-1A chain

Chain KG:  96% 4%

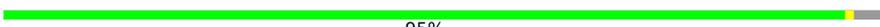


• Molecule 8: Tubulin alpha-1A chain

Chain KI:  95% 5%



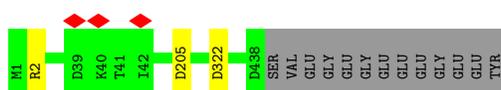
- Molecule 8: Tubulin alpha-1A chain

Chain KK:  95%



- Molecule 8: Tubulin alpha-1A chain

Chain KM:  96%

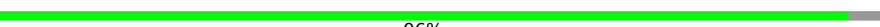


- Molecule 8: Tubulin alpha-1A chain

Chain KO:  95%

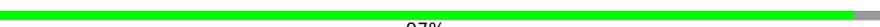


- Molecule 8: Tubulin alpha-1A chain

Chain LC:  96%



- Molecule 8: Tubulin alpha-1A chain

Chain LE:  97%



- Molecule 8: Tubulin alpha-1A chain

Chain LG:  95%

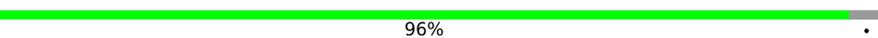


- Molecule 8: Tubulin alpha-1A chain

Chain LI:  96%

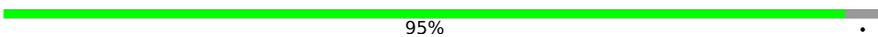


• Molecule 8: Tubulin alpha-1A chain

Chain LK:  96%

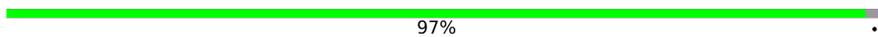


• Molecule 8: Tubulin alpha-1A chain

Chain LM:  95%

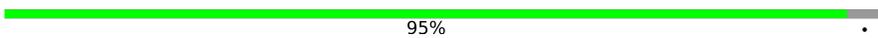


• Molecule 8: Tubulin alpha-1A chain

Chain MC:  97%

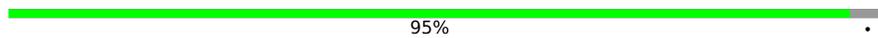


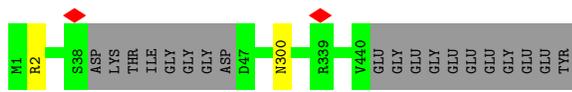
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Chain ME:  95%

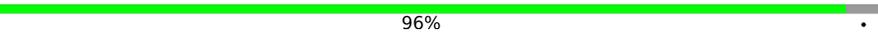


• Molecule 8: Tubulin alpha-1A chain

Chain MG:  95%

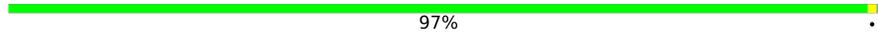


• Molecule 8: Tubulin alpha-1A chain

Chain MI:  96%

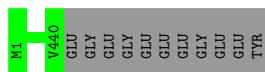


• Molecule 8: Tubulin alpha-1A chain

Chain MK:  97%



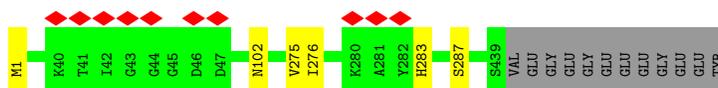
• Molecule 8: Tubulin alpha-1A chain



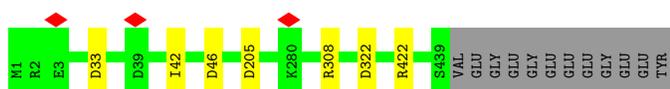
• Molecule 8: Tubulin alpha-1A chain



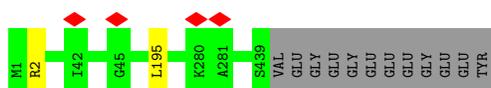
• Molecule 8: Tubulin alpha-1A chain



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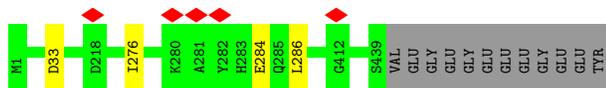


• Molecule 8: Tubulin alpha-1A chain

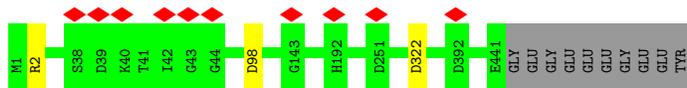


• Molecule 8: Tubulin alpha-1A chain





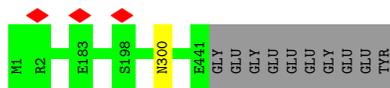
• Molecule 8: Tubulin alpha-1A chain



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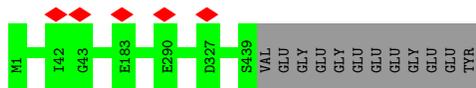
• Molecule 8: Tubulin alpha-1A chain



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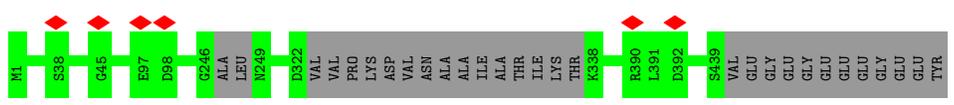
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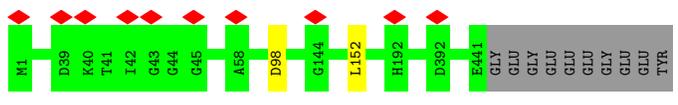
• Molecule 8: Tubulin alpha-1A chain



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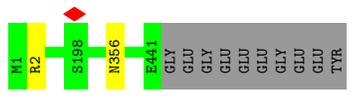
• Molecule 8: Tubulin alpha-1A chain



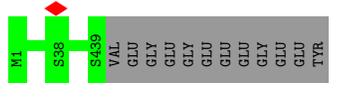
• Molecule 8: Tubulin alpha-1A chain



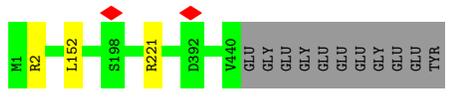
• Molecule 8: Tubulin alpha-1A chain



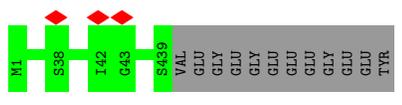
• Molecule 8: Tubulin alpha-1A chain



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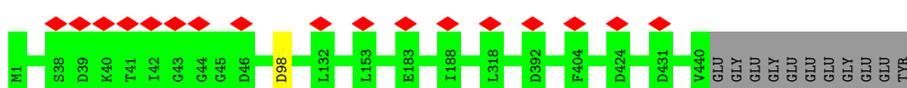
• Molecule 8: Tubulin alpha-1A chain



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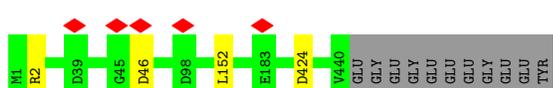
• Molecule 8: Tubulin alpha-1A chain



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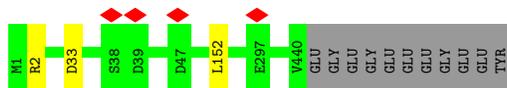


• Molecule 8: Tubulin alpha-1A chain

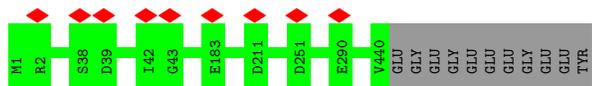


• Molecule 8: Tubulin alpha-1A chain





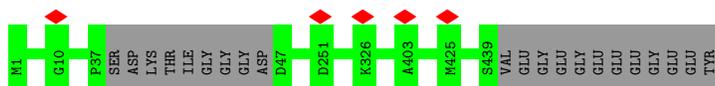
• Molecule 8: Tubulin alpha-1A chain



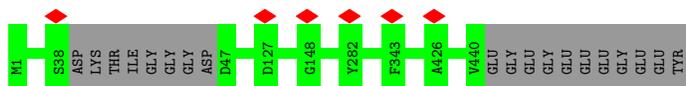
• Molecule 8: Tubulin alpha-1A chain



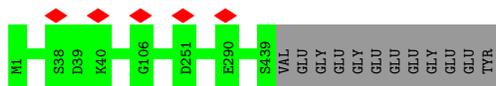
• Molecule 8: Tubulin alpha-1A chain



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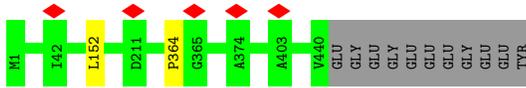


• Molecule 8: Tubulin alpha-1A chain



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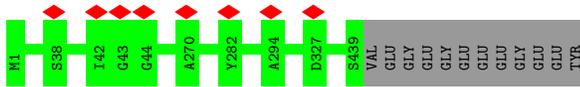




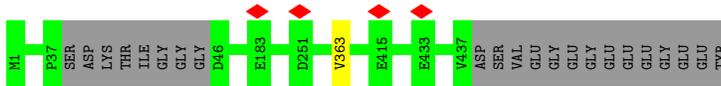
- Molecule 8: Tubulin alpha-1A chain



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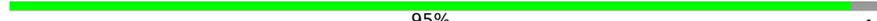


- Molecule 8: Tubulin alpha-1A chain

Chain SM:  95%



- Molecule 8: Tubulin alpha-1A chain

Chain SO:  95%



- Molecule 8: Tubulin alpha-1A chain

Chain TE:  95% 5%

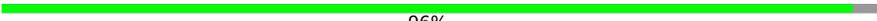


- Molecule 8: Tubulin alpha-1A chain

Chain TG:  95% 5%



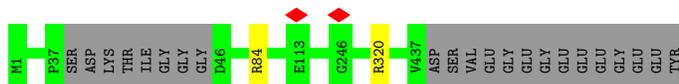
- Molecule 8: Tubulin alpha-1A chain

Chain TI:  96%



- Molecule 8: Tubulin alpha-1A chain

Chain TK:  95% 5%

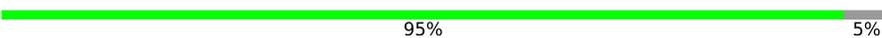


- Molecule 8: Tubulin alpha-1A chain

Chain TM:  95%

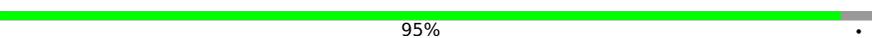


• Molecule 8: Tubulin alpha-1A chain

Chain TO:  95% 5%



• Molecule 8: Tubulin alpha-1A chain

Chain UE:  95%

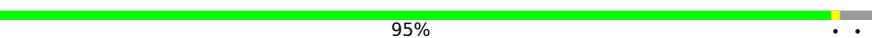


• Molecule 8: Tubulin alpha-1A chain

Chain UG:  95%

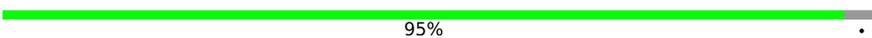


• Molecule 8: Tubulin alpha-1A chain

Chain UI:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain UK:  95%

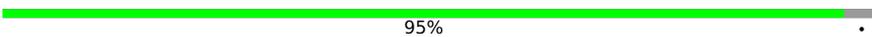


• Molecule 8: Tubulin alpha-1A chain

Chain UM:  95%

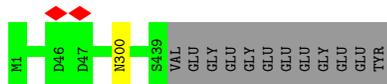


• Molecule 8: Tubulin alpha-1A chain

Chain UO:  95%



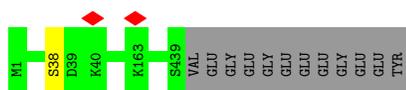
• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



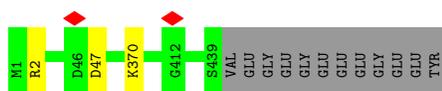
• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain





• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



• Molecule 8: Tubulin alpha-1A chain



• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain





• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



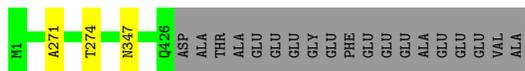
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

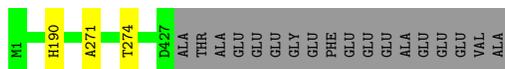


• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

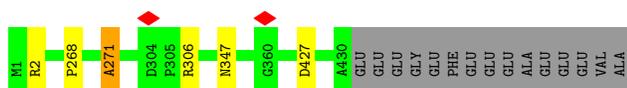




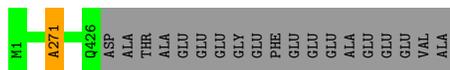
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

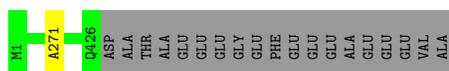




• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



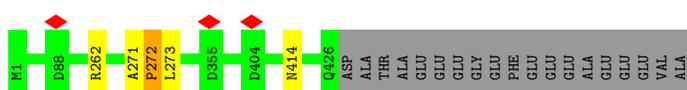
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

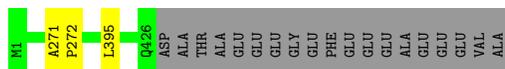


• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

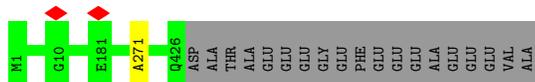




• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



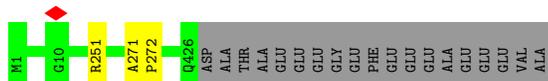
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

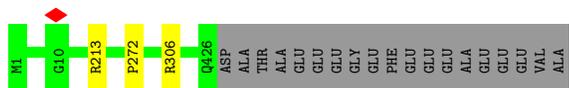


• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

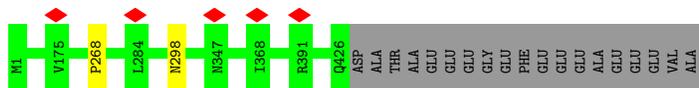




• Molecule 9: Tubulin beta-4B chain



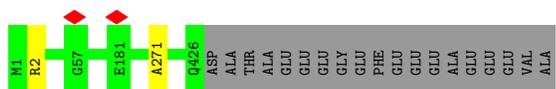
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



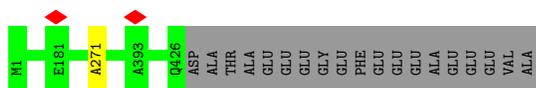
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



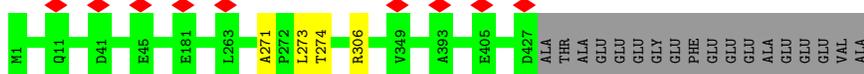
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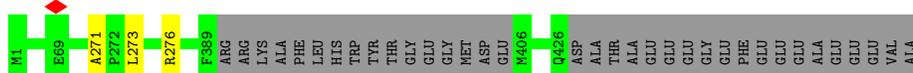
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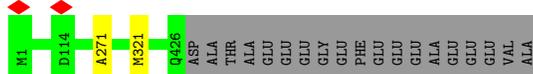
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



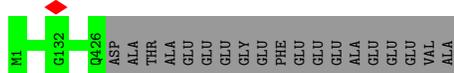
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



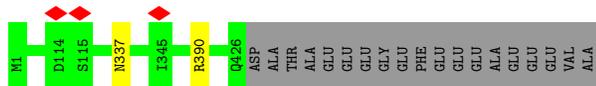
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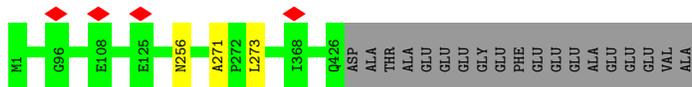
• Molecule 9: Tubulin beta-4B chain



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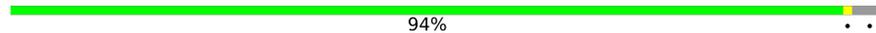
• Molecule 9: Tubulin beta-4B chain

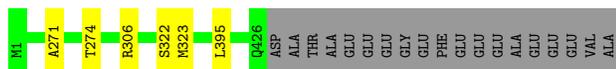


• Molecule 9: Tubulin beta-4B chain

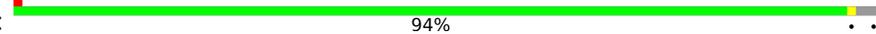


● Molecule 9: Tubulin beta-4B chain

Chain HL:  94%



● Molecule 9: Tubulin beta-4B chain

Chain HN:  94%

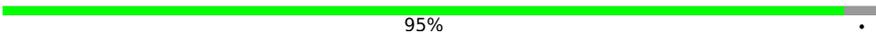


● Molecule 9: Tubulin beta-4B chain

Chain IB:  91%

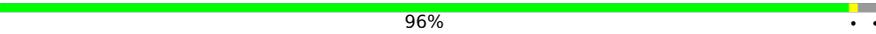


● Molecule 9: Tubulin beta-4B chain

Chain ID:  95%



● Molecule 9: Tubulin beta-4B chain

Chain IF:  96%



● Molecule 9: Tubulin beta-4B chain

Chain IH:  95%



● Molecule 9: Tubulin beta-4B chain

Chain IJ:  96%



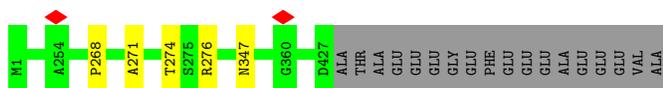
● Molecule 9: Tubulin beta-4B chain

Chain IL:  95%

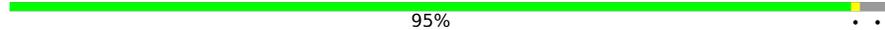


• Molecule 9: Tubulin beta-4B chain

Chain IN:  95%

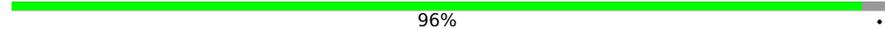


• Molecule 9: Tubulin beta-4B chain

Chain JB:  95%

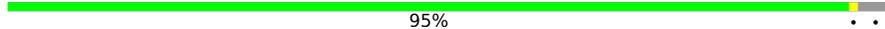


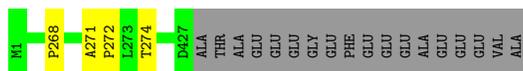
• Molecule 9: Tubulin beta-4B chain

Chain JD:  96%



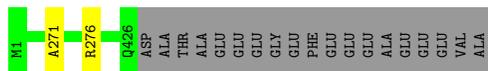
• Molecule 9: Tubulin beta-4B chain

Chain JF:  95%

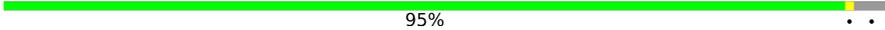


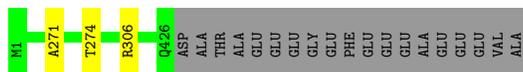
• Molecule 9: Tubulin beta-4B chain

Chain JH:  95%

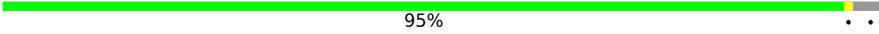


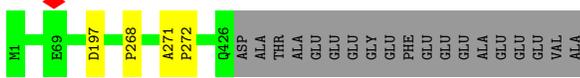
• Molecule 9: Tubulin beta-4B chain

Chain JJ:  95%

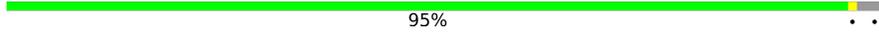


• Molecule 9: Tubulin beta-4B chain

Chain JL:  95%

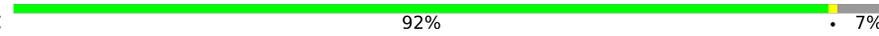


- Molecule 9: Tubulin beta-4B chain

Chain JN:  95%

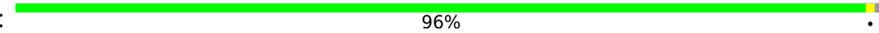


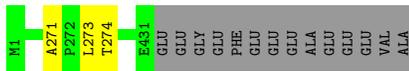
- Molecule 9: Tubulin beta-4B chain

Chain KB:  92% 7%

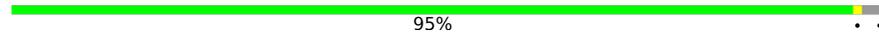


- Molecule 9: Tubulin beta-4B chain

Chain KD:  96%

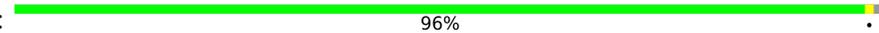


- Molecule 9: Tubulin beta-4B chain

Chain KF:  95%



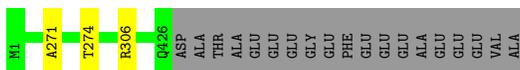
- Molecule 9: Tubulin beta-4B chain

Chain KH:  96%

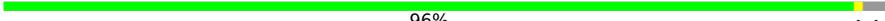


- Molecule 9: Tubulin beta-4B chain

Chain KJ:  95%

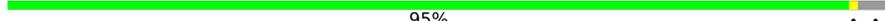


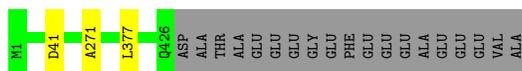
- Molecule 9: Tubulin beta-4B chain

Chain KL:  96% ..



- Molecule 9: Tubulin beta-4B chain

Chain KN:  95% ..



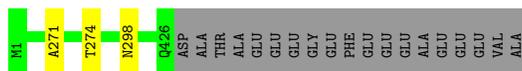
- Molecule 9: Tubulin beta-4B chain

Chain LB:  98% ..

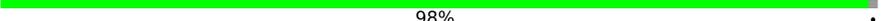


- Molecule 9: Tubulin beta-4B chain

Chain LD:  95% ..



- Molecule 9: Tubulin beta-4B chain

Chain LF:  98% .

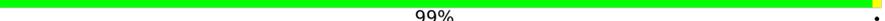


- Molecule 9: Tubulin beta-4B chain

Chain LH:  95% .

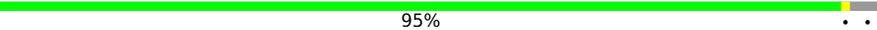


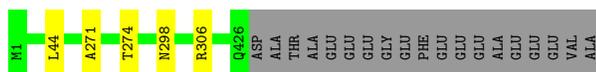
- Molecule 9: Tubulin beta-4B chain

Chain LJ:  99% .



- Molecule 9: Tubulin beta-4B chain

Chain LL:  95%

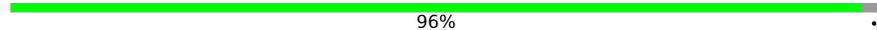


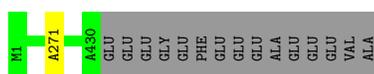
- Molecule 9: Tubulin beta-4B chain

Chain LN:  98%



- Molecule 9: Tubulin beta-4B chain

Chain MB:  96%



- Molecule 9: Tubulin beta-4B chain

Chain MD:  96%



- Molecule 9: Tubulin beta-4B chain

Chain MF:  97%



- Molecule 9: Tubulin beta-4B chain

Chain MH:  96%

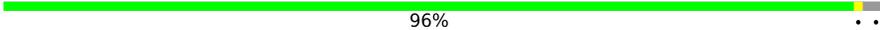


- Molecule 9: Tubulin beta-4B chain

Chain MJ:  96%

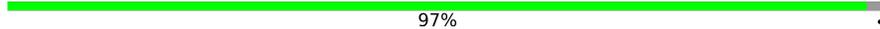


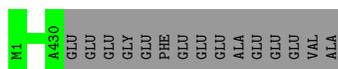
- Molecule 9: Tubulin beta-4B chain

Chain ML:  96%

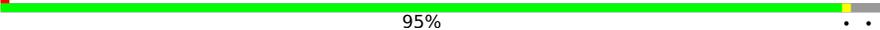


- Molecule 9: Tubulin beta-4B chain

Chain MN:  97%

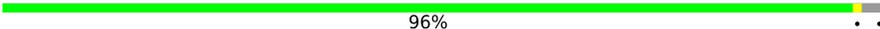


- Molecule 9: Tubulin beta-4B chain

Chain NB:  95%



- Molecule 9: Tubulin beta-4B chain

Chain ND:  96%

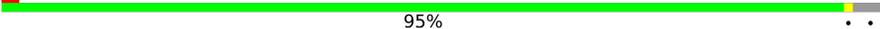


- Molecule 9: Tubulin beta-4B chain

Chain NF:  96%



- Molecule 9: Tubulin beta-4B chain

Chain NH:  95%



- Molecule 9: Tubulin beta-4B chain

Chain NJ:  95%



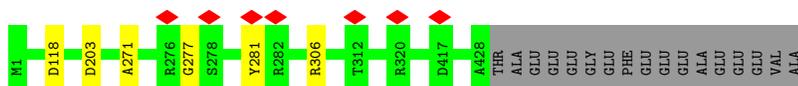
- Molecule 9: Tubulin beta-4B chain

Chain NL:  95%



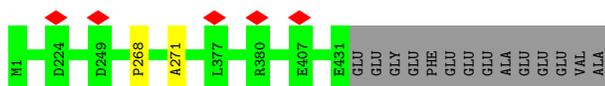
• Molecule 9: Tubulin beta-4B chain

Chain NN:  95%

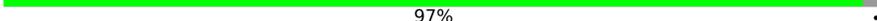


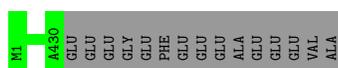
• Molecule 9: Tubulin beta-4B chain

Chain OB:  96%

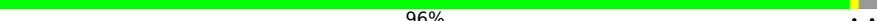


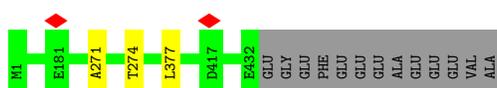
• Molecule 9: Tubulin beta-4B chain

Chain OD:  97%

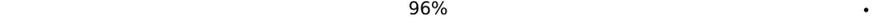


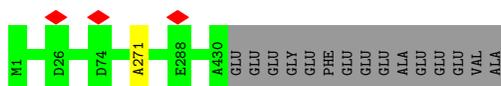
• Molecule 9: Tubulin beta-4B chain

Chain OF:  96%



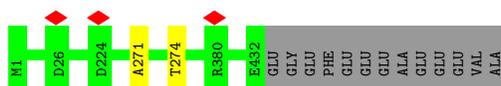
• Molecule 9: Tubulin beta-4B chain

Chain OH:  96%

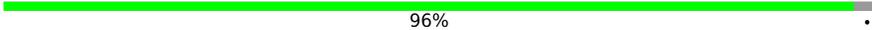


• Molecule 9: Tubulin beta-4B chain

Chain OJ:  97%



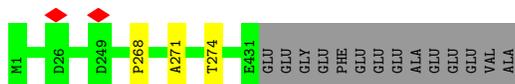
• Molecule 9: Tubulin beta-4B chain

Chain OL:  96%

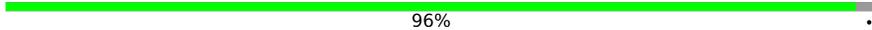


- Molecule 9: Tubulin beta-4B chain

Chain ON:  96%

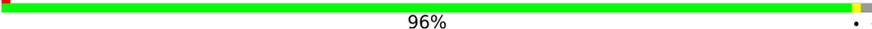


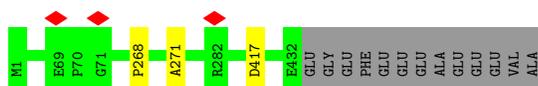
- Molecule 9: Tubulin beta-4B chain

Chain PD:  96%

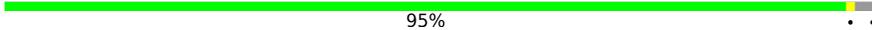


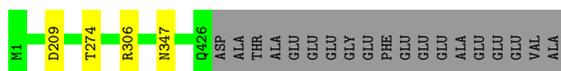
- Molecule 9: Tubulin beta-4B chain

Chain PF:  96%

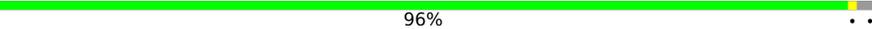


- Molecule 9: Tubulin beta-4B chain

Chain PH:  95%

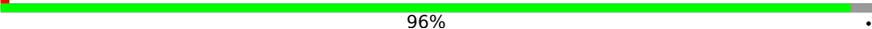


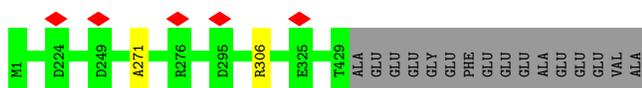
- Molecule 9: Tubulin beta-4B chain

Chain PJ:  96%

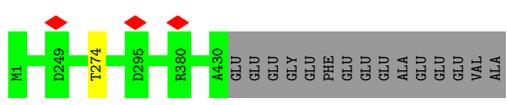


- Molecule 9: Tubulin beta-4B chain

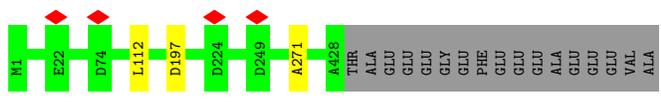
Chain PL:  96%



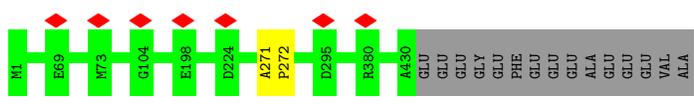
- Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain



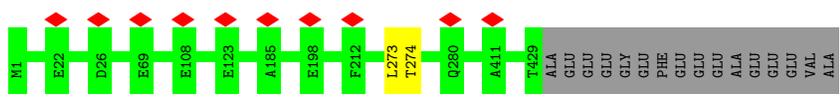
• Molecule 9: Tubulin beta-4B chain



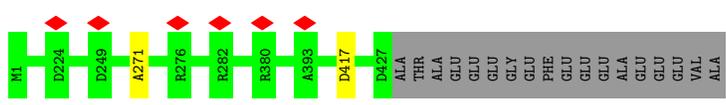
• Molecule 9: Tubulin beta-4B chain



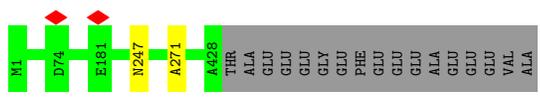
• Molecule 9: Tubulin beta-4B chain



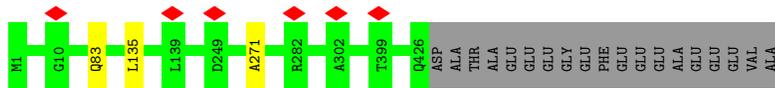
• Molecule 9: Tubulin beta-4B chain



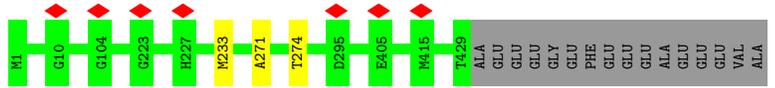
• Molecule 9: Tubulin beta-4B chain



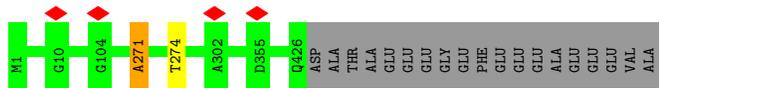
• Molecule 9: Tubulin beta-4B chain



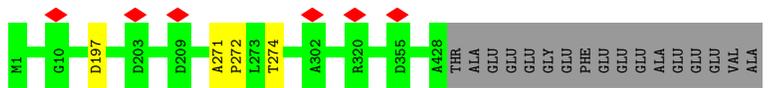
• Molecule 9: Tubulin beta-4B chain



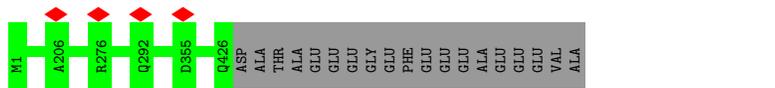
• Molecule 9: Tubulin beta-4B chain



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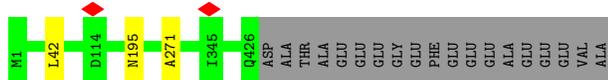
• Molecule 9: Tubulin beta-4B chain



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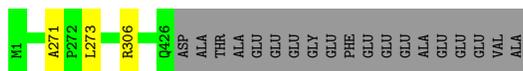
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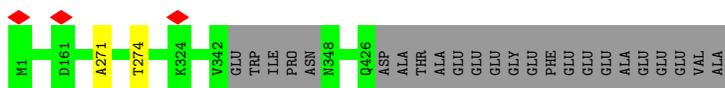
• Molecule 9: Tubulin beta-4B chain



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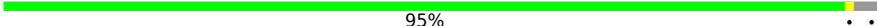
• Molecule 9: Tubulin beta-4B chain

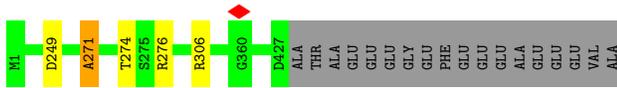


• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

Chain UF:  95%

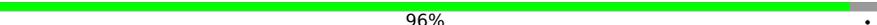


- Molecule 9: Tubulin beta-4B chain

Chain UH:  95%



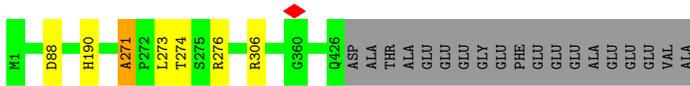
- Molecule 9: Tubulin beta-4B chain

Chain UJ:  96%

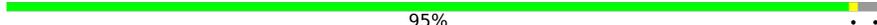


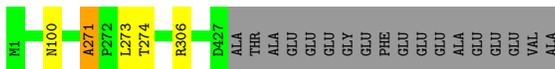
- Molecule 9: Tubulin beta-4B chain

Chain UL:  94%

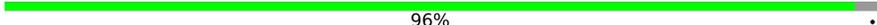


- Molecule 9: Tubulin beta-4B chain

Chain UN:  95%

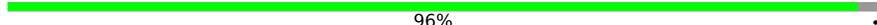


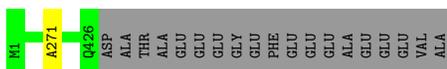
- Molecule 9: Tubulin beta-4B chain

Chain UP:  96%



- Molecule 9: Tubulin beta-4B chain

Chain VD:  96%



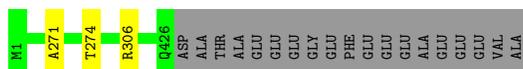
- Molecule 9: Tubulin beta-4B chain

Chain VF:  95%

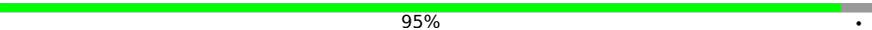


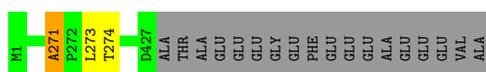
- Molecule 9: Tubulin beta-4B chain

Chain VH:  95%

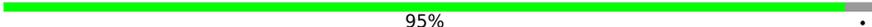


- Molecule 9: Tubulin beta-4B chain

Chain VJ:  95%

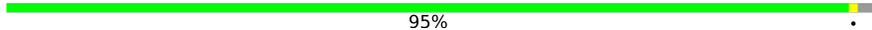


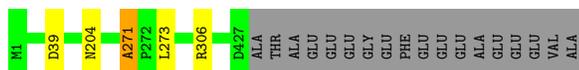
- Molecule 9: Tubulin beta-4B chain

Chain VL:  95%



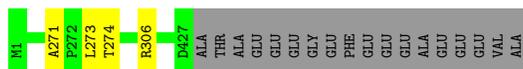
- Molecule 9: Tubulin beta-4B chain

Chain VN:  95%



- Molecule 9: Tubulin beta-4B chain

Chain VP:  95%



- Molecule 9: Tubulin beta-4B chain

Chain WD:  95%



- Molecule 9: Tubulin beta-4B chain



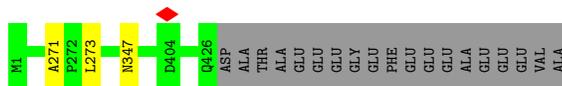
• Molecule 9: Tubulin beta-4B chain



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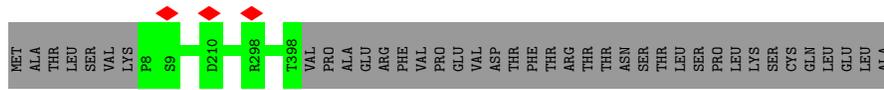


• Molecule 10: Meiosis-specific nuclear structural protein 1

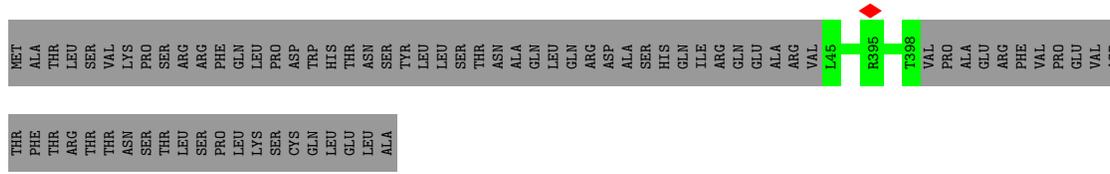
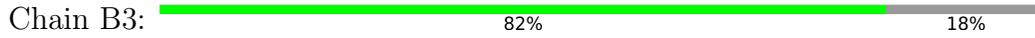




• Molecule 11: Tektin-2



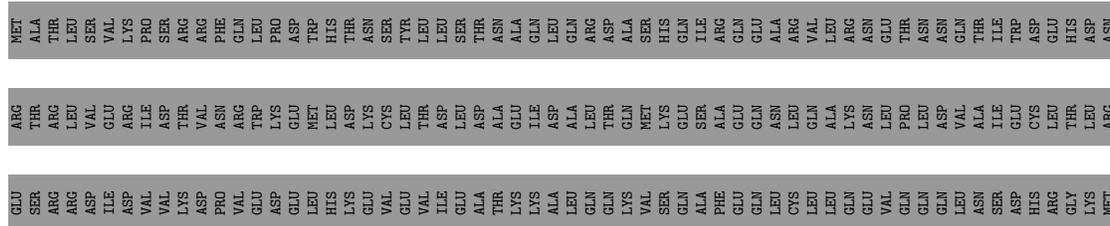
• Molecule 11: Tektin-2



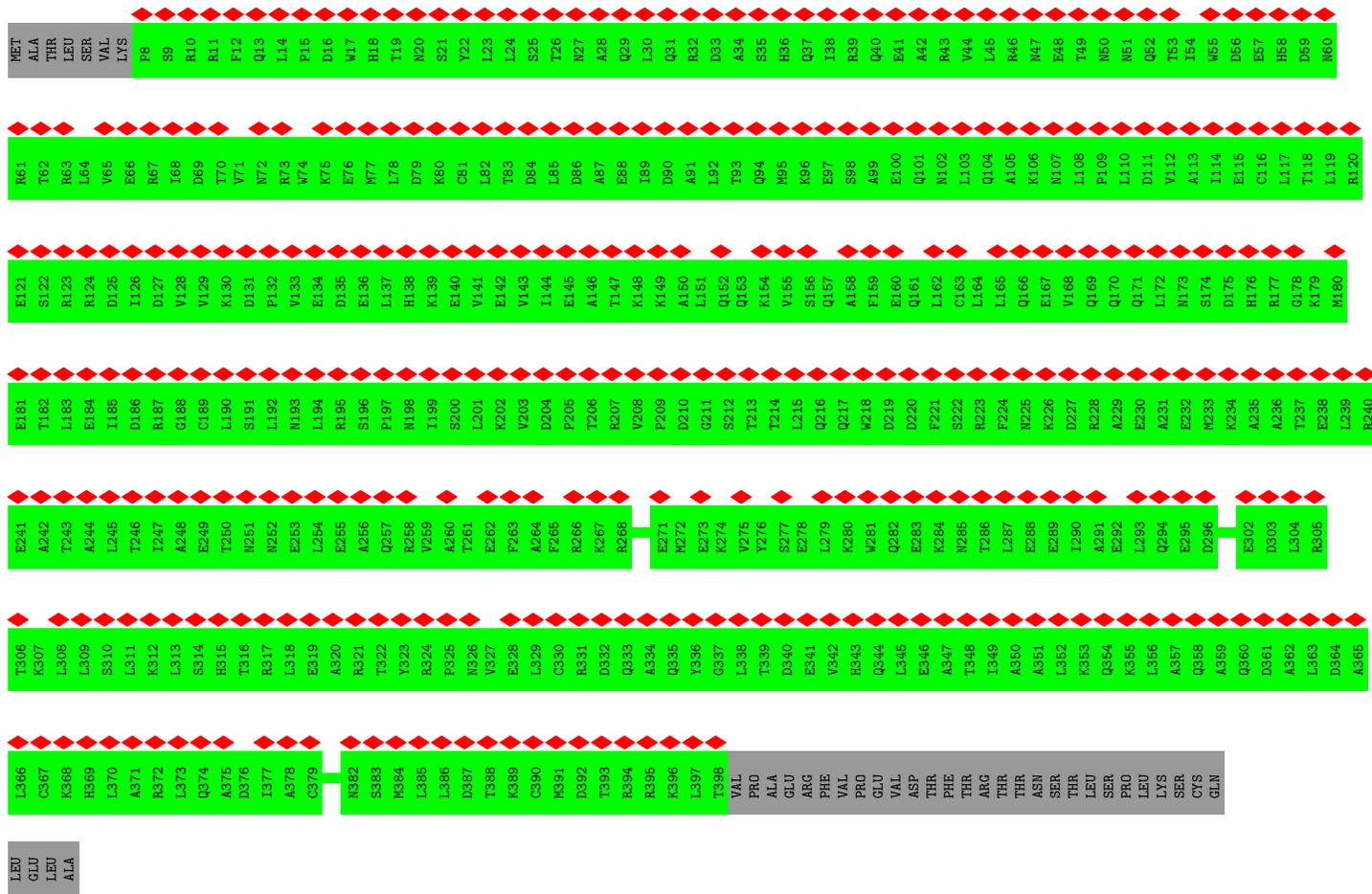
• Molecule 11: Tektin-2



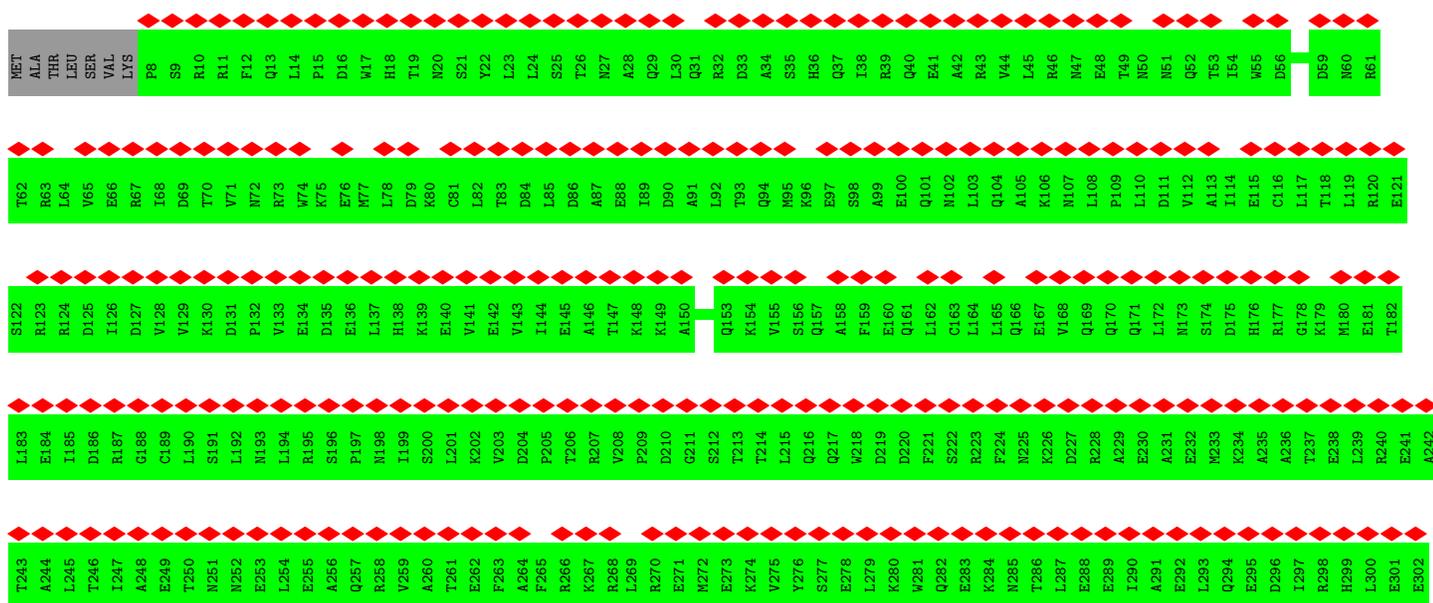
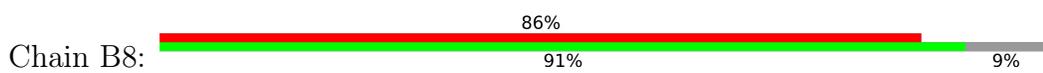
• Molecule 11: Tektin-2







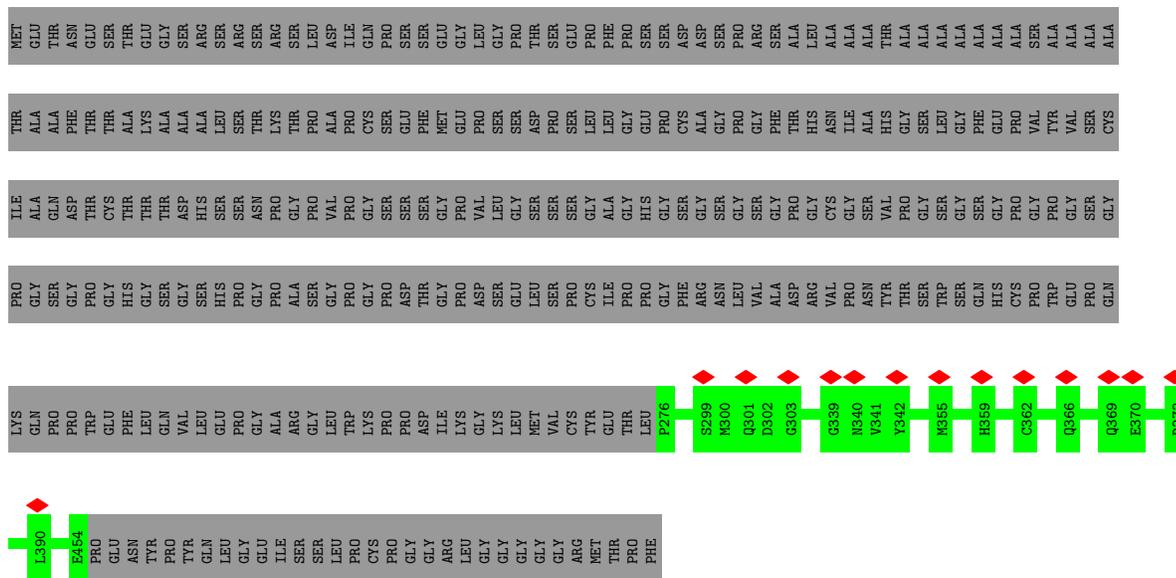
Molecule 11: Tektin-2



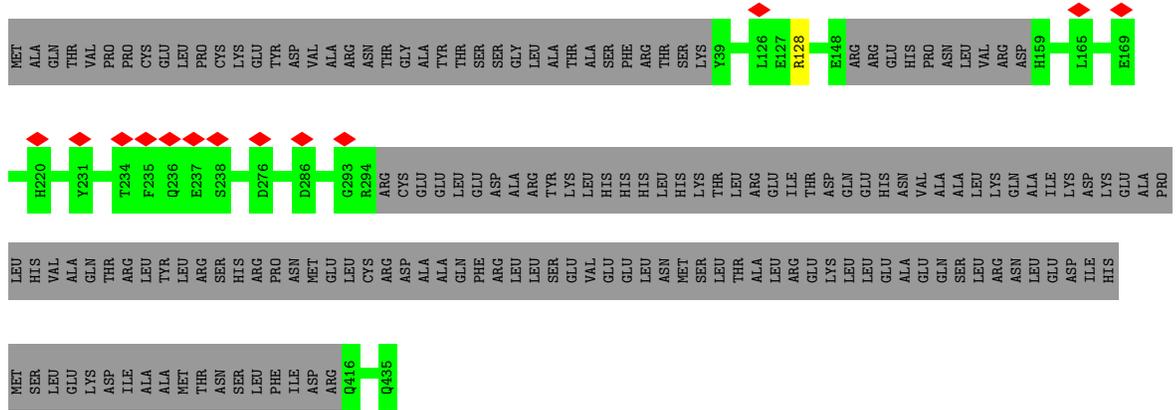




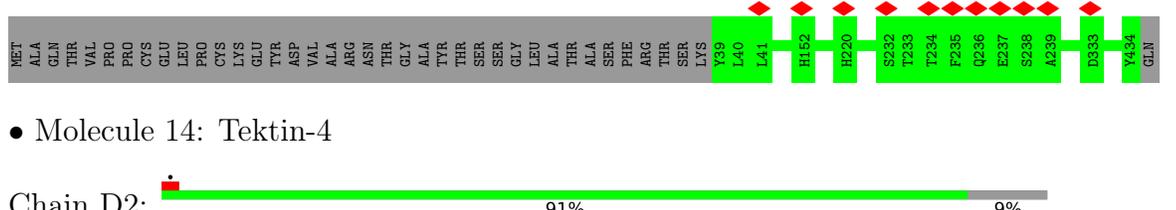




• Molecule 14: Tektin-4



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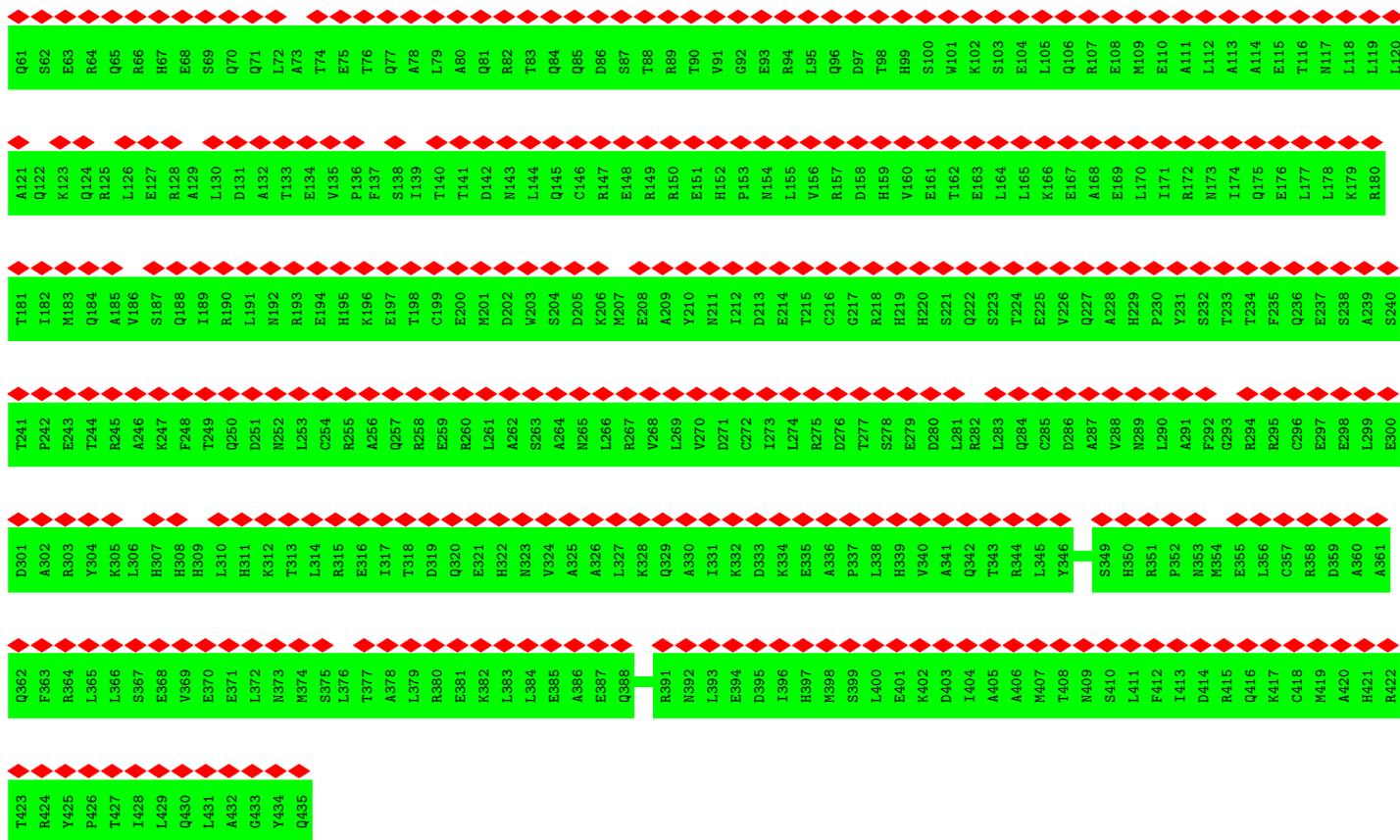


• Molecule 14: Tektin-4

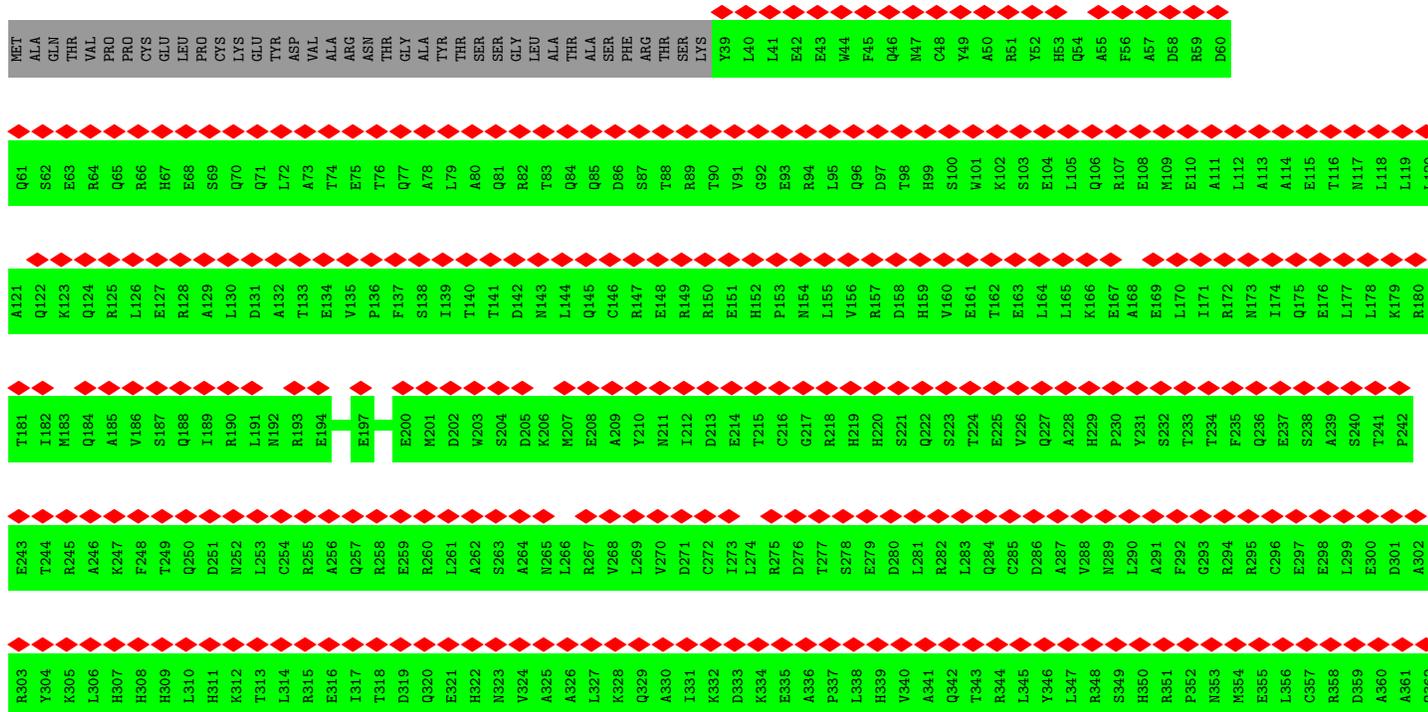


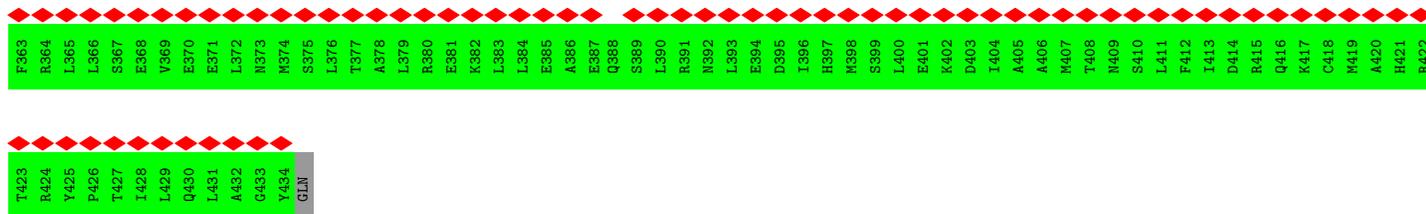
• Molecule 14: Tektin-4



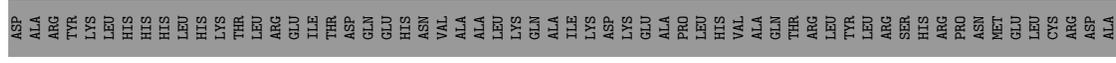


- Molecule 14: Tektin-4

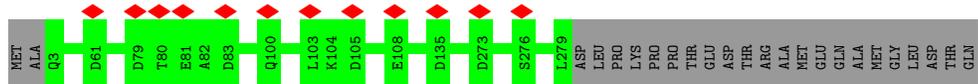
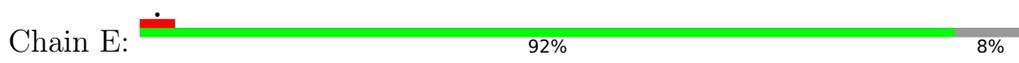




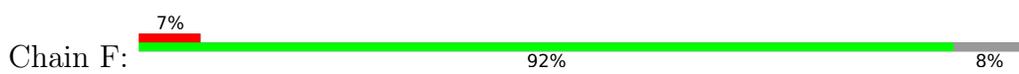
• Molecule 14: Tektin-4

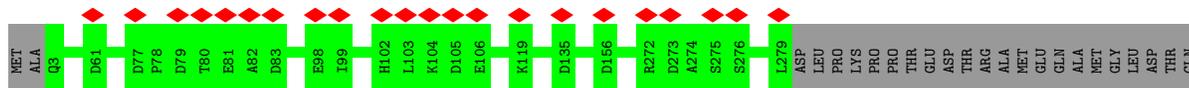


• Molecule 15: Cilia- and flagella-associated protein 161

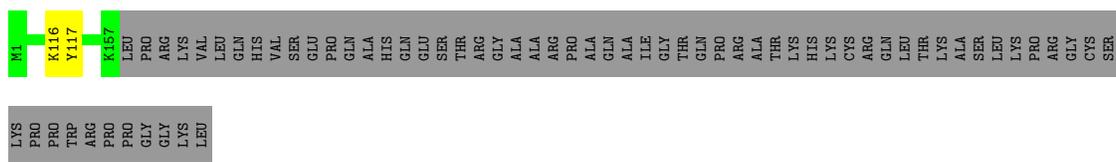


• Molecule 15: Cilia- and flagella-associated protein 161

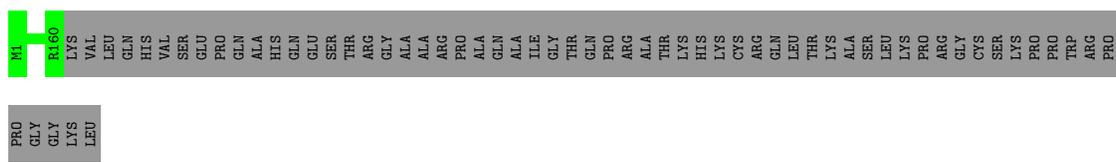




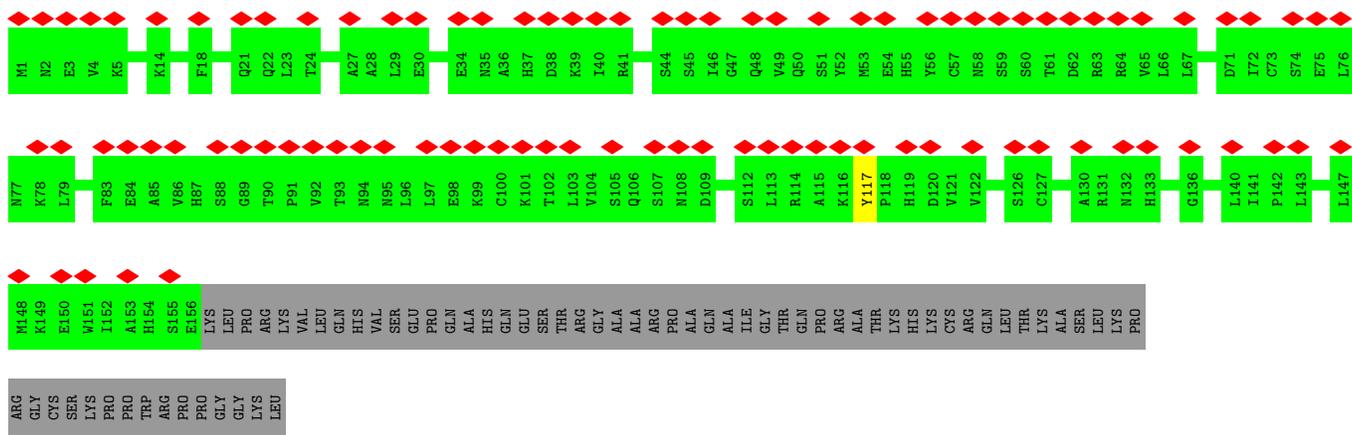
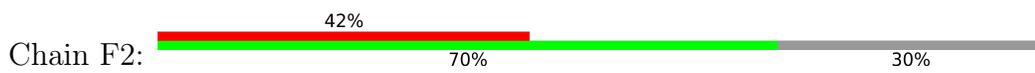
• Molecule 16: Sperm acrosome-associated protein 9



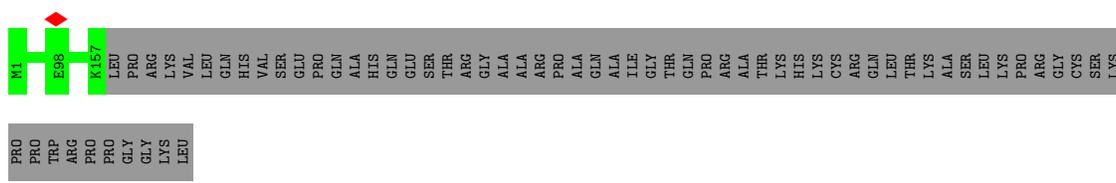
• Molecule 16: Sperm acrosome-associated protein 9



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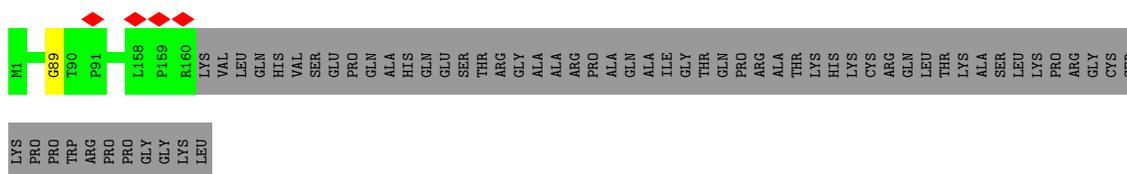


• Molecule 16: Sperm acrosome-associated protein 9



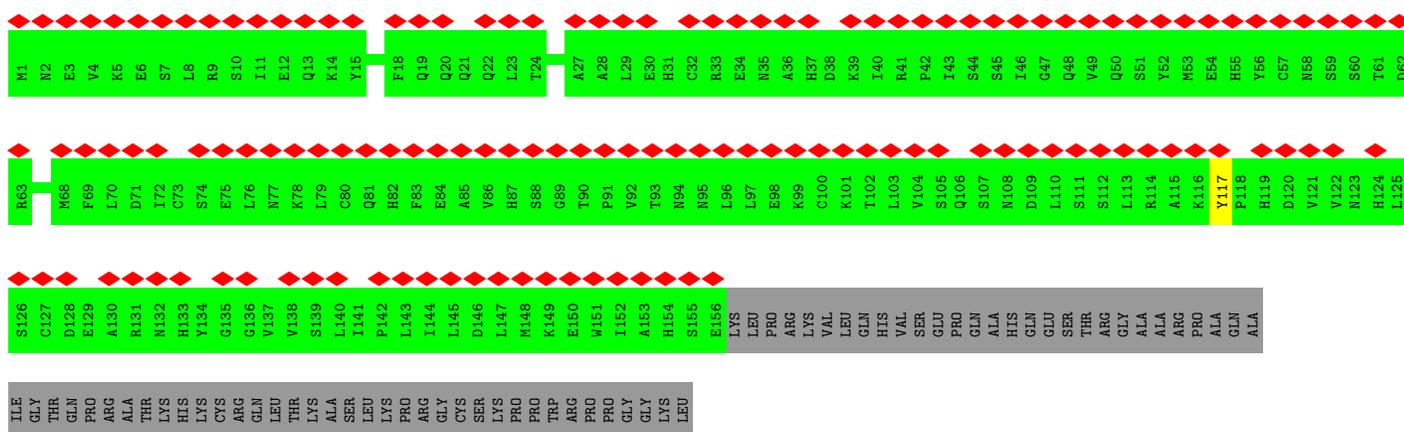
- Molecule 16: Sperm acrosome-associated protein 9

Chain F4:  72% 28%



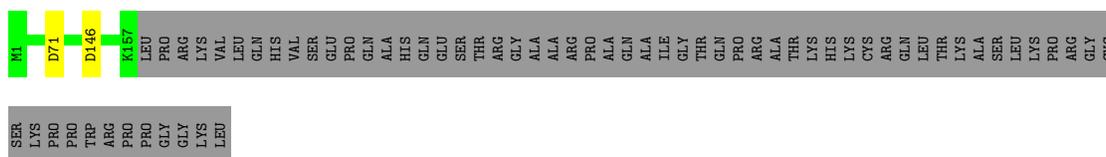
- Molecule 16: Sperm acrosome-associated protein 9

Chain F5:  61% 70% 30%



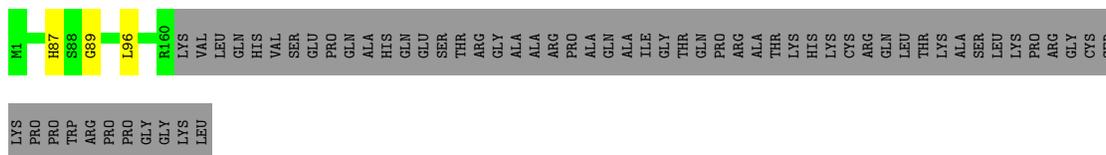
- Molecule 16: Sperm acrosome-associated protein 9

Chain F6:  70% 29%



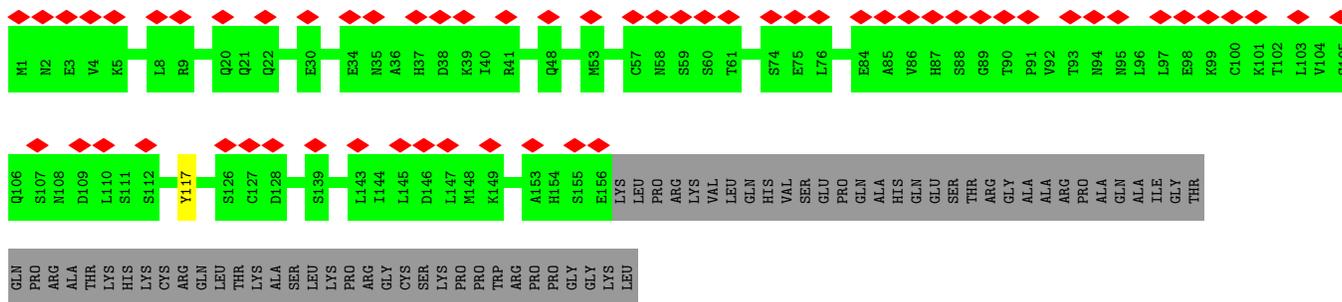
- Molecule 16: Sperm acrosome-associated protein 9

Chain F7:  71% 28%

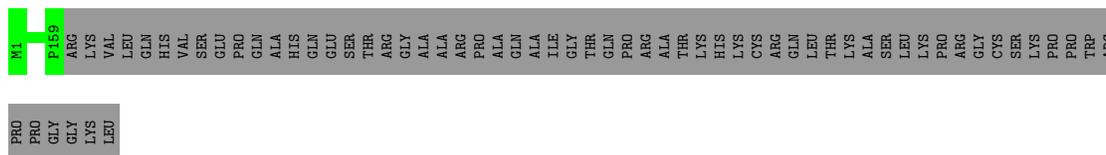


- Molecule 16: Sperm acrosome-associated protein 9

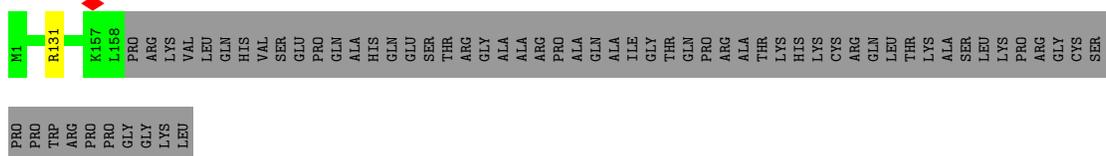
Chain F8:  27% 70% 30%



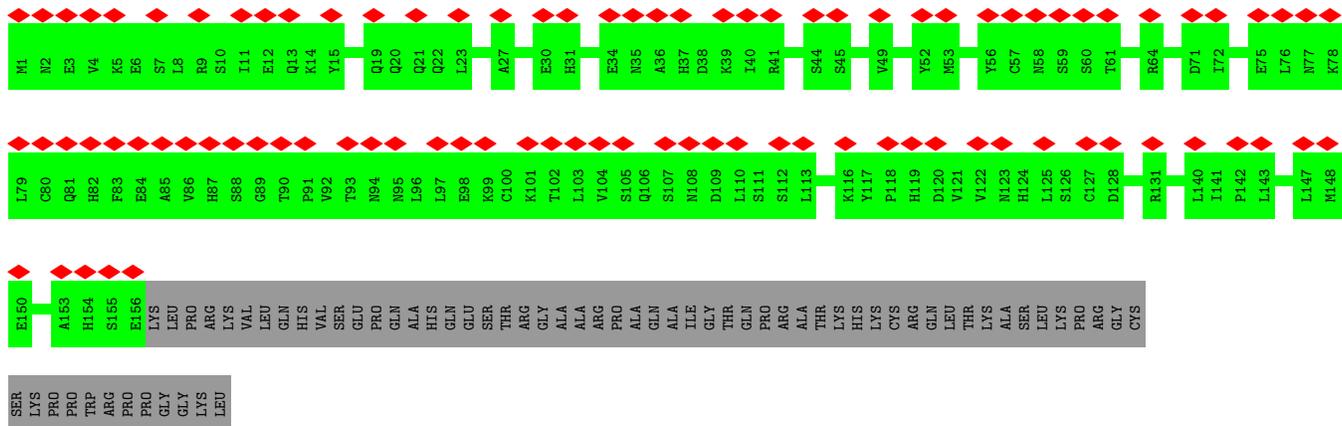
• Molecule 16: Sperm acrosome-associated protein 9



• Molecule 16: Sperm acrosome-associated protein 9

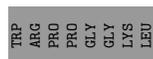
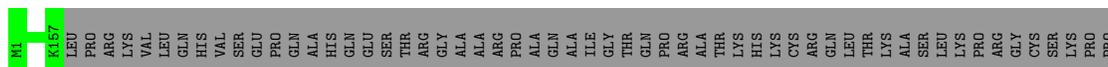


• Molecule 16: Sperm acrosome-associated protein 9

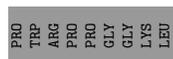
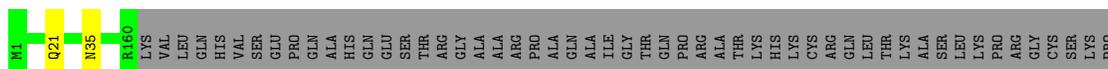


• Molecule 16: Sperm acrosome-associated protein 9

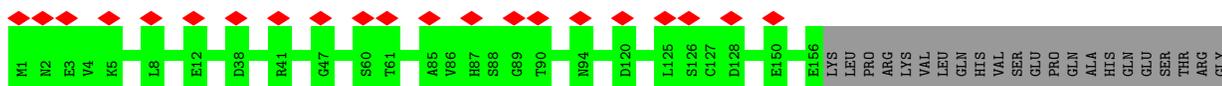




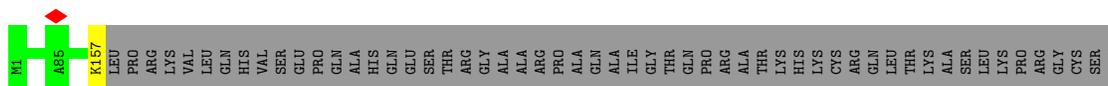
• Molecule 16: Sperm acrosome-associated protein 9



• Molecule 16: Sperm acrosome-associated protein 9



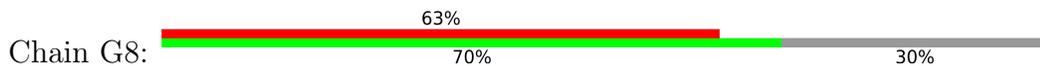
• Molecule 16: Sperm acrosome-associated protein 9

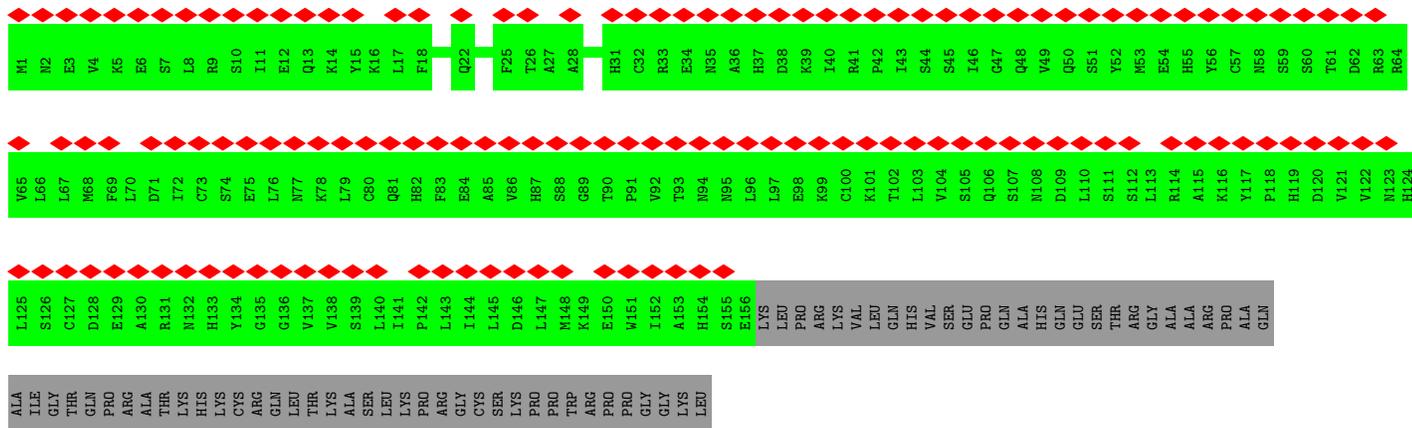


• Molecule 16: Sperm acrosome-associated protein 9

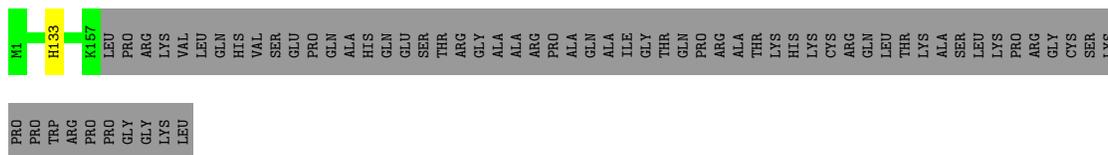


• Molecule 16: Sperm acrosome-associated protein 9

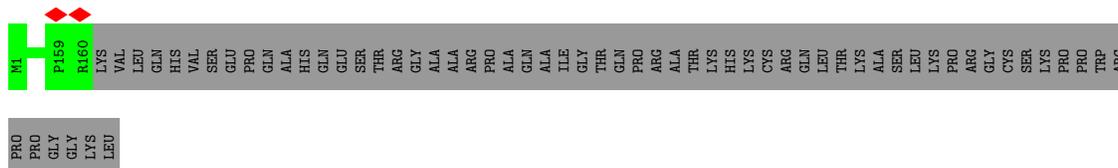




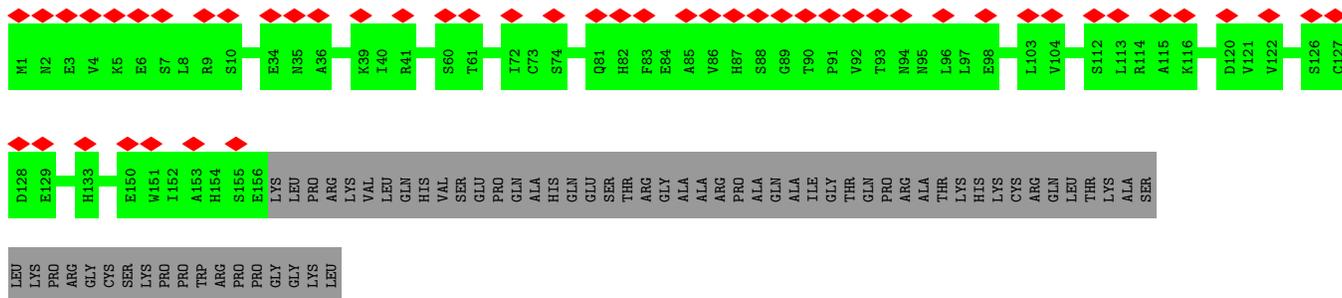
• Molecule 16: Sperm acrosome-associated protein 9



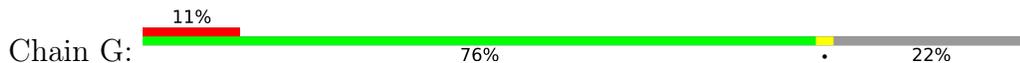
• Molecule 16: Sperm acrosome-associated protein 9

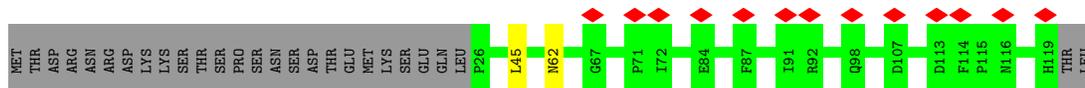


• Molecule 16: Sperm acrosome-associated protein 9

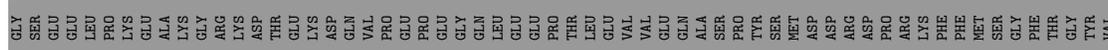


• Molecule 17: Uncharacterized protein C15orf65

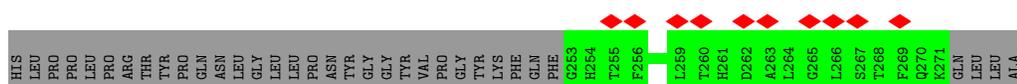
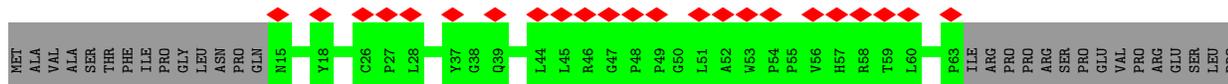




● Molecule 18: Protein FAM166B



● Molecule 18: Protein FAM166B



● Molecule 18: Protein FAM166B

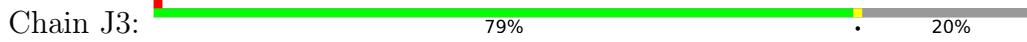






VAL  
ARG  
GLN  
GLY  
THR  
LEU  
ARG  
MET  
GLY  
TYR  
THR  
HIS  
PRO

- Molecule 20: Isoform 2 of Cilia- and flagella-associated protein 77



MET PRO GLU ALA ARG SER SER GLY PRO GLN ASP LEU THR ARG TRP LYS GLN GLN PRO VAL ARG ARG T24 V28 C29 R136 Q152 ASP ASP ARG MET LYS K159 E160 P161 Q209 K210 VAL LEU GLY LYS Y217 Y227 LYS PRO VAL LYS ASP THR

L236 E267 E268 C269 ALA VAL GLN ASP LEU THR ARG MET GLY ASN TYR THR HIS PRO

- Molecule 20: Isoform 2 of Cilia- and flagella-associated protein 77



MET PRO GLU ALA ARG SER SER GLY PRO GLN ASP LEU THR ARG TRP LYS GLN GLN PRO VAL ARG ARG T24 P31 R102 A135 Q152 ASP ASP ARG ARG MET LYS K159 K204 K208 GLN LYS VAL VAL LEU GLY LYS Y217 Y227 LYS PRO VAL LYS LEU

ASP THR L236 D250 D250 THR PHE PRO THR THR ALA LEU ASP ARG ARG ALA LYS GLN TYR HIS ARG GLU CYS VAL ARG GLN THR LEU ARG MET ASP ASN TYR THR HIS PRO

- Molecule 20: Isoform 2 of Cilia- and flagella-associated protein 77



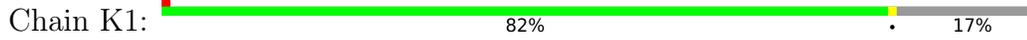
MET PRO GLU ALA ARG SER SER GLY PRO GLN ASP LEU THR ARG TRP LYS GLN GLN PRO VAL ARG ARG T24 P31 Y88 ILE ARG GLY ASP ASP ASP ASP VAL PRO GLU ALA ILE GLY TRP ASN VAL PHE PRO PRO PRO PHE ASN LYS MET GLN THR PRO CYS THR THR ARG HIS ARG ALA THR LEU THR SER ARG THR PHE

ILE ALA MET ASN ARG GLY ALA VAL THR LYS ALA GLY LEU VAL THR ALA ARG GLN ASN LEU TYR ARG GLN ILE LYS LEU ASN ASP ILE ARG ILE LYS SER ASP GLY LEU ASP ASP ASP ASP VAL MET PRO LYS LYS GLU ILE GLY TRP ASN VAL PHE PRO PRO PRO PHE ASN LYS MET GLN THR PRO CYS THR THR ARG HIS ARG ALA THR LEU THR SER ARG THR PHE

PHE ASP LEU LEU GLN HIS ARG TYR LYS LEU LEU LEU VAL GLN GLN GLN LYS ALA ASP GLN THR ARG GLN ALA THR GLN LYS LEU LEU LEU ASP ASP ASP ASP VAL MET PRO LYS LYS GLU ILE GLY TRP ASN VAL PHE PRO PRO PRO PHE ASN LYS MET GLN THR PRO CYS THR THR ARG HIS ARG ALA THR LEU THR SER ARG THR PHE

HIS PHE GLN LYS VAL GLY ARG HIS HIS ASP THR PRO PRO GLN ALA ASP GLN THR ARG GLN ALA THR GLN LYS LEU LEU LEU ASP ASP ASP ASP VAL MET PRO LYS LYS GLU ILE GLY TRP ASN VAL PHE PRO PRO PRO PHE ASN LYS MET GLN THR PRO CYS THR THR ARG HIS ARG ALA THR LEU THR SER ARG THR PHE

- Molecule 21: Protein FAM183A



MET ALA GLY HIS PRO LYS GLU VAL I110 K26 Q36 E58 L120 TYR LYS ALA LYS THR TRP GLY GLY ASP ASP HIS HIS LYS

- Molecule 22: Uncharacterized protein C5orf49

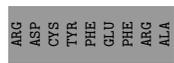
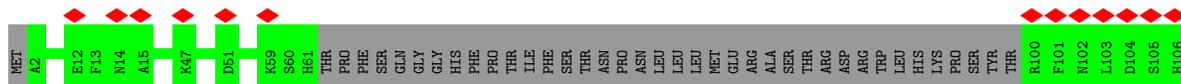




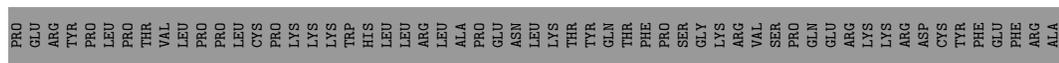
• Molecule 22: Uncharacterized protein C5orf49



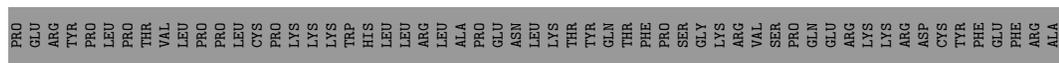
• Molecule 23: Protein FAM166C



• Molecule 23: Protein FAM166C



• Molecule 23: Protein FAM166C



• Molecule 23: Protein FAM166C

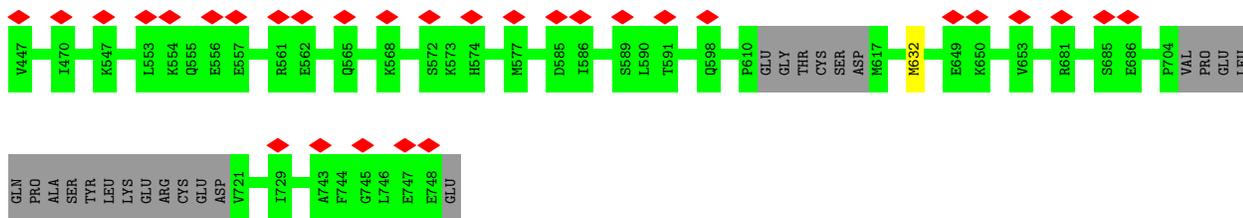












• Molecule 27: Cilia- and flagella-associated protein 20



• Molecule 27: Cilia- and flagella-associated protein 20



• Molecule 27: Cilia- and flagella-associated protein 20



• Molecule 27: Cilia- and flagella-associated protein 20



• Molecule 27: Cilia- and flagella-associated protein 20

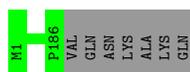


• Molecule 27: Cilia- and flagella-associated protein 20



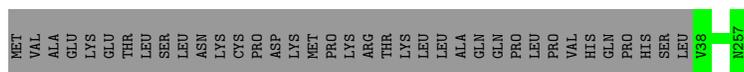
• Molecule 27: Cilia- and flagella-associated protein 20

Chain XG:  96%



- Molecule 28: Parkin coregulated gene protein

Chain YB:  86%



- Molecule 28: Parkin coregulated gene protein

Chain YC:  86%



- Molecule 28: Parkin coregulated gene protein

Chain YD:  85%



- Molecule 28: Parkin coregulated gene protein

Chain YE:  86%



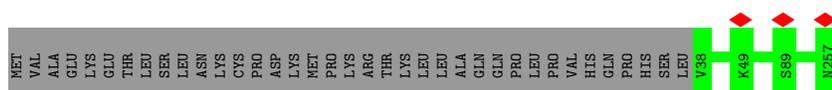
- Molecule 28: Parkin coregulated gene protein

Chain YF:  85%



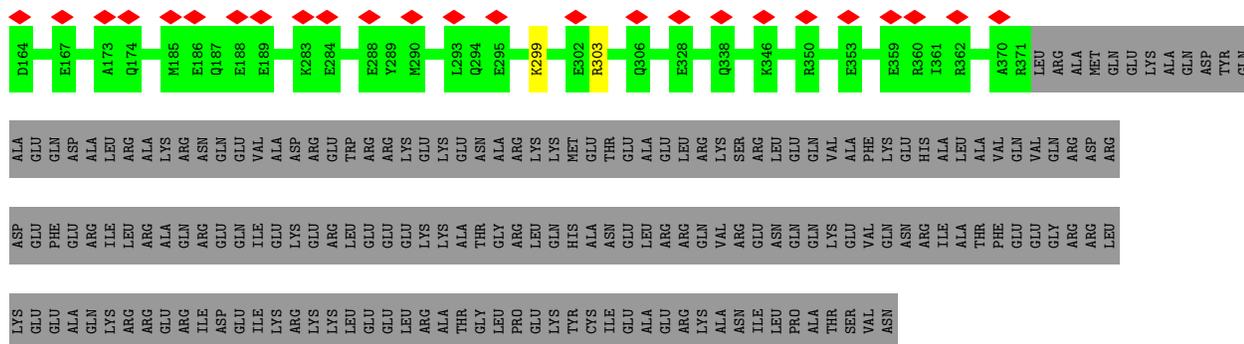
- Molecule 28: Parkin coregulated gene protein

Chain YG:  86%



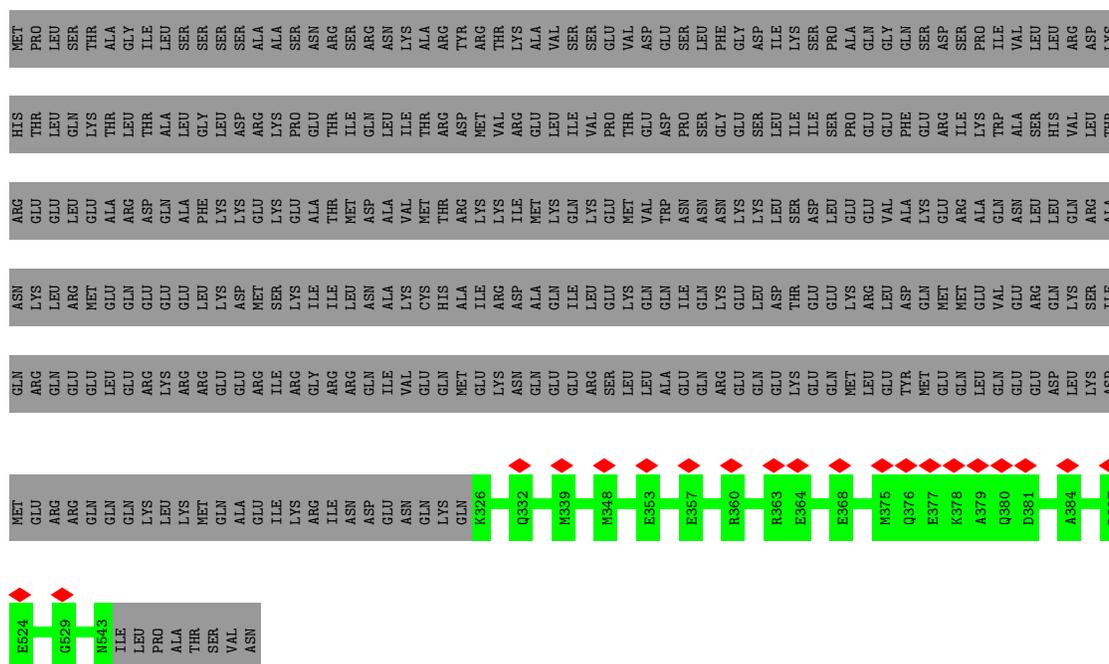
- Molecule 29: Cilia- and flagella-associated protein 45





- Molecule 29: Cilia- and flagella-associated protein 45

Chain d: 39% 60%



- Molecule 30: Cilia- and flagella-associated protein 52

Chain e: 98%

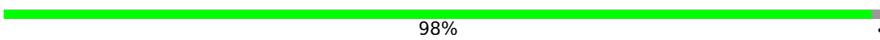


- Molecule 30: Cilia- and flagella-associated protein 52

Chain f: 98%



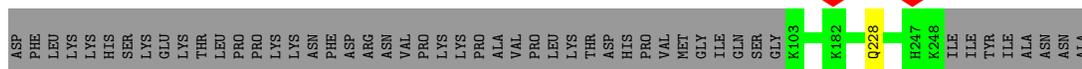
- Molecule 30: Cilia- and flagella-associated protein 52

Chain g:  98%

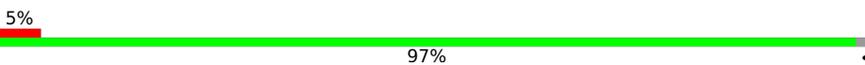


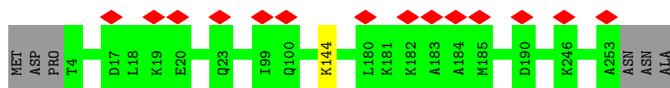
• Molecule 31: Enkurin

Chain h:  57% 43%

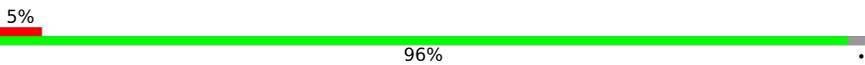


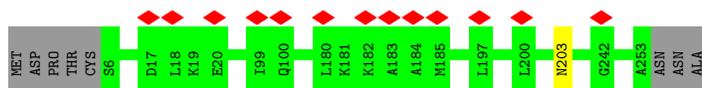
• Molecule 31: Enkurin

Chain i:  5% 97%



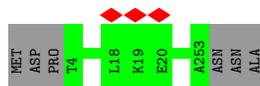
• Molecule 31: Enkurin

Chain j:  5% 96%



• Molecule 31: Enkurin

Chain k:  98%



• Molecule 32: Protein Flattop

Chain l:  66% 34%



• Molecule 32: Protein Flattop







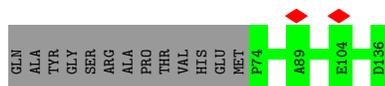
- Molecule 34: Protein CFAP276

Chain s: 66% 34%



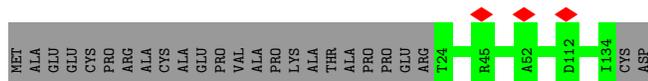
- Molecule 35: UPF0691 protein C9orf116

Chain y: 46% 54%



- Molecule 35: UPF0691 protein C9orf116

Chain z: 82% 18%



## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	208558	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	60	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	64000	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	24.733	Depositor
Minimum map value	-13.575	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	1.5	Depositor
Map size ( $\text{\AA}$ )	701.44, 701.44, 701.44	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.37, 1.37, 1.37	Depositor

## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: GTP, GDP, MG

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	0	0.29	0/429	0.64	0/580
1	7	0.28	0/1227	0.59	0/1659
2	1	0.27	0/2265	0.55	0/3049
2	2	0.27	0/3697	0.53	0/4999
3	3	0.33	0/2531	0.58	0/3362
3	4	0.35	0/1851	0.57	0/2456
4	5	0.27	0/3006	0.55	0/4056
4	6	0.28	0/3006	0.54	1/4056 (0.0%)
5	8	0.30	0/1467	0.61	1/1999 (0.1%)
5	9	0.27	0/422	0.57	0/570
6	A	0.29	0/429	0.45	0/571
7	A0	0.29	0/1785	0.53	0/2399
7	A1	0.32	0/3221	0.56	2/4335 (0.0%)
7	A2	0.33	0/3221	0.56	0/4335
7	A3	0.32	0/2744	0.57	0/3689
7	A4	0.31	0/303	0.66	0/410
8	AA	0.28	0/3507	0.52	1/4761 (0.0%)
8	AC	0.29	0/3507	0.55	2/4761 (0.0%)
8	AE	0.28	0/3507	0.55	0/4761
8	AG	0.29	0/3507	0.54	3/4761 (0.1%)
8	AI	0.28	0/3507	0.54	0/4761
8	AK	0.29	0/3507	0.54	0/4761
8	AM	0.28	0/3507	0.53	2/4761 (0.0%)
8	BA	0.27	0/3460	0.55	1/4697 (0.0%)
8	BC	0.26	0/3507	0.52	0/4761
8	BE	0.29	0/3460	0.57	2/4697 (0.0%)
8	BG	0.28	0/3507	0.55	2/4761 (0.0%)
8	BI	0.28	0/3460	0.56	3/4697 (0.1%)
8	BK	0.28	0/3507	0.56	1/4761 (0.0%)
8	BM	0.29	0/3464	0.54	0/4702
8	CA	0.26	0/3462	0.53	1/4700 (0.0%)
8	CC	0.27	0/3507	0.53	0/4761

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
8	CE	0.26	0/3448	0.55	0/4681
8	CG	0.27	0/3507	0.53	2/4761 (0.0%)
8	CI	0.28	0/3454	0.56	0/4689
8	CK	0.28	0/3507	0.57	2/4761 (0.0%)
8	CM	0.29	0/3454	0.55	0/4689
8	DA	0.27	0/3041	0.56	1/4133 (0.0%)
8	DC	0.26	0/3448	0.54	0/4681
8	DE	0.27	0/3456	0.54	0/4692
8	DG	0.27	0/3448	0.54	1/4681 (0.0%)
8	DI	0.27	0/3448	0.55	0/4681
8	DK	0.26	0/3448	0.55	1/4681 (0.0%)
8	DM	0.26	0/3456	0.53	1/4692 (0.0%)
8	EC	0.27	0/3507	0.57	0/4761
8	EE	0.27	0/3507	0.54	0/4761
8	EG	0.27	0/3501	0.56	0/4753
8	EI	0.27	0/3507	0.56	0/4761
8	EK	0.26	0/3501	0.54	0/4753
8	EM	0.27	0/3501	0.58	1/4753 (0.0%)
8	FC	0.26	0/3456	0.54	1/4692 (0.0%)
8	FE	0.28	0/3456	0.57	2/4692 (0.0%)
8	FG	0.28	0/3448	0.56	2/4681 (0.0%)
8	FI	0.27	0/3448	0.56	0/4681
8	FK	0.27	0/3448	0.55	0/4681
8	FM	0.26	0/3448	0.55	1/4681 (0.0%)
8	GC	0.27	0/3486	0.56	1/4732 (0.0%)
8	GE	0.27	0/3448	0.56	1/4681 (0.0%)
8	GG	0.26	0/3456	0.55	0/4692
8	GI	0.27	0/3448	0.55	0/4681
8	GK	0.27	0/3462	0.55	1/4700 (0.0%)
8	GM	0.28	0/3479	0.58	2/4722 (0.0%)
8	HC	0.26	0/3456	0.53	1/4692 (0.0%)
8	HE	0.26	0/3462	0.52	0/4700
8	HG	0.27	0/3462	0.56	2/4700 (0.0%)
8	HI	0.26	0/3462	0.52	0/4700
8	HK	0.28	0/3454	0.55	1/4689 (0.0%)
8	HM	0.28	0/3456	0.54	0/4692
8	HO	0.28	0/3126	0.57	1/4238 (0.0%)
8	IC	0.26	0/3470	0.53	0/4711
8	IE	0.28	0/3456	0.55	0/4692
8	IG	0.26	0/3507	0.54	2/4761 (0.0%)
8	II	0.27	0/3462	0.54	0/4700
8	IK	0.26	0/3507	0.51	0/4761
8	IM	0.29	0/3456	0.56	0/4692

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
8	IO	0.27	0/3454	0.56	1/4689 (0.0%)
8	JC	0.26	0/3507	0.53	0/4761
8	JE	0.27	0/3448	0.54	1/4681 (0.0%)
8	JG	0.27	0/3448	0.53	0/4681
8	JI	0.27	0/3448	0.54	0/4681
8	JK	0.29	0/3454	0.58	3/4689 (0.1%)
8	JM	0.26	0/3448	0.54	0/4681
8	KC	0.30	0/3467	0.55	0/4707
8	KE	0.28	0/3462	0.53	0/4700
8	KG	0.30	0/3467	0.55	0/4707
8	KI	0.31	0/3450	0.55	1/4684 (0.0%)
8	KK	0.29	0/3467	0.56	2/4707 (0.0%)
8	KM	0.29	0/3501	0.55	2/4753 (0.0%)
8	KO	0.29	0/3460	0.54	0/4697
8	LC	0.29	0/3466	0.54	0/4705
8	LE	0.28	0/3507	0.53	0/4761
8	LG	0.30	0/3474	0.56	2/4716 (0.0%)
8	LI	0.29	0/3487	0.54	1/4732 (0.0%)
8	LK	0.30	0/3467	0.56	1/4707 (0.0%)
8	LM	0.29	0/3456	0.52	0/4692
8	MC	0.28	0/3514	0.55	0/4771
8	ME	0.28	0/3463	0.54	1/4702 (0.0%)
8	MG	0.28	0/3461	0.54	0/4699
8	MI	0.29	0/3469	0.53	0/4710
8	MK	0.28	0/3514	0.55	1/4771 (0.0%)
8	MM	0.30	0/3514	0.54	0/4771
8	NC	0.28	0/3514	0.56	0/4771
8	NE	0.27	0/3507	0.54	0/4761
8	NG	0.27	0/3507	0.58	4/4761 (0.1%)
8	NI	0.27	0/3507	0.55	1/4761 (0.0%)
8	NK	0.26	0/3507	0.54	0/4761
8	NM	0.27	0/3507	0.54	1/4761 (0.0%)
8	OC	0.29	0/3523	0.55	1/4783 (0.0%)
8	OE	0.28	0/3514	0.56	2/4771 (0.0%)
8	OG	0.28	0/3523	0.53	0/4783
8	OI	0.29	0/3523	0.54	0/4783
8	OK	0.26	0/3507	0.52	0/4761
8	OM	0.29	0/3523	0.54	1/4783 (0.0%)
8	OO	0.29	0/3384	0.54	0/4588
8	PC	0.29	0/3523	0.55	1/4783 (0.0%)
8	PE	0.29	0/3514	0.54	1/4771 (0.0%)
8	PG	0.28	0/3523	0.54	0/4783
8	PI	0.27	0/3507	0.51	0/4761

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
8	PK	0.28	0/3514	0.55	1/4771 (0.0%)
8	PM	0.27	0/3507	0.53	0/4761
8	PO	0.27	0/3507	0.53	0/4761
8	QC	0.28	0/3514	0.55	0/4771
8	QE	0.28	0/3514	0.52	0/4771
8	QG	0.28	0/3514	0.55	2/4771 (0.0%)
8	QI	0.28	0/3514	0.54	0/4771
8	QK	0.27	0/3514	0.53	0/4771
8	QM	0.29	0/3514	0.55	2/4771 (0.0%)
8	QO	0.27	0/3514	0.55	0/4771
8	RC	0.28	0/3278	0.55	0/4451
8	RE	0.27	0/3448	0.54	0/4681
8	RG	0.27	0/3461	0.57	0/4699
8	RI	0.27	0/3507	0.55	0/4761
8	RK	0.28	0/3514	0.58	2/4771 (0.0%)
8	RM	0.28	0/3514	0.56	1/4771 (0.0%)
8	RO	0.27	0/3507	0.55	0/4761
8	SE	0.27	0/3442	0.56	0/4673
8	SG	0.27	0/3450	0.54	0/4684
8	SI	0.27	0/3456	0.55	0/4692
8	SK	0.26	0/3456	0.54	2/4692 (0.0%)
8	SM	0.27	0/3456	0.57	1/4692 (0.0%)
8	SO	0.27	0/3456	0.55	2/4692 (0.0%)
8	TE	0.27	0/3442	0.57	0/4673
8	TG	0.28	0/3450	0.58	0/4684
8	TI	0.27	0/3456	0.52	0/4692
8	TK	0.27	0/3442	0.53	0/4673
8	TM	0.27	0/3456	0.55	2/4692 (0.0%)
8	TO	0.28	0/3442	0.58	0/4673
8	UE	0.26	0/3456	0.52	1/4692 (0.0%)
8	UG	0.26	0/3462	0.56	2/4700 (0.0%)
8	UI	0.27	0/3462	0.56	2/4700 (0.0%)
8	UK	0.26	0/3456	0.53	0/4692
8	UM	0.26	0/3456	0.55	0/4692
8	UO	0.26	0/3456	0.54	1/4692 (0.0%)
8	VE	0.26	0/3507	0.54	0/4761
8	VG	0.28	0/3470	0.58	2/4711 (0.0%)
8	VI	0.27	0/3507	0.52	0/4761
8	VK	0.27	0/3456	0.54	0/4692
8	VM	0.27	0/3507	0.53	1/4761 (0.0%)
8	VO	0.26	0/3456	0.53	0/4692
8	WE	0.27	0/3507	0.55	0/4761
8	WG	0.26	0/3448	0.55	1/4681 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
8	WI	0.27	0/3501	0.55	0/4753
8	WK	0.29	0/3448	0.55	0/4681
8	WM	0.28	0/3507	0.57	2/4761 (0.0%)
8	WO	0.28	0/3456	0.55	0/4692
9	AB	0.30	0/3509	0.58	1/4754 (0.0%)
9	AD	0.30	0/3509	0.60	1/4754 (0.0%)
9	AF	0.31	0/3509	0.58	2/4754 (0.0%)
9	AH	0.30	0/3509	0.58	2/4754 (0.0%)
9	AJ	0.31	0/3509	0.58	1/4754 (0.0%)
9	AL	0.31	0/3509	0.59	1/4754 (0.0%)
9	BB	0.27	0/3431	0.55	0/4649
9	BD	0.28	0/3423	0.55	1/4638 (0.0%)
9	BF	0.28	0/3431	0.55	1/4649 (0.0%)
9	BH	0.29	0/3423	0.57	1/4638 (0.0%)
9	BJ	0.30	0/3448	0.59	2/4673 (0.0%)
9	BL	0.30	0/3423	0.57	1/4638 (0.0%)
9	CB	0.29	0/3436	0.59	2/4656 (0.0%)
9	CD	0.27	0/3423	0.56	0/4638
9	CF	0.29	0/3431	0.57	1/4649 (0.0%)
9	CH	0.28	0/3423	0.57	1/4638 (0.0%)
9	CJ	0.28	0/3431	0.56	1/4649 (0.0%)
9	CL	0.29	0/3423	0.56	0/4638
9	DB	0.27	0/3423	0.59	4/4638 (0.1%)
9	DD	0.28	0/3423	0.60	2/4638 (0.0%)
9	DF	0.29	0/3423	0.59	2/4638 (0.0%)
9	DH	0.28	0/3423	0.61	1/4638 (0.0%)
9	DJ	0.28	0/3423	0.59	2/4638 (0.0%)
9	DL	0.29	0/3423	0.60	3/4638 (0.1%)
9	EB	0.28	0/3423	0.58	1/4638 (0.0%)
9	ED	0.27	0/3423	0.57	1/4638 (0.0%)
9	EF	0.28	0/3423	0.58	1/4638 (0.0%)
9	EH	0.28	0/3423	0.59	3/4638 (0.1%)
9	EJ	0.27	0/3423	0.57	2/4638 (0.0%)
9	EL	0.27	0/3423	0.56	0/4638
9	EN	0.28	0/3436	0.60	1/4656 (0.0%)
9	FB	0.26	0/3423	0.55	0/4638
9	FD	0.27	0/3423	0.58	0/4638
9	FF	0.28	0/3423	0.59	0/4638
9	FH	0.28	0/3423	0.58	1/4638 (0.0%)
9	FJ	0.28	0/3423	0.58	1/4638 (0.0%)
9	FL	0.27	0/3423	0.58	0/4638
9	FN	0.27	0/3431	0.57	1/4649 (0.0%)
9	GB	0.28	0/3277	0.59	1/4441 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
9	GD	0.28	0/3423	0.55	1/4638 (0.0%)
9	GF	0.27	0/3431	0.58	2/4649 (0.0%)
9	GH	0.28	0/3423	0.58	0/4638
9	GJ	0.29	0/3448	0.60	2/4673 (0.0%)
9	GL	0.28	0/3423	0.58	0/4638
9	GN	0.26	0/3423	0.55	1/4638 (0.0%)
9	HB	0.27	0/3431	0.56	2/4649 (0.0%)
9	HD	0.27	0/3423	0.55	2/4638 (0.0%)
9	HF	0.27	0/3431	0.53	0/4649
9	HH	0.27	0/3423	0.55	1/4638 (0.0%)
9	HJ	0.28	0/3436	0.59	2/4656 (0.0%)
9	HL	0.28	0/3423	0.57	2/4638 (0.0%)
9	HN	0.28	0/3414	0.60	3/4626 (0.1%)
9	IB	0.28	0/3265	0.56	2/4424 (0.0%)
9	ID	0.27	0/3423	0.53	1/4638 (0.0%)
9	IF	0.28	0/3436	0.58	3/4656 (0.1%)
9	IH	0.29	0/3423	0.57	2/4638 (0.0%)
9	IJ	0.28	0/3443	0.56	1/4666 (0.0%)
9	IL	0.28	0/3423	0.56	2/4638 (0.0%)
9	IN	0.28	0/3431	0.57	1/4649 (0.0%)
9	JB	0.27	0/3423	0.55	0/4638
9	JD	0.27	0/3423	0.55	1/4638 (0.0%)
9	JF	0.27	0/3431	0.56	2/4649 (0.0%)
9	JH	0.28	0/3423	0.58	1/4638 (0.0%)
9	JJ	0.27	0/3423	0.54	1/4638 (0.0%)
9	JL	0.29	0/3423	0.60	3/4638 (0.1%)
9	JN	0.29	0/3423	0.60	2/4638 (0.0%)
9	KB	0.29	0/3290	0.56	2/4458 (0.0%)
9	KD	0.31	0/3457	0.57	1/4685 (0.0%)
9	KF	0.28	0/3423	0.55	1/4638 (0.0%)
9	KH	0.32	0/3457	0.58	2/4685 (0.0%)
9	KJ	0.28	0/3423	0.55	1/4638 (0.0%)
9	KL	0.31	0/3457	0.60	2/4685 (0.0%)
9	KN	0.29	0/3423	0.55	3/4638 (0.1%)
9	LB	0.29	0/3532	0.56	1/4785 (0.0%)
9	LD	0.29	0/3423	0.55	1/4638 (0.0%)
9	LF	0.30	0/3527	0.56	0/4778
9	LH	0.29	0/3423	0.55	1/4638 (0.0%)
9	LJ	0.30	0/3559	0.57	1/4821 (0.0%)
9	LL	0.29	0/3423	0.57	2/4638 (0.0%)
9	LN	0.30	0/3532	0.57	1/4785 (0.0%)
9	MB	0.30	0/3448	0.58	1/4673 (0.0%)
9	MD	0.29	0/3466	0.56	2/4697 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
9	MF	0.28	0/3457	0.56	0/4685
9	MH	0.30	0/3466	0.58	1/4697 (0.0%)
9	MJ	0.28	0/3466	0.56	2/4697 (0.0%)
9	ML	0.30	0/3466	0.61	2/4697 (0.0%)
9	MN	0.28	0/3448	0.56	0/4673
9	NB	0.28	0/3436	0.56	1/4656 (0.0%)
9	ND	0.29	0/3436	0.56	1/4656 (0.0%)
9	NF	0.28	0/3448	0.58	0/4673
9	NH	0.29	0/3436	0.57	1/4656 (0.0%)
9	NJ	0.28	0/3443	0.58	3/4666 (0.1%)
9	NL	0.29	0/3436	0.60	2/4656 (0.0%)
9	NN	0.28	0/3436	0.59	3/4656 (0.1%)
9	OB	0.30	0/3457	0.58	1/4685 (0.0%)
9	OD	0.29	0/3448	0.55	0/4673
9	OF	0.28	0/3466	0.56	2/4697 (0.0%)
9	OH	0.30	0/3448	0.58	1/4673 (0.0%)
9	OJ	0.29	0/3466	0.57	1/4697 (0.0%)
9	OL	0.29	0/3448	0.56	1/4673 (0.0%)
9	ON	0.30	0/3457	0.56	1/4685 (0.0%)
9	PD	0.29	0/3448	0.56	1/4673 (0.0%)
9	PF	0.29	0/3466	0.57	2/4697 (0.0%)
9	PH	0.28	0/3423	0.55	1/4638 (0.0%)
9	PJ	0.28	0/3448	0.56	1/4673 (0.0%)
9	PL	0.29	0/3443	0.56	1/4666 (0.0%)
9	PN	0.30	0/3448	0.57	0/4673
9	QD	0.30	0/3436	0.59	3/4656 (0.1%)
9	QF	0.28	0/3448	0.55	1/4673 (0.0%)
9	QH	0.27	0/3423	0.54	1/4638 (0.0%)
9	QJ	0.28	0/3443	0.55	0/4666
9	QL	0.27	0/3431	0.57	2/4649 (0.0%)
9	QN	0.29	0/3436	0.55	1/4656 (0.0%)
9	RD	0.28	0/3423	0.58	2/4638 (0.0%)
9	RF	0.28	0/3443	0.58	2/4666 (0.0%)
9	RH	0.27	0/3423	0.54	1/4638 (0.0%)
9	RJ	0.28	0/3436	0.58	2/4656 (0.0%)
9	RL	0.27	0/3423	0.56	0/4638
9	RN	0.27	0/3431	0.58	1/4649 (0.0%)
9	SD	0.27	0/3423	0.56	1/4638 (0.0%)
9	SF	0.28	0/3423	0.59	2/4638 (0.0%)
9	SH	0.27	0/3423	0.57	1/4638 (0.0%)
9	SJ	0.27	0/3423	0.57	2/4638 (0.0%)
9	SL	0.28	0/3423	0.59	1/4638 (0.0%)
9	SN	0.28	0/3423	0.58	3/4638 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
9	TD	0.27	0/3423	0.54	1/4638 (0.0%)
9	TF	0.28	0/3431	0.57	1/4649 (0.0%)
9	TH	0.27	0/3423	0.58	2/4638 (0.0%)
9	TJ	0.27	0/3423	0.57	2/4638 (0.0%)
9	TL	0.27	0/3423	0.59	2/4638 (0.0%)
9	TN	0.28	0/3423	0.58	1/4638 (0.0%)
9	TP	0.26	0/3373	0.57	1/4566 (0.0%)
9	UD	0.27	0/3423	0.54	1/4638 (0.0%)
9	UF	0.27	0/3431	0.55	2/4649 (0.0%)
9	UH	0.26	0/3423	0.54	0/4638
9	UJ	0.27	0/3431	0.54	0/4649
9	UL	0.27	0/3423	0.56	2/4638 (0.0%)
9	UN	0.27	0/3431	0.55	1/4649 (0.0%)
9	UP	0.27	0/3431	0.55	1/4649 (0.0%)
9	VD	0.27	0/3423	0.54	1/4638 (0.0%)
9	VF	0.28	0/3431	0.57	2/4649 (0.0%)
9	VH	0.28	0/3423	0.56	1/4638 (0.0%)
9	VJ	0.28	0/3431	0.56	1/4649 (0.0%)
9	VL	0.27	0/3423	0.55	0/4638
9	VN	0.28	0/3431	0.57	2/4649 (0.0%)
9	VP	0.26	0/3431	0.52	1/4649 (0.0%)
9	WD	0.28	0/3423	0.57	1/4638 (0.0%)
9	WF	0.29	0/3423	0.58	3/4638 (0.1%)
9	WH	0.27	0/3423	0.55	0/4638
9	WJ	0.28	0/3423	0.55	0/4638
9	WL	0.29	0/3423	0.57	1/4638 (0.0%)
9	WN	0.28	0/3431	0.56	1/4649 (0.0%)
9	WP	0.29	0/3431	0.57	1/4649 (0.0%)
10	B	0.32	0/1515	0.53	0/2006
10	C	0.34	0/3089	0.54	0/4093
11	B0	0.30	0/1594	0.54	0/2152
11	B1	0.31	0/3223	0.52	0/4347
11	B2	0.32	0/3216	0.52	0/4337
11	B3	0.31	0/2896	0.53	0/3903
11	B4	0.26	0/416	0.57	0/562
11	B5	0.23	0/253	0.32	0/352
11	B6	0.28	0/1765	0.32	0/2467
11	B7	0.28	0/1950	0.31	0/2726
11	B8	0.29	0/1955	0.31	0/2733
11	B9	0.27	0/960	0.29	0/1339
12	C0	0.32	0/291	0.60	0/395
12	C1	0.31	0/2768	0.56	1/3733 (0.0%)
12	C2	0.30	0/3239	0.57	1/4368 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
12	C3	0.30	0/3250	0.56	0/4382
12	C4	0.29	0/1803	0.53	2/2426 (0.1%)
13	D	0.28	0/1502	0.61	0/2038
14	D0	0.30	0/2209	0.53	0/2976
14	D1	0.31	0/3303	0.56	0/4452
14	D2	0.33	0/3322	0.56	0/4475
14	D3	0.31	0/2634	0.58	0/3542
14	D5	0.27	0/1581	0.30	0/2207
14	D6	0.28	0/1986	0.31	0/2775
14	D7	0.28	0/1975	0.32	0/2761
14	D8	0.27	0/1324	0.30	0/1845
15	E	0.26	0/2278	0.53	0/3085
15	F	0.25	0/2278	0.53	0/3085
16	F0	0.29	0/1286	0.59	1/1735 (0.1%)
16	F1	0.28	0/1313	0.55	0/1772
16	F2	0.23	0/775	0.35	0/1081
16	F3	0.29	0/1286	0.58	0/1735
16	F4	0.30	0/1313	0.58	1/1772 (0.1%)
16	F5	0.24	0/775	0.35	0/1081
16	F6	0.31	0/1286	0.66	2/1735 (0.1%)
16	F7	0.28	0/1313	0.56	2/1772 (0.1%)
16	F8	0.24	0/775	0.35	0/1081
16	G0	0.30	0/1302	0.58	0/1758
16	G1	0.31	0/1294	0.58	0/1746
16	G2	0.24	0/775	0.35	0/1081
16	G3	0.29	0/1286	0.52	0/1735
16	G4	0.30	0/1313	0.56	1/1772 (0.1%)
16	G5	0.23	0/775	0.34	0/1081
16	G6	0.29	0/1286	0.57	0/1735
16	G7	0.28	0/1313	0.54	0/1772
16	G8	0.23	0/775	0.34	0/1081
16	H0	0.30	0/1286	0.61	0/1735
16	H1	0.32	0/1313	0.58	0/1772
16	H2	0.24	0/775	0.36	0/1081
17	G	0.28	0/775	0.68	1/1058 (0.1%)
18	H	0.28	0/643	0.54	0/881
18	I	0.28	0/1115	0.55	0/1518
18	J	0.28	0/1120	0.58	0/1525
18	K	0.27	0/1115	0.61	0/1518
18	L	0.28	0/1115	0.57	0/1518
18	M	0.27	0/1115	0.53	0/1518
18	N	0.27	0/1120	0.52	0/1525
19	I1	0.28	0/791	0.50	0/1075

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
20	J1	0.28	0/721	0.58	0/964
20	J2	0.28	0/1892	0.58	0/2553
20	J3	0.32	0/1892	0.63	0/2553
20	J4	0.29	0/1714	0.59	0/2315
20	J5	0.30	0/525	0.66	0/711
21	K1	0.26	0/970	0.62	0/1317
22	L1	0.26	0/1075	0.58	0/1454
22	L2	0.27	0/766	0.63	1/1035 (0.1%)
23	M1	0.31	0/851	0.62	0/1153
23	M2	0.29	0/843	0.58	0/1141
23	M3	0.30	0/851	0.61	1/1153 (0.1%)
23	M4	0.29	0/851	0.57	0/1153
24	O	0.30	0/213	0.73	0/281
24	P	0.30	0/3132	0.54	1/4187 (0.0%)
24	Q	0.31	0/333	0.49	0/448
24	R	0.30	0/1836	0.52	1/2446 (0.0%)
24	S	0.30	0/1406	0.51	0/1883
25	T	0.28	0/4085	0.55	1/5532 (0.0%)
25	U	0.28	0/4093	0.56	0/5544
25	V	0.29	0/4093	0.56	0/5544
26	W	0.28	0/5192	0.59	4/7006 (0.1%)
26	X	0.28	0/5941	0.56	1/8009 (0.0%)
26	Y	0.28	0/5941	0.57	1/8009 (0.0%)
26	Z	0.28	0/4337	0.58	2/5833 (0.0%)
27	XA	0.27	0/1583	0.55	0/2137
27	XB	0.26	0/1583	0.55	0/2137
27	XC	0.26	0/1583	0.55	0/2137
27	XD	0.27	0/1583	0.57	1/2137 (0.0%)
27	XE	0.26	0/1583	0.56	1/2137 (0.0%)
27	XF	0.27	0/1583	0.56	0/2137
27	XG	0.27	0/1583	0.56	0/2137
28	YB	0.27	0/1814	0.53	0/2452
28	YC	0.26	0/1814	0.52	0/2452
28	YD	0.27	0/1814	0.54	1/2452 (0.0%)
28	YE	0.26	0/1814	0.50	0/2452
28	YF	0.28	0/1814	0.55	1/2452 (0.0%)
28	YG	0.28	0/1814	0.55	0/2452
29	a	0.30	0/1473	0.60	0/1951
29	b	0.34	0/2890	0.62	0/3818
29	c	0.31	0/2430	0.60	0/3216
29	d	0.33	0/1869	0.63	1/2472 (0.0%)
30	e	0.27	0/4811	0.58	1/6512 (0.0%)
30	f	0.27	0/4811	0.59	2/6512 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
30	g	0.27	0/4811	0.60	1/6512 (0.0%)
31	h	0.30	0/1230	0.60	0/1643
31	i	0.26	0/2065	0.49	0/2773
31	j	0.27	0/2052	0.52	0/2755
31	k	0.28	0/2065	0.50	0/2773
32	l	0.26	0/934	0.53	0/1271
32	m	0.28	0/934	0.51	0/1271
32	n	0.26	0/934	0.51	0/1271
33	o	0.32	0/3512	0.54	0/4648
33	o1	0.25	0/304	0.55	0/406
33	p	0.30	0/1309	0.51	0/1754
34	q	0.25	0/930	0.48	0/1259
34	r	0.26	0/930	0.55	0/1259
34	s	0.27	0/930	0.55	0/1259
35	y	0.28	0/510	0.59	0/691
35	z	0.27	0/916	0.60	0/1244
All	All	0.28	0/1283717	0.56	333/1739902 (0.0%)

There are no bond length outliers.

All (333) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	CK	32	PRO	CA-N-CD	-10.04	97.44	111.50
8	FG	173	PRO	CA-N-CD	-9.64	98.00	111.50
8	FE	298	PRO	CA-N-CD	-9.59	98.08	111.50
9	HN	271	ALA	C-N-CD	-9.50	99.69	120.60
9	KL	209	ASP	CB-CG-OD1	8.42	125.88	118.30
16	F7	89	GLY	C-N-CA	8.40	142.70	121.70
8	EM	199	ASP	CB-CG-OD2	8.21	125.69	118.30
9	QD	197	ASP	CB-CG-OD1	8.06	125.56	118.30
9	JL	271	ALA	N-CA-C	8.01	132.63	111.00
9	TF	87	PRO	CA-N-CD	-7.98	100.33	111.50
17	G	45	LEU	CA-CB-CG	7.88	133.43	115.30
9	NL	277	GLY	N-CA-C	7.88	132.79	113.10
8	RM	424	ASP	CB-CG-OD2	7.87	125.39	118.30
8	CA	367	ASP	CB-CG-OD2	7.84	125.36	118.30
16	F6	71	ASP	CB-CG-OD1	7.64	125.18	118.30
9	HN	272	PRO	CA-N-CD	-7.56	100.91	111.50
8	ME	431	ASP	CB-CG-OD2	7.56	125.10	118.30
9	DH	271	ALA	N-CA-C	7.51	131.28	111.00
8	OE	345	ASP	CB-CG-OD1	7.47	125.02	118.30
9	HJ	128	ASP	CB-CG-OD1	7.46	125.01	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	DD	271	ALA	N-CA-C	7.38	130.92	111.00
26	W	49	LEU	CA-CB-CG	7.33	132.15	115.30
9	NN	277	GLY	N-CA-C	7.26	131.24	113.10
9	WF	271	ALA	N-CA-C	7.25	130.59	111.00
9	DL	272	PRO	N-CA-C	-7.25	93.25	112.10
9	RJ	271	ALA	N-CA-C	7.23	130.51	111.00
9	AD	128	ASP	CB-CG-OD1	7.20	124.78	118.30
8	NG	46	ASP	CB-CG-OD2	7.20	124.78	118.30
8	RK	152	LEU	CA-CB-CG	7.08	131.58	115.30
9	JD	271	ALA	N-CA-C	7.04	130.01	111.00
8	BK	205	ASP	CB-CG-OD2	7.03	124.63	118.30
8	UG	245	ASP	CB-CG-OD1	7.01	124.61	118.30
9	DL	271	ALA	N-CA-C	6.97	129.81	111.00
9	KB	128	ASP	CB-CG-OD1	6.93	124.54	118.30
9	RN	271	ALA	N-CA-C	6.91	129.65	111.00
8	PK	152	LEU	CA-CB-CG	6.89	131.16	115.30
8	OE	152	LEU	CA-CB-CG	6.87	131.10	115.30
9	QL	271	ALA	N-CA-C	6.85	129.49	111.00
9	JL	197	ASP	CB-CG-OD1	6.83	124.45	118.30
9	LB	271	ALA	N-CA-C	6.83	129.45	111.00
8	JE	116	ASP	CB-CG-OD1	6.82	124.43	118.30
9	DF	271	ALA	N-CA-C	6.79	129.34	111.00
8	JK	245	ASP	CB-CG-OD1	6.78	124.41	118.30
9	IF	327	ASP	CB-CG-OD1	6.78	124.40	118.30
9	OJ	271	ALA	N-CA-C	6.77	129.27	111.00
8	MK	152	LEU	CA-CB-CG	6.73	130.78	115.30
8	DM	424	ASP	CB-CG-OD1	6.72	124.35	118.30
9	AF	128	ASP	CB-CG-OD2	6.68	124.31	118.30
8	QM	33	ASP	CB-CG-OD1	6.68	124.31	118.30
9	JN	271	ALA	N-CA-C	6.67	129.02	111.00
8	LG	322	ASP	CB-CG-OD2	6.66	124.30	118.30
8	KM	205	ASP	CB-CG-OD1	6.63	124.27	118.30
9	WL	271	ALA	N-CA-C	6.63	128.90	111.00
9	RD	271	ALA	N-CA-C	6.61	128.86	111.00
9	OB	271	ALA	N-CA-C	6.60	128.83	111.00
9	DF	272	PRO	N-CA-C	-6.58	94.98	112.10
9	ED	161	ASP	CB-CG-OD2	6.58	124.22	118.30
26	W	461	ASP	CB-CG-OD1	6.58	124.22	118.30
9	NB	271	ALA	N-CA-C	6.55	128.69	111.00
8	VG	152	LEU	CA-CB-CG	6.55	130.36	115.30
9	BJ	271	ALA	N-CA-C	6.54	128.67	111.00
9	BL	271	ALA	N-CA-C	6.54	128.65	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	SJ	271	ALA	N-CA-C	6.53	128.62	111.00
8	PC	152	LEU	CA-CB-CG	6.52	130.30	115.30
25	T	447	ASP	CB-CG-OD2	6.52	124.17	118.30
9	ON	271	ALA	N-CA-C	6.52	128.59	111.00
8	AC	345	ASP	CB-CG-OD2	6.51	124.16	118.30
9	UL	271	ALA	N-CA-C	6.51	128.57	111.00
9	KJ	271	ALA	N-CA-C	6.50	128.55	111.00
8	KM	322	ASP	CB-CG-OD2	6.49	124.14	118.30
9	SL	271	ALA	N-CA-C	6.48	128.49	111.00
9	WD	271	ALA	N-CA-C	6.47	128.46	111.00
9	IH	271	ALA	N-CA-C	6.46	128.44	111.00
9	ML	271	ALA	N-CA-C	6.44	128.39	111.00
9	GJ	271	ALA	N-CA-C	6.42	128.35	111.00
9	WP	271	ALA	N-CA-C	6.42	128.34	111.00
9	PD	271	ALA	N-CA-C	6.42	128.32	111.00
9	BD	271	ALA	N-CA-C	6.41	128.32	111.00
8	FE	298	PRO	N-CD-CG	-6.41	93.59	103.20
8	QG	152	LEU	CA-CB-CG	6.40	130.02	115.30
9	IB	271	ALA	N-CA-C	6.38	128.24	111.00
8	JK	345	ASP	CB-CG-OD1	6.38	124.04	118.30
9	PH	209	ASP	CB-CG-OD1	6.37	124.03	118.30
16	F6	146	ASP	CB-CG-OD1	6.36	124.02	118.30
9	JF	268	PRO	N-CA-C	6.35	128.62	112.10
9	EB	271	ALA	N-CA-C	6.35	128.15	111.00
9	MJ	271	ALA	N-CA-C	6.35	128.15	111.00
26	Z	404	LEU	CA-CB-CG	6.35	129.90	115.30
30	f	154	ALA	N-CA-C	6.34	128.12	111.00
8	BI	120	ASP	CB-CG-OD2	6.32	123.99	118.30
26	Y	275	LEU	CA-CB-CG	6.32	129.83	115.30
9	LL	271	ALA	N-CA-C	6.32	128.05	111.00
9	GD	271	ALA	N-CA-C	6.31	128.05	111.00
9	DJ	271	ALA	N-CA-C	6.31	128.03	111.00
9	MB	271	ALA	N-CA-C	6.30	128.01	111.00
9	NJ	271	ALA	N-CA-C	6.29	127.99	111.00
8	TM	47	ASP	CB-CG-OD1	6.29	123.96	118.30
9	AB	271	ALA	N-CA-C	6.28	127.96	111.00
9	KL	271	ALA	N-CA-C	6.28	127.95	111.00
8	NG	205	ASP	CB-CG-OD1	6.26	123.93	118.30
9	CJ	271	ALA	N-CA-C	6.25	127.89	111.00
8	DA	152	LEU	CA-CB-CG	6.25	129.68	115.30
9	KF	271	ALA	N-CA-C	6.25	127.88	111.00
9	VF	203	ASP	CB-CG-OD2	6.25	123.92	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	QM	152	LEU	CA-CB-CG	6.24	129.65	115.30
8	LG	33	ASP	CB-CG-OD1	6.23	123.90	118.30
8	GC	152	LEU	CA-CB-CG	6.22	129.60	115.30
24	R	197	ASP	CB-CG-OD1	6.22	123.89	118.30
9	PF	271	ALA	N-CA-C	6.21	127.77	111.00
8	HK	152	LEU	CA-CB-CG	6.20	129.57	115.30
9	HH	271	ALA	N-CA-C	6.20	127.73	111.00
9	OH	271	ALA	N-CA-C	6.19	127.72	111.00
9	HD	203	ASP	CB-CG-OD2	6.18	123.86	118.30
9	SN	74	ASP	CB-CG-OD2	6.16	123.85	118.30
9	EJ	271	ALA	N-CA-C	6.14	127.59	111.00
8	GE	59	GLY	N-CA-C	6.13	128.44	113.10
8	OM	152	LEU	CA-CB-CG	6.13	129.39	115.30
26	W	48	LEU	CA-CB-CG	6.12	129.38	115.30
8	BE	397	LEU	CA-CB-CG	6.12	129.38	115.30
9	ML	42	LEU	CA-CB-CG	6.11	129.35	115.30
9	OF	271	ALA	N-CA-C	6.10	127.48	111.00
9	LD	271	ALA	N-CA-C	6.08	127.41	111.00
9	KN	41	ASP	CB-CG-OD1	6.07	123.77	118.30
9	UP	203	ASP	CB-CG-OD2	6.07	123.77	118.30
9	JH	271	ALA	N-CA-C	6.06	127.36	111.00
9	DB	271	ALA	N-CA-C	6.06	127.36	111.00
8	QG	424	ASP	CB-CG-OD1	6.05	123.75	118.30
9	EH	267	MET	CA-CB-CG	6.05	123.59	113.30
8	AG	205	ASP	CB-CG-OD1	6.04	123.74	118.30
8	HG	357	TYR	C-N-CA	-6.03	106.61	121.70
8	HO	227	LEU	CA-CB-CG	6.02	129.15	115.30
9	VP	271	ALA	N-CA-C	6.02	127.26	111.00
9	KH	161	ASP	CB-CG-OD1	6.01	123.71	118.30
8	UI	33	ASP	CB-CG-OD1	6.01	123.71	118.30
9	EF	271	ALA	N-CA-C	6.00	127.21	111.00
9	QD	271	ALA	N-CA-C	6.00	127.20	111.00
8	HC	322	ASP	CB-CG-OD2	5.99	123.69	118.30
23	M3	127	ASP	CB-CG-OD1	5.98	123.68	118.30
8	NM	33	ASP	CB-CG-OD1	5.98	123.68	118.30
9	IJ	271	ALA	N-CA-C	5.96	127.11	111.00
9	LJ	271	ALA	N-CA-C	5.96	127.09	111.00
9	DL	274	THR	N-CA-C	-5.96	94.92	111.00
9	TD	271	ALA	N-CA-C	5.96	127.08	111.00
9	LL	44	LEU	CA-CB-CG	5.92	128.92	115.30
9	RJ	197	ASP	CB-CG-OD1	5.92	123.63	118.30
9	UN	271	ALA	N-CA-C	5.91	126.95	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	UD	271	ALA	N-CA-C	5.90	126.94	111.00
9	OL	271	ALA	N-CA-C	5.90	126.94	111.00
12	C1	440	ASP	CB-CG-OD2	5.88	123.59	118.30
8	GK	392	ASP	CB-CG-OD2	5.88	123.59	118.30
9	QL	417	ASP	CB-CG-OD1	5.87	123.58	118.30
9	JJ	271	ALA	N-CA-C	5.87	126.84	111.00
9	UF	271	ALA	N-CA-C	5.86	126.82	111.00
30	f	107	LEU	CA-CB-CG	5.86	128.77	115.30
8	WM	152	LEU	CA-CB-CG	5.85	128.76	115.30
9	VJ	271	ALA	N-CA-C	5.85	126.79	111.00
8	CG	248	LEU	CA-CB-CG	5.83	128.71	115.30
9	ND	271	ALA	N-CA-C	5.82	126.70	111.00
8	KK	152	LEU	CA-CB-CG	5.81	128.67	115.30
8	FG	173	PRO	N-CD-CG	-5.81	94.48	103.20
9	NN	203	ASP	CB-CG-OD2	5.79	123.52	118.30
8	NG	33	ASP	CB-CG-OD1	5.79	123.51	118.30
9	HJ	271	ALA	N-CA-C	5.79	126.64	111.00
9	UL	88	ASP	CB-CG-OD1	5.78	123.50	118.30
9	GN	271	ALA	N-CA-C	5.77	126.58	111.00
9	SH	271	ALA	N-CA-C	5.77	126.58	111.00
16	F0	116	LYS	C-N-CA	5.77	136.12	121.70
7	A1	258	ASP	CB-CG-OD1	5.75	123.48	118.30
8	NG	322	ASP	CB-CG-OD2	5.74	123.47	118.30
8	BI	152	LEU	CA-CB-CG	5.74	128.50	115.30
9	TH	271	ALA	N-CA-C	5.73	126.48	111.00
9	HL	395	LEU	CA-CB-CG	5.72	128.46	115.30
9	CB	271	ALA	N-CA-C	5.72	126.44	111.00
9	DB	118	ASP	CB-CG-OD1	5.71	123.44	118.30
8	UO	205	ASP	CB-CG-OD2	5.71	123.44	118.30
9	RF	271	ALA	N-CA-C	5.70	126.39	111.00
8	VM	47	ASP	CB-CG-OD2	5.69	123.42	118.30
9	PJ	271	ALA	N-CA-C	5.69	126.37	111.00
9	IF	271	ALA	N-CA-C	5.68	126.35	111.00
9	ID	271	ALA	N-CA-C	5.68	126.33	111.00
26	X	275	LEU	CA-CB-CG	5.67	128.35	115.30
28	YD	209	ASP	CB-CG-OD2	5.67	123.41	118.30
8	WG	252	LEU	CA-CB-CG	5.67	128.34	115.30
8	AM	218	ASP	CB-CG-OD1	5.66	123.40	118.30
9	RH	271	ALA	N-CA-C	5.66	126.29	111.00
8	AG	397	LEU	CA-CB-CG	5.66	128.32	115.30
9	AH	271	ALA	N-CA-C	5.66	126.28	111.00
8	BG	205	ASP	CB-CG-OD2	5.66	123.39	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	SM	116	ASP	CB-CG-OD1	5.66	123.39	118.30
8	SO	218	ASP	CB-CG-OD1	5.66	123.39	118.30
9	TL	209	ASP	CB-CG-OD1	5.66	123.39	118.30
8	GM	152	LEU	CA-CB-CG	5.64	128.28	115.30
8	UI	322	ASP	CB-CG-OD1	5.62	123.36	118.30
9	MJ	44	LEU	CA-CB-CG	5.62	128.22	115.30
30	g	337	ASP	CB-CG-OD1	5.59	123.33	118.30
9	SF	272	PRO	N-CA-C	-5.59	97.56	112.10
9	SN	271	ALA	N-CA-C	5.59	126.09	111.00
9	MD	271	ALA	N-CA-C	5.58	126.07	111.00
9	JF	271	ALA	N-CA-C	5.57	126.05	111.00
9	HN	323	MET	CA-CB-CG	5.57	122.77	113.30
8	FM	171	ILE	C-N-CA	5.56	135.60	121.70
8	BI	306	ASP	CB-CG-OD2	5.56	123.30	118.30
8	VG	367	ASP	CB-CG-OD1	5.56	123.30	118.30
9	HB	271	ALA	N-CA-C	5.56	126.01	111.00
9	CF	271	ALA	N-CA-C	5.55	125.99	111.00
8	NI	195	LEU	CA-CB-CG	5.55	128.06	115.30
9	HD	271	ALA	N-CA-C	5.55	125.97	111.00
9	IB	284	LEU	CA-CB-CG	5.54	128.04	115.30
27	XE	171	LEU	CA-CB-CG	5.54	128.04	115.30
9	GF	240	LEU	CA-CB-CG	5.53	128.03	115.30
9	VN	271	ALA	N-CA-C	5.52	125.90	111.00
9	RF	233	MET	CA-CB-CG	5.51	122.68	113.30
8	RK	364	PRO	CA-N-CD	-5.51	103.78	111.50
8	DK	357	TYR	C-N-CA	-5.51	107.92	121.70
9	PF	417	ASP	CB-CG-OD1	5.50	123.25	118.30
9	IL	42	LEU	CA-CB-CG	5.50	127.95	115.30
9	GJ	269	GLY	N-CA-C	-5.50	99.35	113.10
9	NJ	417	ASP	CB-CG-OD1	5.50	123.25	118.30
12	C4	209	ASP	CB-CG-OD1	5.50	123.25	118.30
9	IH	41	ASP	CB-CG-OD2	5.49	123.24	118.30
8	KI	33	ASP	CB-CG-OD1	5.48	123.23	118.30
22	L2	36	LEU	CA-CB-CG	5.48	127.90	115.30
8	SO	89	PRO	CA-N-CD	-5.46	103.86	111.50
9	JN	118	ASP	CB-CG-OD1	5.45	123.21	118.30
9	QN	271	ALA	N-CA-C	5.45	125.72	111.00
9	AH	44	LEU	CA-CB-CG	5.45	127.83	115.30
9	BJ	427	ASP	CB-CG-OD1	5.44	123.20	118.30
9	QD	112	LEU	CA-CB-CG	5.43	127.80	115.30
9	QH	118	ASP	CB-CG-OD1	5.43	123.19	118.30
27	XD	26	ASP	CB-CG-OD1	5.43	123.19	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	IN	271	ALA	N-CA-C	5.42	125.65	111.00
9	TP	271	ALA	N-CA-C	5.42	125.62	111.00
9	MH	26	ASP	CB-CG-OD2	5.40	123.16	118.30
9	TL	271	ALA	N-CA-C	5.39	125.56	111.00
7	A1	209	PRO	C-N-CA	5.39	135.17	121.70
24	P	275	PRO	C-N-CA	5.39	135.17	121.70
9	WF	209	ASP	CB-CG-OD2	5.38	123.14	118.30
9	LN	271	ALA	N-CA-C	5.38	125.52	111.00
8	CK	32	PRO	N-CD-CG	-5.38	95.14	103.20
28	YF	104	ASP	CB-CG-OD2	5.38	123.14	118.30
9	SD	271	ALA	N-CA-C	5.37	125.50	111.00
9	SF	271	ALA	N-CA-C	5.37	125.49	111.00
9	WF	161	ASP	CB-CG-OD1	5.37	123.13	118.30
8	BG	46	ASP	CB-CG-OD1	5.36	123.13	118.30
26	Z	275	LEU	CA-CB-CG	5.36	127.64	115.30
9	MD	128	ASP	CB-CG-OD1	5.36	123.12	118.30
8	LI	33	ASP	CB-CG-OD2	5.35	123.12	118.30
16	F4	89	GLY	C-N-CA	5.35	135.08	121.70
9	KH	271	ALA	N-CA-C	5.35	125.43	111.00
8	BA	26	LEU	CA-CB-CG	5.34	127.59	115.30
9	QF	271	ALA	N-CA-C	5.34	125.42	111.00
9	TJ	271	ALA	N-CA-C	5.34	125.41	111.00
9	PL	271	ALA	N-CA-C	5.33	125.40	111.00
8	WM	171	ILE	C-N-CA	5.33	135.02	121.70
12	C2	400	LEU	CA-CB-CG	5.33	127.55	115.30
9	OF	377	LEU	CA-CB-CG	5.32	127.54	115.30
12	C4	388	ASP	CB-CG-OD2	5.32	123.09	118.30
8	UG	322	ASP	CB-CG-OD1	5.31	123.08	118.30
9	AJ	417	ASP	CB-CG-OD2	5.31	123.08	118.30
8	IG	33	ASP	CB-CG-OD1	5.30	123.07	118.30
5	8	61	ARG	N-CA-C	5.30	125.30	111.00
8	AM	397	LEU	CA-CB-CG	5.29	127.47	115.30
9	EH	268	PRO	N-CA-C	5.28	125.83	112.10
9	NL	271	ALA	N-CA-C	5.28	125.26	111.00
9	TN	271	ALA	N-CA-C	5.27	125.24	111.00
9	DJ	395	LEU	CA-CB-CG	5.27	127.42	115.30
9	EH	271	ALA	N-CA-C	5.27	125.22	111.00
9	DB	284	LEU	CA-CB-CG	5.26	127.40	115.30
9	SJ	272	PRO	N-CA-C	-5.26	98.43	112.10
8	IG	248	LEU	CA-CB-CG	5.26	127.39	115.30
9	CH	271	ALA	N-CA-C	5.25	125.19	111.00
9	HB	331	LEU	CA-CB-CG	5.25	127.38	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	CB	284	LEU	CA-CB-CG	5.25	127.37	115.30
9	DB	295	ASP	CB-CG-OD2	5.23	123.01	118.30
26	W	508	LEU	CA-CB-CG	5.23	127.32	115.30
8	AC	397	LEU	CA-CB-CG	5.22	127.31	115.30
8	JK	157	LEU	CA-CB-CG	5.22	127.30	115.30
9	EN	284	LEU	CA-CB-CG	5.21	127.30	115.30
8	GM	397	LEU	CA-CB-CG	5.21	127.30	115.30
9	FJ	271	ALA	N-CA-C	5.21	125.07	111.00
16	F7	96	LEU	CB-CG-CD1	-5.19	102.17	111.00
9	IL	271	ALA	N-CA-C	5.18	125.00	111.00
30	e	157	ASN	C-N-CA	5.18	134.66	121.70
9	RD	135	LEU	CA-CB-CG	5.18	127.22	115.30
8	SK	345	ASP	CB-CG-OD1	5.18	122.96	118.30
9	GF	271	ALA	N-CA-C	5.17	124.96	111.00
9	TJ	187	LEU	CA-CB-CG	5.17	127.18	115.30
8	IO	152	LEU	CA-CB-CG	5.17	127.18	115.30
8	PE	152	LEU	CA-CB-CG	5.16	127.16	115.30
9	UF	249	ASP	CB-CG-OD2	5.16	122.94	118.30
9	FN	271	ALA	N-CA-C	5.16	124.92	111.00
9	NH	203	ASP	CB-CG-OD1	5.15	122.94	118.30
8	TM	195	LEU	CA-CB-CG	5.15	127.14	115.30
9	BH	271	ALA	N-CA-C	5.15	124.89	111.00
8	DG	248	LEU	CA-CB-CG	5.15	127.14	115.30
8	AA	218	ASP	CB-CG-OD1	5.13	122.92	118.30
9	VN	39	ASP	CB-CG-OD1	5.13	122.92	118.30
8	OC	322	ASP	CB-CG-OD2	5.13	122.92	118.30
8	UE	364	PRO	CA-N-CD	-5.13	104.32	111.50
9	JL	268	PRO	N-CA-C	5.12	125.42	112.10
9	SN	44	LEU	CA-CB-CG	5.12	127.08	115.30
4	6	77	ASP	CB-CG-OD2	5.12	122.91	118.30
8	SK	302	MET	CA-CB-CG	5.12	122.00	113.30
8	HG	248	LEU	CA-CB-CG	5.11	127.06	115.30
9	BF	271	ALA	N-CA-C	5.11	124.79	111.00
9	VD	271	ALA	N-CA-C	5.10	124.76	111.00
8	CG	364	PRO	CA-N-CD	-5.09	104.37	111.50
8	BE	248	LEU	CA-CB-CG	5.09	127.01	115.30
16	G4	21	GLN	CA-CB-CG	5.09	124.59	113.40
9	VF	271	ALA	N-CA-C	5.08	124.73	111.00
9	KD	271	ALA	N-CA-C	5.08	124.72	111.00
9	NN	118	ASP	CB-CG-OD2	5.08	122.88	118.30
9	WN	271	ALA	N-CA-C	5.08	124.73	111.00
9	LH	271	ALA	N-CA-C	5.08	124.72	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	GB	271	ALA	N-CA-C	5.08	124.71	111.00
9	DD	323	MET	CA-CB-CG	5.07	121.92	113.30
8	FC	33	ASP	CB-CG-OD1	5.07	122.86	118.30
29	d	462	LEU	CA-CB-CG	5.07	126.95	115.30
8	AG	364	PRO	CA-N-CD	-5.06	104.41	111.50
9	AL	42	LEU	CA-CB-CG	5.06	126.95	115.30
9	EJ	272	PRO	N-CA-C	-5.04	99.00	112.10
9	KN	271	ALA	N-CA-C	5.04	124.61	111.00
9	NJ	278	SER	N-CA-C	5.04	124.60	111.00
9	TH	42	LEU	CA-CB-CG	5.04	126.88	115.30
9	VH	271	ALA	N-CA-C	5.03	124.57	111.00
8	LK	33	ASP	CB-CG-OD2	5.02	122.82	118.30
9	HL	271	ALA	N-CA-C	5.02	124.56	111.00
8	KK	205	ASP	CB-CG-OD1	5.02	122.82	118.30
9	KN	377	LEU	CA-CB-CG	5.02	126.84	115.30
9	IF	327	ASP	CB-CG-OD2	-5.01	113.79	118.30
9	FH	271	ALA	N-CA-C	5.01	124.52	111.00
9	AF	271	ALA	N-CA-C	5.00	124.51	111.00
9	KB	271	ALA	N-CA-C	5.00	124.51	111.00

There are no chirality outliers.

There are no planarity outliers.

## 5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	0	50/229 (22%)	44 (88%)	6 (12%)	0	<b>100</b> <b>100</b>

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	7	138/229 (60%)	127 (92%)	11 (8%)	0	100	100
2	1	266/833 (32%)	259 (97%)	7 (3%)	0	100	100
2	2	442/833 (53%)	436 (99%)	6 (1%)	0	100	100
3	3	295/514 (57%)	292 (99%)	3 (1%)	0	100	100
3	4	213/514 (41%)	213 (100%)	0	0	100	100
4	5	369/376 (98%)	358 (97%)	11 (3%)	0	100	100
4	6	369/376 (98%)	361 (98%)	8 (2%)	0	100	100
5	8	166/194 (86%)	151 (91%)	15 (9%)	0	100	100
5	9	46/194 (24%)	41 (89%)	5 (11%)	0	100	100
6	A	48/101 (48%)	48 (100%)	0	0	100	100
7	A0	216/418 (52%)	215 (100%)	1 (0%)	0	100	100
7	A1	389/418 (93%)	383 (98%)	6 (2%)	0	100	100
7	A2	389/418 (93%)	382 (98%)	7 (2%)	0	100	100
7	A3	329/418 (79%)	324 (98%)	5 (2%)	0	100	100
7	A4	33/418 (8%)	32 (97%)	1 (3%)	0	100	100
8	AA	437/451 (97%)	428 (98%)	8 (2%)	1 (0%)	47	79
8	AC	437/451 (97%)	425 (97%)	11 (2%)	1 (0%)	47	79
8	AE	437/451 (97%)	426 (98%)	11 (2%)	0	100	100
8	AG	437/451 (97%)	425 (97%)	12 (3%)	0	100	100
8	AI	437/451 (97%)	424 (97%)	12 (3%)	1 (0%)	47	79
8	AK	437/451 (97%)	428 (98%)	9 (2%)	0	100	100
8	AM	437/451 (97%)	424 (97%)	13 (3%)	0	100	100
8	BA	428/451 (95%)	414 (97%)	13 (3%)	1 (0%)	47	79
8	BC	437/451 (97%)	425 (97%)	11 (2%)	1 (0%)	47	79
8	BE	428/451 (95%)	416 (97%)	12 (3%)	0	100	100
8	BG	437/451 (97%)	420 (96%)	17 (4%)	0	100	100
8	BI	428/451 (95%)	415 (97%)	13 (3%)	0	100	100
8	BK	437/451 (97%)	420 (96%)	17 (4%)	0	100	100
8	BM	429/451 (95%)	419 (98%)	10 (2%)	0	100	100
8	CA	428/451 (95%)	418 (98%)	9 (2%)	1 (0%)	47	79
8	CC	437/451 (97%)	423 (97%)	13 (3%)	1 (0%)	47	79

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	CE	426/451 (94%)	413 (97%)	13 (3%)	0	100	100
8	CG	437/451 (97%)	418 (96%)	19 (4%)	0	100	100
8	CI	427/451 (95%)	412 (96%)	15 (4%)	0	100	100
8	CK	437/451 (97%)	425 (97%)	12 (3%)	0	100	100
8	CM	427/451 (95%)	414 (97%)	13 (3%)	0	100	100
8	DA	375/451 (83%)	364 (97%)	11 (3%)	0	100	100
8	DC	426/451 (94%)	413 (97%)	13 (3%)	0	100	100
8	DE	427/451 (95%)	418 (98%)	9 (2%)	0	100	100
8	DG	426/451 (94%)	410 (96%)	16 (4%)	0	100	100
8	DI	426/451 (94%)	411 (96%)	15 (4%)	0	100	100
8	DK	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
8	DM	427/451 (95%)	418 (98%)	9 (2%)	0	100	100
8	EC	437/451 (97%)	423 (97%)	13 (3%)	1 (0%)	47	79
8	EE	437/451 (97%)	426 (98%)	11 (2%)	0	100	100
8	EG	436/451 (97%)	412 (94%)	24 (6%)	0	100	100
8	EI	437/451 (97%)	418 (96%)	19 (4%)	0	100	100
8	EK	436/451 (97%)	420 (96%)	16 (4%)	0	100	100
8	EM	436/451 (97%)	419 (96%)	17 (4%)	0	100	100
8	FC	427/451 (95%)	416 (97%)	11 (3%)	0	100	100
8	FE	427/451 (95%)	413 (97%)	14 (3%)	0	100	100
8	FG	426/451 (94%)	410 (96%)	16 (4%)	0	100	100
8	FI	426/451 (94%)	411 (96%)	15 (4%)	0	100	100
8	FK	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
8	FM	426/451 (94%)	410 (96%)	16 (4%)	0	100	100
8	GC	431/451 (96%)	420 (97%)	10 (2%)	1 (0%)	47	79
8	GE	426/451 (94%)	420 (99%)	6 (1%)	0	100	100
8	GG	427/451 (95%)	414 (97%)	13 (3%)	0	100	100
8	GI	426/451 (94%)	419 (98%)	7 (2%)	0	100	100
8	GK	428/451 (95%)	422 (99%)	6 (1%)	0	100	100
8	GM	430/451 (95%)	417 (97%)	13 (3%)	0	100	100
8	HC	427/451 (95%)	414 (97%)	12 (3%)	1 (0%)	47	79

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	HE	428/451 (95%)	420 (98%)	8 (2%)	0	100	100
8	HG	428/451 (95%)	414 (97%)	14 (3%)	0	100	100
8	HI	428/451 (95%)	419 (98%)	9 (2%)	0	100	100
8	HK	427/451 (95%)	416 (97%)	11 (3%)	0	100	100
8	HM	427/451 (95%)	417 (98%)	10 (2%)	0	100	100
8	HO	381/451 (84%)	369 (97%)	12 (3%)	0	100	100
8	IC	429/451 (95%)	422 (98%)	6 (1%)	1 (0%)	47	79
8	IE	427/451 (95%)	413 (97%)	14 (3%)	0	100	100
8	IG	437/451 (97%)	423 (97%)	14 (3%)	0	100	100
8	II	428/451 (95%)	416 (97%)	12 (3%)	0	100	100
8	IK	437/451 (97%)	427 (98%)	10 (2%)	0	100	100
8	IM	427/451 (95%)	414 (97%)	13 (3%)	0	100	100
8	IO	427/451 (95%)	413 (97%)	14 (3%)	0	100	100
8	JC	437/451 (97%)	423 (97%)	14 (3%)	0	100	100
8	JE	426/451 (94%)	412 (97%)	14 (3%)	0	100	100
8	JG	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
8	JI	426/451 (94%)	410 (96%)	16 (4%)	0	100	100
8	JK	427/451 (95%)	411 (96%)	16 (4%)	0	100	100
8	JM	426/451 (94%)	413 (97%)	13 (3%)	0	100	100
8	KC	429/451 (95%)	418 (97%)	10 (2%)	1 (0%)	47	79
8	KE	428/451 (95%)	415 (97%)	13 (3%)	0	100	100
8	KG	429/451 (95%)	417 (97%)	12 (3%)	0	100	100
8	KI	426/451 (94%)	411 (96%)	15 (4%)	0	100	100
8	KK	429/451 (95%)	419 (98%)	10 (2%)	0	100	100
8	KM	436/451 (97%)	421 (97%)	15 (3%)	0	100	100
8	KO	428/451 (95%)	413 (96%)	15 (4%)	0	100	100
8	LC	429/451 (95%)	418 (97%)	10 (2%)	1 (0%)	47	79
8	LE	437/451 (97%)	422 (97%)	15 (3%)	0	100	100
8	LG	430/451 (95%)	417 (97%)	13 (3%)	0	100	100
8	LI	432/451 (96%)	420 (97%)	12 (3%)	0	100	100
8	LK	429/451 (95%)	420 (98%)	9 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	LM	427/451 (95%)	418 (98%)	9 (2%)	0	100	100
8	MC	438/451 (97%)	426 (97%)	11 (2%)	1 (0%)	47	79
8	ME	428/451 (95%)	411 (96%)	17 (4%)	0	100	100
8	MG	428/451 (95%)	417 (97%)	11 (3%)	0	100	100
8	MI	429/451 (95%)	418 (97%)	11 (3%)	0	100	100
8	MK	438/451 (97%)	428 (98%)	10 (2%)	0	100	100
8	MM	438/451 (97%)	420 (96%)	18 (4%)	0	100	100
8	NC	438/451 (97%)	423 (97%)	14 (3%)	1 (0%)	47	79
8	NE	437/451 (97%)	424 (97%)	13 (3%)	0	100	100
8	NG	437/451 (97%)	424 (97%)	12 (3%)	1 (0%)	47	79
8	NI	437/451 (97%)	427 (98%)	10 (2%)	0	100	100
8	NK	437/451 (97%)	429 (98%)	8 (2%)	0	100	100
8	NM	437/451 (97%)	424 (97%)	13 (3%)	0	100	100
8	OC	439/451 (97%)	428 (98%)	10 (2%)	1 (0%)	47	79
8	OE	438/451 (97%)	427 (98%)	11 (2%)	0	100	100
8	OG	439/451 (97%)	424 (97%)	15 (3%)	0	100	100
8	OI	439/451 (97%)	429 (98%)	10 (2%)	0	100	100
8	OK	437/451 (97%)	428 (98%)	9 (2%)	0	100	100
8	OM	439/451 (97%)	425 (97%)	14 (3%)	0	100	100
8	OO	416/451 (92%)	402 (97%)	14 (3%)	0	100	100
8	PC	439/451 (97%)	426 (97%)	12 (3%)	1 (0%)	47	79
8	PE	438/451 (97%)	425 (97%)	13 (3%)	0	100	100
8	PG	439/451 (97%)	420 (96%)	19 (4%)	0	100	100
8	PI	437/451 (97%)	424 (97%)	13 (3%)	0	100	100
8	PK	438/451 (97%)	426 (97%)	12 (3%)	0	100	100
8	PM	437/451 (97%)	423 (97%)	14 (3%)	0	100	100
8	PO	437/451 (97%)	425 (97%)	12 (3%)	0	100	100
8	QC	438/451 (97%)	420 (96%)	17 (4%)	1 (0%)	47	79
8	QE	438/451 (97%)	424 (97%)	14 (3%)	0	100	100
8	QG	438/451 (97%)	420 (96%)	17 (4%)	1 (0%)	47	79
8	QI	438/451 (97%)	422 (96%)	16 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	QK	438/451 (97%)	425 (97%)	13 (3%)	0	100	100
8	QM	438/451 (97%)	425 (97%)	13 (3%)	0	100	100
8	QO	438/451 (97%)	418 (95%)	20 (5%)	0	100	100
8	RC	405/451 (90%)	389 (96%)	16 (4%)	0	100	100
8	RE	426/451 (94%)	418 (98%)	8 (2%)	0	100	100
8	RG	428/451 (95%)	410 (96%)	18 (4%)	0	100	100
8	RI	437/451 (97%)	417 (95%)	20 (5%)	0	100	100
8	RK	438/451 (97%)	427 (98%)	11 (2%)	0	100	100
8	RM	438/451 (97%)	421 (96%)	17 (4%)	0	100	100
8	RO	437/451 (97%)	420 (96%)	17 (4%)	0	100	100
8	SE	425/451 (94%)	415 (98%)	10 (2%)	0	100	100
8	SG	426/451 (94%)	416 (98%)	10 (2%)	0	100	100
8	SI	427/451 (95%)	410 (96%)	17 (4%)	0	100	100
8	SK	427/451 (95%)	417 (98%)	10 (2%)	0	100	100
8	SM	427/451 (95%)	413 (97%)	14 (3%)	0	100	100
8	SO	427/451 (95%)	418 (98%)	9 (2%)	0	100	100
8	TE	425/451 (94%)	414 (97%)	11 (3%)	0	100	100
8	TG	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
8	TI	427/451 (95%)	417 (98%)	10 (2%)	0	100	100
8	TK	425/451 (94%)	412 (97%)	13 (3%)	0	100	100
8	TM	427/451 (95%)	413 (97%)	14 (3%)	0	100	100
8	TO	425/451 (94%)	413 (97%)	12 (3%)	0	100	100
8	UE	427/451 (95%)	413 (97%)	14 (3%)	0	100	100
8	UG	428/451 (95%)	417 (97%)	11 (3%)	0	100	100
8	UI	428/451 (95%)	415 (97%)	13 (3%)	0	100	100
8	UK	427/451 (95%)	418 (98%)	9 (2%)	0	100	100
8	UM	427/451 (95%)	417 (98%)	10 (2%)	0	100	100
8	UO	427/451 (95%)	416 (97%)	11 (3%)	0	100	100
8	VE	437/451 (97%)	420 (96%)	17 (4%)	0	100	100
8	VG	429/451 (95%)	413 (96%)	16 (4%)	0	100	100
8	VI	437/451 (97%)	423 (97%)	13 (3%)	1 (0%)	47	79

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	VK	427/451 (95%)	419 (98%)	8 (2%)	0	100	100
8	VM	437/451 (97%)	428 (98%)	9 (2%)	0	100	100
8	VO	427/451 (95%)	418 (98%)	9 (2%)	0	100	100
8	WE	437/451 (97%)	423 (97%)	13 (3%)	1 (0%)	47	79
8	WG	426/451 (94%)	410 (96%)	16 (4%)	0	100	100
8	WI	436/451 (97%)	420 (96%)	16 (4%)	0	100	100
8	WK	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
8	WM	437/451 (97%)	415 (95%)	22 (5%)	0	100	100
8	WO	427/451 (95%)	408 (96%)	19 (4%)	0	100	100
9	AB	435/445 (98%)	418 (96%)	17 (4%)	0	100	100
9	AD	435/445 (98%)	419 (96%)	16 (4%)	0	100	100
9	AF	435/445 (98%)	415 (95%)	20 (5%)	0	100	100
9	AH	435/445 (98%)	417 (96%)	17 (4%)	1 (0%)	47	79
9	AJ	435/445 (98%)	418 (96%)	16 (4%)	1 (0%)	47	79
9	AL	435/445 (98%)	410 (94%)	24 (6%)	1 (0%)	47	79
9	BB	425/445 (96%)	405 (95%)	20 (5%)	0	100	100
9	BD	424/445 (95%)	410 (97%)	14 (3%)	0	100	100
9	BF	425/445 (96%)	409 (96%)	16 (4%)	0	100	100
9	BH	424/445 (95%)	404 (95%)	20 (5%)	0	100	100
9	BJ	428/445 (96%)	413 (96%)	13 (3%)	2 (0%)	29	68
9	BL	424/445 (95%)	408 (96%)	15 (4%)	1 (0%)	47	79
9	CB	426/445 (96%)	413 (97%)	13 (3%)	0	100	100
9	CD	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	CF	425/445 (96%)	410 (96%)	14 (3%)	1 (0%)	47	79
9	CH	424/445 (95%)	406 (96%)	17 (4%)	1 (0%)	47	79
9	CJ	425/445 (96%)	407 (96%)	16 (4%)	2 (0%)	29	68
9	CL	424/445 (95%)	410 (97%)	13 (3%)	1 (0%)	47	79
9	DB	424/445 (95%)	406 (96%)	17 (4%)	1 (0%)	47	79
9	DD	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	DF	424/445 (95%)	407 (96%)	16 (4%)	1 (0%)	47	79
9	DH	424/445 (95%)	396 (93%)	28 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	DJ	424/445 (95%)	403 (95%)	20 (5%)	1 (0%)	47	79
9	DL	424/445 (95%)	397 (94%)	26 (6%)	1 (0%)	47	79
9	EB	424/445 (95%)	405 (96%)	19 (4%)	0	100	100
9	ED	424/445 (95%)	405 (96%)	19 (4%)	0	100	100
9	EF	424/445 (95%)	405 (96%)	19 (4%)	0	100	100
9	EH	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	EJ	424/445 (95%)	405 (96%)	19 (4%)	0	100	100
9	EL	424/445 (95%)	411 (97%)	12 (3%)	1 (0%)	47	79
9	EN	426/445 (96%)	417 (98%)	9 (2%)	0	100	100
9	FB	424/445 (95%)	407 (96%)	17 (4%)	0	100	100
9	FD	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	FF	424/445 (95%)	410 (97%)	13 (3%)	1 (0%)	47	79
9	FH	424/445 (95%)	407 (96%)	17 (4%)	0	100	100
9	FJ	424/445 (95%)	409 (96%)	15 (4%)	0	100	100
9	FL	424/445 (95%)	405 (96%)	17 (4%)	2 (0%)	29	68
9	FN	425/445 (96%)	416 (98%)	9 (2%)	0	100	100
9	GB	406/445 (91%)	396 (98%)	10 (2%)	0	100	100
9	GD	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	GF	425/445 (96%)	406 (96%)	19 (4%)	0	100	100
9	GH	424/445 (95%)	406 (96%)	18 (4%)	0	100	100
9	GJ	428/445 (96%)	408 (95%)	19 (4%)	1 (0%)	47	79
9	GL	424/445 (95%)	403 (95%)	21 (5%)	0	100	100
9	GN	424/445 (95%)	409 (96%)	15 (4%)	0	100	100
9	HB	425/445 (96%)	408 (96%)	15 (4%)	2 (0%)	29	68
9	HD	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	HF	425/445 (96%)	405 (95%)	19 (4%)	1 (0%)	47	79
9	HH	424/445 (95%)	406 (96%)	17 (4%)	1 (0%)	47	79
9	HJ	426/445 (96%)	411 (96%)	14 (3%)	1 (0%)	47	79
9	HL	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	HN	423/445 (95%)	407 (96%)	16 (4%)	0	100	100
9	IB	401/445 (90%)	385 (96%)	15 (4%)	1 (0%)	47	79

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	ID	424/445 (95%)	405 (96%)	19 (4%)	0	100	100
9	IF	426/445 (96%)	408 (96%)	18 (4%)	0	100	100
9	IH	424/445 (95%)	404 (95%)	19 (4%)	1 (0%)	47	79
9	IJ	427/445 (96%)	410 (96%)	17 (4%)	0	100	100
9	IL	424/445 (95%)	403 (95%)	21 (5%)	0	100	100
9	IN	425/445 (96%)	406 (96%)	18 (4%)	1 (0%)	47	79
9	JB	424/445 (95%)	406 (96%)	18 (4%)	0	100	100
9	JD	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	JF	425/445 (96%)	409 (96%)	15 (4%)	1 (0%)	47	79
9	JH	424/445 (95%)	402 (95%)	22 (5%)	0	100	100
9	JJ	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	JL	424/445 (95%)	401 (95%)	22 (5%)	1 (0%)	47	79
9	JN	424/445 (95%)	409 (96%)	15 (4%)	0	100	100
9	KB	408/445 (92%)	392 (96%)	16 (4%)	0	100	100
9	KD	429/445 (96%)	415 (97%)	14 (3%)	0	100	100
9	KF	424/445 (95%)	409 (96%)	15 (4%)	0	100	100
9	KH	429/445 (96%)	416 (97%)	13 (3%)	0	100	100
9	KJ	424/445 (95%)	410 (97%)	14 (3%)	0	100	100
9	KL	429/445 (96%)	410 (96%)	18 (4%)	1 (0%)	47	79
9	KN	424/445 (95%)	409 (96%)	15 (4%)	0	100	100
9	LB	438/445 (98%)	423 (97%)	15 (3%)	0	100	100
9	LD	424/445 (95%)	410 (97%)	14 (3%)	0	100	100
9	LF	437/445 (98%)	418 (96%)	19 (4%)	0	100	100
9	LH	424/445 (95%)	403 (95%)	21 (5%)	0	100	100
9	LJ	441/445 (99%)	424 (96%)	17 (4%)	0	100	100
9	LL	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	LN	438/445 (98%)	421 (96%)	17 (4%)	0	100	100
9	MB	428/445 (96%)	414 (97%)	14 (3%)	0	100	100
9	MD	430/445 (97%)	416 (97%)	13 (3%)	1 (0%)	47	79
9	MF	429/445 (96%)	414 (96%)	15 (4%)	0	100	100
9	MH	430/445 (97%)	415 (96%)	14 (3%)	1 (0%)	47	79

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	MJ	430/445 (97%)	418 (97%)	12 (3%)	0	100	100
9	ML	430/445 (97%)	414 (96%)	15 (4%)	1 (0%)	47	79
9	MN	428/445 (96%)	411 (96%)	17 (4%)	0	100	100
9	NB	426/445 (96%)	410 (96%)	15 (4%)	1 (0%)	47	79
9	ND	426/445 (96%)	411 (96%)	15 (4%)	0	100	100
9	NF	428/445 (96%)	406 (95%)	22 (5%)	0	100	100
9	NH	426/445 (96%)	404 (95%)	21 (5%)	1 (0%)	47	79
9	NJ	427/445 (96%)	409 (96%)	18 (4%)	0	100	100
9	NL	426/445 (96%)	404 (95%)	22 (5%)	0	100	100
9	NN	426/445 (96%)	404 (95%)	21 (5%)	1 (0%)	47	79
9	OB	429/445 (96%)	412 (96%)	16 (4%)	1 (0%)	47	79
9	OD	428/445 (96%)	412 (96%)	16 (4%)	0	100	100
9	OF	430/445 (97%)	413 (96%)	17 (4%)	0	100	100
9	OH	428/445 (96%)	409 (96%)	19 (4%)	0	100	100
9	OJ	430/445 (97%)	415 (96%)	15 (4%)	0	100	100
9	OL	428/445 (96%)	408 (95%)	18 (4%)	2 (0%)	29	68
9	ON	429/445 (96%)	414 (96%)	14 (3%)	1 (0%)	47	79
9	PD	428/445 (96%)	410 (96%)	16 (4%)	2 (0%)	29	68
9	PF	430/445 (97%)	411 (96%)	18 (4%)	1 (0%)	47	79
9	PH	424/445 (95%)	404 (95%)	20 (5%)	0	100	100
9	PJ	428/445 (96%)	414 (97%)	13 (3%)	1 (0%)	47	79
9	PL	427/445 (96%)	407 (95%)	20 (5%)	0	100	100
9	PN	428/445 (96%)	404 (94%)	24 (6%)	0	100	100
9	QD	426/445 (96%)	407 (96%)	19 (4%)	0	100	100
9	QF	428/445 (96%)	411 (96%)	16 (4%)	1 (0%)	47	79
9	QH	424/445 (95%)	410 (97%)	14 (3%)	0	100	100
9	QJ	427/445 (96%)	408 (96%)	19 (4%)	0	100	100
9	QL	425/445 (96%)	414 (97%)	11 (3%)	0	100	100
9	QN	426/445 (96%)	408 (96%)	18 (4%)	0	100	100
9	RD	424/445 (95%)	410 (97%)	14 (3%)	0	100	100
9	RF	427/445 (96%)	410 (96%)	17 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	RH	424/445 (95%)	406 (96%)	17 (4%)	1 (0%)	47	79
9	RJ	426/445 (96%)	408 (96%)	17 (4%)	1 (0%)	47	79
9	RL	424/445 (95%)	407 (96%)	17 (4%)	0	100	100
9	RN	425/445 (96%)	409 (96%)	16 (4%)	0	100	100
9	SD	424/445 (95%)	410 (97%)	14 (3%)	0	100	100
9	SF	424/445 (95%)	406 (96%)	18 (4%)	0	100	100
9	SH	424/445 (95%)	412 (97%)	12 (3%)	0	100	100
9	SJ	424/445 (95%)	405 (96%)	19 (4%)	0	100	100
9	SL	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	SN	424/445 (95%)	408 (96%)	15 (4%)	1 (0%)	47	79
9	TD	424/445 (95%)	413 (97%)	11 (3%)	0	100	100
9	TF	425/445 (96%)	403 (95%)	22 (5%)	0	100	100
9	TH	424/445 (95%)	407 (96%)	17 (4%)	0	100	100
9	TJ	424/445 (95%)	407 (96%)	17 (4%)	0	100	100
9	TL	424/445 (95%)	400 (94%)	24 (6%)	0	100	100
9	TN	424/445 (95%)	402 (95%)	22 (5%)	0	100	100
9	TP	417/445 (94%)	402 (96%)	15 (4%)	0	100	100
9	UD	424/445 (95%)	410 (97%)	14 (3%)	0	100	100
9	UF	425/445 (96%)	411 (97%)	13 (3%)	1 (0%)	47	79
9	UH	424/445 (95%)	413 (97%)	11 (3%)	0	100	100
9	UJ	425/445 (96%)	407 (96%)	18 (4%)	0	100	100
9	UL	424/445 (95%)	411 (97%)	12 (3%)	1 (0%)	47	79
9	UN	425/445 (96%)	407 (96%)	17 (4%)	1 (0%)	47	79
9	UP	425/445 (96%)	412 (97%)	13 (3%)	0	100	100
9	VD	424/445 (95%)	411 (97%)	13 (3%)	0	100	100
9	VF	425/445 (96%)	404 (95%)	20 (5%)	1 (0%)	47	79
9	VH	424/445 (95%)	408 (96%)	16 (4%)	0	100	100
9	VJ	425/445 (96%)	408 (96%)	16 (4%)	1 (0%)	47	79
9	VL	424/445 (95%)	408 (96%)	15 (4%)	1 (0%)	47	79
9	VN	425/445 (96%)	406 (96%)	18 (4%)	1 (0%)	47	79
9	VP	425/445 (96%)	411 (97%)	14 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	WD	424/445 (95%)	412 (97%)	11 (3%)	1 (0%)	47	79
9	WF	424/445 (95%)	407 (96%)	17 (4%)	0	100	100
9	WH	424/445 (95%)	401 (95%)	23 (5%)	0	100	100
9	WJ	424/445 (95%)	401 (95%)	23 (5%)	0	100	100
9	WL	424/445 (95%)	405 (96%)	19 (4%)	0	100	100
9	WN	425/445 (96%)	401 (94%)	24 (6%)	0	100	100
9	WP	425/445 (96%)	405 (95%)	19 (4%)	1 (0%)	47	79
10	B	178/495 (36%)	177 (99%)	1 (1%)	0	100	100
10	C	354/495 (72%)	352 (99%)	2 (1%)	0	100	100
11	B0	189/430 (44%)	188 (100%)	1 (0%)	0	100	100
11	B1	390/430 (91%)	383 (98%)	7 (2%)	0	100	100
11	B2	389/430 (90%)	381 (98%)	8 (2%)	0	100	100
11	B3	352/430 (82%)	343 (97%)	9 (3%)	0	100	100
11	B4	49/430 (11%)	47 (96%)	2 (4%)	0	100	100
11	B5	49/430 (11%)	47 (96%)	2 (4%)	0	100	100
11	B6	352/430 (82%)	348 (99%)	4 (1%)	0	100	100
11	B7	389/430 (90%)	385 (99%)	4 (1%)	0	100	100
11	B8	390/430 (91%)	385 (99%)	5 (1%)	0	100	100
11	B9	189/430 (44%)	189 (100%)	0	0	100	100
12	C0	31/490 (6%)	30 (97%)	1 (3%)	0	100	100
12	C1	332/490 (68%)	326 (98%)	6 (2%)	0	100	100
12	C2	391/490 (80%)	385 (98%)	5 (1%)	1 (0%)	41	75
12	C3	392/490 (80%)	379 (97%)	12 (3%)	1 (0%)	41	75
12	C4	215/490 (44%)	211 (98%)	4 (2%)	0	100	100
13	D	177/485 (36%)	165 (93%)	12 (7%)	0	100	100
14	D0	260/435 (60%)	256 (98%)	4 (2%)	0	100	100
14	D1	394/435 (91%)	389 (99%)	5 (1%)	0	100	100
14	D2	396/435 (91%)	391 (99%)	5 (1%)	0	100	100
14	D3	313/435 (72%)	308 (98%)	5 (2%)	0	100	100
14	D5	313/435 (72%)	309 (99%)	4 (1%)	0	100	100
14	D6	396/435 (91%)	390 (98%)	6 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	D7	394/435 (91%)	383 (97%)	11 (3%)	0	100	100
14	D8	260/435 (60%)	257 (99%)	3 (1%)	0	100	100
15	E	275/301 (91%)	265 (96%)	10 (4%)	0	100	100
15	F	275/301 (91%)	267 (97%)	8 (3%)	0	100	100
16	F0	155/222 (70%)	150 (97%)	4 (3%)	1 (1%)	25	64
16	F1	158/222 (71%)	152 (96%)	6 (4%)	0	100	100
16	F2	154/222 (69%)	150 (97%)	3 (2%)	1 (1%)	25	64
16	F3	155/222 (70%)	150 (97%)	5 (3%)	0	100	100
16	F4	158/222 (71%)	155 (98%)	3 (2%)	0	100	100
16	F5	154/222 (69%)	150 (97%)	3 (2%)	1 (1%)	25	64
16	F6	155/222 (70%)	148 (96%)	7 (4%)	0	100	100
16	F7	158/222 (71%)	150 (95%)	8 (5%)	0	100	100
16	F8	154/222 (69%)	150 (97%)	3 (2%)	1 (1%)	25	64
16	G0	157/222 (71%)	150 (96%)	7 (4%)	0	100	100
16	G1	156/222 (70%)	148 (95%)	8 (5%)	0	100	100
16	G2	154/222 (69%)	149 (97%)	5 (3%)	0	100	100
16	G3	155/222 (70%)	150 (97%)	5 (3%)	0	100	100
16	G4	158/222 (71%)	150 (95%)	8 (5%)	0	100	100
16	G5	154/222 (69%)	151 (98%)	3 (2%)	0	100	100
16	G6	155/222 (70%)	150 (97%)	5 (3%)	0	100	100
16	G7	158/222 (71%)	149 (94%)	9 (6%)	0	100	100
16	G8	154/222 (69%)	149 (97%)	5 (3%)	0	100	100
16	H0	155/222 (70%)	151 (97%)	3 (2%)	1 (1%)	25	64
16	H1	158/222 (71%)	153 (97%)	5 (3%)	0	100	100
16	H2	154/222 (69%)	149 (97%)	5 (3%)	0	100	100
17	G	92/121 (76%)	88 (96%)	4 (4%)	0	100	100
18	H	76/275 (28%)	72 (95%)	3 (4%)	1 (1%)	12	50
18	I	137/275 (50%)	131 (96%)	6 (4%)	0	100	100
18	J	138/275 (50%)	131 (95%)	6 (4%)	1 (1%)	22	61
18	K	137/275 (50%)	134 (98%)	2 (2%)	1 (1%)	22	61
18	L	137/275 (50%)	131 (96%)	6 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	M	137/275 (50%)	131 (96%)	5 (4%)	1 (1%)	22	61
18	N	138/275 (50%)	130 (94%)	7 (5%)	1 (1%)	22	61
19	I1	87/150 (58%)	85 (98%)	2 (2%)	0	100	100
20	J1	75/284 (26%)	72 (96%)	3 (4%)	0	100	100
20	J2	218/284 (77%)	209 (96%)	8 (4%)	1 (0%)	29	68
20	J3	218/284 (77%)	208 (95%)	8 (4%)	2 (1%)	17	57
20	J4	197/284 (69%)	186 (94%)	10 (5%)	1 (0%)	29	68
20	J5	63/284 (22%)	58 (92%)	4 (6%)	1 (2%)	9	46
21	K1	109/134 (81%)	100 (92%)	9 (8%)	0	100	100
22	L1	125/147 (85%)	116 (93%)	9 (7%)	0	100	100
22	L2	88/147 (60%)	83 (94%)	5 (6%)	0	100	100
23	M1	98/201 (49%)	94 (96%)	4 (4%)	0	100	100
23	M2	97/201 (48%)	94 (97%)	3 (3%)	0	100	100
23	M3	98/201 (49%)	95 (97%)	3 (3%)	0	100	100
23	M4	98/201 (49%)	95 (97%)	3 (3%)	0	100	100
24	O	23/382 (6%)	23 (100%)	0	0	100	100
24	P	366/382 (96%)	359 (98%)	6 (2%)	1 (0%)	41	75
24	Q	38/382 (10%)	37 (97%)	1 (3%)	0	100	100
24	R	215/382 (56%)	215 (100%)	0	0	100	100
24	S	163/382 (43%)	161 (99%)	2 (1%)	0	100	100
25	T	478/640 (75%)	447 (94%)	31 (6%)	0	100	100
25	U	479/640 (75%)	451 (94%)	28 (6%)	0	100	100
25	V	479/640 (75%)	454 (95%)	25 (5%)	0	100	100
26	W	604/749 (81%)	571 (94%)	32 (5%)	1 (0%)	47	79
26	X	689/749 (92%)	638 (93%)	49 (7%)	2 (0%)	41	75
26	Y	689/749 (92%)	642 (93%)	46 (7%)	1 (0%)	51	83
26	Z	498/749 (66%)	468 (94%)	30 (6%)	0	100	100
27	XA	184/193 (95%)	178 (97%)	6 (3%)	0	100	100
27	XB	184/193 (95%)	177 (96%)	7 (4%)	0	100	100
27	XC	184/193 (95%)	178 (97%)	6 (3%)	0	100	100
27	XD	184/193 (95%)	178 (97%)	6 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
27	XE	184/193 (95%)	175 (95%)	9 (5%)	0	100	100
27	XF	184/193 (95%)	174 (95%)	10 (5%)	0	100	100
27	XG	184/193 (95%)	177 (96%)	7 (4%)	0	100	100
28	YB	218/257 (85%)	212 (97%)	6 (3%)	0	100	100
28	YC	218/257 (85%)	213 (98%)	5 (2%)	0	100	100
28	YD	218/257 (85%)	210 (96%)	8 (4%)	0	100	100
28	YE	218/257 (85%)	215 (99%)	3 (1%)	0	100	100
28	YF	218/257 (85%)	215 (99%)	3 (1%)	0	100	100
28	YG	218/257 (85%)	211 (97%)	7 (3%)	0	100	100
29	a	168/551 (30%)	167 (99%)	1 (1%)	0	100	100
29	b	332/551 (60%)	332 (100%)	0	0	100	100
29	c	280/551 (51%)	277 (99%)	3 (1%)	0	100	100
29	d	216/551 (39%)	216 (100%)	0	0	100	100
30	e	608/620 (98%)	582 (96%)	24 (4%)	2 (0%)	41	75
30	f	608/620 (98%)	583 (96%)	25 (4%)	0	100	100
30	g	608/620 (98%)	582 (96%)	26 (4%)	0	100	100
31	h	144/256 (56%)	142 (99%)	2 (1%)	0	100	100
31	i	248/256 (97%)	242 (98%)	5 (2%)	1 (0%)	34	71
31	j	246/256 (96%)	244 (99%)	2 (1%)	0	100	100
31	k	248/256 (97%)	244 (98%)	4 (2%)	0	100	100
32	l	115/177 (65%)	110 (96%)	5 (4%)	0	100	100
32	m	115/177 (65%)	112 (97%)	2 (2%)	1 (1%)	17	57
32	n	115/177 (65%)	111 (96%)	3 (3%)	1 (1%)	17	57
33	o	402/552 (73%)	400 (100%)	2 (0%)	0	100	100
33	ol	34/552 (6%)	33 (97%)	1 (3%)	0	100	100
33	p	156/552 (28%)	153 (98%)	3 (2%)	0	100	100
34	q	108/169 (64%)	102 (94%)	6 (6%)	0	100	100
34	r	108/169 (64%)	98 (91%)	10 (9%)	0	100	100
34	s	108/169 (64%)	103 (95%)	5 (5%)	0	100	100
35	y	61/136 (45%)	59 (97%)	2 (3%)	0	100	100
35	z	109/136 (80%)	104 (95%)	5 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	159406/181357 (88%)	153891 (96%)	5408 (3%)	107 (0%)	54 83

All (107) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
8	AC	98	ASP
8	BC	98	ASP
12	C2	213	ASP
12	C3	407	PRO
9	DF	272	PRO
9	DL	272	PRO
9	EL	272	PRO
16	F0	117	TYR
16	F2	117	TYR
16	F8	117	TYR
8	GC	98	ASP
18	H	49	PRO
18	J	49	PRO
20	J4	31	PRO
20	J5	31	PRO
18	K	49	PRO
8	KC	98	ASP
8	LC	98	ASP
18	M	49	PRO
8	MC	98	ASP
8	OC	98	ASP
8	PC	98	ASP
8	WE	37	PRO
26	Y	726	PRO
30	e	158	VAL
8	AI	40	LYS
9	AJ	271	ALA
8	EC	98	ASP
9	FL	176	SER
8	HC	98	ASP
8	IC	98	ASP
20	J3	161	PRO
8	NC	98	ASP
8	NG	42	ILE
24	P	276	ASP
8	AA	97	GLU
8	BA	98	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	CC	98	ASP
16	F5	117	TYR
16	H0	133	HIS
9	JL	272	PRO
9	OB	268	PRO
8	QG	46	ASP
9	SN	272	PRO
26	X	726	PRO
9	NN	271	ALA
9	WD	268	PRO
31	i	144	LYS
32	n	8	ASN
9	AL	428	ALA
20	J3	28	VAL
9	ML	272	PRO
18	N	48	PRO
9	RH	271	ALA
8	VI	38	SER
26	W	292	VAL
30	e	63	HIS
32	m	8	ASN
8	CA	98	ASP
9	DB	272	PRO
20	J2	28	VAL
9	NB	268	PRO
9	PJ	272	PRO
8	QC	98	ASP
9	RJ	272	PRO
9	VF	271	ALA
9	CL	271	ALA
9	FF	271	ALA
9	HH	272	PRO
9	PF	268	PRO
9	UF	271	ALA
9	BJ	268	PRO
9	CJ	271	ALA
9	CJ	272	PRO
9	GJ	271	ALA
9	HJ	268	PRO
9	IH	271	ALA
9	PD	268	PRO
9	UL	271	ALA

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Mol	Chain	Res	Type
9	VL	271	ALA
9	WP	268	PRO
9	BJ	271	ALA
9	CF	271	ALA
9	DJ	272	PRO
9	FL	271	ALA
9	HB	268	PRO
9	IB	271	ALA
9	MD	272	PRO
9	MH	271	ALA
9	OL	271	ALA
9	OL	272	PRO
9	ON	268	PRO
9	QF	272	PRO
9	UN	271	ALA
9	VJ	271	ALA
9	AH	268	PRO
9	BL	271	ALA
9	HF	271	ALA
9	JF	272	PRO
9	KL	272	PRO
9	NH	271	ALA
9	PD	271	ALA
26	X	288	CYS
9	CH	271	ALA
9	HB	272	PRO
9	IN	268	PRO
9	VN	271	ALA

### 5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	0	47/209 (22%)	47 (100%)	0	100	100
1	7	135/209 (65%)	135 (100%)	0	100	100
2	1	243/724 (34%)	242 (100%)	1 (0%)	91	97

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	2	392/724 (54%)	391 (100%)	1 (0%)	92	97
3	3	274/470 (58%)	273 (100%)	1 (0%)	91	97
3	4	197/470 (42%)	197 (100%)	0	100	100
4	5	315/320 (98%)	315 (100%)	0	100	100
4	6	315/320 (98%)	315 (100%)	0	100	100
5	8	157/181 (87%)	156 (99%)	1 (1%)	86	94
5	9	47/181 (26%)	47 (100%)	0	100	100
6	A	44/90 (49%)	44 (100%)	0	100	100
7	A0	195/376 (52%)	194 (100%)	1 (0%)	88	95
7	A1	356/376 (95%)	356 (100%)	0	100	100
7	A2	356/376 (95%)	355 (100%)	1 (0%)	92	97
7	A3	305/376 (81%)	305 (100%)	0	100	100
7	A4	31/376 (8%)	31 (100%)	0	100	100
8	AA	369/378 (98%)	367 (100%)	2 (0%)	88	95
8	AC	369/378 (98%)	369 (100%)	0	100	100
8	AE	369/378 (98%)	367 (100%)	2 (0%)	88	95
8	AG	369/378 (98%)	369 (100%)	0	100	100
8	AI	369/378 (98%)	367 (100%)	2 (0%)	88	95
8	AK	369/378 (98%)	368 (100%)	1 (0%)	92	97
8	AM	369/378 (98%)	367 (100%)	2 (0%)	88	95
8	BA	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	BC	369/378 (98%)	368 (100%)	1 (0%)	92	97
8	BE	364/378 (96%)	364 (100%)	0	100	100
8	BG	369/378 (98%)	368 (100%)	1 (0%)	92	97
8	BI	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	BK	369/378 (98%)	369 (100%)	0	100	100
8	BM	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	CA	365/378 (97%)	365 (100%)	0	100	100
8	CC	369/378 (98%)	368 (100%)	1 (0%)	92	97
8	CE	363/378 (96%)	363 (100%)	0	100	100
8	CG	369/378 (98%)	368 (100%)	1 (0%)	92	97

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	CI	364/378 (96%)	364 (100%)	0	100	100
8	CK	369/378 (98%)	369 (100%)	0	100	100
8	CM	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	DA	327/378 (86%)	326 (100%)	1 (0%)	92	97
8	DC	363/378 (96%)	362 (100%)	1 (0%)	92	97
8	DE	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	DG	363/378 (96%)	362 (100%)	1 (0%)	92	97
8	DI	363/378 (96%)	361 (99%)	2 (1%)	86	94
8	DK	363/378 (96%)	362 (100%)	1 (0%)	92	97
8	DM	364/378 (96%)	364 (100%)	0	100	100
8	EC	369/378 (98%)	368 (100%)	1 (0%)	92	97
8	EE	369/378 (98%)	369 (100%)	0	100	100
8	EG	368/378 (97%)	367 (100%)	1 (0%)	92	97
8	EI	369/378 (98%)	369 (100%)	0	100	100
8	EK	368/378 (97%)	368 (100%)	0	100	100
8	EM	368/378 (97%)	367 (100%)	1 (0%)	92	97
8	FC	364/378 (96%)	364 (100%)	0	100	100
8	FE	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	FG	363/378 (96%)	362 (100%)	1 (0%)	92	97
8	FI	363/378 (96%)	363 (100%)	0	100	100
8	FK	363/378 (96%)	360 (99%)	3 (1%)	81	91
8	FM	363/378 (96%)	362 (100%)	1 (0%)	92	97
8	GC	368/378 (97%)	368 (100%)	0	100	100
8	GE	363/378 (96%)	363 (100%)	0	100	100
8	GG	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	GI	363/378 (96%)	361 (99%)	2 (1%)	86	94
8	GK	365/378 (97%)	364 (100%)	1 (0%)	92	97
8	GM	367/378 (97%)	367 (100%)	0	100	100
8	HC	364/378 (96%)	362 (100%)	2 (0%)	88	95
8	HE	365/378 (97%)	364 (100%)	1 (0%)	92	97
8	HG	365/378 (97%)	365 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	HI	365/378 (97%)	363 (100%)	2 (0%)	88	95
8	HK	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	HM	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	HO	329/378 (87%)	327 (99%)	2 (1%)	86	94
8	IC	366/378 (97%)	364 (100%)	2 (0%)	88	95
8	IE	364/378 (96%)	364 (100%)	0	100	100
8	IG	369/378 (98%)	369 (100%)	0	100	100
8	II	365/378 (97%)	365 (100%)	0	100	100
8	IK	369/378 (98%)	368 (100%)	1 (0%)	92	97
8	IM	364/378 (96%)	364 (100%)	0	100	100
8	IO	364/378 (96%)	364 (100%)	0	100	100
8	JC	369/378 (98%)	368 (100%)	1 (0%)	92	97
8	JE	363/378 (96%)	363 (100%)	0	100	100
8	JG	363/378 (96%)	362 (100%)	1 (0%)	92	97
8	JI	363/378 (96%)	363 (100%)	0	100	100
8	JK	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	JM	363/378 (96%)	363 (100%)	0	100	100
8	KC	365/378 (97%)	365 (100%)	0	100	100
8	KE	365/378 (97%)	363 (100%)	2 (0%)	88	95
8	KG	365/378 (97%)	363 (100%)	2 (0%)	88	95
8	KI	363/378 (96%)	362 (100%)	1 (0%)	92	97
8	KK	365/378 (97%)	364 (100%)	1 (0%)	92	97
8	KM	368/378 (97%)	367 (100%)	1 (0%)	92	97
8	KO	364/378 (96%)	362 (100%)	2 (0%)	88	95
8	LC	365/378 (97%)	364 (100%)	1 (0%)	92	97
8	LE	369/378 (98%)	369 (100%)	0	100	100
8	LG	366/378 (97%)	364 (100%)	2 (0%)	88	95
8	LI	367/378 (97%)	366 (100%)	1 (0%)	92	97
8	LK	365/378 (97%)	364 (100%)	1 (0%)	92	97
8	LM	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	MC	370/378 (98%)	370 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	ME	365/378 (97%)	364 (100%)	1 (0%)	92	97
8	MG	365/378 (97%)	363 (100%)	2 (0%)	88	95
8	MI	366/378 (97%)	365 (100%)	1 (0%)	92	97
8	MK	370/378 (98%)	368 (100%)	2 (0%)	88	95
8	MM	370/378 (98%)	370 (100%)	0	100	100
8	NC	370/378 (98%)	367 (99%)	3 (1%)	81	91
8	NE	369/378 (98%)	363 (98%)	6 (2%)	62	83
8	NG	369/378 (98%)	367 (100%)	2 (0%)	88	95
8	NI	369/378 (98%)	368 (100%)	1 (0%)	92	97
8	NK	369/378 (98%)	365 (99%)	4 (1%)	73	88
8	NM	369/378 (98%)	366 (99%)	3 (1%)	81	91
8	OC	371/378 (98%)	370 (100%)	1 (0%)	92	97
8	OE	370/378 (98%)	370 (100%)	0	100	100
8	OG	371/378 (98%)	370 (100%)	1 (0%)	92	97
8	OI	371/378 (98%)	370 (100%)	1 (0%)	92	97
8	OK	369/378 (98%)	369 (100%)	0	100	100
8	OM	371/378 (98%)	370 (100%)	1 (0%)	92	97
8	OO	356/378 (94%)	356 (100%)	0	100	100
8	PC	371/378 (98%)	371 (100%)	0	100	100
8	PE	370/378 (98%)	370 (100%)	0	100	100
8	PG	371/378 (98%)	369 (100%)	2 (0%)	88	95
8	PI	369/378 (98%)	369 (100%)	0	100	100
8	PK	370/378 (98%)	368 (100%)	2 (0%)	88	95
8	PM	369/378 (98%)	369 (100%)	0	100	100
8	PO	369/378 (98%)	368 (100%)	1 (0%)	92	97
8	QC	370/378 (98%)	370 (100%)	0	100	100
8	QE	370/378 (98%)	370 (100%)	0	100	100
8	QG	370/378 (98%)	369 (100%)	1 (0%)	92	97
8	QI	370/378 (98%)	369 (100%)	1 (0%)	92	97
8	QK	370/378 (98%)	368 (100%)	2 (0%)	88	95
8	QM	370/378 (98%)	369 (100%)	1 (0%)	92	97

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	QO	370/378 (98%)	370 (100%)	0	100	100
8	RC	349/378 (92%)	346 (99%)	3 (1%)	78	90
8	RE	363/378 (96%)	363 (100%)	0	100	100
8	RG	365/378 (97%)	365 (100%)	0	100	100
8	RI	369/378 (98%)	369 (100%)	0	100	100
8	RK	370/378 (98%)	370 (100%)	0	100	100
8	RM	370/378 (98%)	370 (100%)	0	100	100
8	RO	369/378 (98%)	369 (100%)	0	100	100
8	SE	362/378 (96%)	361 (100%)	1 (0%)	92	97
8	SG	363/378 (96%)	362 (100%)	1 (0%)	92	97
8	SI	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	SK	364/378 (96%)	361 (99%)	3 (1%)	81	91
8	SM	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	SO	364/378 (96%)	364 (100%)	0	100	100
8	TE	362/378 (96%)	361 (100%)	1 (0%)	92	97
8	TG	363/378 (96%)	363 (100%)	0	100	100
8	TI	364/378 (96%)	364 (100%)	0	100	100
8	TK	362/378 (96%)	360 (99%)	2 (1%)	86	94
8	TM	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	TO	362/378 (96%)	362 (100%)	0	100	100
8	UE	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	UG	365/378 (97%)	365 (100%)	0	100	100
8	UI	365/378 (97%)	363 (100%)	2 (0%)	88	95
8	UK	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	UM	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	UO	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	VE	369/378 (98%)	368 (100%)	1 (0%)	92	97
8	VG	366/378 (97%)	364 (100%)	2 (0%)	88	95
8	VI	369/378 (98%)	369 (100%)	0	100	100
8	VK	364/378 (96%)	363 (100%)	1 (0%)	92	97
8	VM	369/378 (98%)	367 (100%)	2 (0%)	88	95

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	VO	364/378 (96%)	364 (100%)	0	100	100
8	WE	369/378 (98%)	366 (99%)	3 (1%)	81	91
8	WG	363/378 (96%)	362 (100%)	1 (0%)	92	97
8	WI	368/378 (97%)	367 (100%)	1 (0%)	92	97
8	WK	363/378 (96%)	363 (100%)	0	100	100
8	WM	369/378 (98%)	367 (100%)	2 (0%)	88	95
8	WO	364/378 (96%)	364 (100%)	0	100	100
9	AB	374/380 (98%)	372 (100%)	2 (0%)	88	95
9	AD	374/380 (98%)	373 (100%)	1 (0%)	92	97
9	AF	374/380 (98%)	369 (99%)	5 (1%)	69	86
9	AH	374/380 (98%)	372 (100%)	2 (0%)	88	95
9	AJ	374/380 (98%)	372 (100%)	2 (0%)	88	95
9	AL	374/380 (98%)	373 (100%)	1 (0%)	92	97
9	BB	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	BD	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	BF	367/380 (97%)	365 (100%)	2 (0%)	88	95
9	BH	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	BJ	368/380 (97%)	365 (99%)	3 (1%)	81	91
9	BL	366/380 (96%)	366 (100%)	0	100	100
9	CB	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	CD	366/380 (96%)	366 (100%)	0	100	100
9	CF	367/380 (97%)	365 (100%)	2 (0%)	88	95
9	CH	366/380 (96%)	366 (100%)	0	100	100
9	CJ	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	CL	366/380 (96%)	366 (100%)	0	100	100
9	DB	366/380 (96%)	366 (100%)	0	100	100
9	DD	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	DF	366/380 (96%)	363 (99%)	3 (1%)	81	91
9	DH	366/380 (96%)	366 (100%)	0	100	100
9	DJ	366/380 (96%)	366 (100%)	0	100	100
9	DL	366/380 (96%)	365 (100%)	1 (0%)	92	97

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	EB	366/380 (96%)	366 (100%)	0	100	100
9	ED	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	EF	366/380 (96%)	363 (99%)	3 (1%)	81	91
9	EH	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	EJ	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	EL	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	EN	367/380 (97%)	367 (100%)	0	100	100
9	FB	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	FD	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	FF	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	FH	366/380 (96%)	363 (99%)	3 (1%)	81	91
9	FJ	366/380 (96%)	366 (100%)	0	100	100
9	FL	366/380 (96%)	363 (99%)	3 (1%)	81	91
9	FN	367/380 (97%)	364 (99%)	3 (1%)	81	91
9	GB	353/380 (93%)	351 (99%)	2 (1%)	86	94
9	GD	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	GF	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	GH	366/380 (96%)	366 (100%)	0	100	100
9	GJ	368/380 (97%)	365 (99%)	3 (1%)	81	91
9	GL	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	GN	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	HB	367/380 (97%)	364 (99%)	3 (1%)	81	91
9	HD	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	HF	367/380 (97%)	367 (100%)	0	100	100
9	HH	366/380 (96%)	366 (100%)	0	100	100
9	HJ	367/380 (97%)	364 (99%)	3 (1%)	81	91
9	HL	366/380 (96%)	362 (99%)	4 (1%)	73	88
9	HN	365/380 (96%)	363 (100%)	2 (0%)	88	95
9	IB	353/380 (93%)	352 (100%)	1 (0%)	92	97
9	ID	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	IF	367/380 (97%)	366 (100%)	1 (0%)	92	97

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	IH	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	IJ	368/380 (97%)	367 (100%)	1 (0%)	92	97
9	IL	366/380 (96%)	366 (100%)	0	100	100
9	IN	367/380 (97%)	364 (99%)	3 (1%)	81	91
9	JB	366/380 (96%)	363 (99%)	3 (1%)	81	91
9	JD	366/380 (96%)	366 (100%)	0	100	100
9	JF	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	JH	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	JJ	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	JL	366/380 (96%)	366 (100%)	0	100	100
9	JN	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	KB	355/380 (93%)	354 (100%)	1 (0%)	92	97
9	KD	369/380 (97%)	367 (100%)	2 (0%)	88	95
9	KF	366/380 (96%)	363 (99%)	3 (1%)	81	91
9	KH	369/380 (97%)	368 (100%)	1 (0%)	92	97
9	KJ	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	KL	369/380 (97%)	367 (100%)	2 (0%)	88	95
9	KN	366/380 (96%)	366 (100%)	0	100	100
9	LB	376/380 (99%)	374 (100%)	2 (0%)	88	95
9	LD	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	LF	376/380 (99%)	374 (100%)	2 (0%)	88	95
9	LH	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	LJ	379/380 (100%)	376 (99%)	3 (1%)	81	91
9	LL	366/380 (96%)	363 (99%)	3 (1%)	81	91
9	LN	376/380 (99%)	375 (100%)	1 (0%)	92	97
9	MB	368/380 (97%)	368 (100%)	0	100	100
9	MD	370/380 (97%)	369 (100%)	1 (0%)	92	97
9	MF	369/380 (97%)	368 (100%)	1 (0%)	92	97
9	MH	370/380 (97%)	369 (100%)	1 (0%)	92	97
9	MJ	370/380 (97%)	369 (100%)	1 (0%)	92	97
9	ML	370/380 (97%)	367 (99%)	3 (1%)	81	91

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	MN	368/380 (97%)	368 (100%)	0	100	100
9	NB	367/380 (97%)	364 (99%)	3 (1%)	81	91
9	ND	367/380 (97%)	365 (100%)	2 (0%)	88	95
9	NF	368/380 (97%)	364 (99%)	4 (1%)	73	88
9	NH	367/380 (97%)	365 (100%)	2 (0%)	88	95
9	NJ	368/380 (97%)	364 (99%)	4 (1%)	73	88
9	NL	367/380 (97%)	363 (99%)	4 (1%)	73	88
9	NN	367/380 (97%)	365 (100%)	2 (0%)	88	95
9	OB	369/380 (97%)	369 (100%)	0	100	100
9	OD	368/380 (97%)	368 (100%)	0	100	100
9	OF	370/380 (97%)	369 (100%)	1 (0%)	92	97
9	OH	368/380 (97%)	368 (100%)	0	100	100
9	OJ	370/380 (97%)	369 (100%)	1 (0%)	92	97
9	OL	368/380 (97%)	367 (100%)	1 (0%)	92	97
9	ON	369/380 (97%)	368 (100%)	1 (0%)	92	97
9	PD	368/380 (97%)	368 (100%)	0	100	100
9	PF	370/380 (97%)	370 (100%)	0	100	100
9	PH	366/380 (96%)	363 (99%)	3 (1%)	81	91
9	PJ	368/380 (97%)	367 (100%)	1 (0%)	92	97
9	PL	368/380 (97%)	367 (100%)	1 (0%)	92	97
9	PN	368/380 (97%)	367 (100%)	1 (0%)	92	97
9	QD	367/380 (97%)	367 (100%)	0	100	100
9	QF	368/380 (97%)	368 (100%)	0	100	100
9	QH	366/380 (96%)	366 (100%)	0	100	100
9	QJ	368/380 (97%)	366 (100%)	2 (0%)	88	95
9	QL	367/380 (97%)	367 (100%)	0	100	100
9	QN	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	RD	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	RF	368/380 (97%)	367 (100%)	1 (0%)	92	97
9	RH	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	RJ	367/380 (97%)	366 (100%)	1 (0%)	92	97

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	RL	366/380 (96%)	366 (100%)	0	100	100
9	RN	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	SD	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	SF	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	SH	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	SJ	366/380 (96%)	366 (100%)	0	100	100
9	SL	366/380 (96%)	366 (100%)	0	100	100
9	SN	366/380 (96%)	366 (100%)	0	100	100
9	TD	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	TF	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	TH	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	TJ	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	TL	366/380 (96%)	363 (99%)	3 (1%)	81	91
9	TN	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	TP	361/380 (95%)	360 (100%)	1 (0%)	92	97
9	UD	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	UF	367/380 (97%)	364 (99%)	3 (1%)	81	91
9	UH	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	UJ	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	UL	366/380 (96%)	361 (99%)	5 (1%)	67	85
9	UN	367/380 (97%)	363 (99%)	4 (1%)	73	88
9	UP	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	VD	366/380 (96%)	366 (100%)	0	100	100
9	VF	367/380 (97%)	366 (100%)	1 (0%)	92	97
9	VH	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	VJ	367/380 (97%)	365 (100%)	2 (0%)	88	95
9	VL	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	VN	367/380 (97%)	364 (99%)	3 (1%)	81	91
9	VP	367/380 (97%)	364 (99%)	3 (1%)	81	91
9	WD	366/380 (96%)	366 (100%)	0	100	100
9	WF	366/380 (96%)	364 (100%)	2 (0%)	88	95

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	WH	366/380 (96%)	365 (100%)	1 (0%)	92	97
9	WJ	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	WL	366/380 (96%)	364 (100%)	2 (0%)	88	95
9	WN	367/380 (97%)	367 (100%)	0	100	100
9	WP	367/380 (97%)	366 (100%)	1 (0%)	92	97
10	B	163/455 (36%)	162 (99%)	1 (1%)	86	94
10	C	322/455 (71%)	320 (99%)	2 (1%)	86	94
11	B0	176/388 (45%)	175 (99%)	1 (1%)	86	94
11	B1	353/388 (91%)	353 (100%)	0	100	100
11	B2	352/388 (91%)	352 (100%)	0	100	100
11	B3	318/388 (82%)	318 (100%)	0	100	100
11	B4	45/388 (12%)	45 (100%)	0	100	100
12	C0	33/446 (7%)	33 (100%)	0	100	100
12	C1	303/446 (68%)	302 (100%)	1 (0%)	92	97
12	C2	356/446 (80%)	353 (99%)	3 (1%)	81	91
12	C3	357/446 (80%)	357 (100%)	0	100	100
12	C4	201/446 (45%)	201 (100%)	0	100	100
13	D	163/393 (42%)	163 (100%)	0	100	100
14	D0	237/387 (61%)	236 (100%)	1 (0%)	91	97
14	D1	355/387 (92%)	355 (100%)	0	100	100
14	D2	357/387 (92%)	356 (100%)	1 (0%)	92	97
14	D3	285/387 (74%)	285 (100%)	0	100	100
15	E	246/266 (92%)	246 (100%)	0	100	100
15	F	246/266 (92%)	246 (100%)	0	100	100
16	F0	146/199 (73%)	146 (100%)	0	100	100
16	F1	149/199 (75%)	149 (100%)	0	100	100
16	F3	146/199 (73%)	146 (100%)	0	100	100
16	F4	149/199 (75%)	149 (100%)	0	100	100
16	F6	146/199 (73%)	146 (100%)	0	100	100
16	F7	149/199 (75%)	148 (99%)	1 (1%)	84	93
16	G0	148/199 (74%)	148 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	G1	147/199 (74%)	146 (99%)	1 (1%)	84	93
16	G3	146/199 (73%)	146 (100%)	0	100	100
16	G4	149/199 (75%)	148 (99%)	1 (1%)	84	93
16	G6	146/199 (73%)	145 (99%)	1 (1%)	84	93
16	G7	149/199 (75%)	148 (99%)	1 (1%)	84	93
16	H0	146/199 (73%)	146 (100%)	0	100	100
16	H1	149/199 (75%)	149 (100%)	0	100	100
17	G	88/115 (76%)	87 (99%)	1 (1%)	73	88
18	H	66/235 (28%)	66 (100%)	0	100	100
18	I	106/235 (45%)	106 (100%)	0	100	100
18	J	106/235 (45%)	106 (100%)	0	100	100
18	K	106/235 (45%)	105 (99%)	1 (1%)	78	90
18	L	106/235 (45%)	105 (99%)	1 (1%)	78	90
18	M	106/235 (45%)	106 (100%)	0	100	100
18	N	106/235 (45%)	105 (99%)	1 (1%)	78	90
19	I1	86/139 (62%)	84 (98%)	2 (2%)	50	76
20	J1	75/252 (30%)	75 (100%)	0	100	100
20	J2	200/252 (79%)	199 (100%)	1 (0%)	88	95
20	J3	200/252 (79%)	199 (100%)	1 (0%)	88	95
20	J4	182/252 (72%)	180 (99%)	2 (1%)	73	88
20	J5	58/252 (23%)	58 (100%)	0	100	100
21	K1	105/123 (85%)	104 (99%)	1 (1%)	76	88
22	L1	113/131 (86%)	113 (100%)	0	100	100
22	L2	82/131 (63%)	82 (100%)	0	100	100
23	M1	87/180 (48%)	87 (100%)	0	100	100
23	M2	86/180 (48%)	86 (100%)	0	100	100
23	M3	87/180 (48%)	87 (100%)	0	100	100
23	M4	87/180 (48%)	86 (99%)	1 (1%)	73	88
24	O	21/342 (6%)	21 (100%)	0	100	100
24	P	331/342 (97%)	331 (100%)	0	100	100
24	Q	37/342 (11%)	36 (97%)	1 (3%)	44	73

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
24	R	194/342 (57%)	194 (100%)	0	100	100
24	S	150/342 (44%)	150 (100%)	0	100	100
25	T	439/577 (76%)	438 (100%)	1 (0%)	93	98
25	U	440/577 (76%)	439 (100%)	1 (0%)	93	98
25	V	440/577 (76%)	440 (100%)	0	100	100
26	W	561/688 (82%)	559 (100%)	2 (0%)	91	97
26	X	645/688 (94%)	643 (100%)	2 (0%)	92	97
26	Y	645/688 (94%)	643 (100%)	2 (0%)	92	97
26	Z	471/688 (68%)	469 (100%)	2 (0%)	91	97
27	XA	174/180 (97%)	174 (100%)	0	100	100
27	XB	174/180 (97%)	173 (99%)	1 (1%)	86	94
27	XC	174/180 (97%)	173 (99%)	1 (1%)	86	94
27	XD	174/180 (97%)	174 (100%)	0	100	100
27	XE	174/180 (97%)	173 (99%)	1 (1%)	86	94
27	XF	174/180 (97%)	174 (100%)	0	100	100
27	XG	174/180 (97%)	174 (100%)	0	100	100
28	YB	192/227 (85%)	192 (100%)	0	100	100
28	YC	192/227 (85%)	192 (100%)	0	100	100
28	YD	192/227 (85%)	192 (100%)	0	100	100
28	YE	192/227 (85%)	192 (100%)	0	100	100
28	YF	192/227 (85%)	192 (100%)	0	100	100
28	YG	192/227 (85%)	192 (100%)	0	100	100
29	a	162/495 (33%)	161 (99%)	1 (1%)	86	94
29	b	302/495 (61%)	302 (100%)	0	100	100
29	c	263/495 (53%)	261 (99%)	2 (1%)	81	91
29	d	189/495 (38%)	188 (100%)	1 (0%)	88	95
30	e	514/523 (98%)	514 (100%)	0	100	100
30	f	514/523 (98%)	513 (100%)	1 (0%)	93	98
30	g	514/523 (98%)	512 (100%)	2 (0%)	91	97
31	h	133/233 (57%)	132 (99%)	1 (1%)	81	91
31	i	228/233 (98%)	228 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
31	j	226/233 (97%)	225 (100%)	1 (0%)	91	97
31	k	228/233 (98%)	228 (100%)	0	100	100
32	l	100/153 (65%)	100 (100%)	0	100	100
32	m	100/153 (65%)	100 (100%)	0	100	100
32	n	100/153 (65%)	100 (100%)	0	100	100
33	o	366/495 (74%)	362 (99%)	4 (1%)	73	88
33	o1	32/495 (6%)	32 (100%)	0	100	100
33	p	134/495 (27%)	132 (98%)	2 (2%)	65	84
34	q	100/153 (65%)	100 (100%)	0	100	100
34	r	100/153 (65%)	100 (100%)	0	100	100
34	s	100/153 (65%)	100 (100%)	0	100	100
35	y	58/117 (50%)	58 (100%)	0	100	100
35	z	98/117 (84%)	98 (100%)	0	100	100
All	All	134531/150776 (89%)	134112 (100%)	419 (0%)	92	97

All (419) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	1	733	ARG
2	2	463	LYS
3	3	152	LYS
5	8	61	ARG
7	A0	301	LYS
7	A2	100	LYS
8	AA	2	ARG
8	AA	221	ARG
9	AB	273	LEU
9	AB	274	THR
9	AD	347	ASN
8	AE	50	ASN
8	AE	422	ARG
9	AF	122	LYS
9	AF	195	ASN
9	AF	262	ARG
9	AF	274	THR
9	AF	306	ARG
9	AH	298	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	AH	306	ARG
8	AI	2	ARG
8	AI	422	ARG
9	AJ	274	THR
9	AJ	306	ARG
8	AK	2	ARG
9	AL	273	LEU
8	AM	2	ARG
8	AM	326	LYS
10	B	35	ASN
11	B0	20	ASN
8	BA	2	ARG
9	BB	347	ASN
8	BC	221	ARG
9	BD	274	THR
9	BD	347	ASN
9	BF	190	HIS
9	BF	274	THR
8	BG	430	LYS
9	BH	306	ARG
8	BI	2	ARG
9	BJ	2	ARG
9	BJ	306	ARG
9	BJ	347	ASN
8	BM	2	ARG
10	C	321	GLN
10	C	405	ARG
12	C1	243	GLN
12	C2	134	GLN
12	C2	320	LYS
12	C2	406	ARG
9	CB	274	THR
8	CC	2	ARG
9	CF	274	THR
9	CF	306	ARG
8	CG	2	ARG
9	CJ	274	THR
8	CM	2	ARG
14	D0	128	ARG
14	D2	323	ASN
8	DA	430	LYS
8	DC	2	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	DD	347	ASN
8	DE	339	ARG
9	DF	262	ARG
9	DF	273	LEU
9	DF	414	ASN
8	DG	215	ARG
8	DI	2	ARG
8	DI	256	GLN
8	DK	2	ARG
9	DL	274	THR
8	EC	339	ARG
9	ED	292	GLN
9	ED	323	MET
9	EF	273	LEU
9	EF	298	ASN
9	EF	306	ARG
8	EG	2	ARG
9	EH	274	THR
9	EJ	251	ARG
9	EL	213	ARG
9	EL	306	ARG
8	EM	2	ARG
16	F7	87	HIS
9	FB	268	PRO
9	FB	298	ASN
9	FD	273	LEU
8	FE	2	ARG
9	FF	2	ARG
8	FG	2	ARG
9	FH	274	THR
9	FH	280	GLN
9	FH	337	ASN
8	FK	2	ARG
8	FK	326	LYS
8	FK	422	ARG
9	FL	48	ASN
9	FL	170	VAL
9	FL	306	ARG
8	FM	2	ARG
9	FN	273	LEU
9	FN	274	THR
9	FN	306	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
17	G	62	ASN
16	G1	131	ARG
16	G4	35	ASN
16	G6	157	LYS
16	G7	41	ARG
9	GB	273	LEU
9	GB	276	ARG
9	GD	321	MET
9	GF	274	THR
8	GG	2	ARG
8	GI	203	MET
8	GI	402	ARG
9	GJ	273	LEU
9	GJ	274	THR
9	GJ	279	GLN
8	GK	2	ARG
9	GL	337	ASN
9	GL	390	ARG
9	GN	256	ASN
9	GN	273	LEU
9	HB	245	GLN
9	HB	274	THR
9	HB	318	ARG
8	HC	2	ARG
8	HC	422	ARG
9	HD	274	THR
8	HE	243	ARG
8	HI	293	ASN
8	HI	422	ARG
9	HJ	273	LEU
9	HJ	298	ASN
9	HJ	306	ARG
8	HK	2	ARG
9	HL	274	THR
9	HL	306	ARG
9	HL	322	SER
9	HL	323	MET
8	HM	422	ARG
9	HN	276	ARG
9	HN	306	ARG
8	HO	401	LYS
8	HO	422	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
19	I1	113	THR
19	I1	115	ARG
9	IB	274	THR
8	IC	2	ARG
8	IC	300	ASN
9	ID	274	THR
9	IF	273	LEU
9	IH	291	GLN
9	IJ	274	THR
8	IK	329	ASN
9	IN	274	THR
9	IN	276	ARG
9	IN	347	ASN
20	J2	175	ARG
20	J3	29	CYS
20	J4	102	ARG
20	J4	204	LYS
9	JB	131	GLN
9	JB	306	ARG
9	JB	347	ASN
8	JC	2	ARG
9	JF	274	THR
8	JG	300	ASN
9	JH	276	ARG
9	JJ	274	THR
9	JJ	306	ARG
8	JK	339	ARG
9	JN	298	ASN
18	K	51	LEU
21	K1	26	LYS
9	KB	273	LEU
9	KD	273	LEU
9	KD	274	THR
8	KE	2	ARG
8	KE	308	ARG
9	KF	273	LEU
9	KF	306	ARG
9	KF	414	ASN
8	KG	2	ARG
8	KG	308	ARG
9	KH	306	ARG
8	KI	300	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	KJ	274	THR
9	KJ	306	ARG
8	KK	2	ARG
9	KL	274	THR
9	KL	306	ARG
8	KM	2	ARG
8	KO	2	ARG
8	KO	308	ARG
18	L	90	MET
9	LB	297	LYS
9	LB	306	ARG
8	LC	221	ARG
9	LD	274	THR
9	LD	298	ASN
9	LF	298	ASN
9	LF	306	ARG
8	LG	2	ARG
8	LG	300	ASN
9	LH	306	ARG
8	LI	2	ARG
9	LJ	274	THR
9	LJ	291	GLN
9	LJ	306	ARG
8	LK	308	ARG
9	LL	274	THR
9	LL	298	ASN
9	LL	306	ARG
8	LM	2	ARG
9	LN	306	ARG
23	M4	125	TYR
9	MD	298	ASN
8	ME	339	ARG
9	MF	306	ARG
8	MG	2	ARG
8	MG	300	ASN
9	MH	298	ASN
8	MI	18	ASN
9	MJ	227	HIS
8	MK	1	MET
8	MK	84	ARG
9	ML	227	HIS
9	ML	273	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	ML	298	ASN
18	N	51	LEU
9	NB	274	THR
9	NB	282	ARG
9	NB	285	THR
8	NC	112	LYS
8	NC	221	ARG
8	NC	402	ARG
9	ND	274	THR
9	ND	285	THR
8	NE	1	MET
8	NE	102	ASN
8	NE	275	VAL
8	NE	276	ILE
8	NE	283	HIS
8	NE	287	SER
9	NF	253	LEU
9	NF	273	LEU
9	NF	284	LEU
9	NF	306	ARG
8	NG	308	ARG
8	NG	422	ARG
9	NH	306	ARG
9	NH	318	ARG
8	NI	2	ARG
9	NJ	273	LEU
9	NJ	274	THR
9	NJ	306	ARG
9	NJ	347	ASN
8	NK	40	LYS
8	NK	277	SER
8	NK	279	GLU
8	NK	282	TYR
9	NL	306	ARG
9	NL	318	ARG
9	NL	390	ARG
9	NL	406	MET
8	NM	276	ILE
8	NM	284	GLU
8	NM	286	LEU
9	NN	281	TYR
9	NN	306	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	OC	2	ARG
9	OF	274	THR
8	OG	300	ASN
8	OI	300	ASN
9	OJ	274	THR
9	OL	274	THR
8	OM	2	ARG
9	ON	274	THR
8	PG	2	ARG
8	PG	356	ASN
9	PH	274	THR
9	PH	306	ARG
9	PH	347	ASN
9	PJ	273	LEU
8	PK	2	ARG
8	PK	221	ARG
9	PL	306	ARG
9	PN	274	THR
8	PO	430	LYS
24	Q	382	ARG
8	QG	2	ARG
8	QI	2	ARG
9	QJ	273	LEU
9	QJ	274	THR
8	QK	2	ARG
8	QK	356	ASN
8	QM	2	ARG
9	QN	247	ASN
8	RC	2	ARG
8	RC	221	ARG
8	RC	300	ASN
9	RD	83	GLN
9	RF	274	THR
9	RH	274	THR
9	RJ	274	THR
9	RN	274	THR
9	SD	274	THR
9	SD	414	ASN
8	SE	363	VAL
9	SF	274	THR
8	SG	2	ARG
9	SH	298	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	SH	306	ARG
8	SI	2	ARG
8	SK	363	VAL
8	SK	367	ASP
8	SK	402	ARG
8	SM	2	ARG
25	T	366	ARG
9	TD	390	ARG
8	TE	203	MET
9	TF	325	GLU
9	TH	195	ASN
9	TJ	273	LEU
9	TJ	274	THR
8	TK	84	ARG
8	TK	320	ARG
9	TL	227	HIS
9	TL	288	GLU
9	TL	289	LEU
8	TM	203	MET
9	TN	273	LEU
9	TN	306	ARG
9	TP	274	THR
25	U	366	ARG
9	UD	274	THR
9	UD	276	ARG
8	UE	2	ARG
9	UF	274	THR
9	UF	276	ARG
9	UF	306	ARG
9	UH	174	LYS
9	UH	306	ARG
8	UI	2	ARG
8	UI	380	ASN
9	UJ	273	LEU
8	UK	243	ARG
9	UL	190	HIS
9	UL	273	LEU
9	UL	274	THR
9	UL	276	ARG
9	UL	306	ARG
8	UM	380	ASN
9	UN	100	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	UN	273	LEU
9	UN	274	THR
9	UN	306	ARG
8	UO	401	LYS
9	UP	306	ARG
8	VE	300	ASN
9	VF	274	THR
8	VG	370	LYS
8	VG	430	LYS
9	VH	274	THR
9	VH	306	ARG
9	VJ	273	LEU
9	VJ	274	THR
8	VK	370	LYS
9	VL	306	ARG
8	VM	2	ARG
8	VM	370	LYS
9	VN	204	ASN
9	VN	273	LEU
9	VN	306	ARG
9	VP	273	LEU
9	VP	274	THR
9	VP	306	ARG
26	W	95	THR
26	W	417	ARG
8	WE	192	HIS
8	WE	215	ARG
8	WE	243	ARG
9	WF	273	LEU
9	WF	282	ARG
8	WG	2	ARG
9	WH	379	LYS
8	WI	18	ASN
9	WJ	99	ASN
9	WJ	274	THR
9	WL	273	LEU
9	WL	347	ASN
8	WM	2	ARG
8	WM	221	ARG
9	WP	336	LYS
26	X	723	LEU
26	X	725	MET

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Mol	Chain	Res	Type
27	XB	121	MET
27	XC	121	MET
27	XE	121	MET
26	Y	632	MET
26	Y	723	LEU
26	Z	406	ASN
26	Z	632	MET
29	a	160	LYS
29	c	299	LYS
29	c	303	ARG
29	d	504	LYS
30	f	99	LYS
30	g	374	ASN
30	g	417	ARG
31	h	228	GLN
31	j	203	ASN
33	o	119	ARG
33	o	198	LYS
33	o	305	LYS
33	o	408	LYS
33	p	395	ARG
33	p	420	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (252) such sidechains are listed below:

Mol	Chain	Res	Type
2	2	604	GLN
3	3	173	GLN
5	8	103	ASN
6	A	90	ASN
7	A0	369	GLN
7	A2	224	ASN
7	A3	251	ASN
9	AD	165	ASN
9	AD	347	ASN
8	AI	11	GLN
9	AL	256	ASN
8	AM	11	GLN
8	AM	101	ASN
11	B0	20	ASN
11	B2	31	GLN
11	B3	369	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	BB	195	ASN
9	BB	347	ASN
9	BD	100	ASN
9	BJ	298	ASN
9	BL	134	GLN
8	CA	88	HIS
8	CC	258	ASN
9	CD	99	ASN
8	CE	101	ASN
9	CJ	204	ASN
9	CL	256	ASN
9	CL	414	ASN
8	CM	101	ASN
14	D2	71	GLN
14	D2	323	ASN
8	DC	258	ASN
9	DD	256	ASN
9	DD	298	ASN
9	DF	14	ASN
9	DF	298	ASN
9	DF	414	ASN
8	DG	101	ASN
8	DI	285	GLN
9	DL	99	ASN
9	DL	165	ASN
9	DL	292	GLN
8	DM	285	GLN
9	ED	131	GLN
9	EF	8	GLN
8	EG	258	ASN
9	EH	298	ASN
8	EI	293	ASN
9	FD	15	GLN
8	FE	11	GLN
8	FE	91	GLN
8	FE	380	ASN
9	FF	247	ASN
9	FH	14	ASN
9	FH	195	ASN
9	FH	414	ASN
8	FI	11	GLN
8	FI	18	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	FI	380	ASN
8	FK	380	ASN
9	FL	375	GLN
17	G	62	ASN
16	G0	35	ASN
9	GB	14	ASN
8	GC	11	GLN
9	GD	6	HIS
9	GD	11	GLN
9	GD	280	GLN
9	GF	6	HIS
9	GF	11	GLN
9	GF	134	GLN
9	GF	245	GLN
9	GF	291	GLN
8	GI	226	ASN
8	GI	329	ASN
9	GJ	292	GLN
9	GJ	298	ASN
9	GL	226	ASN
9	GL	334	GLN
9	GL	337	ASN
16	H0	133	HIS
9	HB	298	ASN
8	HC	128	GLN
9	HD	245	GLN
9	HF	11	GLN
9	HJ	298	ASN
9	HL	247	ASN
9	IB	298	ASN
8	IE	285	GLN
9	IH	256	ASN
9	IH	291	GLN
8	II	101	ASN
8	II	216	ASN
9	IJ	334	GLN
8	IK	216	ASN
9	IL	347	ASN
8	IM	11	GLN
8	IM	85	GLN
9	IN	291	GLN
9	JD	348	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	JE	101	ASN
9	JF	375	GLN
8	JG	258	ASN
8	JI	11	GLN
9	JJ	347	ASN
9	JJ	348	ASN
8	JK	258	ASN
9	JL	6	HIS
9	JL	279	GLN
9	JL	298	ASN
9	JL	348	ASN
9	JL	423	GLN
8	JM	101	ASN
9	JN	99	ASN
9	JN	414	ASN
21	K1	18	GLN
21	K1	36	GLN
9	KD	256	ASN
8	KE	11	GLN
8	KE	101	ASN
9	KF	414	ASN
8	KG	356	ASN
9	KH	99	ASN
8	KM	393	HIS
8	KO	101	ASN
8	LC	11	GLN
9	LD	99	ASN
9	LD	247	ASN
8	LE	11	GLN
8	LE	226	ASN
9	LF	191	GLN
9	LH	347	ASN
8	LK	11	GLN
9	MB	8	GLN
8	MC	300	ASN
8	ME	11	GLN
8	MG	258	ASN
9	MH	99	ASN
9	MH	307	HIS
8	MI	11	GLN
8	MI	216	ASN
8	MI	300	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	MJ	8	GLN
9	MJ	298	ASN
8	MK	11	GLN
8	MM	11	GLN
9	MN	8	GLN
8	NE	226	ASN
9	NF	256	ASN
9	NF	279	GLN
9	NF	280	GLN
9	NF	334	GLN
8	NG	101	ASN
9	NJ	279	GLN
9	NL	348	ASN
9	NN	6	HIS
9	NN	94	GLN
9	NN	134	GLN
9	NN	280	GLN
9	OH	332	ASN
9	OH	334	GLN
9	OJ	137	HIS
9	OJ	334	GLN
8	OK	226	ASN
8	OO	256	GLN
24	P	107	GLN
8	PC	258	ASN
8	PI	133	GLN
8	PO	283	HIS
9	QD	8	GLN
9	QD	134	GLN
9	QF	6	HIS
9	QF	8	GLN
8	QG	258	ASN
8	QG	356	ASN
9	QH	8	GLN
8	QI	301	GLN
9	QN	245	GLN
24	R	52	GLN
8	RC	258	ASN
9	RD	264	HIS
9	RD	291	GLN
9	RF	99	ASN
9	RF	134	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	RG	11	GLN
8	RG	285	GLN
8	RI	133	GLN
8	RI	283	HIS
9	RL	134	GLN
9	RL	375	GLN
9	RN	256	ASN
8	RO	18	ASN
8	SG	380	ASN
9	SH	298	ASN
8	SM	285	GLN
9	SN	247	ASN
8	SO	35	GLN
8	SO	61	HIS
9	TD	256	ASN
9	TD	375	GLN
9	TD	426	GLN
8	TE	300	ASN
9	TF	256	ASN
8	TK	372	GLN
9	TL	292	GLN
8	TM	226	ASN
9	TN	414	ASN
8	TO	11	GLN
9	TP	298	ASN
9	UD	375	GLN
8	UE	216	ASN
9	UF	414	ASN
9	UH	190	HIS
9	UH	292	GLN
8	UI	372	GLN
9	UJ	43	GLN
9	UN	100	ASN
9	UN	334	GLN
9	UN	347	ASN
8	UO	102	ASN
9	UP	14	ASN
9	UP	292	GLN
9	VF	298	ASN
9	VH	247	ASN
9	VJ	298	ASN
9	VJ	334	GLN

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Mol	Chain	Res	Type
8	VK	128	GLN
9	VL	256	ASN
9	VL	347	ASN
8	VM	15	GLN
8	VM	128	GLN
8	VO	186	ASN
9	VP	292	GLN
8	WE	11	GLN
9	WF	334	GLN
8	WG	283	HIS
9	WH	204	ASN
9	WJ	298	ASN
9	WL	137	HIS
8	WM	285	GLN
9	WN	298	ASN
8	WO	329	ASN
27	XA	92	GLN
27	XB	131	GLN
27	XD	33	HIS
27	XG	7	GLN
27	XG	33	HIS
27	XG	53	ASN
28	YG	204	ASN
30	e	33	HIS
30	g	33	HIS
31	h	109	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

### 5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

### 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry

Of 451 ligands modelled in this entry, 149 are monoatomic - leaving 302 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
36	GTP	II	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.64	7 (21%)
38	GDP	GL	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.36	4 (13%)
38	GDP	SF	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.25	4 (13%)
36	GTP	GG	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.53	7 (21%)
36	GTP	OO	501	37	26,34,34	1.19	2 (7%)	32,54,54	1.65	7 (21%)
36	GTP	BA	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.61	7 (21%)
38	GDP	RH	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.31	5 (16%)
38	GDP	OD	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.37	4 (13%)
36	GTP	CC	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.64	7 (21%)
38	GDP	HL	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	MJ	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	VE	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.62	7 (21%)
36	GTP	AG	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.55	7 (21%)
36	GTP	HE	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.59	7 (21%)
38	GDP	CL	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.34	4 (13%)
38	GDP	CF	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.32	4 (13%)
38	GDP	ML	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.32	4 (13%)
36	GTP	PE	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.56	7 (21%)
36	GTP	JI	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.67	7 (21%)
36	GTP	SO	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.49	7 (21%)
38	GDP	BF	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.40	4 (13%)
38	GDP	QL	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	AB	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.41	4 (13%)
38	GDP	SJ	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.37	5 (16%)
36	GTP	EI	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.58	7 (21%)
36	GTP	TM	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
38	GDP	BJ	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.39	4 (13%)
38	GDP	RD	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.37	5 (16%)
36	GTP	PM	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.63	7 (21%)
38	GDP	QN	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	HG	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.60	7 (21%)
38	GDP	RN	502	-	24,30,30	0.97	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	SH	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.32	5 (16%)
38	GDP	PL	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	GN	502	-	24,30,30	0.97	1 (4%)	30,47,47	1.34	4 (13%)
38	GDP	KJ	502	-	24,30,30	0.97	1 (4%)	30,47,47	1.36	4 (13%)
38	GDP	ON	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	UF	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	SG	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.52	7 (21%)
36	GTP	BC	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.61	7 (21%)
36	GTP	CK	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.64	7 (21%)
38	GDP	GD	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	UG	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.62	7 (21%)
36	GTP	EK	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.59	7 (21%)
36	GTP	RO	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.54	7 (21%)
38	GDP	EH	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.30	4 (13%)
38	GDP	TF	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.29	4 (13%)
38	GDP	NB	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.39	4 (13%)
36	GTP	LM	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.51	7 (21%)
36	GTP	MK	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.58	7 (21%)
36	GTP	LC	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.62	7 (21%)
38	GDP	UD	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	BI	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.60	7 (21%)
36	GTP	FK	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.42	6 (18%)
38	GDP	PN	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	QE	501	37	26,34,34	1.20	2 (7%)	32,54,54	1.58	7 (21%)
38	GDP	CJ	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.37	4 (13%)
38	GDP	PJ	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	MC	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.55	7 (21%)
38	GDP	WJ	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.32	4 (13%)
38	GDP	HH	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.31	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
36	GTP	NM	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.52	7 (21%)
38	GDP	WL	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	OI	501	-	26,34,34	1.16	2 (7%)	32,54,54	1.71	6 (18%)
38	GDP	FD	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	5 (16%)
38	GDP	FF	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.33	4 (13%)
38	GDP	HB	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.34	4 (13%)
36	GTP	QG	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.60	7 (21%)
38	GDP	WF	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.31	4 (13%)
36	GTP	IG	501	37	26,34,34	1.12	2 (7%)	32,54,54	1.63	6 (18%)
36	GTP	GM	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.57	6 (18%)
36	GTP	IC	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.56	7 (21%)
36	GTP	NC	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.59	7 (21%)
36	GTP	SI	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.47	7 (21%)
38	GDP	LH	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.30	4 (13%)
38	GDP	QJ	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	OJ	502	-	24,30,30	0.97	1 (4%)	30,47,47	1.33	4 (13%)
38	GDP	KF	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.38	4 (13%)
36	GTP	GE	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.53	7 (21%)
36	GTP	FG	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.54	7 (21%)
38	GDP	UJ	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	MM	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.56	7 (21%)
36	GTP	AM	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.55	7 (21%)
36	GTP	PC	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.59	6 (18%)
36	GTP	WM	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.53	6 (18%)
36	GTP	ME	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.54	7 (21%)
38	GDP	AH	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.39	4 (13%)
38	GDP	ED	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.34	4 (13%)
38	GDP	KH	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.31	4 (13%)
36	GTP	OK	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.53	6 (18%)
38	GDP	VF	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.34	4 (13%)
36	GTP	RK	501	37	26,34,34	1.20	2 (7%)	32,54,54	1.67	7 (21%)
36	GTP	NE	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.58	7 (21%)
38	GDP	FN	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	5 (16%)
36	GTP	DG	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.63	6 (18%)
38	GDP	OB	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.42	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
38	GDP	GH	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	VD	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.32	4 (13%)
38	GDP	JL	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.34	4 (13%)
36	GTP	DA	501	37	26,34,34	1.10	2 (7%)	32,54,54	1.53	6 (18%)
38	GDP	AD	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.38	4 (13%)
38	GDP	JF	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.31	4 (13%)
38	GDP	PF	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	BG	501	37	26,34,34	1.19	2 (7%)	32,54,54	1.58	7 (21%)
36	GTP	QM	501	37	26,34,34	1.19	2 (7%)	32,54,54	1.56	7 (21%)
36	GTP	TO	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.55	7 (21%)
36	GTP	EM	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.59	7 (21%)
36	GTP	BM	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.61	7 (21%)
36	GTP	HO	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.58	7 (21%)
36	GTP	OC	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.70	7 (21%)
36	GTP	PI	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.61	7 (21%)
36	GTP	QK	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.52	6 (18%)
38	GDP	LD	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	TP	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	BE	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.59	7 (21%)
36	GTP	DI	501	37	26,34,34	1.11	2 (7%)	32,54,54	1.69	6 (18%)
38	GDP	VN	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.36	4 (13%)
38	GDP	VP	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	TE	501	37	26,34,34	1.12	2 (7%)	32,54,54	1.56	6 (18%)
38	GDP	RL	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.32	4 (13%)
36	GTP	LG	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.60	7 (21%)
38	GDP	TN	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.32	4 (13%)
36	GTP	VM	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.53	7 (21%)
36	GTP	WK	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.63	6 (18%)
36	GTP	OG	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.55	7 (21%)
36	GTP	PK	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.50	7 (21%)
38	GDP	JD	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.34	4 (13%)
36	GTP	HI	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.68	7 (21%)
36	GTP	PO	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.59	7 (21%)
38	GDP	LF	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.36	4 (13%)
38	GDP	MD	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.33	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
38	GDP	UN	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.33	4 (13%)
38	GDP	NJ	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.36	4 (13%)
38	GDP	WD	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.31	4 (13%)
36	GTP	KM	501	37	26,34,34	1.20	2 (7%)	32,54,54	1.65	7 (21%)
38	GDP	QF	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.34	4 (13%)
38	GDP	GF	502	-	24,30,30	0.92	1 (4%)	30,47,47	1.29	4 (13%)
36	GTP	TI	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.49	7 (21%)
36	GTP	WO	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.55	6 (18%)
38	GDP	TH	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.34	4 (13%)
36	GTP	WG	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.69	6 (18%)
38	GDP	FH	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.33	5 (16%)
38	GDP	WH	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.32	4 (13%)
36	GTP	CA	501	37	26,34,34	1.12	2 (7%)	32,54,54	1.58	6 (18%)
38	GDP	NH	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.36	4 (13%)
38	GDP	UH	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.36	4 (13%)
38	GDP	LL	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	LK	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.62	7 (21%)
36	GTP	VI	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.58	7 (21%)
38	GDP	DD	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.28	4 (13%)
38	GDP	PD	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	PG	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.61	7 (21%)
36	GTP	CI	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.66	6 (18%)
36	GTP	DC	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.60	6 (18%)
38	GDP	AF	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.40	4 (13%)
36	GTP	BK	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.55	7 (21%)
36	GTP	KK	501	-	26,34,34	1.20	2 (7%)	32,54,54	1.63	7 (21%)
36	GTP	GI	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.55	7 (21%)
36	GTP	HM	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.55	7 (21%)
36	GTP	JE	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.57	7 (21%)
36	GTP	CM	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.63	7 (21%)
38	GDP	DJ	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.31	4 (13%)
36	GTP	HC	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.51	7 (21%)
36	GTP	QO	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.64	7 (21%)
36	GTP	VK	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.63	7 (21%)
38	GDP	MN	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.38	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
38	GDP	OF	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.36	4 (13%)
38	GDP	EL	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.25	4 (13%)
36	GTP	DK	501	37	26,34,34	1.12	2 (7%)	32,54,54	1.69	6 (18%)
38	GDP	BH	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.38	4 (13%)
36	GTP	OM	501	37	26,34,34	1.19	2 (7%)	32,54,54	1.58	7 (21%)
38	GDP	EF	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.34	5 (16%)
38	GDP	SN	502	-	24,30,30	0.92	1 (4%)	30,47,47	1.34	5 (16%)
38	GDP	UP	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.34	4 (13%)
38	GDP	MH	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.29	4 (13%)
38	GDP	IL	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	EC	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.55	7 (21%)
38	GDP	MF	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.32	4 (13%)
36	GTP	DE	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.55	6 (18%)
38	GDP	DL	502	-	24,30,30	0.97	1 (4%)	30,47,47	1.29	4 (13%)
36	GTP	QC	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.51	7 (21%)
38	GDP	DB	502	-	24,30,30	0.97	1 (4%)	30,47,47	1.28	4 (13%)
36	GTP	KE	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.63	7 (21%)
38	GDP	DF	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.31	4 (13%)
36	GTP	NK	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.58	7 (21%)
36	GTP	EE	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.54	7 (21%)
36	GTP	RC	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.56	7 (21%)
38	GDP	ND	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	EB	502	-	24,30,30	0.97	1 (4%)	30,47,47	1.32	4 (13%)
38	GDP	PH	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	VG	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.60	7 (21%)
38	GDP	BB	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.37	4 (13%)
36	GTP	SE	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.54	7 (21%)
36	GTP	UI	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.53	7 (21%)
36	GTP	UO	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.59	7 (21%)
36	GTP	UK	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.61	7 (21%)
36	GTP	WE	501	37	26,34,34	1.12	2 (7%)	32,54,54	1.55	6 (18%)
36	GTP	JK	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.58	7 (21%)
38	GDP	DH	502	-	24,30,30	0.98	1 (4%)	30,47,47	1.29	4 (13%)
36	GTP	IE	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.62	7 (21%)
38	GDP	EN	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.32	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
36	GTP	JG	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.65	7 (21%)
36	GTP	UE	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.62	7 (21%)
38	GDP	HD	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.34	4 (13%)
38	GDP	QH	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.33	4 (13%)
36	GTP	NG	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.60	8 (25%)
38	GDP	VJ	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.37	4 (13%)
36	GTP	RI	501	37	26,34,34	1.19	2 (7%)	32,54,54	1.65	7 (21%)
36	GTP	TK	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.56	7 (21%)
38	GDP	IB	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	FJ	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.31	4 (13%)
38	GDP	LB	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.37	4 (13%)
38	GDP	ID	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	FL	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.31	5 (16%)
38	GDP	JN	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.33	4 (13%)
36	GTP	FI	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.44	6 (18%)
36	GTP	RG	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.58	7 (21%)
38	GDP	HN	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.33	4 (13%)
38	GDP	JH	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.34	4 (13%)
38	GDP	RJ	502	-	24,30,30	0.98	1 (4%)	30,47,47	1.34	4 (13%)
38	GDP	NF	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.39	4 (13%)
38	GDP	VL	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	KD	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	IN	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	UL	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.33	4 (13%)
36	GTP	UM	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.51	7 (21%)
38	GDP	LN	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.38	4 (13%)
38	GDP	LJ	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.41	4 (13%)
36	GTP	AC	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.53	7 (21%)
38	GDP	AJ	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.44	4 (13%)
36	GTP	DM	501	37	26,34,34	1.10	2 (7%)	32,54,54	1.68	6 (18%)
36	GTP	SM	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.48	7 (21%)
38	GDP	AL	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.40	4 (13%)
36	GTP	GK	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.53	7 (21%)
36	GTP	IO	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.63	7 (21%)
36	GTP	AK	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.53	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
36	GTP	CE	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.57	7 (21%)
38	GDP	NN	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.39	4 (13%)
38	GDP	VH	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.33	4 (13%)
36	GTP	HK	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.60	7 (21%)
38	GDP	RF	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.34	5 (16%)
38	GDP	WN	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.31	4 (13%)
36	GTP	FM	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.47	7 (21%)
36	GTP	JM	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.61	7 (21%)
38	GDP	CD	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	WI	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.64	6 (18%)
38	GDP	TJ	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.31	4 (13%)
36	GTP	AA	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.53	7 (21%)
38	GDP	CB	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.39	4 (13%)
38	GDP	EJ	502	-	24,30,30	0.97	1 (4%)	30,47,47	1.26	4 (13%)
38	GDP	TD	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	CG	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.62	7 (21%)
38	GDP	JJ	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.33	4 (13%)
36	GTP	VO	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.61	7 (21%)
38	GDP	SL	502	-	24,30,30	0.92	1 (4%)	30,47,47	1.35	5 (16%)
36	GTP	RM	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.59	7 (21%)
36	GTP	AE	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.57	7 (21%)
38	GDP	GJ	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.34	4 (13%)
36	GTP	IK	501	37	26,34,34	1.13	2 (7%)	32,54,54	1.63	7 (21%)
38	GDP	QD	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	TG	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.61	7 (21%)
38	GDP	KB	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.39	4 (13%)
38	GDP	MB	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.39	4 (13%)
36	GTP	QI	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.61	7 (21%)
36	GTP	JC	501	37	26,34,34	1.14	2 (7%)	32,54,54	1.60	6 (18%)
36	GTP	NI	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.56	7 (21%)
38	GDP	WP	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.32	4 (13%)
38	GDP	HF	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	SD	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.36	5 (16%)
36	GTP	GC	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.49	7 (21%)
38	GDP	IF	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.34	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
36	GTP	FC	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.50	7 (21%)
38	GDP	CH	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.30	4 (13%)
38	GDP	HJ	502	-	24,30,30	0.97	1 (4%)	30,47,47	1.35	4 (13%)
38	GDP	BD	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	KC	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.59	7 (21%)
38	GDP	GB	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.36	4 (13%)
38	GDP	IH	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.37	4 (13%)
36	GTP	EG	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.57	7 (21%)
36	GTP	SK	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.46	7 (21%)
38	GDP	JB	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	IM	501	37	26,34,34	1.12	2 (7%)	32,54,54	1.63	6 (18%)
38	GDP	IJ	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.37	4 (13%)
36	GTP	KI	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.62	7 (21%)
38	GDP	OH	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.36	4 (13%)
36	GTP	AI	501	37	26,34,34	1.20	2 (7%)	32,54,54	1.53	7 (21%)
36	GTP	KO	501	37	26,34,34	1.18	2 (7%)	32,54,54	1.67	7 (21%)
36	GTP	FE	501	37	26,34,34	1.15	2 (7%)	32,54,54	1.54	7 (21%)
36	GTP	LI	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.57	7 (21%)
38	GDP	BL	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.37	4 (13%)
38	GDP	NL	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.38	4 (13%)
36	GTP	MI	501	37	26,34,34	1.16	2 (7%)	32,54,54	1.59	7 (21%)
36	GTP	RE	501	-	26,34,34	1.20	2 (7%)	32,54,54	1.64	7 (21%)
38	GDP	TL	502	-	24,30,30	0.92	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	OE	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.58	7 (21%)
36	GTP	MG	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.57	7 (21%)
36	GTP	KG	501	-	26,34,34	1.19	2 (7%)	32,54,54	1.63	7 (21%)
38	GDP	FB	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.34	4 (13%)
38	GDP	KN	502	-	24,30,30	0.97	1 (4%)	30,47,47	1.42	4 (13%)
38	GDP	KL	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.36	4 (13%)
38	GDP	OL	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
36	GTP	LE	501	37	26,34,34	1.17	2 (7%)	32,54,54	1.63	7 (21%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
36	GTP	II	501	37	-	4/18/38/38	0/3/3/3
38	GDP	GL	502	-	-	0/12/32/32	0/3/3/3
38	GDP	SF	502	-	-	0/12/32/32	0/3/3/3
36	GTP	GG	501	37	-	4/18/38/38	0/3/3/3
36	GTP	OO	501	37	-	7/18/38/38	0/3/3/3
36	GTP	BA	501	37	-	5/18/38/38	0/3/3/3
38	GDP	RH	502	-	-	0/12/32/32	0/3/3/3
38	GDP	OD	502	-	-	2/12/32/32	0/3/3/3
36	GTP	CC	501	37	-	8/18/38/38	0/3/3/3
38	GDP	HL	502	-	-	1/12/32/32	0/3/3/3
38	GDP	MJ	502	-	-	3/12/32/32	0/3/3/3
36	GTP	VE	501	37	-	4/18/38/38	0/3/3/3
36	GTP	AG	501	37	-	4/18/38/38	0/3/3/3
36	GTP	HE	501	37	-	4/18/38/38	0/3/3/3
38	GDP	CL	502	-	-	2/12/32/32	0/3/3/3
38	GDP	CF	502	-	-	2/12/32/32	0/3/3/3
38	GDP	ML	502	-	-	4/12/32/32	0/3/3/3
36	GTP	PE	501	37	-	5/18/38/38	0/3/3/3
36	GTP	JI	501	37	-	2/18/38/38	0/3/3/3
36	GTP	SO	501	37	-	3/18/38/38	0/3/3/3
38	GDP	BF	502	-	-	3/12/32/32	0/3/3/3
38	GDP	QL	502	-	-	3/12/32/32	0/3/3/3
38	GDP	AB	502	-	-	1/12/32/32	0/3/3/3
38	GDP	SJ	502	-	-	0/12/32/32	0/3/3/3
36	GTP	EI	501	37	-	6/18/38/38	0/3/3/3
36	GTP	TM	501	37	-	3/18/38/38	0/3/3/3
38	GDP	BJ	502	-	-	4/12/32/32	0/3/3/3
38	GDP	RD	502	-	-	1/12/32/32	0/3/3/3
36	GTP	PM	501	37	-	8/18/38/38	0/3/3/3
38	GDP	QN	502	-	-	4/12/32/32	0/3/3/3
36	GTP	HG	501	37	-	4/18/38/38	0/3/3/3
38	GDP	RN	502	-	-	1/12/32/32	0/3/3/3
38	GDP	SH	502	-	-	4/12/32/32	0/3/3/3
38	GDP	PL	502	-	-	2/12/32/32	0/3/3/3
38	GDP	GN	502	-	-	1/12/32/32	0/3/3/3
38	GDP	KJ	502	-	-	3/12/32/32	0/3/3/3
38	GDP	ON	502	-	-	3/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	GDP	UF	502	-	-	2/12/32/32	0/3/3/3
36	GTP	SG	501	37	-	5/18/38/38	0/3/3/3
36	GTP	BC	501	37	-	4/18/38/38	0/3/3/3
36	GTP	CK	501	37	-	10/18/38/38	0/3/3/3
38	GDP	GD	502	-	-	3/12/32/32	0/3/3/3
36	GTP	UG	501	37	-	5/18/38/38	0/3/3/3
36	GTP	EK	501	37	-	5/18/38/38	0/3/3/3
36	GTP	RO	501	37	-	5/18/38/38	0/3/3/3
38	GDP	EH	502	-	-	2/12/32/32	0/3/3/3
38	GDP	TF	502	-	-	1/12/32/32	0/3/3/3
38	GDP	NB	502	-	-	1/12/32/32	0/3/3/3
36	GTP	LM	501	-	-	5/18/38/38	0/3/3/3
36	GTP	MK	501	37	-	5/18/38/38	0/3/3/3
36	GTP	LC	501	37	-	7/18/38/38	0/3/3/3
38	GDP	UD	502	-	-	1/12/32/32	0/3/3/3
36	GTP	BI	501	37	-	4/18/38/38	0/3/3/3
36	GTP	FK	501	37	-	5/18/38/38	0/3/3/3
38	GDP	PN	502	-	-	3/12/32/32	0/3/3/3
36	GTP	QE	501	37	-	9/18/38/38	0/3/3/3
38	GDP	CJ	502	-	-	1/12/32/32	0/3/3/3
38	GDP	PJ	502	-	-	2/12/32/32	0/3/3/3
36	GTP	MC	501	37	-	5/18/38/38	0/3/3/3
38	GDP	WJ	502	-	-	2/12/32/32	0/3/3/3
38	GDP	HH	502	-	-	0/12/32/32	0/3/3/3
36	GTP	NM	501	37	-	5/18/38/38	0/3/3/3
38	GDP	WL	502	-	-	1/12/32/32	0/3/3/3
36	GTP	OI	501	-	-	3/18/38/38	0/3/3/3
38	GDP	FD	502	-	-	4/12/32/32	0/3/3/3
38	GDP	FF	502	-	-	2/12/32/32	0/3/3/3
38	GDP	HB	502	-	-	1/12/32/32	0/3/3/3
36	GTP	QG	501	37	-	6/18/38/38	0/3/3/3
38	GDP	WF	502	-	-	2/12/32/32	0/3/3/3
36	GTP	IG	501	37	-	7/18/38/38	0/3/3/3
36	GTP	GM	501	37	-	5/18/38/38	0/3/3/3
36	GTP	IC	501	37	-	5/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
36	GTP	NC	501	37	-	5/18/38/38	0/3/3/3
36	GTP	SI	501	37	-	5/18/38/38	0/3/3/3
38	GDP	LH	502	-	-	4/12/32/32	0/3/3/3
38	GDP	QJ	502	-	-	2/12/32/32	0/3/3/3
38	GDP	OJ	502	-	-	2/12/32/32	0/3/3/3
38	GDP	KF	502	-	-	3/12/32/32	0/3/3/3
36	GTP	GE	501	37	-	6/18/38/38	0/3/3/3
36	GTP	FG	501	37	-	5/18/38/38	0/3/3/3
38	GDP	UJ	502	-	-	3/12/32/32	0/3/3/3
36	GTP	MM	501	37	-	5/18/38/38	0/3/3/3
36	GTP	AM	501	37	-	4/18/38/38	0/3/3/3
36	GTP	PC	501	37	-	8/18/38/38	0/3/3/3
36	GTP	WM	501	37	-	8/18/38/38	0/3/3/3
36	GTP	ME	501	37	-	5/18/38/38	0/3/3/3
38	GDP	AH	502	-	-	1/12/32/32	0/3/3/3
38	GDP	ED	502	-	-	3/12/32/32	0/3/3/3
38	GDP	KH	502	-	-	0/12/32/32	0/3/3/3
36	GTP	OK	501	37	-	4/18/38/38	0/3/3/3
38	GDP	VF	502	-	-	1/12/32/32	0/3/3/3
36	GTP	RK	501	37	-	3/18/38/38	0/3/3/3
36	GTP	NE	501	37	-	4/18/38/38	0/3/3/3
38	GDP	FN	502	-	-	0/12/32/32	0/3/3/3
36	GTP	DG	501	37	-	8/18/38/38	0/3/3/3
38	GDP	OB	502	-	-	4/12/32/32	0/3/3/3
38	GDP	GH	502	-	-	1/12/32/32	0/3/3/3
38	GDP	VD	502	-	-	0/12/32/32	0/3/3/3
38	GDP	JL	502	-	-	1/12/32/32	0/3/3/3
36	GTP	DA	501	37	-	9/18/38/38	0/3/3/3
38	GDP	AD	502	-	-	1/12/32/32	0/3/3/3
38	GDP	JF	502	-	-	1/12/32/32	0/3/3/3
38	GDP	PF	502	-	-	3/12/32/32	0/3/3/3
36	GTP	BG	501	37	-	5/18/38/38	0/3/3/3
36	GTP	QM	501	37	-	8/18/38/38	0/3/3/3
36	GTP	TO	501	37	-	4/18/38/38	0/3/3/3
36	GTP	EM	501	37	-	5/18/38/38	0/3/3/3
36	GTP	BM	501	37	-	4/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
36	GTP	HO	501	37	-	9/18/38/38	0/3/3/3
36	GTP	OC	501	37	-	6/18/38/38	0/3/3/3
36	GTP	PI	501	37	-	3/18/38/38	0/3/3/3
36	GTP	QK	501	37	-	9/18/38/38	0/3/3/3
38	GDP	LD	502	-	-	4/12/32/32	0/3/3/3
38	GDP	TP	502	-	-	1/12/32/32	0/3/3/3
36	GTP	BE	501	37	-	4/18/38/38	0/3/3/3
36	GTP	DI	501	37	-	3/18/38/38	0/3/3/3
38	GDP	VN	502	-	-	3/12/32/32	0/3/3/3
38	GDP	VP	502	-	-	1/12/32/32	0/3/3/3
36	GTP	TE	501	37	-	5/18/38/38	0/3/3/3
38	GDP	RL	502	-	-	0/12/32/32	0/3/3/3
36	GTP	LG	501	37	-	5/18/38/38	0/3/3/3
38	GDP	TN	502	-	-	4/12/32/32	0/3/3/3
36	GTP	VM	501	37	-	7/18/38/38	0/3/3/3
36	GTP	WK	501	37	-	5/18/38/38	0/3/3/3
36	GTP	OG	501	37	-	5/18/38/38	0/3/3/3
36	GTP	PK	501	37	-	4/18/38/38	0/3/3/3
38	GDP	JD	502	-	-	2/12/32/32	0/3/3/3
36	GTP	HI	501	37	-	8/18/38/38	0/3/3/3
36	GTP	PO	501	37	-	4/18/38/38	0/3/3/3
38	GDP	LF	502	-	-	1/12/32/32	0/3/3/3
38	GDP	MD	502	-	-	2/12/32/32	0/3/3/3
38	GDP	UN	502	-	-	1/12/32/32	0/3/3/3
38	GDP	NJ	502	-	-	1/12/32/32	0/3/3/3
38	GDP	WD	502	-	-	4/12/32/32	0/3/3/3
36	GTP	KM	501	37	-	5/18/38/38	0/3/3/3
38	GDP	QF	502	-	-	2/12/32/32	0/3/3/3
38	GDP	GF	502	-	-	1/12/32/32	0/3/3/3
36	GTP	TI	501	37	-	2/18/38/38	0/3/3/3
36	GTP	WO	501	37	-	3/18/38/38	0/3/3/3
38	GDP	TH	502	-	-	3/12/32/32	0/3/3/3
36	GTP	WG	501	37	-	7/18/38/38	0/3/3/3
38	GDP	FH	502	-	-	3/12/32/32	0/3/3/3
38	GDP	WH	502	-	-	2/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
36	GTP	CA	501	37	-	4/18/38/38	0/3/3/3
38	GDP	NH	502	-	-	1/12/32/32	0/3/3/3
38	GDP	UH	502	-	-	1/12/32/32	0/3/3/3
38	GDP	LL	502	-	-	3/12/32/32	0/3/3/3
36	GTP	LK	501	37	-	6/18/38/38	0/3/3/3
36	GTP	VI	501	37	-	6/18/38/38	0/3/3/3
38	GDP	DD	502	-	-	1/12/32/32	0/3/3/3
38	GDP	PD	502	-	-	4/12/32/32	0/3/3/3
36	GTP	PG	501	37	-	7/18/38/38	0/3/3/3
36	GTP	CI	501	37	-	8/18/38/38	0/3/3/3
36	GTP	DC	501	37	-	5/18/38/38	0/3/3/3
38	GDP	AF	502	-	-	2/12/32/32	0/3/3/3
36	GTP	BK	501	37	-	5/18/38/38	0/3/3/3
36	GTP	KK	501	-	-	8/18/38/38	0/3/3/3
36	GTP	GI	501	37	-	4/18/38/38	0/3/3/3
36	GTP	HM	501	37	-	4/18/38/38	0/3/3/3
36	GTP	JE	501	37	-	2/18/38/38	0/3/3/3
36	GTP	CM	501	37	-	3/18/38/38	0/3/3/3
38	GDP	DJ	502	-	-	1/12/32/32	0/3/3/3
36	GTP	HC	501	37	-	4/18/38/38	0/3/3/3
36	GTP	QO	501	37	-	8/18/38/38	0/3/3/3
36	GTP	VK	501	37	-	5/18/38/38	0/3/3/3
38	GDP	MN	502	-	-	1/12/32/32	0/3/3/3
38	GDP	OF	502	-	-	3/12/32/32	0/3/3/3
38	GDP	EL	502	-	-	2/12/32/32	0/3/3/3
36	GTP	DK	501	37	-	3/18/38/38	0/3/3/3
38	GDP	BH	502	-	-	3/12/32/32	0/3/3/3
36	GTP	OM	501	37	-	7/18/38/38	0/3/3/3
38	GDP	EF	502	-	-	0/12/32/32	0/3/3/3
38	GDP	SN	502	-	-	3/12/32/32	0/3/3/3
38	GDP	UP	502	-	-	1/12/32/32	0/3/3/3
38	GDP	MH	502	-	-	1/12/32/32	0/3/3/3
38	GDP	IL	502	-	-	2/12/32/32	0/3/3/3
36	GTP	EC	501	37	-	5/18/38/38	0/3/3/3
38	GDP	MF	502	-	-	1/12/32/32	0/3/3/3
36	GTP	DE	501	37	-	3/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	GDP	DL	502	-	-	1/12/32/32	0/3/3/3
36	GTP	QC	501	37	-	3/18/38/38	0/3/3/3
38	GDP	DB	502	-	-	0/12/32/32	0/3/3/3
36	GTP	KE	501	-	-	7/18/38/38	0/3/3/3
38	GDP	DF	502	-	-	1/12/32/32	0/3/3/3
36	GTP	NK	501	37	-	5/18/38/38	0/3/3/3
36	GTP	EE	501	37	-	5/18/38/38	0/3/3/3
36	GTP	RC	501	-	-	6/18/38/38	0/3/3/3
38	GDP	ND	502	-	-	0/12/32/32	0/3/3/3
38	GDP	EB	502	-	-	0/12/32/32	0/3/3/3
38	GDP	PH	502	-	-	3/12/32/32	0/3/3/3
36	GTP	VG	501	37	-	8/18/38/38	0/3/3/3
38	GDP	BB	502	-	-	1/12/32/32	0/3/3/3
36	GTP	SE	501	37	-	5/18/38/38	0/3/3/3
36	GTP	UI	501	37	-	5/18/38/38	0/3/3/3
36	GTP	UO	501	37	-	5/18/38/38	0/3/3/3
36	GTP	UK	501	37	-	3/18/38/38	0/3/3/3
36	GTP	WE	501	37	-	5/18/38/38	0/3/3/3
36	GTP	JK	501	37	-	5/18/38/38	0/3/3/3
38	GDP	DH	502	-	-	2/12/32/32	0/3/3/3
36	GTP	IE	501	37	-	4/18/38/38	0/3/3/3
38	GDP	EN	502	-	-	1/12/32/32	0/3/3/3
36	GTP	JG	501	37	-	2/18/38/38	0/3/3/3
36	GTP	UE	501	37	-	4/18/38/38	0/3/3/3
38	GDP	HD	502	-	-	1/12/32/32	0/3/3/3
38	GDP	QH	502	-	-	4/12/32/32	0/3/3/3
36	GTP	NG	501	37	-	5/18/38/38	0/3/3/3
38	GDP	VJ	502	-	-	2/12/32/32	0/3/3/3
36	GTP	RI	501	37	-	3/18/38/38	0/3/3/3
36	GTP	TK	501	37	-	5/18/38/38	0/3/3/3
38	GDP	IB	502	-	-	1/12/32/32	0/3/3/3
38	GDP	FJ	502	-	-	1/12/32/32	0/3/3/3
38	GDP	LB	502	-	-	2/12/32/32	0/3/3/3
38	GDP	ID	502	-	-	2/12/32/32	0/3/3/3
38	GDP	FL	502	-	-	3/12/32/32	0/3/3/3
38	GDP	JN	502	-	-	2/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
36	GTP	FI	501	37	-	6/18/38/38	0/3/3/3
36	GTP	RG	501	37	-	3/18/38/38	0/3/3/3
38	GDP	HN	502	-	-	1/12/32/32	0/3/3/3
38	GDP	JH	502	-	-	1/12/32/32	0/3/3/3
38	GDP	RJ	502	-	-	1/12/32/32	0/3/3/3
38	GDP	NF	502	-	-	1/12/32/32	0/3/3/3
38	GDP	VL	502	-	-	1/12/32/32	0/3/3/3
38	GDP	KD	502	-	-	2/12/32/32	0/3/3/3
38	GDP	IN	502	-	-	1/12/32/32	0/3/3/3
38	GDP	UL	502	-	-	1/12/32/32	0/3/3/3
36	GTP	UM	501	37	-	8/18/38/38	0/3/3/3
38	GDP	LN	502	-	-	4/12/32/32	0/3/3/3
38	GDP	LJ	502	-	-	3/12/32/32	0/3/3/3
36	GTP	AC	501	37	-	4/18/38/38	0/3/3/3
38	GDP	AJ	502	-	-	2/12/32/32	0/3/3/3
36	GTP	DM	501	37	-	3/18/38/38	0/3/3/3
36	GTP	SM	501	37	-	5/18/38/38	0/3/3/3
38	GDP	AL	502	-	-	1/12/32/32	0/3/3/3
36	GTP	GK	501	37	-	5/18/38/38	0/3/3/3
36	GTP	IO	501	37	-	6/18/38/38	0/3/3/3
36	GTP	AK	501	37	-	4/18/38/38	0/3/3/3
36	GTP	CE	501	37	-	4/18/38/38	0/3/3/3
38	GDP	NN	502	-	-	1/12/32/32	0/3/3/3
38	GDP	VH	502	-	-	0/12/32/32	0/3/3/3
36	GTP	HK	501	37	-	4/18/38/38	0/3/3/3
38	GDP	RF	502	-	-	1/12/32/32	0/3/3/3
38	GDP	WN	502	-	-	3/12/32/32	0/3/3/3
36	GTP	FM	501	37	-	5/18/38/38	0/3/3/3
36	GTP	JM	501	37	-	4/18/38/38	0/3/3/3
38	GDP	CD	502	-	-	2/12/32/32	0/3/3/3
36	GTP	WI	501	37	-	3/18/38/38	0/3/3/3
38	GDP	TJ	502	-	-	3/12/32/32	0/3/3/3
36	GTP	AA	501	37	-	4/18/38/38	0/3/3/3
38	GDP	CB	502	-	-	2/12/32/32	0/3/3/3
38	GDP	EJ	502	-	-	1/12/32/32	0/3/3/3
38	GDP	TD	502	-	-	3/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
36	GTP	CG	501	37	-	6/18/38/38	0/3/3/3
38	GDP	JJ	502	-	-	1/12/32/32	0/3/3/3
36	GTP	VO	501	37	-	4/18/38/38	0/3/3/3
38	GDP	SL	502	-	-	0/12/32/32	0/3/3/3
36	GTP	RM	501	37	-	6/18/38/38	0/3/3/3
36	GTP	AE	501	37	-	3/18/38/38	0/3/3/3
38	GDP	GJ	502	-	-	4/12/32/32	0/3/3/3
36	GTP	IK	501	37	-	5/18/38/38	0/3/3/3
38	GDP	QD	502	-	-	4/12/32/32	0/3/3/3
36	GTP	TG	501	37	-	5/18/38/38	0/3/3/3
38	GDP	KB	502	-	-	3/12/32/32	0/3/3/3
38	GDP	MB	502	-	-	1/12/32/32	0/3/3/3
36	GTP	QI	501	37	-	6/18/38/38	0/3/3/3
36	GTP	JC	501	37	-	4/18/38/38	0/3/3/3
36	GTP	NI	501	37	-	4/18/38/38	0/3/3/3
38	GDP	WP	502	-	-	3/12/32/32	0/3/3/3
38	GDP	HF	502	-	-	0/12/32/32	0/3/3/3
38	GDP	SD	502	-	-	3/12/32/32	0/3/3/3
36	GTP	GC	501	37	-	5/18/38/38	0/3/3/3
38	GDP	IF	502	-	-	2/12/32/32	0/3/3/3
36	GTP	FC	501	37	-	5/18/38/38	0/3/3/3
38	GDP	CH	502	-	-	1/12/32/32	0/3/3/3
38	GDP	HJ	502	-	-	1/12/32/32	0/3/3/3
38	GDP	BD	502	-	-	1/12/32/32	0/3/3/3
36	GTP	KC	501	37	-	4/18/38/38	0/3/3/3
38	GDP	GB	502	-	-	3/12/32/32	0/3/3/3
38	GDP	IH	502	-	-	2/12/32/32	0/3/3/3
36	GTP	EG	501	37	-	5/18/38/38	0/3/3/3
36	GTP	SK	501	37	-	6/18/38/38	0/3/3/3
38	GDP	JB	502	-	-	1/12/32/32	0/3/3/3
36	GTP	IM	501	37	-	8/18/38/38	0/3/3/3
38	GDP	IJ	502	-	-	1/12/32/32	0/3/3/3
36	GTP	KI	501	-	-	5/18/38/38	0/3/3/3
38	GDP	OH	502	-	-	1/12/32/32	0/3/3/3
36	GTP	AI	501	37	-	4/18/38/38	0/3/3/3
36	GTP	KO	501	37	-	7/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
36	GTP	FE	501	37	-	4/18/38/38	0/3/3/3
36	GTP	LI	501	37	-	5/18/38/38	0/3/3/3
38	GDP	BL	502	-	-	2/12/32/32	0/3/3/3
38	GDP	NL	502	-	-	1/12/32/32	0/3/3/3
36	GTP	MI	501	37	-	5/18/38/38	0/3/3/3
36	GTP	RE	501	-	-	3/18/38/38	0/3/3/3
38	GDP	TL	502	-	-	4/12/32/32	0/3/3/3
36	GTP	OE	501	37	-	4/18/38/38	0/3/3/3
36	GTP	MG	501	37	-	5/18/38/38	0/3/3/3
36	GTP	KG	501	-	-	6/18/38/38	0/3/3/3
38	GDP	FB	502	-	-	1/12/32/32	0/3/3/3
38	GDP	KN	502	-	-	3/12/32/32	0/3/3/3
38	GDP	KL	502	-	-	1/12/32/32	0/3/3/3
38	GDP	OL	502	-	-	4/12/32/32	0/3/3/3
36	GTP	LE	501	37	-	9/18/38/38	0/3/3/3

All (451) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	RK	501	GTP	C5-C6	-4.37	1.38	1.47
36	RE	501	GTP	C5-C6	-4.34	1.38	1.47
36	QE	501	GTP	C5-C6	-4.29	1.38	1.47
36	BG	501	GTP	C5-C6	-4.28	1.38	1.47
36	RI	501	GTP	C5-C6	-4.28	1.38	1.47
36	OO	501	GTP	C5-C6	-4.27	1.38	1.47
36	UE	501	GTP	C5-C6	-4.27	1.38	1.47
36	OM	501	GTP	C5-C6	-4.26	1.38	1.47
36	AI	501	GTP	C5-C6	-4.26	1.38	1.47
36	KM	501	GTP	C5-C6	-4.26	1.38	1.47
36	NE	501	GTP	C5-C6	-4.24	1.38	1.47
36	QG	501	GTP	C5-C6	-4.23	1.38	1.47
36	QM	501	GTP	C5-C6	-4.23	1.38	1.47
36	BE	501	GTP	C5-C6	-4.23	1.38	1.47
36	BC	501	GTP	C5-C6	-4.23	1.38	1.47
36	NC	501	GTP	C5-C6	-4.22	1.38	1.47
36	BM	501	GTP	C5-C6	-4.21	1.38	1.47
36	KE	501	GTP	C5-C6	-4.21	1.38	1.47
36	BA	501	GTP	C5-C6	-4.21	1.38	1.47
36	BK	501	GTP	C5-C6	-4.20	1.38	1.47
36	BI	501	GTP	C5-C6	-4.20	1.38	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	RO	501	GTP	C5-C6	-4.20	1.38	1.47
36	KK	501	GTP	C5-C6	-4.20	1.38	1.47
36	QO	501	GTP	C5-C6	-4.19	1.38	1.47
36	FM	501	GTP	C5-C6	-4.18	1.38	1.47
36	SE	501	GTP	C5-C6	-4.18	1.38	1.47
36	KG	501	GTP	C5-C6	-4.17	1.38	1.47
36	NG	501	GTP	C5-C6	-4.17	1.38	1.47
36	SO	501	GTP	C5-C6	-4.17	1.38	1.47
36	SG	501	GTP	C5-C6	-4.17	1.38	1.47
36	MG	501	GTP	C5-C6	-4.17	1.38	1.47
36	FI	501	GTP	C5-C6	-4.17	1.39	1.47
36	KO	501	GTP	C5-C6	-4.16	1.39	1.47
36	GG	501	GTP	C5-C6	-4.16	1.39	1.47
36	AG	501	GTP	C5-C6	-4.16	1.39	1.47
36	PG	501	GTP	C5-C6	-4.16	1.39	1.47
36	OC	501	GTP	C5-C6	-4.15	1.39	1.47
36	MM	501	GTP	C5-C6	-4.15	1.39	1.47
36	EI	501	GTP	C5-C6	-4.15	1.39	1.47
36	QI	501	GTP	C5-C6	-4.15	1.39	1.47
36	SI	501	GTP	C5-C6	-4.15	1.39	1.47
36	QK	501	GTP	C5-C6	-4.15	1.39	1.47
36	LG	501	GTP	C5-C6	-4.15	1.39	1.47
36	RG	501	GTP	C5-C6	-4.14	1.39	1.47
36	VE	501	GTP	C5-C6	-4.14	1.39	1.47
36	MI	501	GTP	C5-C6	-4.14	1.39	1.47
36	JI	501	GTP	C5-C6	-4.14	1.39	1.47
36	LK	501	GTP	C5-C6	-4.14	1.39	1.47
36	KI	501	GTP	C5-C6	-4.14	1.39	1.47
36	LM	501	GTP	C5-C6	-4.14	1.39	1.47
36	QC	501	GTP	C5-C6	-4.14	1.39	1.47
36	LC	501	GTP	C5-C6	-4.14	1.39	1.47
36	JM	501	GTP	C5-C6	-4.13	1.39	1.47
36	FK	501	GTP	C5-C6	-4.13	1.39	1.47
36	AK	501	GTP	C5-C6	-4.13	1.39	1.47
36	SK	501	GTP	C5-C6	-4.13	1.39	1.47
36	LE	501	GTP	C5-C6	-4.13	1.39	1.47
36	AE	501	GTP	C5-C6	-4.13	1.39	1.47
36	OI	501	GTP	C5-C6	-4.13	1.39	1.47
36	PK	501	GTP	C5-C6	-4.13	1.39	1.47
36	LI	501	GTP	C5-C6	-4.13	1.39	1.47
36	SM	501	GTP	C5-C6	-4.13	1.39	1.47
36	HM	501	GTP	C5-C6	-4.13	1.39	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	NK	501	GTP	C5-C6	-4.13	1.39	1.47
36	NI	501	GTP	C5-C6	-4.12	1.39	1.47
36	RM	501	GTP	C5-C6	-4.12	1.39	1.47
36	HO	501	GTP	C5-C6	-4.12	1.39	1.47
36	AM	501	GTP	C5-C6	-4.12	1.39	1.47
36	EM	501	GTP	C5-C6	-4.12	1.39	1.47
36	PM	501	GTP	C5-C6	-4.12	1.39	1.47
36	MC	501	GTP	C5-C6	-4.12	1.39	1.47
36	VK	501	GTP	C5-C6	-4.12	1.39	1.47
36	JE	501	GTP	C5-C6	-4.11	1.39	1.47
36	MK	501	GTP	C5-C6	-4.11	1.39	1.47
36	HC	501	GTP	C5-C6	-4.11	1.39	1.47
36	HI	501	GTP	C5-C6	-4.11	1.39	1.47
36	EE	501	GTP	C5-C6	-4.11	1.39	1.47
36	PI	501	GTP	C5-C6	-4.10	1.39	1.47
36	FC	501	GTP	C5-C6	-4.10	1.39	1.47
36	JK	501	GTP	C5-C6	-4.10	1.39	1.47
36	FE	501	GTP	C5-C6	-4.10	1.39	1.47
36	NM	501	GTP	C5-C6	-4.10	1.39	1.47
36	EK	501	GTP	C5-C6	-4.10	1.39	1.47
36	OG	501	GTP	C5-C6	-4.10	1.39	1.47
36	ME	501	GTP	C5-C6	-4.09	1.39	1.47
36	FG	501	GTP	C5-C6	-4.09	1.39	1.47
36	OE	501	GTP	C5-C6	-4.09	1.39	1.47
36	UI	501	GTP	C5-C6	-4.09	1.39	1.47
36	AA	501	GTP	C5-C6	-4.09	1.39	1.47
36	GC	501	GTP	C5-C6	-4.09	1.39	1.47
36	UO	501	GTP	C5-C6	-4.09	1.39	1.47
36	EG	501	GTP	C5-C6	-4.08	1.39	1.47
36	CK	501	GTP	C5-C6	-4.08	1.39	1.47
36	HE	501	GTP	C5-C6	-4.08	1.39	1.47
36	RC	501	GTP	C5-C6	-4.08	1.39	1.47
36	EC	501	GTP	C5-C6	-4.08	1.39	1.47
36	OK	501	GTP	C5-C6	-4.08	1.39	1.47
36	TK	501	GTP	C5-C6	-4.08	1.39	1.47
36	HK	501	GTP	C5-C6	-4.07	1.39	1.47
36	PE	501	GTP	C5-C6	-4.07	1.39	1.47
36	AC	501	GTP	C5-C6	-4.07	1.39	1.47
36	KC	501	GTP	C5-C6	-4.07	1.39	1.47
36	UG	501	GTP	C5-C6	-4.07	1.39	1.47
36	VO	501	GTP	C5-C6	-4.07	1.39	1.47
36	TM	501	GTP	C5-C6	-4.06	1.39	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	TO	501	GTP	C5-C6	-4.06	1.39	1.47
36	PO	501	GTP	C5-C6	-4.06	1.39	1.47
36	GE	501	GTP	C5-C6	-4.05	1.39	1.47
36	HG	501	GTP	C5-C6	-4.05	1.39	1.47
36	TI	501	GTP	C5-C6	-4.05	1.39	1.47
36	CC	501	GTP	C5-C6	-4.04	1.39	1.47
36	VG	501	GTP	C5-C6	-4.04	1.39	1.47
36	IO	501	GTP	C5-C6	-4.03	1.39	1.47
36	CM	501	GTP	C5-C6	-4.03	1.39	1.47
36	VI	501	GTP	C5-C6	-4.03	1.39	1.47
36	GI	501	GTP	C5-C6	-4.02	1.39	1.47
36	JG	501	GTP	C5-C6	-4.02	1.39	1.47
36	WM	501	GTP	C5-C6	-4.02	1.39	1.47
36	VM	501	GTP	C5-C6	-4.02	1.39	1.47
36	DG	501	GTP	C5-C6	-4.02	1.39	1.47
36	WI	501	GTP	C5-C6	-4.02	1.39	1.47
36	GK	501	GTP	C5-C6	-4.00	1.39	1.47
36	WK	501	GTP	C5-C6	-4.00	1.39	1.47
36	PC	501	GTP	C5-C6	-4.00	1.39	1.47
36	TG	501	GTP	C5-C6	-4.00	1.39	1.47
36	JC	501	GTP	C5-C6	-3.99	1.39	1.47
36	IK	501	GTP	C5-C6	-3.99	1.39	1.47
36	UK	501	GTP	C5-C6	-3.98	1.39	1.47
36	CA	501	GTP	C5-C6	-3.98	1.39	1.47
36	UM	501	GTP	C5-C6	-3.98	1.39	1.47
36	IE	501	GTP	C5-C6	-3.97	1.39	1.47
36	WO	501	GTP	C5-C6	-3.97	1.39	1.47
36	GM	501	GTP	C5-C6	-3.97	1.39	1.47
36	CI	501	GTP	C5-C6	-3.97	1.39	1.47
36	DE	501	GTP	C5-C6	-3.96	1.39	1.47
36	IC	501	GTP	C5-C6	-3.96	1.39	1.47
36	TE	501	GTP	C5-C6	-3.95	1.39	1.47
36	CE	501	GTP	C5-C6	-3.95	1.39	1.47
36	CG	501	GTP	C5-C6	-3.95	1.39	1.47
36	IG	501	GTP	C5-C6	-3.94	1.39	1.47
36	WG	501	GTP	C5-C6	-3.93	1.39	1.47
36	DK	501	GTP	C5-C6	-3.92	1.39	1.47
36	DA	501	GTP	C5-C6	-3.91	1.39	1.47
36	II	501	GTP	C5-C6	-3.91	1.39	1.47
36	DC	501	GTP	C5-C6	-3.90	1.39	1.47
36	IM	501	GTP	C5-C6	-3.90	1.39	1.47
36	DI	501	GTP	C5-C6	-3.84	1.39	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	WE	501	GTP	C5-C6	-3.84	1.39	1.47
36	DM	501	GTP	C5-C6	-3.81	1.39	1.47
38	RN	502	GDP	C6-N1	-2.73	1.33	1.37
38	LF	502	GDP	C6-N1	-2.70	1.33	1.37
38	KJ	502	GDP	C6-N1	-2.69	1.33	1.37
38	DB	502	GDP	C6-N1	-2.69	1.33	1.37
38	QD	502	GDP	C6-N1	-2.68	1.33	1.37
38	EB	502	GDP	C6-N1	-2.67	1.33	1.37
38	RJ	502	GDP	C6-N1	-2.67	1.33	1.37
38	MB	502	GDP	C6-N1	-2.67	1.33	1.37
38	EH	502	GDP	C6-N1	-2.66	1.33	1.37
38	MN	502	GDP	C6-N1	-2.64	1.33	1.37
38	JD	502	GDP	C6-N1	-2.64	1.33	1.37
38	KN	502	GDP	C6-N1	-2.64	1.33	1.37
38	QJ	502	GDP	C6-N1	-2.64	1.33	1.37
38	LJ	502	GDP	C6-N1	-2.63	1.34	1.37
38	OJ	502	GDP	C6-N1	-2.63	1.34	1.37
38	DH	502	GDP	C6-N1	-2.62	1.34	1.37
38	AL	502	GDP	C6-N1	-2.62	1.34	1.37
38	MJ	502	GDP	C6-N1	-2.62	1.34	1.37
38	JH	502	GDP	C6-N1	-2.62	1.34	1.37
38	QF	502	GDP	C6-N1	-2.61	1.34	1.37
38	OD	502	GDP	C6-N1	-2.61	1.34	1.37
38	OB	502	GDP	C6-N1	-2.60	1.34	1.37
38	EL	502	GDP	C6-N1	-2.60	1.34	1.37
38	KB	502	GDP	C6-N1	-2.60	1.34	1.37
38	RL	502	GDP	C6-N1	-2.59	1.34	1.37
38	EJ	502	GDP	C6-N1	-2.59	1.34	1.37
38	QN	502	GDP	C6-N1	-2.59	1.34	1.37
38	KF	502	GDP	C6-N1	-2.58	1.34	1.37
38	EN	502	GDP	C6-N1	-2.58	1.34	1.37
38	MF	502	GDP	C6-N1	-2.58	1.34	1.37
38	ED	502	GDP	C6-N1	-2.57	1.34	1.37
38	RD	502	GDP	C6-N1	-2.57	1.34	1.37
38	RF	502	GDP	C6-N1	-2.57	1.34	1.37
38	FN	502	GDP	C6-N1	-2.57	1.34	1.37
38	JL	502	GDP	C6-N1	-2.56	1.34	1.37
38	RH	502	GDP	C6-N1	-2.56	1.34	1.37
38	AB	502	GDP	C6-N1	-2.56	1.34	1.37
38	FH	502	GDP	C6-N1	-2.56	1.34	1.37
38	FF	502	GDP	C6-N1	-2.56	1.34	1.37
38	HJ	502	GDP	C6-N1	-2.55	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	MH	502	GDP	C6-N1	-2.55	1.34	1.37
38	LH	502	GDP	C6-N1	-2.55	1.34	1.37
38	AJ	502	GDP	C6-N1	-2.55	1.34	1.37
38	VH	502	GDP	C6-N1	-2.55	1.34	1.37
38	SF	502	GDP	C6-N1	-2.55	1.34	1.37
38	LB	502	GDP	C6-N1	-2.54	1.34	1.37
38	JN	502	GDP	C6-N1	-2.54	1.34	1.37
38	SD	502	GDP	C6-N1	-2.54	1.34	1.37
38	JB	502	GDP	C6-N1	-2.54	1.34	1.37
38	GN	502	GDP	C6-N1	-2.54	1.34	1.37
38	KH	502	GDP	C6-N1	-2.54	1.34	1.37
38	DJ	502	GDP	C6-N1	-2.54	1.34	1.37
38	DL	502	GDP	C6-N1	-2.54	1.34	1.37
38	KD	502	GDP	C6-N1	-2.54	1.34	1.37
38	LD	502	GDP	C6-N1	-2.53	1.34	1.37
38	QL	502	GDP	C6-N1	-2.53	1.34	1.37
38	KL	502	GDP	C6-N1	-2.53	1.34	1.37
38	JJ	502	GDP	C6-N1	-2.53	1.34	1.37
38	OF	502	GDP	C6-N1	-2.53	1.34	1.37
38	MD	502	GDP	C6-N1	-2.53	1.34	1.37
38	PL	502	GDP	C6-N1	-2.53	1.34	1.37
38	PH	502	GDP	C6-N1	-2.52	1.34	1.37
38	AF	502	GDP	C6-N1	-2.52	1.34	1.37
38	LL	502	GDP	C6-N1	-2.52	1.34	1.37
38	ML	502	GDP	C6-N1	-2.52	1.34	1.37
38	PD	502	GDP	C6-N1	-2.52	1.34	1.37
38	AH	502	GDP	C6-N1	-2.52	1.34	1.37
38	WJ	502	GDP	C6-N1	-2.52	1.34	1.37
38	NJ	502	GDP	C6-N1	-2.51	1.34	1.37
38	OH	502	GDP	C6-N1	-2.51	1.34	1.37
38	ON	502	GDP	C6-N1	-2.51	1.34	1.37
38	VJ	502	GDP	C6-N1	-2.51	1.34	1.37
38	BH	502	GDP	C6-N1	-2.51	1.34	1.37
38	UJ	502	GDP	C6-N1	-2.51	1.34	1.37
38	SH	502	GDP	C6-N1	-2.51	1.34	1.37
38	WN	502	GDP	C6-N1	-2.51	1.34	1.37
38	UP	502	GDP	C6-N1	-2.51	1.34	1.37
38	FD	502	GDP	C6-N1	-2.51	1.34	1.37
38	SJ	502	GDP	C6-N1	-2.50	1.34	1.37
38	IH	502	GDP	C6-N1	-2.49	1.34	1.37
38	PF	502	GDP	C6-N1	-2.49	1.34	1.37
38	QH	502	GDP	C6-N1	-2.49	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	HN	502	GDP	C6-N1	-2.49	1.34	1.37
38	VL	502	GDP	C6-N1	-2.49	1.34	1.37
38	CJ	502	GDP	C6-N1	-2.49	1.34	1.37
38	PJ	502	GDP	C6-N1	-2.48	1.34	1.37
38	CB	502	GDP	C6-N1	-2.48	1.34	1.37
38	HD	502	GDP	C6-N1	-2.48	1.34	1.37
38	PN	502	GDP	C6-N1	-2.48	1.34	1.37
38	DD	502	GDP	C6-N1	-2.48	1.34	1.37
38	JF	502	GDP	C6-N1	-2.48	1.34	1.37
38	WP	502	GDP	C6-N1	-2.48	1.34	1.37
38	CD	502	GDP	C6-N1	-2.47	1.34	1.37
38	VD	502	GDP	C6-N1	-2.47	1.34	1.37
38	VF	502	GDP	C6-N1	-2.47	1.34	1.37
38	FJ	502	GDP	C6-N1	-2.47	1.34	1.37
38	UD	502	GDP	C6-N1	-2.47	1.34	1.37
38	EF	502	GDP	C6-N1	-2.47	1.34	1.37
38	IF	502	GDP	C6-N1	-2.47	1.34	1.37
38	NN	502	GDP	C6-N1	-2.47	1.34	1.37
38	DF	502	GDP	C6-N1	-2.47	1.34	1.37
38	OL	502	GDP	C6-N1	-2.47	1.34	1.37
38	SN	502	GDP	C6-N1	-2.47	1.34	1.37
38	IJ	502	GDP	C6-N1	-2.46	1.34	1.37
38	AD	502	GDP	C6-N1	-2.46	1.34	1.37
38	VP	502	GDP	C6-N1	-2.46	1.34	1.37
38	LN	502	GDP	C6-N1	-2.46	1.34	1.37
38	WD	502	GDP	C6-N1	-2.46	1.34	1.37
38	UF	502	GDP	C6-N1	-2.45	1.34	1.37
38	UH	502	GDP	C6-N1	-2.45	1.34	1.37
38	SL	502	GDP	C6-N1	-2.44	1.34	1.37
38	CF	502	GDP	C6-N1	-2.43	1.34	1.37
38	NB	502	GDP	C6-N1	-2.43	1.34	1.37
38	IL	502	GDP	C6-N1	-2.43	1.34	1.37
38	TP	502	GDP	C6-N1	-2.43	1.34	1.37
38	WL	502	GDP	C6-N1	-2.43	1.34	1.37
38	HB	502	GDP	C6-N1	-2.43	1.34	1.37
38	NH	502	GDP	C6-N1	-2.43	1.34	1.37
38	FL	502	GDP	C6-N1	-2.43	1.34	1.37
38	UL	502	GDP	C6-N1	-2.43	1.34	1.37
38	BD	502	GDP	C6-N1	-2.42	1.34	1.37
38	NF	502	GDP	C6-N1	-2.42	1.34	1.37
38	ND	502	GDP	C6-N1	-2.42	1.34	1.37
38	BF	502	GDP	C6-N1	-2.42	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	GD	502	GDP	C6-N1	-2.42	1.34	1.37
38	HF	502	GDP	C6-N1	-2.42	1.34	1.37
38	GL	502	GDP	C6-N1	-2.42	1.34	1.37
38	HL	502	GDP	C6-N1	-2.42	1.34	1.37
38	NL	502	GDP	C6-N1	-2.42	1.34	1.37
38	WH	502	GDP	C6-N1	-2.42	1.34	1.37
38	VN	502	GDP	C6-N1	-2.41	1.34	1.37
38	HH	502	GDP	C6-N1	-2.41	1.34	1.37
38	IB	502	GDP	C6-N1	-2.41	1.34	1.37
38	TH	502	GDP	C6-N1	-2.40	1.34	1.37
38	UN	502	GDP	C6-N1	-2.40	1.34	1.37
38	TN	502	GDP	C6-N1	-2.40	1.34	1.37
38	FB	502	GDP	C6-N1	-2.40	1.34	1.37
38	TJ	502	GDP	C6-N1	-2.40	1.34	1.37
38	ID	502	GDP	C6-N1	-2.40	1.34	1.37
38	TF	502	GDP	C6-N1	-2.40	1.34	1.37
38	BL	502	GDP	C6-N1	-2.39	1.34	1.37
38	CL	502	GDP	C6-N1	-2.39	1.34	1.37
38	CH	502	GDP	C6-N1	-2.39	1.34	1.37
38	BB	502	GDP	C6-N1	-2.39	1.34	1.37
38	GB	502	GDP	C6-N1	-2.38	1.34	1.37
38	TD	502	GDP	C6-N1	-2.37	1.34	1.37
38	BJ	502	GDP	C6-N1	-2.37	1.34	1.37
38	GJ	502	GDP	C6-N1	-2.37	1.34	1.37
38	WF	502	GDP	C6-N1	-2.37	1.34	1.37
38	IN	502	GDP	C6-N1	-2.36	1.34	1.37
38	GH	502	GDP	C6-N1	-2.35	1.34	1.37
38	TL	502	GDP	C6-N1	-2.35	1.34	1.37
38	GF	502	GDP	C6-N1	-2.34	1.34	1.37
36	IE	501	GTP	C2-N3	2.26	1.38	1.33
36	DA	501	GTP	C2-N3	2.26	1.38	1.33
36	DC	501	GTP	C2-N3	2.25	1.38	1.33
36	VE	501	GTP	C2-N3	2.25	1.38	1.33
36	DG	501	GTP	C2-N3	2.24	1.38	1.33
36	CK	501	GTP	C2-N3	2.24	1.38	1.33
36	CC	501	GTP	C2-N3	2.24	1.38	1.33
36	PC	501	GTP	C2-N3	2.23	1.38	1.33
36	RC	501	GTP	C2-N3	2.23	1.38	1.33
36	II	501	GTP	C2-N3	2.23	1.38	1.33
36	IC	501	GTP	C2-N3	2.23	1.38	1.33
36	IG	501	GTP	C2-N3	2.22	1.38	1.33
36	CG	501	GTP	C2-N3	2.22	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	CE	501	GTP	C2-N3	2.22	1.38	1.33
36	KK	501	GTP	C2-N3	2.22	1.38	1.33
36	GI	501	GTP	C2-N3	2.21	1.38	1.33
36	EC	501	GTP	C2-N3	2.21	1.38	1.33
36	IM	501	GTP	C2-N3	2.21	1.38	1.33
36	IO	501	GTP	C2-N3	2.21	1.38	1.33
36	HG	501	GTP	C2-N3	2.20	1.38	1.33
36	FC	501	GTP	C2-N3	2.20	1.38	1.33
36	UM	501	GTP	C2-N3	2.20	1.38	1.33
36	VG	501	GTP	C2-N3	2.20	1.38	1.33
36	VI	501	GTP	C2-N3	2.20	1.38	1.33
36	WI	501	GTP	C2-N3	2.20	1.38	1.33
36	HC	501	GTP	C2-N3	2.19	1.38	1.33
36	CM	501	GTP	C2-N3	2.19	1.38	1.33
36	CA	501	GTP	C2-N3	2.19	1.38	1.33
36	LE	501	GTP	C2-N3	2.19	1.38	1.33
36	IK	501	GTP	C2-N3	2.19	1.38	1.33
36	DE	501	GTP	C2-N3	2.19	1.38	1.33
36	LK	501	GTP	C2-N3	2.19	1.38	1.33
36	FE	501	GTP	C2-N3	2.19	1.38	1.33
36	HO	501	GTP	C2-N3	2.18	1.38	1.33
36	PK	501	GTP	C2-N3	2.18	1.38	1.33
36	OK	501	GTP	C2-N3	2.18	1.38	1.33
36	UE	501	GTP	C2-N3	2.18	1.38	1.33
36	VM	501	GTP	C2-N3	2.18	1.38	1.33
36	UG	501	GTP	C2-N3	2.18	1.38	1.33
36	MG	501	GTP	C2-N3	2.18	1.38	1.33
36	KC	501	GTP	C2-N3	2.18	1.38	1.33
36	KG	501	GTP	C2-N3	2.18	1.38	1.33
36	NE	501	GTP	C2-N3	2.17	1.38	1.33
36	NG	501	GTP	C2-N3	2.17	1.38	1.33
36	DI	501	GTP	C2-N3	2.17	1.38	1.33
36	FM	501	GTP	C2-N3	2.17	1.38	1.33
36	WM	501	GTP	C2-N3	2.17	1.38	1.33
36	QK	501	GTP	C2-N3	2.17	1.38	1.33
36	HK	501	GTP	C2-N3	2.17	1.38	1.33
36	HI	501	GTP	C2-N3	2.17	1.38	1.33
36	JK	501	GTP	C2-N3	2.17	1.38	1.33
36	VO	501	GTP	C2-N3	2.17	1.38	1.33
36	SI	501	GTP	C2-N3	2.17	1.38	1.33
36	VK	501	GTP	C2-N3	2.17	1.38	1.33
36	JM	501	GTP	C2-N3	2.16	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	JC	501	GTP	C2-N3	2.16	1.38	1.33
36	SE	501	GTP	C2-N3	2.16	1.38	1.33
36	GC	501	GTP	C2-N3	2.16	1.38	1.33
36	HE	501	GTP	C2-N3	2.16	1.38	1.33
36	HM	501	GTP	C2-N3	2.16	1.38	1.33
36	PE	501	GTP	C2-N3	2.16	1.38	1.33
36	NC	501	GTP	C2-N3	2.16	1.38	1.33
36	UI	501	GTP	C2-N3	2.16	1.38	1.33
36	CI	501	GTP	C2-N3	2.15	1.38	1.33
36	RK	501	GTP	C2-N3	2.15	1.38	1.33
36	BK	501	GTP	C2-N3	2.15	1.38	1.33
36	JE	501	GTP	C2-N3	2.15	1.38	1.33
36	BA	501	GTP	C2-N3	2.15	1.38	1.33
36	FG	501	GTP	C2-N3	2.15	1.38	1.33
36	TK	501	GTP	C2-N3	2.15	1.38	1.33
36	QO	501	GTP	C2-N3	2.14	1.38	1.33
36	PG	501	GTP	C2-N3	2.14	1.38	1.33
36	RO	501	GTP	C2-N3	2.14	1.38	1.33
36	KO	501	GTP	C2-N3	2.14	1.38	1.33
36	MC	501	GTP	C2-N3	2.14	1.38	1.33
36	NK	501	GTP	C2-N3	2.14	1.38	1.33
36	SK	501	GTP	C2-N3	2.14	1.38	1.33
36	EM	501	GTP	C2-N3	2.14	1.38	1.33
36	EG	501	GTP	C2-N3	2.14	1.38	1.33
36	SG	501	GTP	C2-N3	2.14	1.38	1.33
36	BC	501	GTP	C2-N3	2.14	1.38	1.33
36	KM	501	GTP	C2-N3	2.14	1.38	1.33
36	UO	501	GTP	C2-N3	2.14	1.38	1.33
36	WG	501	GTP	C2-N3	2.14	1.38	1.33
36	TM	501	GTP	C2-N3	2.13	1.38	1.33
36	UK	501	GTP	C2-N3	2.13	1.38	1.33
36	GG	501	GTP	C2-N3	2.13	1.38	1.33
36	LG	501	GTP	C2-N3	2.13	1.38	1.33
36	GM	501	GTP	C2-N3	2.13	1.38	1.33
36	ME	501	GTP	C2-N3	2.13	1.38	1.33
36	LI	501	GTP	C2-N3	2.13	1.38	1.33
36	PI	501	GTP	C2-N3	2.13	1.38	1.33
36	EE	501	GTP	C2-N3	2.12	1.38	1.33
36	OG	501	GTP	C2-N3	2.12	1.38	1.33
36	TO	501	GTP	C2-N3	2.12	1.38	1.33
36	RI	501	GTP	C2-N3	2.12	1.38	1.33
36	NI	501	GTP	C2-N3	2.12	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BE	501	GTP	C2-N3	2.12	1.38	1.33
36	KI	501	GTP	C2-N3	2.12	1.38	1.33
36	JI	501	GTP	C2-N3	2.12	1.38	1.33
36	BM	501	GTP	C2-N3	2.12	1.38	1.33
36	OM	501	GTP	C2-N3	2.12	1.38	1.33
36	LM	501	GTP	C2-N3	2.12	1.38	1.33
36	TG	501	GTP	C2-N3	2.11	1.38	1.33
36	BG	501	GTP	C2-N3	2.11	1.38	1.33
36	QG	501	GTP	C2-N3	2.11	1.38	1.33
36	BI	501	GTP	C2-N3	2.11	1.38	1.33
36	LC	501	GTP	C2-N3	2.11	1.38	1.33
36	RE	501	GTP	C2-N3	2.11	1.38	1.33
36	EK	501	GTP	C2-N3	2.11	1.38	1.33
36	SM	501	GTP	C2-N3	2.11	1.38	1.33
36	FK	501	GTP	C2-N3	2.11	1.38	1.33
36	QM	501	GTP	C2-N3	2.11	1.38	1.33
36	OC	501	GTP	C2-N3	2.10	1.38	1.33
36	TE	501	GTP	C2-N3	2.10	1.38	1.33
36	OE	501	GTP	C2-N3	2.10	1.38	1.33
36	SO	501	GTP	C2-N3	2.10	1.38	1.33
36	MK	501	GTP	C2-N3	2.10	1.38	1.33
36	NM	501	GTP	C2-N3	2.10	1.38	1.33
36	GE	501	GTP	C2-N3	2.10	1.38	1.33
36	KE	501	GTP	C2-N3	2.09	1.38	1.33
36	QC	501	GTP	C2-N3	2.09	1.38	1.33
36	QI	501	GTP	C2-N3	2.09	1.38	1.33
36	AI	501	GTP	C2-N3	2.09	1.38	1.33
36	RG	501	GTP	C2-N3	2.09	1.38	1.33
36	MI	501	GTP	C2-N3	2.09	1.38	1.33
36	AK	501	GTP	C2-N3	2.08	1.38	1.33
36	MM	501	GTP	C2-N3	2.08	1.38	1.33
36	OO	501	GTP	C2-N3	2.08	1.38	1.33
36	WO	501	GTP	C2-N3	2.08	1.38	1.33
36	WE	501	GTP	C2-N3	2.08	1.38	1.33
36	GK	501	GTP	C2-N3	2.08	1.38	1.33
36	PM	501	GTP	C2-N3	2.08	1.38	1.33
36	JG	501	GTP	C2-N3	2.07	1.38	1.33
36	QE	501	GTP	C2-N3	2.07	1.38	1.33
36	PO	501	GTP	C2-N3	2.07	1.38	1.33
36	WK	501	GTP	C2-N3	2.05	1.38	1.33
36	AE	501	GTP	C2-N3	2.05	1.38	1.33
36	OI	501	GTP	C2-N3	2.05	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	RM	501	GTP	C2-N3	2.05	1.38	1.33
36	EI	501	GTP	C2-N3	2.05	1.38	1.33
36	DM	501	GTP	C2-N3	2.05	1.38	1.33
36	AG	501	GTP	C2-N3	2.05	1.38	1.33
36	TI	501	GTP	C2-N3	2.05	1.38	1.33
36	AM	501	GTP	C2-N3	2.04	1.38	1.33
36	AA	501	GTP	C2-N3	2.04	1.38	1.33
36	AC	501	GTP	C2-N3	2.03	1.38	1.33
36	FI	501	GTP	C2-N3	2.02	1.38	1.33
36	DK	501	GTP	C2-N3	2.02	1.38	1.33

All (1643) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	AB	502	GDP	PA-O3A-PB	-4.58	117.11	132.83
38	AJ	502	GDP	PA-O3A-PB	-4.56	117.17	132.83
38	OB	502	GDP	PA-O3A-PB	-4.54	117.26	132.83
36	DM	501	GTP	PB-O3B-PG	-4.49	117.42	132.83
38	AF	502	GDP	PA-O3A-PB	-4.47	117.50	132.83
36	OI	501	GTP	PB-O3B-PG	-4.38	117.79	132.83
38	LJ	502	GDP	PA-O3A-PB	-4.35	117.89	132.83
38	NL	502	GDP	PA-O3A-PB	-4.33	117.98	132.83
38	KF	502	GDP	PA-O3A-PB	-4.31	118.03	132.83
36	CI	501	GTP	PB-O3B-PG	-4.31	118.05	132.83
38	AD	502	GDP	PA-O3A-PB	-4.30	118.07	132.83
38	BF	502	GDP	PA-O3A-PB	-4.30	118.08	132.83
36	PI	501	GTP	PB-O3B-PG	-4.28	118.13	132.83
38	QN	502	GDP	PA-O3A-PB	-4.28	118.14	132.83
38	BL	502	GDP	PA-O3A-PB	-4.27	118.17	132.83
38	KN	502	GDP	PA-O3A-PB	-4.27	118.19	132.83
38	LN	502	GDP	PA-O3A-PB	-4.25	118.25	132.83
36	WG	501	GTP	PB-O3B-PG	-4.24	118.29	132.83
38	BH	502	GDP	PA-O3A-PB	-4.22	118.34	132.83
38	NH	502	GDP	PA-O3A-PB	-4.22	118.35	132.83
38	QD	502	GDP	PA-O3A-PB	-4.21	118.39	132.83
38	BJ	502	GDP	PA-O3A-PB	-4.17	118.50	132.83
38	NB	502	GDP	PA-O3A-PB	-4.17	118.51	132.83
36	OC	501	GTP	PB-O3B-PG	-4.17	118.52	132.83
38	NN	502	GDP	PA-O3A-PB	-4.17	118.52	132.83
38	CB	502	GDP	PA-O3A-PB	-4.16	118.56	132.83
38	BB	502	GDP	PA-O3A-PB	-4.16	118.57	132.83
38	PD	502	GDP	PA-O3A-PB	-4.14	118.63	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	IG	501	GTP	PB-O3B-PG	-4.13	118.64	132.83
38	HB	502	GDP	PA-O3A-PB	-4.13	118.64	132.83
38	KB	502	GDP	PA-O3A-PB	-4.13	118.64	132.83
38	AH	502	GDP	PA-O3A-PB	-4.13	118.65	132.83
38	NF	502	GDP	PA-O3A-PB	-4.13	118.65	132.83
38	OF	502	GDP	PA-O3A-PB	-4.13	118.66	132.83
38	OD	502	GDP	PA-O3A-PB	-4.12	118.67	132.83
38	UJ	502	GDP	PA-O3A-PB	-4.12	118.70	132.83
38	LL	502	GDP	PA-O3A-PB	-4.11	118.71	132.83
36	IM	501	GTP	PA-O3A-PB	-4.11	118.72	132.83
36	HI	501	GTP	PB-O3B-PG	-4.11	118.73	132.83
38	QJ	502	GDP	PA-O3A-PB	-4.11	118.74	132.83
36	CC	501	GTP	PB-O3B-PG	-4.10	118.74	132.83
38	LB	502	GDP	PA-O3A-PB	-4.10	118.74	132.83
38	PH	502	GDP	PA-O3A-PB	-4.10	118.77	132.83
38	MN	502	GDP	PA-O3A-PB	-4.10	118.77	132.83
36	WG	501	GTP	PA-O3A-PB	-4.09	118.78	132.83
36	DI	501	GTP	PB-O3B-PG	-4.09	118.79	132.83
38	OH	502	GDP	PA-O3A-PB	-4.09	118.80	132.83
38	AL	502	GDP	PA-O3A-PB	-4.08	118.82	132.83
38	PJ	502	GDP	PA-O3A-PB	-4.07	118.84	132.83
38	ON	502	GDP	PA-O3A-PB	-4.07	118.85	132.83
38	NJ	502	GDP	PA-O3A-PB	-4.06	118.90	132.83
36	DK	501	GTP	PA-O3A-PB	-4.05	118.91	132.83
38	IJ	502	GDP	PA-O3A-PB	-4.05	118.91	132.83
36	OC	501	GTP	PA-O3A-PB	-4.05	118.92	132.83
36	JG	501	GTP	PB-O3B-PG	-4.04	118.95	132.83
38	OL	502	GDP	PA-O3A-PB	-4.04	118.96	132.83
38	KL	502	GDP	PA-O3A-PB	-4.04	118.97	132.83
38	HL	502	GDP	PA-O3A-PB	-4.03	118.98	132.83
38	VJ	502	GDP	PA-O3A-PB	-4.03	119.00	132.83
36	WK	501	GTP	PB-O3B-PG	-4.02	119.02	132.83
36	OO	501	GTP	PB-O3B-PG	-4.02	119.02	132.83
38	LD	502	GDP	PA-O3A-PB	-4.02	119.03	132.83
36	DI	501	GTP	PA-O3A-PB	-4.02	119.03	132.83
38	BD	502	GDP	PA-O3A-PB	-4.01	119.06	132.83
38	HD	502	GDP	PA-O3A-PB	-4.01	119.06	132.83
38	HJ	502	GDP	PA-O3A-PB	-3.99	119.12	132.83
38	OJ	502	GDP	PA-O3A-PB	-3.99	119.13	132.83
36	II	501	GTP	PB-O3B-PG	-3.99	119.14	132.83
36	JI	501	GTP	PB-O3B-PG	-3.98	119.16	132.83
38	PL	502	GDP	PA-O3A-PB	-3.98	119.17	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	IK	501	GTP	PB-O3B-PG	-3.98	119.19	132.83
38	QL	502	GDP	PA-O3A-PB	-3.97	119.19	132.83
38	UF	502	GDP	PA-O3A-PB	-3.97	119.20	132.83
38	KJ	502	GDP	PA-O3A-PB	-3.97	119.21	132.83
38	VN	502	GDP	PA-O3A-PB	-3.97	119.22	132.83
36	QE	501	GTP	PB-O3B-PG	-3.95	119.29	132.83
38	LF	502	GDP	PA-O3A-PB	-3.94	119.29	132.83
36	DC	501	GTP	PB-O3B-PG	-3.94	119.30	132.83
38	CJ	502	GDP	PA-O3A-PB	-3.94	119.32	132.83
38	VP	502	GDP	PA-O3A-PB	-3.93	119.33	132.83
38	MB	502	GDP	PA-O3A-PB	-3.93	119.33	132.83
38	ND	502	GDP	PA-O3A-PB	-3.93	119.34	132.83
36	OI	501	GTP	PA-O3A-PB	-3.93	119.35	132.83
38	IL	502	GDP	PA-O3A-PB	-3.93	119.35	132.83
38	QF	502	GDP	PA-O3A-PB	-3.92	119.36	132.83
38	HF	502	GDP	PA-O3A-PB	-3.92	119.36	132.83
38	PN	502	GDP	PA-O3A-PB	-3.91	119.39	132.83
38	WL	502	GDP	PA-O3A-PB	-3.91	119.40	132.83
38	VL	502	GDP	PA-O3A-PB	-3.91	119.40	132.83
38	ID	502	GDP	PA-O3A-PB	-3.91	119.40	132.83
36	HI	501	GTP	PA-O3A-PB	-3.91	119.41	132.83
38	UN	502	GDP	PA-O3A-PB	-3.90	119.43	132.83
38	IN	502	GDP	PA-O3A-PB	-3.90	119.44	132.83
36	RE	501	GTP	PB-O3B-PG	-3.90	119.45	132.83
38	JH	502	GDP	PA-O3A-PB	-3.90	119.45	132.83
36	KO	501	GTP	PB-O3B-PG	-3.89	119.49	132.83
38	PF	502	GDP	PA-O3A-PB	-3.88	119.51	132.83
38	QH	502	GDP	PA-O3A-PB	-3.87	119.53	132.83
36	UE	501	GTP	PB-O3B-PG	-3.87	119.56	132.83
36	QG	501	GTP	PB-O3B-PG	-3.86	119.59	132.83
36	DK	501	GTP	PB-O3B-PG	-3.86	119.59	132.83
38	UH	502	GDP	PA-O3A-PB	-3.85	119.60	132.83
36	PM	501	GTP	PB-O3B-PG	-3.85	119.61	132.83
36	QO	501	GTP	PB-O3B-PG	-3.85	119.61	132.83
36	IO	501	GTP	PA-O3A-PB	-3.85	119.63	132.83
38	GH	502	GDP	PA-O3A-PB	-3.84	119.64	132.83
38	JD	502	GDP	PA-O3A-PB	-3.84	119.66	132.83
36	CK	501	GTP	PB-O3B-PG	-3.83	119.68	132.83
38	JL	502	GDP	PA-O3A-PB	-3.83	119.68	132.83
38	UP	502	GDP	PA-O3A-PB	-3.83	119.70	132.83
38	CH	502	GDP	PA-O3A-PB	-3.81	119.75	132.83
38	IB	502	GDP	PA-O3A-PB	-3.81	119.77	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	WP	502	GDP	PA-O3A-PB	-3.81	119.77	132.83
36	KM	501	GTP	PB-O3B-PG	-3.80	119.79	132.83
38	UL	502	GDP	PA-O3A-PB	-3.79	119.83	132.83
36	UG	501	GTP	PA-O3A-PB	-3.78	119.84	132.83
38	IF	502	GDP	PA-O3A-PB	-3.78	119.85	132.83
36	CM	501	GTP	PB-O3B-PG	-3.78	119.85	132.83
36	CI	501	GTP	PA-O3A-PB	-3.78	119.86	132.83
38	IH	502	GDP	PA-O3A-PB	-3.78	119.86	132.83
36	DG	501	GTP	PB-O3B-PG	-3.77	119.87	132.83
36	HK	501	GTP	PB-O3B-PG	-3.77	119.88	132.83
38	VF	502	GDP	PA-O3A-PB	-3.77	119.88	132.83
36	CG	501	GTP	PB-O3B-PG	-3.77	119.89	132.83
38	JB	502	GDP	PA-O3A-PB	-3.77	119.89	132.83
36	PG	501	GTP	PB-O3B-PG	-3.77	119.90	132.83
38	SL	502	GDP	PA-O3A-PB	-3.76	119.91	132.83
38	RD	502	GDP	PA-O3A-PB	-3.76	119.91	132.83
38	CF	502	GDP	PA-O3A-PB	-3.76	119.93	132.83
38	KD	502	GDP	PA-O3A-PB	-3.76	119.94	132.83
36	JM	501	GTP	PB-O3B-PG	-3.76	119.94	132.83
36	UK	501	GTP	PA-O3A-PB	-3.75	119.95	132.83
38	VD	502	GDP	PA-O3A-PB	-3.75	119.97	132.83
38	JJ	502	GDP	PA-O3A-PB	-3.74	119.98	132.83
36	GI	501	GTP	PA-O3A-PB	-3.74	119.99	132.83
36	WI	501	GTP	PB-O3B-PG	-3.74	119.99	132.83
36	QI	501	GTP	PB-O3B-PG	-3.74	120.00	132.83
36	VK	501	GTP	PB-O3B-PG	-3.73	120.01	132.83
36	VG	501	GTP	PB-O3B-PG	-3.73	120.02	132.83
38	CD	502	GDP	PA-O3A-PB	-3.73	120.02	132.83
38	KH	502	GDP	PA-O3A-PB	-3.73	120.02	132.83
38	TD	502	GDP	PA-O3A-PB	-3.73	120.03	132.83
36	HG	501	GTP	PB-O3B-PG	-3.73	120.03	132.83
36	IE	501	GTP	PB-O3B-PG	-3.73	120.03	132.83
36	EC	501	GTP	PB-O3B-PG	-3.73	120.04	132.83
38	DJ	502	GDP	PA-O3A-PB	-3.72	120.06	132.83
38	CL	502	GDP	PA-O3A-PB	-3.72	120.06	132.83
36	DG	501	GTP	PA-O3A-PB	-3.72	120.06	132.83
36	JC	501	GTP	PB-O3B-PG	-3.72	120.07	132.83
38	FB	502	GDP	PA-O3A-PB	-3.72	120.07	132.83
36	UK	501	GTP	PB-O3B-PG	-3.72	120.08	132.83
38	RN	502	GDP	PA-O3A-PB	-3.71	120.10	132.83
36	KK	501	GTP	PB-O3B-PG	-3.71	120.11	132.83
36	TG	501	GTP	PB-O3B-PG	-3.71	120.11	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	EK	501	GTP	PB-O3B-PG	-3.71	120.11	132.83
36	OK	501	GTP	PB-O3B-PG	-3.69	120.15	132.83
36	KG	501	GTP	PB-O3B-PG	-3.69	120.17	132.83
36	EM	501	GTP	PB-O3B-PG	-3.69	120.17	132.83
38	MJ	502	GDP	PA-O3A-PB	-3.69	120.17	132.83
36	IO	501	GTP	PB-O3B-PG	-3.68	120.18	132.83
36	RI	501	GTP	PA-O3A-PB	-3.68	120.21	132.83
36	BM	501	GTP	PA-O3A-PB	-3.68	120.21	132.83
36	HO	501	GTP	PB-O3B-PG	-3.68	120.22	132.83
38	FD	502	GDP	PA-O3A-PB	-3.67	120.25	132.83
38	WF	502	GDP	PA-O3A-PB	-3.66	120.26	132.83
38	TP	502	GDP	PA-O3A-PB	-3.66	120.26	132.83
36	QO	501	GTP	PA-O3A-PB	-3.66	120.27	132.83
36	IM	501	GTP	PB-O3B-PG	-3.66	120.27	132.83
38	WN	502	GDP	PA-O3A-PB	-3.66	120.27	132.83
38	GD	502	GDP	PA-O3A-PB	-3.66	120.28	132.83
36	JK	501	GTP	PB-O3B-PG	-3.65	120.29	132.83
38	HN	502	GDP	PA-O3A-PB	-3.65	120.30	132.83
36	PC	501	GTP	PB-O3B-PG	-3.65	120.30	132.83
36	OM	501	GTP	PB-O3B-PG	-3.65	120.30	132.83
36	JI	501	GTP	PA-O3A-PB	-3.65	120.31	132.83
36	RK	501	GTP	PB-O3B-PG	-3.65	120.31	132.83
36	EE	501	GTP	PB-O3B-PG	-3.65	120.31	132.83
38	GN	502	GDP	PA-O3A-PB	-3.65	120.31	132.83
38	VH	502	GDP	PA-O3A-PB	-3.64	120.33	132.83
38	MF	502	GDP	PA-O3A-PB	-3.64	120.35	132.83
36	NG	501	GTP	PA-O3A-PB	-3.63	120.35	132.83
36	NI	501	GTP	PA-O3A-PB	-3.63	120.36	132.83
36	UG	501	GTP	PB-O3B-PG	-3.63	120.38	132.83
36	VE	501	GTP	PA-O3A-PB	-3.63	120.39	132.83
36	WI	501	GTP	PA-O3A-PB	-3.62	120.39	132.83
36	LE	501	GTP	PB-O3B-PG	-3.62	120.40	132.83
38	MD	502	GDP	PA-O3A-PB	-3.62	120.41	132.83
36	OO	501	GTP	PA-O3A-PB	-3.62	120.41	132.83
38	WJ	502	GDP	PA-O3A-PB	-3.62	120.42	132.83
36	RK	501	GTP	PA-O3A-PB	-3.61	120.43	132.83
38	GB	502	GDP	PA-O3A-PB	-3.61	120.43	132.83
36	CG	501	GTP	PA-O3A-PB	-3.61	120.43	132.83
38	UD	502	GDP	PA-O3A-PB	-3.61	120.44	132.83
36	VO	501	GTP	PB-O3B-PG	-3.61	120.44	132.83
36	QM	501	GTP	PB-O3B-PG	-3.61	120.44	132.83
36	BC	501	GTP	PA-O3A-PB	-3.61	120.45	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	VO	501	GTP	PA-O3A-PB	-3.60	120.46	132.83
38	JF	502	GDP	PA-O3A-PB	-3.60	120.47	132.83
36	UM	501	GTP	PB-O3B-PG	-3.60	120.47	132.83
36	KC	501	GTP	PB-O3B-PG	-3.60	120.48	132.83
36	BA	501	GTP	PB-O3B-PG	-3.60	120.49	132.83
38	DL	502	GDP	PA-O3A-PB	-3.59	120.52	132.83
36	LI	501	GTP	PB-O3B-PG	-3.59	120.52	132.83
36	VI	501	GTP	PB-O3B-PG	-3.58	120.53	132.83
36	KI	501	GTP	PB-O3B-PG	-3.58	120.54	132.83
36	NK	501	GTP	PA-O3A-PB	-3.58	120.54	132.83
38	RF	502	GDP	PA-O3A-PB	-3.58	120.54	132.83
36	VK	501	GTP	PA-O3A-PB	-3.57	120.56	132.83
38	WH	502	GDP	PA-O3A-PB	-3.57	120.58	132.83
36	AK	501	GTP	PA-O3A-PB	-3.57	120.58	132.83
38	HH	502	GDP	PA-O3A-PB	-3.57	120.58	132.83
36	KO	501	GTP	PA-O3A-PB	-3.57	120.58	132.83
36	II	501	GTP	PA-O3A-PB	-3.56	120.60	132.83
36	RG	501	GTP	PB-O3B-PG	-3.56	120.60	132.83
36	EG	501	GTP	C5-C6-N1	3.56	120.24	113.95
36	BG	501	GTP	PA-O3A-PB	-3.56	120.61	132.83
36	VM	501	GTP	PB-O3B-PG	-3.56	120.62	132.83
38	GF	502	GDP	PA-O3A-PB	-3.56	120.62	132.83
36	RM	501	GTP	PB-O3B-PG	-3.55	120.64	132.83
36	HE	501	GTP	PA-O3A-PB	-3.54	120.67	132.83
36	KI	501	GTP	C5-C6-N1	3.54	120.21	113.95
36	LC	501	GTP	PA-O3A-PB	-3.54	120.67	132.83
36	IK	501	GTP	PA-O3A-PB	-3.54	120.69	132.83
36	EG	501	GTP	PB-O3B-PG	-3.54	120.69	132.83
36	QK	501	GTP	PB-O3B-PG	-3.53	120.70	132.83
36	HM	501	GTP	PA-O3A-PB	-3.53	120.71	132.83
36	RI	501	GTP	C5-C6-N1	3.53	120.19	113.95
36	EI	501	GTP	PB-O3B-PG	-3.53	120.72	132.83
36	PO	501	GTP	PB-O3B-PG	-3.53	120.73	132.83
38	DH	502	GDP	PA-O3A-PB	-3.52	120.73	132.83
38	MH	502	GDP	PA-O3A-PB	-3.52	120.73	132.83
36	NC	501	GTP	PA-O3A-PB	-3.52	120.75	132.83
38	TF	502	GDP	PA-O3A-PB	-3.52	120.75	132.83
38	TN	502	GDP	PA-O3A-PB	-3.51	120.77	132.83
36	AI	501	GTP	C5-C6-N1	3.51	120.16	113.95
36	HE	501	GTP	PB-O3B-PG	-3.51	120.77	132.83
36	KG	501	GTP	C5-C6-N1	3.51	120.15	113.95
36	AE	501	GTP	PA-O3A-PB	-3.51	120.78	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	UO	501	GTP	PB-O3B-PG	-3.51	120.79	132.83
36	CA	501	GTP	PB-O3B-PG	-3.51	120.80	132.83
36	LC	501	GTP	PB-O3B-PG	-3.51	120.80	132.83
38	DF	502	GDP	PA-O3A-PB	-3.50	120.81	132.83
36	NC	501	GTP	PB-O3B-PG	-3.50	120.81	132.83
38	GL	502	GDP	PA-O3A-PB	-3.50	120.82	132.83
36	GM	501	GTP	PB-O3B-PG	-3.50	120.82	132.83
36	GM	501	GTP	PA-O3A-PB	-3.50	120.82	132.83
38	SH	502	GDP	PA-O3A-PB	-3.50	120.82	132.83
38	SJ	502	GDP	PA-O3A-PB	-3.50	120.83	132.83
38	GN	502	GDP	C3'-C2'-C1'	3.49	106.24	100.98
36	PO	501	GTP	PA-O3A-PB	-3.49	120.84	132.83
36	LG	501	GTP	PB-O3B-PG	-3.49	120.84	132.83
36	BK	501	GTP	PA-O3A-PB	-3.49	120.84	132.83
36	RI	501	GTP	PB-O3B-PG	-3.49	120.85	132.83
38	ML	502	GDP	PA-O3A-PB	-3.49	120.86	132.83
38	JN	502	GDP	PA-O3A-PB	-3.49	120.87	132.83
36	AG	501	GTP	PA-O3A-PB	-3.48	120.88	132.83
36	UO	501	GTP	PA-O3A-PB	-3.48	120.88	132.83
36	BI	501	GTP	PA-O3A-PB	-3.48	120.89	132.83
36	MI	501	GTP	PA-O3A-PB	-3.48	120.89	132.83
36	KO	501	GTP	C5-C6-N1	3.48	120.09	113.95
36	PM	501	GTP	PA-O3A-PB	-3.47	120.91	132.83
36	KE	501	GTP	C5-C6-N1	3.47	120.08	113.95
36	MC	501	GTP	PB-O3B-PG	-3.47	120.92	132.83
38	TL	502	GDP	PA-O3A-PB	-3.47	120.92	132.83
36	KK	501	GTP	C5-C6-N1	3.47	120.08	113.95
36	EI	501	GTP	C5-C6-N1	3.47	120.08	113.95
38	TP	502	GDP	C3'-C2'-C1'	3.47	106.20	100.98
38	ED	502	GDP	PA-O3A-PB	-3.47	120.93	132.83
36	JG	501	GTP	PA-O3A-PB	-3.47	120.93	132.83
38	GB	502	GDP	C3'-C2'-C1'	3.47	106.19	100.98
36	LK	501	GTP	PB-O3B-PG	-3.46	120.94	132.83
38	EN	502	GDP	PA-O3A-PB	-3.46	120.94	132.83
36	NE	501	GTP	PA-O3A-PB	-3.46	120.95	132.83
36	WK	501	GTP	PA-O3A-PB	-3.46	120.96	132.83
36	RG	501	GTP	C5-C6-N1	3.46	120.06	113.95
38	TH	502	GDP	PA-O3A-PB	-3.46	120.96	132.83
36	LK	501	GTP	C5-C6-N1	3.46	120.06	113.95
36	SE	501	GTP	C5-C6-N1	3.46	120.06	113.95
36	KE	501	GTP	PA-O3A-PB	-3.45	120.97	132.83
36	GG	501	GTP	PA-O3A-PB	-3.45	120.99	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	KM	501	GTP	C5-C6-N1	3.45	120.04	113.95
36	KK	501	GTP	PA-O3A-PB	-3.45	121.00	132.83
36	ME	501	GTP	C5-C6-N1	3.44	120.03	113.95
38	RJ	502	GDP	PA-O3A-PB	-3.44	121.01	132.83
36	KE	501	GTP	PB-O3B-PG	-3.44	121.02	132.83
36	OE	501	GTP	PA-O3A-PB	-3.44	121.02	132.83
36	BE	501	GTP	PA-O3A-PB	-3.44	121.02	132.83
36	TE	501	GTP	PB-O3B-PG	-3.44	121.03	132.83
36	RC	501	GTP	C5-C6-N1	3.43	120.02	113.95
38	GL	502	GDP	C3'-C2'-C1'	3.43	106.15	100.98
36	IE	501	GTP	PA-O3A-PB	-3.43	121.05	132.83
36	EM	501	GTP	C5-C6-N1	3.43	120.01	113.95
36	QO	501	GTP	C5-C6-N1	3.43	120.01	113.95
38	GJ	502	GDP	PA-O3A-PB	-3.43	121.06	132.83
36	QG	501	GTP	C5-C6-N1	3.43	120.00	113.95
36	CM	501	GTP	PA-O3A-PB	-3.43	121.07	132.83
36	LE	501	GTP	C5-C6-N1	3.42	120.00	113.95
36	DE	501	GTP	C5-C6-N1	3.42	119.99	113.95
36	DM	501	GTP	PA-O3A-PB	-3.42	121.08	132.83
36	NE	501	GTP	PB-O3B-PG	-3.42	121.08	132.83
36	RO	501	GTP	PB-O3B-PG	-3.42	121.09	132.83
38	TD	502	GDP	C3'-C2'-C1'	3.42	106.13	100.98
36	GC	501	GTP	C5-C6-N1	3.42	119.99	113.95
36	EE	501	GTP	C5-C6-N1	3.42	119.99	113.95
36	OI	501	GTP	C5-C6-N1	3.42	119.99	113.95
36	AG	501	GTP	C5-C6-N1	3.42	119.99	113.95
36	DG	501	GTP	C5-C6-N1	3.42	119.99	113.95
36	UE	501	GTP	PA-O3A-PB	-3.42	121.10	132.83
36	BA	501	GTP	PA-O3A-PB	-3.42	121.10	132.83
36	SE	501	GTP	PB-O3B-PG	-3.41	121.12	132.83
38	EB	502	GDP	C3'-C2'-C1'	3.41	106.11	100.98
38	IH	502	GDP	C3'-C2'-C1'	3.41	106.11	100.98
36	BM	501	GTP	C5-C6-N1	3.40	119.96	113.95
38	DD	502	GDP	PA-O3A-PB	-3.40	121.15	132.83
36	MM	501	GTP	PA-O3A-PB	-3.40	121.15	132.83
36	TM	501	GTP	PA-O3A-PB	-3.40	121.16	132.83
36	JE	501	GTP	C5-C6-N1	3.40	119.95	113.95
36	TK	501	GTP	PA-O3A-PB	-3.40	121.16	132.83
36	MK	501	GTP	PB-O3B-PG	-3.40	121.16	132.83
36	AE	501	GTP	C5-C6-N1	3.40	119.95	113.95
36	QI	501	GTP	C5-C6-N1	3.40	119.95	113.95
36	LI	501	GTP	C5-C6-N1	3.40	119.95	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	OO	501	GTP	C5-C6-N1	3.40	119.95	113.95
36	OM	501	GTP	C5-C6-N1	3.39	119.95	113.95
38	RN	502	GDP	C3'-C2'-C1'	3.39	106.09	100.98
36	BK	501	GTP	C5-C6-N1	3.39	119.94	113.95
36	QK	501	GTP	C5-C6-N1	3.39	119.94	113.95
36	VE	501	GTP	PB-O3B-PG	-3.39	121.19	132.83
38	NB	502	GDP	C3'-C2'-C1'	3.39	106.08	100.98
36	JM	501	GTP	C5-C6-N1	3.39	119.94	113.95
38	MB	502	GDP	C3'-C2'-C1'	3.39	106.08	100.98
36	AC	501	GTP	PA-O3A-PB	-3.39	121.20	132.83
36	BC	501	GTP	PB-O3B-PG	-3.39	121.21	132.83
38	AJ	502	GDP	C3'-C2'-C1'	3.39	106.08	100.98
36	WO	501	GTP	C5-C6-N1	3.38	119.93	113.95
36	OE	501	GTP	C5-C6-N1	3.38	119.93	113.95
36	PC	501	GTP	C5-C6-N1	3.38	119.93	113.95
38	UD	502	GDP	C3'-C2'-C1'	3.38	106.07	100.98
38	FN	502	GDP	C3'-C2'-C1'	3.38	106.07	100.98
38	FF	502	GDP	C3'-C2'-C1'	3.38	106.06	100.98
36	KC	501	GTP	C5-C6-N1	3.38	119.92	113.95
36	JM	501	GTP	PA-O3A-PB	-3.38	121.24	132.83
36	JI	501	GTP	C5-C6-N1	3.38	119.91	113.95
38	FF	502	GDP	PA-O3A-PB	-3.37	121.25	132.83
36	LM	501	GTP	C5-C6-N1	3.37	119.91	113.95
38	TJ	502	GDP	PA-O3A-PB	-3.37	121.26	132.83
36	NK	501	GTP	PB-O3B-PG	-3.37	121.26	132.83
38	FL	502	GDP	PA-O3A-PB	-3.37	121.26	132.83
36	MI	501	GTP	C5-C6-N1	3.37	119.90	113.95
36	JE	501	GTP	PB-O3B-PG	-3.37	121.27	132.83
36	LG	501	GTP	C5-C6-N1	3.37	119.90	113.95
36	LC	501	GTP	C5-C6-N1	3.37	119.90	113.95
36	MK	501	GTP	C5-C6-N1	3.37	119.90	113.95
36	CK	501	GTP	C5-C6-N1	3.36	119.89	113.95
36	JG	501	GTP	C5-C6-N1	3.36	119.89	113.95
36	MG	501	GTP	PB-O3B-PG	-3.36	121.28	132.83
36	MM	501	GTP	C5-C6-N1	3.36	119.89	113.95
36	EC	501	GTP	C5-C6-N1	3.36	119.89	113.95
36	PO	501	GTP	C5-C6-N1	3.36	119.88	113.95
36	QC	501	GTP	C5-C6-N1	3.36	119.88	113.95
36	RE	501	GTP	C5-C6-N1	3.36	119.88	113.95
38	EH	502	GDP	PA-O3A-PB	-3.36	121.31	132.83
36	RO	501	GTP	C5-C6-N1	3.36	119.88	113.95
36	UM	501	GTP	C5-C6-N1	3.36	119.88	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	AM	501	GTP	C5-C6-N1	3.36	119.88	113.95
36	MG	501	GTP	C5-C6-N1	3.35	119.88	113.95
36	MK	501	GTP	PA-O3A-PB	-3.35	121.32	132.83
38	RJ	502	GDP	C3'-C2'-C1'	3.35	106.02	100.98
36	CA	501	GTP	C5-C6-N1	3.35	119.87	113.95
36	NG	501	GTP	C5-C6-N1	3.35	119.87	113.95
36	BM	501	GTP	PB-O3B-PG	-3.35	121.33	132.83
36	RM	501	GTP	C5-C6-N1	3.35	119.86	113.95
36	OC	501	GTP	C5-C6-N1	3.35	119.86	113.95
36	NI	501	GTP	C5-C6-N1	3.35	119.86	113.95
36	MC	501	GTP	C5-C6-N1	3.35	119.86	113.95
36	DA	501	GTP	PB-O3B-PG	-3.34	121.35	132.83
38	DB	502	GDP	C3'-C2'-C1'	3.34	106.01	100.98
36	PG	501	GTP	C5-C6-N1	3.34	119.86	113.95
38	RL	502	GDP	PA-O3A-PB	-3.34	121.36	132.83
36	TK	501	GTP	PB-O3B-PG	-3.34	121.36	132.83
36	RK	501	GTP	C5-C6-N1	3.34	119.85	113.95
36	OK	501	GTP	C5-C6-N1	3.34	119.85	113.95
36	NM	501	GTP	PA-O3A-PB	-3.34	121.36	132.83
36	AC	501	GTP	C5-C6-N1	3.34	119.85	113.95
36	BC	501	GTP	C5-C6-N1	3.34	119.85	113.95
38	EB	502	GDP	PA-O3A-PB	-3.34	121.37	132.83
36	BA	501	GTP	C5-C6-N1	3.34	119.84	113.95
36	BE	501	GTP	C5-C6-N1	3.34	119.84	113.95
36	AA	501	GTP	C5-C6-N1	3.34	119.84	113.95
36	EK	501	GTP	C5-C6-N1	3.34	119.84	113.95
38	NN	502	GDP	C3'-C2'-C1'	3.33	106.00	100.98
36	TO	501	GTP	PA-O3A-PB	-3.33	121.39	132.83
38	LH	502	GDP	PA-O3A-PB	-3.33	121.39	132.83
38	SN	502	GDP	PA-O3A-PB	-3.33	121.39	132.83
36	IG	501	GTP	PA-O3A-PB	-3.33	121.39	132.83
36	RM	501	GTP	PA-O3A-PB	-3.33	121.40	132.83
36	VG	501	GTP	C5-C6-N1	3.33	119.83	113.95
36	UE	501	GTP	C5-C6-N1	3.33	119.83	113.95
36	QM	501	GTP	C5-C6-N1	3.33	119.83	113.95
38	SD	502	GDP	PA-O3A-PB	-3.33	121.41	132.83
38	SD	502	GDP	C3'-C2'-C1'	3.33	105.98	100.98
38	TL	502	GDP	C3'-C2'-C1'	3.33	105.98	100.98
36	QE	501	GTP	C5-C6-N1	3.33	119.82	113.95
36	TG	501	GTP	PA-O3A-PB	-3.32	121.42	132.83
36	JC	501	GTP	C5-C6-N1	3.32	119.82	113.95
36	WI	501	GTP	C5-C6-N1	3.32	119.82	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	UO	501	GTP	C5-C6-N1	3.32	119.82	113.95
36	BG	501	GTP	PB-O3B-PG	-3.32	121.42	132.83
36	TO	501	GTP	C5-C6-N1	3.32	119.82	113.95
36	VE	501	GTP	C5-C6-N1	3.32	119.82	113.95
36	BI	501	GTP	C5-C6-N1	3.32	119.81	113.95
36	OG	501	GTP	C5-C6-N1	3.32	119.81	113.95
36	DC	501	GTP	C5-C6-N1	3.32	119.81	113.95
36	IE	501	GTP	C5-C6-N1	3.32	119.81	113.95
36	CE	501	GTP	C5-C6-N1	3.31	119.81	113.95
36	PK	501	GTP	C5-C6-N1	3.31	119.80	113.95
36	CM	501	GTP	C5-C6-N1	3.31	119.80	113.95
36	HG	501	GTP	C5-C6-N1	3.31	119.80	113.95
36	NC	501	GTP	C5-C6-N1	3.31	119.80	113.95
36	DA	501	GTP	C5-C6-N1	3.31	119.80	113.95
36	JK	501	GTP	C5-C6-N1	3.31	119.79	113.95
36	WM	501	GTP	PB-O3B-PG	-3.31	121.47	132.83
36	NE	501	GTP	C5-C6-N1	3.31	119.79	113.95
36	PI	501	GTP	C5-C6-N1	3.31	119.79	113.95
36	AA	501	GTP	PA-O3A-PB	-3.31	121.48	132.83
38	KN	502	GDP	C3'-C2'-C1'	3.31	105.96	100.98
36	WG	501	GTP	C5-C6-N1	3.30	119.79	113.95
38	BJ	502	GDP	C3'-C2'-C1'	3.30	105.95	100.98
36	WK	501	GTP	C5-C6-N1	3.30	119.78	113.95
36	AK	501	GTP	C5-C6-N1	3.30	119.78	113.95
36	CI	501	GTP	C5-C6-N1	3.30	119.78	113.95
36	AM	501	GTP	PA-O3A-PB	-3.30	121.51	132.83
36	MI	501	GTP	PB-O3B-PG	-3.30	121.51	132.83
36	PE	501	GTP	C5-C6-N1	3.30	119.77	113.95
36	VK	501	GTP	C5-C6-N1	3.30	119.77	113.95
36	FE	501	GTP	C5-C6-N1	3.30	119.77	113.95
36	RE	501	GTP	PA-O3A-PB	-3.30	121.51	132.83
36	FK	501	GTP	C5-C6-N1	3.30	119.77	113.95
36	PM	501	GTP	C5-C6-N1	3.29	119.77	113.95
36	PE	501	GTP	PA-O3A-PB	-3.29	121.53	132.83
38	UH	502	GDP	C3'-C2'-C1'	3.29	105.93	100.98
36	HO	501	GTP	C5-C6-N1	3.29	119.76	113.95
36	UG	501	GTP	C5-C6-N1	3.29	119.76	113.95
36	GI	501	GTP	C5-C6-N1	3.29	119.75	113.95
36	II	501	GTP	C5-C6-N1	3.28	119.75	113.95
36	HK	501	GTP	PA-O3A-PB	-3.28	121.56	132.83
38	GD	502	GDP	C3'-C2'-C1'	3.28	105.92	100.98
36	BE	501	GTP	PB-O3B-PG	-3.28	121.56	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BI	501	GTP	PB-O3B-PG	-3.28	121.57	132.83
36	IC	501	GTP	PB-O3B-PG	-3.28	121.57	132.83
36	UI	501	GTP	C5-C6-N1	3.28	119.74	113.95
36	QI	501	GTP	PA-O3A-PB	-3.28	121.59	132.83
36	NM	501	GTP	C5-C6-N1	3.27	119.73	113.95
36	IO	501	GTP	C5-C6-N1	3.27	119.73	113.95
38	HN	502	GDP	C3'-C2'-C1'	3.27	105.91	100.98
36	IC	501	GTP	C5-C6-N1	3.27	119.73	113.95
38	FH	502	GDP	PA-O3A-PB	-3.27	121.60	132.83
36	TK	501	GTP	C5-C6-N1	3.27	119.73	113.95
36	TG	501	GTP	C5-C6-N1	3.27	119.73	113.95
36	FC	501	GTP	C5-C6-N1	3.27	119.72	113.95
36	KM	501	GTP	PA-O3A-PB	-3.27	121.62	132.83
36	SO	501	GTP	C5-C6-N1	3.26	119.72	113.95
38	IB	502	GDP	C3'-C2'-C1'	3.26	105.89	100.98
36	CC	501	GTP	C5-C6-N1	3.26	119.71	113.95
38	CB	502	GDP	C3'-C2'-C1'	3.26	105.89	100.98
36	SG	501	GTP	C5-C6-N1	3.26	119.71	113.95
36	FG	501	GTP	C8-N7-C5	3.26	109.20	102.99
38	VJ	502	GDP	C3'-C2'-C1'	3.26	105.88	100.98
36	HI	501	GTP	C5-C6-N1	3.26	119.70	113.95
36	VI	501	GTP	PA-O3A-PB	-3.26	121.65	132.83
38	EL	502	GDP	PA-O3A-PB	-3.26	121.65	132.83
36	GE	501	GTP	C5-C6-N1	3.26	119.70	113.95
36	GE	501	GTP	PB-O3B-PG	-3.26	121.66	132.83
36	WM	501	GTP	C5-C6-N1	3.25	119.70	113.95
36	PG	501	GTP	PA-O3A-PB	-3.25	121.67	132.83
36	VI	501	GTP	C5-C6-N1	3.25	119.69	113.95
38	KB	502	GDP	C3'-C2'-C1'	3.25	105.87	100.98
36	TE	501	GTP	C5-C6-N1	3.25	119.69	113.95
36	DK	501	GTP	C5-C6-N1	3.25	119.69	113.95
36	DE	501	GTP	PB-O3B-PG	-3.25	121.68	132.83
36	CG	501	GTP	C5-C6-N1	3.25	119.69	113.95
38	NF	502	GDP	C3'-C2'-C1'	3.25	105.87	100.98
38	RH	502	GDP	PA-O3A-PB	-3.25	121.69	132.83
36	NK	501	GTP	C5-C6-N1	3.25	119.68	113.95
38	VL	502	GDP	C3'-C2'-C1'	3.25	105.86	100.98
36	DM	501	GTP	C5-C6-N1	3.24	119.68	113.95
36	RC	501	GTP	PB-O3B-PG	-3.24	121.70	132.83
36	DI	501	GTP	C5-C6-N1	3.24	119.68	113.95
38	EJ	502	GDP	PA-O3A-PB	-3.24	121.71	132.83
36	CA	501	GTP	PA-O3A-PB	-3.24	121.71	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	WO	501	GTP	PA-O3A-PB	-3.24	121.71	132.83
36	UK	501	GTP	C5-C6-N1	3.24	119.67	113.95
36	HE	501	GTP	C5-C6-N1	3.24	119.67	113.95
36	FI	501	GTP	PB-O3B-PG	-3.24	121.72	132.83
36	WE	501	GTP	PA-O3A-PB	-3.23	121.73	132.83
36	VM	501	GTP	C5-C6-N1	3.23	119.66	113.95
36	SG	501	GTP	PB-O3B-PG	-3.23	121.74	132.83
38	CJ	502	GDP	C3'-C2'-C1'	3.23	105.84	100.98
36	HM	501	GTP	C5-C6-N1	3.23	119.65	113.95
36	HC	501	GTP	C5-C6-N1	3.23	119.65	113.95
38	HF	502	GDP	C3'-C2'-C1'	3.23	105.84	100.98
36	KI	501	GTP	C2-N1-C6	-3.23	119.16	125.10
36	GK	501	GTP	PA-O3A-PB	-3.23	121.76	132.83
38	IL	502	GDP	C3'-C2'-C1'	3.23	105.83	100.98
36	HG	501	GTP	PA-O3A-PB	-3.22	121.76	132.83
36	SM	501	GTP	C5-C6-N1	3.22	119.64	113.95
36	VO	501	GTP	C5-C6-N1	3.22	119.64	113.95
36	HK	501	GTP	C5-C6-N1	3.22	119.64	113.95
38	EN	502	GDP	C3'-C2'-C1'	3.22	105.83	100.98
36	GK	501	GTP	C5-C6-N1	3.22	119.64	113.95
36	BG	501	GTP	C5-C6-N1	3.21	119.63	113.95
36	FG	501	GTP	PA-O3A-PB	-3.21	121.80	132.83
36	WE	501	GTP	C5-C6-N1	3.21	119.62	113.95
38	RL	502	GDP	C3'-C2'-C1'	3.21	105.81	100.98
36	FM	501	GTP	PB-O3B-PG	-3.21	121.81	132.83
38	AH	502	GDP	C3'-C2'-C1'	3.21	105.81	100.98
38	ND	502	GDP	C3'-C2'-C1'	3.21	105.81	100.98
36	SM	501	GTP	PB-O3B-PG	-3.21	121.82	132.83
38	WD	502	GDP	C3'-C2'-C1'	3.21	105.80	100.98
38	IJ	502	GDP	C3'-C2'-C1'	3.20	105.80	100.98
36	IK	501	GTP	C5-C6-N1	3.20	119.60	113.95
36	WI	501	GTP	C3'-C2'-C1'	3.20	105.80	100.98
38	FB	502	GDP	C3'-C2'-C1'	3.20	105.80	100.98
38	BF	502	GDP	C3'-C2'-C1'	3.20	105.79	100.98
38	JN	502	GDP	C3'-C2'-C1'	3.20	105.79	100.98
36	DA	501	GTP	C8-N7-C5	3.19	109.07	102.99
36	WO	501	GTP	C8-N7-C5	3.19	109.07	102.99
38	IN	502	GDP	C3'-C2'-C1'	3.19	105.78	100.98
38	LJ	502	GDP	C3'-C2'-C1'	3.19	105.78	100.98
36	LE	501	GTP	PA-O3A-PB	-3.19	121.89	132.83
38	JD	502	GDP	C3'-C2'-C1'	3.19	105.78	100.98
36	SI	501	GTP	C5-C6-N1	3.19	119.58	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	FE	501	GTP	PB-O3B-PG	-3.19	121.90	132.83
36	WE	501	GTP	C8-N7-C5	3.18	109.06	102.99
36	IG	501	GTP	C5-C6-N1	3.18	119.58	113.95
36	AI	501	GTP	PA-O3A-PB	-3.18	121.90	132.83
38	NJ	502	GDP	C3'-C2'-C1'	3.18	105.77	100.98
38	UF	502	GDP	C3'-C2'-C1'	3.18	105.77	100.98
38	WL	502	GDP	C3'-C2'-C1'	3.18	105.77	100.98
36	GM	501	GTP	C5-C6-N1	3.18	119.57	113.95
38	JB	502	GDP	C3'-C2'-C1'	3.18	105.76	100.98
38	TH	502	GDP	C3'-C2'-C1'	3.18	105.76	100.98
36	FM	501	GTP	C5-C6-N1	3.18	119.56	113.95
38	CL	502	GDP	C3'-C2'-C1'	3.17	105.76	100.98
36	FE	501	GTP	PA-O3A-PB	-3.17	121.94	132.83
36	FG	501	GTP	PB-O3B-PG	-3.17	121.94	132.83
36	SK	501	GTP	PB-O3B-PG	-3.17	121.94	132.83
36	LE	501	GTP	C2-N1-C6	-3.17	119.26	125.10
36	OE	501	GTP	PB-O3B-PG	-3.17	121.95	132.83
36	TM	501	GTP	C5-C6-N1	3.17	119.55	113.95
36	LK	501	GTP	PA-O3A-PB	-3.17	121.96	132.83
36	CC	501	GTP	PA-O3A-PB	-3.17	121.96	132.83
38	HL	502	GDP	C3'-C2'-C1'	3.16	105.74	100.98
36	DC	501	GTP	PA-O3A-PB	-3.16	121.97	132.83
36	EG	501	GTP	C2-N1-C6	-3.16	119.27	125.10
38	FJ	502	GDP	PA-O3A-PB	-3.16	121.98	132.83
36	II	501	GTP	C3'-C2'-C1'	3.16	105.74	100.98
38	AL	502	GDP	C3'-C2'-C1'	3.16	105.73	100.98
36	GG	501	GTP	C5-C6-N1	3.16	119.53	113.95
36	OG	501	GTP	PB-O3B-PG	-3.16	121.99	132.83
38	BH	502	GDP	C3'-C2'-C1'	3.16	105.73	100.98
36	MM	501	GTP	PB-O3B-PG	-3.16	121.99	132.83
36	IG	501	GTP	C8-N7-C5	3.16	109.00	102.99
38	UL	502	GDP	C3'-C2'-C1'	3.16	105.73	100.98
38	UP	502	GDP	C3'-C2'-C1'	3.16	105.73	100.98
36	KO	501	GTP	C2-N1-C6	-3.16	119.29	125.10
36	WG	501	GTP	C8-N7-C5	3.15	109.00	102.99
36	MG	501	GTP	PA-O3A-PB	-3.15	122.00	132.83
36	CE	501	GTP	PB-O3B-PG	-3.15	122.01	132.83
36	LG	501	GTP	PA-O3A-PB	-3.15	122.01	132.83
38	WD	502	GDP	PA-O3A-PB	-3.15	122.01	132.83
36	IM	501	GTP	C5-C6-N1	3.15	119.52	113.95
36	FI	501	GTP	C5-C6-N1	3.15	119.51	113.95
38	VD	502	GDP	C3'-C2'-C1'	3.15	105.72	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	VH	502	GDP	C3'-C2'-C1'	3.15	105.71	100.98
36	FG	501	GTP	C5-C6-N1	3.14	119.50	113.95
36	KE	501	GTP	C2-N1-C6	-3.14	119.31	125.10
36	DK	501	GTP	C2-N1-C6	-3.14	119.32	125.10
38	VF	502	GDP	C3'-C2'-C1'	3.14	105.70	100.98
36	PE	501	GTP	PB-O3B-PG	-3.13	122.08	132.83
38	FN	502	GDP	PA-O3A-PB	-3.13	122.08	132.83
36	IC	501	GTP	PA-O3A-PB	-3.13	122.08	132.83
36	EK	501	GTP	PA-O3A-PB	-3.13	122.09	132.83
36	KC	501	GTP	PA-O3A-PB	-3.13	122.09	132.83
36	ME	501	GTP	PA-O3A-PB	-3.13	122.10	132.83
36	CE	501	GTP	C8-N7-C5	3.13	108.94	102.99
38	BB	502	GDP	C3'-C2'-C1'	3.12	105.68	100.98
36	WE	501	GTP	PB-O3B-PG	-3.12	122.10	132.83
36	KM	501	GTP	C2-N1-C6	-3.12	119.34	125.10
38	AB	502	GDP	C3'-C2'-C1'	3.12	105.68	100.98
38	GJ	502	GDP	C3'-C2'-C1'	3.12	105.68	100.98
36	LK	501	GTP	C2-N1-C6	-3.12	119.35	125.10
36	DM	501	GTP	C8-N7-C5	3.12	108.93	102.99
36	PK	501	GTP	PB-O3B-PG	-3.12	122.12	132.83
38	NH	502	GDP	C3'-C2'-C1'	3.12	105.67	100.98
38	VP	502	GDP	C3'-C2'-C1'	3.12	105.67	100.98
36	TI	501	GTP	C5-C6-N1	3.12	119.46	113.95
36	IE	501	GTP	C8-N7-C5	3.12	108.93	102.99
36	IK	501	GTP	C8-N7-C5	3.12	108.93	102.99
36	PC	501	GTP	C8-N7-C5	3.12	108.93	102.99
36	AI	501	GTP	C2-N1-C6	-3.12	119.36	125.10
36	KI	501	GTP	PA-O3A-PB	-3.11	122.14	132.83
38	PL	502	GDP	C3'-C2'-C1'	3.11	105.67	100.98
36	SK	501	GTP	C5-C6-N1	3.11	119.45	113.95
38	EF	502	GDP	PA-O3A-PB	-3.11	122.14	132.83
36	CK	501	GTP	C3'-C2'-C1'	3.11	105.67	100.98
38	OB	502	GDP	C3'-C2'-C1'	3.11	105.67	100.98
36	CA	501	GTP	C8-N7-C5	3.11	108.92	102.99
36	CK	501	GTP	C2-N1-C6	-3.11	119.37	125.10
36	IC	501	GTP	C8-N7-C5	3.11	108.91	102.99
38	EF	502	GDP	C3'-C2'-C1'	3.11	105.66	100.98
36	PC	501	GTP	C2-N1-C6	-3.11	119.38	125.10
36	MI	501	GTP	C2-N1-C6	-3.11	119.38	125.10
36	SG	501	GTP	C8-N7-C5	3.11	108.91	102.99
36	SK	501	GTP	C8-N7-C5	3.11	108.91	102.99
36	AM	501	GTP	PB-O3B-PG	-3.10	122.17	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	QC	501	GTP	C8-N7-C5	3.10	108.90	102.99
36	CI	501	GTP	C8-N7-C5	3.10	108.90	102.99
36	KG	501	GTP	C2-N1-C6	-3.10	119.39	125.10
36	KK	501	GTP	C2-N1-C6	-3.10	119.39	125.10
38	FD	502	GDP	C3'-C2'-C1'	3.10	105.64	100.98
38	UN	502	GDP	C3'-C2'-C1'	3.10	105.64	100.98
38	RD	502	GDP	C3'-C2'-C1'	3.10	105.64	100.98
36	IM	501	GTP	C8-N7-C5	3.10	108.89	102.99
36	EI	501	GTP	C2-N1-C6	-3.10	119.40	125.10
36	JI	501	GTP	C3'-C2'-C1'	3.10	105.64	100.98
36	OG	501	GTP	PA-O3A-PB	-3.10	122.20	132.83
38	AD	502	GDP	C3'-C2'-C1'	3.10	105.64	100.98
38	ID	502	GDP	C3'-C2'-C1'	3.09	105.64	100.98
36	RI	501	GTP	C2-N1-C6	-3.09	119.40	125.10
36	CM	501	GTP	C8-N7-C5	3.09	108.88	102.99
36	DK	501	GTP	C3'-C2'-C1'	3.09	105.63	100.98
36	GK	501	GTP	C8-N7-C5	3.09	108.88	102.99
36	PO	501	GTP	C8-N7-C5	3.09	108.88	102.99
36	TE	501	GTP	C8-N7-C5	3.09	108.88	102.99
36	IO	501	GTP	C3'-C2'-C1'	3.09	105.63	100.98
36	ME	501	GTP	C8-N7-C5	3.09	108.87	102.99
38	HH	502	GDP	C3'-C2'-C1'	3.09	105.63	100.98
36	DC	501	GTP	C8-N7-C5	3.09	108.87	102.99
36	PE	501	GTP	C8-N7-C5	3.09	108.87	102.99
38	FJ	502	GDP	C3'-C2'-C1'	3.09	105.62	100.98
36	HC	501	GTP	PA-O3A-PB	-3.09	122.24	132.83
36	LI	501	GTP	C2-N1-C6	-3.08	119.42	125.10
36	JE	501	GTP	C2-N1-C6	-3.08	119.42	125.10
36	II	501	GTP	C8-N7-C5	3.08	108.86	102.99
36	RE	501	GTP	C2-N1-C6	-3.08	119.42	125.10
36	TI	501	GTP	PA-O3A-PB	-3.08	122.26	132.83
36	EM	501	GTP	C2-N1-C6	-3.08	119.43	125.10
36	LM	501	GTP	PA-O3A-PB	-3.08	122.27	132.83
38	CD	502	GDP	C3'-C2'-C1'	3.08	105.61	100.98
36	QG	501	GTP	C3'-C2'-C1'	3.08	105.61	100.98
36	LG	501	GTP	C2-N1-C6	-3.08	119.44	125.10
36	FC	501	GTP	PB-O3B-PG	-3.07	122.28	132.83
36	UI	501	GTP	PB-O3B-PG	-3.07	122.28	132.83
36	WO	501	GTP	PB-O3B-PG	-3.07	122.28	132.83
36	OI	501	GTP	C8-N7-C5	3.07	108.84	102.99
36	DK	501	GTP	C8-N7-C5	3.07	108.84	102.99
36	DE	501	GTP	C2-N1-C6	-3.07	119.44	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	CM	501	GTP	C2-N1-C6	-3.07	119.44	125.10
36	KC	501	GTP	C8-N7-C5	3.07	108.84	102.99
36	WI	501	GTP	C8-N7-C5	3.07	108.84	102.99
36	VG	501	GTP	C8-N7-C5	3.07	108.84	102.99
36	FK	501	GTP	C8-N7-C5	3.07	108.83	102.99
36	JE	501	GTP	PA-O3A-PB	-3.07	122.30	132.83
36	VG	501	GTP	C3'-C2'-C1'	3.07	105.59	100.98
38	NL	502	GDP	C3'-C2'-C1'	3.07	105.59	100.98
36	UM	501	GTP	C2-N1-C6	-3.07	119.45	125.10
38	PF	502	GDP	C3'-C2'-C1'	3.07	105.59	100.98
36	ME	501	GTP	C2-N1-C6	-3.07	119.45	125.10
36	RG	501	GTP	C2-N1-C6	-3.06	119.46	125.10
36	JK	501	GTP	C2-N1-C6	-3.06	119.46	125.10
36	LK	501	GTP	C8-N7-C5	3.06	108.82	102.99
36	HI	501	GTP	C8-N7-C5	3.06	108.82	102.99
36	QO	501	GTP	C2-N1-C6	-3.06	119.47	125.10
36	GK	501	GTP	PB-O3B-PG	-3.06	122.34	132.83
36	LC	501	GTP	C8-N7-C5	3.06	108.81	102.99
36	JM	501	GTP	C2-N1-C6	-3.05	119.48	125.10
36	IG	501	GTP	C3'-C2'-C1'	3.05	105.57	100.98
36	CE	501	GTP	PA-O3A-PB	-3.05	122.35	132.83
36	DM	501	GTP	C3'-C2'-C1'	3.05	105.57	100.98
36	HK	501	GTP	C8-N7-C5	3.05	108.80	102.99
36	DG	501	GTP	C8-N7-C5	3.05	108.80	102.99
36	MC	501	GTP	C8-N7-C5	3.05	108.80	102.99
38	VN	502	GDP	C3'-C2'-C1'	3.05	105.57	100.98
36	AC	501	GTP	C8-N7-C5	3.05	108.80	102.99
36	JG	501	GTP	C3'-C2'-C1'	3.05	105.56	100.98
36	WK	501	GTP	C8-N7-C5	3.05	108.79	102.99
36	HM	501	GTP	C8-N7-C5	3.05	108.79	102.99
36	KC	501	GTP	C2-N1-C6	-3.04	119.49	125.10
36	KG	501	GTP	PA-O3A-PB	-3.04	122.38	132.83
36	OC	501	GTP	C8-N7-C5	3.04	108.79	102.99
36	QE	501	GTP	C2-N1-C6	-3.04	119.49	125.10
36	PI	501	GTP	C3'-C2'-C1'	3.04	105.56	100.98
36	JC	501	GTP	C8-N7-C5	3.04	108.78	102.99
38	BL	502	GDP	C3'-C2'-C1'	3.04	105.56	100.98
36	FE	501	GTP	C8-N7-C5	3.04	108.78	102.99
36	CG	501	GTP	C8-N7-C5	3.04	108.78	102.99
36	CK	501	GTP	C8-N7-C5	3.04	108.78	102.99
36	VI	501	GTP	C8-N7-C5	3.04	108.78	102.99
36	AK	501	GTP	C8-N7-C5	3.04	108.78	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	LE	501	GTP	C8-N7-C5	3.04	108.78	102.99
36	DG	501	GTP	C2-N1-C6	-3.04	119.50	125.10
36	SE	501	GTP	C2-N1-C6	-3.04	119.50	125.10
36	OG	501	GTP	C8-N7-C5	3.04	108.78	102.99
36	RM	501	GTP	C8-N7-C5	3.04	108.78	102.99
36	PM	501	GTP	C8-N7-C5	3.04	108.77	102.99
36	DA	501	GTP	C2-N1-C6	-3.04	119.51	125.10
36	OM	501	GTP	C2-N1-C6	-3.04	119.51	125.10
36	MK	501	GTP	C8-N7-C5	3.04	108.77	102.99
36	KI	501	GTP	C8-N7-C5	3.03	108.77	102.99
36	DE	501	GTP	PA-O3A-PB	-3.03	122.42	132.83
36	FC	501	GTP	C8-N7-C5	3.03	108.77	102.99
36	LI	501	GTP	C8-N7-C5	3.03	108.77	102.99
36	RC	501	GTP	C8-N7-C5	3.03	108.77	102.99
36	OK	501	GTP	C8-N7-C5	3.03	108.77	102.99
36	MM	501	GTP	C8-N7-C5	3.03	108.77	102.99
38	GH	502	GDP	C3'-C2'-C1'	3.03	105.54	100.98
38	MJ	502	GDP	C3'-C2'-C1'	3.03	105.54	100.98
36	AG	501	GTP	C2-N1-C6	-3.03	119.52	125.10
38	SJ	502	GDP	C3'-C2'-C1'	3.03	105.54	100.98
36	HG	501	GTP	C8-N7-C5	3.03	108.76	102.99
36	LG	501	GTP	C8-N7-C5	3.03	108.76	102.99
36	DI	501	GTP	C8-N7-C5	3.03	108.76	102.99
36	GE	501	GTP	PA-O3A-PB	-3.03	122.43	132.83
36	VE	501	GTP	C2-N1-C6	-3.03	119.52	125.10
36	DI	501	GTP	C3'-C2'-C1'	3.03	105.54	100.98
36	MI	501	GTP	C8-N7-C5	3.03	108.76	102.99
38	LF	502	GDP	C3'-C2'-C1'	3.03	105.53	100.98
36	LM	501	GTP	C8-N7-C5	3.03	108.75	102.99
36	JI	501	GTP	C2-N1-C6	-3.02	119.53	125.10
36	EG	501	GTP	C3'-C2'-C1'	3.02	105.53	100.98
36	QI	501	GTP	C8-N7-C5	3.02	108.75	102.99
36	NM	501	GTP	C8-N7-C5	3.02	108.75	102.99
36	AM	501	GTP	C8-N7-C5	3.02	108.75	102.99
36	VK	501	GTP	C8-N7-C5	3.02	108.75	102.99
36	CC	501	GTP	C3'-C2'-C1'	3.02	105.53	100.98
36	JK	501	GTP	PA-O3A-PB	-3.02	122.46	132.83
36	TO	501	GTP	C8-N7-C5	3.02	108.75	102.99
36	JM	501	GTP	C3'-C2'-C1'	3.02	105.53	100.98
36	DE	501	GTP	C8-N7-C5	3.02	108.74	102.99
36	SE	501	GTP	C8-N7-C5	3.02	108.74	102.99
36	SO	501	GTP	C8-N7-C5	3.02	108.74	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	IF	502	GDP	C3'-C2'-C1'	3.02	105.52	100.98
36	WM	501	GTP	C8-N7-C5	3.02	108.74	102.99
36	JG	501	GTP	C2-N1-C6	-3.02	119.54	125.10
36	RC	501	GTP	PA-O3A-PB	-3.02	122.48	132.83
36	DC	501	GTP	C2-N1-C6	-3.02	119.55	125.10
36	OC	501	GTP	C2-N1-C6	-3.02	119.55	125.10
36	IM	501	GTP	C3'-C2'-C1'	3.02	105.52	100.98
36	VM	501	GTP	C8-N7-C5	3.01	108.73	102.99
36	QC	501	GTP	C2-N1-C6	-3.01	119.55	125.10
36	CE	501	GTP	C2-N1-C6	-3.01	119.55	125.10
36	KK	501	GTP	C8-N7-C5	3.01	108.73	102.99
36	TG	501	GTP	C8-N7-C5	3.01	108.73	102.99
36	MK	501	GTP	C2-N1-C6	-3.01	119.55	125.10
36	CC	501	GTP	C8-N7-C5	3.01	108.73	102.99
36	KO	501	GTP	C8-N7-C5	3.01	108.73	102.99
36	PI	501	GTP	C8-N7-C5	3.01	108.72	102.99
36	PE	501	GTP	C2-N1-C6	-3.01	119.56	125.10
36	KM	501	GTP	C8-N7-C5	3.01	108.72	102.99
36	SI	501	GTP	C8-N7-C5	3.01	108.72	102.99
38	ED	502	GDP	C3'-C2'-C1'	3.01	105.51	100.98
36	GC	501	GTP	PA-O3A-PB	-3.01	122.50	132.83
36	NG	501	GTP	PB-O3B-PG	-3.00	122.52	132.83
36	FM	501	GTP	C8-N7-C5	3.00	108.71	102.99
36	CC	501	GTP	C2-N1-C6	-3.00	119.57	125.10
36	JC	501	GTP	C2-N1-C6	-3.00	119.57	125.10
36	QM	501	GTP	C2-N1-C6	-3.00	119.57	125.10
36	QM	501	GTP	PA-O3A-PB	-3.00	122.52	132.83
36	BI	501	GTP	C2-N1-C6	-3.00	119.57	125.10
36	FK	501	GTP	PA-O3A-PB	-3.00	122.53	132.83
36	GM	501	GTP	C8-N7-C5	3.00	108.71	102.99
36	JE	501	GTP	C8-N7-C5	3.00	108.71	102.99
36	RE	501	GTP	C3'-C2'-C1'	3.00	105.49	100.98
38	LB	502	GDP	C3'-C2'-C1'	3.00	105.49	100.98
36	AE	501	GTP	C2-N1-C6	-3.00	119.58	125.10
36	PK	501	GTP	C2-N1-C6	-3.00	119.58	125.10
36	TG	501	GTP	C3'-C2'-C1'	3.00	105.49	100.98
36	EC	501	GTP	C2-N1-C6	-3.00	119.58	125.10
36	AE	501	GTP	C8-N7-C5	3.00	108.70	102.99
36	EC	501	GTP	C8-N7-C5	3.00	108.70	102.99
36	RG	501	GTP	C8-N7-C5	3.00	108.70	102.99
36	TM	501	GTP	C8-N7-C5	3.00	108.70	102.99
36	VK	501	GTP	C2-N1-C6	-3.00	119.58	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	NK	501	GTP	C8-N7-C5	3.00	108.70	102.99
36	QO	501	GTP	C8-N7-C5	3.00	108.70	102.99
38	MN	502	GDP	C3'-C2'-C1'	2.99	105.49	100.98
36	LC	501	GTP	C2-N1-C6	-2.99	119.58	125.10
36	MG	501	GTP	C2-N1-C6	-2.99	119.58	125.10
36	HO	501	GTP	PA-O3A-PB	-2.99	122.55	132.83
36	AA	501	GTP	C8-N7-C5	2.99	108.69	102.99
36	GE	501	GTP	C8-N7-C5	2.99	108.69	102.99
36	HI	501	GTP	C3'-C2'-C1'	2.99	105.48	100.98
38	DB	502	GDP	PA-O3A-PB	-2.99	122.57	132.83
36	QG	501	GTP	C2-N1-C6	-2.99	119.59	125.10
38	QJ	502	GDP	C3'-C2'-C1'	2.99	105.48	100.98
38	SL	502	GDP	C3'-C2'-C1'	2.99	105.48	100.98
36	AG	501	GTP	C8-N7-C5	2.99	108.68	102.99
36	UK	501	GTP	C8-N7-C5	2.99	108.68	102.99
36	WI	501	GTP	C2-N1-C6	-2.99	119.60	125.10
36	RG	501	GTP	C3'-C2'-C1'	2.99	105.47	100.98
38	RF	502	GDP	C3'-C2'-C1'	2.99	105.47	100.98
36	DM	501	GTP	C2-N1-C6	-2.99	119.60	125.10
36	WM	501	GTP	C2-N1-C6	-2.99	119.60	125.10
36	KG	501	GTP	C8-N7-C5	2.99	108.68	102.99
36	QK	501	GTP	C2-N1-C6	-2.99	119.60	125.10
36	SM	501	GTP	C8-N7-C5	2.98	108.67	102.99
36	VO	501	GTP	C8-N7-C5	2.98	108.67	102.99
36	VG	501	GTP	C2-N1-C6	-2.98	119.61	125.10
36	MC	501	GTP	C2-N1-C6	-2.98	119.61	125.10
36	BC	501	GTP	C2-N1-C6	-2.98	119.61	125.10
36	WK	501	GTP	C2-N1-C6	-2.98	119.61	125.10
36	DI	501	GTP	C2-N1-C6	-2.98	119.61	125.10
36	KO	501	GTP	C3'-C2'-C1'	2.98	105.46	100.98
36	OK	501	GTP	C2-N1-C6	-2.98	119.61	125.10
36	HE	501	GTP	C8-N7-C5	2.98	108.66	102.99
36	OE	501	GTP	C8-N7-C5	2.98	108.66	102.99
36	PG	501	GTP	C8-N7-C5	2.98	108.66	102.99
36	IC	501	GTP	C2-N1-C6	-2.98	119.61	125.10
36	WG	501	GTP	C2-N1-C6	-2.98	119.61	125.10
36	FI	501	GTP	C8-N7-C5	2.98	108.66	102.99
36	EE	501	GTP	C8-N7-C5	2.98	108.66	102.99
36	QG	501	GTP	C8-N7-C5	2.98	108.66	102.99
36	QK	501	GTP	C8-N7-C5	2.97	108.66	102.99
36	RC	501	GTP	C2-N1-C6	-2.97	119.62	125.10
36	RO	501	GTP	C8-N7-C5	2.97	108.66	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	RK	501	GTP	C2-N1-C6	-2.97	119.62	125.10
36	GI	501	GTP	C2-N1-C6	-2.97	119.62	125.10
36	HO	501	GTP	C8-N7-C5	2.97	108.65	102.99
36	EE	501	GTP	C2-N1-C6	-2.97	119.62	125.10
38	HD	502	GDP	C3'-C2'-C1'	2.97	105.45	100.98
36	CA	501	GTP	C2-N1-C6	-2.97	119.63	125.10
36	MG	501	GTP	C8-N7-C5	2.97	108.65	102.99
36	TK	501	GTP	C8-N7-C5	2.97	108.65	102.99
36	UG	501	GTP	C8-N7-C5	2.97	108.65	102.99
36	EK	501	GTP	C2-N1-C6	-2.97	119.63	125.10
36	QI	501	GTP	C2-N1-C6	-2.97	119.63	125.10
38	HB	502	GDP	C3'-C2'-C1'	2.97	105.45	100.98
36	AI	501	GTP	C8-N7-C5	2.97	108.64	102.99
36	EM	501	GTP	PA-O3A-PB	-2.97	122.65	132.83
36	MM	501	GTP	C2-N1-C6	-2.97	119.64	125.10
36	DE	501	GTP	C3'-C2'-C1'	2.97	105.44	100.98
38	WH	502	GDP	C3'-C2'-C1'	2.97	105.44	100.98
36	LM	501	GTP	C2-N1-C6	-2.97	119.64	125.10
36	PG	501	GTP	C2-N1-C6	-2.97	119.64	125.10
36	JG	501	GTP	C8-N7-C5	2.96	108.64	102.99
36	PO	501	GTP	C2-N1-C6	-2.96	119.64	125.10
36	NI	501	GTP	C8-N7-C5	2.96	108.63	102.99
38	FH	502	GDP	C3'-C2'-C1'	2.96	105.44	100.98
36	VE	501	GTP	C8-N7-C5	2.96	108.63	102.99
36	IO	501	GTP	C8-N7-C5	2.96	108.63	102.99
36	NE	501	GTP	C8-N7-C5	2.96	108.63	102.99
36	JC	501	GTP	C3'-C2'-C1'	2.96	105.43	100.98
36	KE	501	GTP	C8-N7-C5	2.96	108.63	102.99
36	QM	501	GTP	C8-N7-C5	2.96	108.62	102.99
36	OI	501	GTP	C2-N1-C6	-2.96	119.66	125.10
36	TI	501	GTP	C8-N7-C5	2.95	108.62	102.99
36	UI	501	GTP	PA-O3A-PB	-2.95	122.69	132.83
36	BA	501	GTP	C8-N7-C5	2.95	108.62	102.99
36	SO	501	GTP	C2-N1-C6	-2.95	119.66	125.10
36	BI	501	GTP	C8-N7-C5	2.95	108.61	102.99
36	TO	501	GTP	C2-N1-C6	-2.95	119.66	125.10
38	MF	502	GDP	C3'-C2'-C1'	2.95	105.42	100.98
36	AM	501	GTP	C2-N1-C6	-2.95	119.66	125.10
36	GI	501	GTP	C8-N7-C5	2.95	108.61	102.99
36	OO	501	GTP	C2-N1-C6	-2.95	119.67	125.10
36	EG	501	GTP	C8-N7-C5	2.95	108.60	102.99
36	HC	501	GTP	C8-N7-C5	2.95	108.60	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	PK	501	GTP	C8-N7-C5	2.94	108.60	102.99
36	RO	501	GTP	C2-N1-C6	-2.94	119.68	125.10
36	UE	501	GTP	C2-N1-C6	-2.94	119.68	125.10
36	WO	501	GTP	C2-N1-C6	-2.94	119.68	125.10
36	OI	501	GTP	C3'-C2'-C1'	2.94	105.41	100.98
36	KG	501	GTP	C3'-C2'-C1'	2.94	105.40	100.98
36	OE	501	GTP	C2-N1-C6	-2.94	119.69	125.10
36	IG	501	GTP	C2-N1-C6	-2.94	119.69	125.10
36	TE	501	GTP	C2-N1-C6	-2.94	119.69	125.10
36	ME	501	GTP	PB-O3B-PG	-2.94	122.75	132.83
36	GK	501	GTP	C2-N1-C6	-2.94	119.69	125.10
36	EM	501	GTP	C3'-C2'-C1'	2.94	105.40	100.98
38	PJ	502	GDP	C3'-C2'-C1'	2.94	105.40	100.98
36	GC	501	GTP	C8-N7-C5	2.94	108.58	102.99
36	UO	501	GTP	C8-N7-C5	2.94	108.58	102.99
36	HI	501	GTP	C2-N1-C6	-2.93	119.69	125.10
36	BK	501	GTP	C8-N7-C5	2.93	108.58	102.99
36	IE	501	GTP	C2-N1-C6	-2.93	119.69	125.10
36	NG	501	GTP	C8-N7-C5	2.93	108.58	102.99
36	AA	501	GTP	C2-N1-C6	-2.93	119.70	125.10
36	UO	501	GTP	C2-N1-C6	-2.93	119.70	125.10
36	VG	501	GTP	PA-O3A-PB	-2.93	122.77	132.83
36	SG	501	GTP	C2-N1-C6	-2.93	119.70	125.10
36	BE	501	GTP	C8-N7-C5	2.93	108.57	102.99
36	UG	501	GTP	C2-N1-C6	-2.93	119.70	125.10
36	BC	501	GTP	C3'-C2'-C1'	2.93	105.39	100.98
38	OD	502	GDP	C3'-C2'-C1'	2.93	105.39	100.98
36	CG	501	GTP	C2-N1-C6	-2.93	119.71	125.10
36	OM	501	GTP	C8-N7-C5	2.93	108.56	102.99
36	II	501	GTP	C2-N1-C6	-2.93	119.71	125.10
36	HO	501	GTP	C2-N1-C6	-2.93	119.71	125.10
36	JK	501	GTP	C3'-C2'-C1'	2.93	105.38	100.98
36	UI	501	GTP	C2-N1-C6	-2.92	119.71	125.10
36	TG	501	GTP	C2-N1-C6	-2.92	119.71	125.10
36	AC	501	GTP	C2-N1-C6	-2.92	119.72	125.10
36	OG	501	GTP	C2-N1-C6	-2.92	119.72	125.10
36	BA	501	GTP	C2-N1-C6	-2.92	119.72	125.10
36	NG	501	GTP	C2-N1-C6	-2.92	119.72	125.10
36	SI	501	GTP	C3'-C2'-C1'	2.92	105.38	100.98
38	QL	502	GDP	C3'-C2'-C1'	2.92	105.38	100.98
36	UM	501	GTP	C8-N7-C5	2.92	108.55	102.99
36	VI	501	GTP	C2-N1-C6	-2.92	119.72	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	KC	501	GTP	C3'-C2'-C1'	2.92	105.37	100.98
36	FK	501	GTP	C2-N1-C6	-2.92	119.72	125.10
36	BE	501	GTP	C2-N1-C6	-2.92	119.72	125.10
38	AF	502	GDP	C3'-C2'-C1'	2.92	105.37	100.98
36	RM	501	GTP	C2-N1-C6	-2.92	119.73	125.10
36	JK	501	GTP	C8-N7-C5	2.92	108.55	102.99
36	UI	501	GTP	C8-N7-C5	2.92	108.55	102.99
36	OO	501	GTP	C8-N7-C5	2.92	108.55	102.99
38	DF	502	GDP	C3'-C2'-C1'	2.92	105.37	100.98
36	AK	501	GTP	C2-N1-C6	-2.92	119.73	125.10
38	JJ	502	GDP	C3'-C2'-C1'	2.92	105.37	100.98
36	BM	501	GTP	C2-N1-C6	-2.92	119.73	125.10
36	PM	501	GTP	C2-N1-C6	-2.92	119.73	125.10
36	JC	501	GTP	PA-O3A-PB	-2.91	122.82	132.83
36	DC	501	GTP	C3'-C2'-C1'	2.91	105.37	100.98
36	EI	501	GTP	C8-N7-C5	2.91	108.54	102.99
36	BK	501	GTP	C2-N1-C6	-2.91	119.73	125.10
36	SI	501	GTP	PB-O3B-PG	-2.91	122.83	132.83
36	TK	501	GTP	C2-N1-C6	-2.91	119.73	125.10
36	VM	501	GTP	C3'-C2'-C1'	2.91	105.36	100.98
36	IO	501	GTP	C2-N1-C6	-2.91	119.74	125.10
36	UE	501	GTP	C8-N7-C5	2.91	108.53	102.99
36	HG	501	GTP	C2-N1-C6	-2.91	119.74	125.10
36	PI	501	GTP	C2-N1-C6	-2.91	119.74	125.10
36	JM	501	GTP	C8-N7-C5	2.91	108.53	102.99
36	EI	501	GTP	PA-O3A-PB	-2.91	122.85	132.83
36	TM	501	GTP	PB-O3B-PG	-2.90	122.86	132.83
38	BD	502	GDP	C3'-C2'-C1'	2.90	105.35	100.98
36	JI	501	GTP	C8-N7-C5	2.90	108.52	102.99
36	TE	501	GTP	PA-O3A-PB	-2.90	122.87	132.83
36	QO	501	GTP	C3'-C2'-C1'	2.90	105.35	100.98
36	AE	501	GTP	PB-O3B-PG	-2.90	122.87	132.83
36	VO	501	GTP	C2-N1-C6	-2.90	119.76	125.10
38	PN	502	GDP	C3'-C2'-C1'	2.90	105.34	100.98
36	GE	501	GTP	C2-N1-C6	-2.90	119.76	125.10
36	HM	501	GTP	C2-N1-C6	-2.90	119.76	125.10
36	NE	501	GTP	C2-N1-C6	-2.90	119.76	125.10
36	BC	501	GTP	C8-N7-C5	2.90	108.51	102.99
36	RO	501	GTP	C3'-C2'-C1'	2.90	105.34	100.98
36	GC	501	GTP	C2-N1-C6	-2.90	119.77	125.10
36	NC	501	GTP	C8-N7-C5	2.90	108.51	102.99
36	DA	501	GTP	C3'-C2'-C1'	2.89	105.34	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	GG	501	GTP	C2-N1-C6	-2.89	119.77	125.10
36	NI	501	GTP	C2-N1-C6	-2.89	119.77	125.10
36	IK	501	GTP	C2-N1-C6	-2.89	119.77	125.10
38	GF	502	GDP	C3'-C2'-C1'	2.89	105.33	100.98
36	LG	501	GTP	C3'-C2'-C1'	2.89	105.33	100.98
36	BM	501	GTP	C8-N7-C5	2.89	108.50	102.99
36	JE	501	GTP	C3'-C2'-C1'	2.89	105.33	100.98
36	EM	501	GTP	C8-N7-C5	2.89	108.50	102.99
36	BG	501	GTP	C2-N1-C6	-2.89	119.78	125.10
38	TJ	502	GDP	C3'-C2'-C1'	2.89	105.33	100.98
36	NC	501	GTP	C2-N1-C6	-2.89	119.78	125.10
36	VE	501	GTP	C3'-C2'-C1'	2.89	105.33	100.98
36	NM	501	GTP	C2-N1-C6	-2.89	119.78	125.10
36	HE	501	GTP	C2-N1-C6	-2.89	119.78	125.10
36	VM	501	GTP	C2-N1-C6	-2.89	119.78	125.10
36	TM	501	GTP	C2-N1-C6	-2.88	119.79	125.10
36	EK	501	GTP	C8-N7-C5	2.88	108.48	102.99
36	GG	501	GTP	C8-N7-C5	2.88	108.48	102.99
36	IM	501	GTP	C2-N1-C6	-2.88	119.79	125.10
36	RC	501	GTP	C3'-C2'-C1'	2.88	105.31	100.98
36	GG	501	GTP	C3'-C2'-C1'	2.88	105.31	100.98
36	CI	501	GTP	C2-N1-C6	-2.88	119.80	125.10
36	WE	501	GTP	C2-N1-C6	-2.88	119.80	125.10
36	HO	501	GTP	C3'-C2'-C1'	2.88	105.31	100.98
36	RK	501	GTP	C8-N7-C5	2.88	108.47	102.99
36	HC	501	GTP	C2-N1-C6	-2.87	119.81	125.10
36	NK	501	GTP	C2-N1-C6	-2.87	119.81	125.10
36	HK	501	GTP	C2-N1-C6	-2.87	119.81	125.10
36	SI	501	GTP	C2-N1-C6	-2.87	119.81	125.10
38	KJ	502	GDP	C3'-C2'-C1'	2.87	105.30	100.98
36	OC	501	GTP	C3'-C2'-C1'	2.87	105.30	100.98
36	WK	501	GTP	C3'-C2'-C1'	2.87	105.30	100.98
36	FE	501	GTP	C2-N1-C6	-2.87	119.81	125.10
36	SM	501	GTP	C2-N1-C6	-2.87	119.81	125.10
36	BG	501	GTP	C3'-C2'-C1'	2.87	105.30	100.98
38	JF	502	GDP	C3'-C2'-C1'	2.87	105.30	100.98
36	QE	501	GTP	C8-N7-C5	2.86	108.45	102.99
36	DG	501	GTP	C3'-C2'-C1'	2.86	105.29	100.98
36	QC	501	GTP	PB-O3B-PG	-2.86	123.00	132.83
36	CE	501	GTP	C3'-C2'-C1'	2.86	105.29	100.98
36	KK	501	GTP	C3'-C2'-C1'	2.86	105.29	100.98
36	SE	501	GTP	PA-O3A-PB	-2.86	123.01	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	FC	501	GTP	C2-N1-C6	-2.86	119.83	125.10
36	MC	501	GTP	C3'-C2'-C1'	2.86	105.28	100.98
38	CF	502	GDP	C3'-C2'-C1'	2.86	105.28	100.98
36	BG	501	GTP	C8-N7-C5	2.86	108.44	102.99
36	SO	501	GTP	PA-O3A-PB	-2.86	123.02	132.83
38	MD	502	GDP	C3'-C2'-C1'	2.85	105.28	100.98
36	PK	501	GTP	C3'-C2'-C1'	2.85	105.28	100.98
36	LI	501	GTP	C3'-C2'-C1'	2.85	105.27	100.98
36	PC	501	GTP	C3'-C2'-C1'	2.85	105.27	100.98
38	OF	502	GDP	C3'-C2'-C1'	2.85	105.27	100.98
38	QN	502	GDP	C3'-C2'-C1'	2.85	105.27	100.98
38	KD	502	GDP	C3'-C2'-C1'	2.85	105.27	100.98
36	EC	501	GTP	C3'-C2'-C1'	2.85	105.27	100.98
36	EK	501	GTP	C3'-C2'-C1'	2.85	105.27	100.98
36	IK	501	GTP	C3'-C2'-C1'	2.85	105.27	100.98
36	HM	501	GTP	PB-O3B-PG	-2.85	123.06	132.83
36	GM	501	GTP	C2-N1-C6	-2.84	119.87	125.10
36	LM	501	GTP	PB-O3B-PG	-2.84	123.09	132.83
36	HC	501	GTP	PB-O3B-PG	-2.84	123.09	132.83
36	OO	501	GTP	C3'-C2'-C1'	2.84	105.25	100.98
36	SK	501	GTP	C2-N1-C6	-2.84	119.88	125.10
36	UK	501	GTP	C2-N1-C6	-2.84	119.88	125.10
36	BI	501	GTP	C3'-C2'-C1'	2.83	105.24	100.98
36	FI	501	GTP	C2-N1-C6	-2.83	119.88	125.10
38	EH	502	GDP	C3'-C2'-C1'	2.83	105.24	100.98
36	RI	501	GTP	C8-N7-C5	2.83	108.38	102.99
38	QF	502	GDP	C3'-C2'-C1'	2.83	105.24	100.98
36	FG	501	GTP	C2-N1-C6	-2.83	119.89	125.10
36	KI	501	GTP	C3'-C2'-C1'	2.82	105.23	100.98
36	EE	501	GTP	C3'-C2'-C1'	2.82	105.23	100.98
38	LN	502	GDP	C3'-C2'-C1'	2.82	105.23	100.98
38	JL	502	GDP	C3'-C2'-C1'	2.82	105.23	100.98
36	RG	501	GTP	PA-O3A-PB	-2.82	123.15	132.83
36	RE	501	GTP	C8-N7-C5	2.82	108.35	102.99
36	SO	501	GTP	PB-O3B-PG	-2.81	123.17	132.83
36	LC	501	GTP	C3'-C2'-C1'	2.81	105.22	100.98
36	PG	501	GTP	C3'-C2'-C1'	2.81	105.22	100.98
38	HJ	502	GDP	C3'-C2'-C1'	2.81	105.21	100.98
36	TI	501	GTP	C3'-C2'-C1'	2.81	105.21	100.98
38	DL	502	GDP	C3'-C2'-C1'	2.81	105.21	100.98
36	TI	501	GTP	PB-O3B-PG	-2.81	123.19	132.83
36	TI	501	GTP	C2-N1-C6	-2.81	119.93	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	OG	501	GTP	C3'-C2'-C1'	2.80	105.20	100.98
36	BK	501	GTP	C3'-C2'-C1'	2.80	105.20	100.98
38	TN	502	GDP	C3'-C2'-C1'	2.80	105.20	100.98
38	KF	502	GDP	C3'-C2'-C1'	2.80	105.19	100.98
36	FM	501	GTP	C2-N1-C6	-2.80	119.94	125.10
36	KE	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98
36	CG	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98
36	NC	501	GTP	C3'-C2'-C1'	2.79	105.19	100.98
36	SG	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
36	VK	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
36	TM	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
36	IE	501	GTP	C3'-C2'-C1'	2.79	105.17	100.98
38	SN	502	GDP	C3'-C2'-C1'	2.79	105.17	100.98
36	QG	501	GTP	PA-O3A-PB	-2.79	123.27	132.83
38	KL	502	GDP	C3'-C2'-C1'	2.78	105.17	100.98
36	NM	501	GTP	PB-O3B-PG	-2.78	123.28	132.83
38	WF	502	GDP	C3'-C2'-C1'	2.78	105.16	100.98
36	HC	501	GTP	C3'-C2'-C1'	2.78	105.16	100.98
36	GI	501	GTP	PB-O3B-PG	-2.78	123.30	132.83
36	BE	501	GTP	C3'-C2'-C1'	2.77	105.15	100.98
36	CI	501	GTP	C3'-C2'-C1'	2.77	105.15	100.98
38	QD	502	GDP	C3'-C2'-C1'	2.77	105.14	100.98
36	UG	501	GTP	C3'-C2'-C1'	2.77	105.14	100.98
36	TO	501	GTP	C3'-C2'-C1'	2.77	105.14	100.98
38	DH	502	GDP	C3'-C2'-C1'	2.77	105.14	100.98
38	WP	502	GDP	C3'-C2'-C1'	2.76	105.14	100.98
36	NI	501	GTP	PB-O3B-PG	-2.76	123.34	132.83
36	MG	501	GTP	C3'-C2'-C1'	2.76	105.14	100.98
36	FG	501	GTP	C3'-C2'-C1'	2.76	105.13	100.98
38	UJ	502	GDP	C3'-C2'-C1'	2.76	105.13	100.98
36	HM	501	GTP	C3'-C2'-C1'	2.76	105.13	100.98
36	NG	501	GTP	C3'-C2'-C1'	2.76	105.13	100.98
38	ON	502	GDP	C3'-C2'-C1'	2.75	105.12	100.98
36	AK	501	GTP	C3'-C2'-C1'	2.75	105.12	100.98
36	CM	501	GTP	C3'-C2'-C1'	2.75	105.12	100.98
36	HE	501	GTP	C3'-C2'-C1'	2.75	105.11	100.98
36	SG	501	GTP	PA-O3A-PB	-2.75	123.40	132.83
36	CA	501	GTP	C3'-C2'-C1'	2.75	105.11	100.98
36	RO	501	GTP	PA-O3A-PB	-2.74	123.41	132.83
36	UO	501	GTP	C3'-C2'-C1'	2.74	105.11	100.98
36	OM	501	GTP	PA-O3A-PB	-2.74	123.42	132.83
36	IC	501	GTP	C3'-C2'-C1'	2.74	105.10	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	KM	501	GTP	C3'-C2'-C1'	2.74	105.10	100.98
36	BA	501	GTP	C3'-C2'-C1'	2.74	105.10	100.98
36	SM	501	GTP	PA-O3A-PB	-2.73	123.44	132.83
36	QI	501	GTP	C3'-C2'-C1'	2.73	105.09	100.98
38	DD	502	GDP	C3'-C2'-C1'	2.73	105.09	100.98
36	WM	501	GTP	C3'-C2'-C1'	2.73	105.08	100.98
36	RI	501	GTP	C3'-C2'-C1'	2.73	105.08	100.98
38	JH	502	GDP	C3'-C2'-C1'	2.73	105.08	100.98
36	TE	501	GTP	C3'-C2'-C1'	2.72	105.08	100.98
38	SF	502	GDP	PA-O3A-PB	-2.72	123.48	132.83
38	OL	502	GDP	C3'-C2'-C1'	2.72	105.07	100.98
36	CK	501	GTP	PA-O3A-PB	-2.72	123.50	132.83
36	GI	501	GTP	C3'-C2'-C1'	2.72	105.07	100.98
36	PI	501	GTP	PA-O3A-PB	-2.71	123.51	132.83
36	UE	501	GTP	C3'-C2'-C1'	2.71	105.06	100.98
36	HG	501	GTP	C3'-C2'-C1'	2.71	105.05	100.98
36	SK	501	GTP	C3'-C2'-C1'	2.70	105.05	100.98
38	QH	502	GDP	C3'-C2'-C1'	2.70	105.05	100.98
38	TF	502	GDP	C3'-C2'-C1'	2.70	105.05	100.98
36	FC	501	GTP	PA-O3A-PB	-2.70	123.56	132.83
36	SO	501	GTP	C3'-C2'-C1'	2.70	105.04	100.98
36	HK	501	GTP	C3'-C2'-C1'	2.70	105.04	100.98
36	RK	501	GTP	C3'-C2'-C1'	2.69	105.03	100.98
36	UI	501	GTP	C3'-C2'-C1'	2.69	105.03	100.98
38	WN	502	GDP	C3'-C2'-C1'	2.69	105.03	100.98
38	WJ	502	GDP	C3'-C2'-C1'	2.69	105.03	100.98
36	QE	501	GTP	C3'-C2'-C1'	2.69	105.03	100.98
36	NI	501	GTP	C3'-C2'-C1'	2.69	105.03	100.98
36	FC	501	GTP	C3'-C2'-C1'	2.69	105.02	100.98
38	OH	502	GDP	C3'-C2'-C1'	2.69	105.02	100.98
36	WG	501	GTP	C3'-C2'-C1'	2.68	105.02	100.98
38	PH	502	GDP	C3'-C2'-C1'	2.68	105.02	100.98
36	BK	501	GTP	PB-O3B-PG	-2.68	123.62	132.83
36	NE	501	GTP	C3'-C2'-C1'	2.68	105.01	100.98
38	RH	502	GDP	C3'-C2'-C1'	2.68	105.01	100.98
36	VO	501	GTP	C3'-C2'-C1'	2.68	105.01	100.98
36	AE	501	GTP	C3'-C2'-C1'	2.68	105.01	100.98
36	GG	501	GTP	PB-O3B-PG	-2.67	123.65	132.83
36	EI	501	GTP	C3'-C2'-C1'	2.66	104.98	100.98
38	OJ	502	GDP	C3'-C2'-C1'	2.66	104.98	100.98
36	LK	501	GTP	C3'-C2'-C1'	2.66	104.98	100.98
36	VI	501	GTP	C3'-C2'-C1'	2.65	104.97	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	TO	501	GTP	PB-O3B-PG	-2.65	123.73	132.83
38	PD	502	GDP	C3'-C2'-C1'	2.65	104.97	100.98
36	MC	501	GTP	PA-O3A-PB	-2.64	123.78	132.83
36	AC	501	GTP	PB-O3B-PG	-2.64	123.78	132.83
36	GE	501	GTP	C3'-C2'-C1'	2.63	104.94	100.98
36	UK	501	GTP	C3'-C2'-C1'	2.63	104.94	100.98
38	DJ	502	GDP	C3'-C2'-C1'	2.63	104.94	100.98
36	FM	501	GTP	C3'-C2'-C1'	2.63	104.93	100.98
36	AI	501	GTP	C3'-C2'-C1'	2.62	104.93	100.98
36	PE	501	GTP	C3'-C2'-C1'	2.62	104.92	100.98
36	NK	501	GTP	C3'-C2'-C1'	2.62	104.92	100.98
36	GC	501	GTP	C3'-C2'-C1'	2.62	104.92	100.98
36	TK	501	GTP	C3'-C2'-C1'	2.61	104.91	100.98
36	AA	501	GTP	C3'-C2'-C1'	2.61	104.91	100.98
36	NM	501	GTP	C3'-C2'-C1'	2.61	104.91	100.98
36	LI	501	GTP	PA-O3A-PB	-2.61	123.88	132.83
36	AA	501	GTP	PB-O3B-PG	-2.60	123.89	132.83
36	GM	501	GTP	C3'-C2'-C1'	2.60	104.89	100.98
36	MK	501	GTP	C3'-C2'-C1'	2.60	104.89	100.98
36	OE	501	GTP	C3'-C2'-C1'	2.59	104.89	100.98
36	PM	501	GTP	C3'-C2'-C1'	2.59	104.89	100.98
36	QC	501	GTP	C3'-C2'-C1'	2.59	104.88	100.98
36	NG	501	GTP	O3G-PG-O3B	2.59	113.31	104.64
36	AC	501	GTP	C3'-C2'-C1'	2.58	104.87	100.98
36	WO	501	GTP	C3'-C2'-C1'	2.58	104.87	100.98
36	QK	501	GTP	C3'-C2'-C1'	2.58	104.86	100.98
36	QM	501	GTP	C3'-C2'-C1'	2.58	104.86	100.98
36	PC	501	GTP	PA-O3A-PB	-2.58	123.99	132.83
36	BM	501	GTP	C3'-C2'-C1'	2.57	104.85	100.98
36	OK	501	GTP	C3'-C2'-C1'	2.57	104.85	100.98
38	LD	502	GDP	C3'-C2'-C1'	2.57	104.84	100.98
36	LE	501	GTP	C3'-C2'-C1'	2.55	104.82	100.98
36	QE	501	GTP	PA-O3A-PB	-2.55	124.07	132.83
36	GK	501	GTP	C3'-C2'-C1'	2.55	104.82	100.98
38	ML	502	GDP	C3'-C2'-C1'	2.54	104.81	100.98
36	MI	501	GTP	C3'-C2'-C1'	2.54	104.81	100.98
36	RK	501	GTP	O6-C6-C5	-2.54	119.41	124.37
36	AG	501	GTP	C3'-C2'-C1'	2.54	104.80	100.98
36	UM	501	GTP	C3'-C2'-C1'	2.54	104.80	100.98
38	SF	502	GDP	C3'-C2'-C1'	2.53	104.78	100.98
36	RM	501	GTP	C3'-C2'-C1'	2.52	104.77	100.98
38	LL	502	GDP	C5-C6-N1	2.52	118.40	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	EJ	502	GDP	C3'-C2'-C1'	2.52	104.77	100.98
38	AL	502	GDP	C5-C6-N1	2.52	118.40	113.95
36	EC	501	GTP	PA-O3A-PB	-2.51	124.20	132.83
36	OM	501	GTP	C3'-C2'-C1'	2.51	104.76	100.98
36	EG	501	GTP	PA-O3A-PB	-2.50	124.24	132.83
38	LH	502	GDP	C5-C6-N1	2.50	118.37	113.95
38	SH	502	GDP	C3'-C2'-C1'	2.50	104.74	100.98
36	AG	501	GTP	PB-O3B-PG	-2.49	124.27	132.83
36	SE	501	GTP	C3'-C2'-C1'	2.49	104.73	100.98
38	KD	502	GDP	C5-C6-N1	2.48	118.33	113.95
36	FE	501	GTP	C3'-C2'-C1'	2.47	104.70	100.98
38	DB	502	GDP	C5-C6-N1	2.47	118.31	113.95
38	CD	502	GDP	C5-C6-N1	2.47	118.31	113.95
38	OD	502	GDP	C5-C6-N1	2.47	118.31	113.95
38	JN	502	GDP	C5-C6-N1	2.47	118.31	113.95
38	MN	502	GDP	C5-C6-N1	2.46	118.30	113.95
38	WH	502	GDP	C8-N7-C5	2.46	107.67	102.99
38	KH	502	GDP	C5-C6-N1	2.46	118.29	113.95
38	MH	502	GDP	C5-C6-N1	2.45	118.28	113.95
38	MJ	502	GDP	C5-C6-N1	2.45	118.28	113.95
38	OH	502	GDP	C5-C6-N1	2.45	118.28	113.95
38	JH	502	GDP	C5-C6-N1	2.45	118.27	113.95
36	SI	501	GTP	PA-O3A-PB	-2.45	124.43	132.83
38	EB	502	GDP	C5-C6-N1	2.45	118.27	113.95
38	EF	502	GDP	C5-C6-N1	2.44	118.27	113.95
38	IJ	502	GDP	C5-C6-N1	2.44	118.27	113.95
38	LD	502	GDP	C5-C6-N1	2.44	118.27	113.95
38	SN	502	GDP	C5-C6-N1	2.44	118.27	113.95
38	CH	502	GDP	C3'-C2'-C1'	2.44	104.65	100.98
38	WP	502	GDP	C8-N7-C5	2.44	107.64	102.99
38	CH	502	GDP	C5-C6-N1	2.44	118.26	113.95
38	FL	502	GDP	C5-C6-N1	2.44	118.26	113.95
38	WF	502	GDP	C8-N7-C5	2.44	107.64	102.99
36	GC	501	GTP	PB-O3B-PG	-2.43	124.48	132.83
38	KN	502	GDP	C5-C6-N1	2.43	118.25	113.95
36	BA	501	GTP	O6-C6-C5	-2.43	119.62	124.37
38	LN	502	GDP	C5-C6-N1	2.43	118.24	113.95
38	WN	502	GDP	C8-N7-C5	2.43	107.62	102.99
38	DL	502	GDP	C8-N7-C5	2.43	107.61	102.99
36	QC	501	GTP	PA-O3A-PB	-2.43	124.50	132.83
38	AH	502	GDP	C5-C6-N1	2.43	118.23	113.95
38	KB	502	GDP	C5-C6-N1	2.42	118.23	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	IH	502	GDP	C8-N7-C5	2.42	107.61	102.99
38	CH	502	GDP	C8-N7-C5	2.42	107.61	102.99
38	OF	502	GDP	C5-C6-N1	2.42	118.23	113.95
38	DJ	502	GDP	C5-C6-N1	2.42	118.23	113.95
38	LF	502	GDP	C5-C6-N1	2.42	118.22	113.95
38	CJ	502	GDP	C8-N7-C5	2.42	107.59	102.99
38	ML	502	GDP	C5-C6-N1	2.42	118.22	113.95
38	VF	502	GDP	C8-N7-C5	2.42	107.59	102.99
38	CB	502	GDP	C8-N7-C5	2.42	107.59	102.99
36	UE	501	GTP	O6-C6-C5	-2.41	119.66	124.37
38	WD	502	GDP	C8-N7-C5	2.41	107.59	102.99
38	KF	502	GDP	C5-C6-N1	2.41	118.22	113.95
38	PN	502	GDP	C8-N7-C5	2.41	107.59	102.99
36	EE	501	GTP	PA-O3A-PB	-2.41	124.55	132.83
38	CL	502	GDP	C8-N7-C5	2.41	107.58	102.99
38	QJ	502	GDP	C8-N7-C5	2.41	107.58	102.99
38	MD	502	GDP	C5-C6-N1	2.41	118.21	113.95
38	LJ	502	GDP	C5-C6-N1	2.41	118.21	113.95
36	ME	501	GTP	C3'-C2'-C1'	2.41	104.61	100.98
36	PO	501	GTP	C3'-C2'-C1'	2.41	104.61	100.98
38	AJ	502	GDP	C5-C6-N1	2.41	118.20	113.95
38	MB	502	GDP	C5-C6-N1	2.41	118.20	113.95
38	BH	502	GDP	C5-C6-N1	2.41	118.20	113.95
38	HJ	502	GDP	C5-C6-N1	2.41	118.20	113.95
36	BM	501	GTP	O6-C6-C5	-2.41	119.67	124.37
38	HD	502	GDP	C8-N7-C5	2.41	107.57	102.99
36	NE	501	GTP	O6-C6-C5	-2.40	119.67	124.37
38	AF	502	GDP	C5-C6-N1	2.40	118.20	113.95
38	OB	502	GDP	C5-C6-N1	2.40	118.20	113.95
38	VN	502	GDP	C8-N7-C5	2.40	107.57	102.99
38	QN	502	GDP	C8-N7-C5	2.40	107.57	102.99
38	BF	502	GDP	C5-C6-N1	2.40	118.19	113.95
38	NF	502	GDP	C5-C6-N1	2.40	118.19	113.95
38	CD	502	GDP	C8-N7-C5	2.40	107.56	102.99
38	RD	502	GDP	C5-C6-N1	2.40	118.19	113.95
38	DD	502	GDP	C8-N7-C5	2.40	107.56	102.99
38	DF	502	GDP	C8-N7-C5	2.40	107.56	102.99
38	VL	502	GDP	C5-C6-N1	2.40	118.19	113.95
38	HJ	502	GDP	C8-N7-C5	2.40	107.56	102.99
38	IL	502	GDP	C8-N7-C5	2.40	107.56	102.99
38	EH	502	GDP	C5-C6-N1	2.40	118.19	113.95
38	LH	502	GDP	C8-N7-C5	2.40	107.56	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	AD	502	GDP	C5-C6-N1	2.40	118.18	113.95
38	HL	502	GDP	C8-N7-C5	2.40	107.55	102.99
38	VH	502	GDP	C8-N7-C5	2.40	107.55	102.99
36	BI	501	GTP	O6-C6-C5	-2.39	119.69	124.37
38	FN	502	GDP	C5-C6-N1	2.39	118.18	113.95
38	NN	502	GDP	C5-C6-N1	2.39	118.18	113.95
38	PH	502	GDP	C5-C6-N1	2.39	118.18	113.95
38	QJ	502	GDP	C5-C6-N1	2.39	118.18	113.95
38	WN	502	GDP	C5-C6-N1	2.39	118.18	113.95
36	RE	501	GTP	O6-C6-C5	-2.39	119.70	124.37
38	MF	502	GDP	C5-C6-N1	2.39	118.17	113.95
38	VH	502	GDP	C5-C6-N1	2.39	118.17	113.95
38	JB	502	GDP	C5-C6-N1	2.39	118.17	113.95
38	IF	502	GDP	C8-N7-C5	2.39	107.54	102.99
38	KJ	502	GDP	C5-C6-N1	2.39	118.17	113.95
38	AB	502	GDP	C5-C6-N1	2.39	118.17	113.95
38	SJ	502	GDP	C5-C6-N1	2.39	118.17	113.95
38	RN	502	GDP	C5-C6-N1	2.39	118.17	113.95
38	KN	502	GDP	C8-N7-C5	2.39	107.54	102.99
38	ED	502	GDP	C5-C6-N1	2.39	118.16	113.95
38	KL	502	GDP	C5-C6-N1	2.38	118.16	113.95
38	ID	502	GDP	C8-N7-C5	2.38	107.53	102.99
38	SL	502	GDP	C5-C6-N1	2.38	118.16	113.95
38	WJ	502	GDP	C8-N7-C5	2.38	107.53	102.99
38	WL	502	GDP	C8-N7-C5	2.38	107.53	102.99
38	UF	502	GDP	C5-C6-N1	2.38	118.16	113.95
36	PK	501	GTP	PA-O3A-PB	-2.38	124.65	132.83
38	UN	502	GDP	C8-N7-C5	2.38	107.53	102.99
36	AK	501	GTP	PB-O3B-PG	-2.38	124.66	132.83
38	ON	502	GDP	C5-C6-N1	2.38	118.15	113.95
36	BG	501	GTP	O6-C6-C5	-2.38	119.73	124.37
38	JF	502	GDP	C8-N7-C5	2.38	107.52	102.99
38	DH	502	GDP	C8-N7-C5	2.38	107.52	102.99
38	IN	502	GDP	C8-N7-C5	2.38	107.52	102.99
38	PD	502	GDP	C8-N7-C5	2.38	107.52	102.99
38	ND	502	GDP	C5-C6-N1	2.38	118.15	113.95
38	RF	502	GDP	C5-C6-N1	2.37	118.14	113.95
38	LJ	502	GDP	C8-N7-C5	2.37	107.51	102.99
38	CF	502	GDP	C5-C6-N1	2.37	118.14	113.95
38	HD	502	GDP	C5-C6-N1	2.37	118.14	113.95
38	LN	502	GDP	C8-N7-C5	2.37	107.51	102.99
38	LF	502	GDP	C8-N7-C5	2.37	107.51	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	TJ	502	GDP	C8-N7-C5	2.37	107.51	102.99
38	FL	502	GDP	O6-C6-C5	-2.37	119.74	124.37
38	BD	502	GDP	C5-C6-N1	2.37	118.14	113.95
38	PF	502	GDP	C5-C6-N1	2.37	118.14	113.95
38	QL	502	GDP	C5-C6-N1	2.37	118.14	113.95
38	KB	502	GDP	C8-N7-C5	2.37	107.50	102.99
38	OH	502	GDP	C8-N7-C5	2.37	107.50	102.99
38	NB	502	GDP	C5-C6-N1	2.37	118.14	113.95
38	OJ	502	GDP	C5-C6-N1	2.37	118.14	113.95
38	HF	502	GDP	C8-N7-C5	2.37	107.50	102.99
38	CF	502	GDP	C8-N7-C5	2.37	107.50	102.99
38	PL	502	GDP	C5-C6-N1	2.37	118.13	113.95
38	QF	502	GDP	C5-C6-N1	2.37	118.13	113.95
38	VJ	502	GDP	C5-C6-N1	2.37	118.13	113.95
38	LD	502	GDP	C8-N7-C5	2.37	107.50	102.99
38	LB	502	GDP	C5-C6-N1	2.37	118.13	113.95
36	AM	501	GTP	C3'-C2'-C1'	2.37	104.54	100.98
38	GH	502	GDP	C8-N7-C5	2.37	107.50	102.99
38	PJ	502	GDP	C5-C6-N1	2.36	118.13	113.95
38	SH	502	GDP	C5-C6-N1	2.36	118.12	113.95
38	HB	502	GDP	C8-N7-C5	2.36	107.49	102.99
38	NJ	502	GDP	C5-C6-N1	2.36	118.12	113.95
36	BC	501	GTP	O6-C6-C5	-2.36	119.76	124.37
38	CJ	502	GDP	C5-C6-N1	2.36	118.12	113.95
38	BL	502	GDP	C5-C6-N1	2.36	118.12	113.95
38	IH	502	GDP	C5-C6-N1	2.36	118.12	113.95
38	PJ	502	GDP	C8-N7-C5	2.36	107.49	102.99
36	NG	501	GTP	O6-C6-C5	-2.36	119.76	124.37
38	KH	502	GDP	C8-N7-C5	2.36	107.49	102.99
38	VF	502	GDP	C5-C6-N1	2.36	118.12	113.95
38	IJ	502	GDP	C8-N7-C5	2.36	107.48	102.99
38	LH	502	GDP	C3'-C2'-C1'	2.36	104.53	100.98
38	HF	502	GDP	C5-C6-N1	2.36	118.11	113.95
38	WJ	502	GDP	C5-C6-N1	2.36	118.11	113.95
38	TP	502	GDP	C5-C6-N1	2.36	118.11	113.95
38	VP	502	GDP	C8-N7-C5	2.36	107.48	102.99
38	UJ	502	GDP	C8-N7-C5	2.36	107.48	102.99
38	UP	502	GDP	C8-N7-C5	2.36	107.48	102.99
38	RH	502	GDP	C5-C6-N1	2.36	118.11	113.95
38	HN	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	TF	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	NL	502	GDP	C5-C6-N1	2.35	118.11	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	PD	502	GDP	C5-C6-N1	2.35	118.11	113.95
38	PN	502	GDP	C5-C6-N1	2.35	118.11	113.95
38	TH	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	QD	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	VD	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	FD	502	GDP	C5-C6-N1	2.35	118.11	113.95
38	BF	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	VL	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	DB	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	VJ	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	LB	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	PL	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	AL	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	CL	502	GDP	C5-C6-N1	2.35	118.10	113.95
38	ON	502	GDP	C8-N7-C5	2.35	107.47	102.99
38	KJ	502	GDP	C8-N7-C5	2.35	107.47	102.99
36	FM	501	GTP	PA-O3A-PB	-2.35	124.77	132.83
38	OL	502	GDP	C5-C6-N1	2.35	118.10	113.95
38	AF	502	GDP	C8-N7-C5	2.35	107.46	102.99
38	HH	502	GDP	C8-N7-C5	2.35	107.46	102.99
38	UN	502	GDP	C5-C6-N1	2.35	118.10	113.95
38	BB	502	GDP	C5-C6-N1	2.35	118.09	113.95
38	BJ	502	GDP	C5-C6-N1	2.35	118.09	113.95
36	SM	501	GTP	C3'-C2'-C1'	2.35	104.51	100.98
38	JJ	502	GDP	C5-C6-N1	2.34	118.09	113.95
38	UH	502	GDP	C5-C6-N1	2.34	118.09	113.95
38	GL	502	GDP	C8-N7-C5	2.34	107.46	102.99
38	NF	502	GDP	C8-N7-C5	2.34	107.46	102.99
38	WP	502	GDP	C5-C6-N1	2.34	118.09	113.95
38	GN	502	GDP	C8-N7-C5	2.34	107.45	102.99
38	OB	502	GDP	C8-N7-C5	2.34	107.45	102.99
38	FH	502	GDP	C5-C6-N1	2.34	118.09	113.95
38	KH	502	GDP	C3'-C2'-C1'	2.34	104.50	100.98
38	TN	502	GDP	C8-N7-C5	2.34	107.45	102.99
38	RL	502	GDP	C5-C6-N1	2.34	118.08	113.95
38	GJ	502	GDP	C8-N7-C5	2.34	107.45	102.99
38	OJ	502	GDP	C8-N7-C5	2.34	107.45	102.99
36	NC	501	GTP	O6-C6-C5	-2.34	119.80	124.37
38	DJ	502	GDP	C8-N7-C5	2.34	107.44	102.99
38	IB	502	GDP	C8-N7-C5	2.34	107.44	102.99
38	SN	502	GDP	O6-C6-C5	-2.34	119.81	124.37
38	IL	502	GDP	C5-C6-N1	2.34	118.08	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	ND	502	GDP	C8-N7-C5	2.34	107.44	102.99
38	NL	502	GDP	C8-N7-C5	2.34	107.44	102.99
38	QH	502	GDP	C5-C6-N1	2.33	118.08	113.95
38	NH	502	GDP	C8-N7-C5	2.33	107.44	102.99
36	AG	501	GTP	O6-C6-C5	-2.33	119.81	124.37
38	VD	502	GDP	C5-C6-N1	2.33	118.07	113.95
36	AI	501	GTP	O6-C6-C5	-2.33	119.81	124.37
38	EL	502	GDP	C8-N7-C5	2.33	107.43	102.99
38	GD	502	GDP	C8-N7-C5	2.33	107.43	102.99
38	NB	502	GDP	C8-N7-C5	2.33	107.43	102.99
38	DF	502	GDP	C5-C6-N1	2.33	118.07	113.95
38	MH	502	GDP	C3'-C2'-C1'	2.33	104.49	100.98
38	VN	502	GDP	C5-C6-N1	2.33	118.07	113.95
38	PH	502	GDP	C8-N7-C5	2.33	107.43	102.99
38	UL	502	GDP	C5-C6-N1	2.33	118.07	113.95
38	FB	502	GDP	C5-C6-N1	2.33	118.06	113.95
38	MJ	502	GDP	C8-N7-C5	2.33	107.43	102.99
38	UL	502	GDP	C8-N7-C5	2.33	107.42	102.99
38	VP	502	GDP	C5-C6-N1	2.33	118.06	113.95
36	BE	501	GTP	O6-C6-C5	-2.33	119.83	124.37
36	WM	501	GTP	PA-O3A-PB	-2.33	124.84	132.83
38	EJ	502	GDP	C5-C6-N1	2.33	118.06	113.95
38	MH	502	GDP	C8-N7-C5	2.32	107.42	102.99
38	TL	502	GDP	C8-N7-C5	2.32	107.42	102.99
38	OL	502	GDP	C8-N7-C5	2.32	107.42	102.99
38	TD	502	GDP	C8-N7-C5	2.32	107.42	102.99
38	AB	502	GDP	C8-N7-C5	2.32	107.42	102.99
38	SD	502	GDP	C5-C6-N1	2.32	118.05	113.95
38	EN	502	GDP	C5-C6-N1	2.32	118.05	113.95
38	GJ	502	GDP	C5-C6-N1	2.32	118.05	113.95
38	TN	502	GDP	C5-C6-N1	2.32	118.05	113.95
38	HH	502	GDP	C5-C6-N1	2.32	118.05	113.95
38	JL	502	GDP	C8-N7-C5	2.32	107.41	102.99
36	BK	501	GTP	O6-C6-C5	-2.32	119.84	124.37
38	FJ	502	GDP	C5-C6-N1	2.32	118.05	113.95
38	FB	502	GDP	C8-N7-C5	2.32	107.41	102.99
38	MF	502	GDP	C8-N7-C5	2.32	107.41	102.99
38	ID	502	GDP	C5-C6-N1	2.32	118.05	113.95
38	JH	502	GDP	C8-N7-C5	2.32	107.41	102.99
38	HN	502	GDP	C5-C6-N1	2.32	118.04	113.95
38	MB	502	GDP	C8-N7-C5	2.32	107.40	102.99
38	PF	502	GDP	C8-N7-C5	2.32	107.40	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	TD	502	GDP	C5-C6-N1	2.32	118.04	113.95
38	AJ	502	GDP	C8-N7-C5	2.32	107.40	102.99
38	MN	502	GDP	C8-N7-C5	2.32	107.40	102.99
38	UJ	502	GDP	C5-C6-N1	2.32	118.04	113.95
38	KD	502	GDP	C8-N7-C5	2.31	107.39	102.99
38	UH	502	GDP	C8-N7-C5	2.31	107.39	102.99
38	GL	502	GDP	C5-C6-N1	2.31	118.03	113.95
38	RJ	502	GDP	C5-C6-N1	2.31	118.03	113.95
38	IN	502	GDP	C5-C6-N1	2.31	118.03	113.95
38	SF	502	GDP	C5-C6-N1	2.31	118.03	113.95
38	QH	502	GDP	C8-N7-C5	2.31	107.39	102.99
36	VE	501	GTP	O6-C6-C5	-2.31	119.86	124.37
38	OD	502	GDP	C8-N7-C5	2.31	107.39	102.99
38	WF	502	GDP	C5-C6-N1	2.31	118.03	113.95
36	LE	501	GTP	O6-C6-C5	-2.31	119.86	124.37
38	NH	502	GDP	C5-C6-N1	2.31	118.03	113.95
38	TJ	502	GDP	C5-C6-N1	2.31	118.03	113.95
38	IF	502	GDP	C5-C6-N1	2.31	118.03	113.95
38	CB	502	GDP	C5-C6-N1	2.31	118.03	113.95
38	GH	502	GDP	C5-C6-N1	2.31	118.03	113.95
38	GN	502	GDP	C5-C6-N1	2.31	118.03	113.95
38	UF	502	GDP	C8-N7-C5	2.31	107.38	102.99
38	EJ	502	GDP	C8-N7-C5	2.30	107.38	102.99
38	JJ	502	GDP	C8-N7-C5	2.30	107.38	102.99
38	OF	502	GDP	C8-N7-C5	2.30	107.38	102.99
38	SD	502	GDP	C8-N7-C5	2.30	107.38	102.99
38	LL	502	GDP	C8-N7-C5	2.30	107.38	102.99
38	JF	502	GDP	C5-C6-N1	2.30	118.02	113.95
36	MM	501	GTP	C3'-C2'-C1'	2.30	104.44	100.98
38	EN	502	GDP	C8-N7-C5	2.30	107.37	102.99
38	QF	502	GDP	C8-N7-C5	2.30	107.37	102.99
38	GB	502	GDP	C8-N7-C5	2.30	107.37	102.99
38	GF	502	GDP	C8-N7-C5	2.30	107.37	102.99
36	UI	501	GTP	O6-C6-C5	-2.30	119.88	124.37
38	JL	502	GDP	C5-C6-N1	2.30	118.01	113.95
38	DD	502	GDP	C5-C6-N1	2.30	118.01	113.95
36	LM	501	GTP	C3'-C2'-C1'	2.30	104.44	100.98
36	NI	501	GTP	O6-C6-C5	-2.30	119.89	124.37
36	RG	501	GTP	O6-C6-C5	-2.30	119.89	124.37
38	BD	502	GDP	C8-N7-C5	2.30	107.36	102.99
38	FJ	502	GDP	C8-N7-C5	2.30	107.36	102.99
38	RF	502	GDP	C8-N7-C5	2.30	107.36	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	TP	502	GDP	C8-N7-C5	2.30	107.36	102.99
38	AH	502	GDP	C8-N7-C5	2.29	107.36	102.99
38	MD	502	GDP	C8-N7-C5	2.29	107.36	102.99
38	GD	502	GDP	C5-C6-N1	2.29	118.00	113.95
38	QD	502	GDP	C5-C6-N1	2.29	118.00	113.95
38	BH	502	GDP	C8-N7-C5	2.29	107.36	102.99
38	ML	502	GDP	C8-N7-C5	2.29	107.36	102.99
36	FE	501	GTP	O6-C6-C5	-2.29	119.90	124.37
38	WL	502	GDP	C5-C6-N1	2.29	118.00	113.95
38	RJ	502	GDP	C8-N7-C5	2.29	107.36	102.99
38	RH	502	GDP	C8-N7-C5	2.29	107.35	102.99
38	AD	502	GDP	C8-N7-C5	2.29	107.35	102.99
36	KE	501	GTP	O6-C6-C5	-2.29	119.90	124.37
38	KL	502	GDP	C8-N7-C5	2.29	107.35	102.99
38	UD	502	GDP	C8-N7-C5	2.29	107.35	102.99
38	DH	502	GDP	C5-C6-N1	2.29	117.99	113.95
38	NN	502	GDP	C8-N7-C5	2.29	107.35	102.99
38	QL	502	GDP	C8-N7-C5	2.29	107.35	102.99
38	UD	502	GDP	C5-C6-N1	2.29	117.99	113.95
38	EF	502	GDP	C8-N7-C5	2.28	107.34	102.99
38	TH	502	GDP	C5-C6-N1	2.28	117.98	113.95
36	HI	501	GTP	O6-C6-C5	-2.28	119.91	124.37
38	KF	502	GDP	C8-N7-C5	2.28	107.34	102.99
38	IB	502	GDP	C5-C6-N1	2.28	117.98	113.95
36	HO	501	GTP	O6-C6-C5	-2.28	119.92	124.37
38	RL	502	GDP	C8-N7-C5	2.28	107.33	102.99
36	WE	501	GTP	C3'-C2'-C1'	2.28	104.41	100.98
38	WH	502	GDP	C5-C6-N1	2.28	117.97	113.95
38	NJ	502	GDP	C8-N7-C5	2.28	107.33	102.99
38	SF	502	GDP	C8-N7-C5	2.28	107.33	102.99
38	BB	502	GDP	C8-N7-C5	2.27	107.32	102.99
38	FF	502	GDP	C5-C6-N1	2.27	117.97	113.95
38	EB	502	GDP	C8-N7-C5	2.27	107.32	102.99
36	UG	501	GTP	O6-C6-C5	-2.27	119.93	124.37
38	GB	502	GDP	C5-C6-N1	2.27	117.96	113.95
38	HB	502	GDP	C5-C6-N1	2.27	117.96	113.95
38	EL	502	GDP	C5-C6-N1	2.27	117.96	113.95
38	JB	502	GDP	C8-N7-C5	2.27	107.31	102.99
38	HL	502	GDP	C5-C6-N1	2.27	117.96	113.95
38	BJ	502	GDP	C8-N7-C5	2.27	107.31	102.99
38	TF	502	GDP	C5-C6-N1	2.27	117.96	113.95
38	FF	502	GDP	C8-N7-C5	2.27	107.31	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	HM	501	GTP	O6-C6-C5	-2.27	119.95	124.37
38	SJ	502	GDP	O6-C6-C5	-2.27	119.95	124.37
38	EH	502	GDP	C8-N7-C5	2.27	107.31	102.99
38	RD	502	GDP	C8-N7-C5	2.26	107.30	102.99
38	FH	502	GDP	C8-N7-C5	2.26	107.30	102.99
38	JN	502	GDP	C8-N7-C5	2.26	107.30	102.99
38	TL	502	GDP	C5-C6-N1	2.26	117.94	113.95
38	BL	502	GDP	C8-N7-C5	2.26	107.29	102.99
38	ED	502	GDP	C8-N7-C5	2.26	107.29	102.99
36	UM	501	GTP	O6-C6-C5	-2.25	119.97	124.37
36	AI	501	GTP	PB-O3B-PG	-2.25	125.10	132.83
36	CM	501	GTP	O6-C6-C5	-2.25	119.98	124.37
36	QG	501	GTP	O6-C6-C5	-2.25	119.98	124.37
38	WD	502	GDP	C5-C6-N1	2.25	117.92	113.95
38	DL	502	GDP	C5-C6-N1	2.25	117.92	113.95
36	UO	501	GTP	O6-C6-C5	-2.25	119.98	124.37
38	LL	502	GDP	C3'-C2'-C1'	2.24	104.36	100.98
38	QN	502	GDP	C5-C6-N1	2.24	117.92	113.95
36	OC	501	GTP	O6-C6-C5	-2.24	119.99	124.37
38	UP	502	GDP	C5-C6-N1	2.24	117.91	113.95
36	EI	501	GTP	O6-C6-C5	-2.24	119.99	124.37
36	RI	501	GTP	O6-C6-C5	-2.24	119.99	124.37
36	FC	501	GTP	O6-C6-C5	-2.24	119.99	124.37
38	RN	502	GDP	C8-N7-C5	2.24	107.26	102.99
36	NM	501	GTP	O6-C6-C5	-2.24	120.00	124.37
36	NK	501	GTP	O6-C6-C5	-2.24	120.00	124.37
36	KK	501	GTP	O6-C6-C5	-2.24	120.00	124.37
38	GF	502	GDP	C5-C6-N1	2.24	117.90	113.95
36	HK	501	GTP	O6-C6-C5	-2.24	120.00	124.37
38	RH	502	GDP	C2'-C3'-C4'	2.23	106.98	102.64
36	AE	501	GTP	O6-C6-C5	-2.23	120.01	124.37
36	VO	501	GTP	O6-C6-C5	-2.23	120.01	124.37
36	MG	501	GTP	O6-C6-C5	-2.23	120.02	124.37
36	VK	501	GTP	O6-C6-C5	-2.23	120.02	124.37
36	VI	501	GTP	O6-C6-C5	-2.22	120.03	124.37
36	ME	501	GTP	O6-C6-C5	-2.22	120.03	124.37
36	GG	501	GTP	O6-C6-C5	-2.22	120.03	124.37
36	PG	501	GTP	O6-C6-C5	-2.22	120.03	124.37
36	QK	501	GTP	O6-C6-C5	-2.22	120.03	124.37
38	FN	502	GDP	C8-N7-C5	2.22	107.22	102.99
36	HC	501	GTP	O6-C6-C5	-2.22	120.04	124.37
38	JD	502	GDP	C5-C6-N1	2.22	117.87	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	MM	501	GTP	O6-C6-C5	-2.21	120.05	124.37
36	EK	501	GTP	O6-C6-C5	-2.21	120.05	124.37
36	LK	501	GTP	O6-C6-C5	-2.21	120.05	124.37
36	KG	501	GTP	O6-C6-C5	-2.21	120.06	124.37
36	OM	501	GTP	O6-C6-C5	-2.21	120.06	124.37
36	MI	501	GTP	O6-C6-C5	-2.21	120.06	124.37
38	FD	502	GDP	C8-N7-C5	2.20	107.19	102.99
38	SJ	502	GDP	C8-N7-C5	2.20	107.18	102.99
36	KM	501	GTP	O6-C6-C5	-2.20	120.07	124.37
36	HG	501	GTP	O6-C6-C5	-2.20	120.07	124.37
36	LM	501	GTP	O6-C6-C5	-2.20	120.07	124.37
36	SE	501	GTP	O6-C6-C5	-2.20	120.08	124.37
36	AA	501	GTP	O6-C6-C5	-2.20	120.08	124.37
36	TO	501	GTP	O6-C6-C5	-2.20	120.08	124.37
36	UM	501	GTP	PA-O3A-PB	-2.19	125.30	132.83
36	OG	501	GTP	O6-C6-C5	-2.19	120.09	124.37
36	HE	501	GTP	O6-C6-C5	-2.19	120.09	124.37
36	SG	501	GTP	O6-C6-C5	-2.18	120.11	124.37
38	SH	502	GDP	C8-N7-C5	2.18	107.15	102.99
36	TK	501	GTP	O6-C6-C5	-2.18	120.12	124.37
36	SM	501	GTP	O6-C6-C5	-2.18	120.12	124.37
38	SL	502	GDP	C8-N7-C5	2.18	107.13	102.99
38	JD	502	GDP	C8-N7-C5	2.17	107.13	102.99
36	LG	501	GTP	O6-C6-C5	-2.17	120.13	124.37
36	RC	501	GTP	O6-C6-C5	-2.17	120.13	124.37
36	AC	501	GTP	O6-C6-C5	-2.17	120.13	124.37
36	QM	501	GTP	O6-C6-C5	-2.17	120.14	124.37
36	UK	501	GTP	O6-C6-C5	-2.16	120.15	124.37
36	OO	501	GTP	O6-C6-C5	-2.16	120.15	124.37
36	EE	501	GTP	O6-C6-C5	-2.16	120.16	124.37
38	FL	502	GDP	C8-N7-C5	2.16	107.10	102.99
36	MK	501	GTP	O6-C6-C5	-2.16	120.16	124.37
36	JM	501	GTP	O6-C6-C5	-2.15	120.17	124.37
36	AK	501	GTP	O6-C6-C5	-2.15	120.18	124.37
36	OE	501	GTP	O6-C6-C5	-2.15	120.18	124.37
36	AM	501	GTP	O6-C6-C5	-2.15	120.18	124.37
36	DA	501	GTP	PA-O3A-PB	-2.14	125.47	132.83
36	KO	501	GTP	O6-C6-C5	-2.14	120.19	124.37
36	SK	501	GTP	O6-C6-C5	-2.14	120.19	124.37
36	QE	501	GTP	O6-C6-C5	-2.14	120.19	124.37
36	GI	501	GTP	O6-C6-C5	-2.14	120.20	124.37
36	SO	501	GTP	O6-C6-C5	-2.14	120.20	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	VM	501	GTP	O6-C6-C5	-2.14	120.20	124.37
36	PE	501	GTP	O6-C6-C5	-2.13	120.20	124.37
36	JE	501	GTP	O6-C6-C5	-2.13	120.21	124.37
36	JI	501	GTP	O6-C6-C5	-2.13	120.21	124.37
36	PO	501	GTP	O6-C6-C5	-2.13	120.21	124.37
36	IO	501	GTP	O6-C6-C5	-2.13	120.22	124.37
38	SN	502	GDP	C8-N7-C5	2.13	107.04	102.99
36	PI	501	GTP	O6-C6-C5	-2.12	120.22	124.37
36	FK	501	GTP	C3'-C2'-C1'	2.12	104.17	100.98
36	MC	501	GTP	O6-C6-C5	-2.12	120.23	124.37
36	GE	501	GTP	O6-C6-C5	-2.12	120.23	124.37
36	EC	501	GTP	O6-C6-C5	-2.12	120.23	124.37
36	QO	501	GTP	O6-C6-C5	-2.12	120.23	124.37
36	PK	501	GTP	O6-C6-C5	-2.12	120.23	124.37
36	JK	501	GTP	O6-C6-C5	-2.12	120.24	124.37
36	CK	501	GTP	O6-C6-C5	-2.12	120.24	124.37
36	CC	501	GTP	O6-C6-C5	-2.11	120.25	124.37
36	FK	501	GTP	O6-C6-C5	-2.11	120.25	124.37
36	OK	501	GTP	O6-C6-C5	-2.11	120.26	124.37
36	SI	501	GTP	O6-C6-C5	-2.11	120.26	124.37
36	FI	501	GTP	C3'-C2'-C1'	2.11	104.15	100.98
36	FM	501	GTP	O6-C6-C5	-2.10	120.26	124.37
36	EM	501	GTP	O6-C6-C5	-2.10	120.27	124.37
36	TI	501	GTP	O6-C6-C5	-2.10	120.28	124.37
36	RM	501	GTP	O6-C6-C5	-2.10	120.28	124.37
36	QI	501	GTP	O6-C6-C5	-2.09	120.28	124.37
36	CG	501	GTP	O6-C6-C5	-2.09	120.28	124.37
36	PM	501	GTP	O6-C6-C5	-2.09	120.29	124.37
36	LC	501	GTP	O6-C6-C5	-2.09	120.29	124.37
36	FI	501	GTP	O6-C6-C5	-2.09	120.29	124.37
36	QC	501	GTP	O6-C6-C5	-2.09	120.29	124.37
36	RO	501	GTP	O6-C6-C5	-2.09	120.29	124.37
38	SH	502	GDP	O6-C6-C5	-2.08	120.30	124.37
36	KC	501	GTP	O6-C6-C5	-2.08	120.30	124.37
36	VG	501	GTP	O6-C6-C5	-2.08	120.30	124.37
36	IC	501	GTP	O6-C6-C5	-2.08	120.31	124.37
36	FG	501	GTP	O6-C6-C5	-2.08	120.31	124.37
38	SD	502	GDP	O6-C6-C5	-2.08	120.32	124.37
36	LI	501	GTP	O6-C6-C5	-2.08	120.32	124.37
36	IE	501	GTP	O6-C6-C5	-2.07	120.33	124.37
36	II	501	GTP	O6-C6-C5	-2.07	120.33	124.37
38	FD	502	GDP	O6-C6-C5	-2.07	120.33	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	VM	501	GTP	PA-O3A-PB	-2.07	125.72	132.83
36	GK	501	GTP	O6-C6-C5	-2.07	120.34	124.37
36	JG	501	GTP	O6-C6-C5	-2.06	120.34	124.37
36	TG	501	GTP	O6-C6-C5	-2.06	120.35	124.37
36	EG	501	GTP	O6-C6-C5	-2.06	120.35	124.37
38	EF	502	GDP	O6-C6-C5	-2.05	120.37	124.37
36	CE	501	GTP	O6-C6-C5	-2.05	120.38	124.37
36	GC	501	GTP	O6-C6-C5	-2.04	120.39	124.37
38	SL	502	GDP	O6-C6-C5	-2.03	120.40	124.37
38	FL	502	GDP	C3'-C2'-C1'	2.03	104.04	100.98
38	FN	502	GDP	O6-C6-C5	-2.03	120.42	124.37
36	SK	501	GTP	PA-O3A-PB	-2.02	125.88	132.83
38	RD	502	GDP	O6-C6-C5	-2.02	120.42	124.37
38	FH	502	GDP	O2B-PB-O3A	2.02	111.41	104.64
38	RF	502	GDP	C2'-C3'-C4'	2.02	106.56	102.64
36	IK	501	GTP	O6-C6-C5	-2.01	120.44	124.37
36	TM	501	GTP	O6-C6-C5	-2.01	120.46	124.37
38	EL	502	GDP	C3'-C2'-C1'	2.00	103.99	100.98
36	KI	501	GTP	O6-C6-C5	-2.00	120.46	124.37

There are no chirality outliers.

All (1035) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
36	AE	501	GTP	PB-O3A-PA-O5'
36	AG	501	GTP	C5'-O5'-PA-O1A
36	AK	501	GTP	C5'-O5'-PA-O3A
36	AK	501	GTP	C5'-O5'-PA-O1A
36	AM	501	GTP	PB-O3A-PA-O5'
36	AM	501	GTP	C5'-O5'-PA-O1A
36	BA	501	GTP	PB-O3A-PA-O5'
36	BC	501	GTP	C3'-C4'-C5'-O5'
36	BE	501	GTP	PB-O3A-PA-O5'
36	BE	501	GTP	O4'-C4'-C5'-O5'
36	BE	501	GTP	C3'-C4'-C5'-O5'
36	BG	501	GTP	PB-O3A-PA-O5'
36	BI	501	GTP	O4'-C4'-C5'-O5'
36	BI	501	GTP	C3'-C4'-C5'-O5'
36	BK	501	GTP	PB-O3A-PA-O5'
36	BM	501	GTP	PB-O3A-PA-O5'
36	CA	501	GTP	PB-O3A-PA-O5'
36	CA	501	GTP	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
36	CC	501	GTP	C5'-O5'-PA-O1A
36	CC	501	GTP	C5'-O5'-PA-O2A
36	CC	501	GTP	C3'-C4'-C5'-O5'
36	CE	501	GTP	C5'-O5'-PA-O3A
36	CE	501	GTP	C5'-O5'-PA-O1A
36	CG	501	GTP	C5'-O5'-PA-O1A
36	CG	501	GTP	C5'-O5'-PA-O2A
36	CG	501	GTP	O4'-C4'-C5'-O5'
36	CG	501	GTP	C3'-C4'-C5'-O5'
36	CI	501	GTP	C5'-O5'-PA-O1A
36	CK	501	GTP	PB-O3B-PG-O2G
36	CK	501	GTP	PB-O3B-PG-O3G
36	CK	501	GTP	PB-O3A-PA-O5'
36	CK	501	GTP	C5'-O5'-PA-O3A
36	CK	501	GTP	C5'-O5'-PA-O1A
36	CK	501	GTP	C5'-O5'-PA-O2A
36	CK	501	GTP	C3'-C4'-C5'-O5'
36	CM	501	GTP	O4'-C4'-C5'-O5'
36	CM	501	GTP	C3'-C4'-C5'-O5'
36	DA	501	GTP	C5'-O5'-PA-O1A
36	DC	501	GTP	C5'-O5'-PA-O1A
36	DC	501	GTP	C5'-O5'-PA-O2A
36	DE	501	GTP	C5'-O5'-PA-O3A
36	DE	501	GTP	C5'-O5'-PA-O2A
36	DG	501	GTP	C5'-O5'-PA-O1A
36	DG	501	GTP	C5'-O5'-PA-O2A
36	DI	501	GTP	C5'-O5'-PA-O3A
36	DK	501	GTP	C5'-O5'-PA-O3A
36	DM	501	GTP	C5'-O5'-PA-O3A
36	EC	501	GTP	C5'-O5'-PA-O1A
36	EC	501	GTP	C5'-O5'-PA-O2A
36	EE	501	GTP	C5'-O5'-PA-O3A
36	EE	501	GTP	C5'-O5'-PA-O2A
36	EG	501	GTP	C5'-O5'-PA-O3A
36	EI	501	GTP	C5'-O5'-PA-O1A
36	EI	501	GTP	C5'-O5'-PA-O2A
36	EK	501	GTP	C5'-O5'-PA-O3A
36	EK	501	GTP	C5'-O5'-PA-O2A
36	EM	501	GTP	C5'-O5'-PA-O3A
36	EM	501	GTP	C5'-O5'-PA-O2A
36	FC	501	GTP	C5'-O5'-PA-O3A
36	FC	501	GTP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
36	FE	501	GTP	C5'-O5'-PA-O3A
36	FE	501	GTP	C5'-O5'-PA-O2A
36	FG	501	GTP	C5'-O5'-PA-O3A
36	FI	501	GTP	C5'-O5'-PA-O3A
36	FK	501	GTP	PB-O3A-PA-O5'
36	FK	501	GTP	C5'-O5'-PA-O3A
36	FM	501	GTP	C5'-O5'-PA-O3A
36	GC	501	GTP	C3'-C4'-C5'-O5'
36	GE	501	GTP	PB-O3A-PA-O5'
36	GE	501	GTP	C5'-O5'-PA-O1A
36	GG	501	GTP	C5'-O5'-PA-O1A
36	GI	501	GTP	PB-O3A-PA-O5'
36	GK	501	GTP	PB-O3A-PA-O5'
36	GK	501	GTP	C5'-O5'-PA-O1A
36	GM	501	GTP	PB-O3A-PA-O5'
36	HC	501	GTP	C3'-C4'-C5'-O5'
36	HE	501	GTP	C3'-C4'-C5'-O5'
36	HG	501	GTP	O4'-C4'-C5'-O5'
36	HG	501	GTP	C3'-C4'-C5'-O5'
36	HI	501	GTP	C5'-O5'-PA-O1A
36	HK	501	GTP	O4'-C4'-C5'-O5'
36	HK	501	GTP	C3'-C4'-C5'-O5'
36	HM	501	GTP	O4'-C4'-C5'-O5'
36	HM	501	GTP	C3'-C4'-C5'-O5'
36	HO	501	GTP	PB-O3A-PA-O5'
36	HO	501	GTP	C5'-O5'-PA-O1A
36	HO	501	GTP	C5'-O5'-PA-O2A
36	HO	501	GTP	C3'-C4'-C5'-O5'
36	IC	501	GTP	O4'-C4'-C5'-O5'
36	IC	501	GTP	C3'-C4'-C5'-O5'
36	IE	501	GTP	O4'-C4'-C5'-O5'
36	IE	501	GTP	C3'-C4'-C5'-O5'
36	IG	501	GTP	C5'-O5'-PA-O1A
36	IG	501	GTP	C5'-O5'-PA-O2A
36	II	501	GTP	C5'-O5'-PA-O1A
36	IK	501	GTP	PB-O3A-PA-O5'
36	IK	501	GTP	C5'-O5'-PA-O1A
36	IM	501	GTP	C5'-O5'-PA-O1A
36	IM	501	GTP	C5'-O5'-PA-O2A
36	IO	501	GTP	C5'-O5'-PA-O3A
36	IO	501	GTP	C5'-O5'-PA-O1A
36	IO	501	GTP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
36	JC	501	GTP	C5'-O5'-PA-O3A
36	JC	501	GTP	C5'-O5'-PA-O2A
36	JE	501	GTP	C5'-O5'-PA-O3A
36	JE	501	GTP	C5'-O5'-PA-O1A
36	JK	501	GTP	C5'-O5'-PA-O3A
36	JK	501	GTP	C5'-O5'-PA-O2A
36	JM	501	GTP	C5'-O5'-PA-O1A
36	JM	501	GTP	C5'-O5'-PA-O2A
36	KC	501	GTP	C5'-O5'-PA-O3A
36	KC	501	GTP	C5'-O5'-PA-O2A
36	KE	501	GTP	C5'-O5'-PA-O3A
36	KE	501	GTP	C5'-O5'-PA-O1A
36	KE	501	GTP	C5'-O5'-PA-O2A
36	KG	501	GTP	C5'-O5'-PA-O3A
36	KG	501	GTP	C5'-O5'-PA-O1A
36	KG	501	GTP	C5'-O5'-PA-O2A
36	KI	501	GTP	C5'-O5'-PA-O1A
36	KI	501	GTP	C5'-O5'-PA-O2A
36	KK	501	GTP	C5'-O5'-PA-O1A
36	KK	501	GTP	C5'-O5'-PA-O2A
36	KM	501	GTP	C5'-O5'-PA-O1A
36	KM	501	GTP	C5'-O5'-PA-O2A
36	KO	501	GTP	C5'-O5'-PA-O1A
36	KO	501	GTP	C5'-O5'-PA-O2A
36	LC	501	GTP	C5'-O5'-PA-O1A
36	LC	501	GTP	C5'-O5'-PA-O2A
36	LE	501	GTP	C5'-O5'-PA-O3A
36	LE	501	GTP	C5'-O5'-PA-O2A
36	LG	501	GTP	C5'-O5'-PA-O1A
36	LG	501	GTP	C5'-O5'-PA-O2A
36	LI	501	GTP	C5'-O5'-PA-O3A
36	LI	501	GTP	C5'-O5'-PA-O1A
36	LI	501	GTP	C5'-O5'-PA-O2A
36	LK	501	GTP	C5'-O5'-PA-O3A
36	LK	501	GTP	C5'-O5'-PA-O1A
36	LK	501	GTP	C5'-O5'-PA-O2A
36	MC	501	GTP	C5'-O5'-PA-O3A
36	MC	501	GTP	C5'-O5'-PA-O2A
36	MG	501	GTP	C5'-O5'-PA-O3A
36	MG	501	GTP	C5'-O5'-PA-O2A
36	MI	501	GTP	C5'-O5'-PA-O3A
36	MI	501	GTP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
36	MK	501	GTP	C5'-O5'-PA-O3A
36	MM	501	GTP	C5'-O5'-PA-O3A
36	MM	501	GTP	C5'-O5'-PA-O2A
36	NE	501	GTP	PB-O3A-PA-O5'
36	NE	501	GTP	C3'-C4'-C5'-O5'
36	NG	501	GTP	PB-O3B-PG-O3G
36	NI	501	GTP	C5'-O5'-PA-O1A
36	NK	501	GTP	PB-O3A-PA-O5'
36	NM	501	GTP	PB-O3A-PA-O5'
36	OC	501	GTP	C5'-O5'-PA-O1A
36	OC	501	GTP	C3'-C4'-C5'-O5'
36	OE	501	GTP	PB-O3A-PA-O5'
36	OE	501	GTP	O4'-C4'-C5'-O5'
36	OE	501	GTP	C3'-C4'-C5'-O5'
36	OG	501	GTP	PB-O3A-PA-O5'
36	OI	501	GTP	C5'-O5'-PA-O3A
36	OI	501	GTP	C5'-O5'-PA-O2A
36	OK	501	GTP	O4'-C4'-C5'-O5'
36	OK	501	GTP	C3'-C4'-C5'-O5'
36	OM	501	GTP	C5'-O5'-PA-O3A
36	OM	501	GTP	C5'-O5'-PA-O2A
36	OM	501	GTP	C3'-C4'-C5'-O5'
36	OO	501	GTP	C5'-O5'-PA-O1A
36	OO	501	GTP	C5'-O5'-PA-O2A
36	PC	501	GTP	C5'-O5'-PA-O3A
36	PC	501	GTP	C5'-O5'-PA-O2A
36	PC	501	GTP	C3'-C4'-C5'-O5'
36	PE	501	GTP	PB-O3A-PA-O5'
36	PE	501	GTP	O4'-C4'-C5'-O5'
36	PE	501	GTP	C3'-C4'-C5'-O5'
36	PG	501	GTP	C5'-O5'-PA-O3A
36	PG	501	GTP	C5'-O5'-PA-O1A
36	PG	501	GTP	C5'-O5'-PA-O2A
36	PI	501	GTP	C5'-O5'-PA-O3A
36	PI	501	GTP	C5'-O5'-PA-O2A
36	PM	501	GTP	C5'-O5'-PA-O3A
36	PM	501	GTP	C5'-O5'-PA-O1A
36	PM	501	GTP	C5'-O5'-PA-O2A
36	PO	501	GTP	PB-O3A-PA-O5'
36	PO	501	GTP	O4'-C4'-C5'-O5'
36	PO	501	GTP	C3'-C4'-C5'-O5'
36	QC	501	GTP	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
36	QE	501	GTP	C5'-O5'-PA-O3A
36	QE	501	GTP	C3'-C4'-C5'-O5'
36	QG	501	GTP	C5'-O5'-PA-O1A
36	QG	501	GTP	C5'-O5'-PA-O2A
36	QI	501	GTP	C5'-O5'-PA-O3A
36	QI	501	GTP	C5'-O5'-PA-O1A
36	QI	501	GTP	C5'-O5'-PA-O2A
36	QK	501	GTP	C5'-O5'-PA-O3A
36	QK	501	GTP	O4'-C4'-C5'-O5'
36	QK	501	GTP	C3'-C4'-C5'-O5'
36	QM	501	GTP	PB-O3A-PA-O5'
36	QM	501	GTP	C5'-O5'-PA-O3A
36	QM	501	GTP	C5'-O5'-PA-O2A
36	QM	501	GTP	C3'-C4'-C5'-O5'
36	QO	501	GTP	C5'-O5'-PA-O1A
36	QO	501	GTP	C5'-O5'-PA-O2A
36	RC	501	GTP	C5'-O5'-PA-O3A
36	RC	501	GTP	C5'-O5'-PA-O2A
36	RE	501	GTP	C5'-O5'-PA-O3A
36	RE	501	GTP	C5'-O5'-PA-O2A
36	RG	501	GTP	C5'-O5'-PA-O3A
36	RG	501	GTP	C5'-O5'-PA-O2A
36	RM	501	GTP	C5'-O5'-PA-O1A
36	RM	501	GTP	C5'-O5'-PA-O2A
36	RO	501	GTP	C5'-O5'-PA-O3A
36	RO	501	GTP	C5'-O5'-PA-O2A
36	SE	501	GTP	C5'-O5'-PA-O3A
36	SG	501	GTP	C5'-O5'-PA-O3A
36	SG	501	GTP	C5'-O5'-PA-O1A
36	SG	501	GTP	C5'-O5'-PA-O2A
36	SI	501	GTP	C5'-O5'-PA-O3A
36	SK	501	GTP	C5'-O5'-PA-O3A
36	SM	501	GTP	C5'-O5'-PA-O3A
36	SO	501	GTP	C5'-O5'-PA-O1A
36	TE	501	GTP	C5'-O5'-PA-O1A
36	TG	501	GTP	C5'-O5'-PA-O3A
36	TG	501	GTP	C5'-O5'-PA-O2A
36	TK	501	GTP	PB-O3A-PA-O5'
36	UE	501	GTP	PB-O3A-PA-O5'
36	UI	501	GTP	C3'-C4'-C5'-O5'
36	UK	501	GTP	C5'-O5'-PA-O1A
36	UM	501	GTP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
36	UM	501	GTP	C5'-O5'-PA-O1A
36	UM	501	GTP	C5'-O5'-PA-O2A
36	UM	501	GTP	C3'-C4'-C5'-O5'
36	UO	501	GTP	PB-O3A-PA-O5'
36	VE	501	GTP	PB-O3A-PA-O5'
36	VG	501	GTP	C5'-O5'-PA-O1A
36	VG	501	GTP	C5'-O5'-PA-O2A
36	VG	501	GTP	O4'-C4'-C5'-O5'
36	VG	501	GTP	C3'-C4'-C5'-O5'
36	VI	501	GTP	C5'-O5'-PA-O1A
36	VI	501	GTP	C5'-O5'-PA-O2A
36	VI	501	GTP	O4'-C4'-C5'-O5'
36	VI	501	GTP	C3'-C4'-C5'-O5'
36	VK	501	GTP	O4'-C4'-C5'-O5'
36	VK	501	GTP	C3'-C4'-C5'-O5'
36	VM	501	GTP	C5'-O5'-PA-O3A
36	VM	501	GTP	C5'-O5'-PA-O2A
36	VM	501	GTP	C3'-C4'-C5'-O5'
36	VO	501	GTP	O4'-C4'-C5'-O5'
36	VO	501	GTP	C3'-C4'-C5'-O5'
36	WE	501	GTP	O4'-C4'-C5'-O5'
36	WE	501	GTP	C3'-C4'-C5'-O5'
36	WG	501	GTP	C5'-O5'-PA-O1A
36	WG	501	GTP	O4'-C4'-C5'-O5'
36	WG	501	GTP	C3'-C4'-C5'-O5'
36	WI	501	GTP	C5'-O5'-PA-O3A
36	WK	501	GTP	C5'-O5'-PA-O1A
36	WK	501	GTP	C5'-O5'-PA-O2A
36	WM	501	GTP	C5'-O5'-PA-O3A
36	WM	501	GTP	C5'-O5'-PA-O2A
36	WM	501	GTP	O4'-C4'-C5'-O5'
36	WM	501	GTP	C3'-C4'-C5'-O5'
36	WO	501	GTP	O4'-C4'-C5'-O5'
38	AB	502	GDP	C5'-O5'-PA-O1A
38	AJ	502	GDP	C5'-O5'-PA-O1A
38	BB	502	GDP	C5'-O5'-PA-O1A
38	BD	502	GDP	C5'-O5'-PA-O1A
38	BF	502	GDP	C5'-O5'-PA-O3A
38	BF	502	GDP	C5'-O5'-PA-O1A
38	BJ	502	GDP	PA-O3A-PB-O2B
38	BJ	502	GDP	C5'-O5'-PA-O1A
38	BL	502	GDP	C5'-O5'-PA-O1A

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Mol	Chain	Res	Type	Atoms
38	CB	502	GDP	C5'-O5'-PA-O1A
38	CF	502	GDP	C5'-O5'-PA-O1A
38	DH	502	GDP	C5'-O5'-PA-O1A
38	FB	502	GDP	C5'-O5'-PA-O1A
38	FD	502	GDP	C5'-O5'-PA-O1A
38	FD	502	GDP	C3'-C4'-C5'-O5'
38	GB	502	GDP	C5'-O5'-PA-O1A
38	GJ	502	GDP	C5'-O5'-PA-O1A
38	HL	502	GDP	C5'-O5'-PA-O1A
38	IB	502	GDP	C5'-O5'-PA-O1A
38	ID	502	GDP	C5'-O5'-PA-O1A
38	IF	502	GDP	C5'-O5'-PA-O3A
38	IF	502	GDP	C5'-O5'-PA-O1A
38	IH	502	GDP	C5'-O5'-PA-O1A
38	IJ	502	GDP	C5'-O5'-PA-O1A
38	IL	502	GDP	C5'-O5'-PA-O1A
38	IN	502	GDP	C5'-O5'-PA-O1A
38	JF	502	GDP	C5'-O5'-PA-O1A
38	KD	502	GDP	C5'-O5'-PA-O1A
38	KF	502	GDP	C5'-O5'-PA-O3A
38	KF	502	GDP	C5'-O5'-PA-O1A
38	KJ	502	GDP	C5'-O5'-PA-O1A
38	KL	502	GDP	C5'-O5'-PA-O1A
38	KN	502	GDP	C5'-O5'-PA-O1A
38	LD	502	GDP	C5'-O5'-PA-O1A
38	LH	502	GDP	C5'-O5'-PA-O1A
38	LH	502	GDP	C3'-C4'-C5'-O5'
38	LJ	502	GDP	C5'-O5'-PA-O1A
38	LL	502	GDP	C5'-O5'-PA-O1A
38	LN	502	GDP	C5'-O5'-PA-O3A
38	LN	502	GDP	C5'-O5'-PA-O1A
38	MH	502	GDP	C5'-O5'-PA-O1A
38	ML	502	GDP	C5'-O5'-PA-O3A
38	ML	502	GDP	C5'-O5'-PA-O1A
38	OB	502	GDP	C5'-O5'-PA-O3A
38	OB	502	GDP	C5'-O5'-PA-O1A
38	OD	502	GDP	C5'-O5'-PA-O3A
38	OD	502	GDP	C5'-O5'-PA-O1A
38	OF	502	GDP	C5'-O5'-PA-O1A
38	OF	502	GDP	O4'-C4'-C5'-O5'
38	OF	502	GDP	C3'-C4'-C5'-O5'
38	OH	502	GDP	C5'-O5'-PA-O1A

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Mol	Chain	Res	Type	Atoms
38	OJ	502	GDP	C5'-O5'-PA-O1A
38	OL	502	GDP	C5'-O5'-PA-O1A
38	ON	502	GDP	C5'-O5'-PA-O1A
38	PD	502	GDP	C5'-O5'-PA-O1A
38	PD	502	GDP	O4'-C4'-C5'-O5'
38	PD	502	GDP	C3'-C4'-C5'-O5'
38	PH	502	GDP	C5'-O5'-PA-O1A
38	PJ	502	GDP	C5'-O5'-PA-O1A
38	PL	502	GDP	C5'-O5'-PA-O1A
38	PN	502	GDP	C5'-O5'-PA-O3A
38	QD	502	GDP	C5'-O5'-PA-O1A
38	QH	502	GDP	C5'-O5'-PA-O1A
38	QJ	502	GDP	C5'-O5'-PA-O1A
38	QN	502	GDP	C5'-O5'-PA-O1A
38	SH	502	GDP	C5'-O5'-PA-O1A
38	SN	502	GDP	C5'-O5'-PA-O1A
38	TF	502	GDP	C5'-O5'-PA-O1A
38	TJ	502	GDP	C5'-O5'-PA-O1A
38	TL	502	GDP	C5'-O5'-PA-O3A
38	TN	502	GDP	C5'-O5'-PA-O1A
38	UD	502	GDP	C5'-O5'-PA-O1A
38	UF	502	GDP	C5'-O5'-PA-O1A
38	UJ	502	GDP	C5'-O5'-PA-O1A
38	UP	502	GDP	C5'-O5'-PA-O1A
38	VJ	502	GDP	C5'-O5'-PA-O1A
38	VL	502	GDP	C5'-O5'-PA-O1A
38	VN	502	GDP	C5'-O5'-PA-O1A
38	VP	502	GDP	C5'-O5'-PA-O1A
38	WD	502	GDP	C5'-O5'-PA-O1A
38	WF	502	GDP	C5'-O5'-PA-O3A
38	WF	502	GDP	C5'-O5'-PA-O1A
38	WH	502	GDP	C5'-O5'-PA-O1A
38	WJ	502	GDP	C5'-O5'-PA-O3A
38	WJ	502	GDP	C5'-O5'-PA-O1A
38	WL	502	GDP	C5'-O5'-PA-O1A
38	WN	502	GDP	C5'-O5'-PA-O3A
38	WN	502	GDP	C5'-O5'-PA-O1A
38	WP	502	GDP	C5'-O5'-PA-O1A
36	AC	501	GTP	C3'-C4'-C5'-O5'
36	AE	501	GTP	C3'-C4'-C5'-O5'
36	BC	501	GTP	O4'-C4'-C5'-O5'
36	BM	501	GTP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
36	BM	501	GTP	C3'-C4'-C5'-O5'
36	CA	501	GTP	O4'-C4'-C5'-O5'
36	CC	501	GTP	O4'-C4'-C5'-O5'
36	CK	501	GTP	O4'-C4'-C5'-O5'
36	GC	501	GTP	O4'-C4'-C5'-O5'
36	GI	501	GTP	C3'-C4'-C5'-O5'
36	HC	501	GTP	O4'-C4'-C5'-O5'
36	HE	501	GTP	O4'-C4'-C5'-O5'
36	HO	501	GTP	O4'-C4'-C5'-O5'
36	IK	501	GTP	C3'-C4'-C5'-O5'
36	NE	501	GTP	O4'-C4'-C5'-O5'
36	OC	501	GTP	O4'-C4'-C5'-O5'
36	OG	501	GTP	C3'-C4'-C5'-O5'
36	OM	501	GTP	O4'-C4'-C5'-O5'
36	OO	501	GTP	C3'-C4'-C5'-O5'
36	PC	501	GTP	O4'-C4'-C5'-O5'
36	PM	501	GTP	C3'-C4'-C5'-O5'
36	QC	501	GTP	O4'-C4'-C5'-O5'
36	QE	501	GTP	O4'-C4'-C5'-O5'
36	QM	501	GTP	O4'-C4'-C5'-O5'
36	UI	501	GTP	O4'-C4'-C5'-O5'
36	UM	501	GTP	O4'-C4'-C5'-O5'
36	VE	501	GTP	O4'-C4'-C5'-O5'
36	VE	501	GTP	C3'-C4'-C5'-O5'
36	VM	501	GTP	O4'-C4'-C5'-O5'
36	WO	501	GTP	C3'-C4'-C5'-O5'
38	FD	502	GDP	O4'-C4'-C5'-O5'
38	LH	502	GDP	O4'-C4'-C5'-O5'
38	ML	502	GDP	C3'-C4'-C5'-O5'
38	QD	502	GDP	C3'-C4'-C5'-O5'
38	TL	502	GDP	O4'-C4'-C5'-O5'
38	TL	502	GDP	C3'-C4'-C5'-O5'
38	TN	502	GDP	C3'-C4'-C5'-O5'
36	DI	501	GTP	C4'-C5'-O5'-PA
36	WI	501	GTP	C4'-C5'-O5'-PA
36	AC	501	GTP	O4'-C4'-C5'-O5'
36	AE	501	GTP	O4'-C4'-C5'-O5'
36	BA	501	GTP	O4'-C4'-C5'-O5'
36	BA	501	GTP	C3'-C4'-C5'-O5'
36	CE	501	GTP	O4'-C4'-C5'-O5'
36	CE	501	GTP	C3'-C4'-C5'-O5'
36	GI	501	GTP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
36	IK	501	GTP	O4'-C4'-C5'-O5'
36	OG	501	GTP	O4'-C4'-C5'-O5'
36	OO	501	GTP	O4'-C4'-C5'-O5'
36	PK	501	GTP	O4'-C4'-C5'-O5'
36	PK	501	GTP	C3'-C4'-C5'-O5'
36	PM	501	GTP	O4'-C4'-C5'-O5'
38	FH	502	GDP	O4'-C4'-C5'-O5'
38	FH	502	GDP	C3'-C4'-C5'-O5'
38	ML	502	GDP	O4'-C4'-C5'-O5'
38	QD	502	GDP	O4'-C4'-C5'-O5'
38	TN	502	GDP	O4'-C4'-C5'-O5'
36	FI	501	GTP	C4'-C5'-O5'-PA
36	NG	501	GTP	O4'-C4'-C5'-O5'
36	NG	501	GTP	C3'-C4'-C5'-O5'
38	OB	502	GDP	C3'-C4'-C5'-O5'
36	AA	501	GTP	C3'-C4'-C5'-O5'
36	BG	501	GTP	C3'-C4'-C5'-O5'
36	CI	501	GTP	C3'-C4'-C5'-O5'
36	DG	501	GTP	C3'-C4'-C5'-O5'
36	IO	501	GTP	C3'-C4'-C5'-O5'
36	NC	501	GTP	C3'-C4'-C5'-O5'
36	NK	501	GTP	C3'-C4'-C5'-O5'
38	LD	502	GDP	C3'-C4'-C5'-O5'
38	QN	502	GDP	C3'-C4'-C5'-O5'
38	SN	502	GDP	C3'-C4'-C5'-O5'
38	TD	502	GDP	C3'-C4'-C5'-O5'
36	AA	501	GTP	O4'-C4'-C5'-O5'
36	BG	501	GTP	O4'-C4'-C5'-O5'
36	BK	501	GTP	C3'-C4'-C5'-O5'
36	DG	501	GTP	O4'-C4'-C5'-O5'
36	HI	501	GTP	C3'-C4'-C5'-O5'
36	IM	501	GTP	C3'-C4'-C5'-O5'
36	IO	501	GTP	O4'-C4'-C5'-O5'
36	LE	501	GTP	C3'-C4'-C5'-O5'
36	NK	501	GTP	O4'-C4'-C5'-O5'
36	NM	501	GTP	C3'-C4'-C5'-O5'
36	QO	501	GTP	C3'-C4'-C5'-O5'
36	RK	501	GTP	C3'-C4'-C5'-O5'
36	UO	501	GTP	C3'-C4'-C5'-O5'
38	ED	502	GDP	C3'-C4'-C5'-O5'
38	GJ	502	GDP	C3'-C4'-C5'-O5'
38	LD	502	GDP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
38	OB	502	GDP	O4'-C4'-C5'-O5'
38	PH	502	GDP	C3'-C4'-C5'-O5'
38	SN	502	GDP	O4'-C4'-C5'-O5'
38	TD	502	GDP	O4'-C4'-C5'-O5'
38	WD	502	GDP	C3'-C4'-C5'-O5'
36	DK	501	GTP	C4'-C5'-O5'-PA
36	OI	501	GTP	C4'-C5'-O5'-PA
36	LC	501	GTP	C3'-C4'-C5'-O5'
36	LM	501	GTP	C3'-C4'-C5'-O5'
36	NC	501	GTP	O4'-C4'-C5'-O5'
36	QI	501	GTP	C3'-C4'-C5'-O5'
38	GD	502	GDP	C3'-C4'-C5'-O5'
38	ON	502	GDP	C3'-C4'-C5'-O5'
38	TJ	502	GDP	C3'-C4'-C5'-O5'
38	BF	502	GDP	PA-O3A-PB-O1B
38	BH	502	GDP	PA-O3A-PB-O1B
38	BJ	502	GDP	PA-O3A-PB-O1B
36	SK	501	GTP	C4'-C5'-O5'-PA
36	DA	501	GTP	PB-O3A-PA-O1A
36	DG	501	GTP	PB-O3A-PA-O1A
36	FE	501	GTP	PA-O3A-PB-O1B
36	FI	501	GTP	PB-O3A-PA-O1A
36	HI	501	GTP	PB-O3A-PA-O1A
36	QE	501	GTP	PA-O3A-PB-O1B
36	QK	501	GTP	PA-O3A-PB-O1B
36	QK	501	GTP	PB-O3A-PA-O1A
36	TE	501	GTP	PA-O3A-PB-O1B
36	WG	501	GTP	PB-O3A-PA-O1A
36	AI	501	GTP	C3'-C4'-C5'-O5'
38	KB	502	GDP	C3'-C4'-C5'-O5'
38	QL	502	GDP	C3'-C4'-C5'-O5'
36	FM	501	GTP	C4'-C5'-O5'-PA
36	CI	501	GTP	O4'-C4'-C5'-O5'
36	HI	501	GTP	O4'-C4'-C5'-O5'
36	LE	501	GTP	O4'-C4'-C5'-O5'
38	ED	502	GDP	O4'-C4'-C5'-O5'
38	QN	502	GDP	O4'-C4'-C5'-O5'
36	CI	501	GTP	C4'-C5'-O5'-PA
36	CK	501	GTP	C4'-C5'-O5'-PA
36	DC	501	GTP	C4'-C5'-O5'-PA
36	HI	501	GTP	C4'-C5'-O5'-PA
36	HO	501	GTP	C4'-C5'-O5'-PA

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Mol	Chain	Res	Type	Atoms
36	II	501	GTP	C4'-C5'-O5'-PA
36	IM	501	GTP	C4'-C5'-O5'-PA
36	JG	501	GTP	C4'-C5'-O5'-PA
36	JK	501	GTP	C4'-C5'-O5'-PA
36	LI	501	GTP	C4'-C5'-O5'-PA
36	LK	501	GTP	C4'-C5'-O5'-PA
36	MC	501	GTP	C4'-C5'-O5'-PA
36	OC	501	GTP	C4'-C5'-O5'-PA
36	PI	501	GTP	C4'-C5'-O5'-PA
36	QE	501	GTP	C4'-C5'-O5'-PA
36	QK	501	GTP	C4'-C5'-O5'-PA
36	SM	501	GTP	C4'-C5'-O5'-PA
36	TE	501	GTP	C4'-C5'-O5'-PA
36	WE	501	GTP	C4'-C5'-O5'-PA
36	WK	501	GTP	C4'-C5'-O5'-PA
36	WO	501	GTP	C4'-C5'-O5'-PA
36	AA	501	GTP	PB-O3A-PA-O5'
36	AC	501	GTP	PB-O3A-PA-O5'
36	AG	501	GTP	PB-O3A-PA-O5'
36	AI	501	GTP	PB-O3A-PA-O5'
36	AK	501	GTP	PB-O3A-PA-O5'
36	BC	501	GTP	PB-O3A-PA-O5'
36	BI	501	GTP	PB-O3A-PA-O5'
36	CC	501	GTP	PB-O3A-PA-O5'
36	GC	501	GTP	PB-O3A-PA-O5'
36	GG	501	GTP	PB-O3A-PA-O5'
36	HC	501	GTP	PB-O3A-PA-O5'
36	HE	501	GTP	PB-O3A-PA-O5'
36	HG	501	GTP	PB-O3A-PA-O5'
36	HK	501	GTP	PB-O3A-PA-O5'
36	HM	501	GTP	PB-O3A-PA-O5'
36	IC	501	GTP	PB-O3A-PA-O5'
36	IE	501	GTP	PB-O3A-PA-O5'
36	KE	501	GTP	PB-O3A-PA-O5'
36	LE	501	GTP	PB-O3A-PA-O5'
36	LM	501	GTP	PB-O3A-PA-O5'
36	ME	501	GTP	PB-O3A-PA-O5'
36	MM	501	GTP	PB-O3A-PA-O5'
36	NC	501	GTP	PB-O3A-PA-O5'
36	NG	501	GTP	PB-O3A-PA-O5'
36	NI	501	GTP	PB-O3A-PA-O5'
36	OK	501	GTP	PB-O3A-PA-O5'

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Mol	Chain	Res	Type	Atoms
36	OM	501	GTP	PB-O3A-PA-O5'
36	PC	501	GTP	PB-O3A-PA-O5'
36	PK	501	GTP	PB-O3A-PA-O5'
36	QE	501	GTP	PB-O3A-PA-O5'
36	QK	501	GTP	PB-O3A-PA-O5'
36	SO	501	GTP	PB-O3A-PA-O5'
36	TE	501	GTP	PB-O3A-PA-O5'
36	TI	501	GTP	PB-O3A-PA-O5'
36	TM	501	GTP	PB-O3A-PA-O5'
36	TO	501	GTP	PB-O3A-PA-O5'
36	UG	501	GTP	PB-O3A-PA-O5'
36	UI	501	GTP	PB-O3A-PA-O5'
36	UK	501	GTP	PB-O3A-PA-O5'
36	UM	501	GTP	PB-O3A-PA-O5'
36	VG	501	GTP	PB-O3A-PA-O5'
36	VK	501	GTP	PB-O3A-PA-O5'
36	VM	501	GTP	PB-O3A-PA-O5'
36	VO	501	GTP	PB-O3A-PA-O5'
36	WE	501	GTP	PB-O3A-PA-O5'
36	WM	501	GTP	PB-O3A-PA-O5'
36	QO	501	GTP	O4'-C4'-C5'-O5'
36	UO	501	GTP	O4'-C4'-C5'-O5'
38	GJ	502	GDP	O4'-C4'-C5'-O5'
36	DM	501	GTP	C4'-C5'-O5'-PA
36	EG	501	GTP	C4'-C5'-O5'-PA
36	KE	501	GTP	C4'-C5'-O5'-PA
36	KG	501	GTP	C4'-C5'-O5'-PA
36	KK	501	GTP	C4'-C5'-O5'-PA
36	LG	501	GTP	C4'-C5'-O5'-PA
36	OO	501	GTP	C4'-C5'-O5'-PA
36	RK	501	GTP	C4'-C5'-O5'-PA
36	SI	501	GTP	C4'-C5'-O5'-PA
36	UM	501	GTP	C4'-C5'-O5'-PA
36	VK	501	GTP	C4'-C5'-O5'-PA
36	WG	501	GTP	C4'-C5'-O5'-PA
38	BH	502	GDP	PA-O3A-PB-O2B
36	CI	501	GTP	C5'-O5'-PA-O3A
36	DA	501	GTP	C5'-O5'-PA-O3A
36	EI	501	GTP	C5'-O5'-PA-O3A
36	HI	501	GTP	C5'-O5'-PA-O3A
36	II	501	GTP	C5'-O5'-PA-O3A
36	OC	501	GTP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
36	QG	501	GTP	C5'-O5'-PA-O3A
36	RI	501	GTP	C5'-O5'-PA-O3A
36	SO	501	GTP	C5'-O5'-PA-O3A
36	WG	501	GTP	C5'-O5'-PA-O3A
38	BJ	502	GDP	C5'-O5'-PA-O3A
38	LH	502	GDP	C5'-O5'-PA-O3A
38	LJ	502	GDP	C5'-O5'-PA-O3A
38	QD	502	GDP	C5'-O5'-PA-O3A
38	UJ	502	GDP	C5'-O5'-PA-O3A
36	BK	501	GTP	O4'-C4'-C5'-O5'
36	KK	501	GTP	C3'-C4'-C5'-O5'
36	LM	501	GTP	O4'-C4'-C5'-O5'
36	NM	501	GTP	O4'-C4'-C5'-O5'
36	PG	501	GTP	C3'-C4'-C5'-O5'
36	TK	501	GTP	C3'-C4'-C5'-O5'
38	OL	502	GDP	C3'-C4'-C5'-O5'
38	PH	502	GDP	O4'-C4'-C5'-O5'
38	TH	502	GDP	C3'-C4'-C5'-O5'
36	CC	501	GTP	PA-O3A-PB-O2B
36	CI	501	GTP	PB-O3A-PA-O2A
36	EE	501	GTP	PB-O3A-PA-O2A
36	EG	501	GTP	PB-O3A-PA-O2A
36	EI	501	GTP	PB-O3A-PA-O2A
36	FK	501	GTP	PA-O3A-PB-O1B
36	IM	501	GTP	PB-O3A-PA-O2A
36	KG	501	GTP	PA-O3A-PB-O2B
36	KK	501	GTP	PA-O3A-PB-O2B
36	KO	501	GTP	PA-O3A-PB-O2B
36	LC	501	GTP	PA-O3A-PB-O2B
36	MI	501	GTP	PA-O3A-PB-O2B
36	MK	501	GTP	PA-O3A-PB-O2B
36	OM	501	GTP	PA-O3A-PB-O2B
36	OO	501	GTP	PA-O3A-PB-O2B
36	QG	501	GTP	PB-O3A-PA-O2A
36	QO	501	GTP	PA-O3A-PB-O2B
36	SM	501	GTP	PA-O3A-PB-O2B
36	TG	501	GTP	PA-O3A-PB-O2B
36	UM	501	GTP	PB-O3A-PA-O1A
36	VM	501	GTP	PA-O3A-PB-O2B
36	WM	501	GTP	PA-O3A-PB-O2B
36	CC	501	GTP	C4'-C5'-O5'-PA
36	CG	501	GTP	C4'-C5'-O5'-PA

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Mol	Chain	Res	Type	Atoms
36	CM	501	GTP	C4'-C5'-O5'-PA
36	DA	501	GTP	C4'-C5'-O5'-PA
36	EC	501	GTP	C4'-C5'-O5'-PA
36	EE	501	GTP	C4'-C5'-O5'-PA
36	EI	501	GTP	C4'-C5'-O5'-PA
36	FC	501	GTP	C4'-C5'-O5'-PA
36	FE	501	GTP	C4'-C5'-O5'-PA
36	FG	501	GTP	C4'-C5'-O5'-PA
36	HG	501	GTP	C4'-C5'-O5'-PA
36	IG	501	GTP	C4'-C5'-O5'-PA
36	IO	501	GTP	C4'-C5'-O5'-PA
36	JC	501	GTP	C4'-C5'-O5'-PA
36	KC	501	GTP	C4'-C5'-O5'-PA
36	KI	501	GTP	C4'-C5'-O5'-PA
36	KM	501	GTP	C4'-C5'-O5'-PA
36	KO	501	GTP	C4'-C5'-O5'-PA
36	LC	501	GTP	C4'-C5'-O5'-PA
36	LE	501	GTP	C4'-C5'-O5'-PA
36	MG	501	GTP	C4'-C5'-O5'-PA
36	MI	501	GTP	C4'-C5'-O5'-PA
36	MK	501	GTP	C4'-C5'-O5'-PA
36	MM	501	GTP	C4'-C5'-O5'-PA
36	OK	501	GTP	C4'-C5'-O5'-PA
36	OM	501	GTP	C4'-C5'-O5'-PA
36	PC	501	GTP	C4'-C5'-O5'-PA
36	PM	501	GTP	C4'-C5'-O5'-PA
36	QG	501	GTP	C4'-C5'-O5'-PA
36	QI	501	GTP	C4'-C5'-O5'-PA
36	QM	501	GTP	C4'-C5'-O5'-PA
36	QO	501	GTP	C4'-C5'-O5'-PA
36	RC	501	GTP	C4'-C5'-O5'-PA
36	RG	501	GTP	C4'-C5'-O5'-PA
36	RO	501	GTP	C4'-C5'-O5'-PA
36	SE	501	GTP	C4'-C5'-O5'-PA
36	SG	501	GTP	C4'-C5'-O5'-PA
36	TG	501	GTP	C4'-C5'-O5'-PA
36	UK	501	GTP	C4'-C5'-O5'-PA
36	VI	501	GTP	C4'-C5'-O5'-PA
36	VM	501	GTP	C4'-C5'-O5'-PA
36	WM	501	GTP	C4'-C5'-O5'-PA
36	CI	501	GTP	C5'-O5'-PA-O2A
36	DA	501	GTP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
36	DE	501	GTP	C5'-O5'-PA-O1A
36	DI	501	GTP	C5'-O5'-PA-O2A
36	DK	501	GTP	C5'-O5'-PA-O2A
36	DM	501	GTP	C5'-O5'-PA-O2A
36	EG	501	GTP	C5'-O5'-PA-O2A
36	EK	501	GTP	C5'-O5'-PA-O1A
36	FG	501	GTP	C5'-O5'-PA-O2A
36	FI	501	GTP	C5'-O5'-PA-O2A
36	FK	501	GTP	C5'-O5'-PA-O1A
36	FM	501	GTP	C5'-O5'-PA-O2A
36	HI	501	GTP	C5'-O5'-PA-O2A
36	II	501	GTP	C5'-O5'-PA-O2A
36	MK	501	GTP	C5'-O5'-PA-O2A
36	OC	501	GTP	C5'-O5'-PA-O2A
36	QE	501	GTP	C5'-O5'-PA-O2A
36	QK	501	GTP	C5'-O5'-PA-O2A
36	SE	501	GTP	C5'-O5'-PA-O2A
36	SI	501	GTP	C5'-O5'-PA-O2A
36	SK	501	GTP	C5'-O5'-PA-O2A
36	SM	501	GTP	C5'-O5'-PA-O2A
36	WG	501	GTP	C5'-O5'-PA-O2A
38	HN	502	GDP	C5'-O5'-PA-O1A
38	KB	502	GDP	C5'-O5'-PA-O1A
38	PN	502	GDP	C5'-O5'-PA-O1A
38	QF	502	GDP	C5'-O5'-PA-O1A
38	TL	502	GDP	C5'-O5'-PA-O1A
36	GE	501	GTP	C3'-C4'-C5'-O5'
36	GM	501	GTP	C3'-C4'-C5'-O5'
36	KO	501	GTP	C3'-C4'-C5'-O5'
36	ME	501	GTP	C3'-C4'-C5'-O5'
36	UG	501	GTP	C3'-C4'-C5'-O5'
38	FL	502	GDP	C3'-C4'-C5'-O5'
38	GB	502	GDP	C3'-C4'-C5'-O5'
38	LN	502	GDP	C3'-C4'-C5'-O5'
38	MJ	502	GDP	C3'-C4'-C5'-O5'
38	QH	502	GDP	C3'-C4'-C5'-O5'
38	SH	502	GDP	C3'-C4'-C5'-O5'
36	BK	501	GTP	C4'-C5'-O5'-PA
36	CA	501	GTP	C4'-C5'-O5'-PA
36	GE	501	GTP	C4'-C5'-O5'-PA
36	GK	501	GTP	C4'-C5'-O5'-PA
36	HE	501	GTP	C4'-C5'-O5'-PA

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Mol	Chain	Res	Type	Atoms
36	JI	501	GTP	C4'-C5'-O5'-PA
36	PG	501	GTP	C4'-C5'-O5'-PA
36	RI	501	GTP	C4'-C5'-O5'-PA
36	TK	501	GTP	C4'-C5'-O5'-PA
36	VE	501	GTP	C4'-C5'-O5'-PA
36	VG	501	GTP	C4'-C5'-O5'-PA
36	IM	501	GTP	O4'-C4'-C5'-O5'
36	LC	501	GTP	O4'-C4'-C5'-O5'
36	QI	501	GTP	O4'-C4'-C5'-O5'
36	RC	501	GTP	C3'-C4'-C5'-O5'
36	UE	501	GTP	C3'-C4'-C5'-O5'
38	GD	502	GDP	O4'-C4'-C5'-O5'
38	JN	502	GDP	C3'-C4'-C5'-O5'
38	ON	502	GDP	O4'-C4'-C5'-O5'
38	PF	502	GDP	C3'-C4'-C5'-O5'
38	TJ	502	GDP	O4'-C4'-C5'-O5'
38	WD	502	GDP	O4'-C4'-C5'-O5'
38	VN	502	GDP	PA-O3A-PB-O1B
36	AK	501	GTP	C4'-C5'-O5'-PA
36	BG	501	GTP	C4'-C5'-O5'-PA
36	EK	501	GTP	C4'-C5'-O5'-PA
36	EM	501	GTP	C4'-C5'-O5'-PA
36	HK	501	GTP	C4'-C5'-O5'-PA
36	IC	501	GTP	C4'-C5'-O5'-PA
36	IE	501	GTP	C4'-C5'-O5'-PA
36	NI	501	GTP	C4'-C5'-O5'-PA
36	NK	501	GTP	C4'-C5'-O5'-PA
36	PO	501	GTP	C4'-C5'-O5'-PA
36	UE	501	GTP	C4'-C5'-O5'-PA
36	UO	501	GTP	C4'-C5'-O5'-PA
36	VO	501	GTP	C4'-C5'-O5'-PA
36	GK	501	GTP	C3'-C4'-C5'-O5'
36	RK	501	GTP	O4'-C4'-C5'-O5'
36	TK	501	GTP	O4'-C4'-C5'-O5'
38	KB	502	GDP	O4'-C4'-C5'-O5'
38	LL	502	GDP	C3'-C4'-C5'-O5'
38	QL	502	GDP	O4'-C4'-C5'-O5'
36	CK	501	GTP	PA-O3A-PB-O2B
36	EC	501	GTP	PB-O3A-PA-O2A
36	FC	501	GTP	PA-O3A-PB-O1B
36	FG	501	GTP	PA-O3A-PB-O2B
36	FI	501	GTP	PA-O3A-PB-O1B

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Atoms</b>
36	FM	501	GTP	PA-O3A-PB-O1B
36	GE	501	GTP	PA-O3A-PB-O1B
36	HO	501	GTP	PA-O3A-PB-O2B
36	IG	501	GTP	PB-O3A-PA-O2A
36	JC	501	GTP	PA-O3A-PB-O2B
36	JM	501	GTP	PB-O3A-PA-O2A
36	KC	501	GTP	PA-O3A-PB-O2B
36	KE	501	GTP	PA-O3A-PB-O2B
36	KI	501	GTP	PA-O3A-PB-O2B
36	KM	501	GTP	PA-O3A-PB-O2B
36	LE	501	GTP	PA-O3A-PB-O1B
36	LG	501	GTP	PA-O3A-PB-O2B
36	LI	501	GTP	PA-O3A-PB-O2B
36	LK	501	GTP	PA-O3A-PB-O2B
36	MC	501	GTP	PA-O3A-PB-O2B
36	MG	501	GTP	PA-O3A-PB-O2B
36	MM	501	GTP	PA-O3A-PB-O2B
36	PC	501	GTP	PA-O3A-PB-O2B
36	PG	501	GTP	PA-O3A-PB-O2B
36	QM	501	GTP	PA-O3A-PB-O2B
36	RC	501	GTP	PA-O3A-PB-O2B
36	RM	501	GTP	PB-O3A-PA-O2A
36	SE	501	GTP	PA-O3A-PB-O2B
36	SG	501	GTP	PA-O3A-PB-O2B
36	SI	501	GTP	PA-O3A-PB-O1B
36	SK	501	GTP	PA-O3A-PB-O2B
36	WK	501	GTP	PB-O3A-PA-O2A
36	AG	501	GTP	C4'-C5'-O5'-PA
36	BA	501	GTP	C4'-C5'-O5'-PA
36	BE	501	GTP	C4'-C5'-O5'-PA
36	FK	501	GTP	C4'-C5'-O5'-PA
36	GC	501	GTP	C4'-C5'-O5'-PA
36	GG	501	GTP	C4'-C5'-O5'-PA
36	HM	501	GTP	C4'-C5'-O5'-PA
36	LM	501	GTP	C4'-C5'-O5'-PA
36	NG	501	GTP	C4'-C5'-O5'-PA
36	NM	501	GTP	C4'-C5'-O5'-PA
36	OE	501	GTP	C4'-C5'-O5'-PA
36	TO	501	GTP	C4'-C5'-O5'-PA
36	UG	501	GTP	C4'-C5'-O5'-PA
36	UI	501	GTP	C4'-C5'-O5'-PA
36	JI	501	GTP	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
38	JD	502	GDP	C3'-C4'-C5'-O5'
38	OJ	502	GDP	C3'-C4'-C5'-O5'
36	AA	501	GTP	C4'-C5'-O5'-PA
36	AC	501	GTP	C4'-C5'-O5'-PA
36	BM	501	GTP	C4'-C5'-O5'-PA
36	GI	501	GTP	C4'-C5'-O5'-PA
36	HC	501	GTP	C4'-C5'-O5'-PA
36	IK	501	GTP	C4'-C5'-O5'-PA
36	NC	501	GTP	C4'-C5'-O5'-PA
36	PK	501	GTP	C4'-C5'-O5'-PA
36	TI	501	GTP	C4'-C5'-O5'-PA
36	AG	501	GTP	C3'-C4'-C5'-O5'
36	TM	501	GTP	C3'-C4'-C5'-O5'
38	AJ	502	GDP	C3'-C4'-C5'-O5'
36	AM	501	GTP	C4'-C5'-O5'-PA
36	GM	501	GTP	C4'-C5'-O5'-PA
36	NE	501	GTP	C4'-C5'-O5'-PA
36	PE	501	GTP	C4'-C5'-O5'-PA
36	AI	501	GTP	O4'-C4'-C5'-O5'
38	LB	502	GDP	C3'-C4'-C5'-O5'
38	WN	502	GDP	C3'-C4'-C5'-O5'
36	EM	501	GTP	PB-O3A-PA-O2A
36	HO	501	GTP	PA-O3A-PB-O1B
36	QE	501	GTP	PB-O3A-PA-O1A
36	QK	501	GTP	PA-O3A-PB-O2B
36	QM	501	GTP	PA-O3A-PB-O1B
36	RO	501	GTP	PA-O3A-PB-O2B
36	RO	501	GTP	PB-O3A-PA-O1A
36	SE	501	GTP	PA-O3A-PB-O1B
36	SK	501	GTP	PB-O3A-PA-O1A
36	VG	501	GTP	PA-O3A-PB-O2B
36	GM	501	GTP	O4'-C4'-C5'-O5'
36	IG	501	GTP	C3'-C4'-C5'-O5'
36	KK	501	GTP	O4'-C4'-C5'-O5'
36	KO	501	GTP	O4'-C4'-C5'-O5'
36	PG	501	GTP	O4'-C4'-C5'-O5'
38	FF	502	GDP	C3'-C4'-C5'-O5'
38	FL	502	GDP	O4'-C4'-C5'-O5'
38	GB	502	GDP	O4'-C4'-C5'-O5'
38	KN	502	GDP	C3'-C4'-C5'-O5'
38	MJ	502	GDP	O4'-C4'-C5'-O5'
38	OL	502	GDP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
38	SD	502	GDP	C3'-C4'-C5'-O5'
38	TH	502	GDP	O4'-C4'-C5'-O5'
36	QC	501	GTP	PB-O3A-PA-O5'
36	BC	501	GTP	C4'-C5'-O5'-PA
36	BI	501	GTP	C4'-C5'-O5'-PA
36	ME	501	GTP	C4'-C5'-O5'-PA
36	OG	501	GTP	C4'-C5'-O5'-PA
36	DA	501	GTP	C3'-C4'-C5'-O5'
36	GE	501	GTP	O4'-C4'-C5'-O5'
36	ME	501	GTP	O4'-C4'-C5'-O5'
36	UE	501	GTP	O4'-C4'-C5'-O5'
36	UG	501	GTP	O4'-C4'-C5'-O5'
38	CD	502	GDP	C3'-C4'-C5'-O5'
38	KJ	502	GDP	C3'-C4'-C5'-O5'
38	MD	502	GDP	C3'-C4'-C5'-O5'
38	QH	502	GDP	O4'-C4'-C5'-O5'
38	SH	502	GDP	O4'-C4'-C5'-O5'
38	BL	502	GDP	PA-O3A-PB-O1B
36	AI	501	GTP	C4'-C5'-O5'-PA
36	RM	501	GTP	C4'-C5'-O5'-PA
36	RC	501	GTP	O4'-C4'-C5'-O5'
36	TO	501	GTP	C3'-C4'-C5'-O5'
38	CL	502	GDP	C3'-C4'-C5'-O5'
38	EH	502	GDP	C3'-C4'-C5'-O5'
38	EL	502	GDP	C3'-C4'-C5'-O5'
38	QF	502	GDP	C3'-C4'-C5'-O5'
36	AM	501	GTP	C5'-O5'-PA-O3A
36	CC	501	GTP	C5'-O5'-PA-O3A
36	CG	501	GTP	C5'-O5'-PA-O3A
36	DC	501	GTP	C5'-O5'-PA-O3A
36	DG	501	GTP	C5'-O5'-PA-O3A
36	EC	501	GTP	C5'-O5'-PA-O3A
36	GC	501	GTP	C5'-O5'-PA-O3A
36	GG	501	GTP	C5'-O5'-PA-O3A
36	HO	501	GTP	C5'-O5'-PA-O3A
36	IG	501	GTP	C5'-O5'-PA-O3A
36	IM	501	GTP	C5'-O5'-PA-O3A
36	JG	501	GTP	C5'-O5'-PA-O3A
36	JM	501	GTP	C5'-O5'-PA-O3A
36	KI	501	GTP	C5'-O5'-PA-O3A
36	KK	501	GTP	C5'-O5'-PA-O3A
36	KM	501	GTP	C5'-O5'-PA-O3A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Atoms</b>
36	KO	501	GTP	C5'-O5'-PA-O3A
36	LC	501	GTP	C5'-O5'-PA-O3A
36	LG	501	GTP	C5'-O5'-PA-O3A
36	NI	501	GTP	C5'-O5'-PA-O3A
36	OO	501	GTP	C5'-O5'-PA-O3A
36	PE	501	GTP	C5'-O5'-PA-O3A
36	QO	501	GTP	C5'-O5'-PA-O3A
36	RM	501	GTP	C5'-O5'-PA-O3A
36	UI	501	GTP	C5'-O5'-PA-O3A
36	VG	501	GTP	C5'-O5'-PA-O3A
36	VI	501	GTP	C5'-O5'-PA-O3A
36	WK	501	GTP	C5'-O5'-PA-O3A
38	CB	502	GDP	C5'-O5'-PA-O3A
38	DH	502	GDP	C5'-O5'-PA-O3A
38	FD	502	GDP	C5'-O5'-PA-O3A
38	GJ	502	GDP	C5'-O5'-PA-O3A
38	ID	502	GDP	C5'-O5'-PA-O3A
38	IH	502	GDP	C5'-O5'-PA-O3A
38	IL	502	GDP	C5'-O5'-PA-O3A
38	KD	502	GDP	C5'-O5'-PA-O3A
38	KJ	502	GDP	C5'-O5'-PA-O3A
38	KN	502	GDP	C5'-O5'-PA-O3A
38	LD	502	GDP	C5'-O5'-PA-O3A
38	LL	502	GDP	C5'-O5'-PA-O3A
38	OL	502	GDP	C5'-O5'-PA-O3A
38	PD	502	GDP	C5'-O5'-PA-O3A
38	PJ	502	GDP	C5'-O5'-PA-O3A
38	PL	502	GDP	C5'-O5'-PA-O3A
38	QH	502	GDP	C5'-O5'-PA-O3A
38	QJ	502	GDP	C5'-O5'-PA-O3A
38	QN	502	GDP	C5'-O5'-PA-O3A
38	SH	502	GDP	C5'-O5'-PA-O3A
38	TN	502	GDP	C5'-O5'-PA-O3A
38	UF	502	GDP	C5'-O5'-PA-O3A
38	VJ	502	GDP	C5'-O5'-PA-O3A
38	VN	502	GDP	C5'-O5'-PA-O3A
38	WD	502	GDP	C5'-O5'-PA-O3A
38	WH	502	GDP	C5'-O5'-PA-O3A
38	WP	502	GDP	C5'-O5'-PA-O3A
36	RI	501	GTP	C3'-C4'-C5'-O5'
36	TE	501	GTP	C3'-C4'-C5'-O5'
36	WI	501	GTP	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
38	AF	502	GDP	C3'-C4'-C5'-O5'
38	KF	502	GDP	C3'-C4'-C5'-O5'
38	LJ	502	GDP	C3'-C4'-C5'-O5'
38	LN	502	GDP	O4'-C4'-C5'-O5'
38	RJ	502	GDP	C3'-C4'-C5'-O5'
38	UJ	502	GDP	C3'-C4'-C5'-O5'
38	WP	502	GDP	C3'-C4'-C5'-O5'
36	CI	501	GTP	PB-O3A-PA-O1A
36	DA	501	GTP	PA-O3A-PB-O1B
36	DA	501	GTP	PA-O3A-PB-O2B
36	DA	501	GTP	PB-O3A-PA-O2A
36	DC	501	GTP	PB-O3A-PA-O2A
36	DG	501	GTP	PB-O3A-PA-O2A
36	EE	501	GTP	PB-O3A-PA-O1A
36	EG	501	GTP	PB-O3A-PA-O1A
36	EI	501	GTP	PB-O3A-PA-O1A
36	EK	501	GTP	PB-O3A-PA-O2A
36	EM	501	GTP	PB-O3A-PA-O1A
36	FC	501	GTP	PA-O3A-PB-O2B
36	FG	501	GTP	PA-O3A-PB-O1B
36	FI	501	GTP	PA-O3A-PB-O2B
36	FM	501	GTP	PA-O3A-PB-O2B
36	HI	501	GTP	PB-O3A-PA-O2A
36	IG	501	GTP	PB-O3A-PA-O1A
36	IM	501	GTP	PB-O3A-PA-O1A
36	JK	501	GTP	PA-O3A-PB-O1B
36	JK	501	GTP	PA-O3A-PB-O2B
36	KE	501	GTP	PA-O3A-PB-O1B
36	KG	501	GTP	PA-O3A-PB-O1B
36	KK	501	GTP	PA-O3A-PB-O1B
36	LE	501	GTP	PA-O3A-PB-O2B
36	LK	501	GTP	PA-O3A-PB-O1B
36	MC	501	GTP	PA-O3A-PB-O1B
36	MG	501	GTP	PA-O3A-PB-O1B
36	MI	501	GTP	PA-O3A-PB-O1B
36	MK	501	GTP	PA-O3A-PB-O1B
36	PM	501	GTP	PA-O3A-PB-O1B
36	PM	501	GTP	PA-O3A-PB-O2B
36	QE	501	GTP	PA-O3A-PB-O2B
36	QG	501	GTP	PB-O3A-PA-O1A
36	QO	501	GTP	PA-O3A-PB-O1B
36	RM	501	GTP	PB-O3A-PA-O1A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Atoms</b>
36	SI	501	GTP	PA-O3A-PB-O2B
36	SK	501	GTP	PA-O3A-PB-O1B
36	SM	501	GTP	PA-O3A-PB-O1B
36	TG	501	GTP	PA-O3A-PB-O1B
38	TH	502	GDP	PB-O3A-PA-O2A
36	DG	501	GTP	C4'-C5'-O5'-PA
36	RE	501	GTP	C4'-C5'-O5'-PA
36	BA	501	GTP	C5'-O5'-PA-O1A
36	BG	501	GTP	C5'-O5'-PA-O1A
36	BK	501	GTP	C5'-O5'-PA-O1A
36	GM	501	GTP	C5'-O5'-PA-O1A
36	IC	501	GTP	C5'-O5'-PA-O1A
36	LE	501	GTP	C5'-O5'-PA-O1A
36	LM	501	GTP	C5'-O5'-PA-O1A
36	ME	501	GTP	C5'-O5'-PA-O1A
36	NC	501	GTP	C5'-O5'-PA-O1A
36	NK	501	GTP	C5'-O5'-PA-O1A
36	NM	501	GTP	C5'-O5'-PA-O1A
36	OG	501	GTP	C5'-O5'-PA-O1A
36	PC	501	GTP	C5'-O5'-PA-O1A
36	TK	501	GTP	C5'-O5'-PA-O1A
36	TM	501	GTP	C5'-O5'-PA-O1A
36	TO	501	GTP	C5'-O5'-PA-O1A
36	UG	501	GTP	C5'-O5'-PA-O1A
36	UO	501	GTP	C5'-O5'-PA-O1A
36	VK	501	GTP	C5'-O5'-PA-O1A
36	WE	501	GTP	C5'-O5'-PA-O1A
36	WM	501	GTP	C5'-O5'-PA-O1A
38	AD	502	GDP	C5'-O5'-PA-O1A
38	AF	502	GDP	C5'-O5'-PA-O1A
38	AH	502	GDP	C5'-O5'-PA-O1A
38	AL	502	GDP	C5'-O5'-PA-O1A
38	BH	502	GDP	C5'-O5'-PA-O1A
38	CD	502	GDP	C5'-O5'-PA-O1A
38	CH	502	GDP	C5'-O5'-PA-O1A
38	CJ	502	GDP	C5'-O5'-PA-O1A
38	CL	502	GDP	C5'-O5'-PA-O1A
38	DD	502	GDP	C5'-O5'-PA-O1A
38	DF	502	GDP	C5'-O5'-PA-O1A
38	DJ	502	GDP	C5'-O5'-PA-O1A
38	DL	502	GDP	C5'-O5'-PA-O1A
38	ED	502	GDP	C5'-O5'-PA-O1A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Atoms</b>
38	EH	502	GDP	C5'-O5'-PA-O1A
38	EJ	502	GDP	C5'-O5'-PA-O1A
38	EL	502	GDP	C5'-O5'-PA-O1A
38	EN	502	GDP	C5'-O5'-PA-O1A
38	FF	502	GDP	C5'-O5'-PA-O1A
38	FH	502	GDP	C5'-O5'-PA-O1A
38	FJ	502	GDP	C5'-O5'-PA-O1A
38	FL	502	GDP	C5'-O5'-PA-O1A
38	GD	502	GDP	C5'-O5'-PA-O1A
38	GF	502	GDP	C5'-O5'-PA-O1A
38	GH	502	GDP	C5'-O5'-PA-O1A
38	GN	502	GDP	C5'-O5'-PA-O1A
38	HB	502	GDP	C5'-O5'-PA-O1A
38	HD	502	GDP	C5'-O5'-PA-O1A
38	HJ	502	GDP	C5'-O5'-PA-O1A
38	JB	502	GDP	C5'-O5'-PA-O1A
38	JD	502	GDP	C5'-O5'-PA-O1A
38	JH	502	GDP	C5'-O5'-PA-O1A
38	JJ	502	GDP	C5'-O5'-PA-O1A
38	JL	502	GDP	C5'-O5'-PA-O1A
38	JN	502	GDP	C5'-O5'-PA-O1A
38	LB	502	GDP	C5'-O5'-PA-O1A
38	LF	502	GDP	C5'-O5'-PA-O1A
38	MB	502	GDP	C5'-O5'-PA-O1A
38	MD	502	GDP	C5'-O5'-PA-O1A
38	MF	502	GDP	C5'-O5'-PA-O1A
38	MJ	502	GDP	C5'-O5'-PA-O1A
38	MN	502	GDP	C5'-O5'-PA-O1A
38	NB	502	GDP	C5'-O5'-PA-O1A
38	NF	502	GDP	C5'-O5'-PA-O1A
38	NH	502	GDP	C5'-O5'-PA-O1A
38	NJ	502	GDP	C5'-O5'-PA-O1A
38	NL	502	GDP	C5'-O5'-PA-O1A
38	NN	502	GDP	C5'-O5'-PA-O1A
38	PF	502	GDP	C5'-O5'-PA-O1A
38	QL	502	GDP	C5'-O5'-PA-O1A
38	RD	502	GDP	C5'-O5'-PA-O1A
38	RF	502	GDP	C5'-O5'-PA-O1A
38	RN	502	GDP	C5'-O5'-PA-O1A
38	SD	502	GDP	C5'-O5'-PA-O1A
38	TD	502	GDP	C5'-O5'-PA-O1A
38	TP	502	GDP	C5'-O5'-PA-O1A

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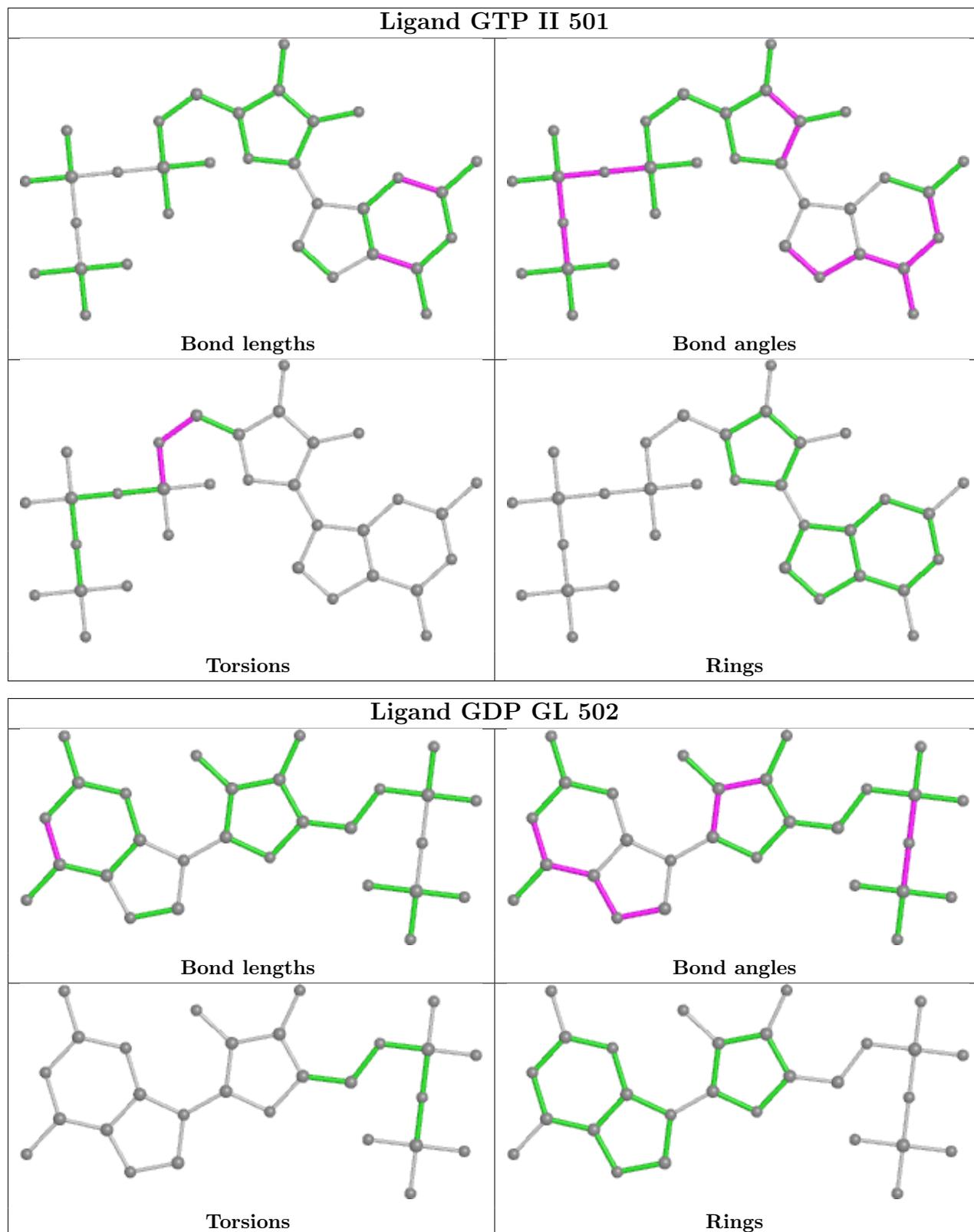
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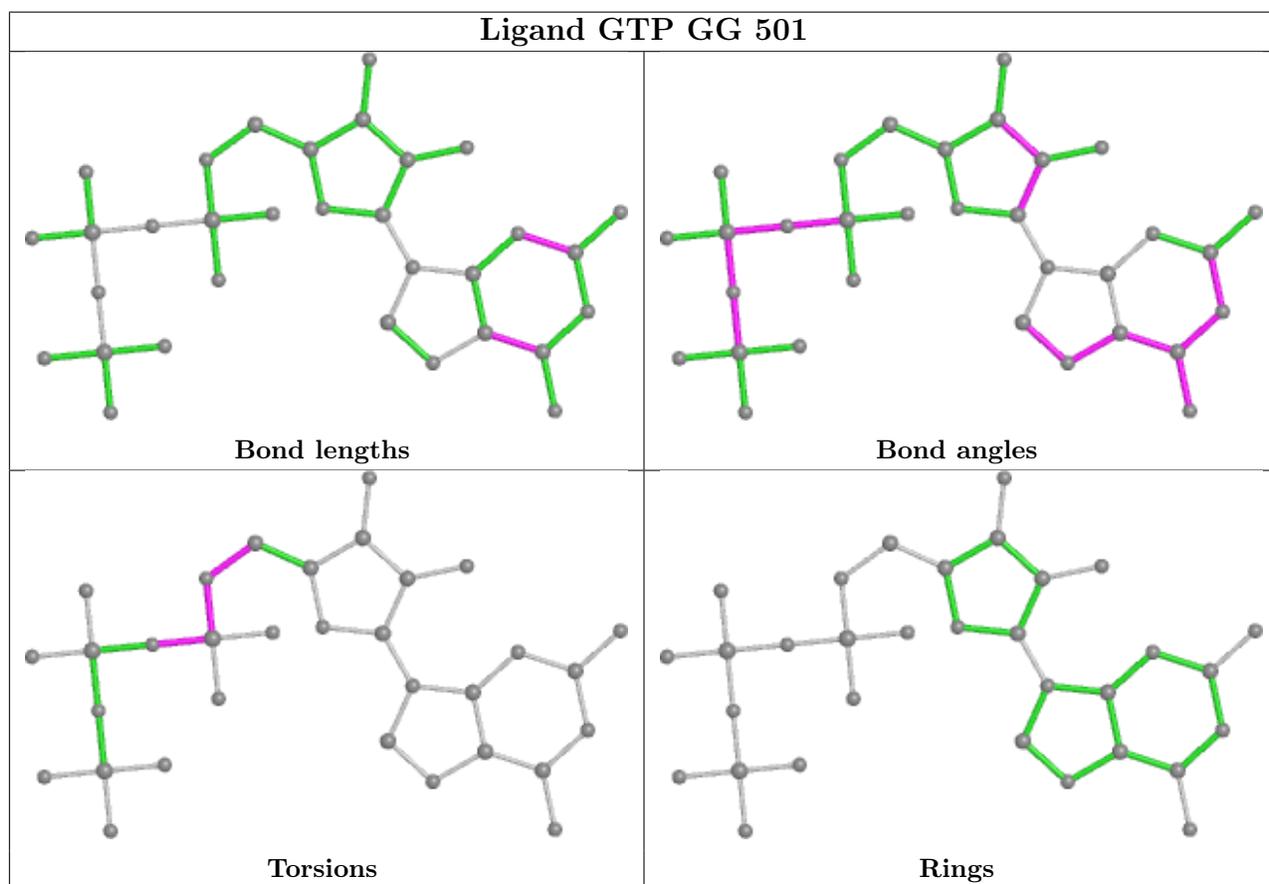
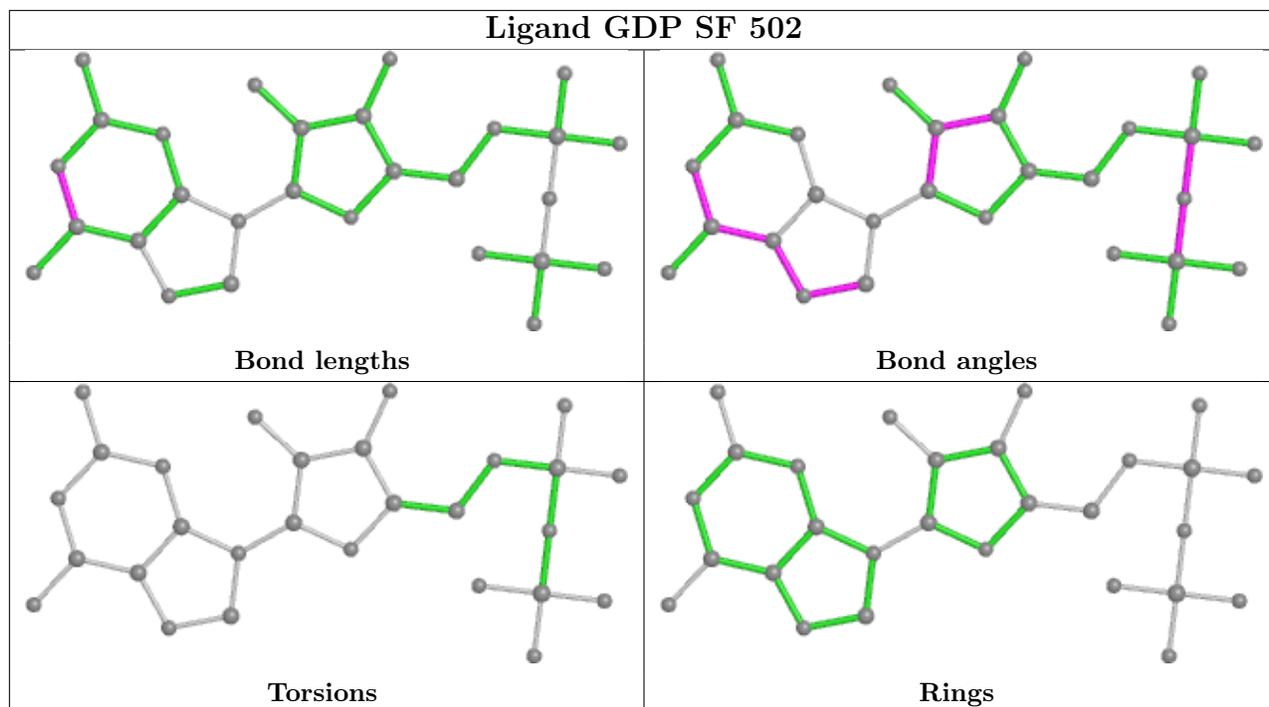
Mol	Chain	Res	Type	Atoms
38	UH	502	GDP	C5'-O5'-PA-O1A
38	UL	502	GDP	C5'-O5'-PA-O1A
38	UN	502	GDP	C5'-O5'-PA-O1A
38	VF	502	GDP	C5'-O5'-PA-O1A
36	GK	501	GTP	O4'-C4'-C5'-O5'
38	CF	502	GDP	C3'-C4'-C5'-O5'
38	PF	502	GDP	O4'-C4'-C5'-O5'
38	SD	502	GDP	O4'-C4'-C5'-O5'
38	PN	502	GDP	C3'-C4'-C5'-O5'

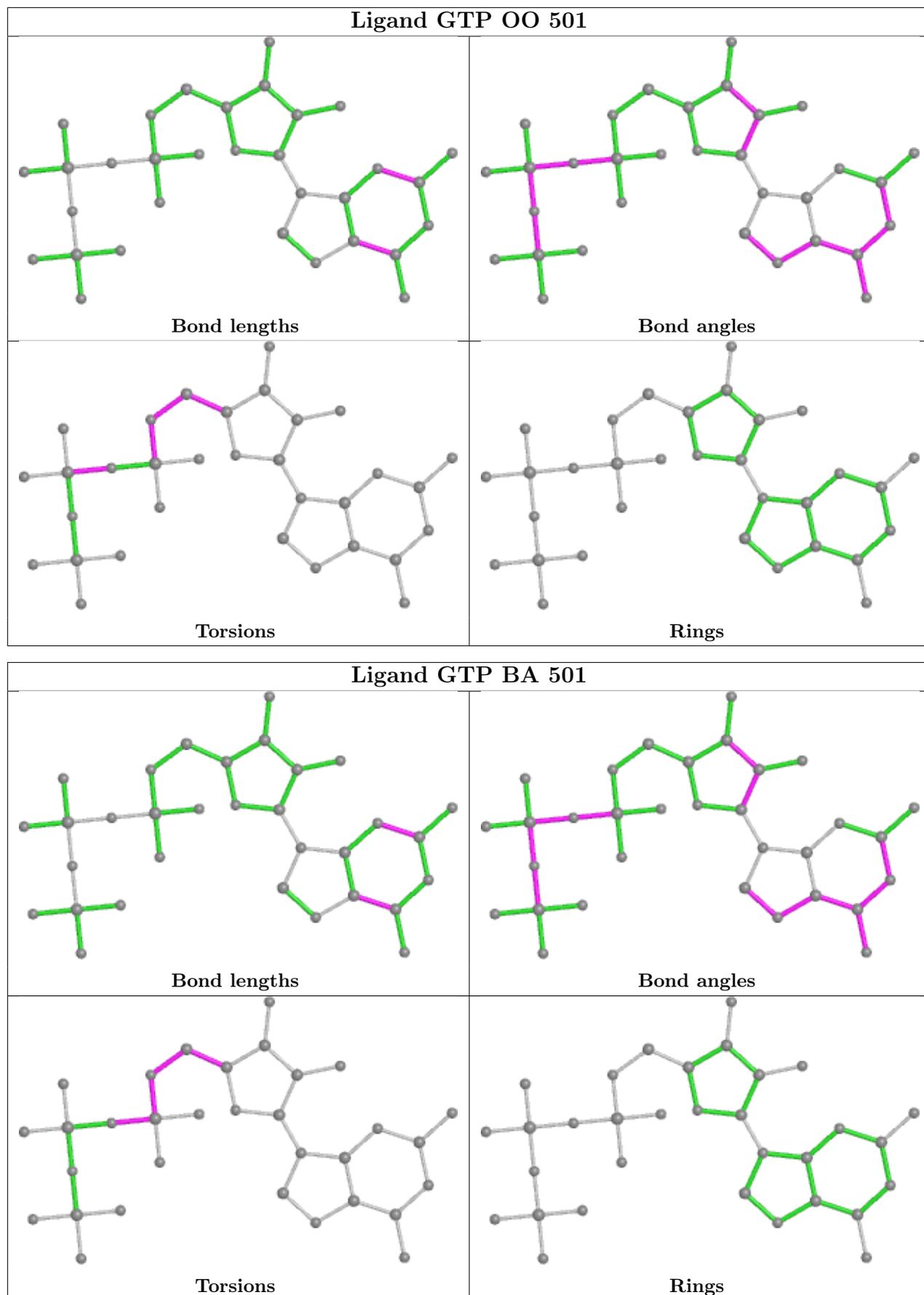
There are no ring outliers.

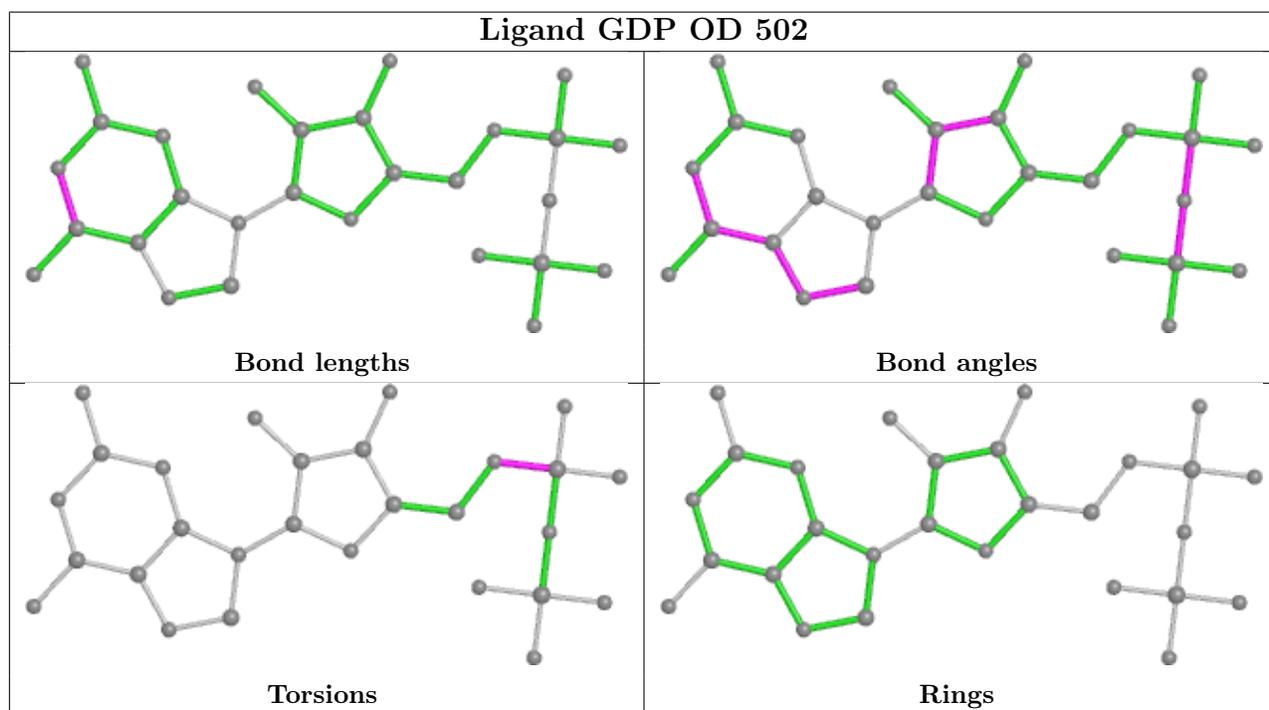
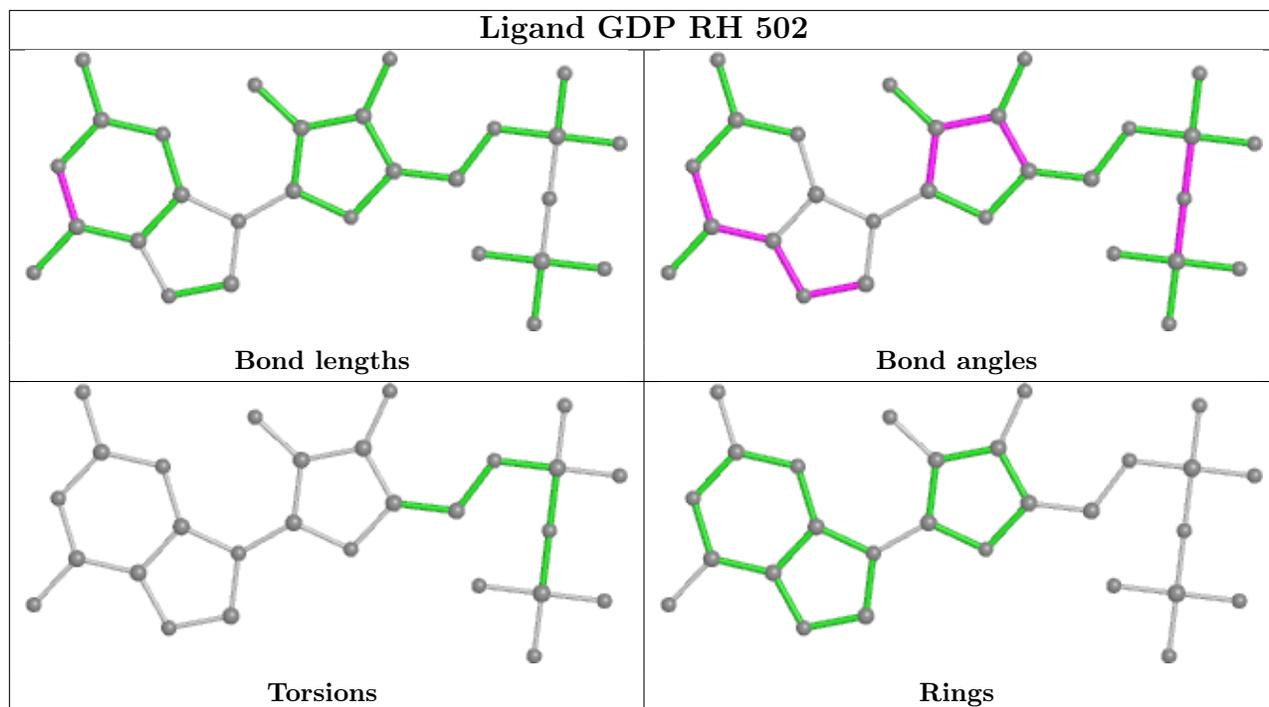
No monomer is involved in short contacts.

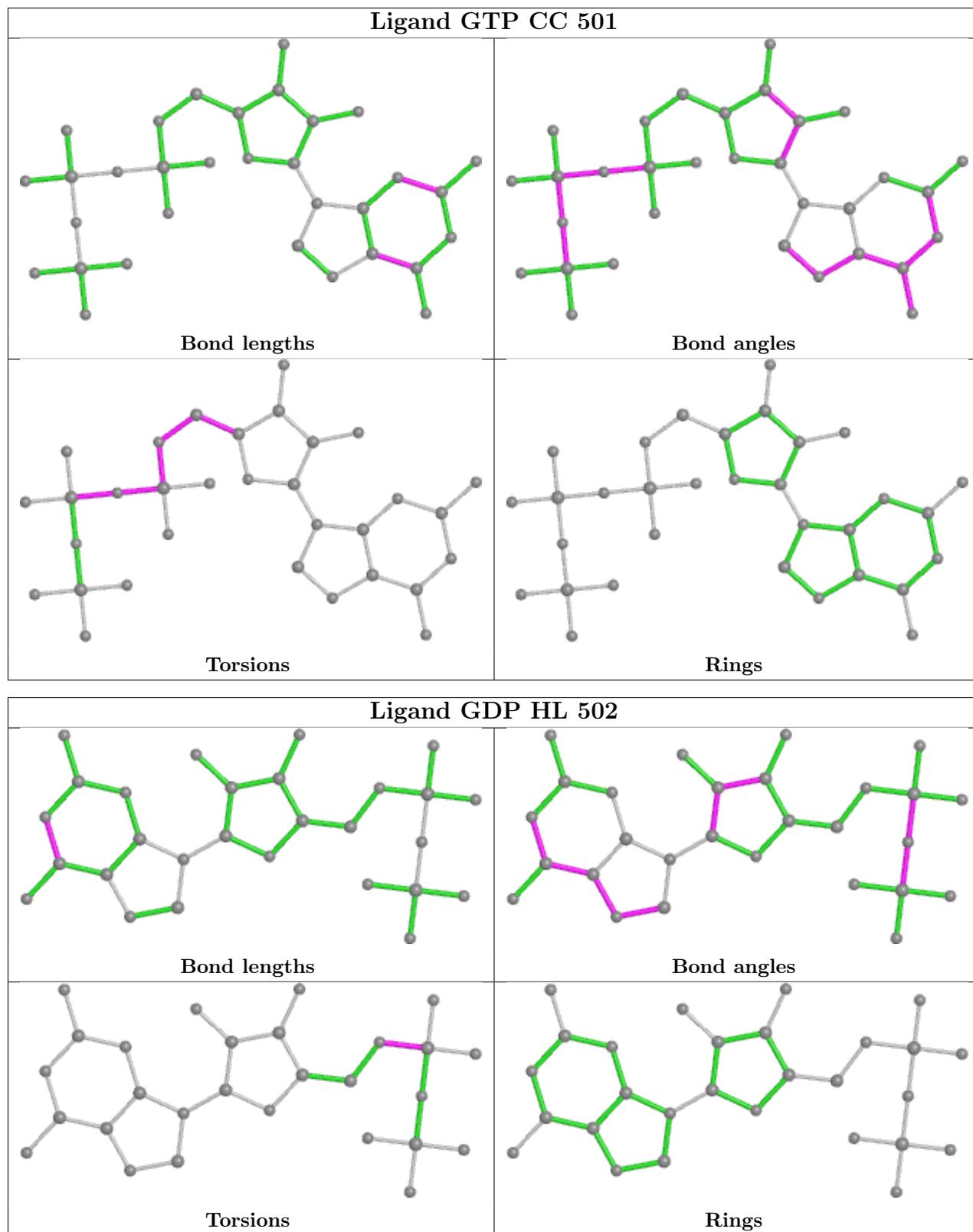
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

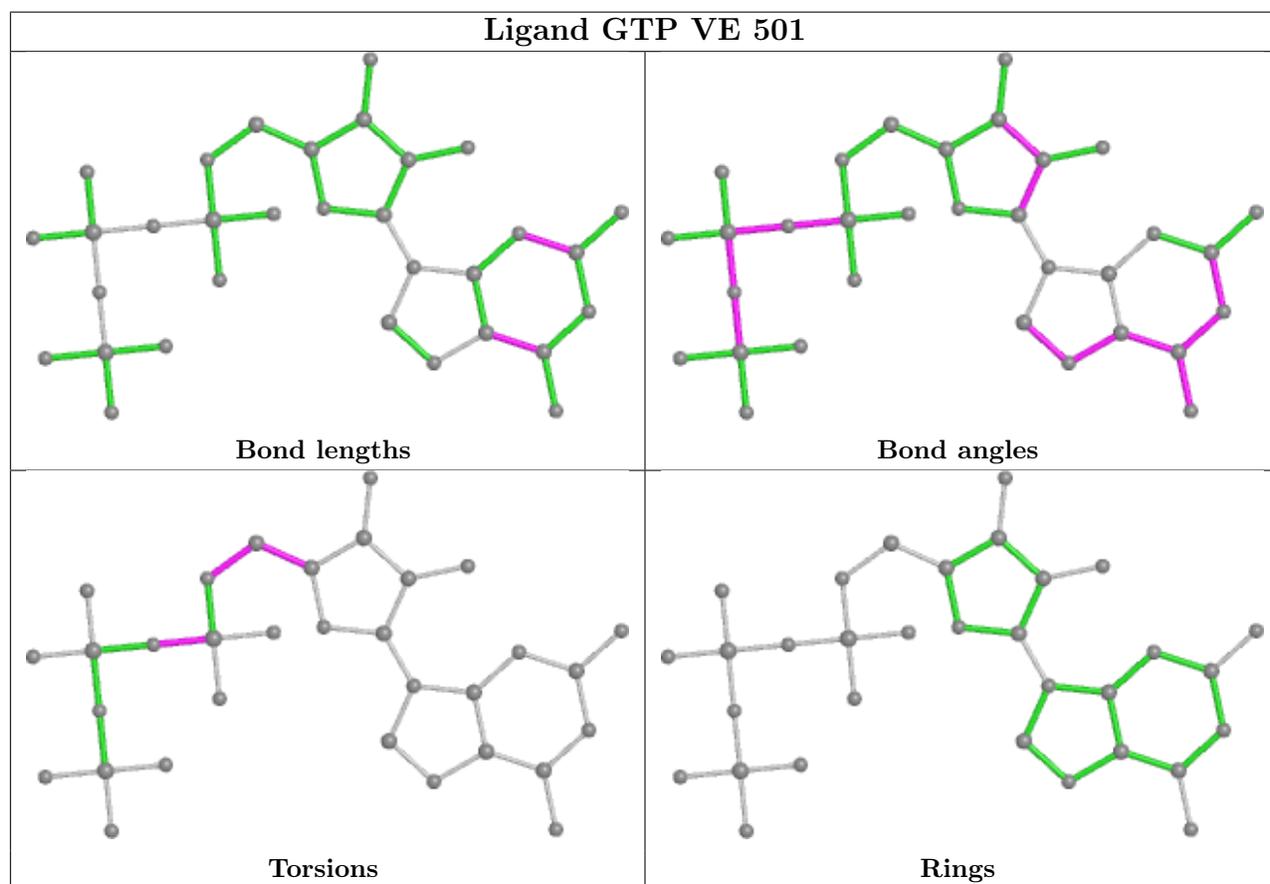
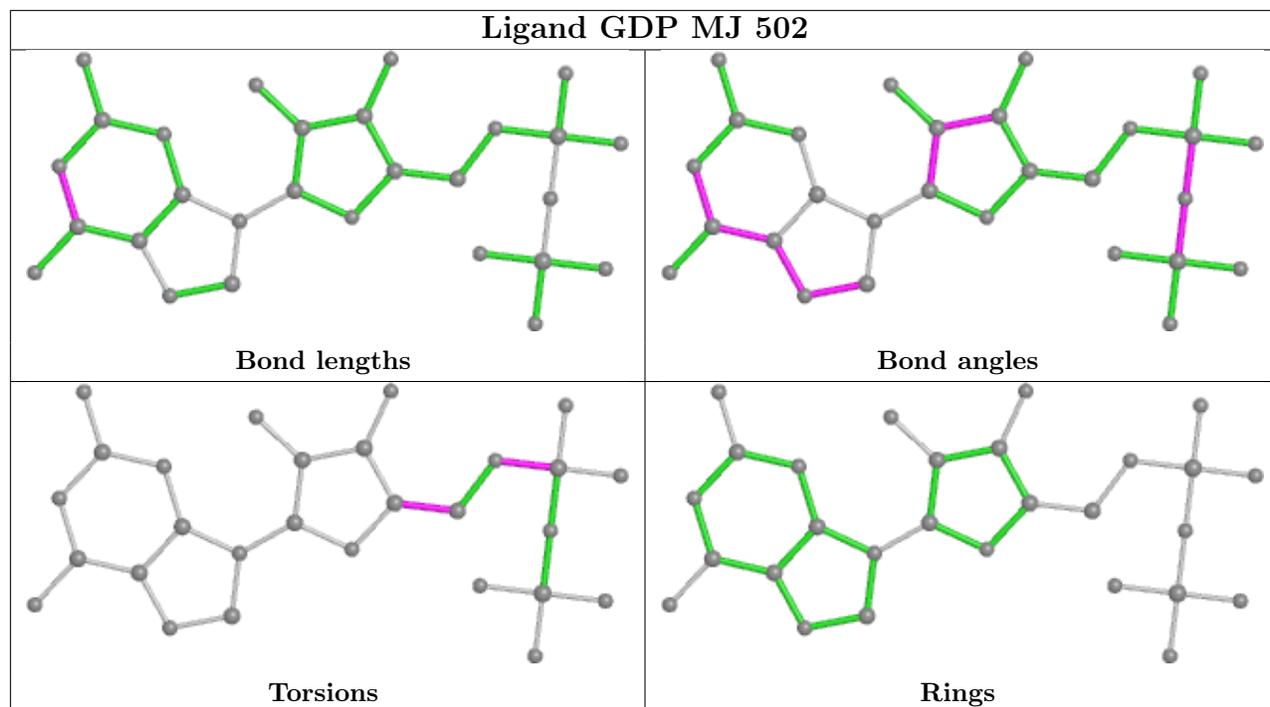


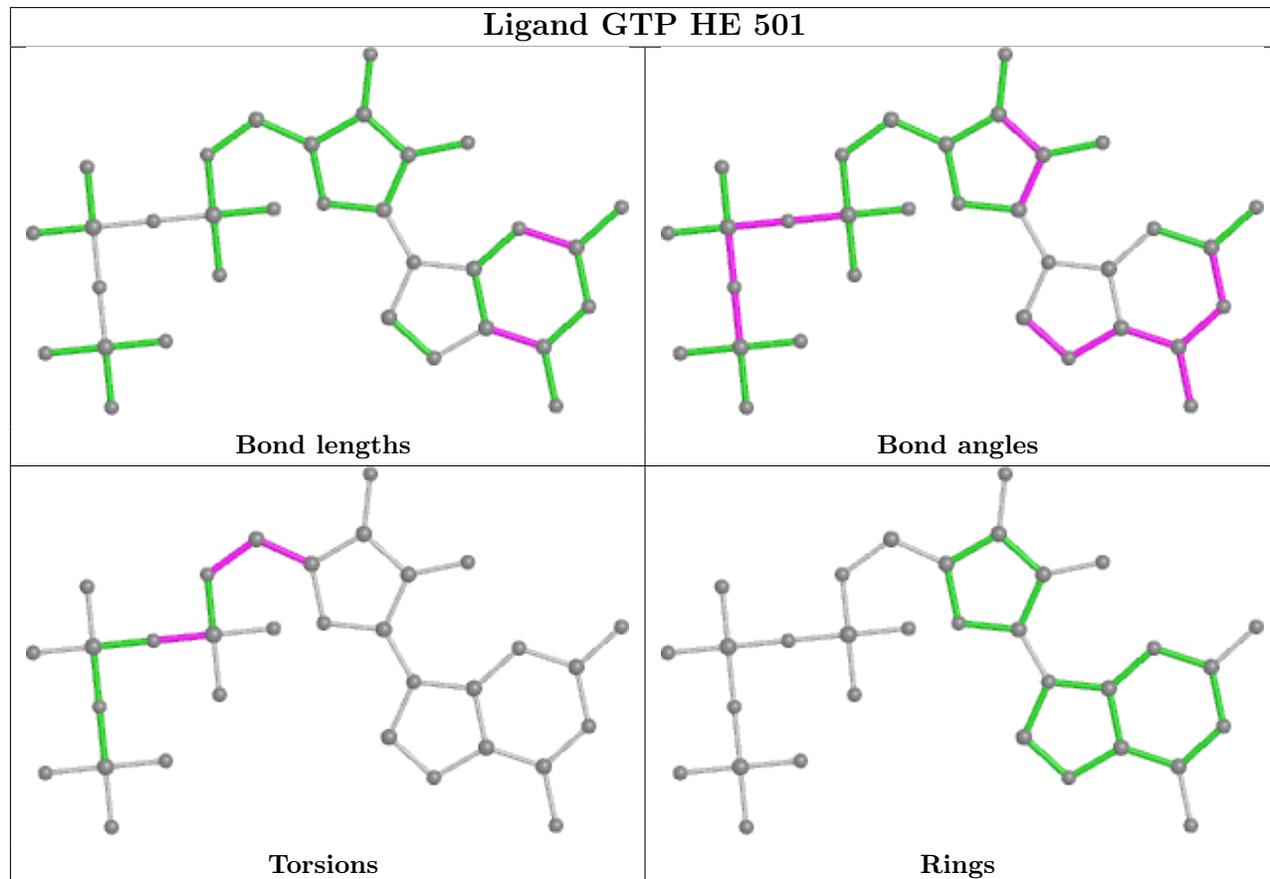
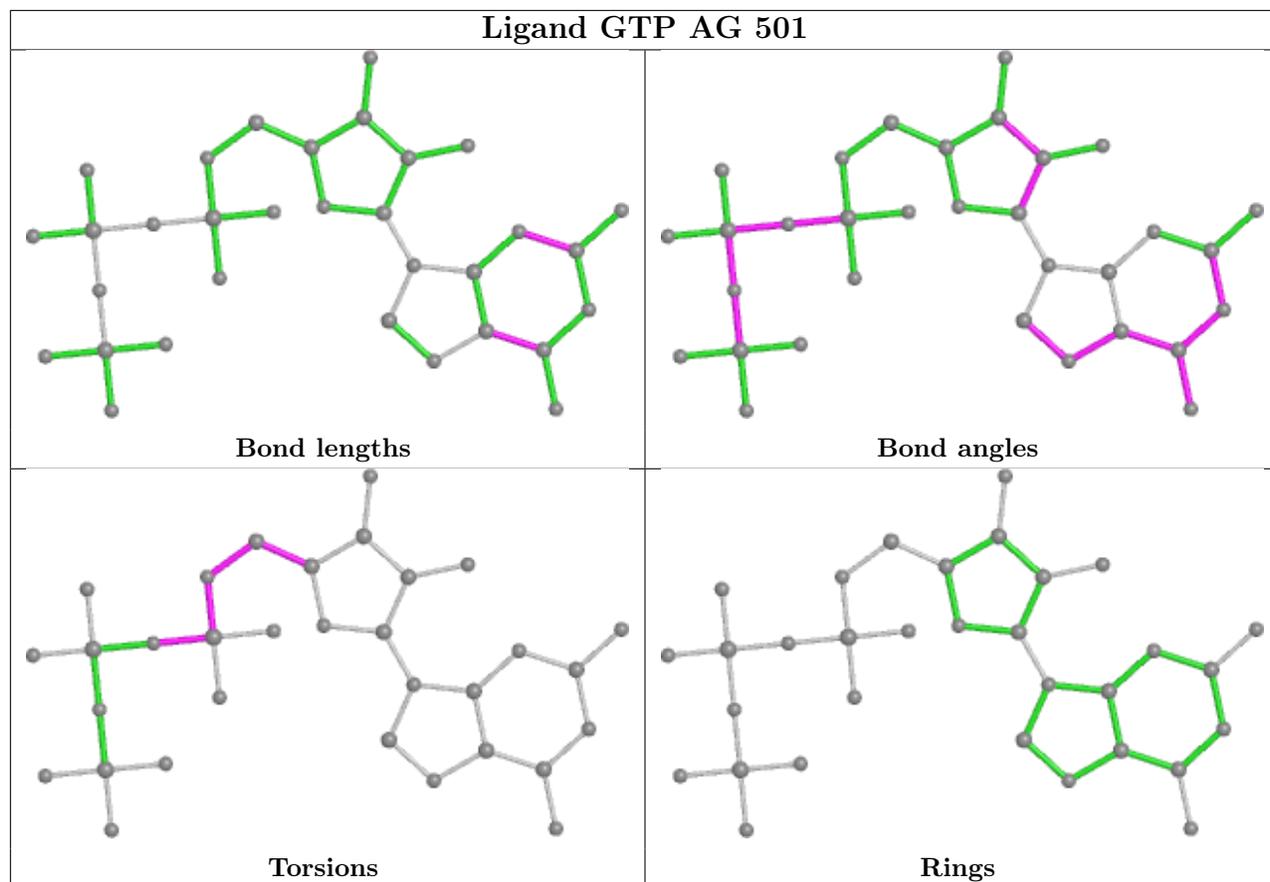


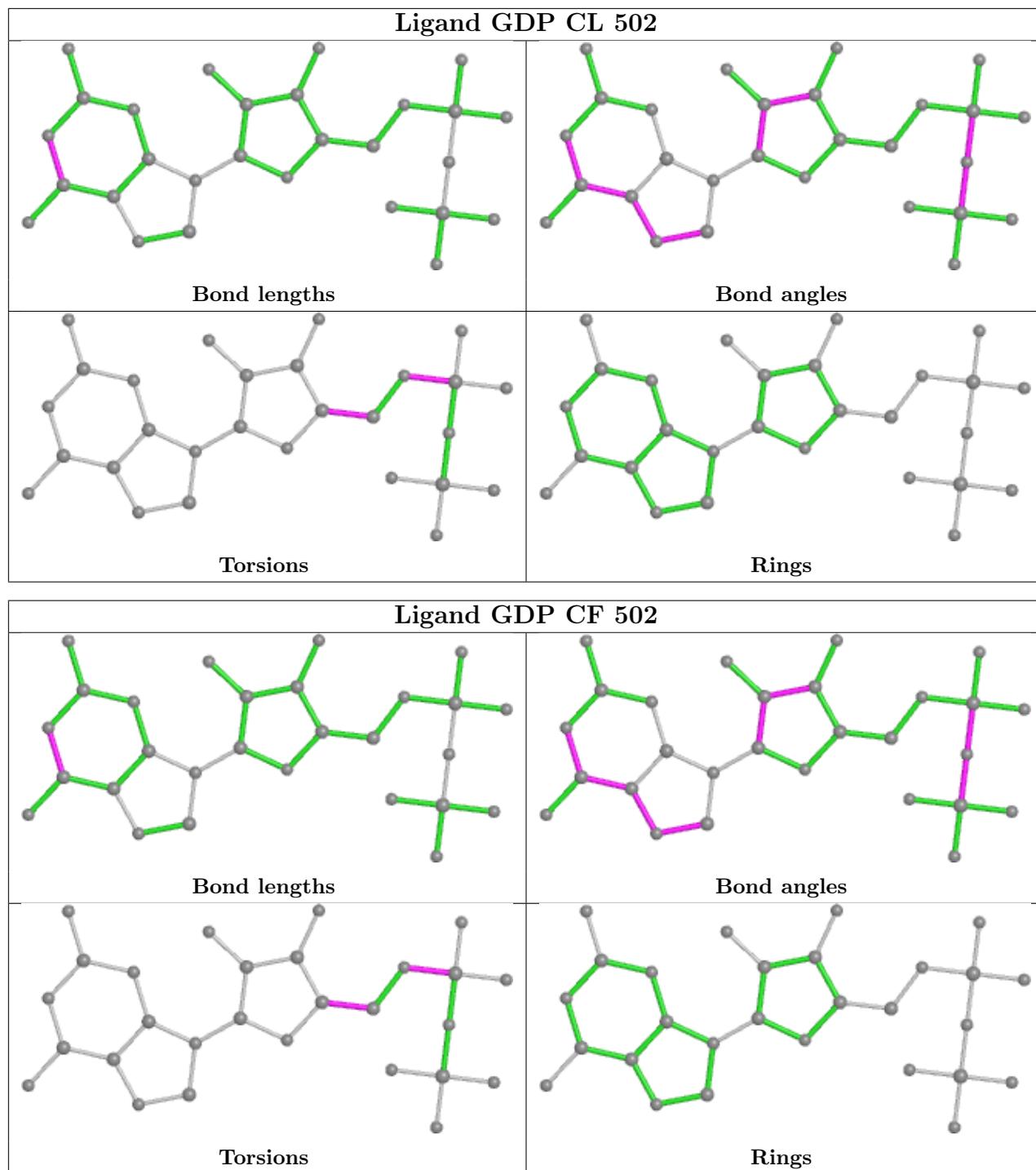


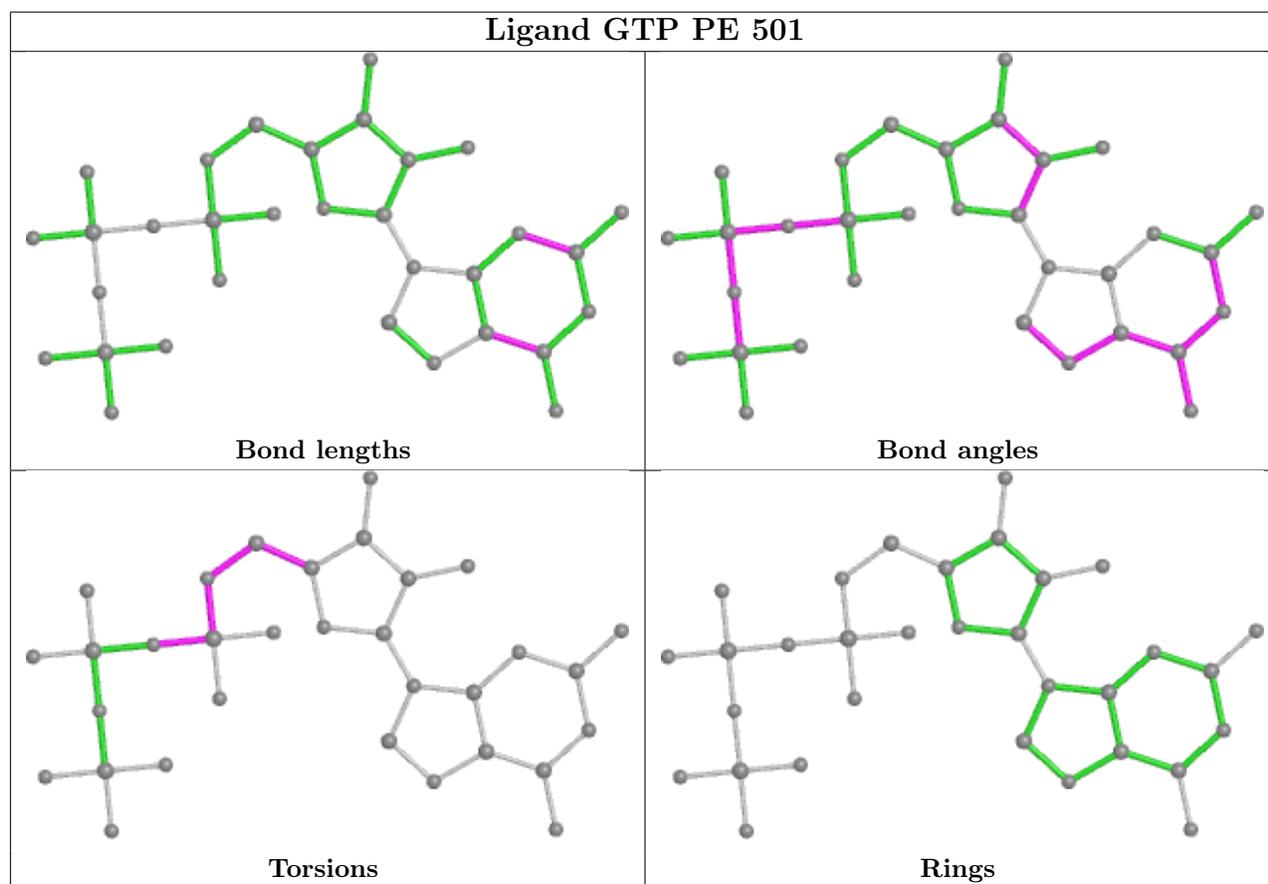
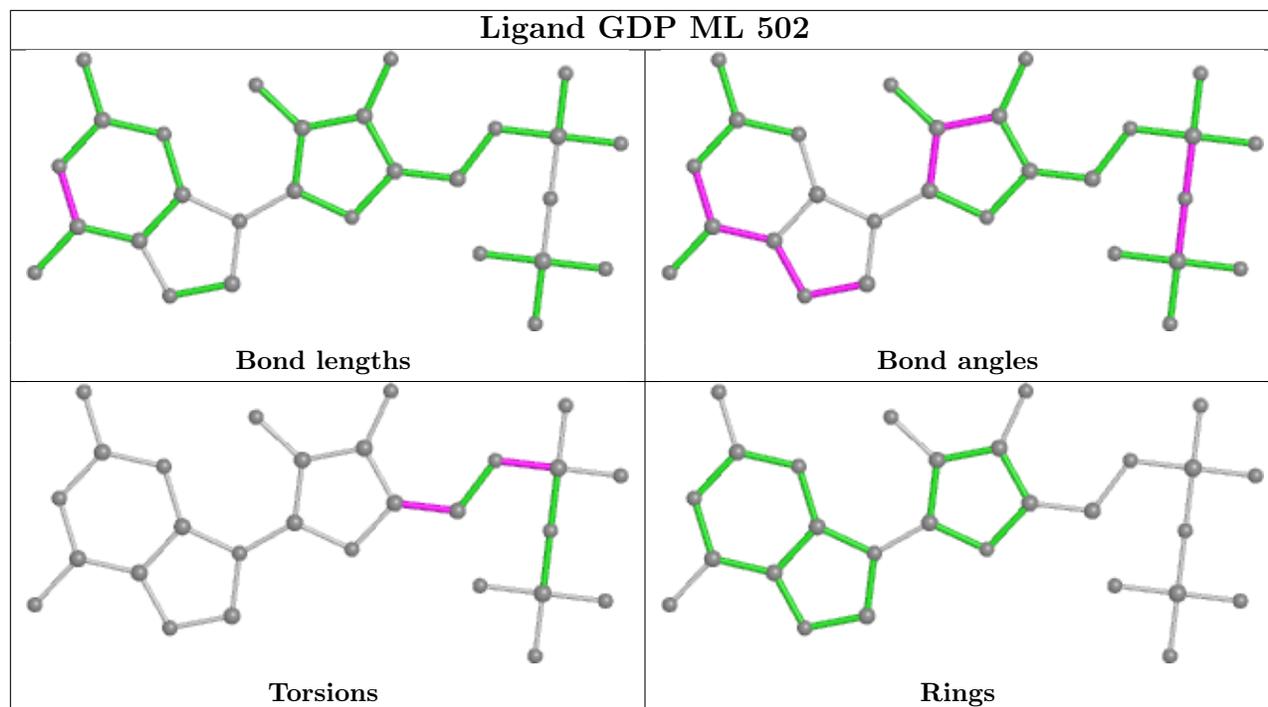


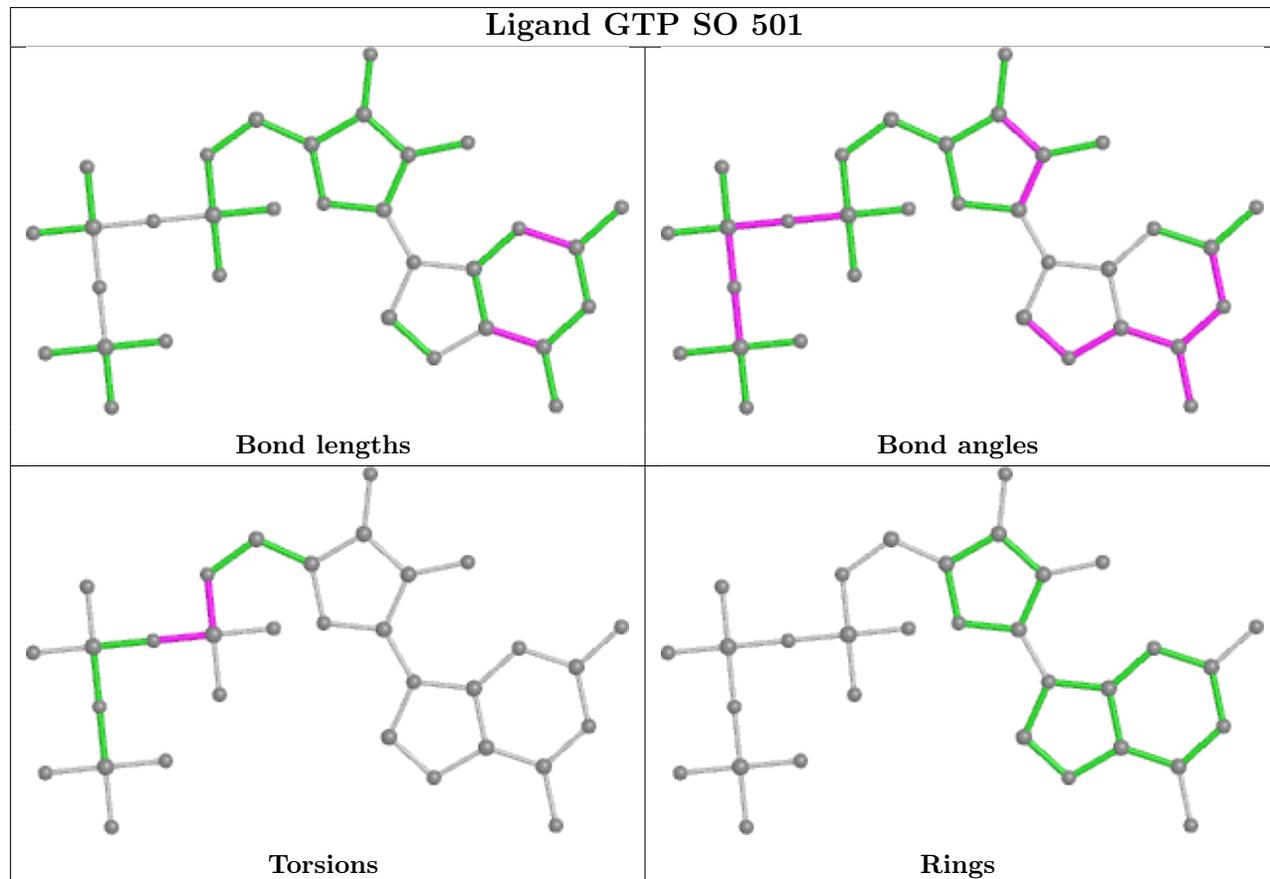
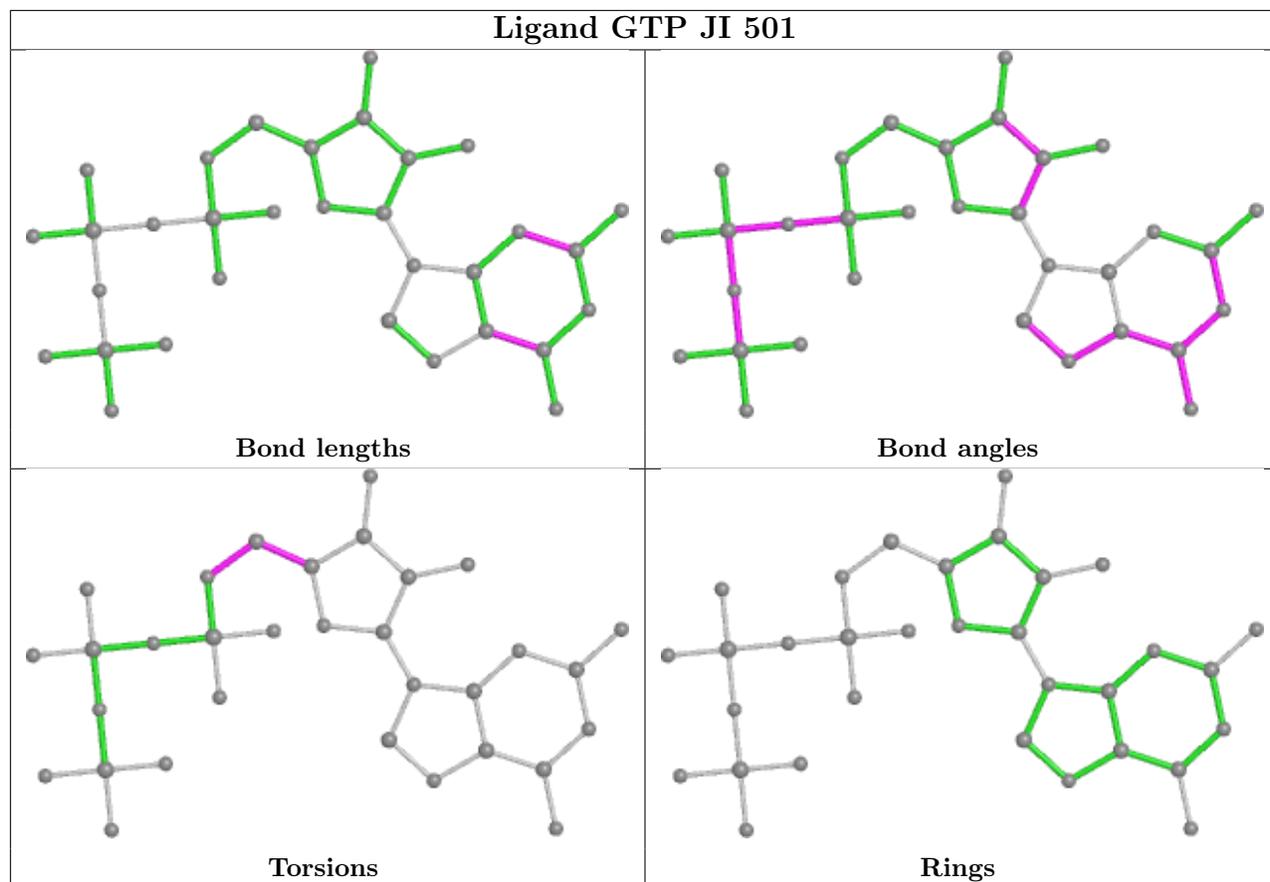


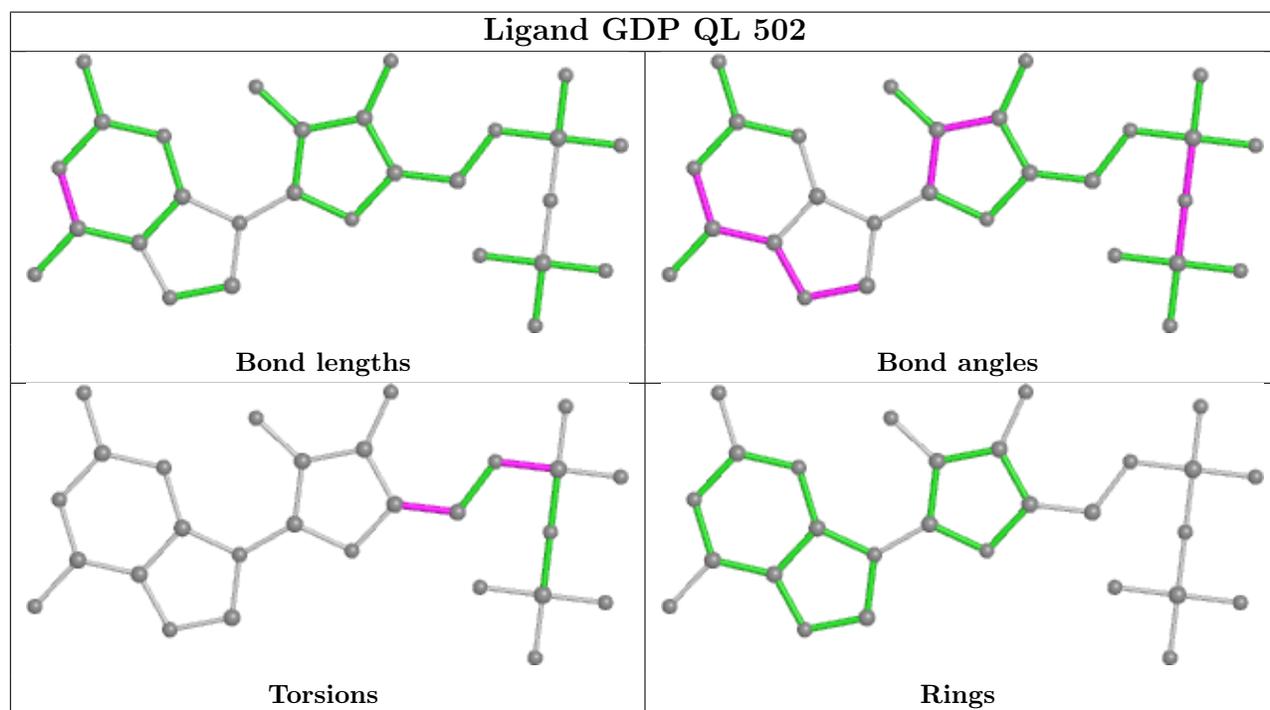
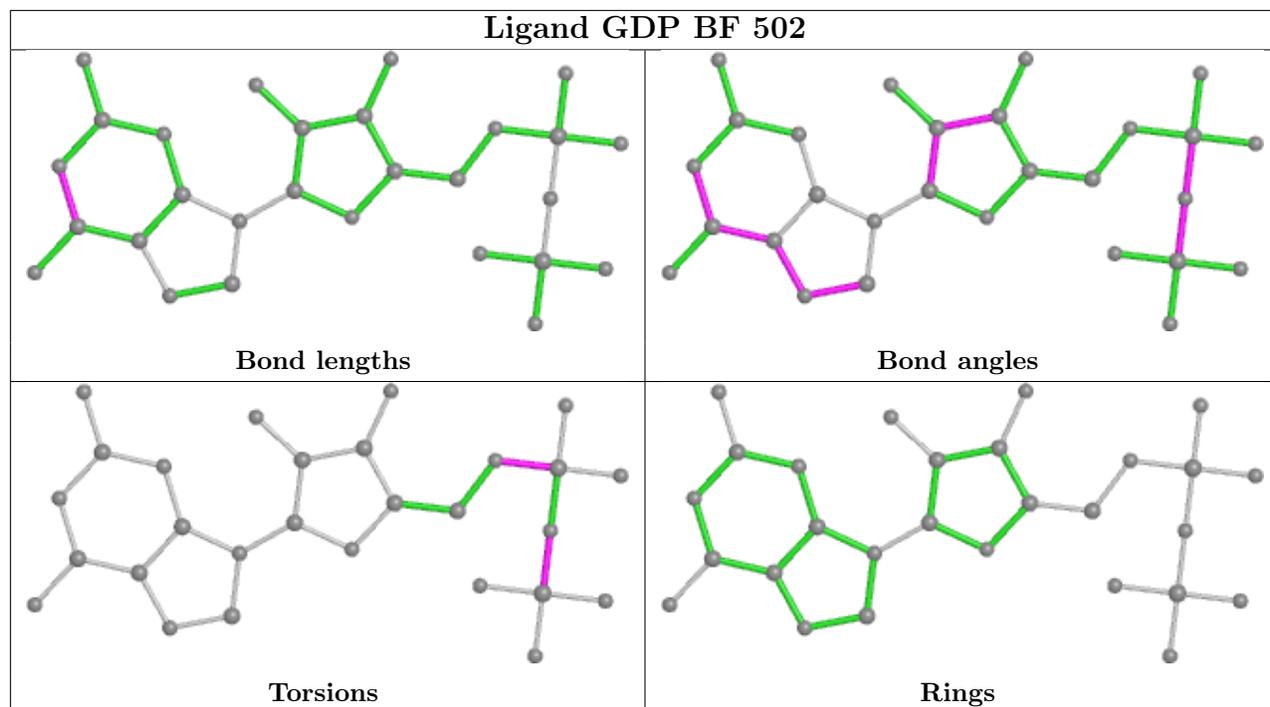


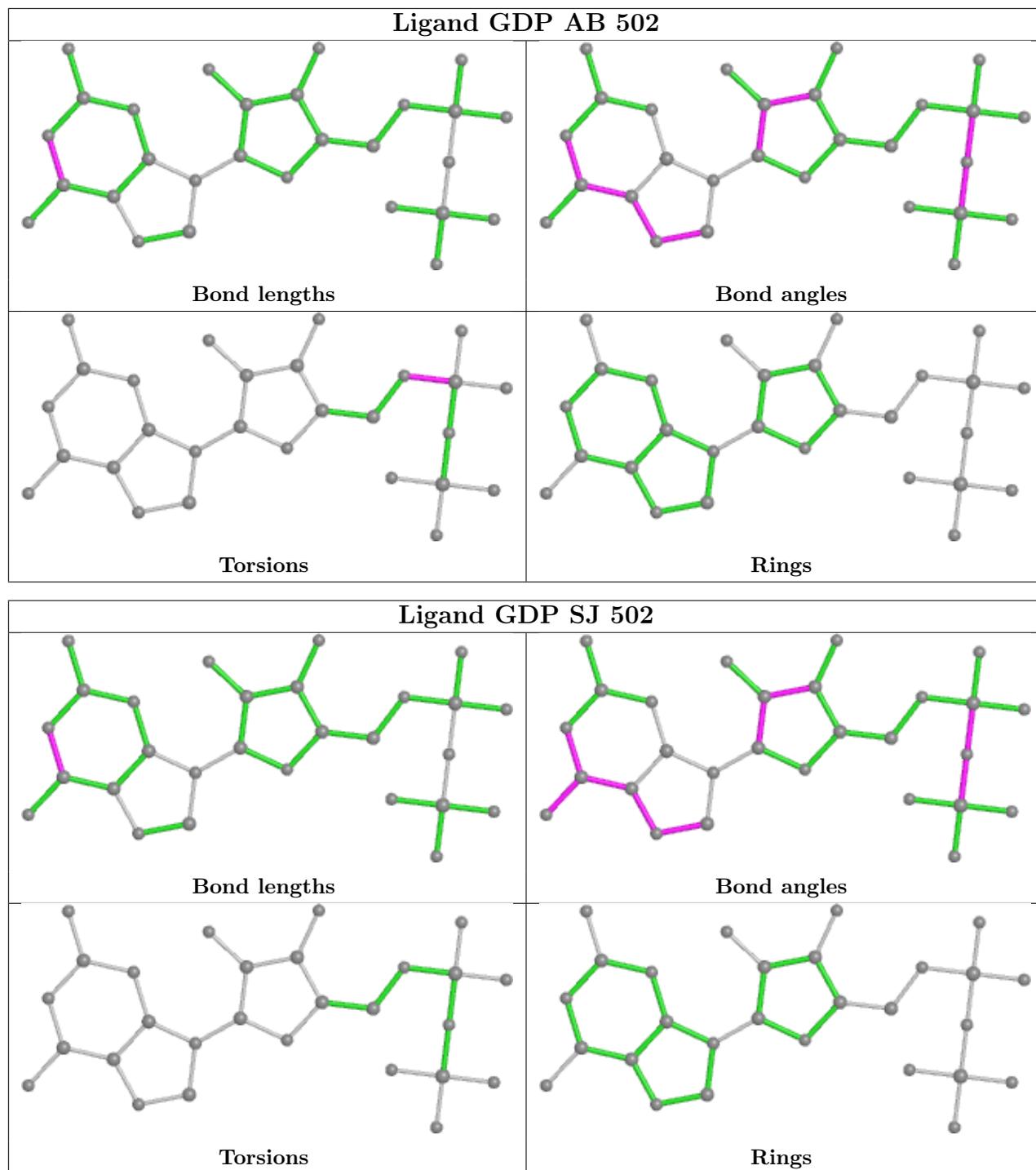


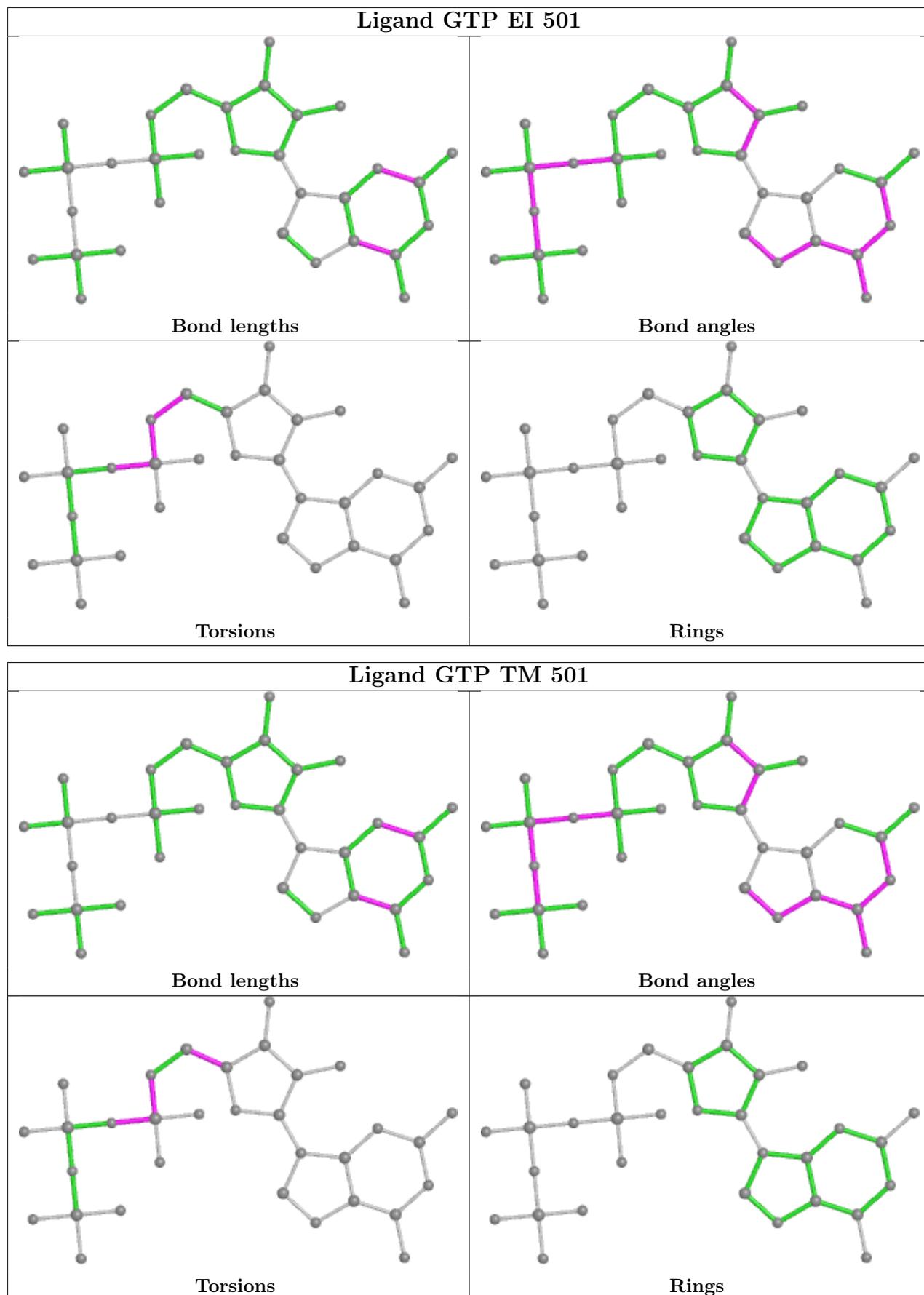


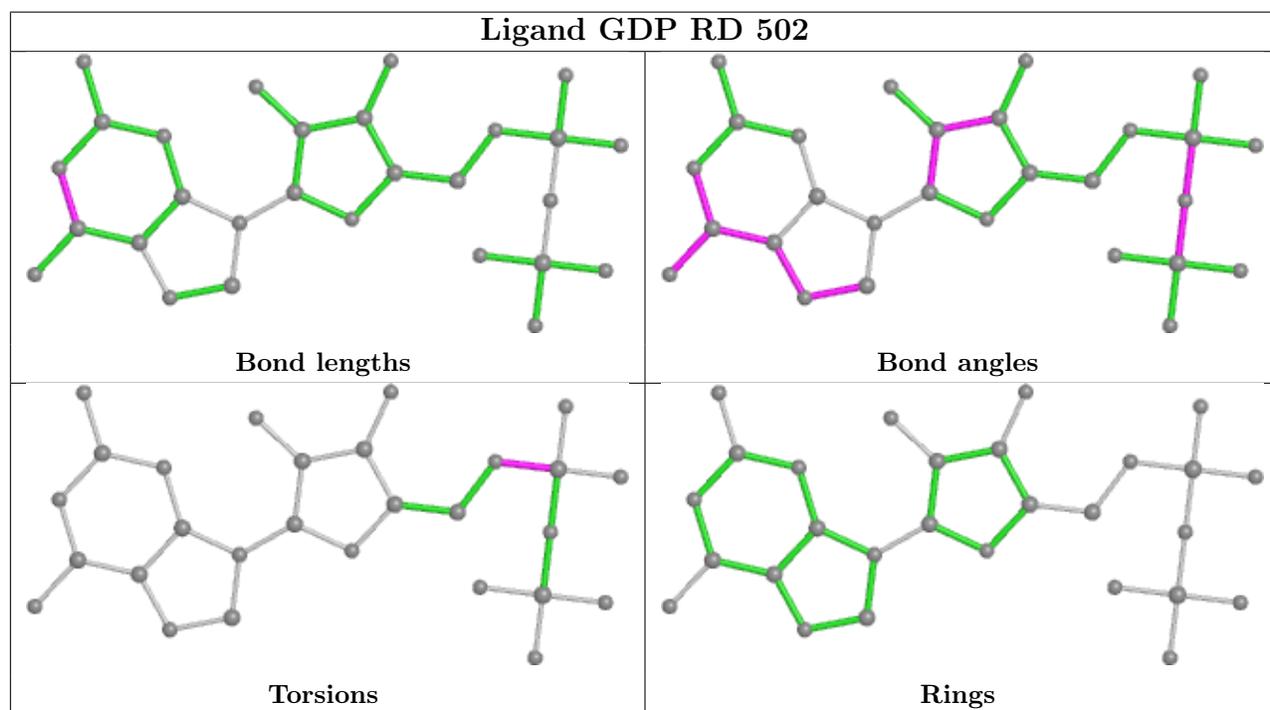
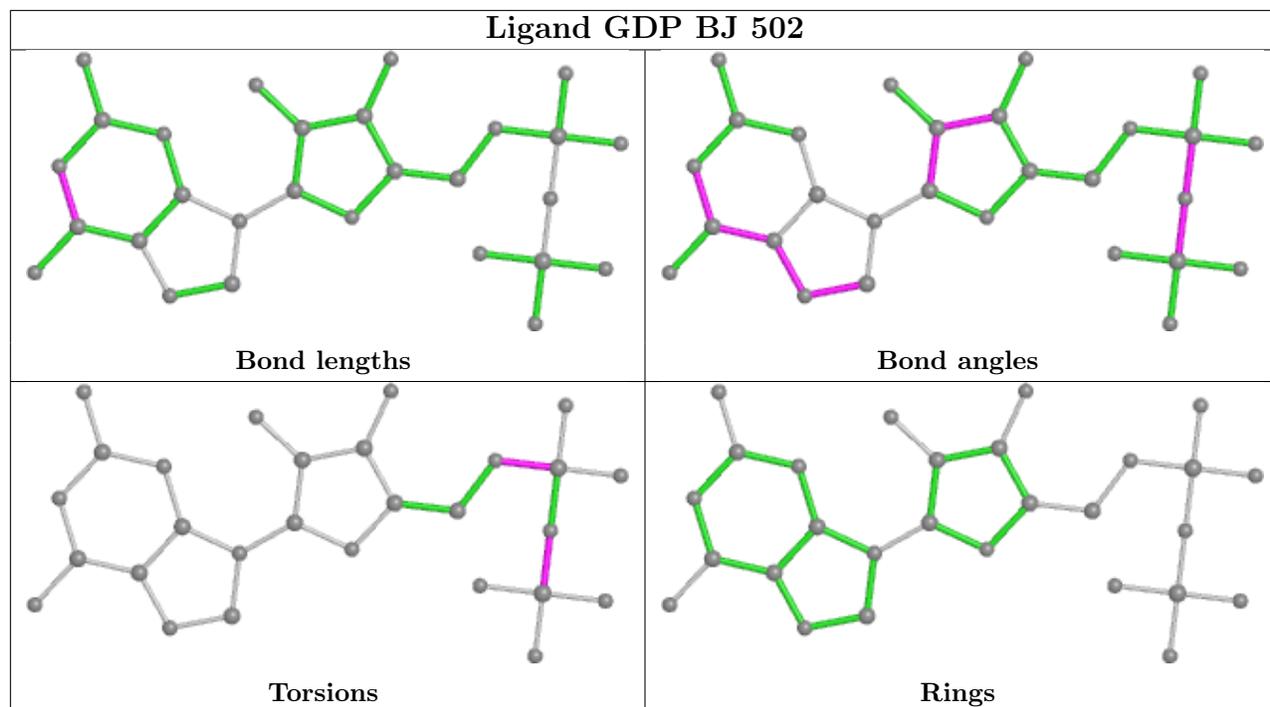


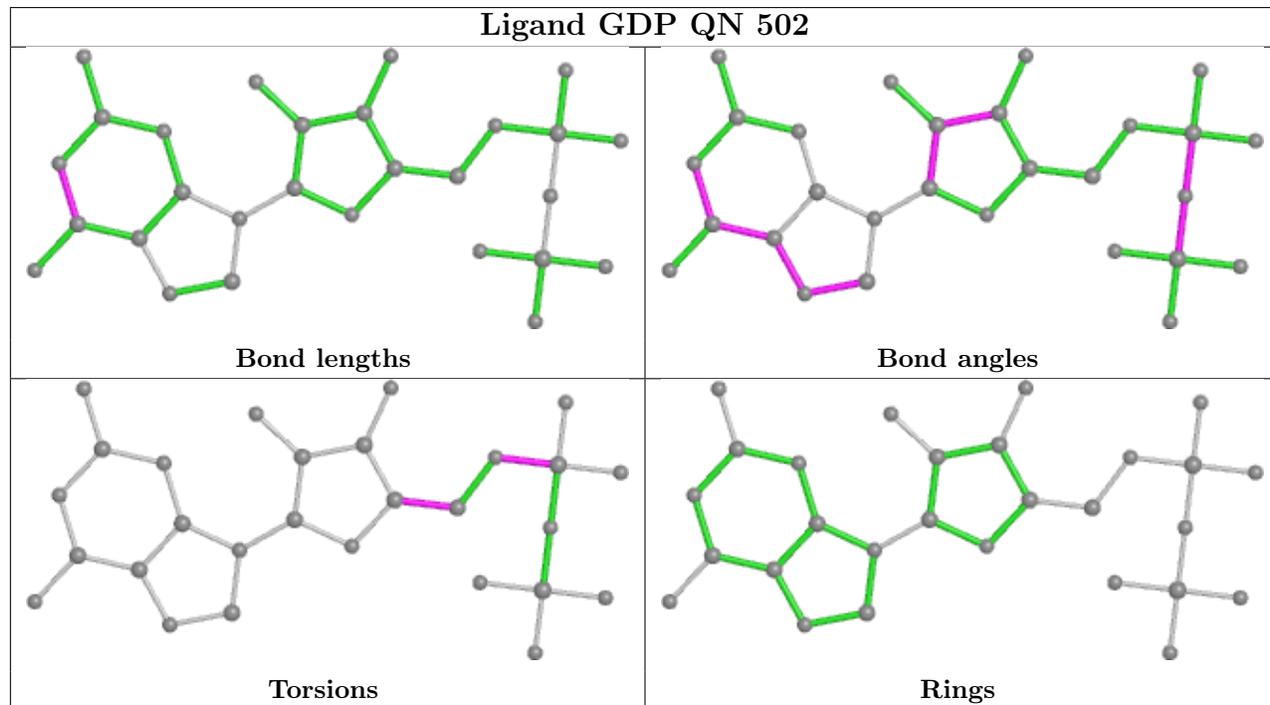
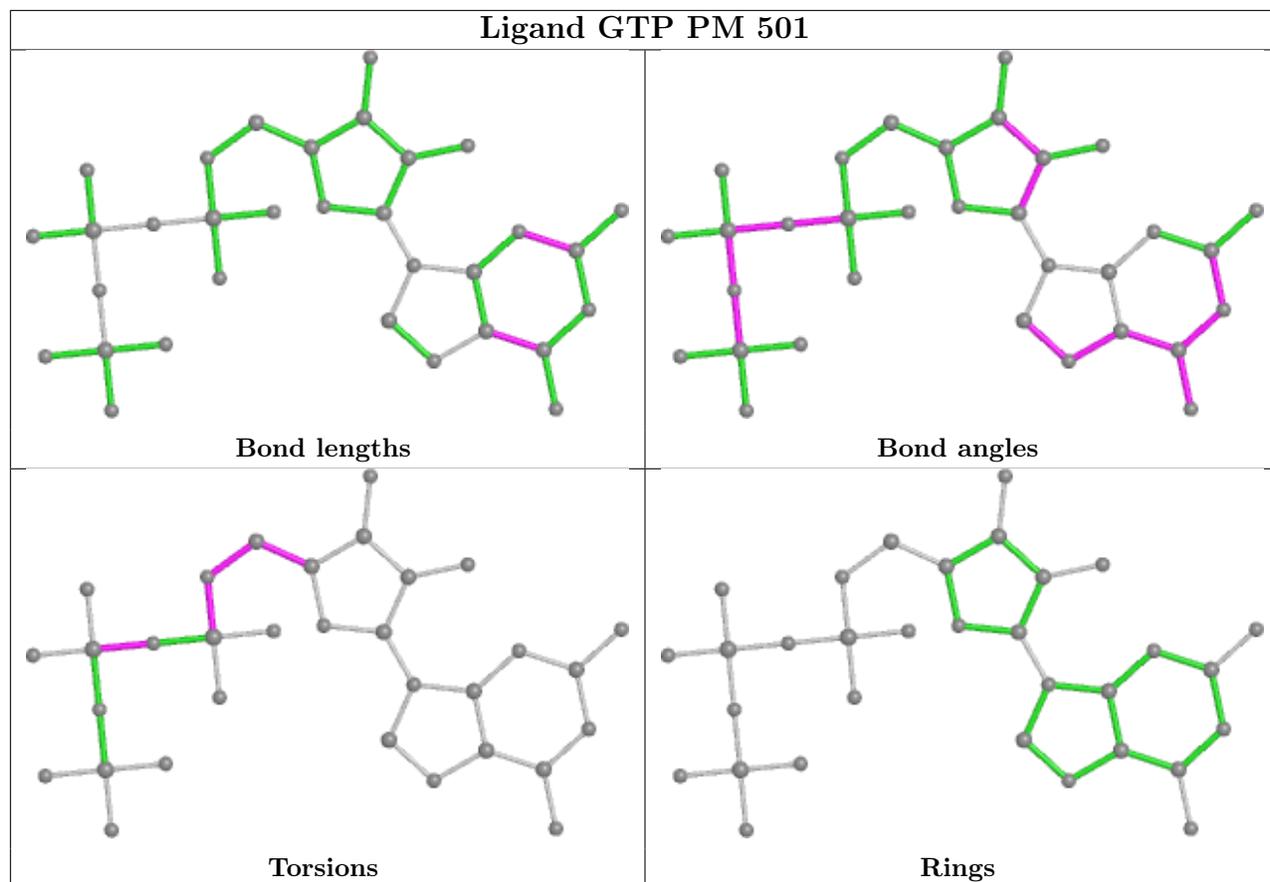


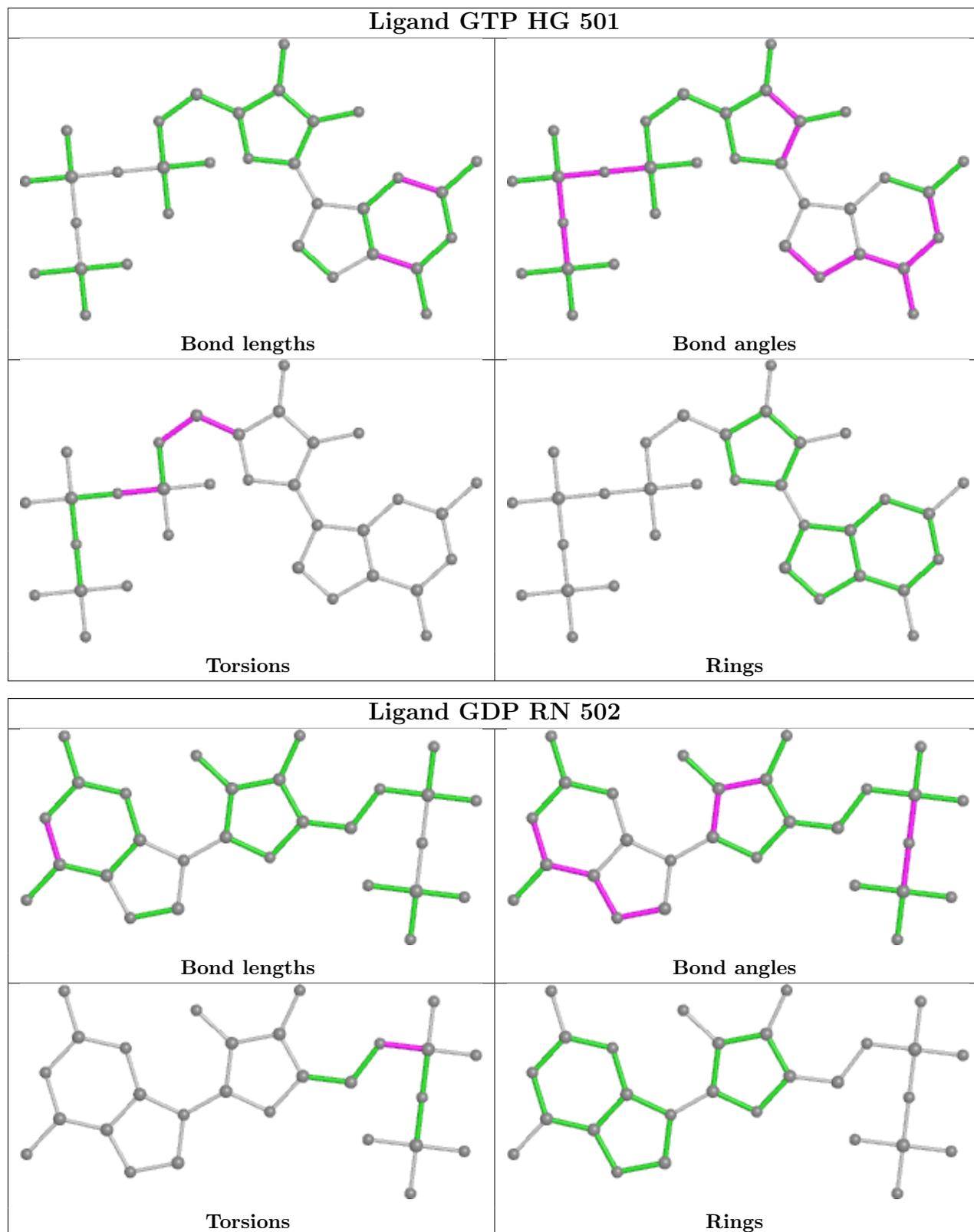


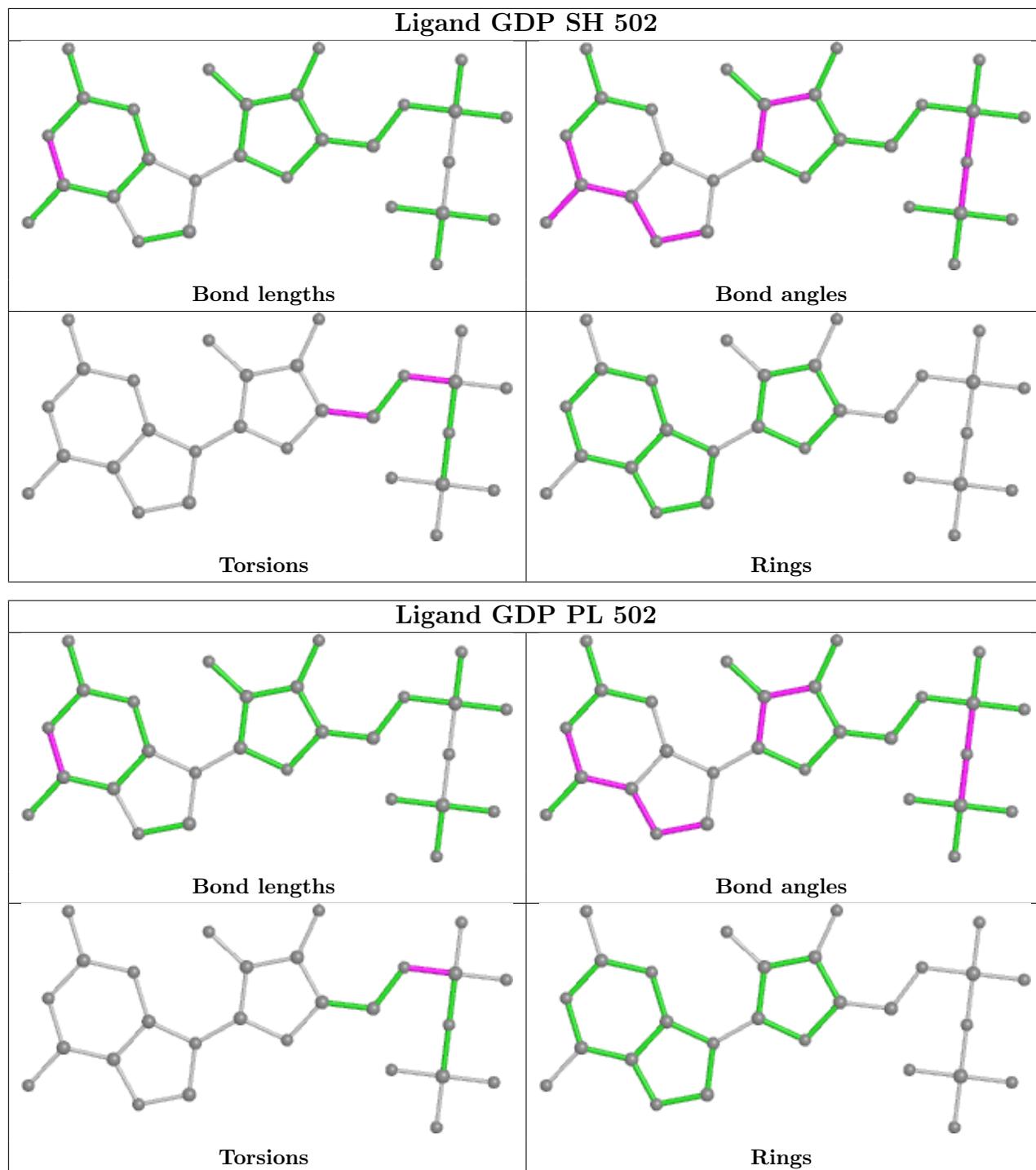


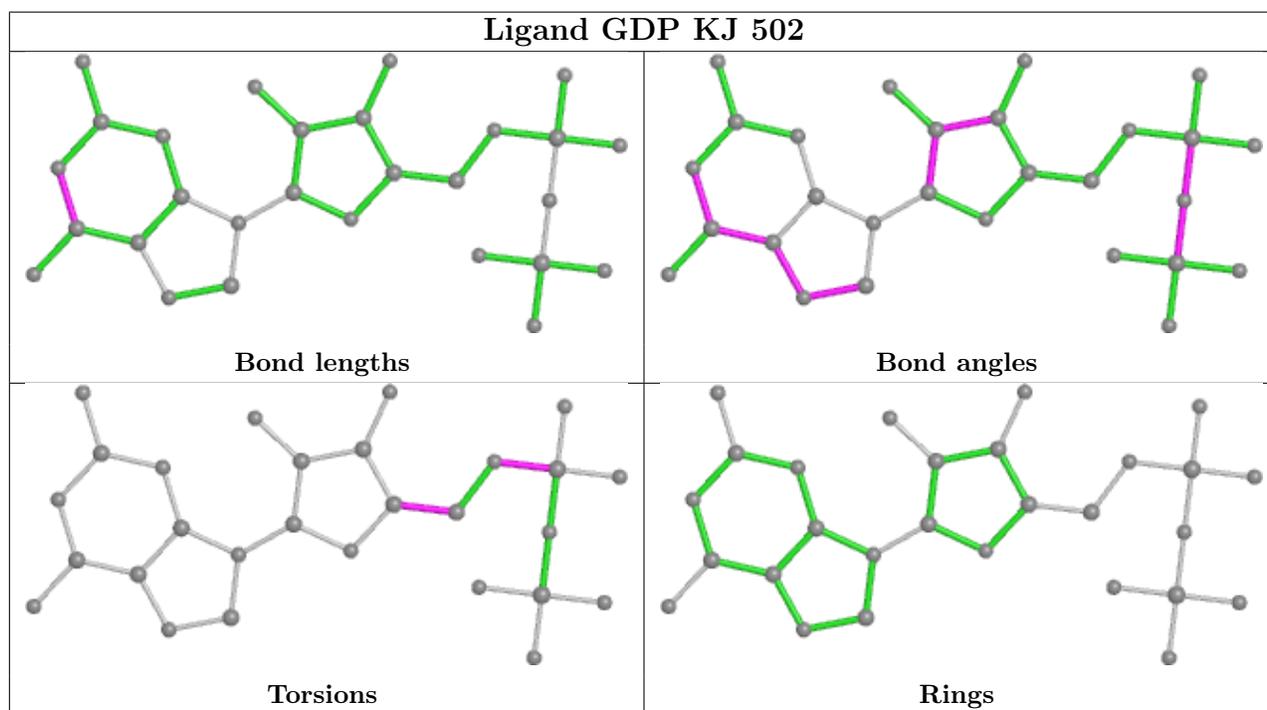
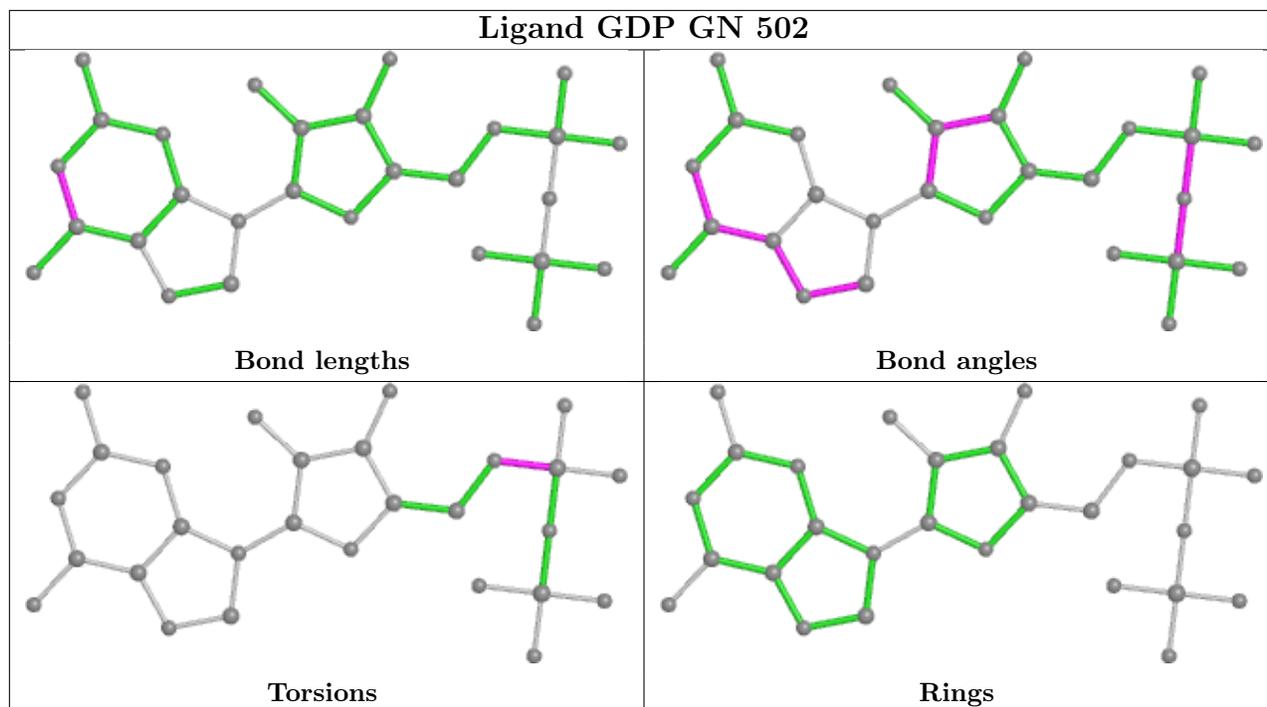


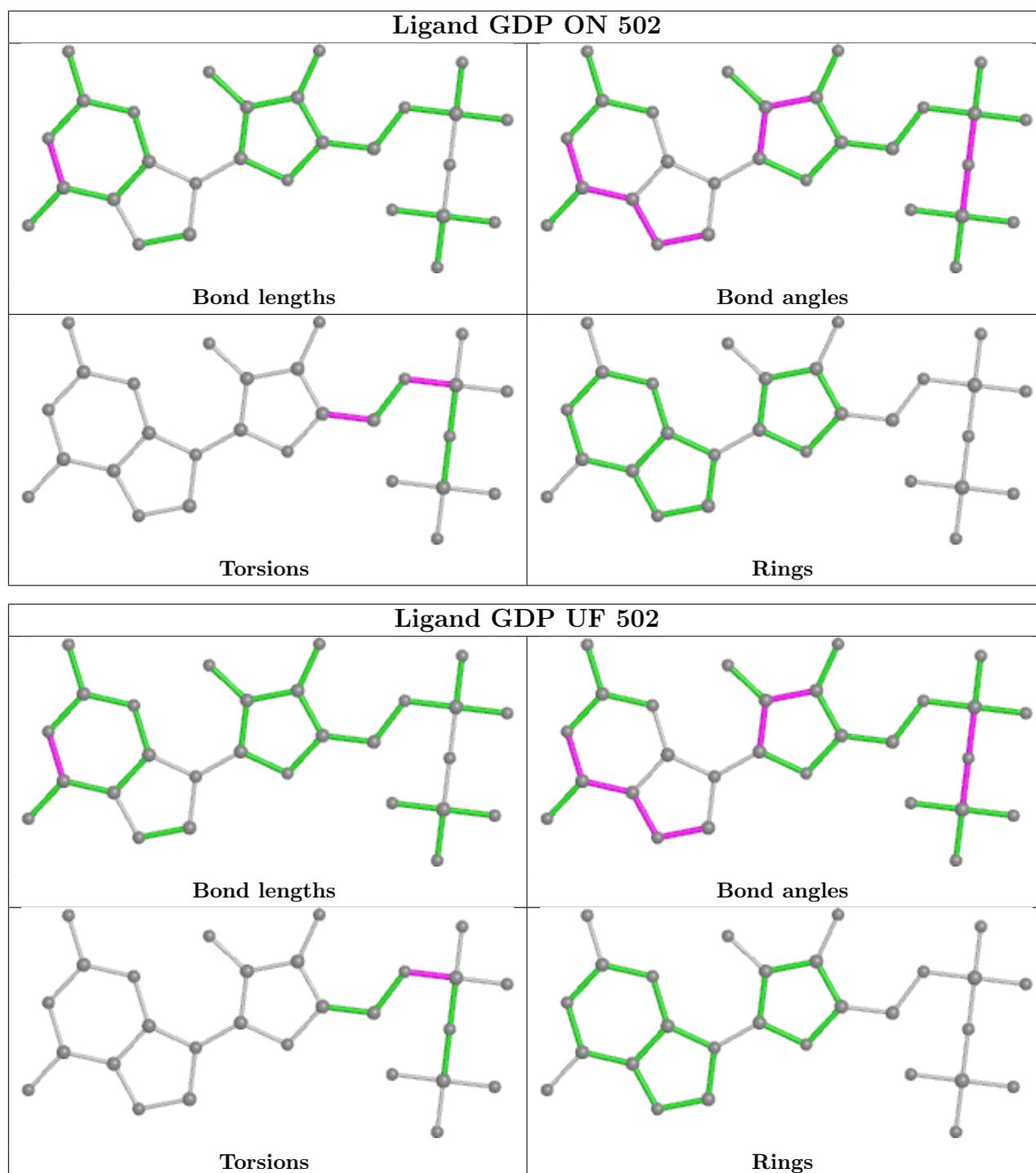


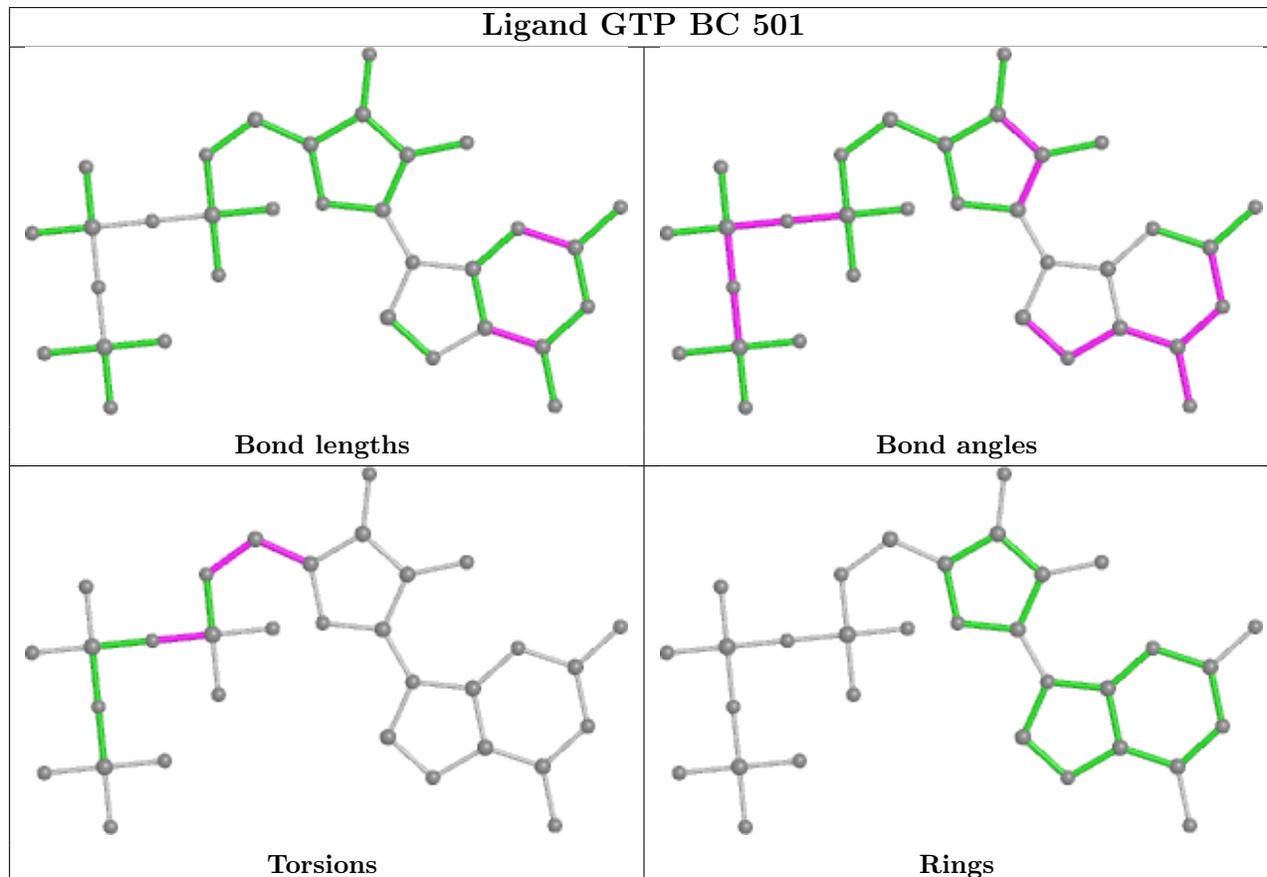
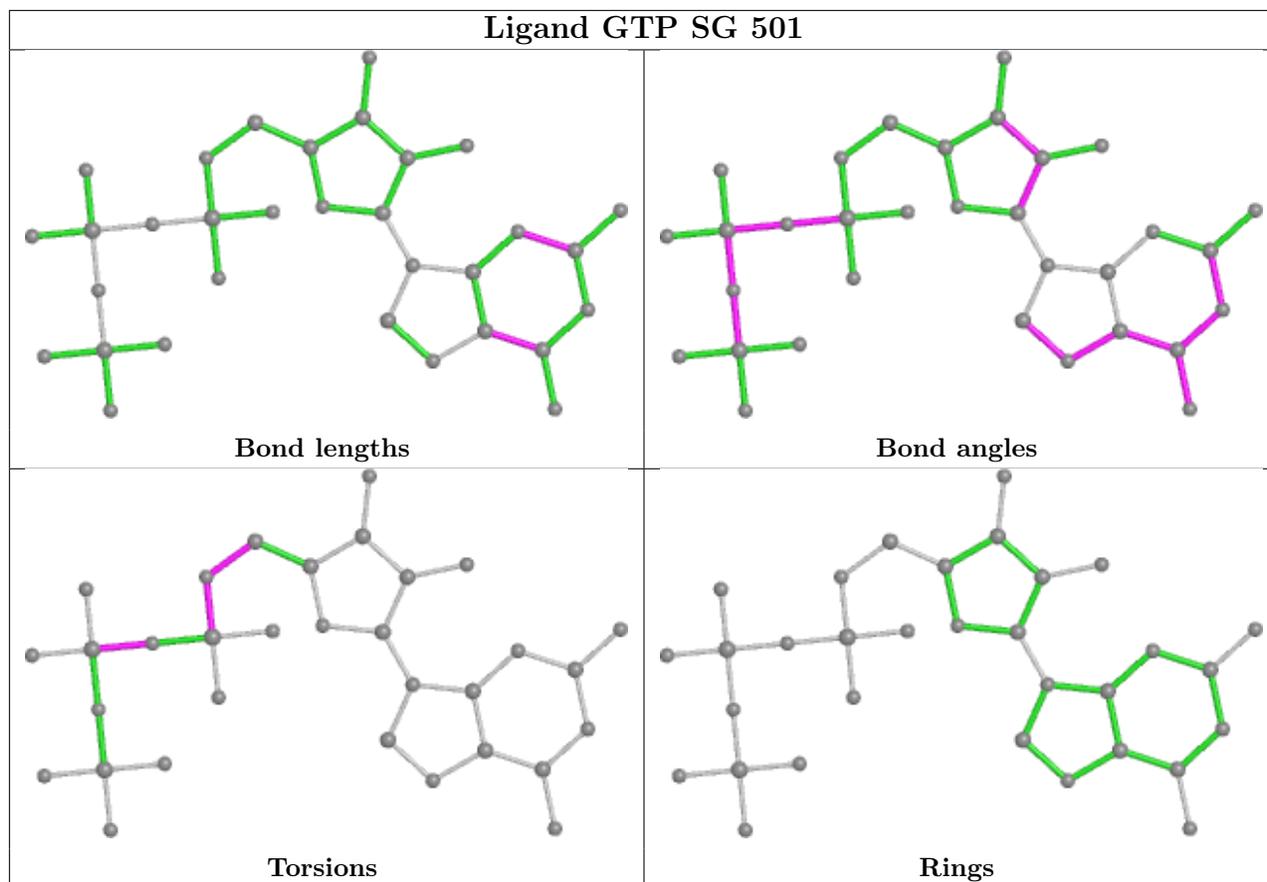


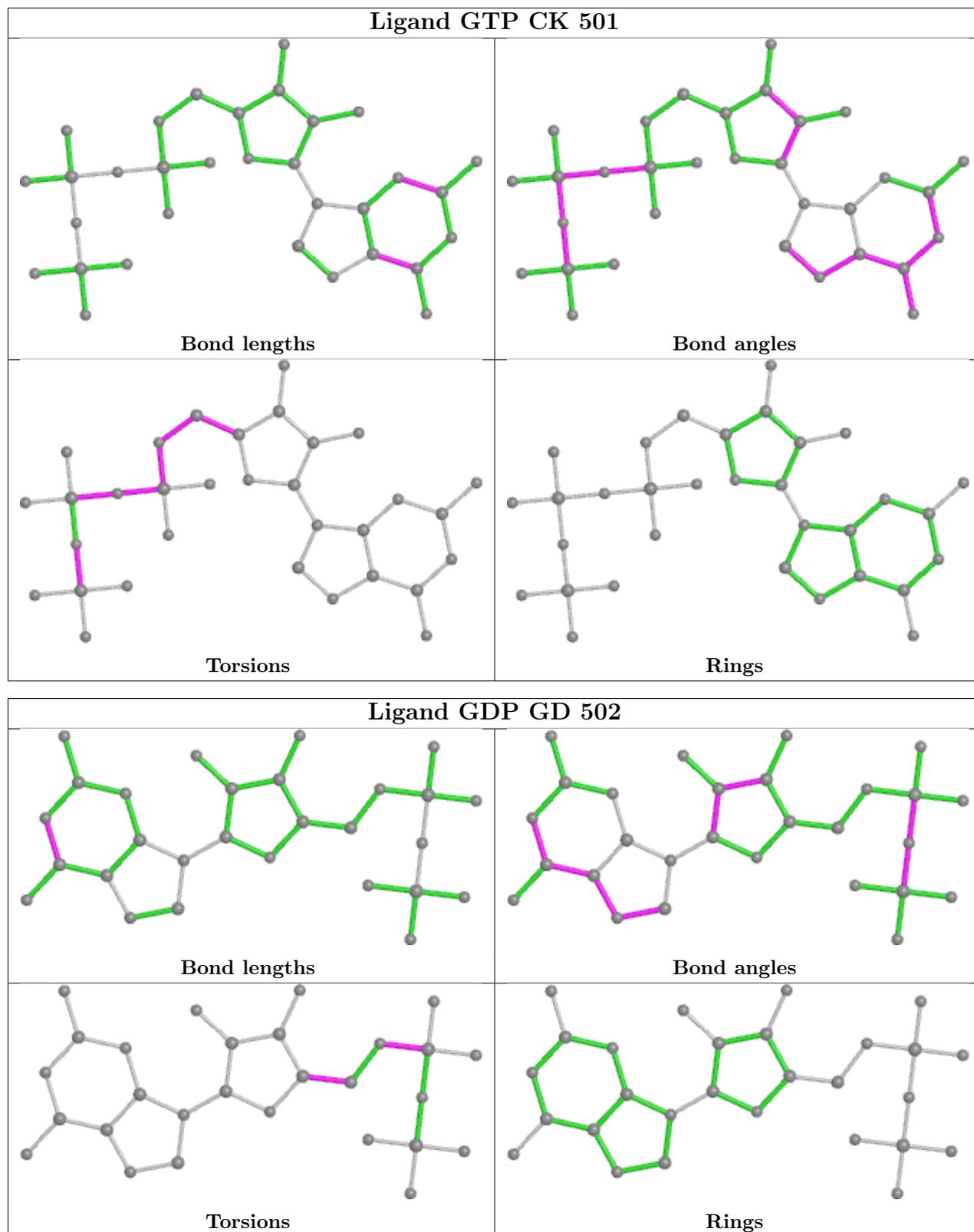


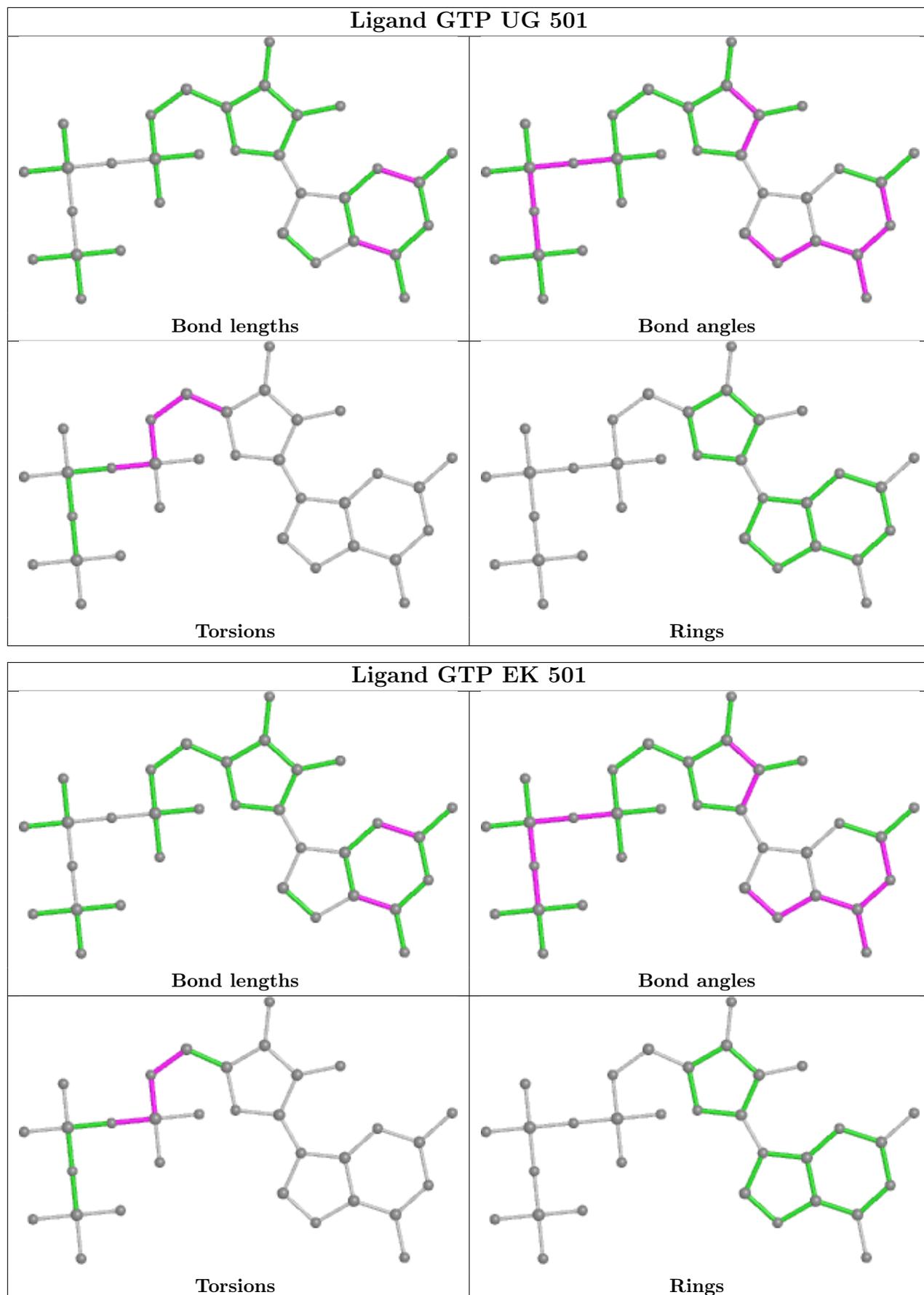


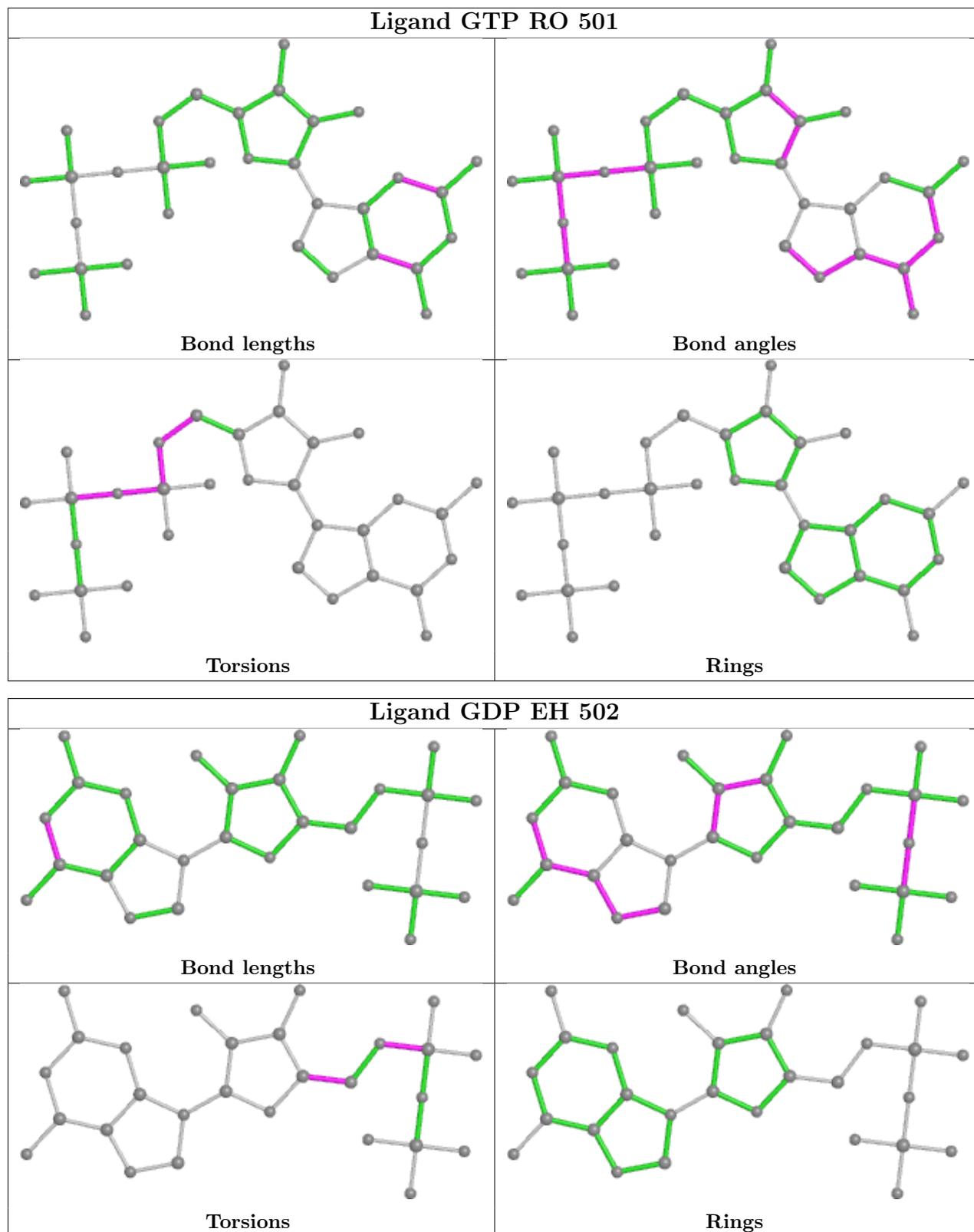


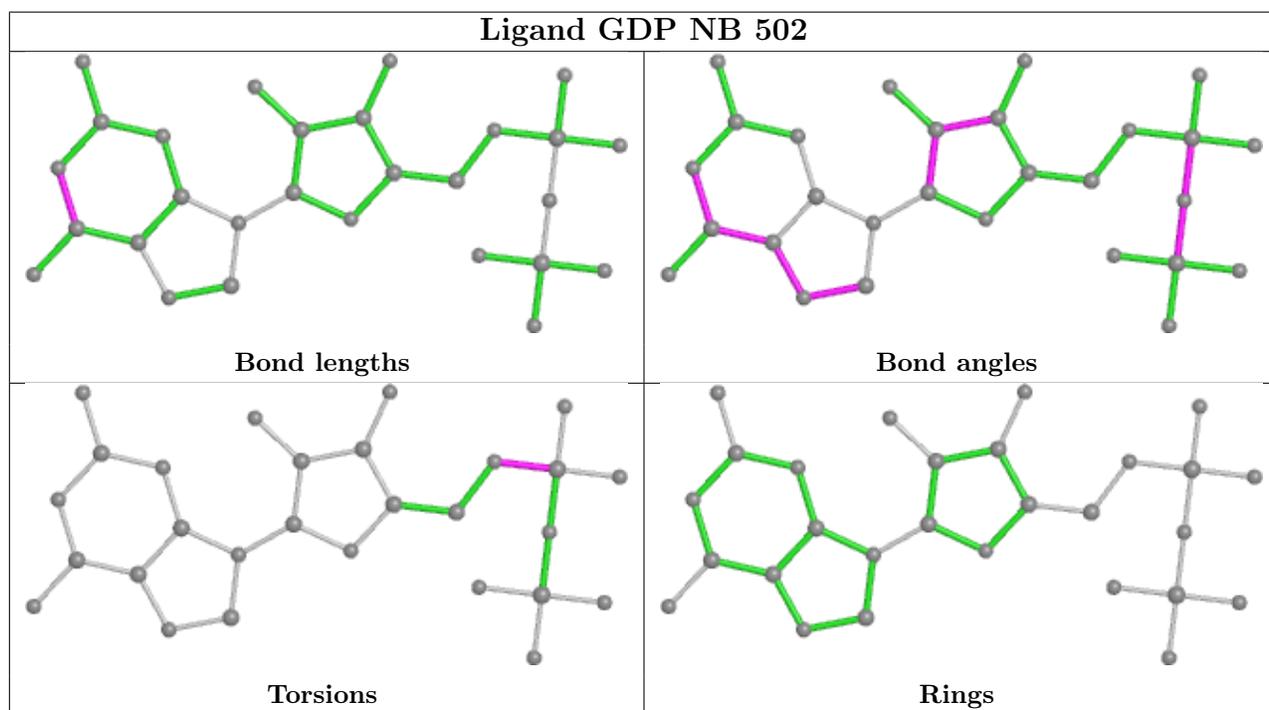
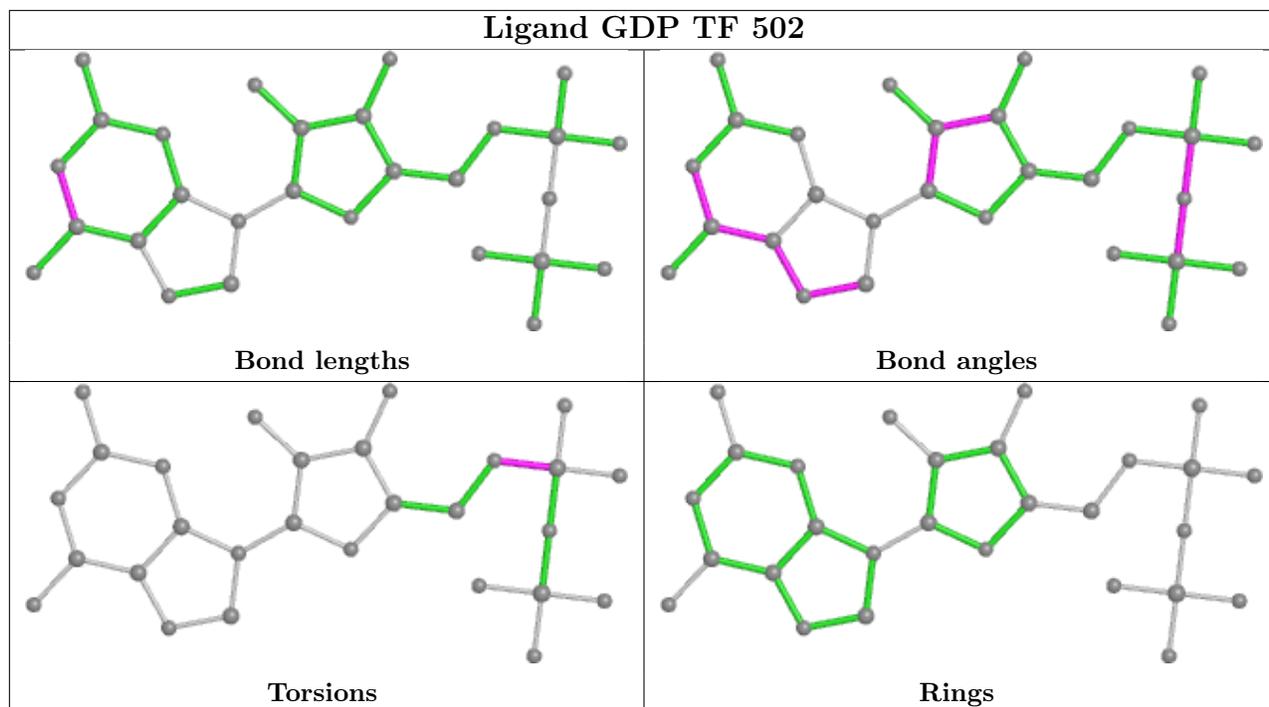


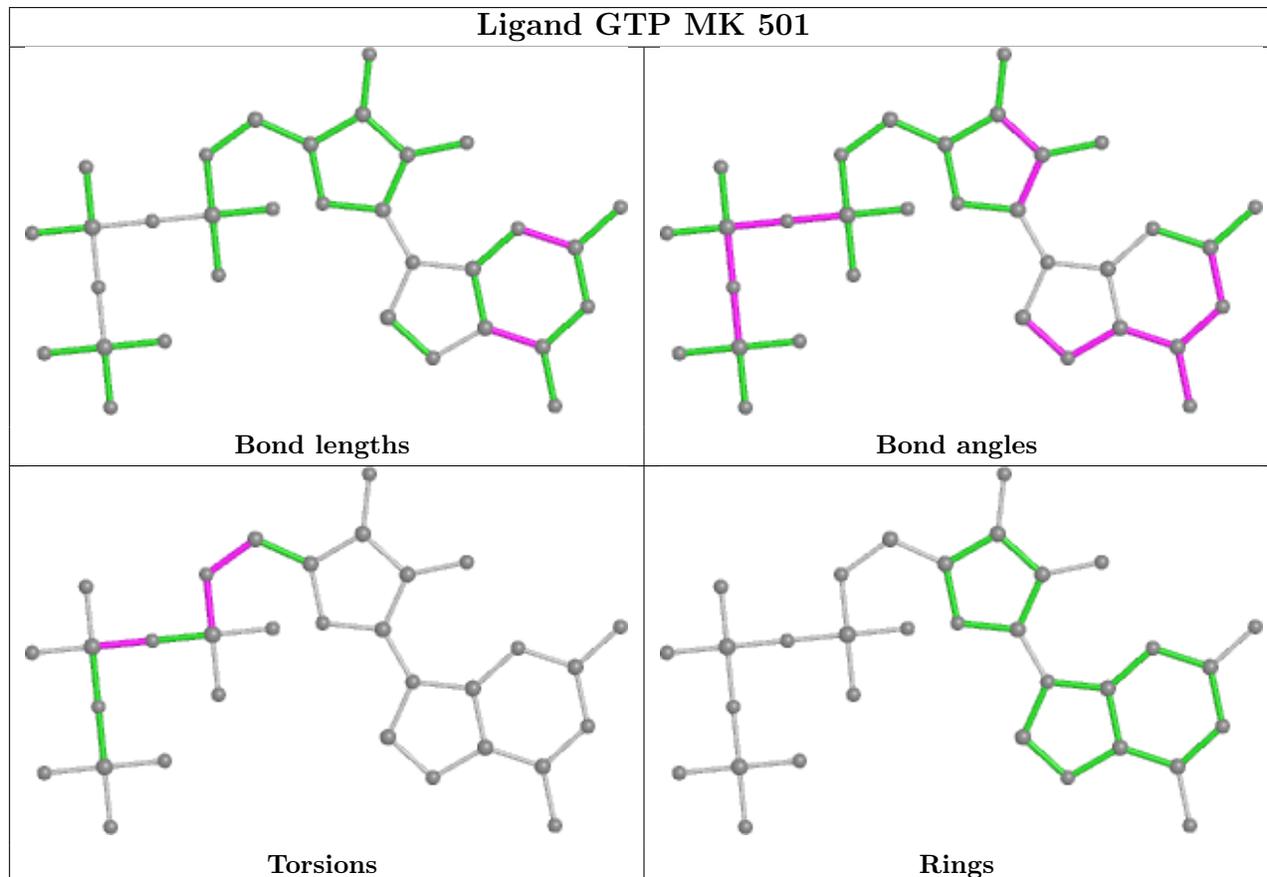
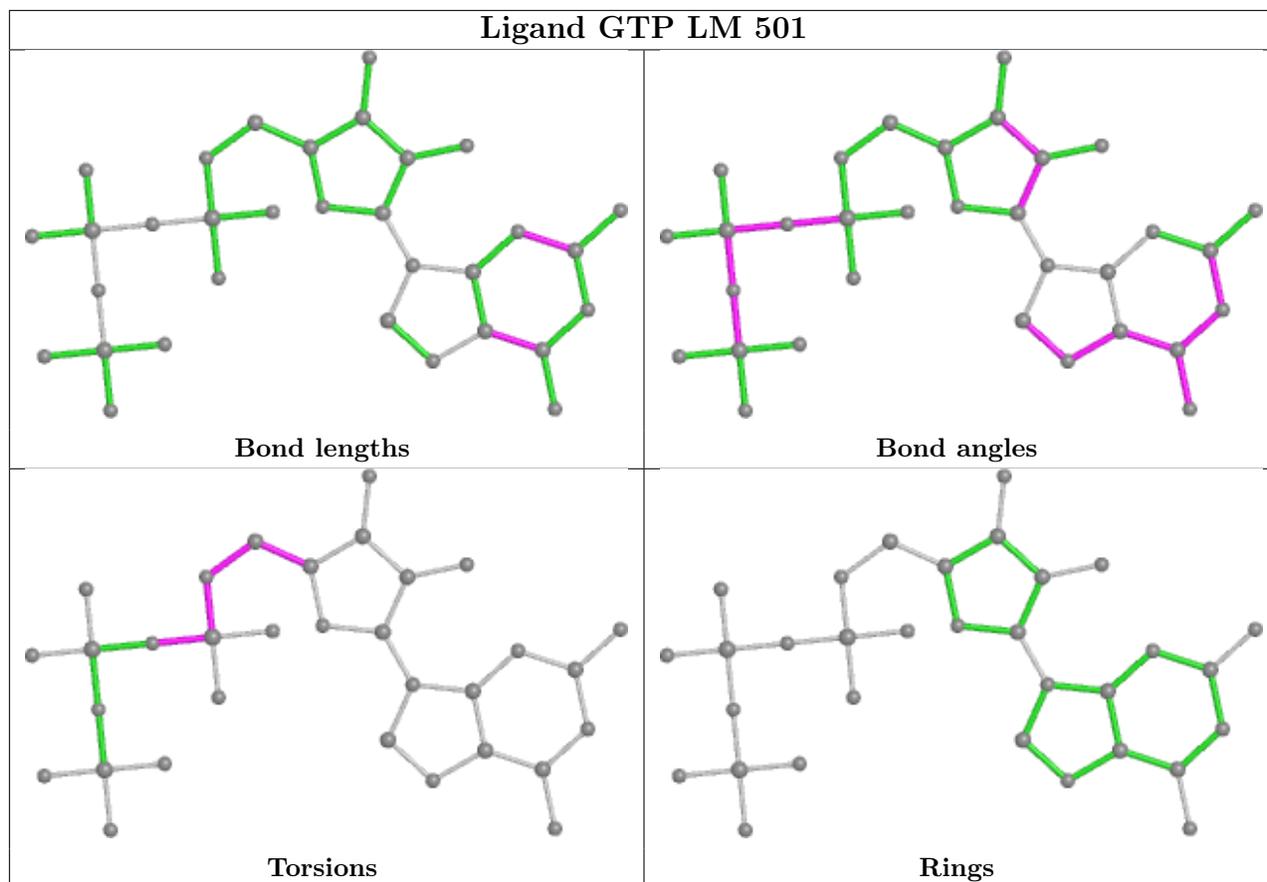


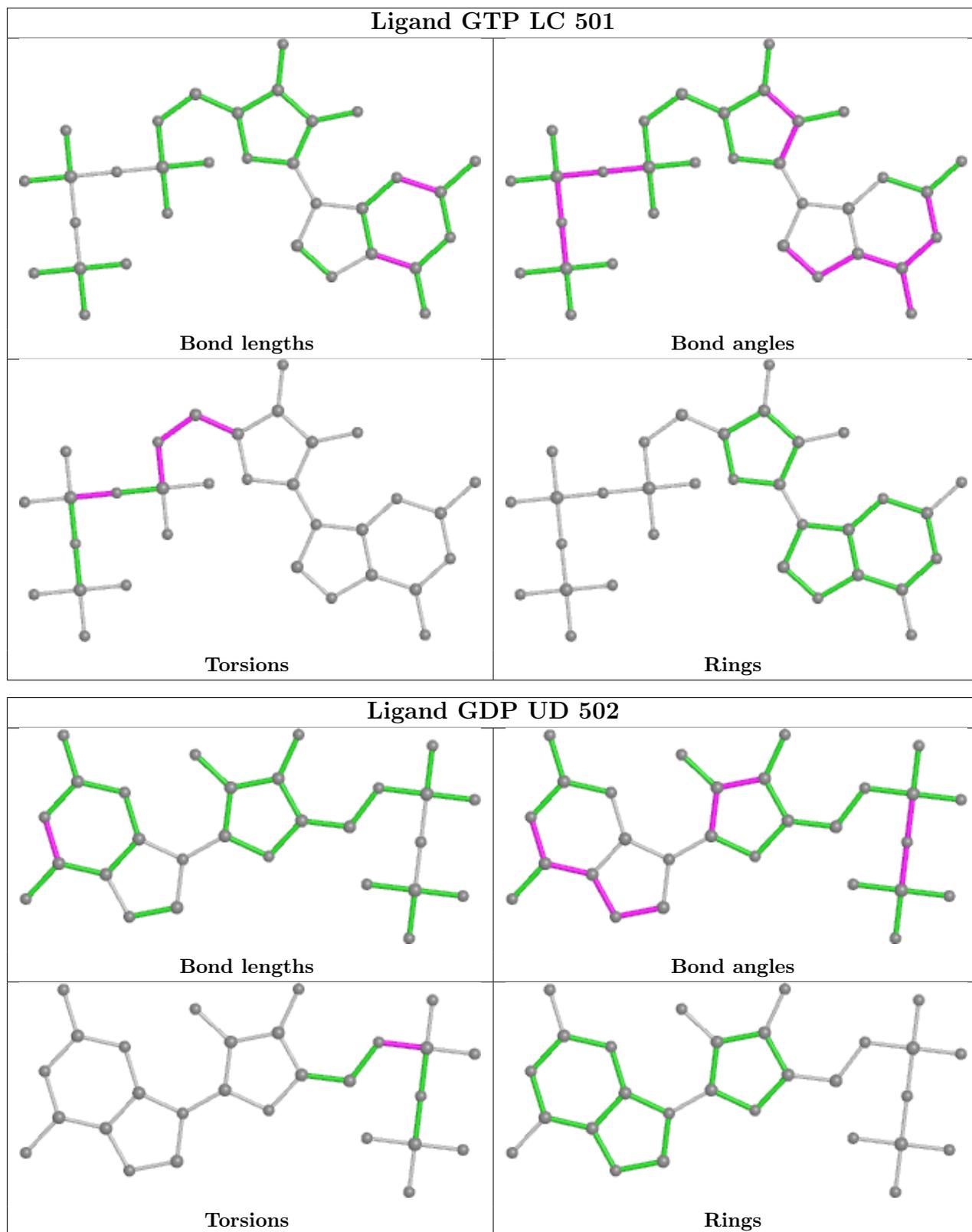


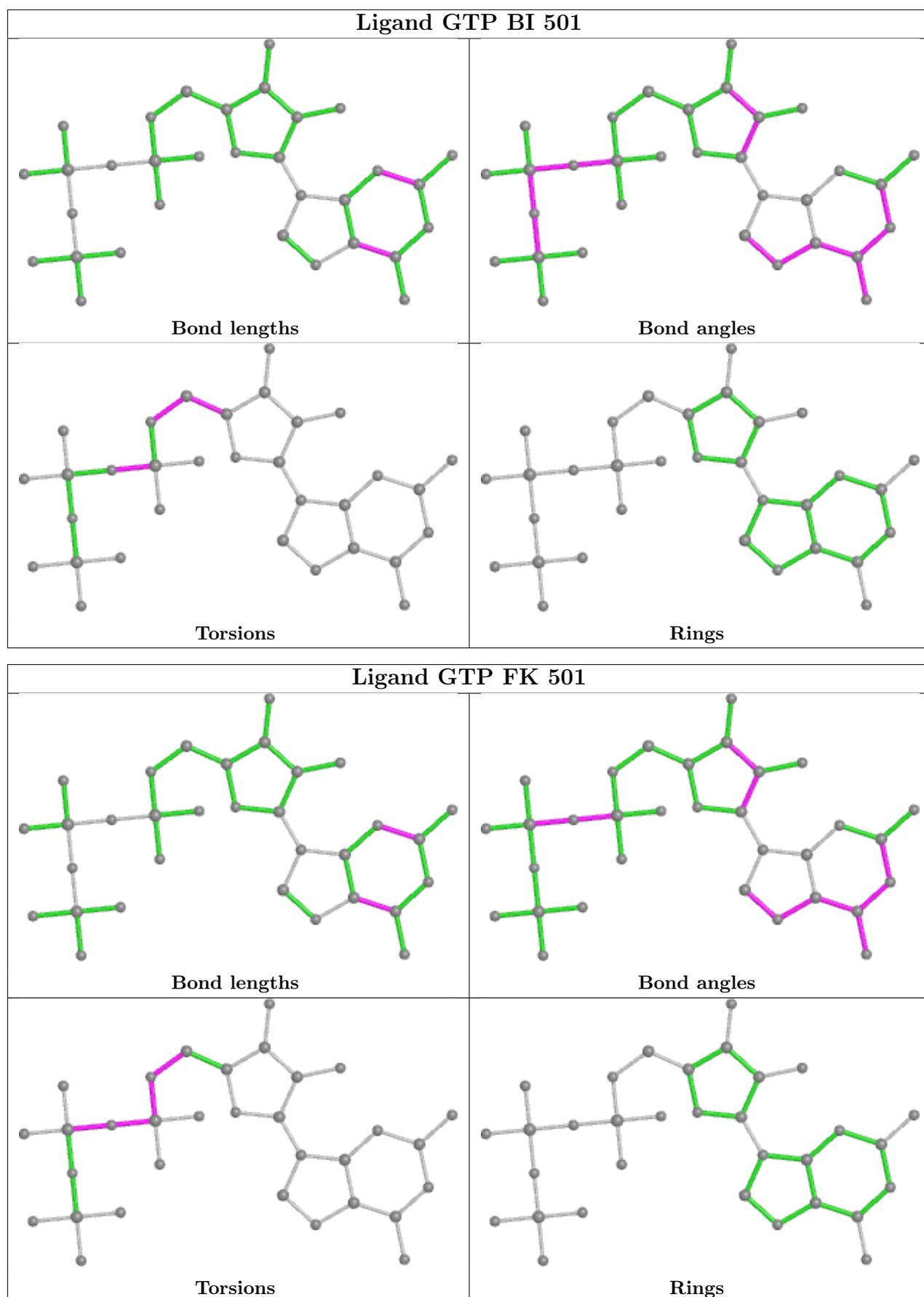


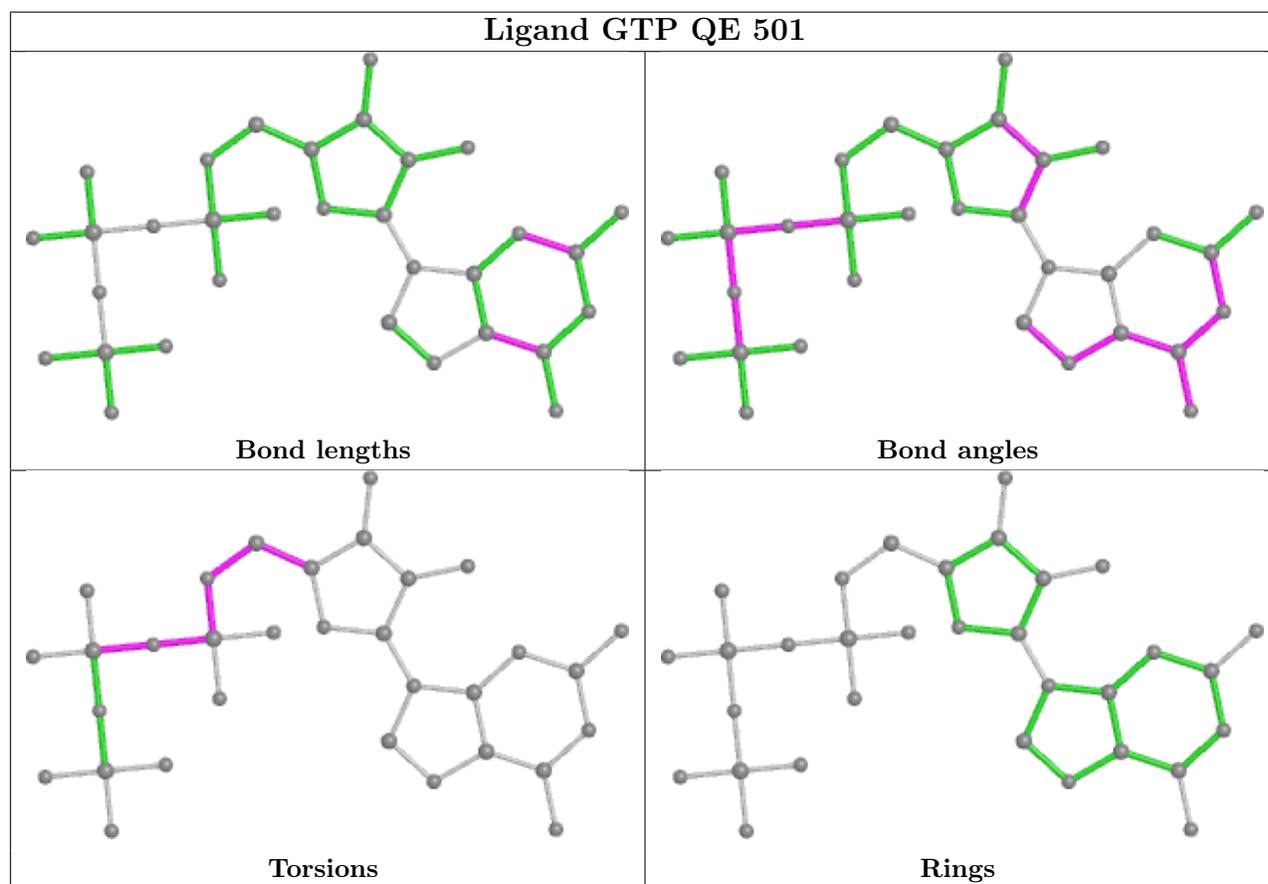
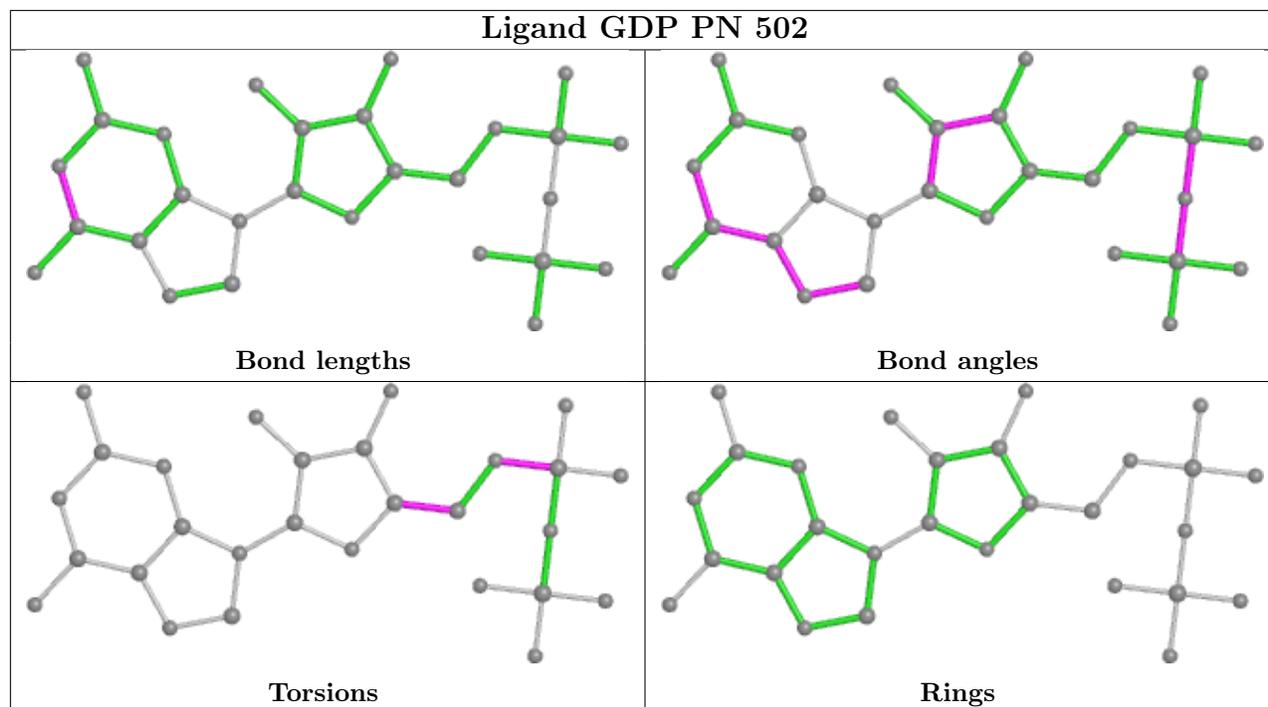


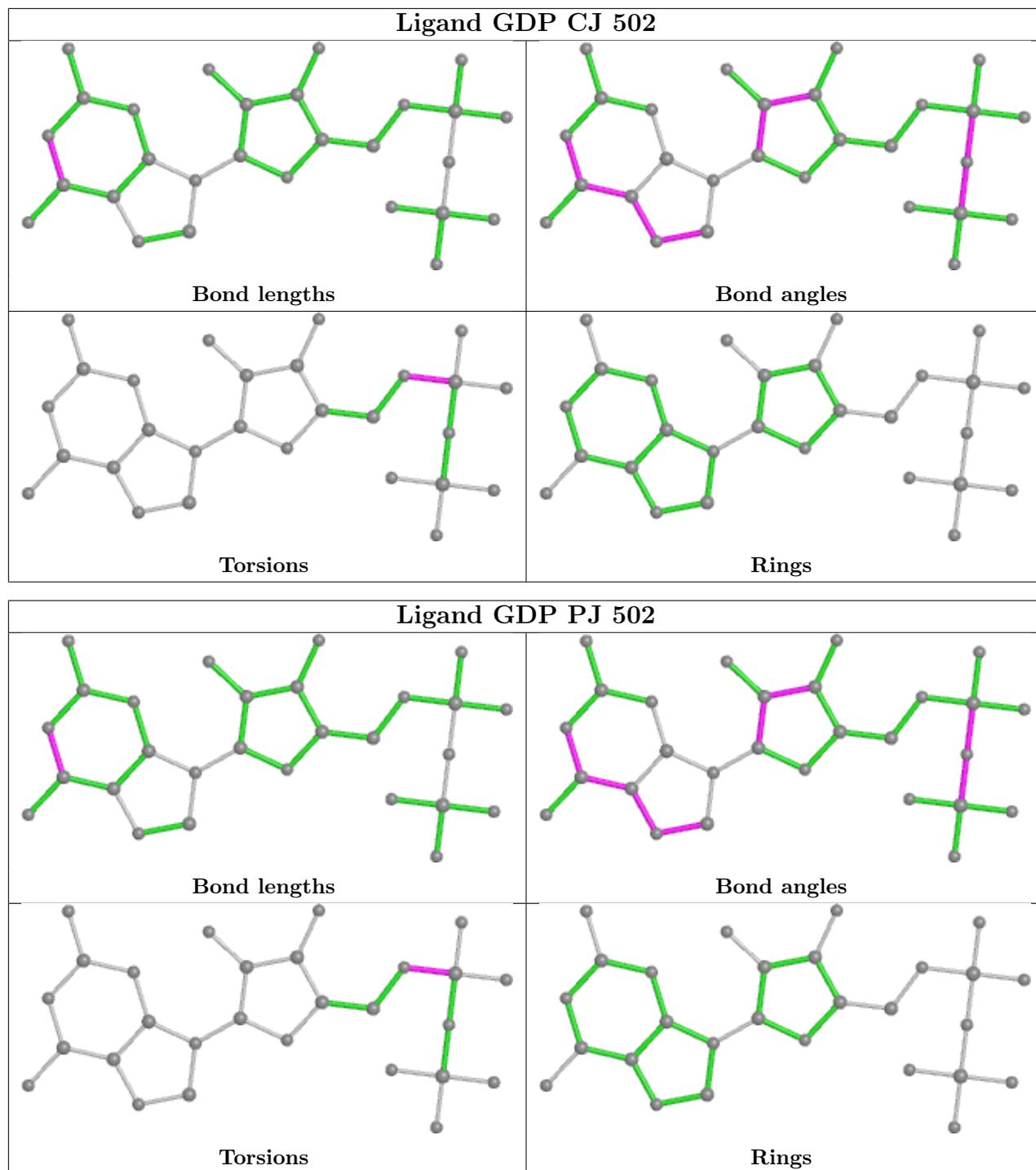


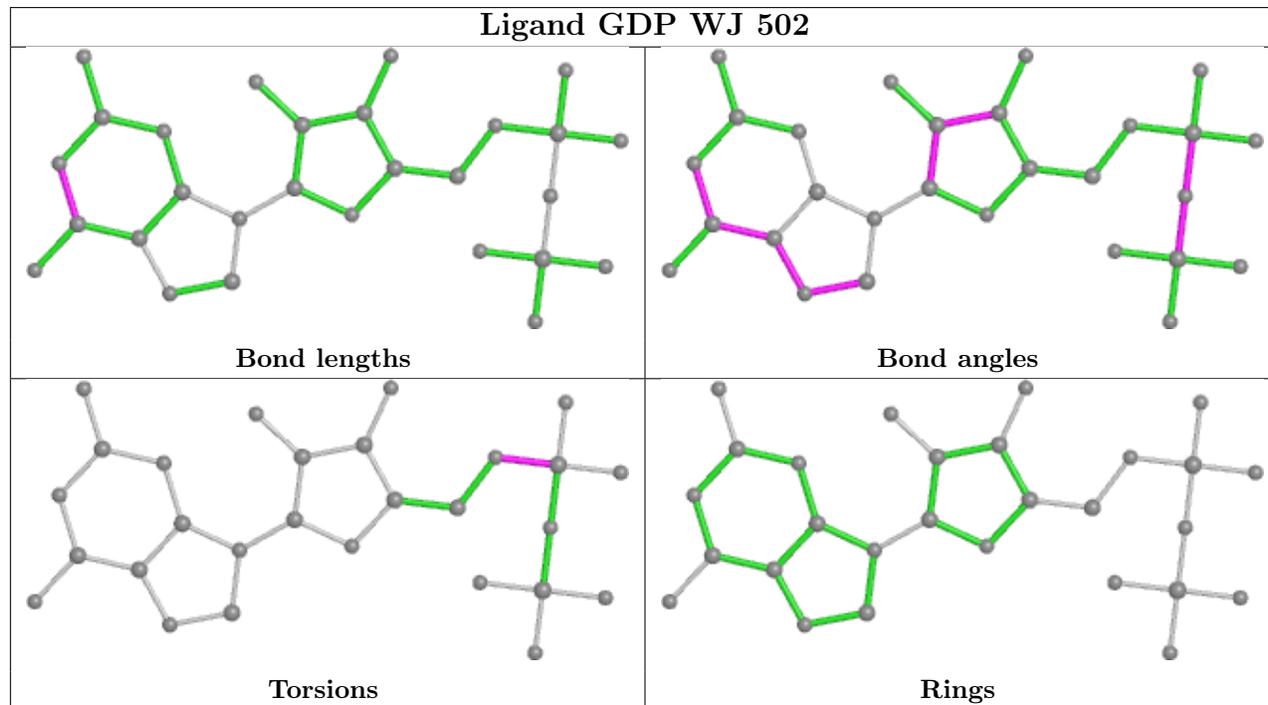
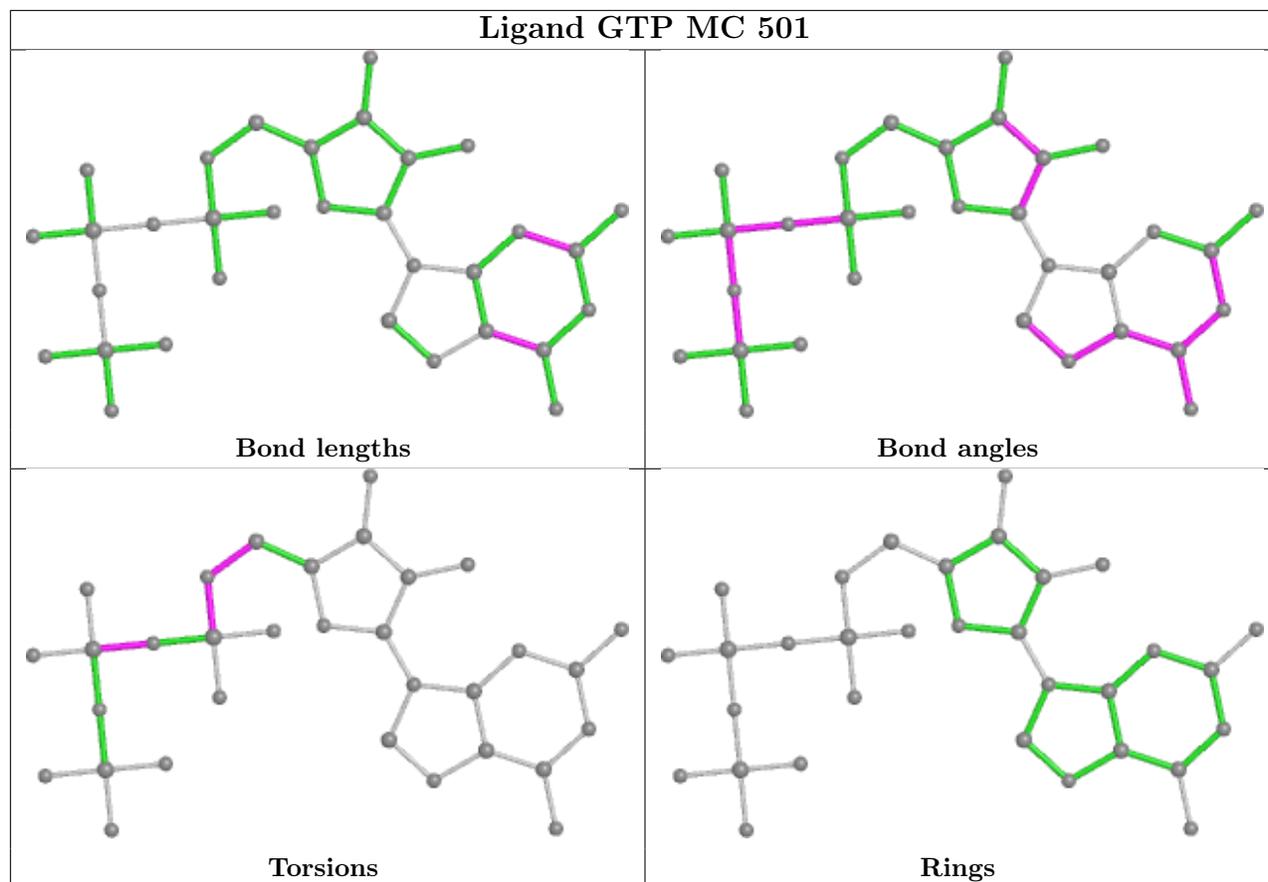


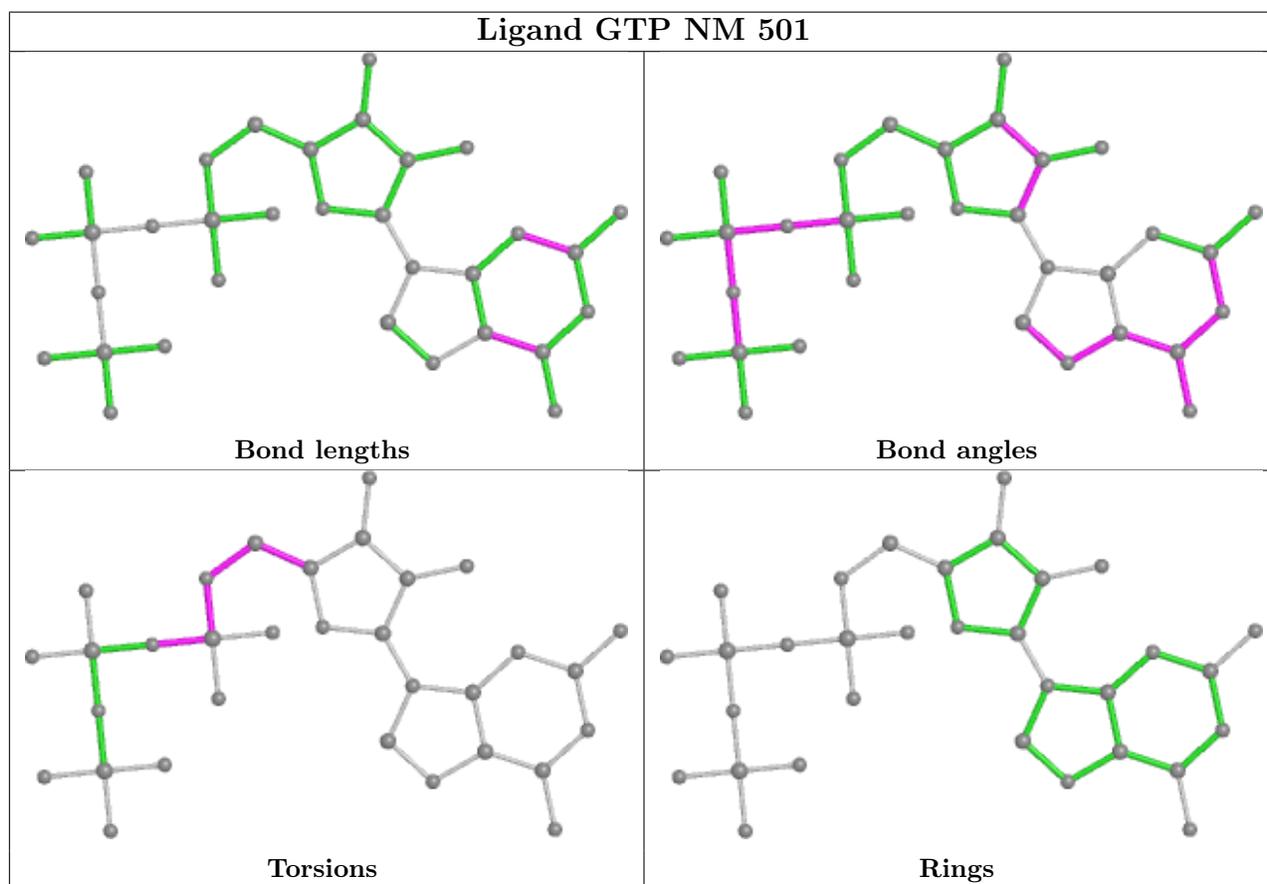
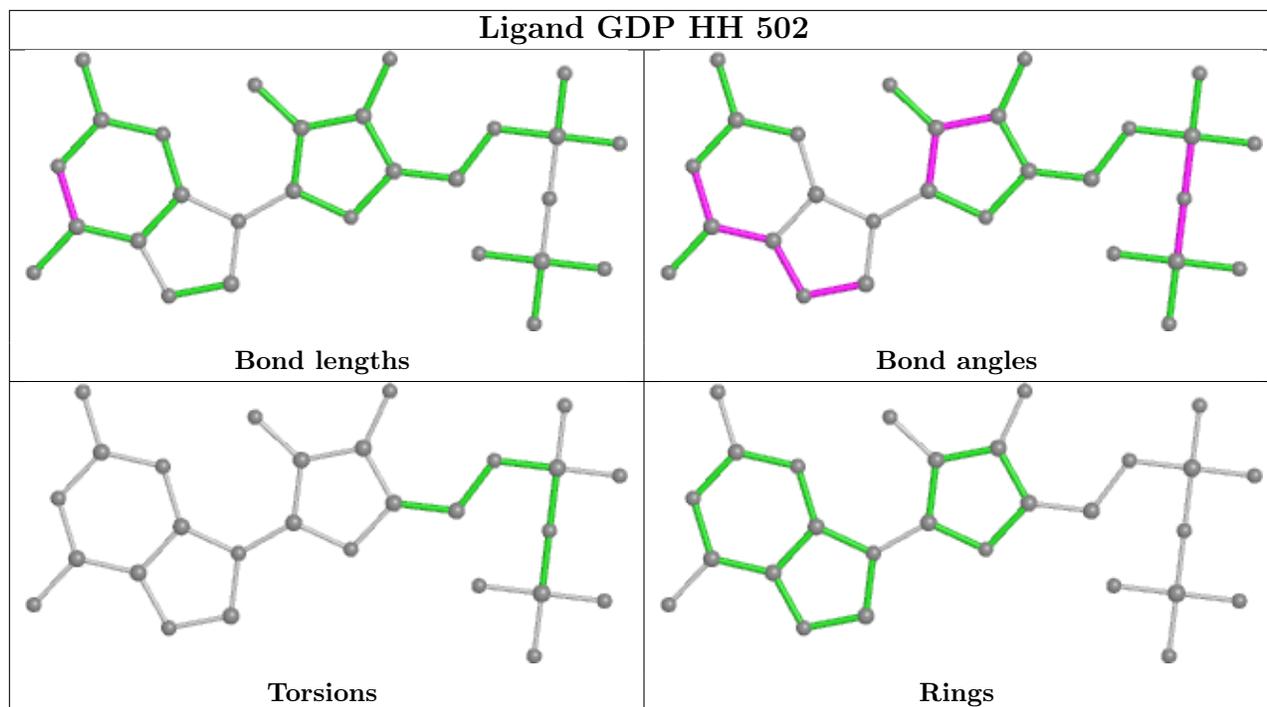


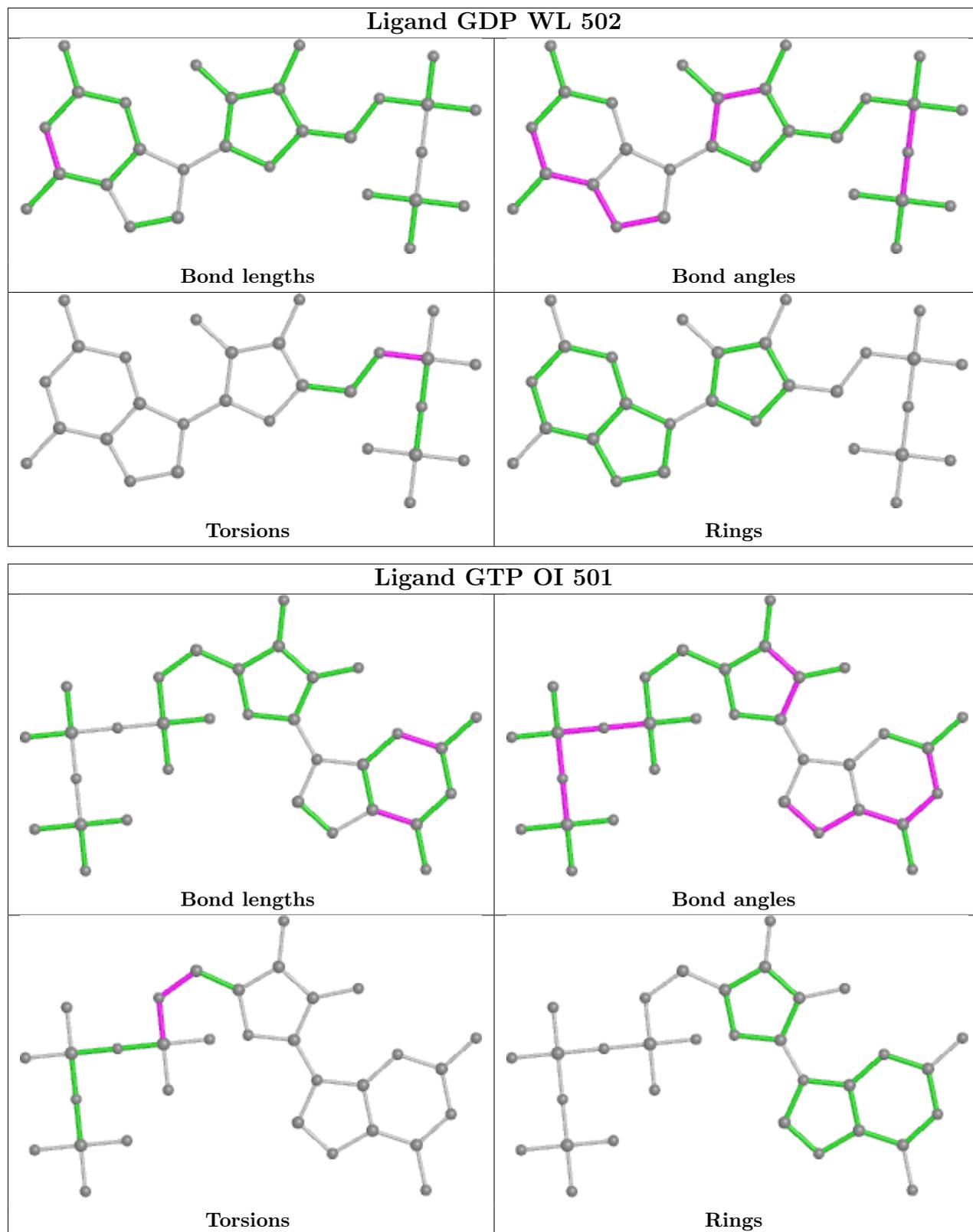


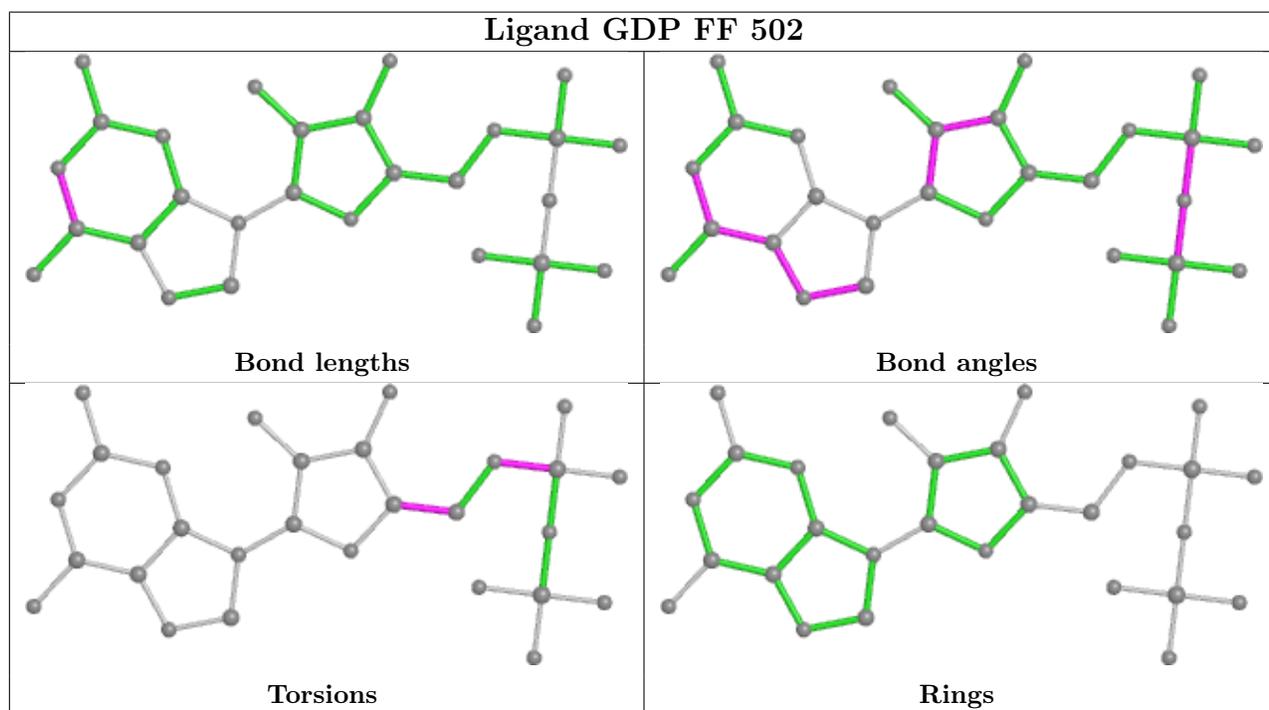
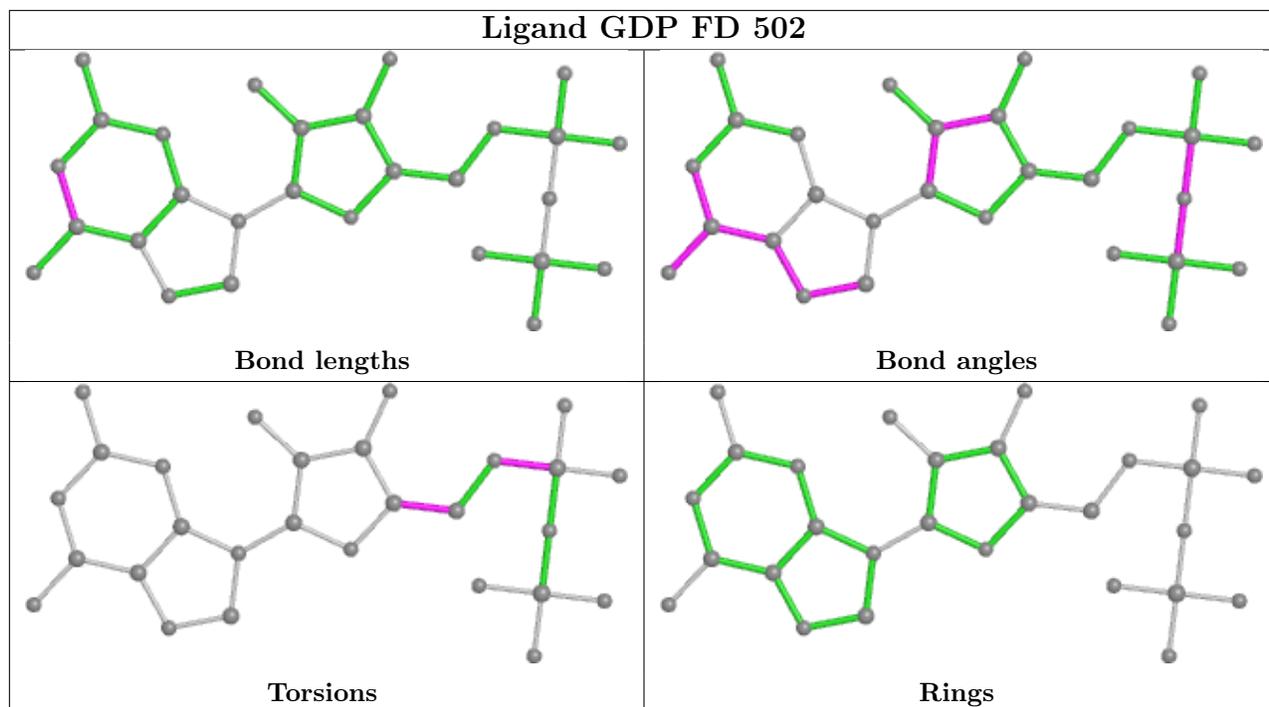


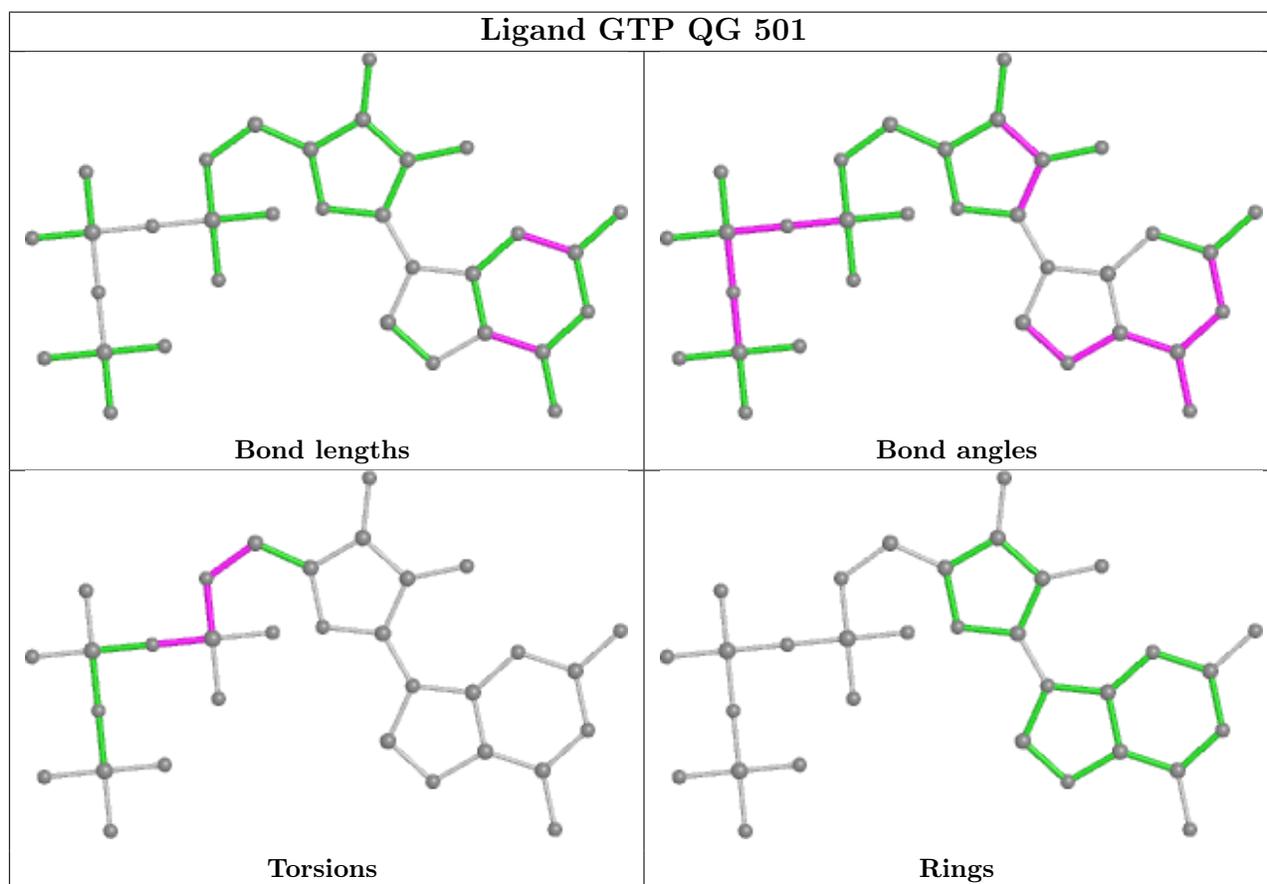
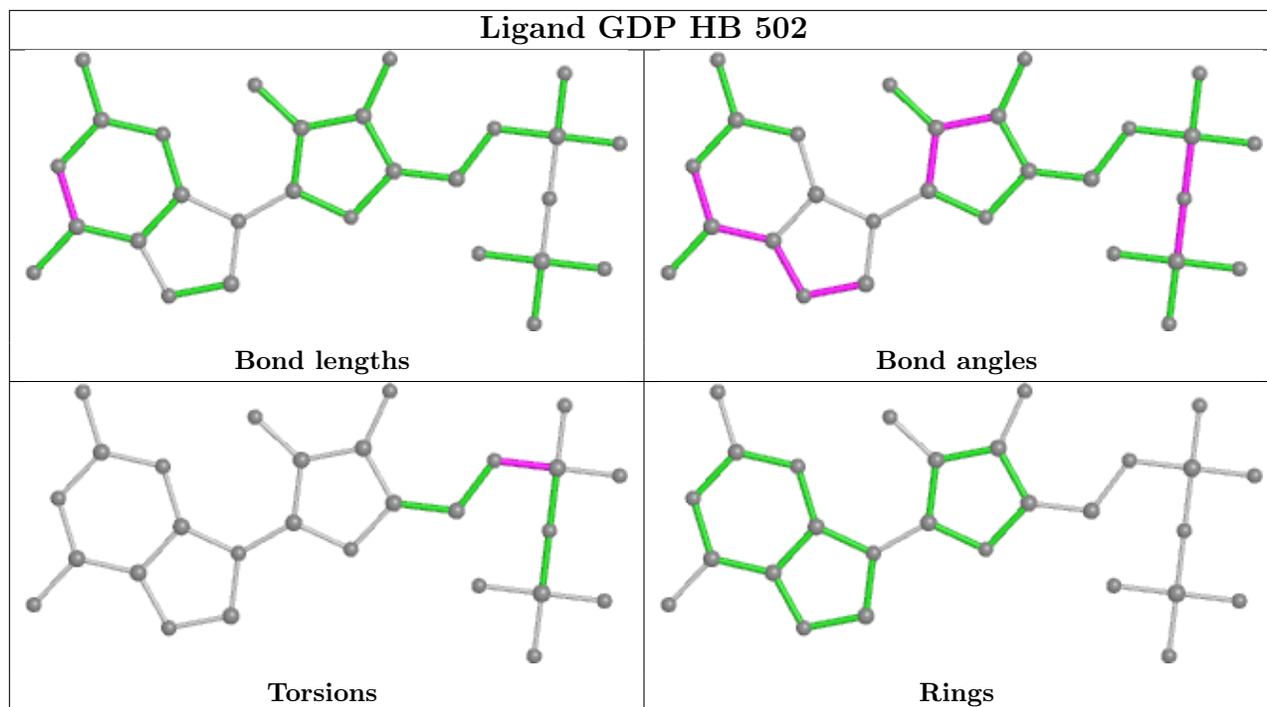


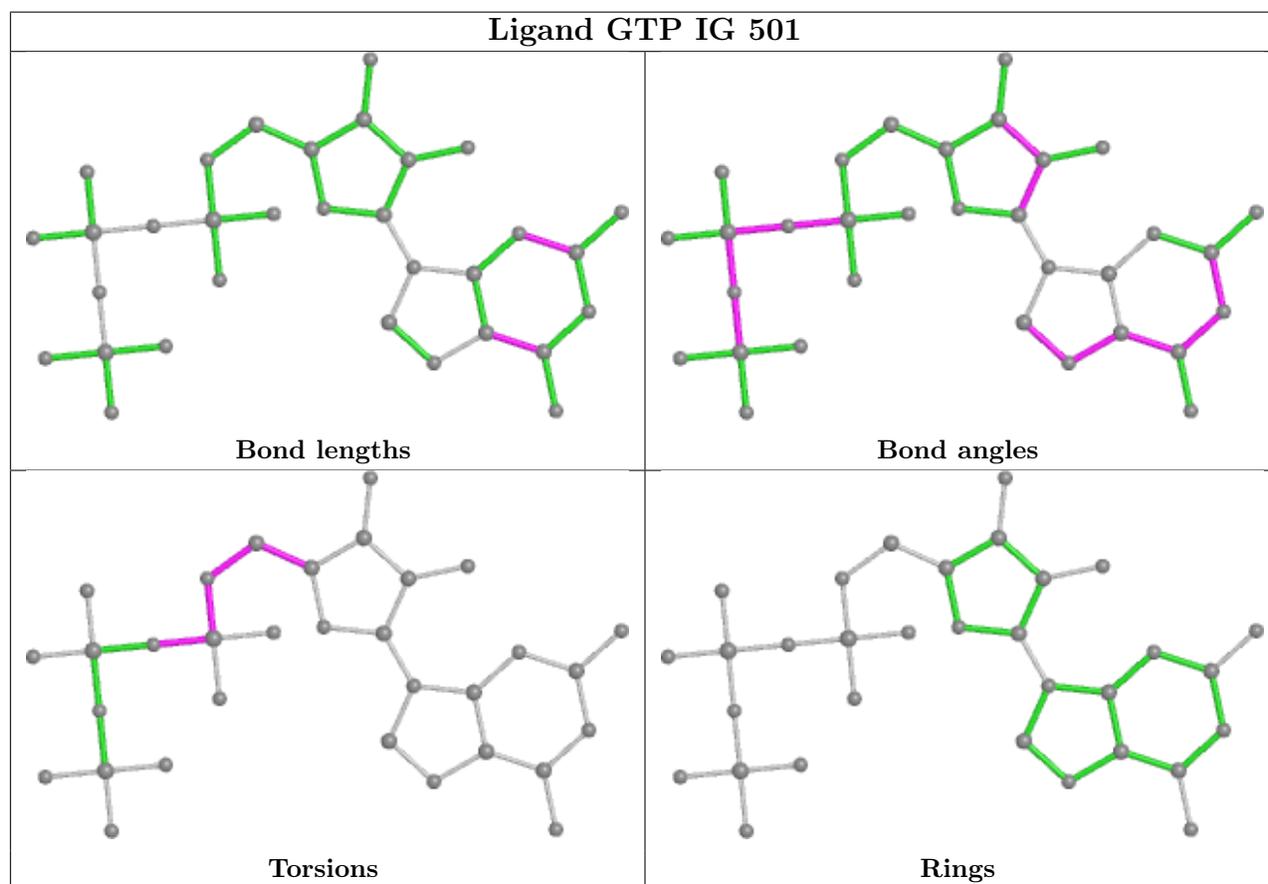
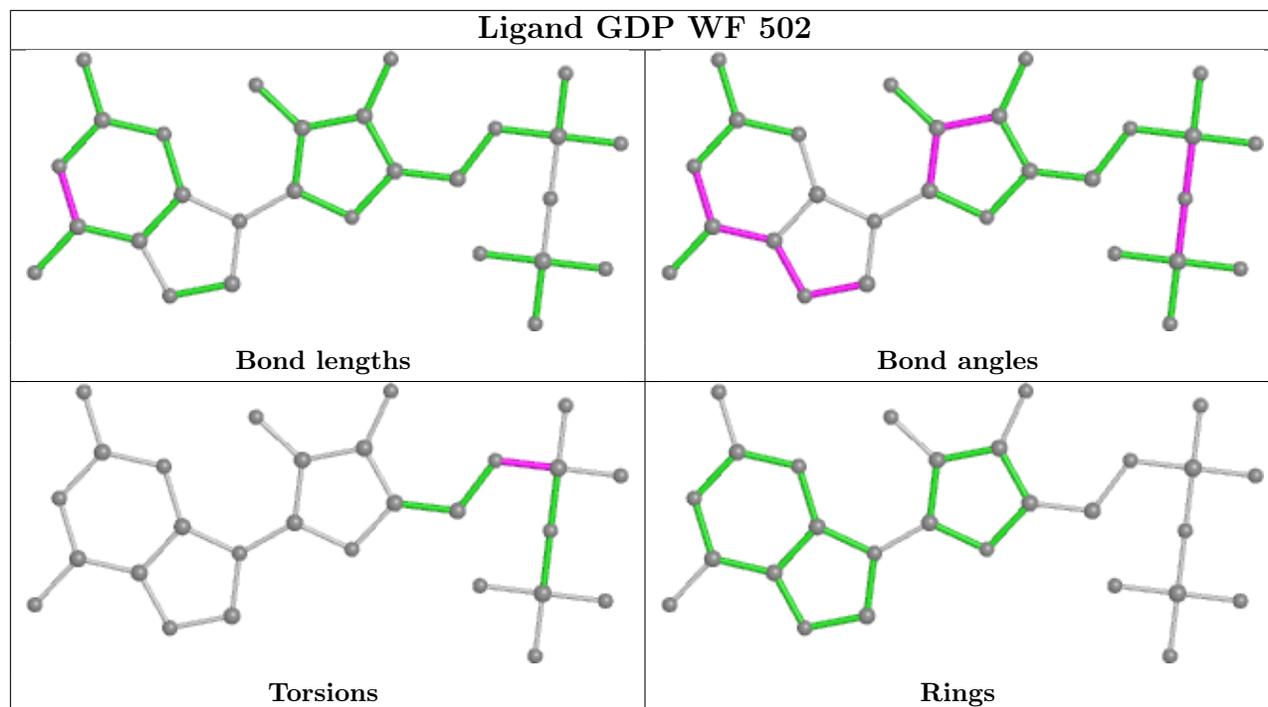


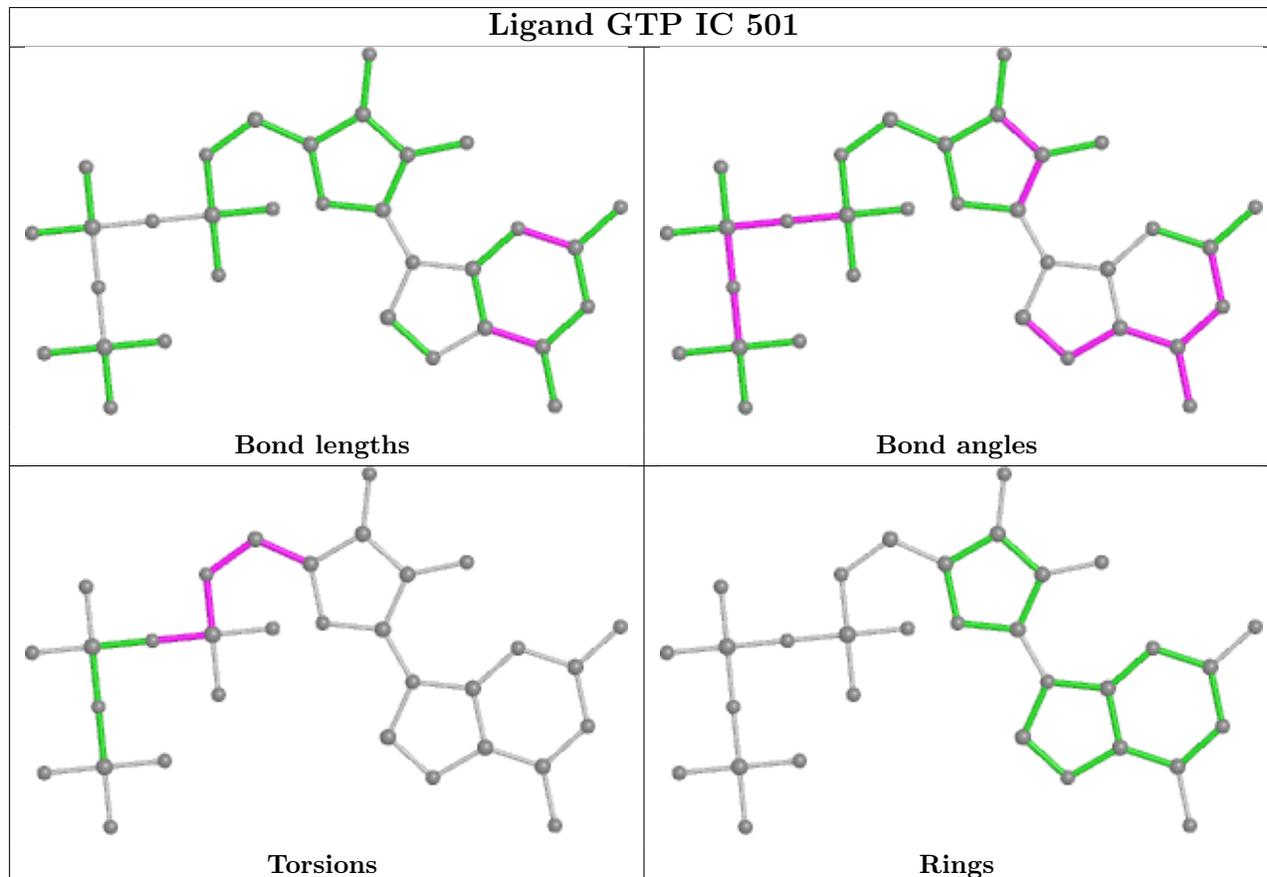
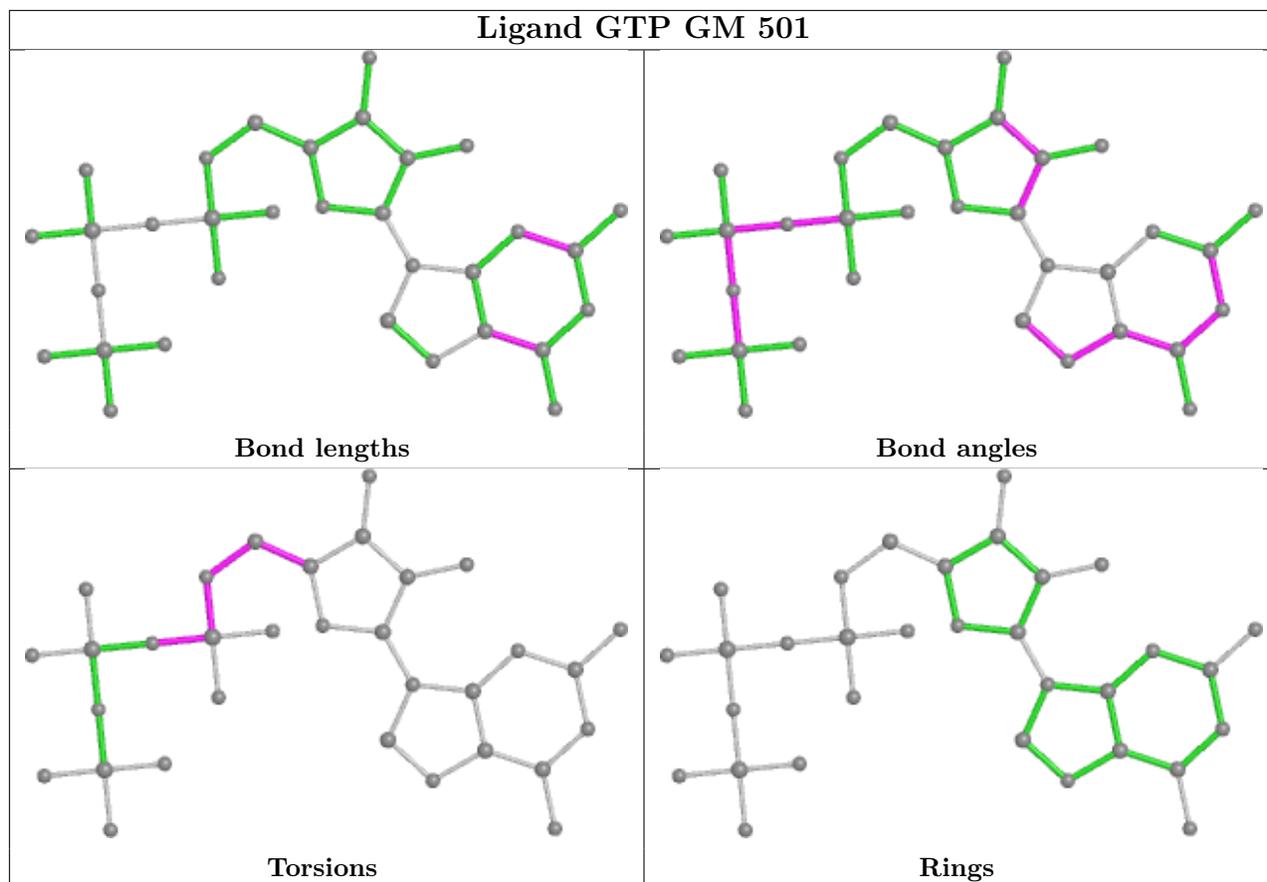


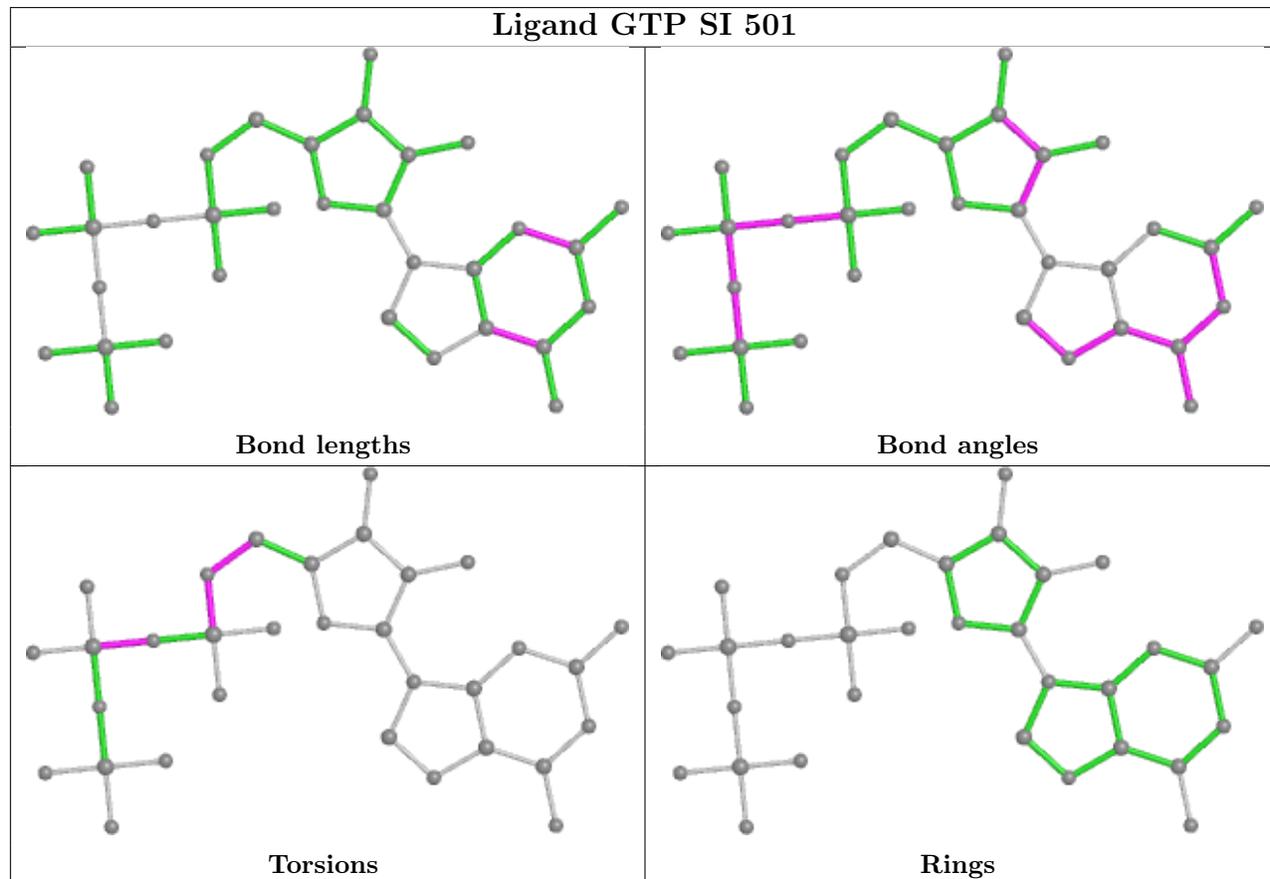
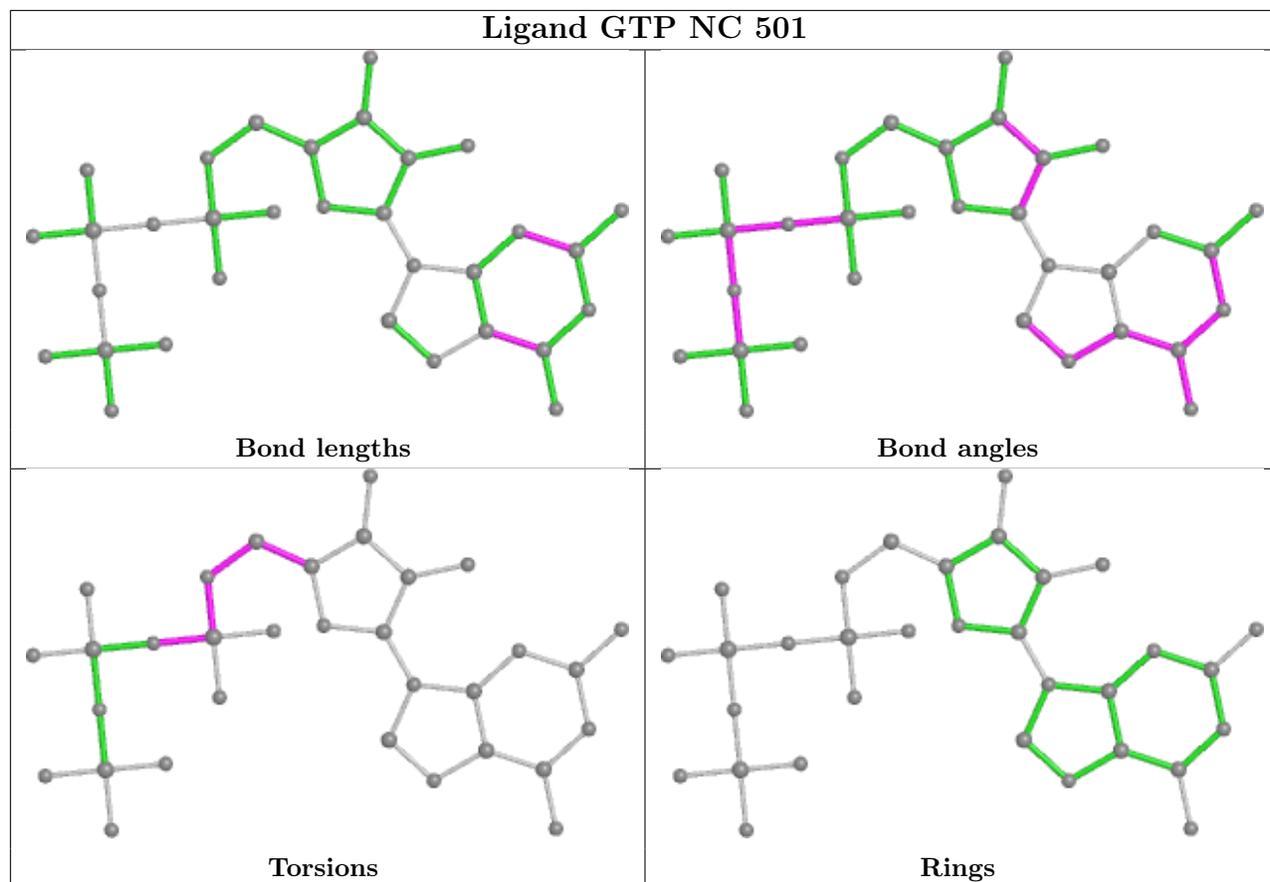


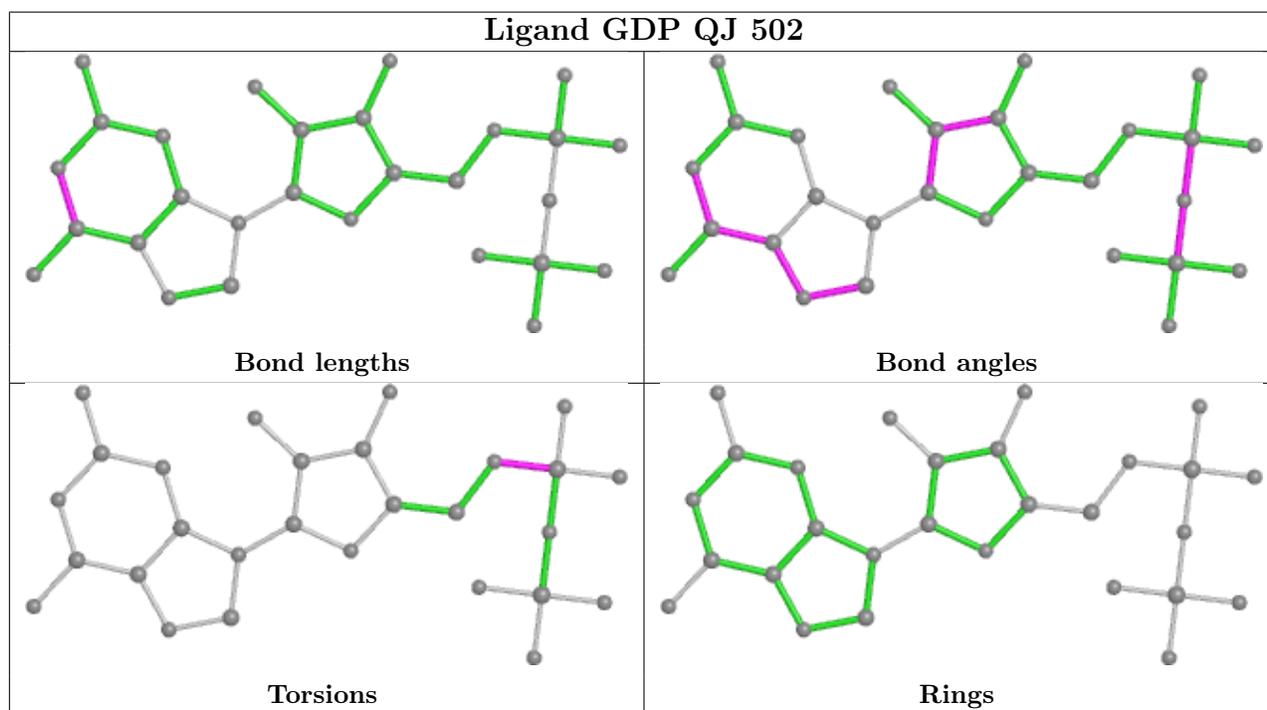
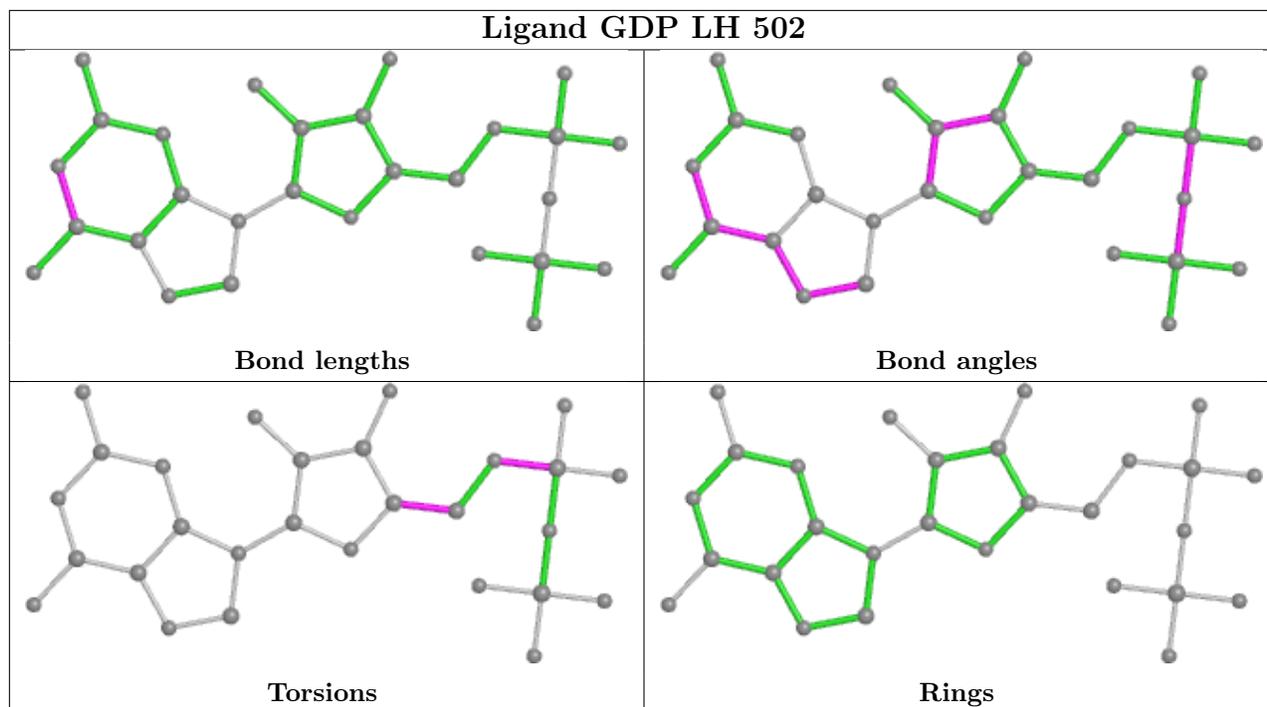


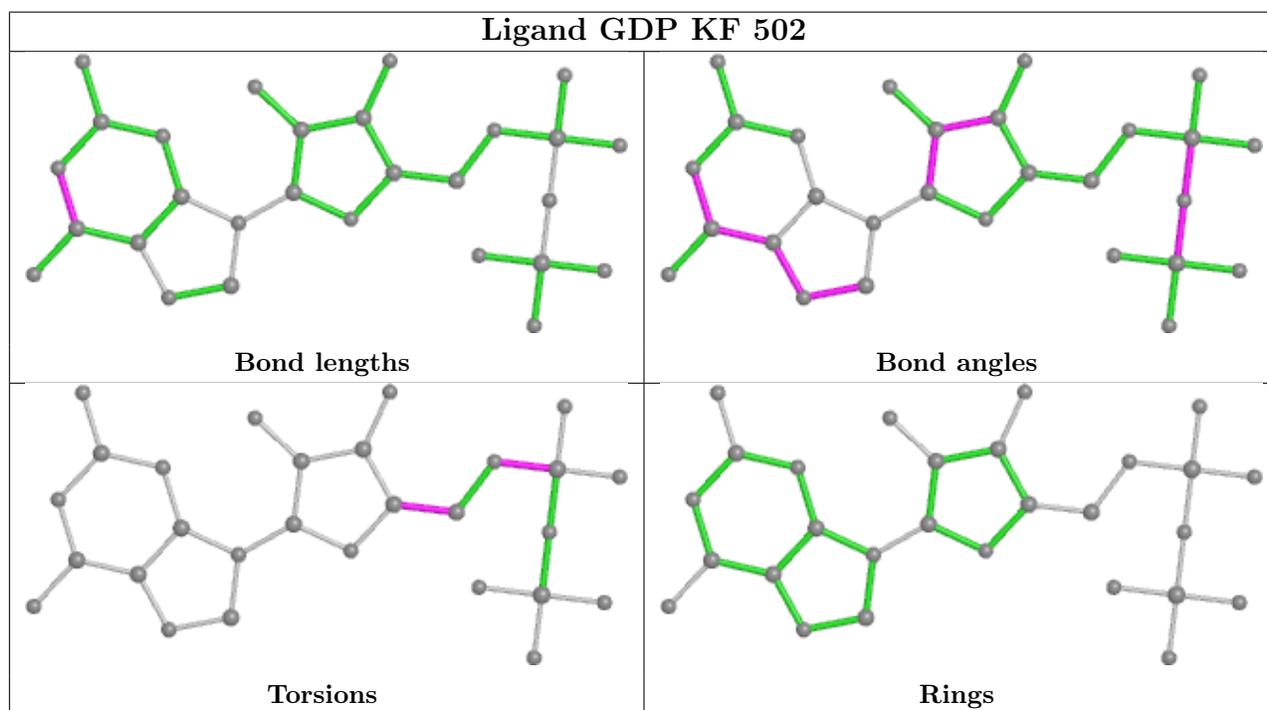
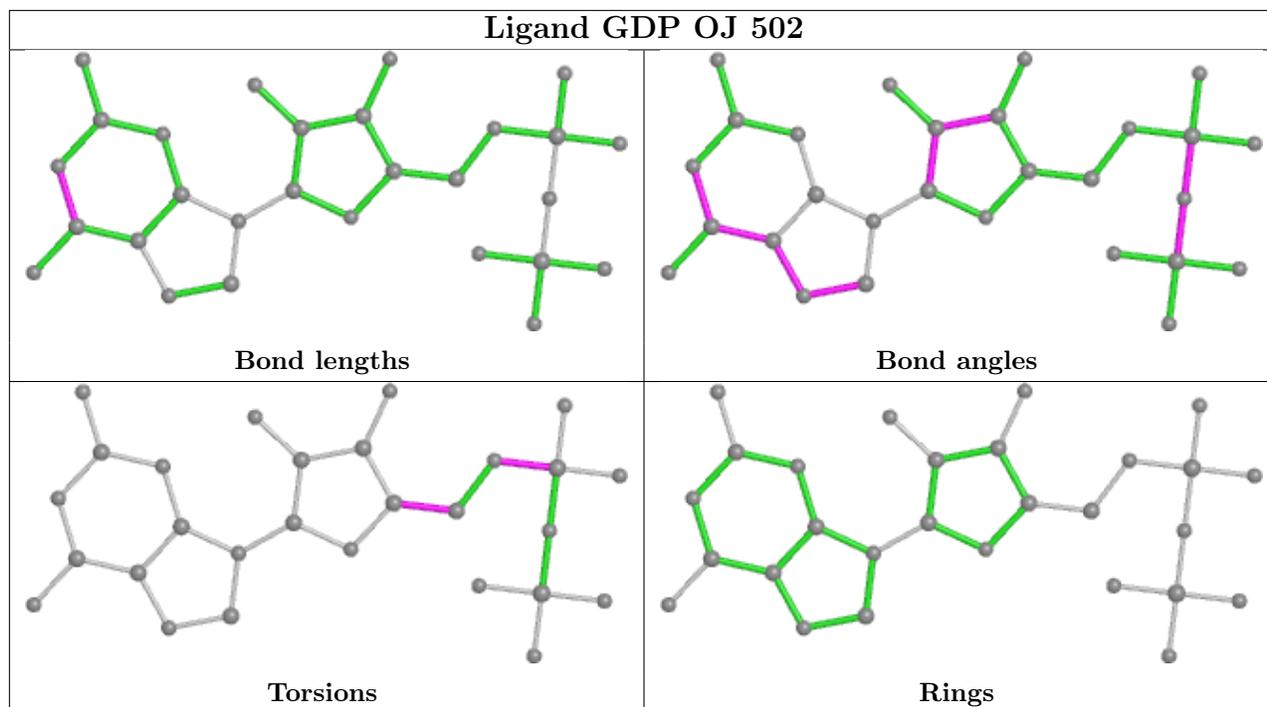


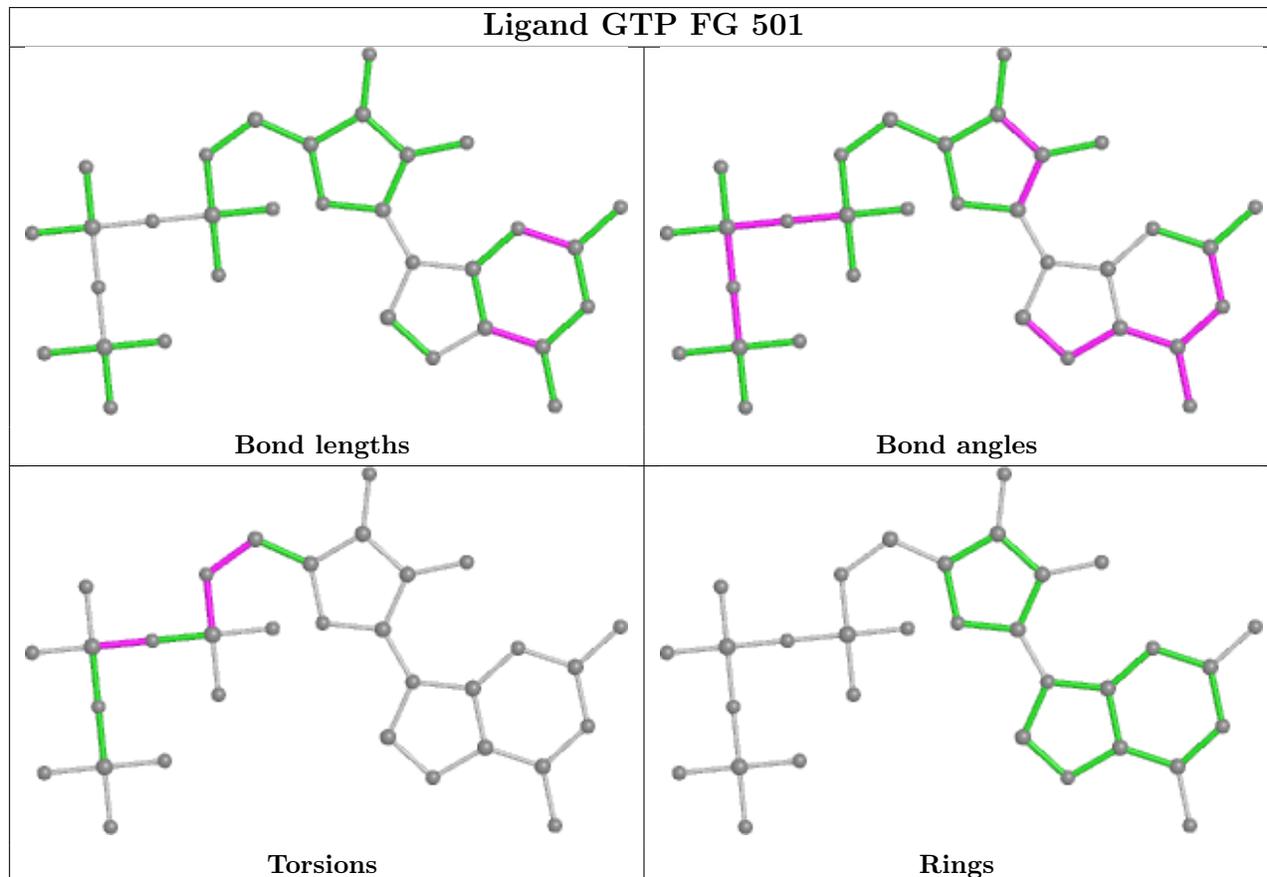
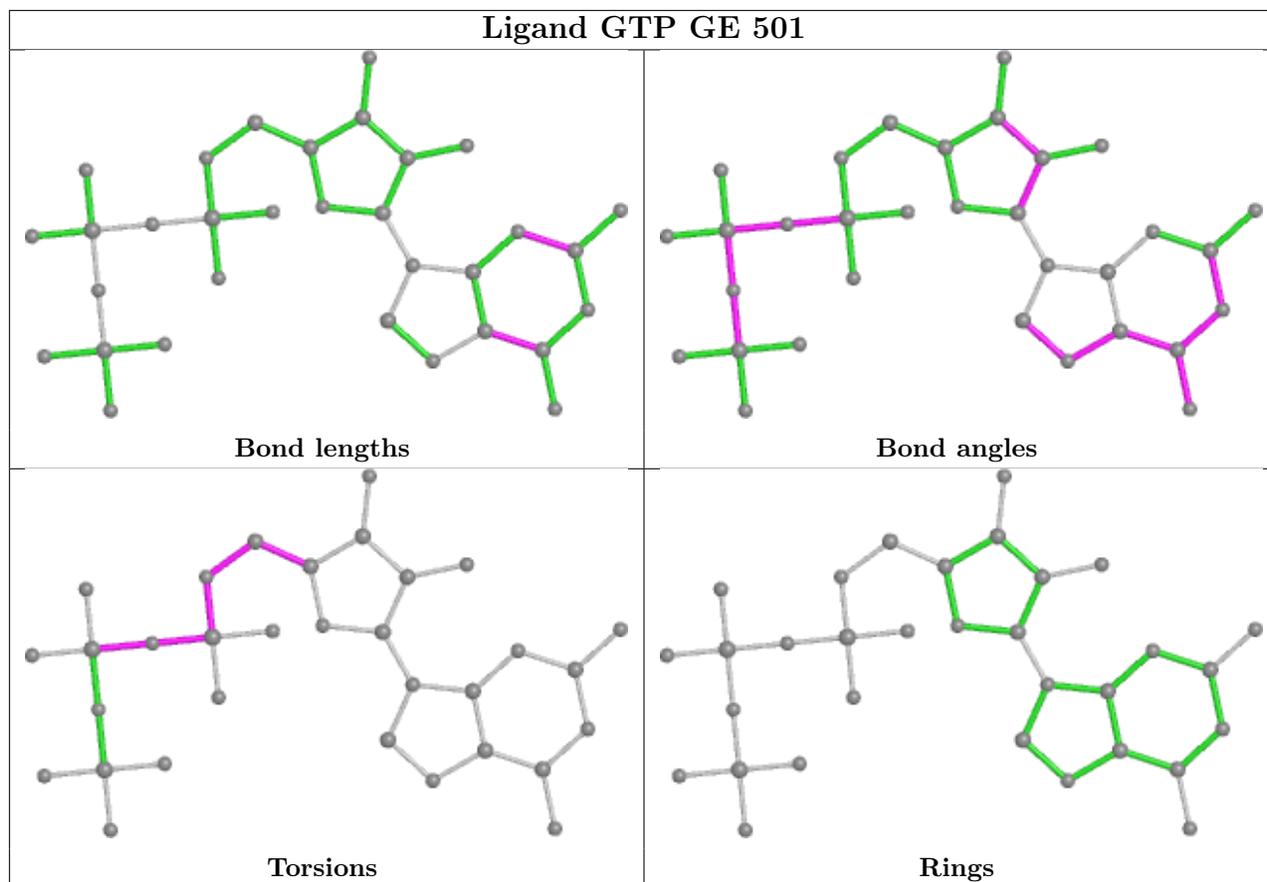


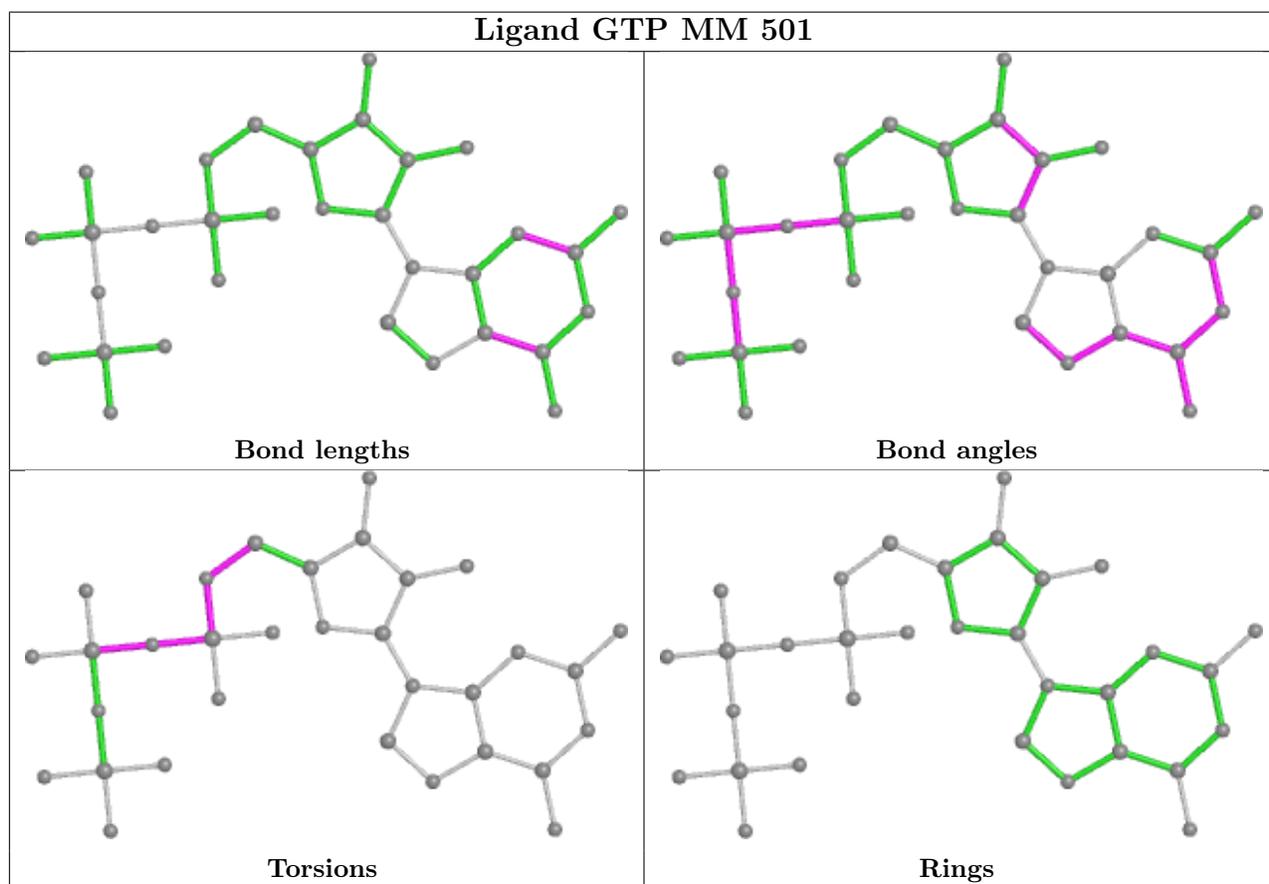
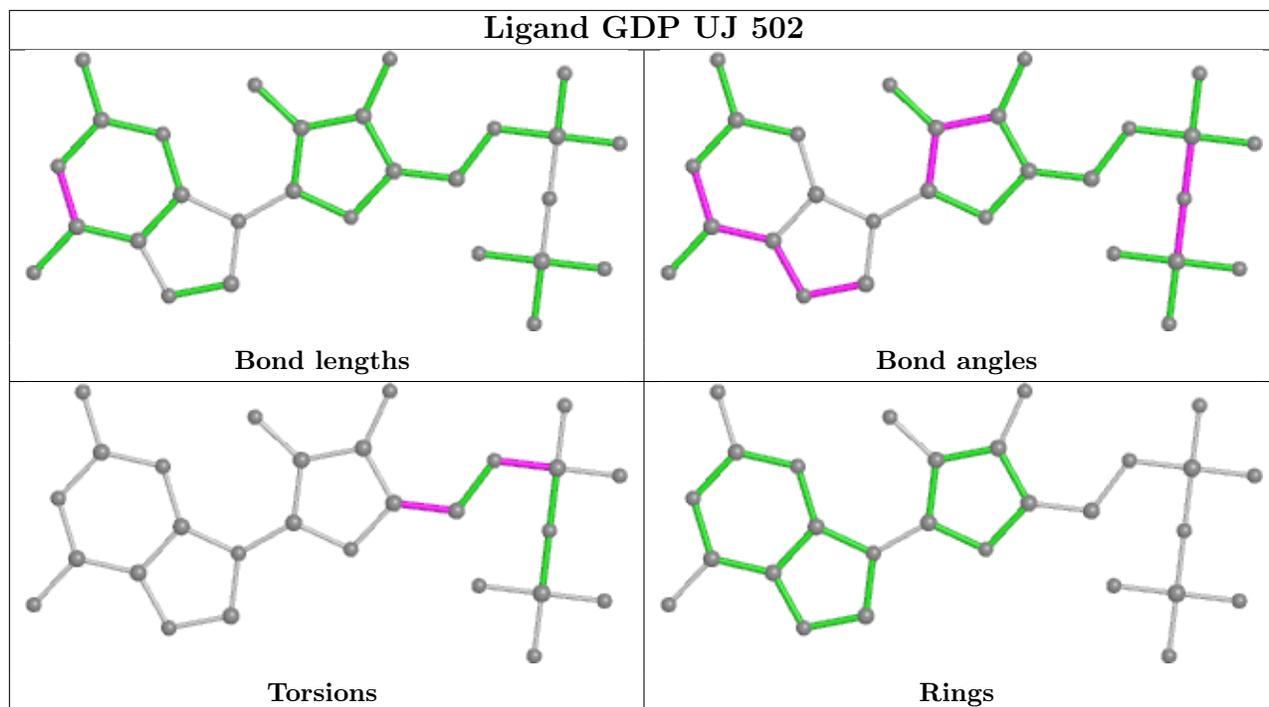


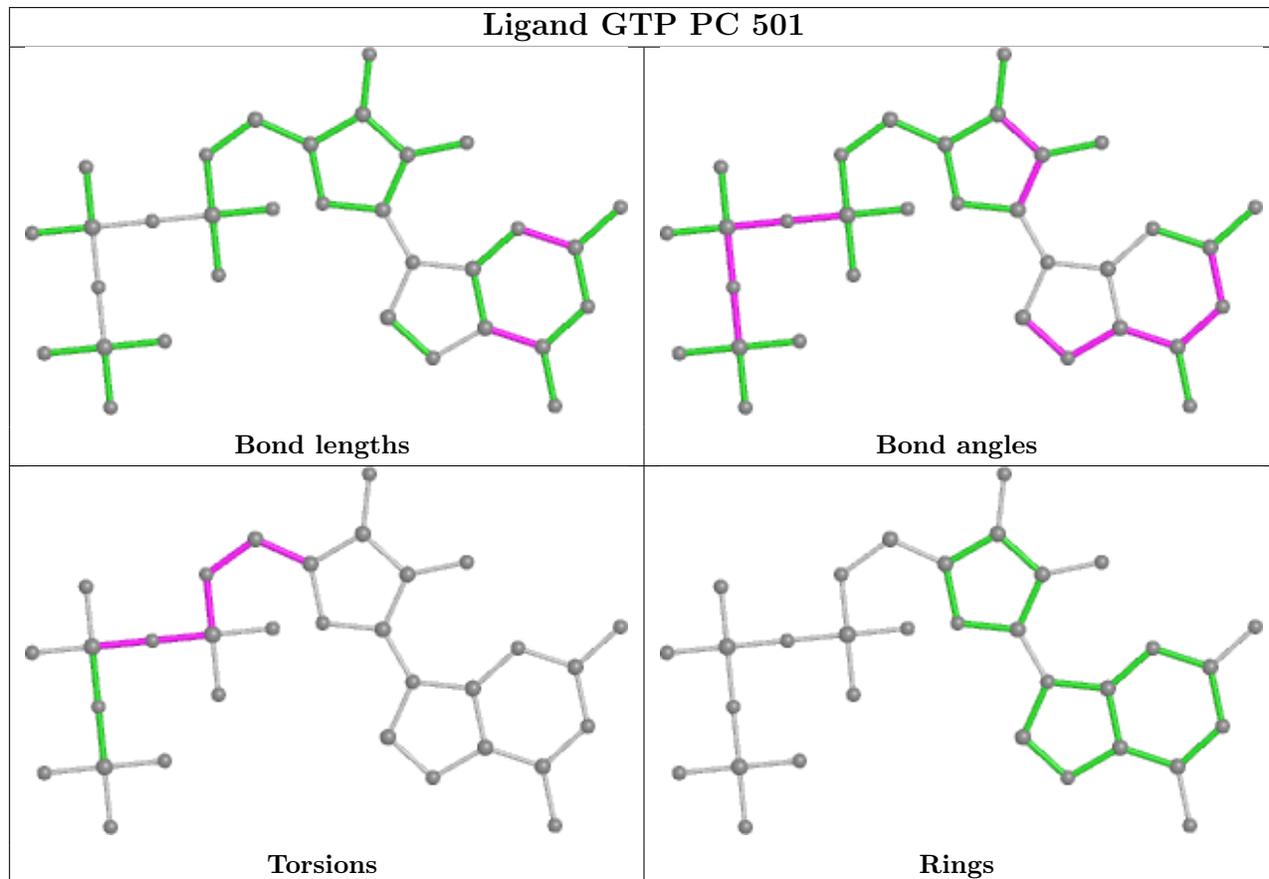
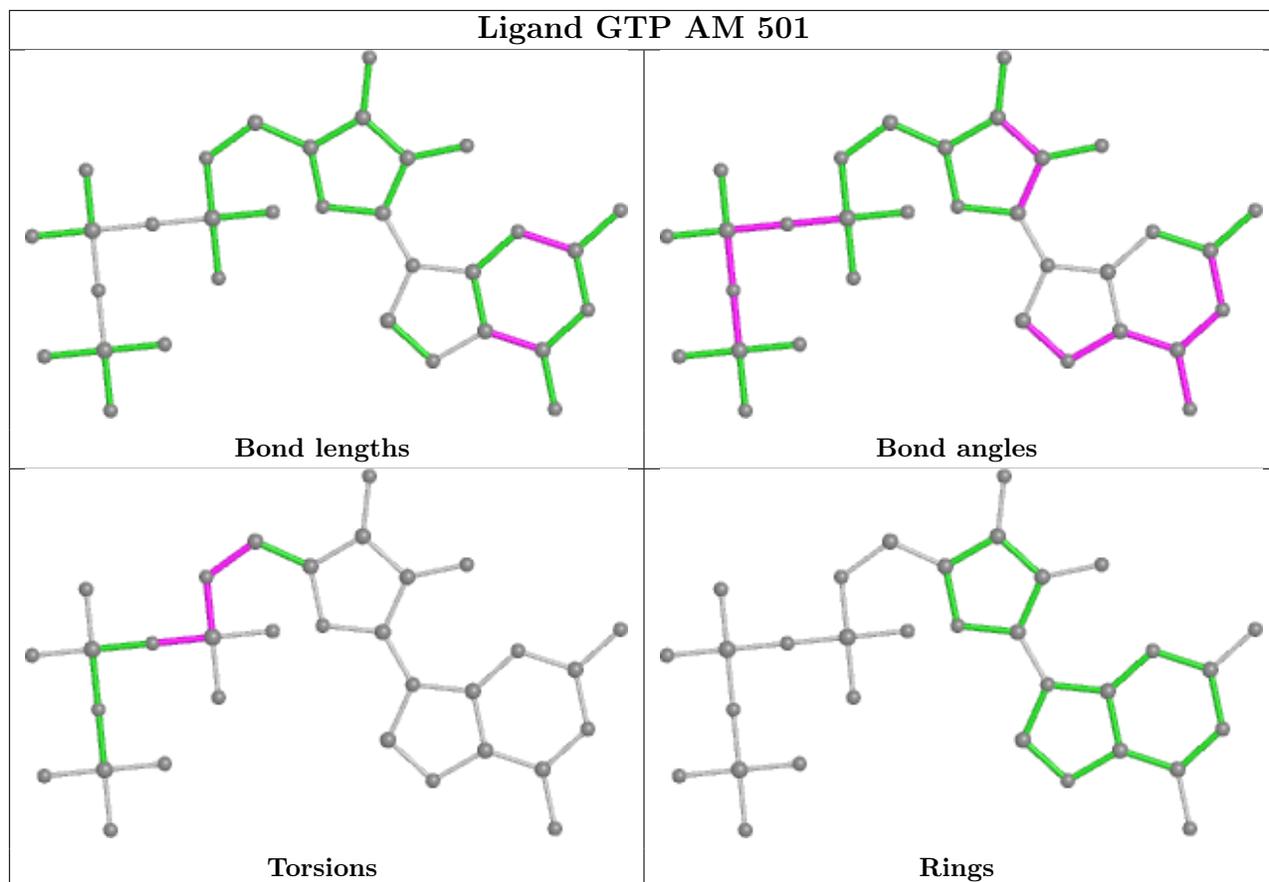


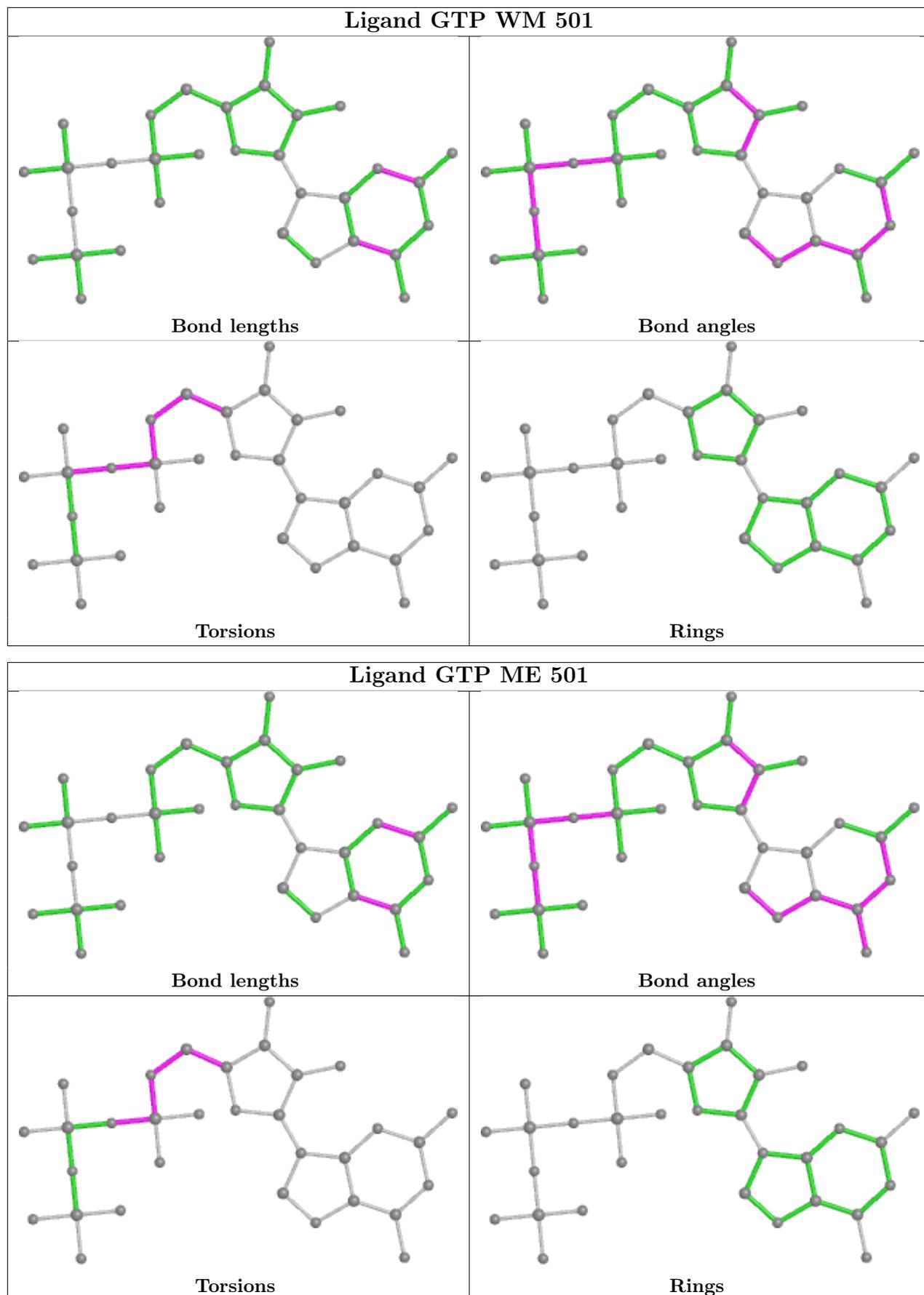


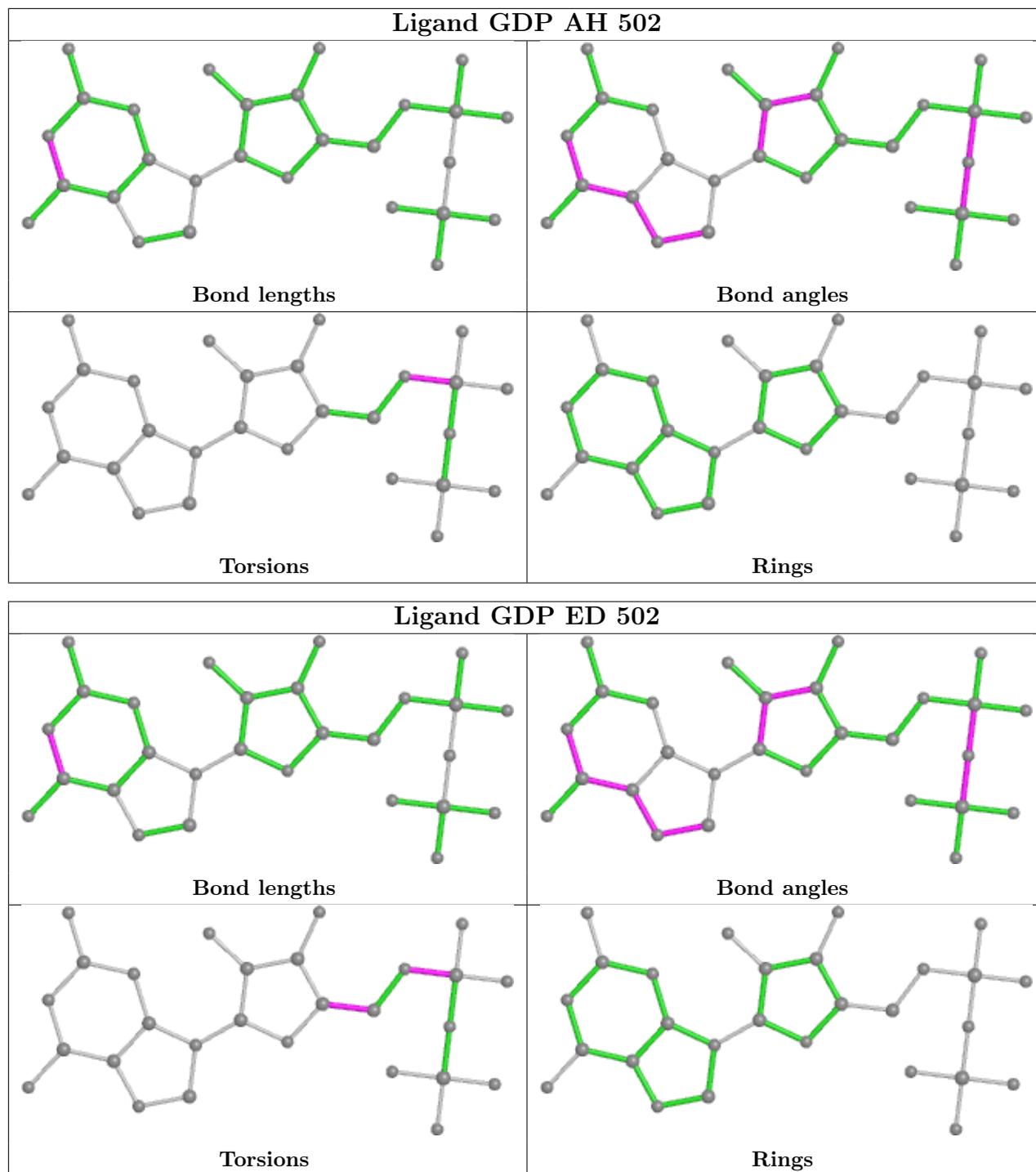


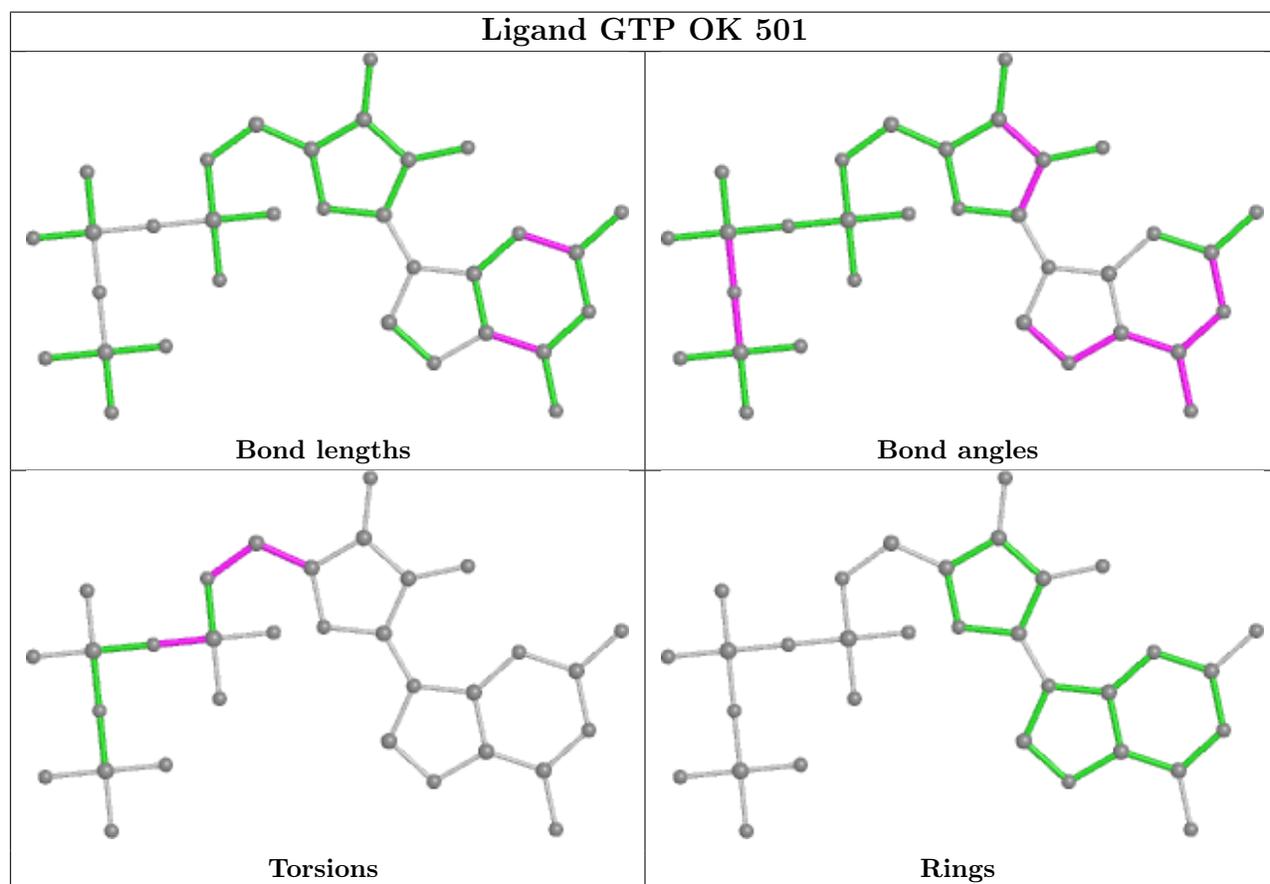
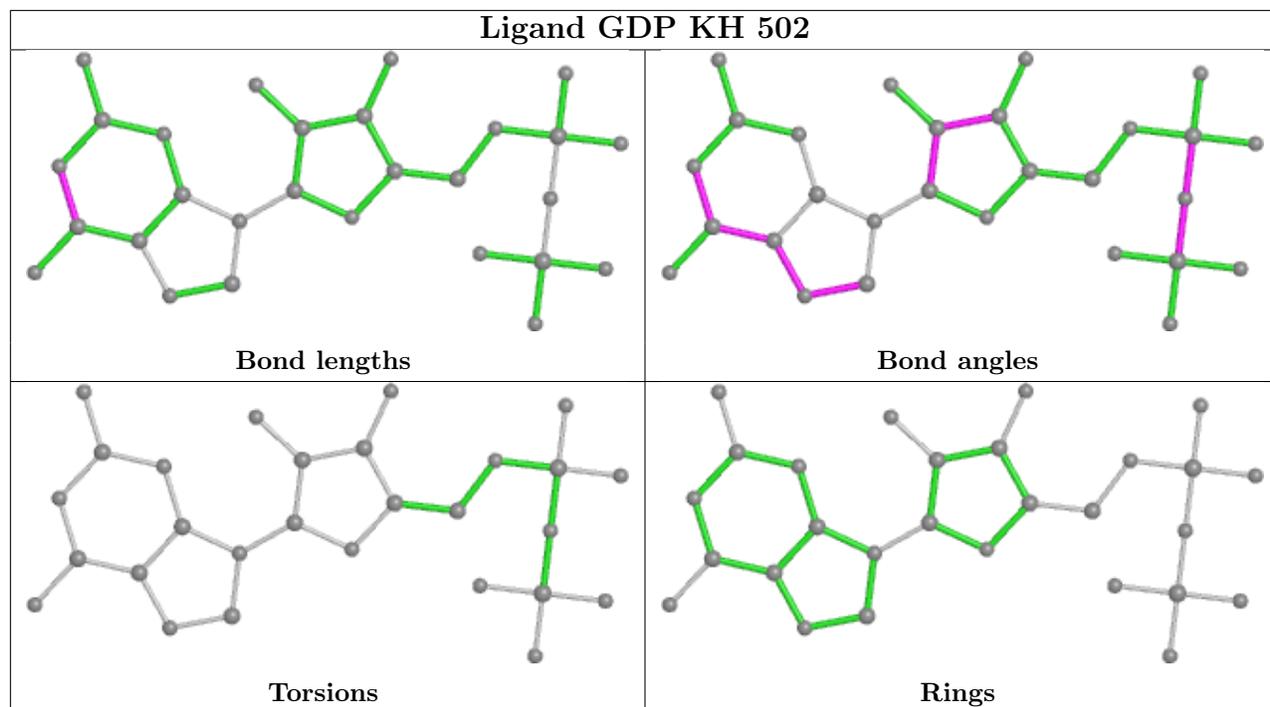


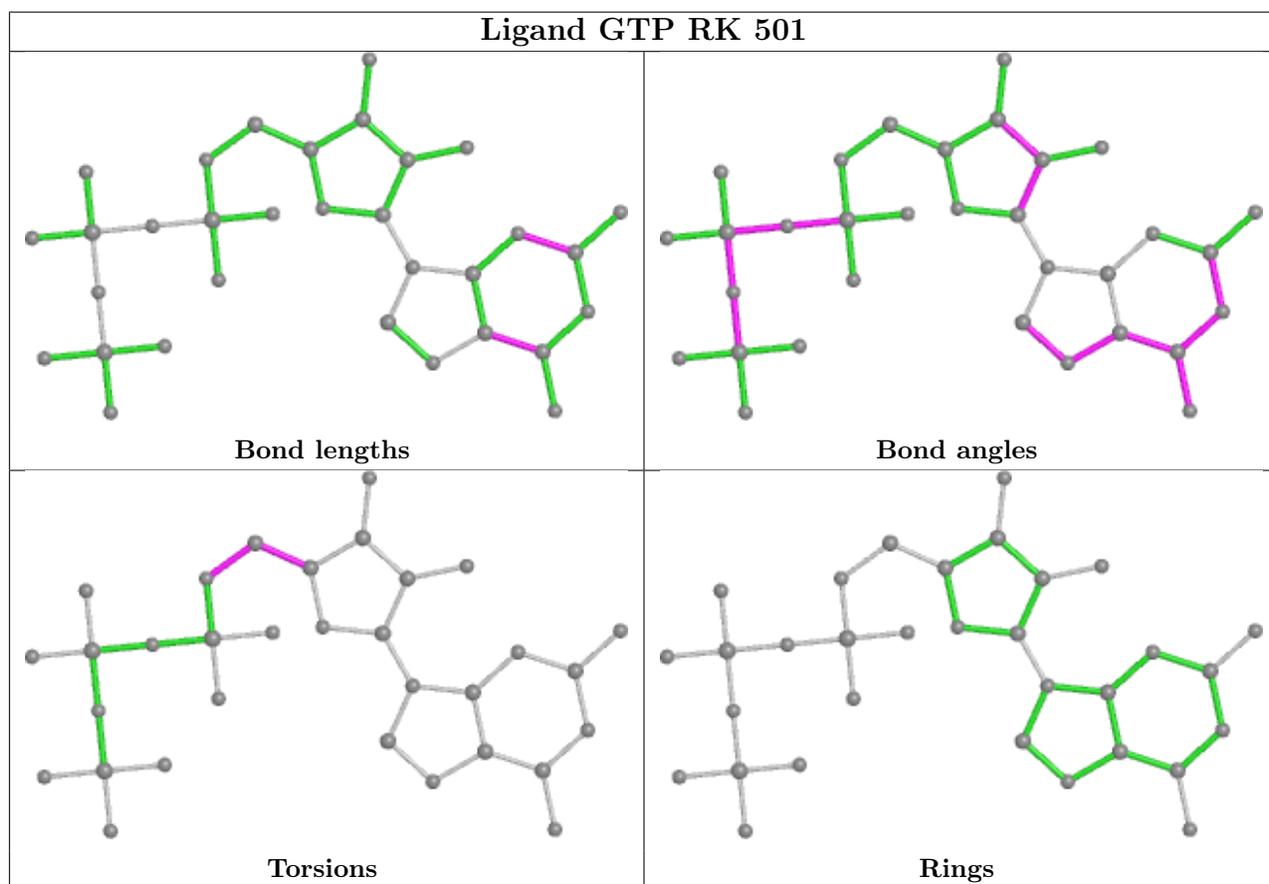
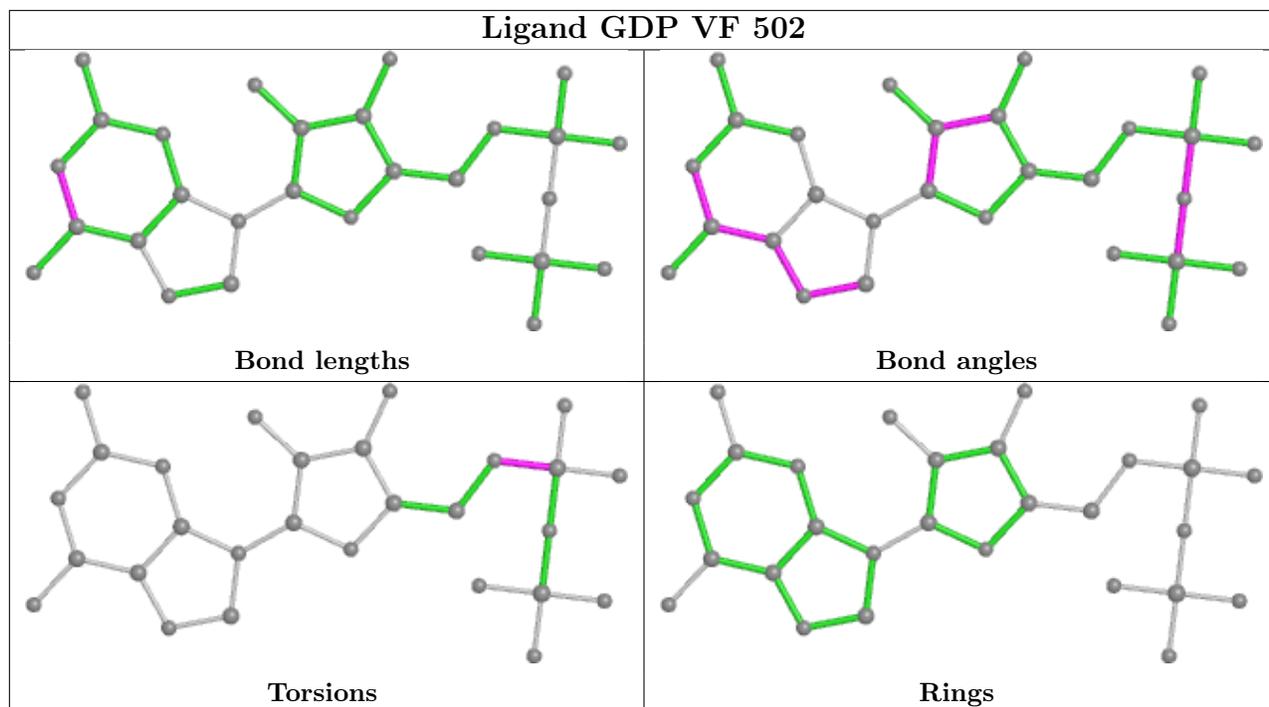


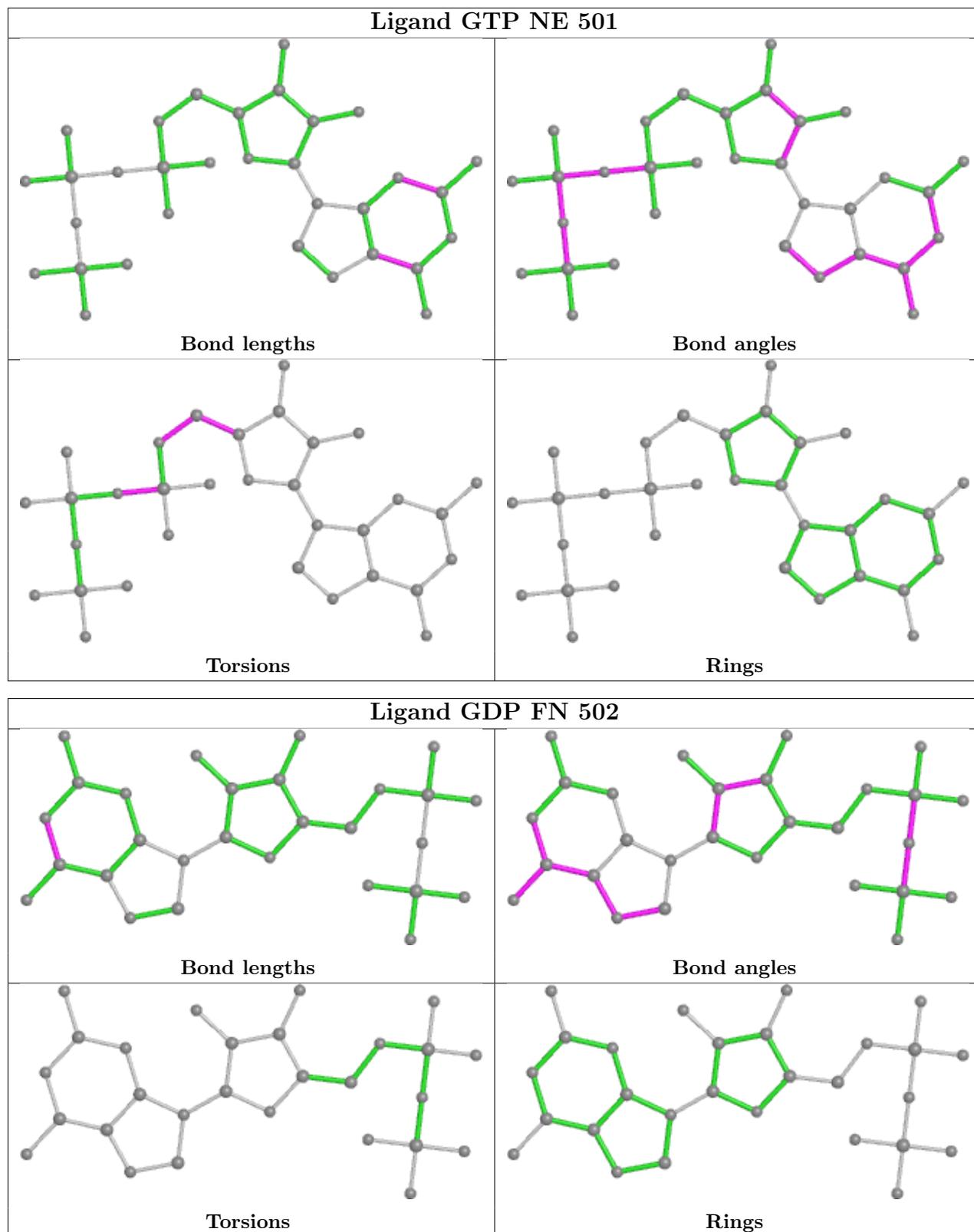


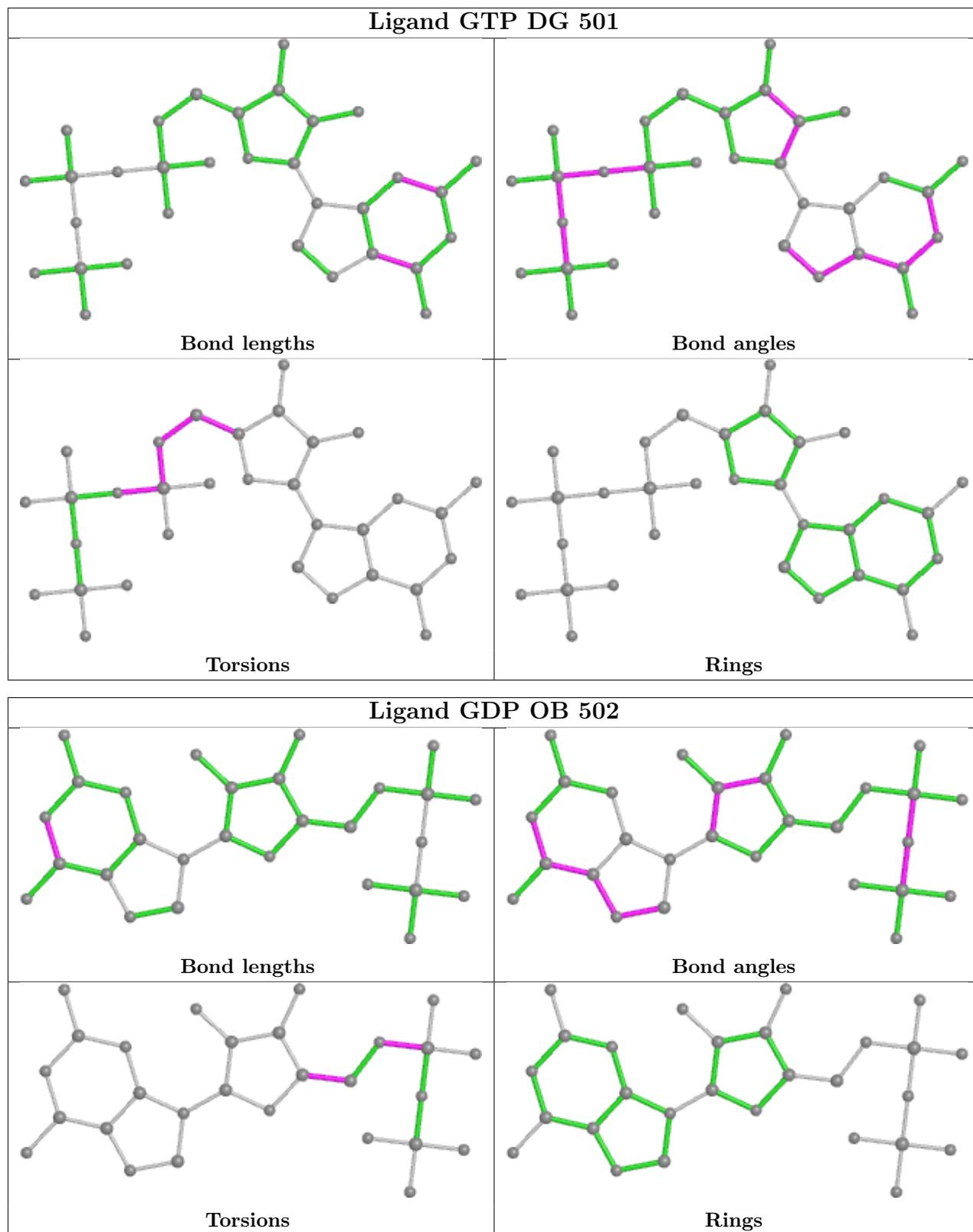


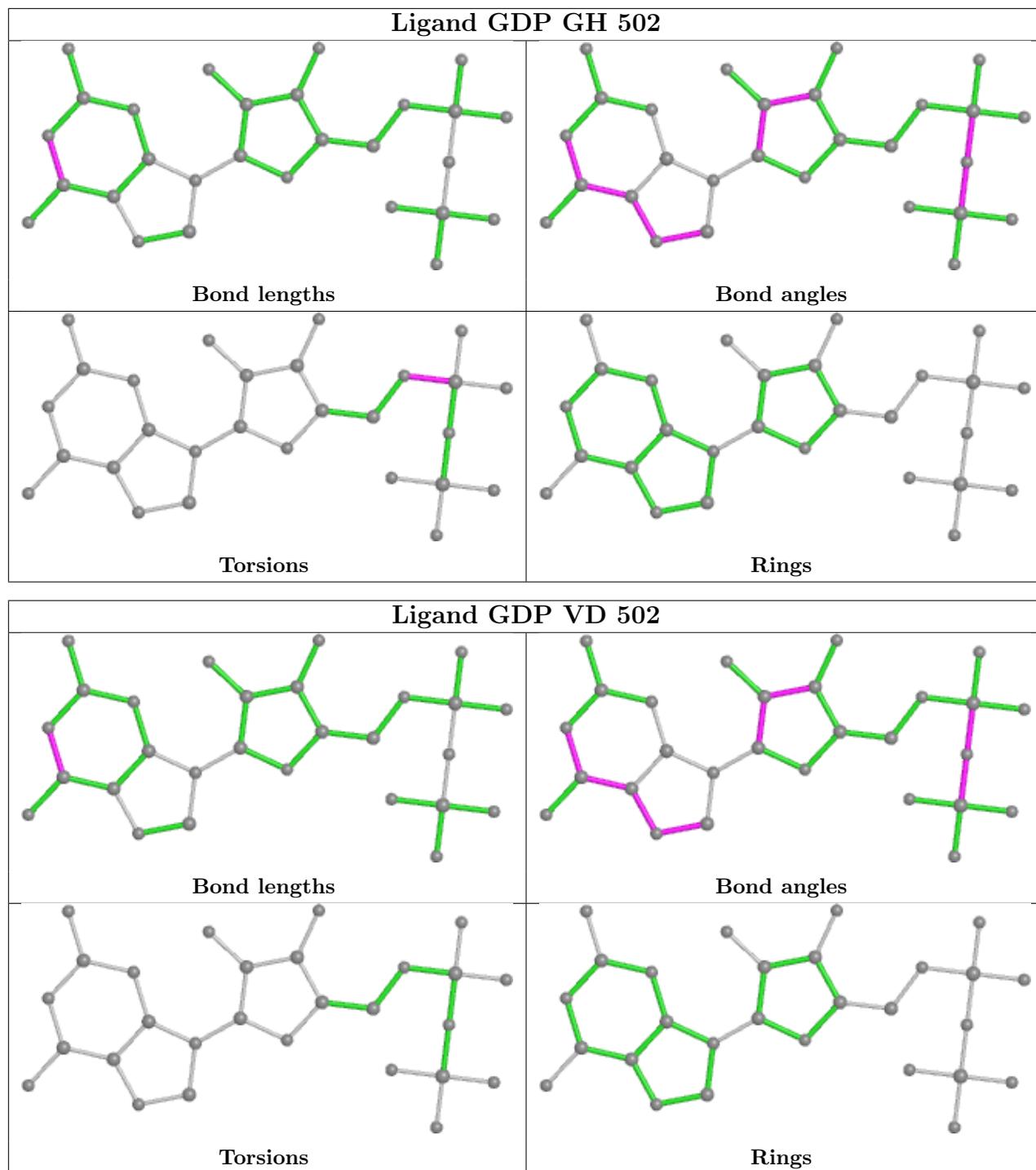


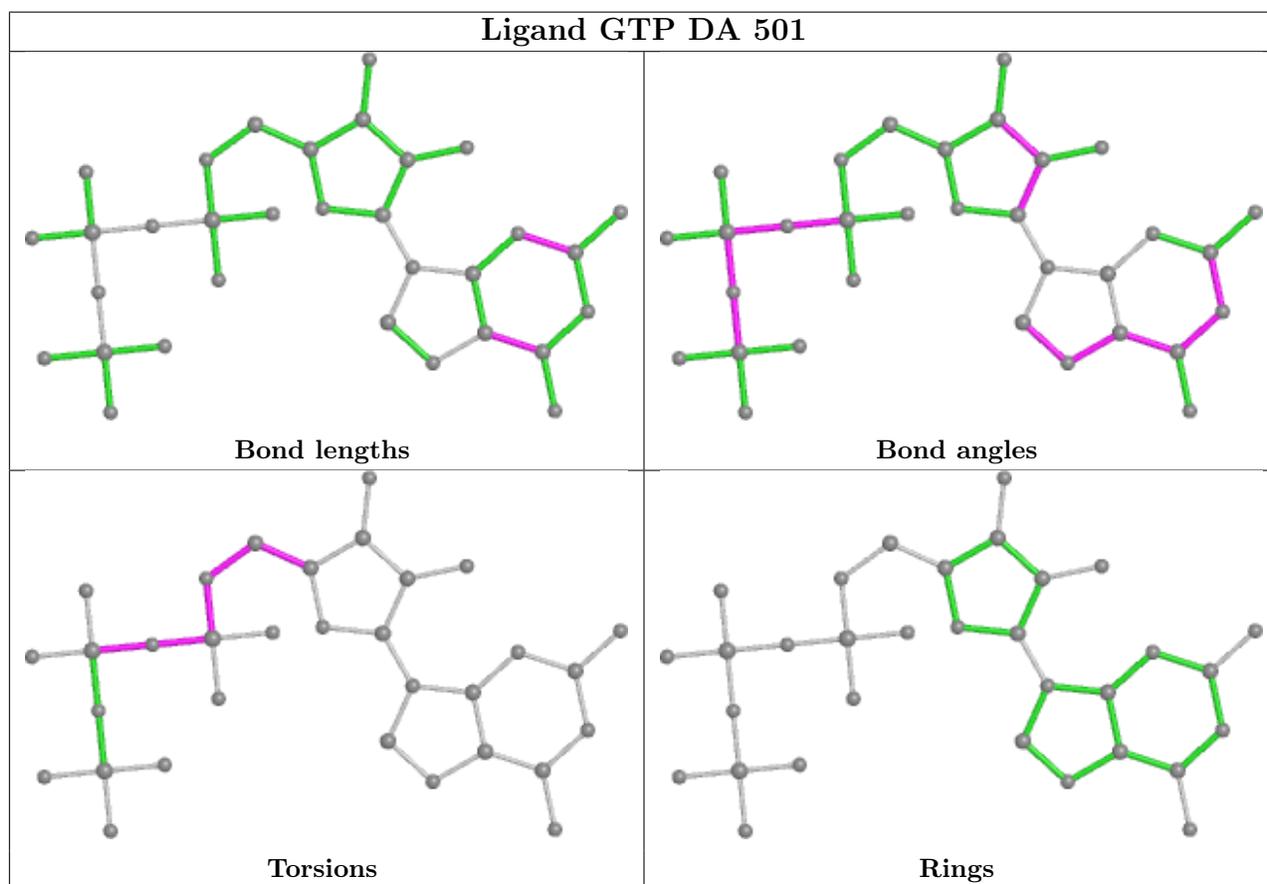
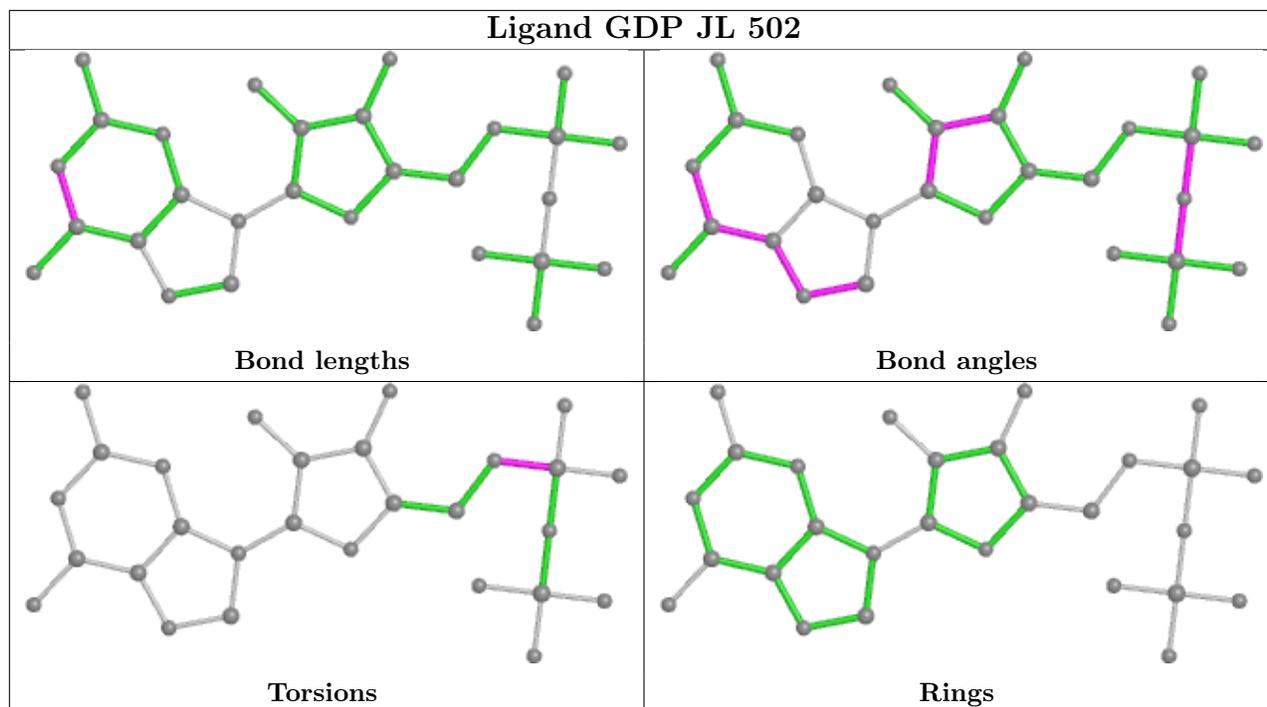


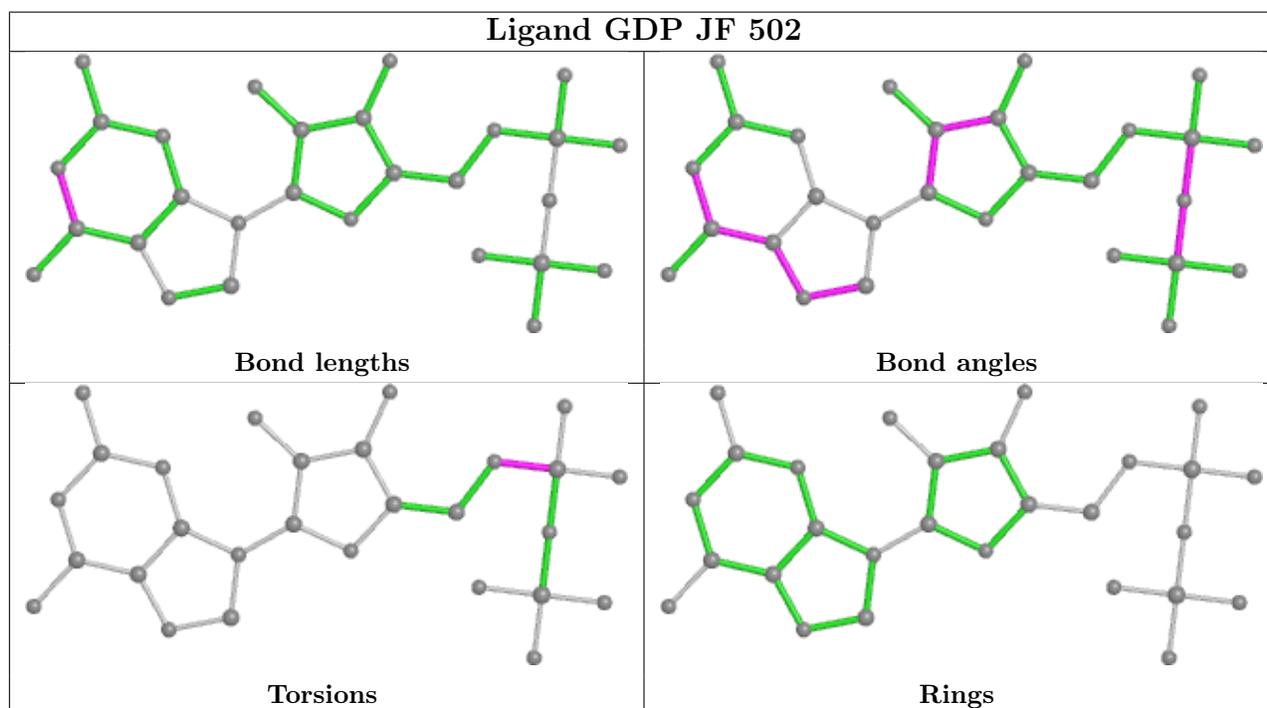
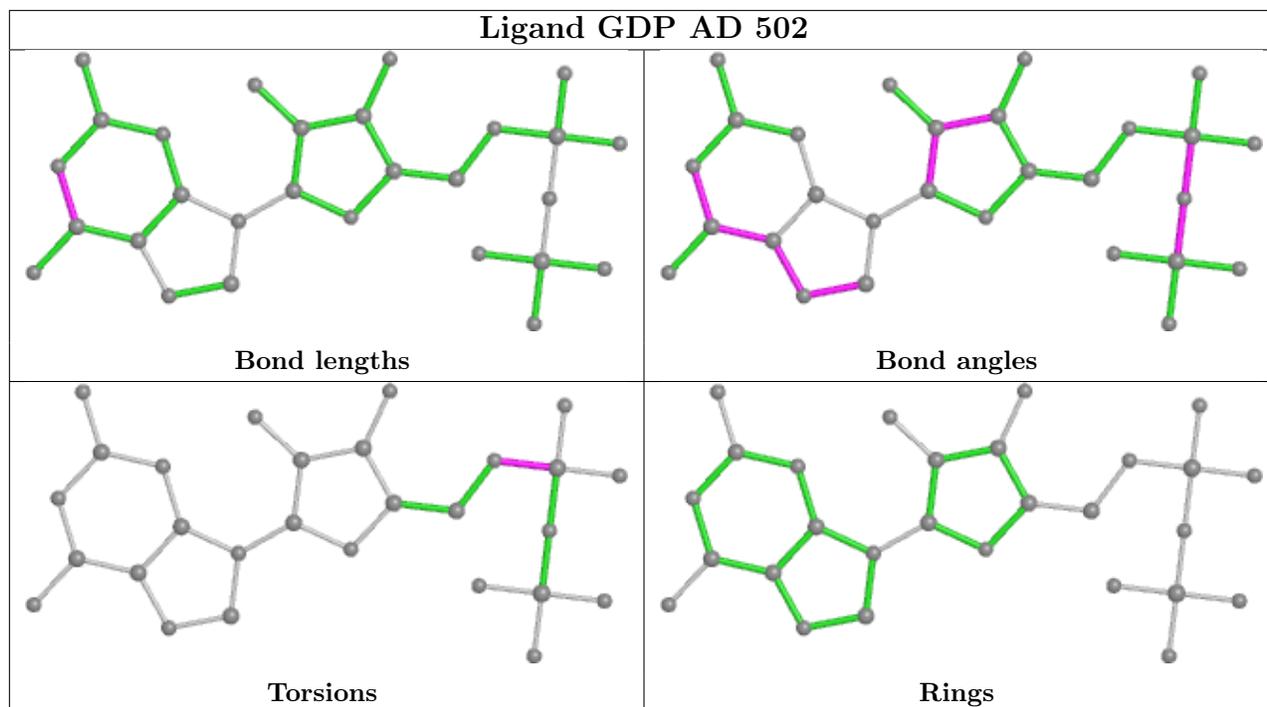


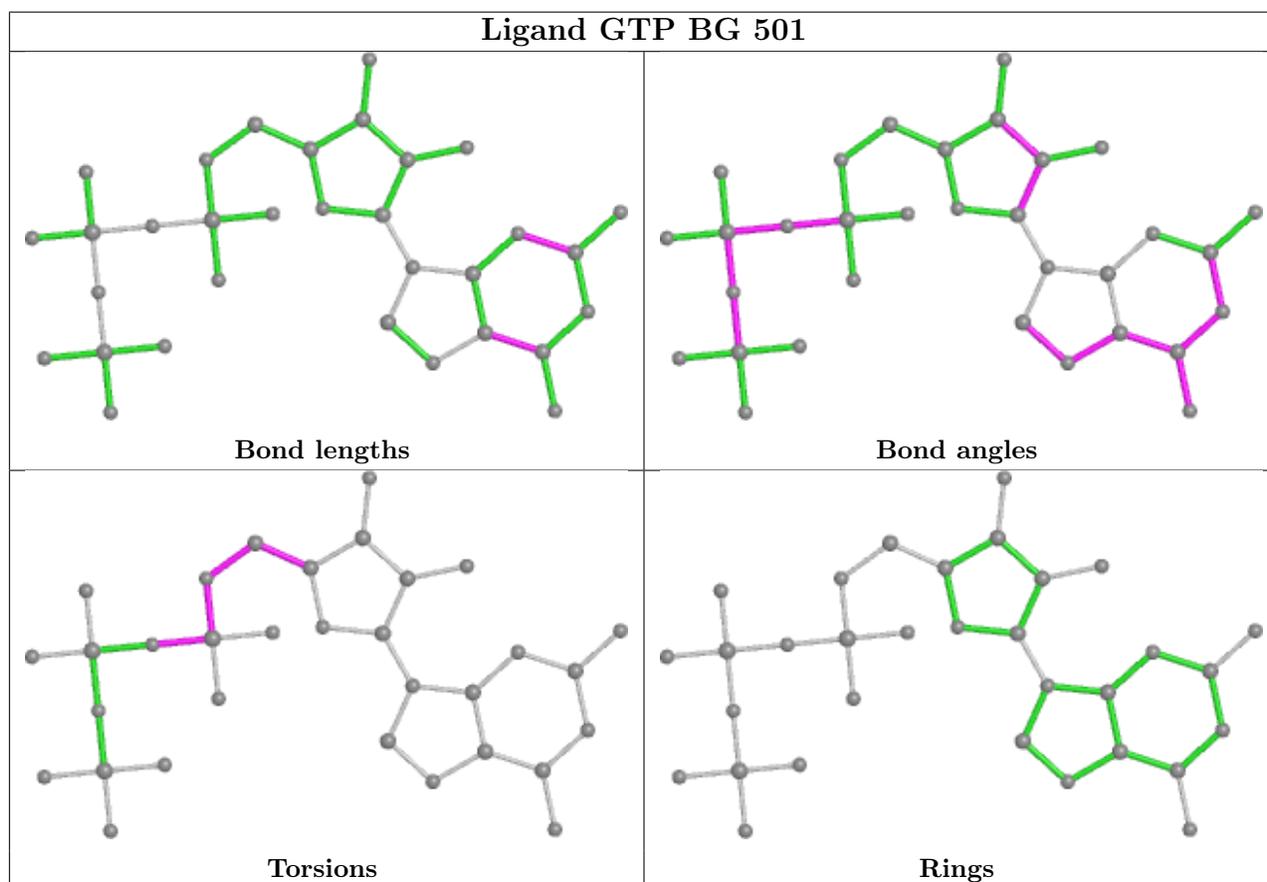
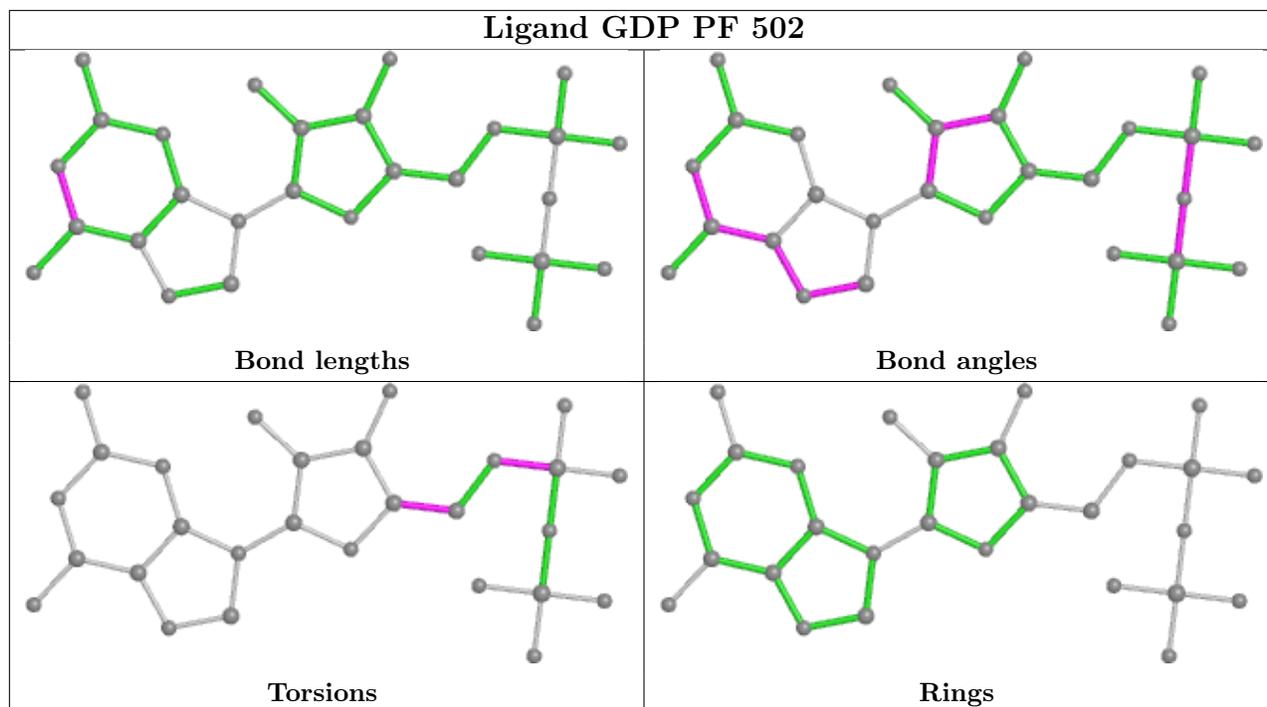


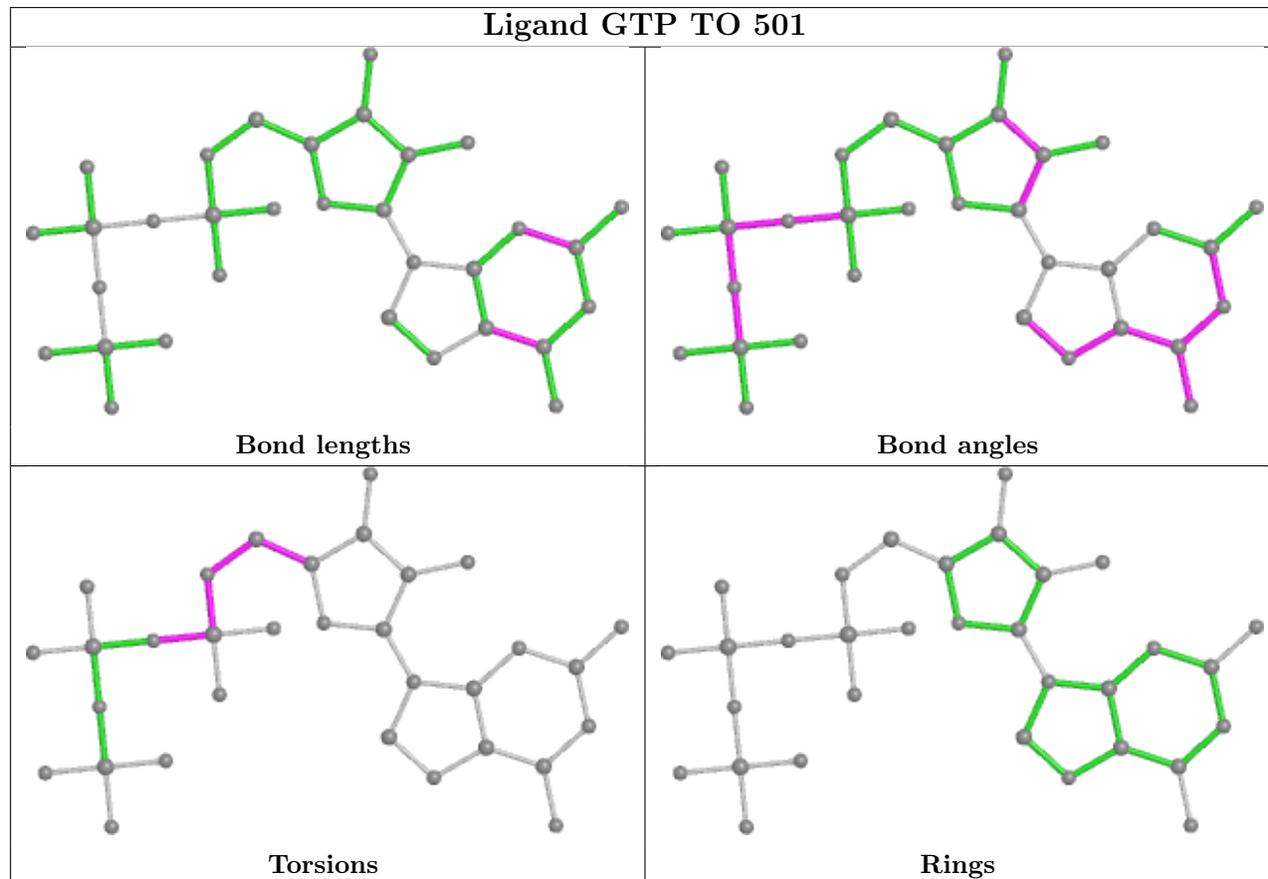
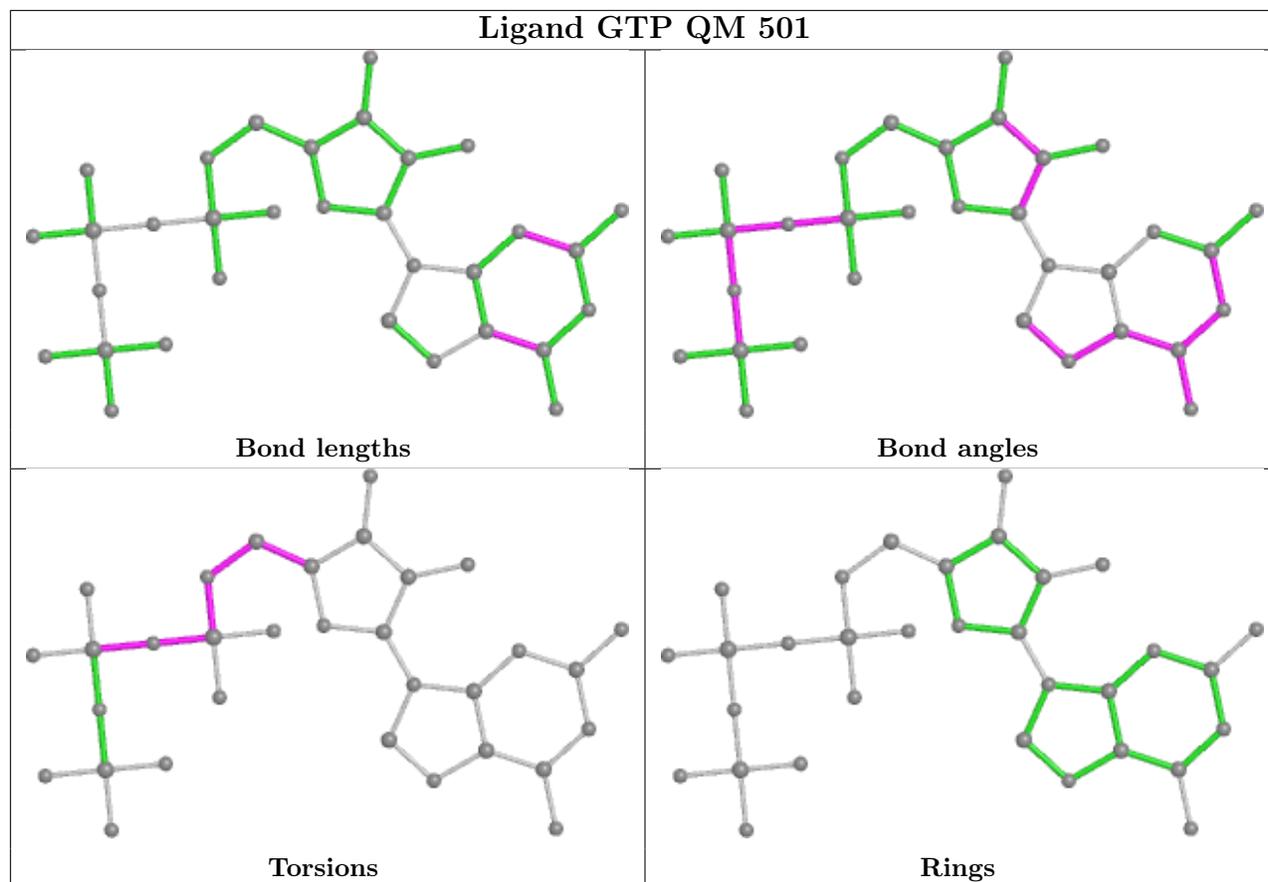


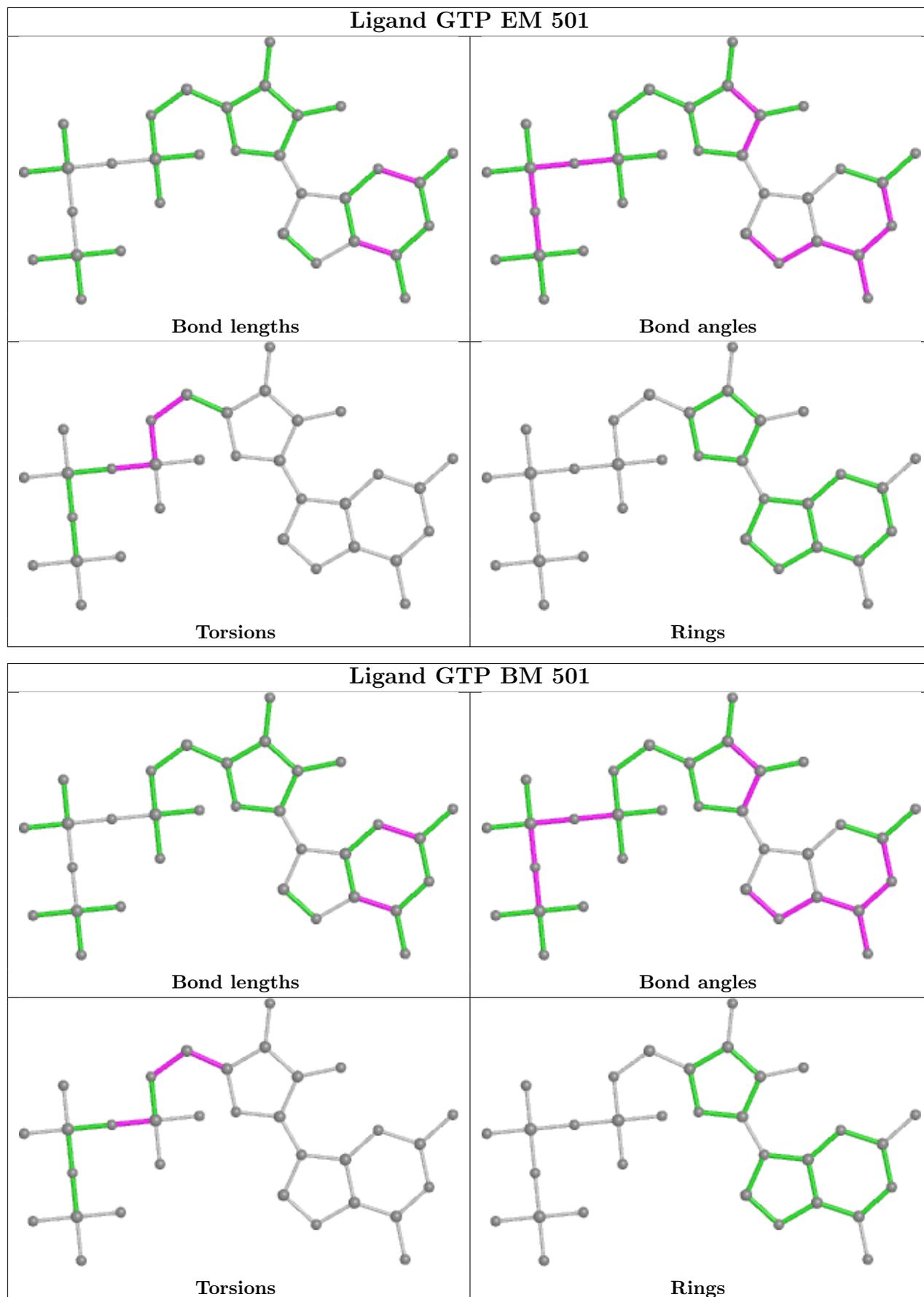


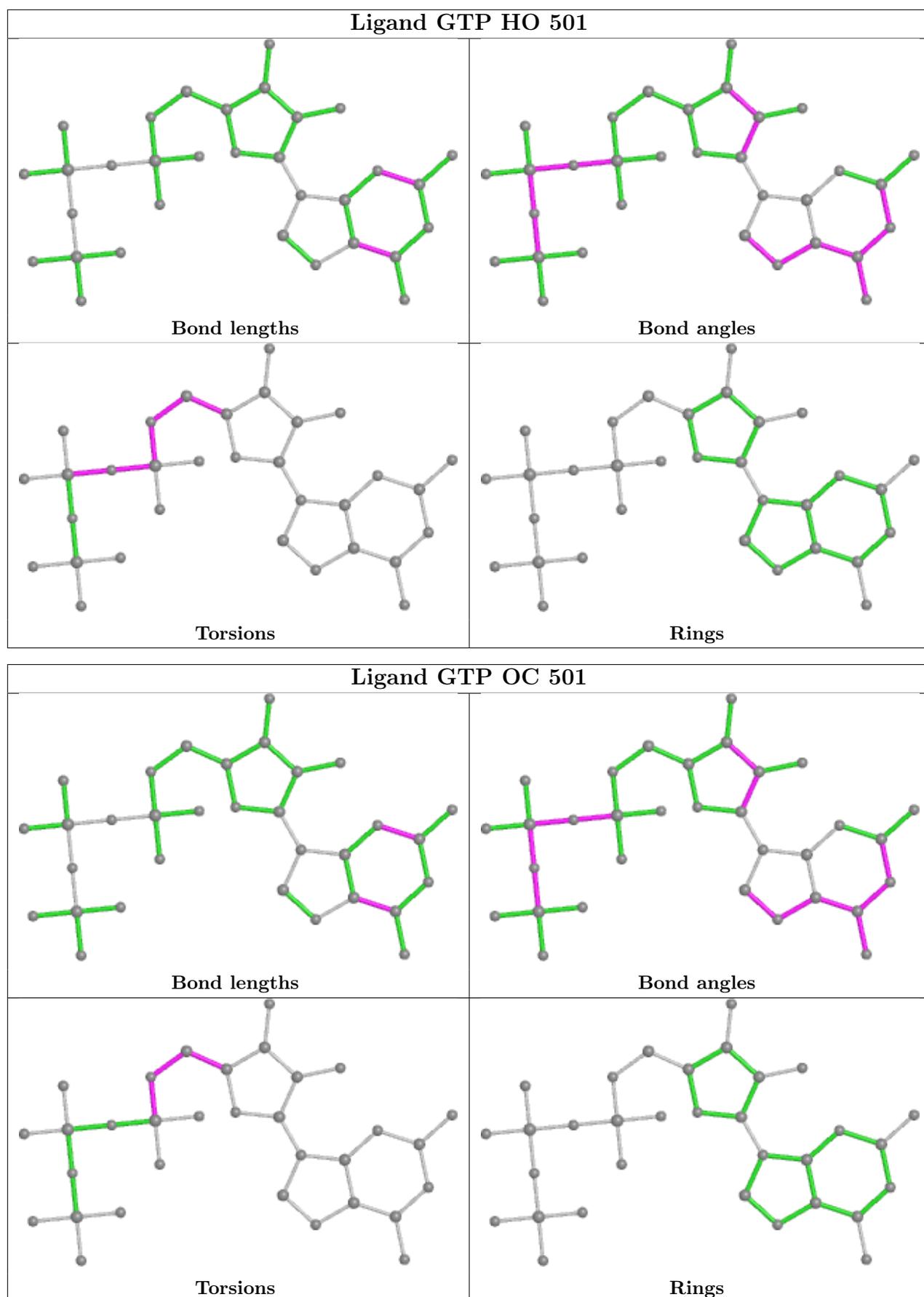


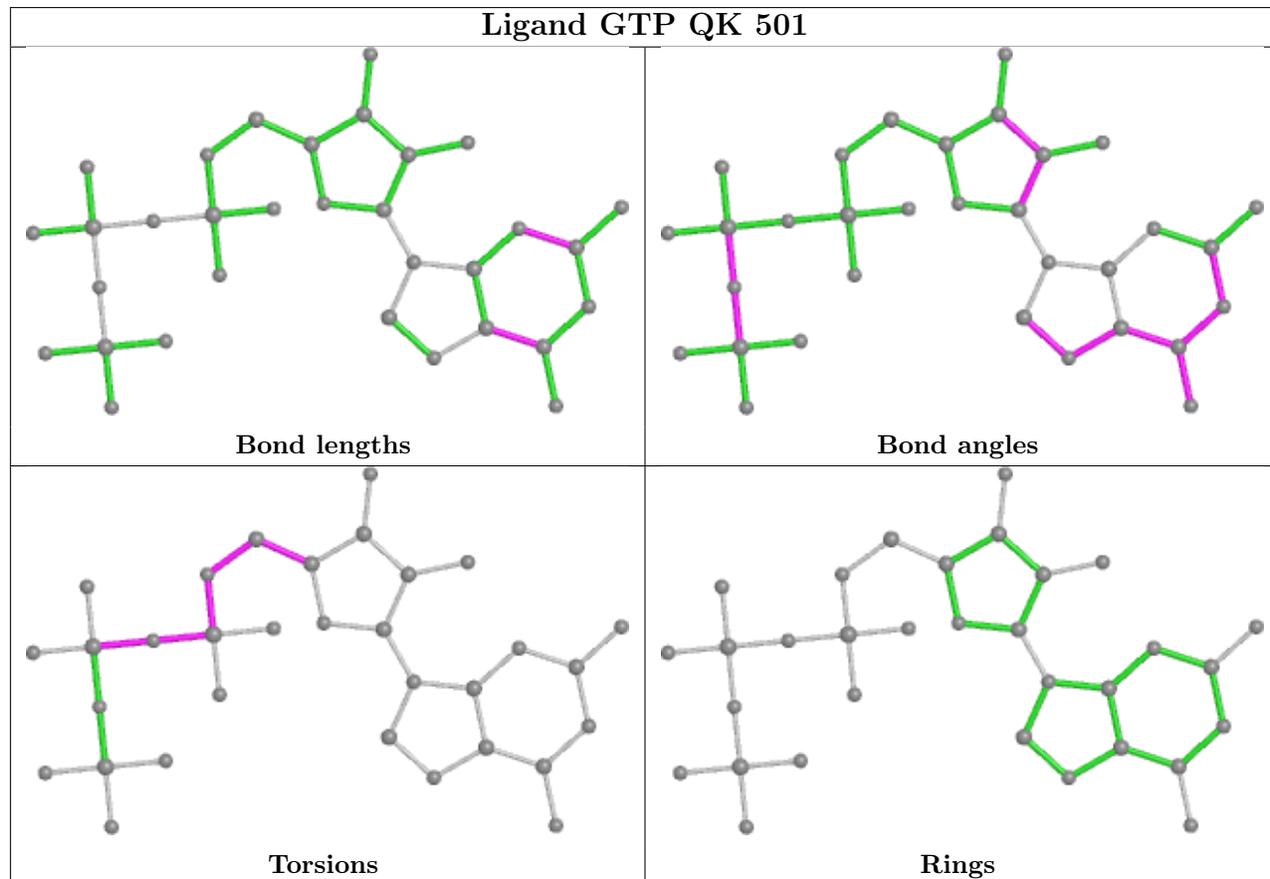
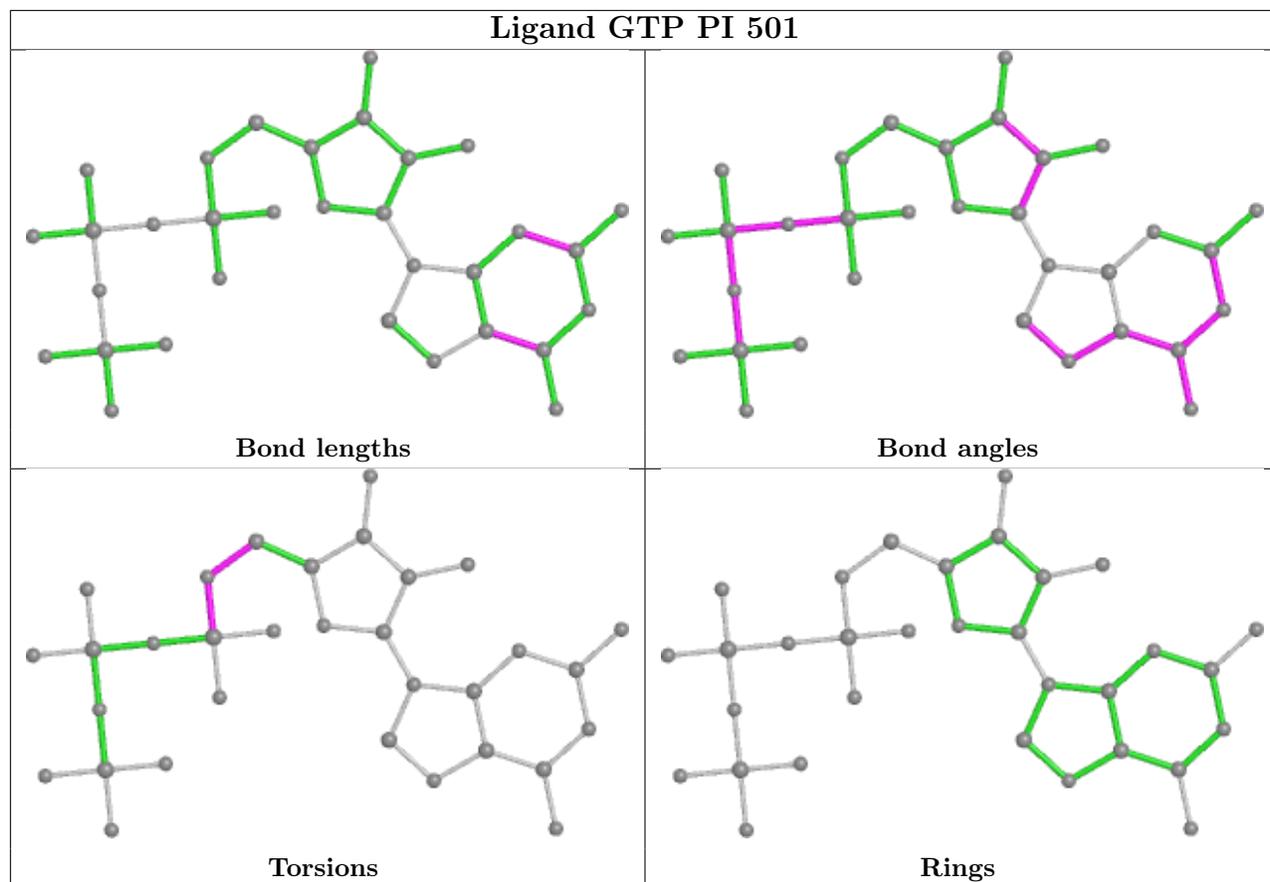


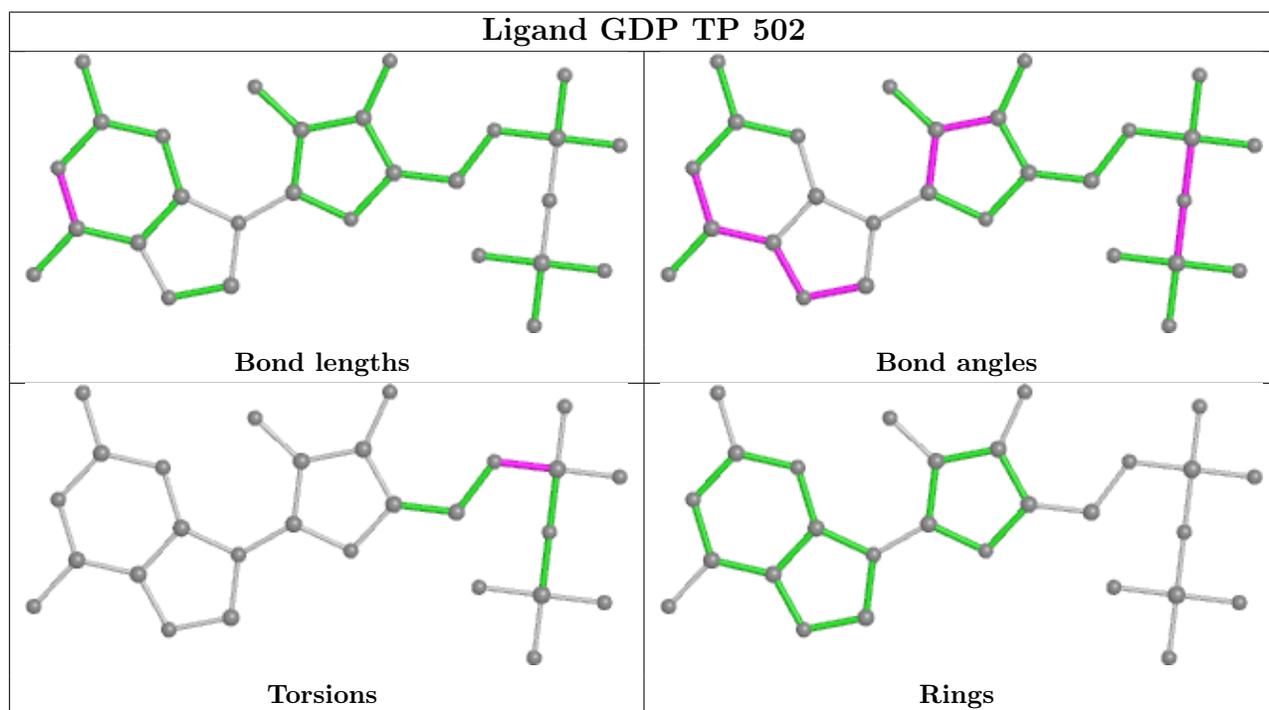
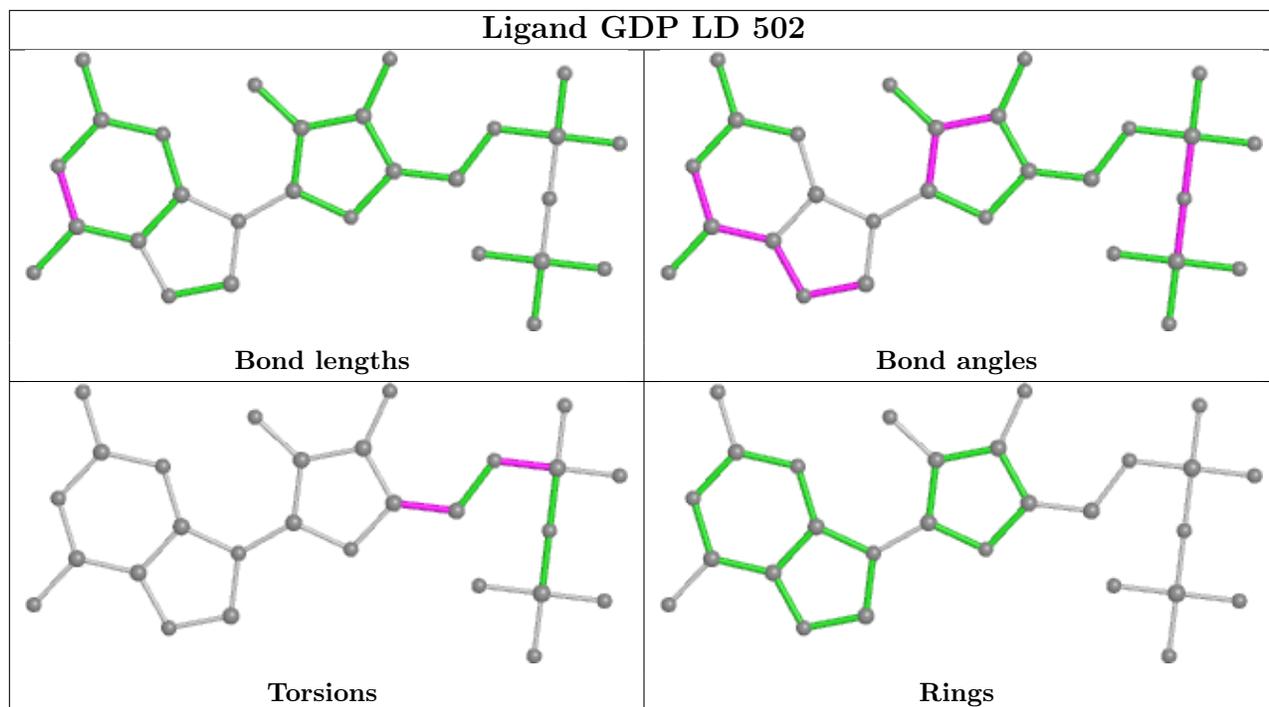


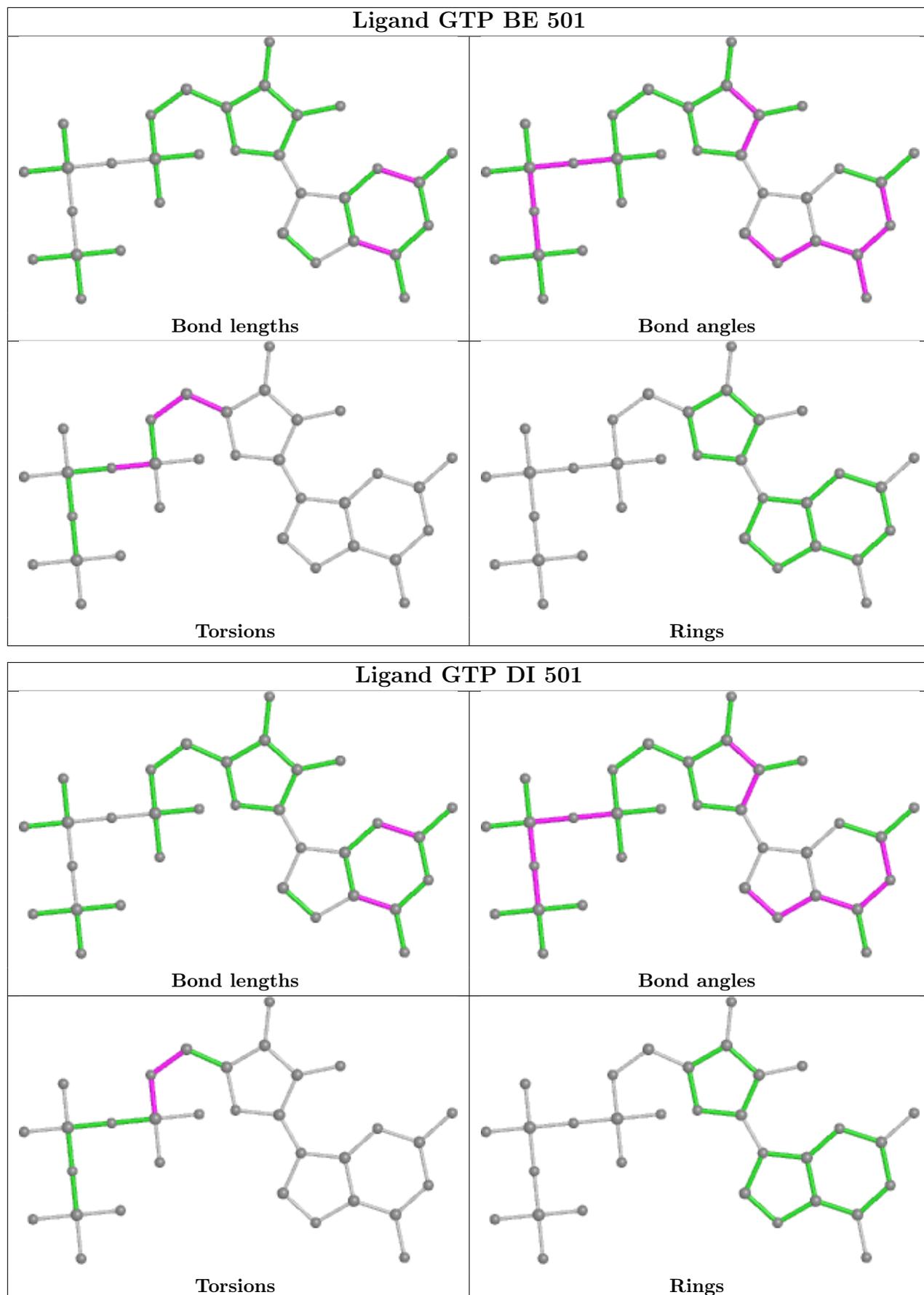


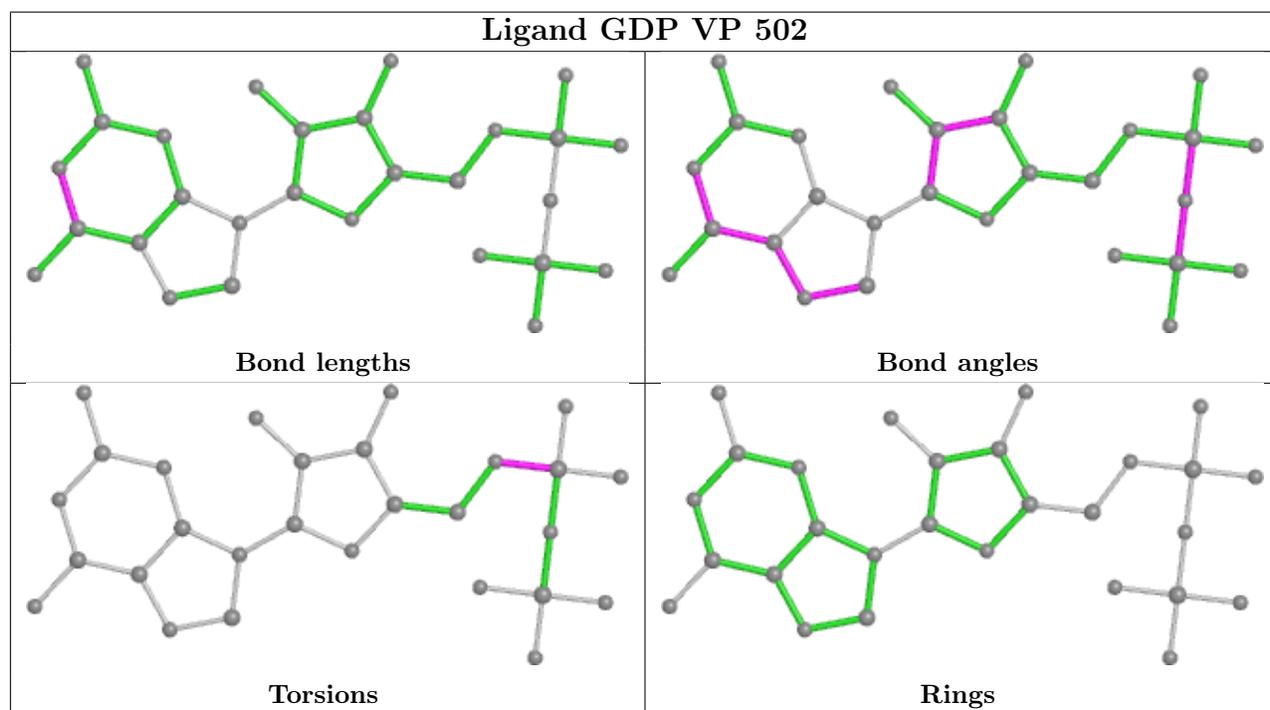
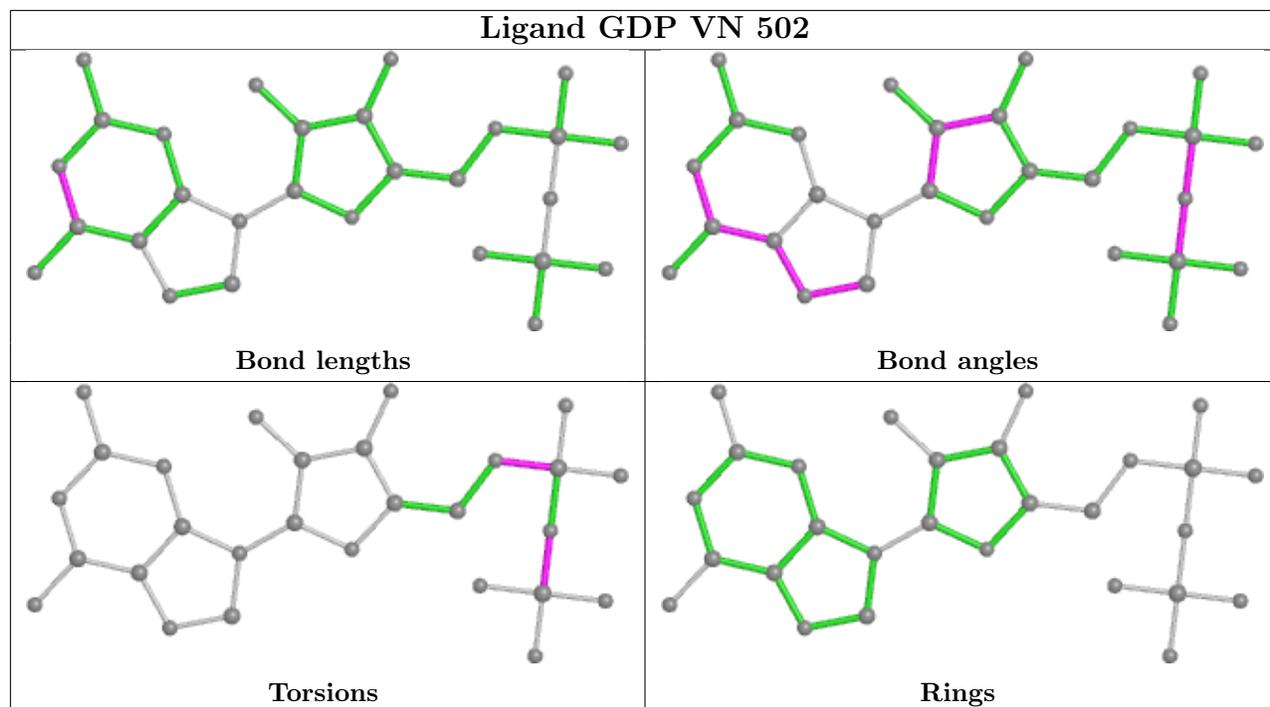


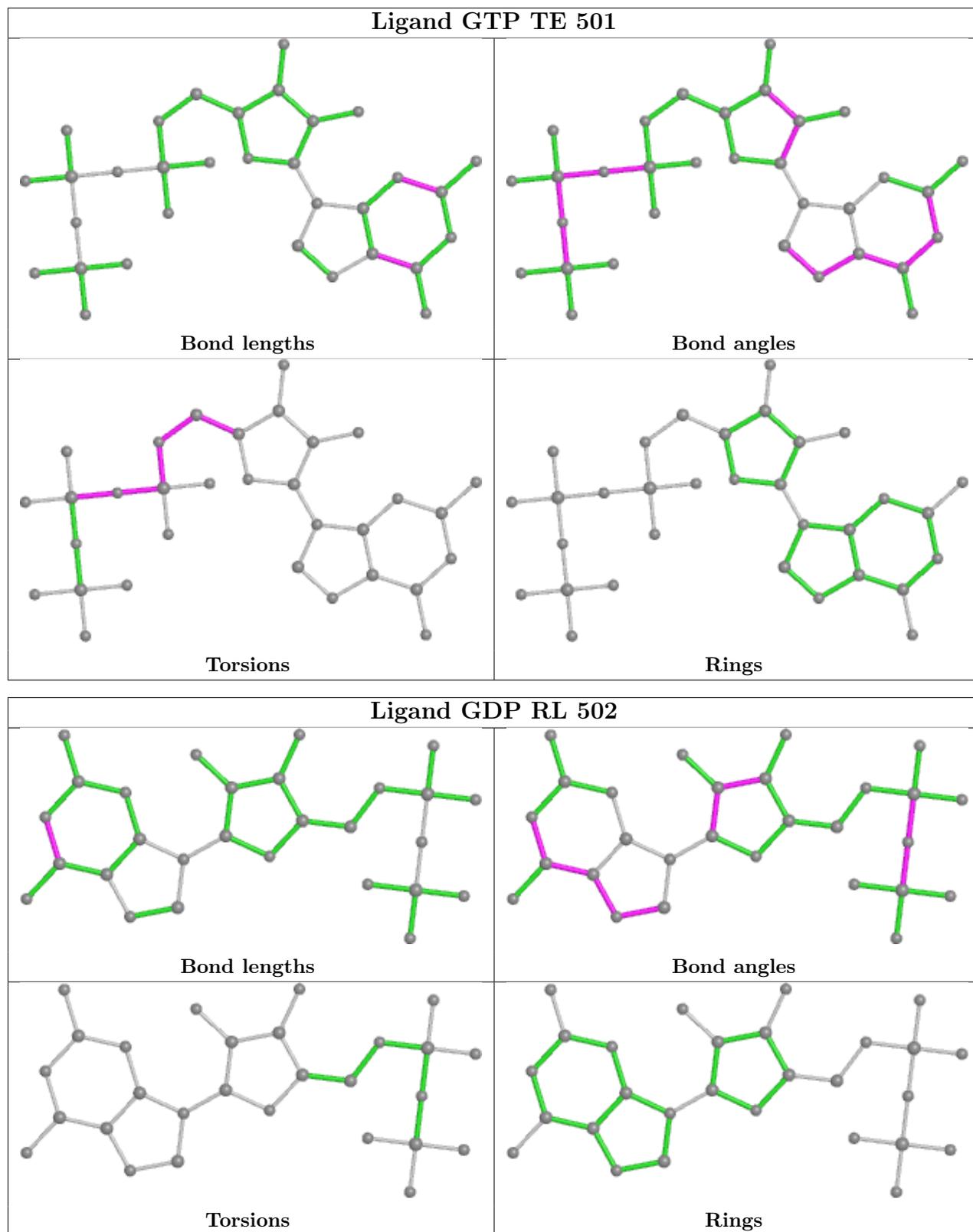


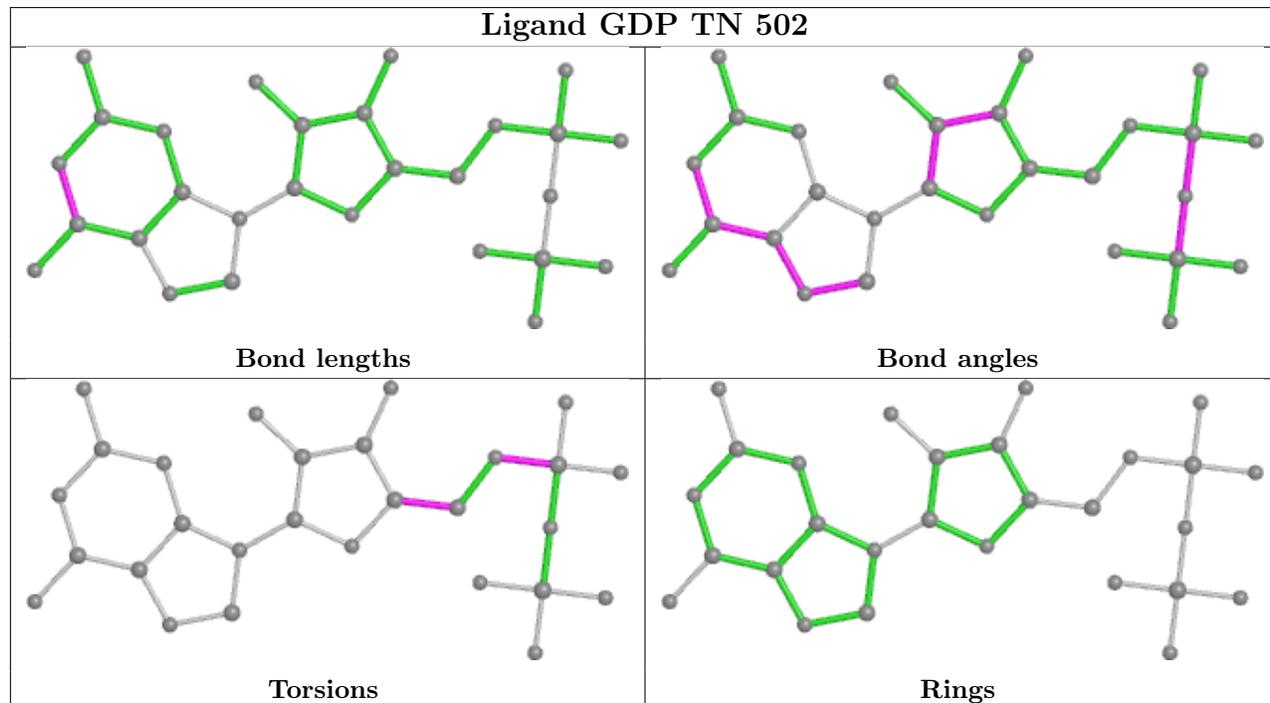
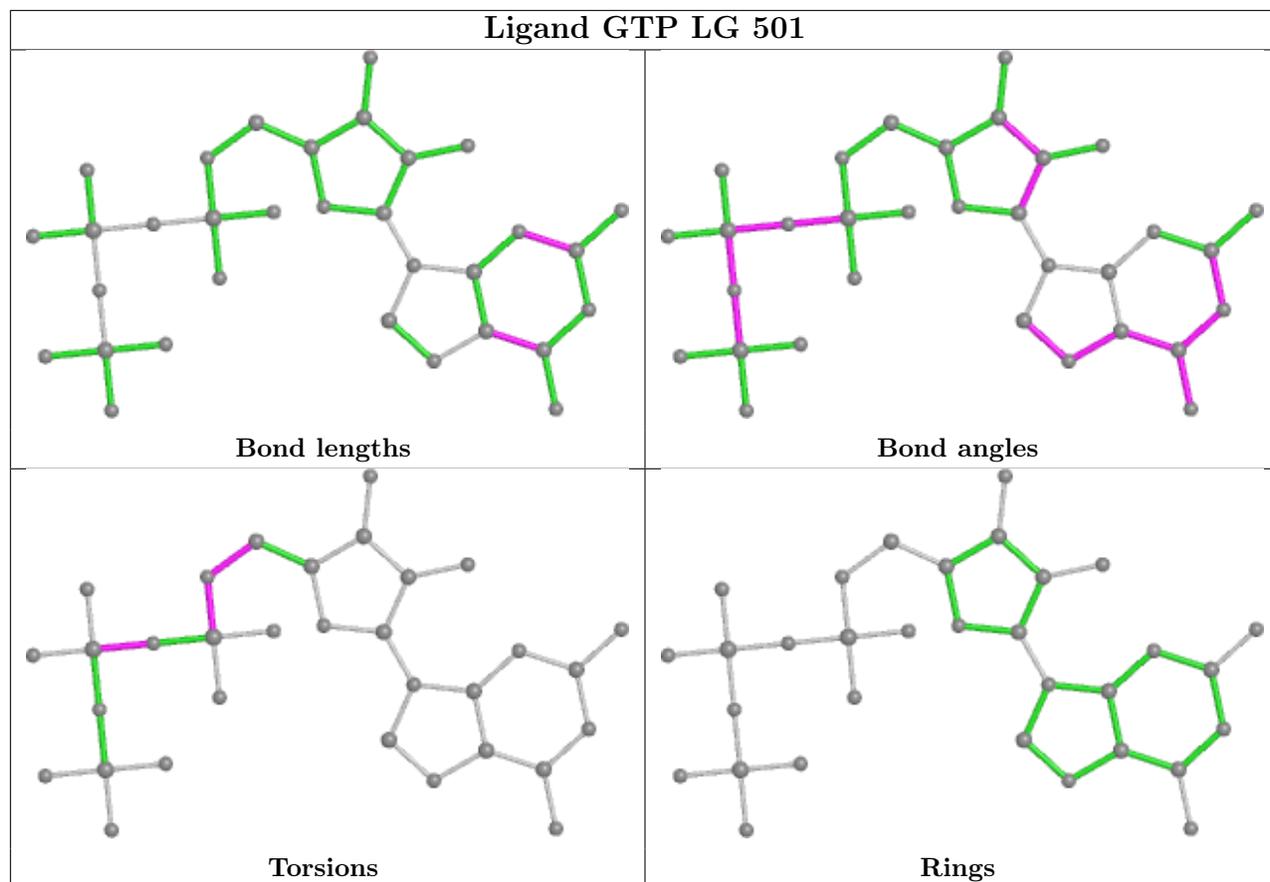


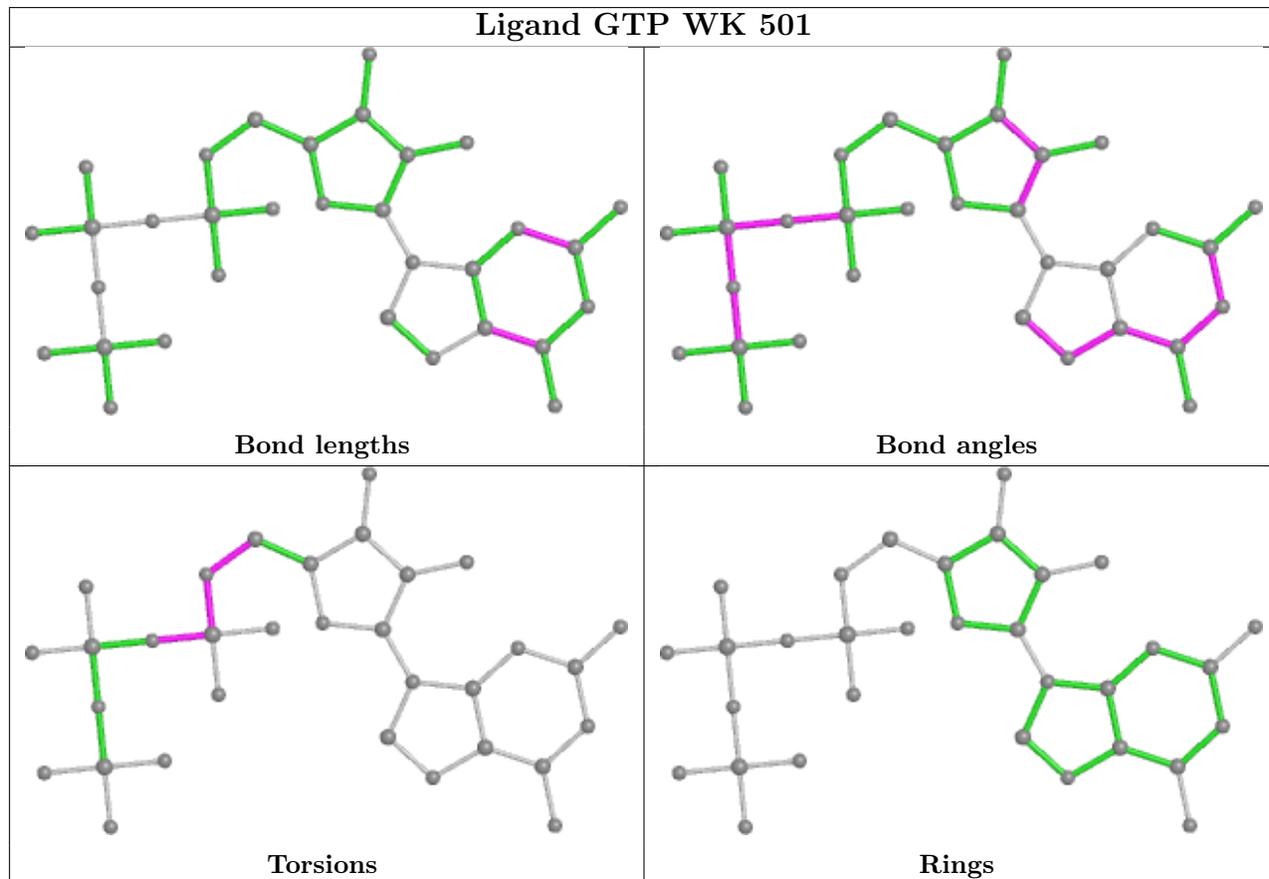
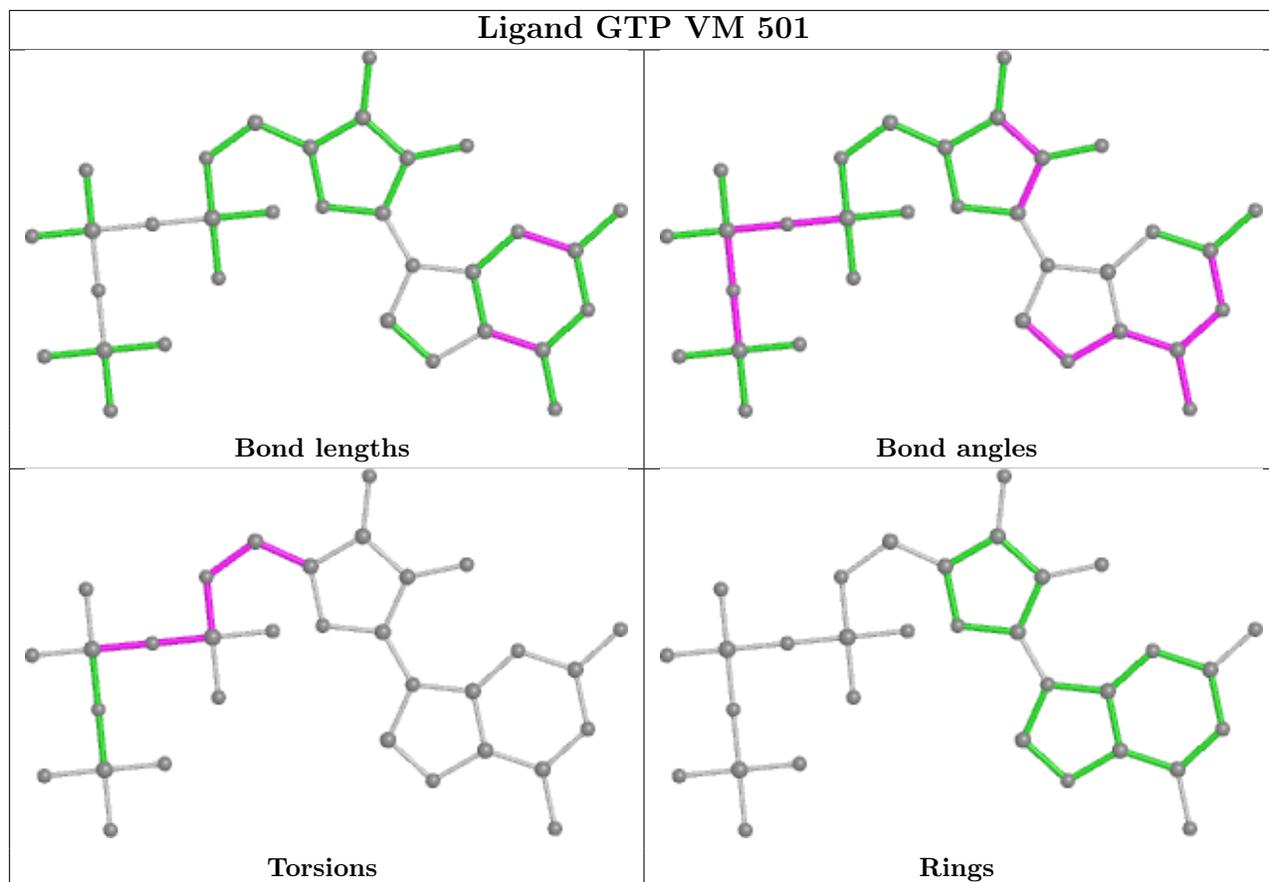


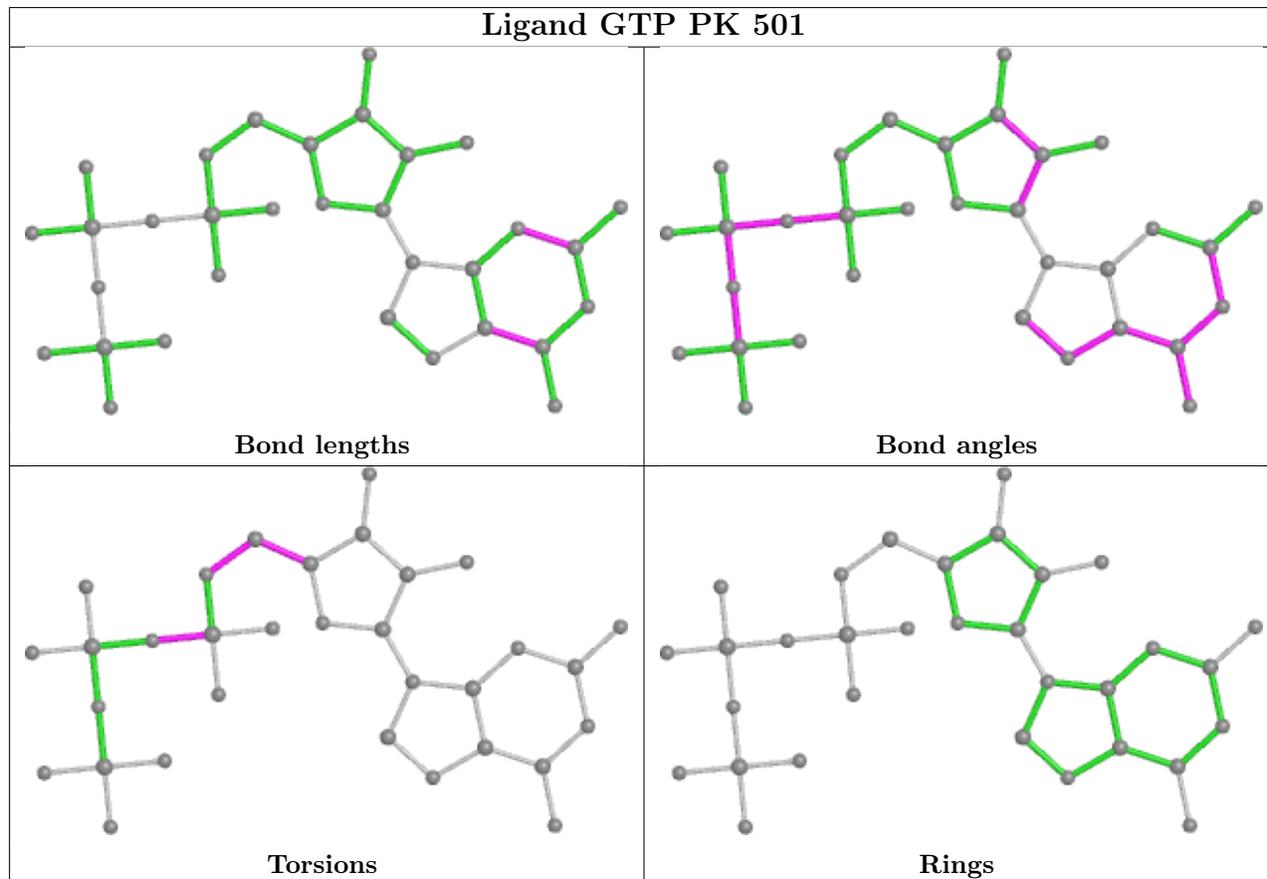
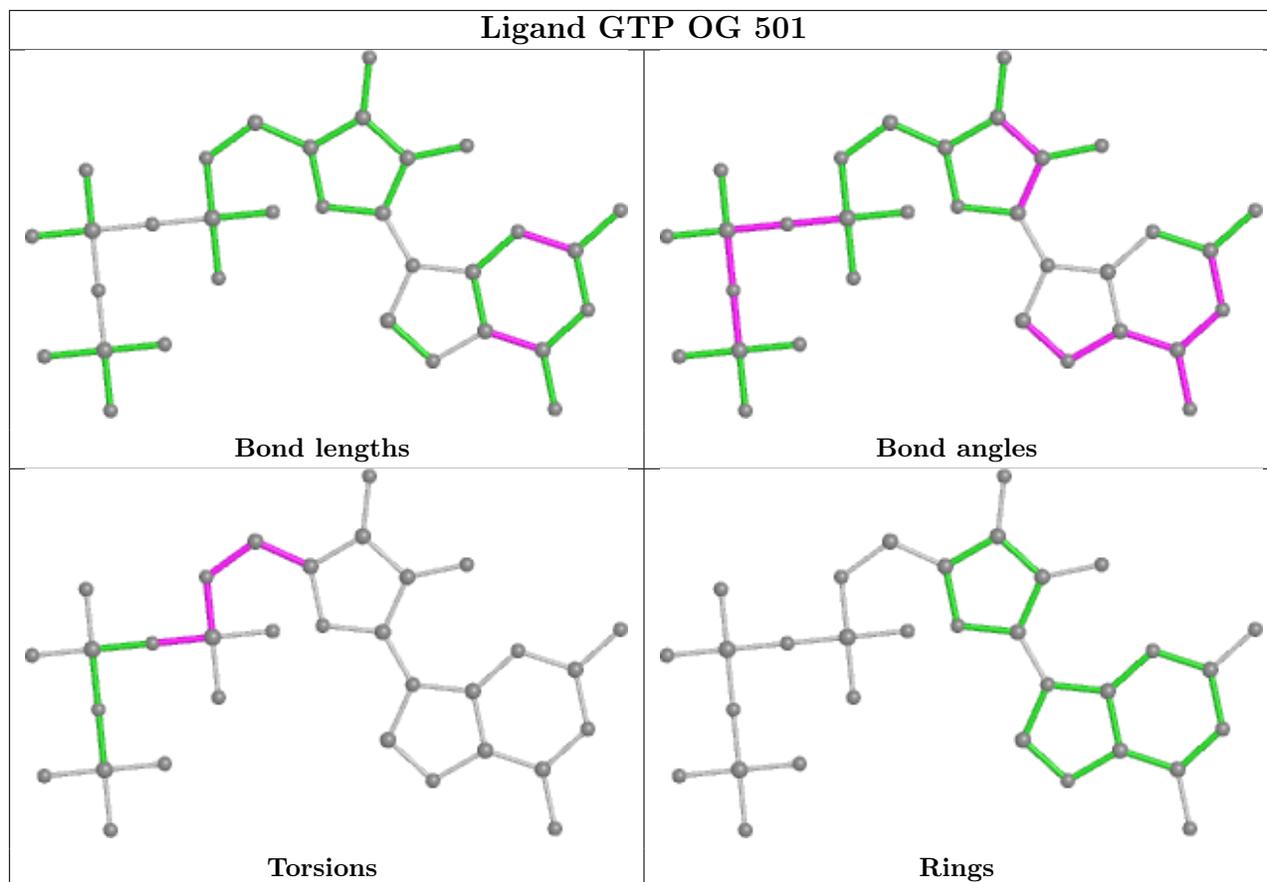


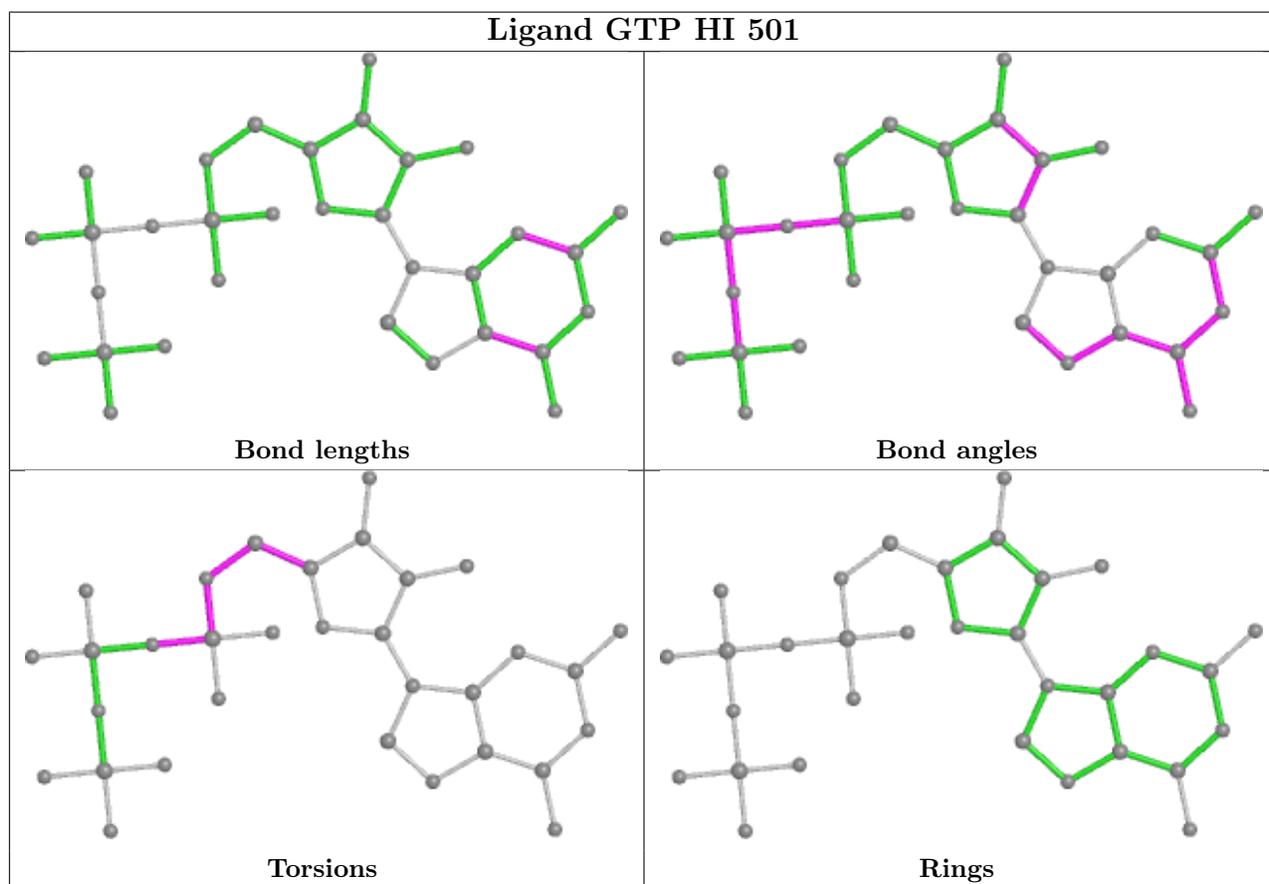
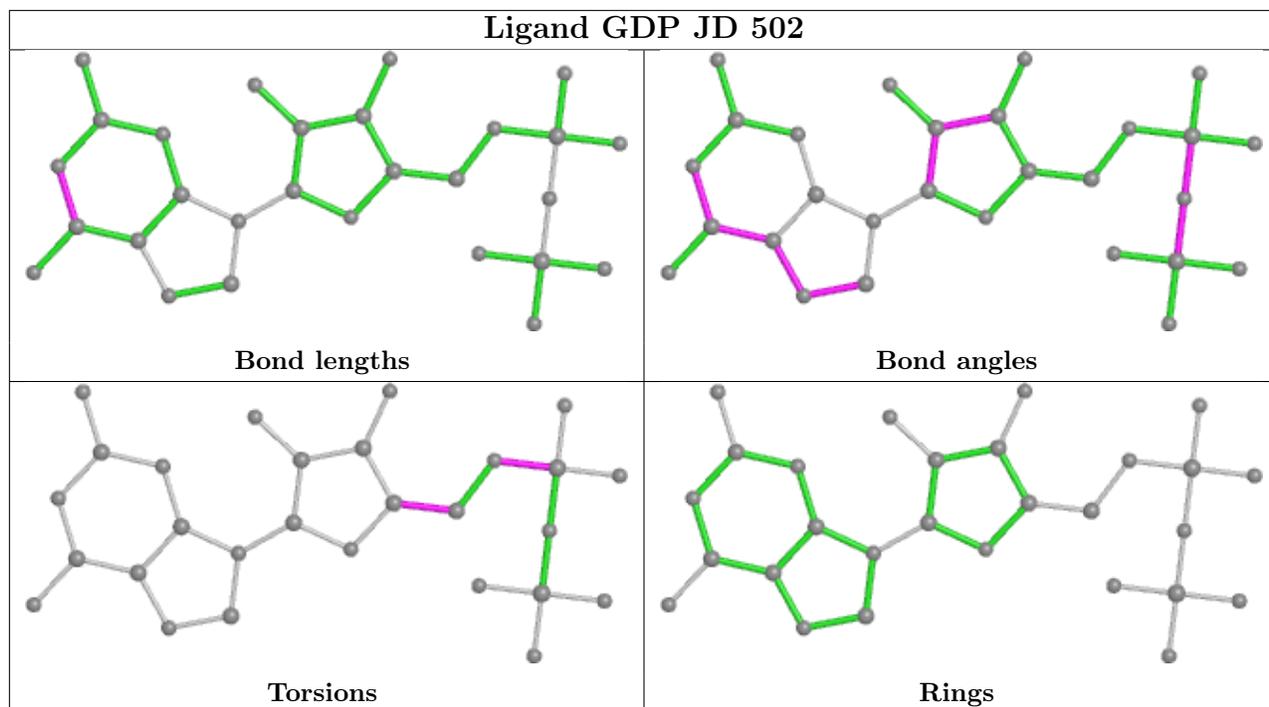


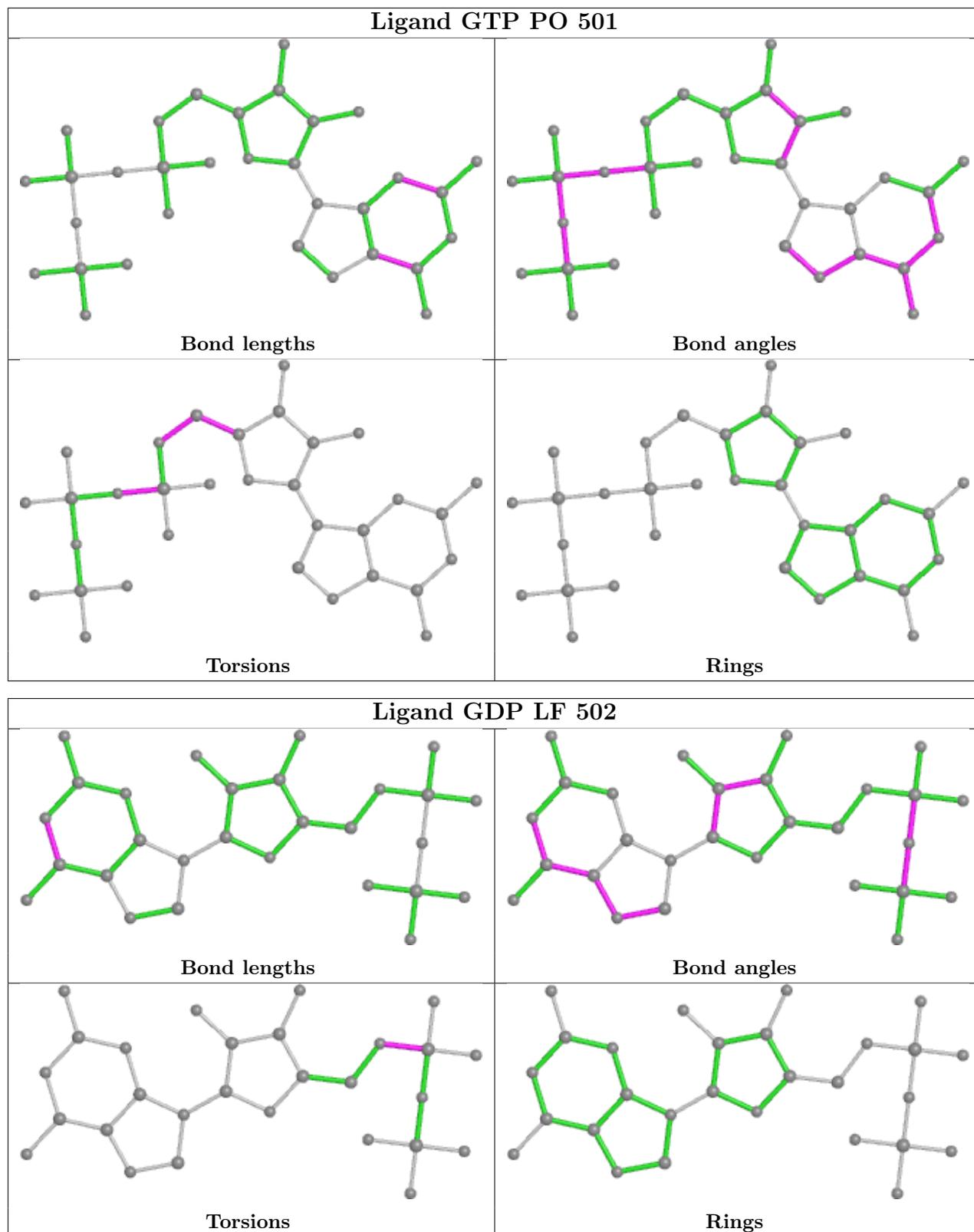


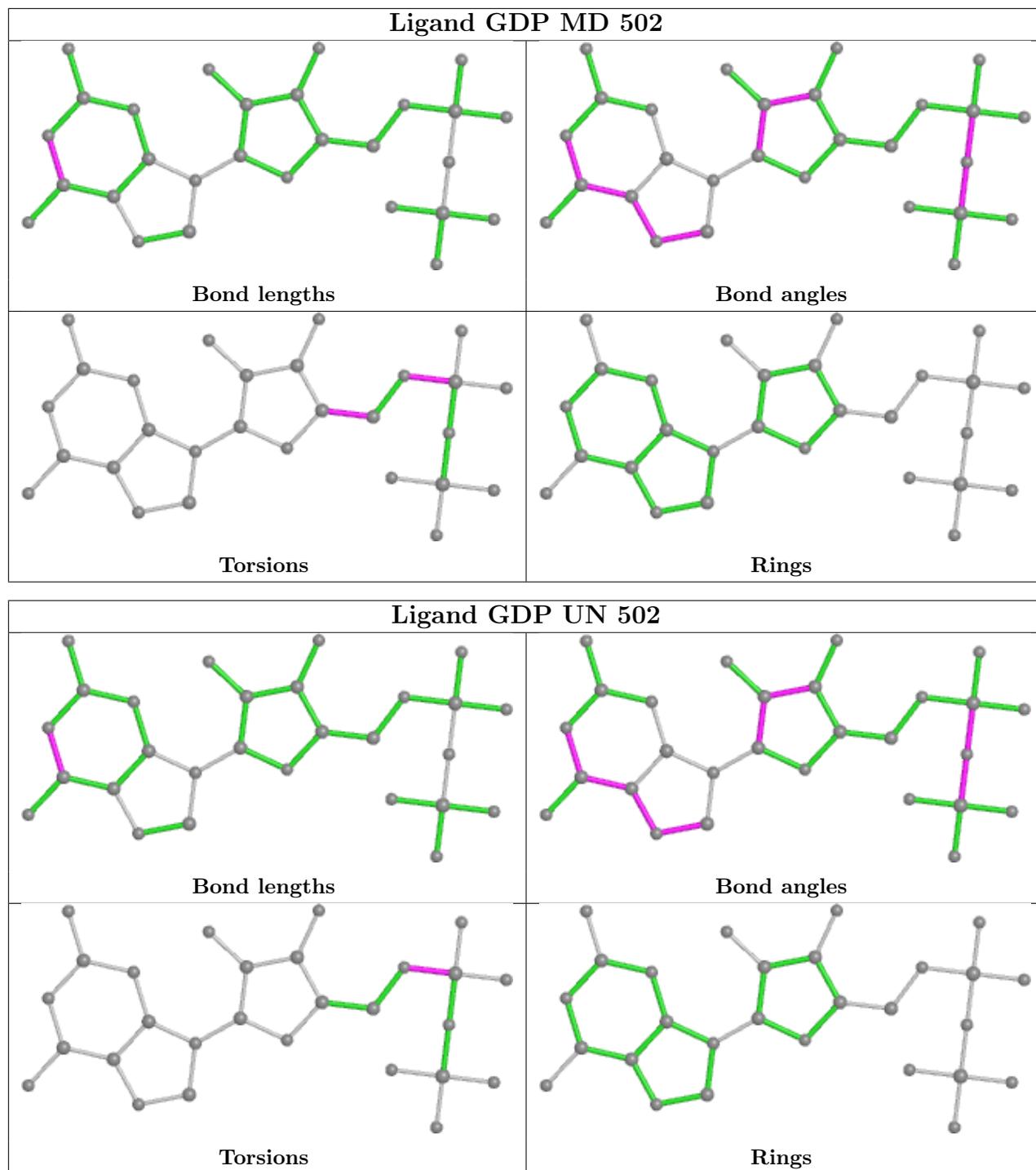


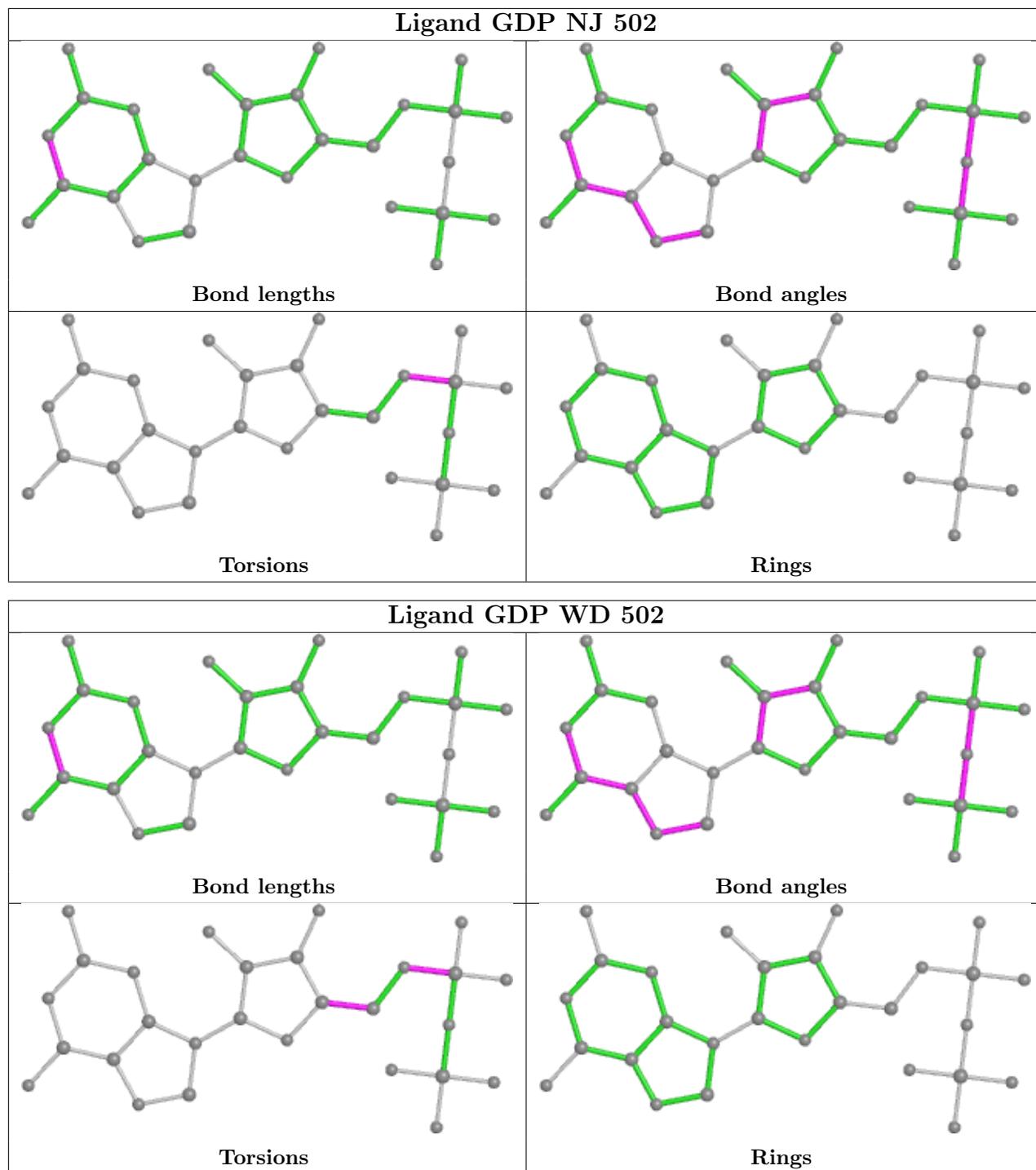


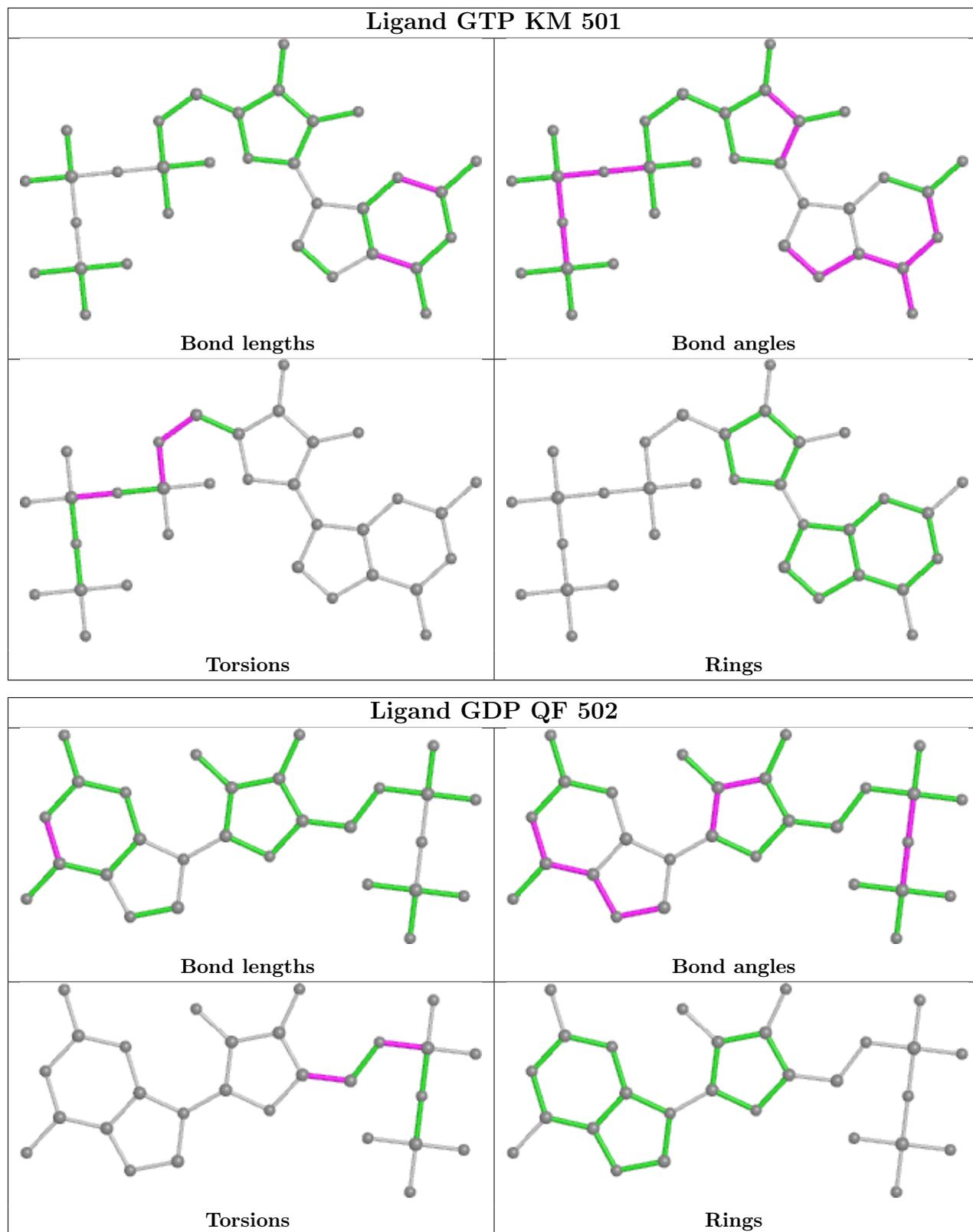


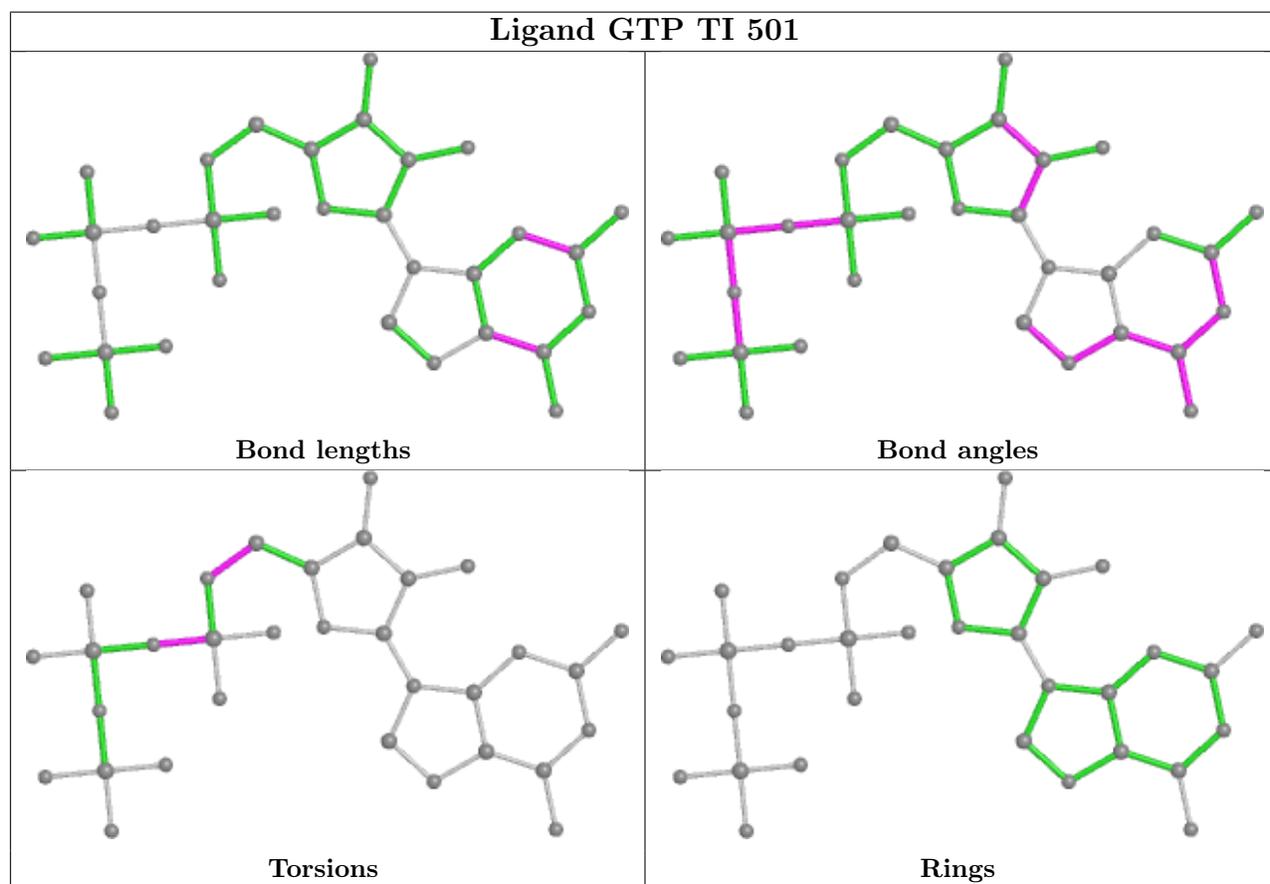
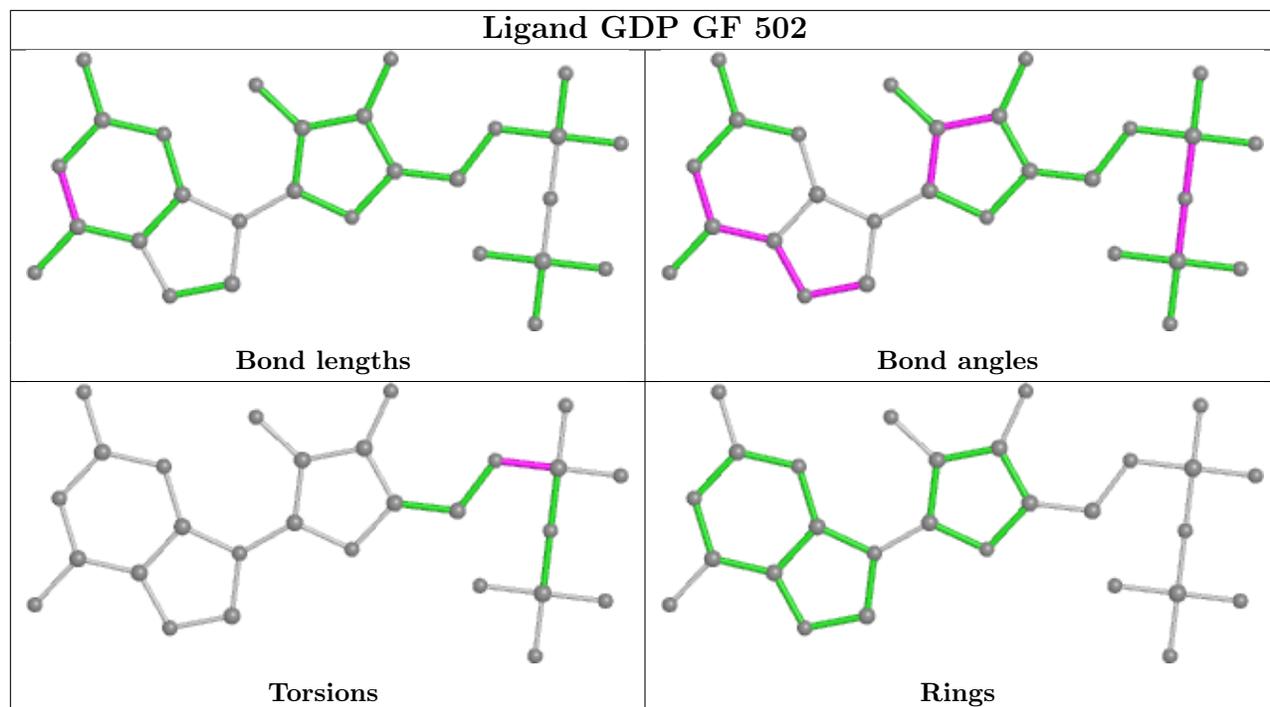


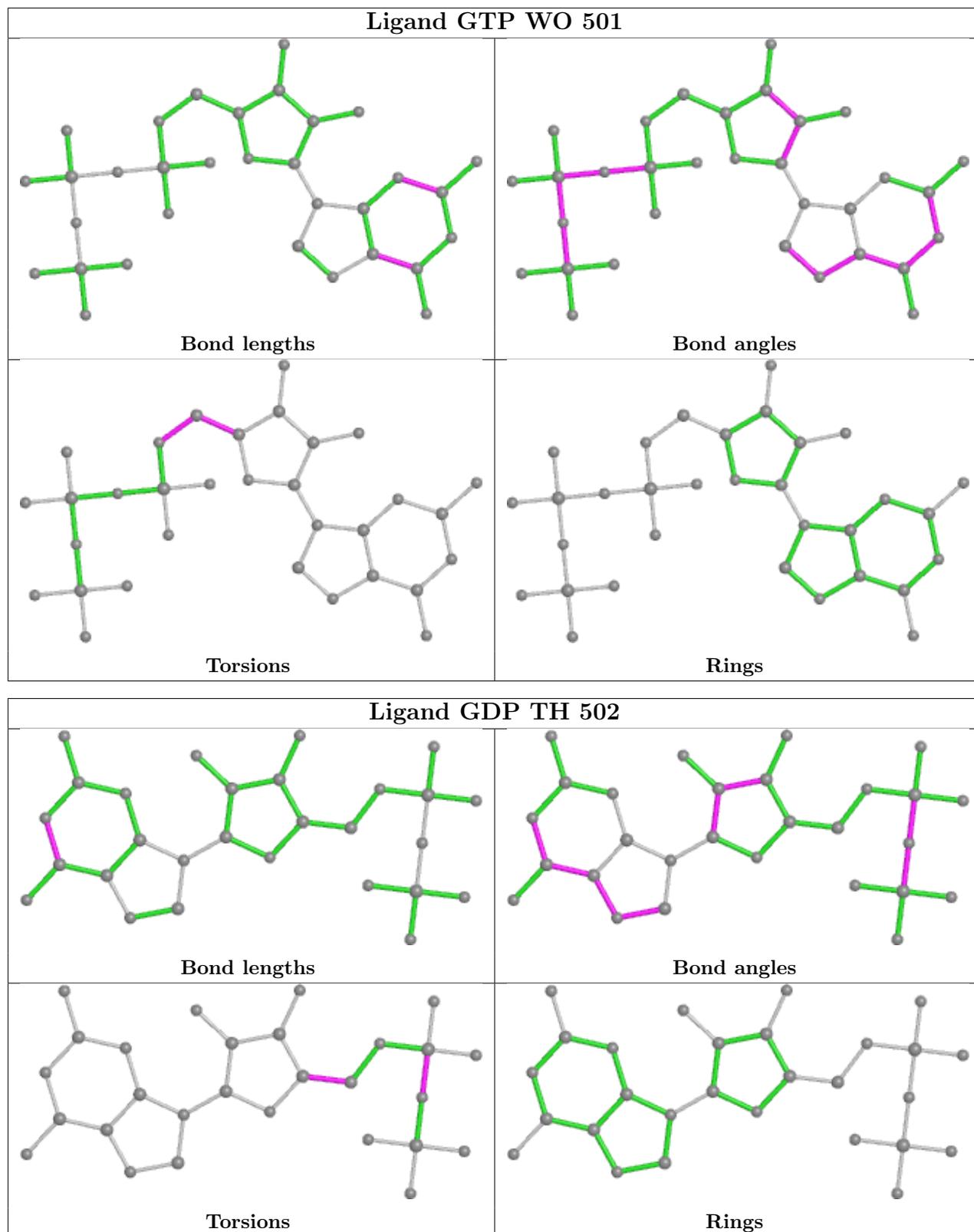


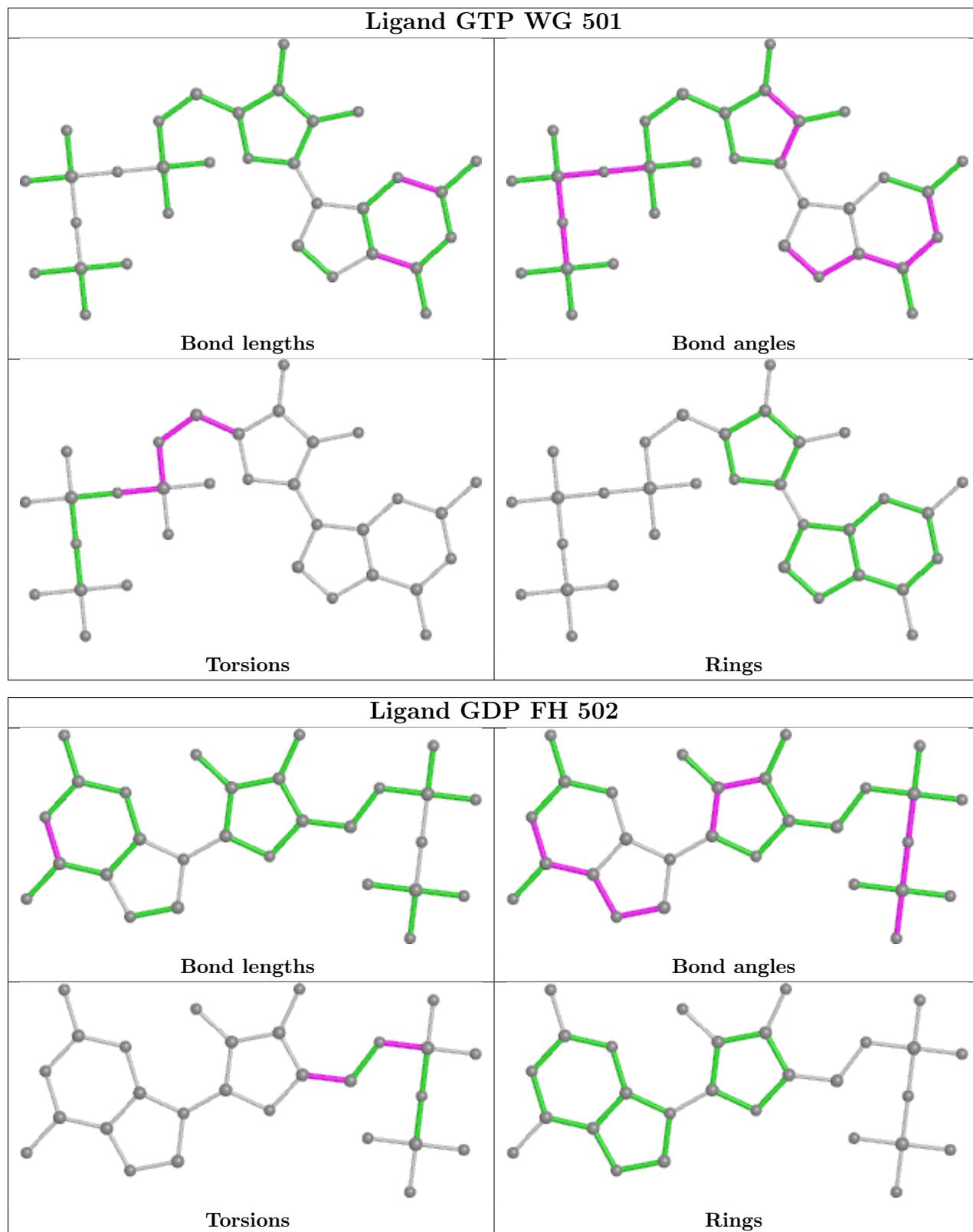


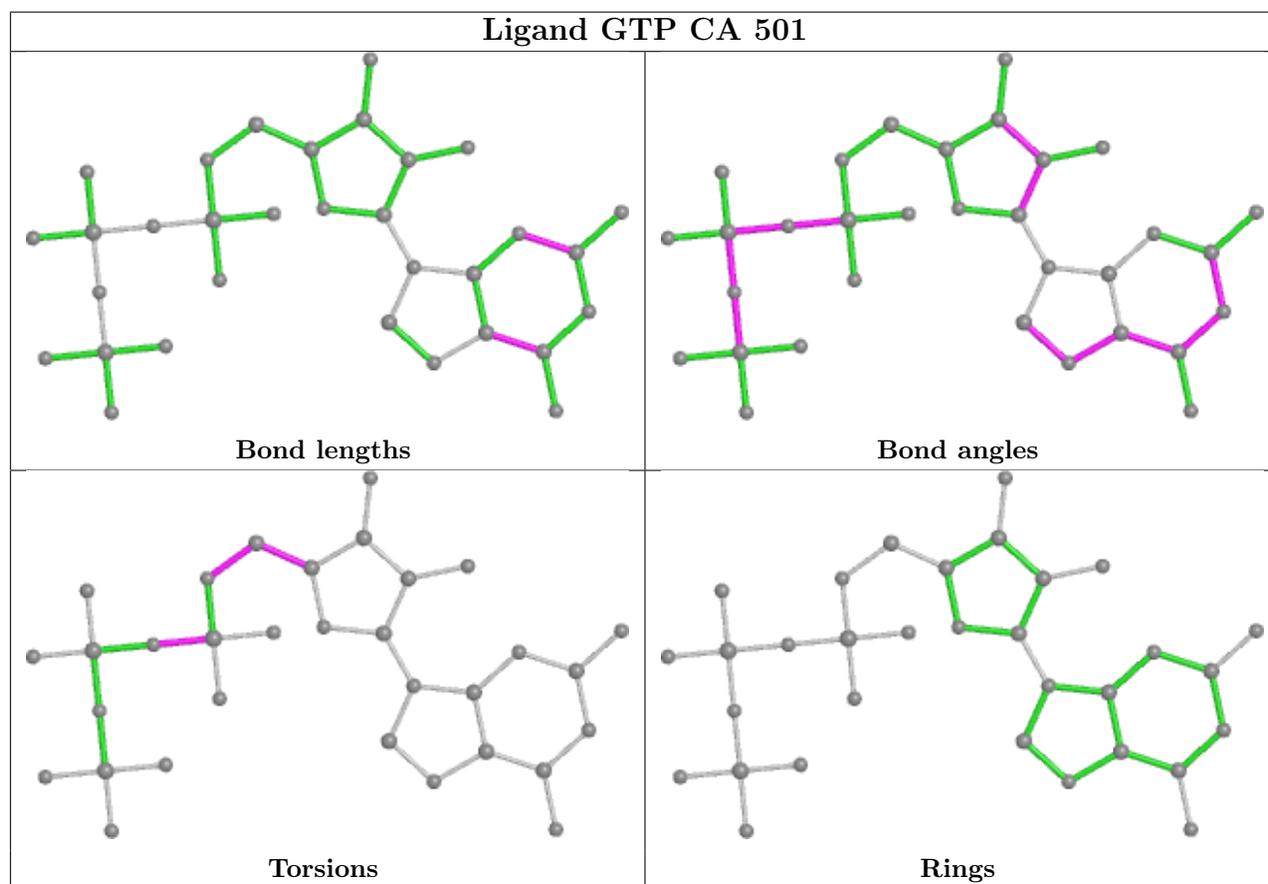
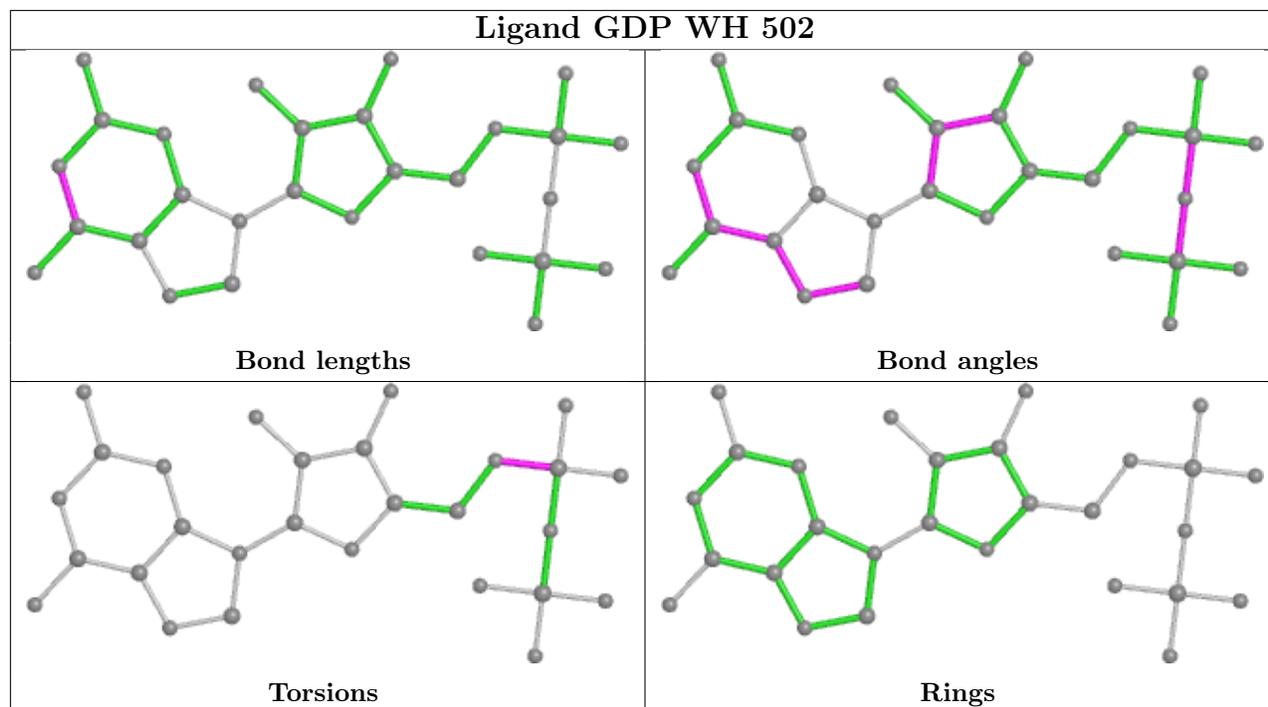


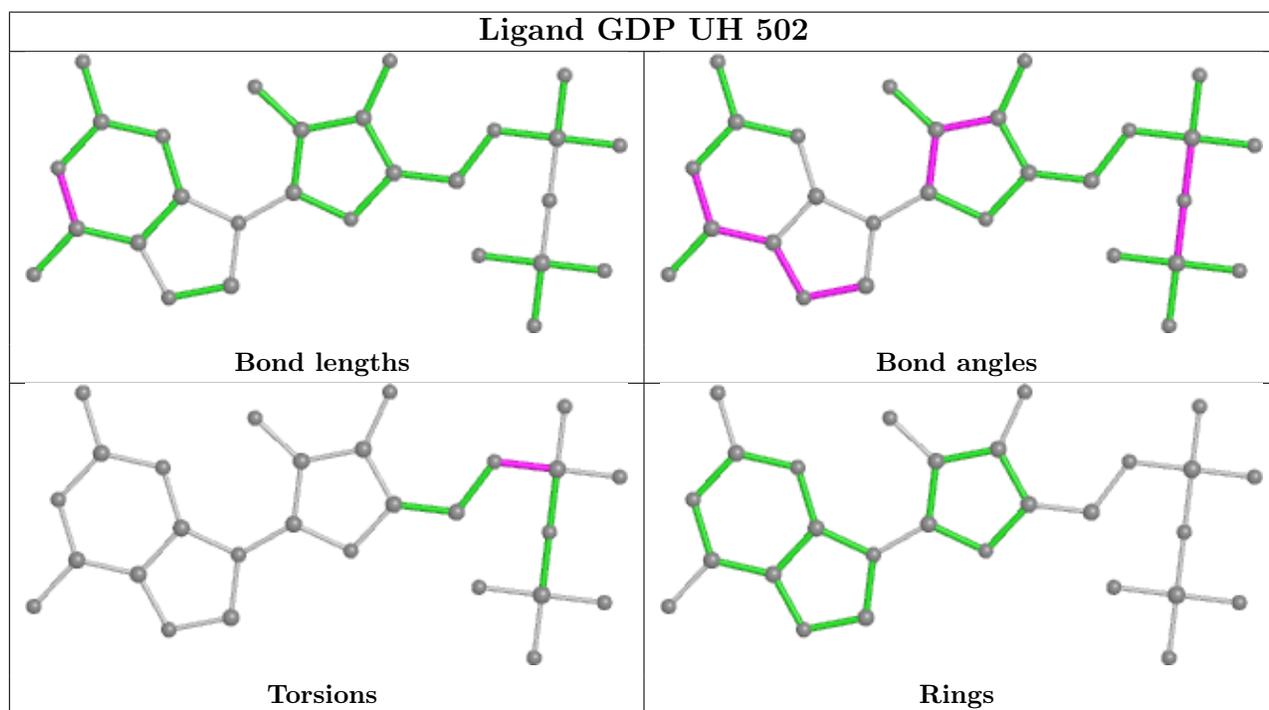
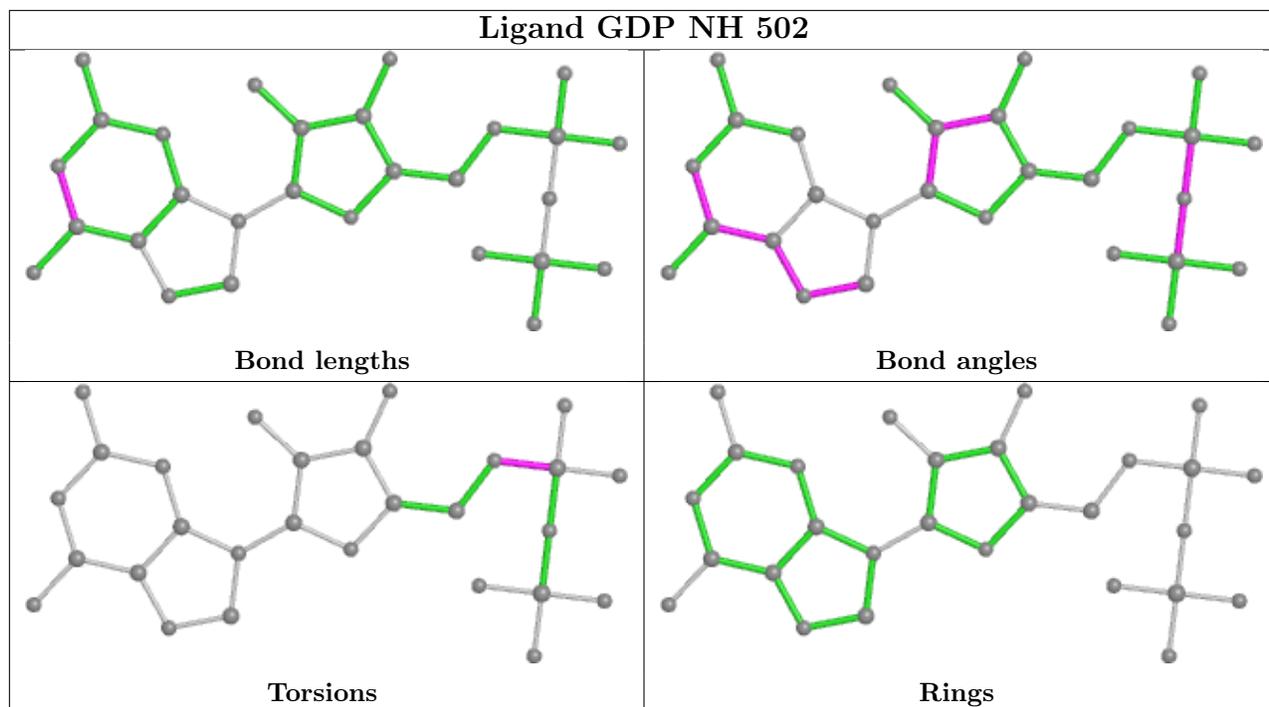


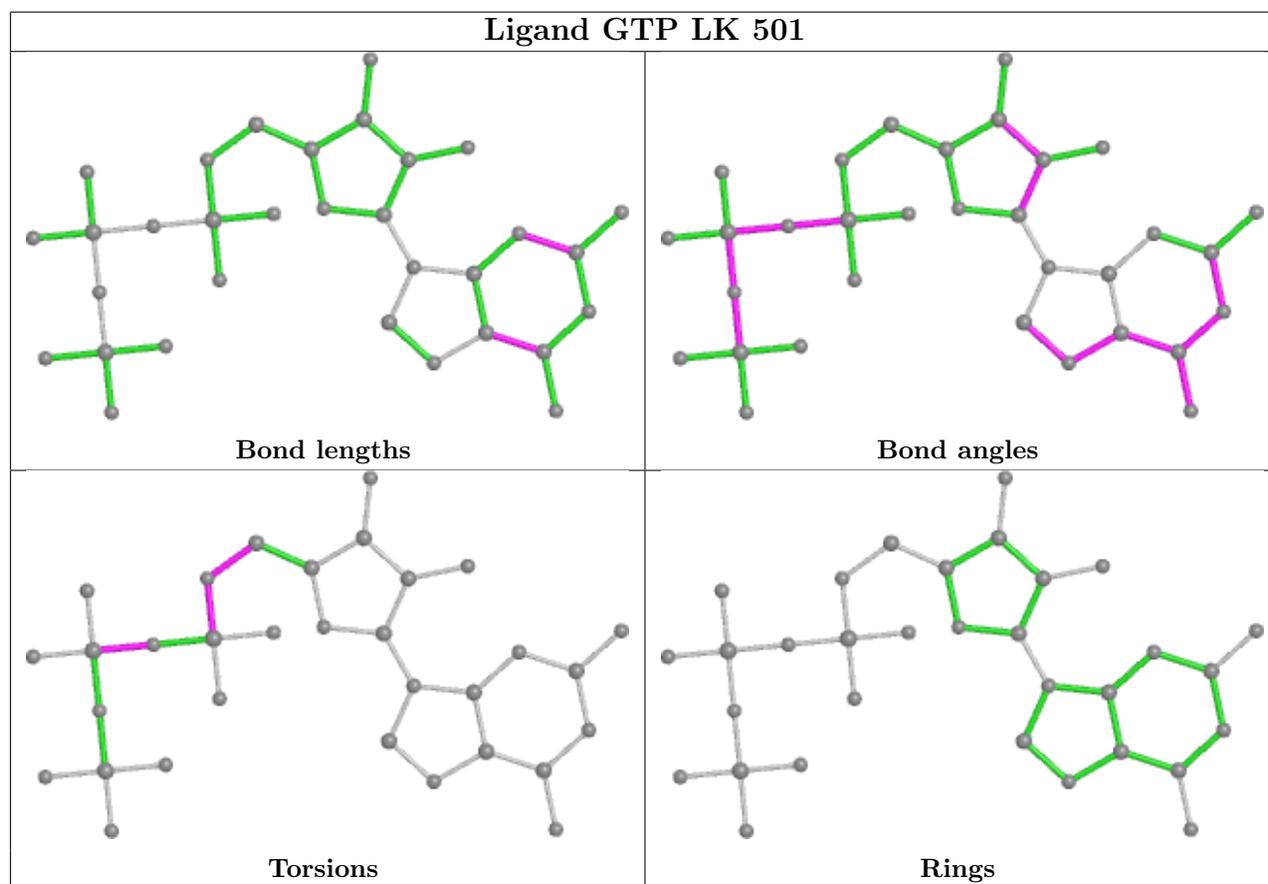
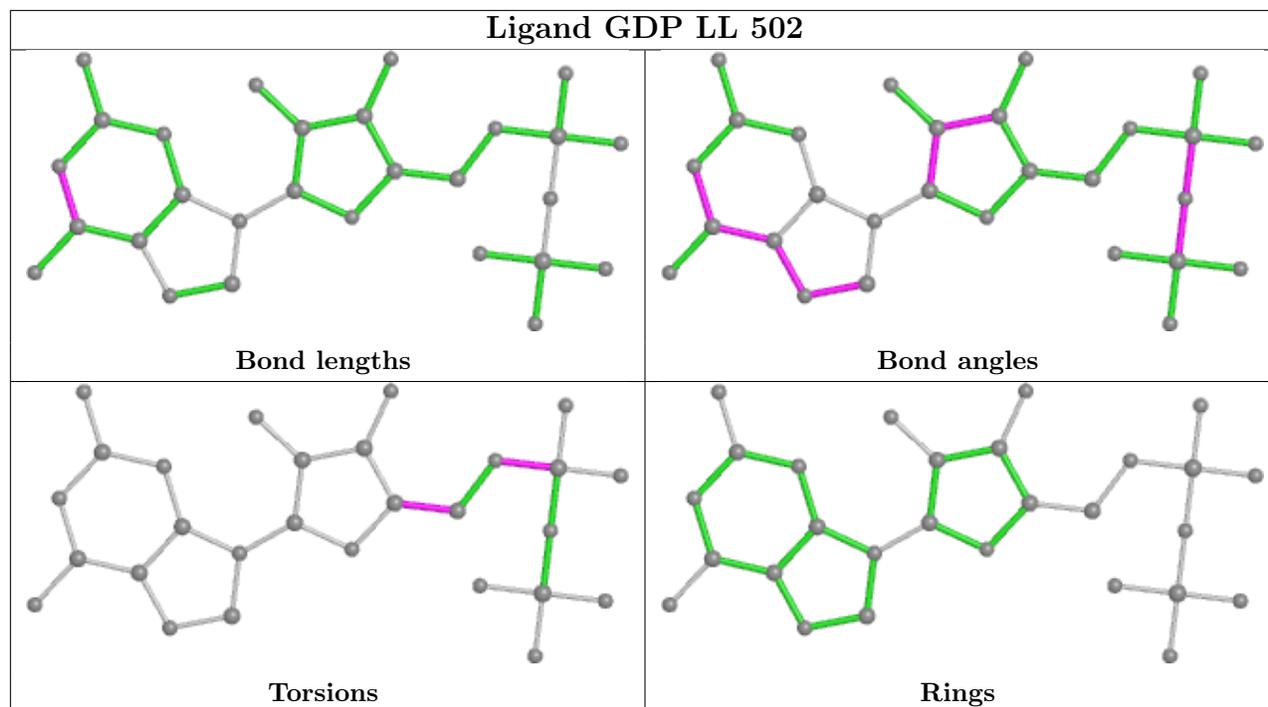


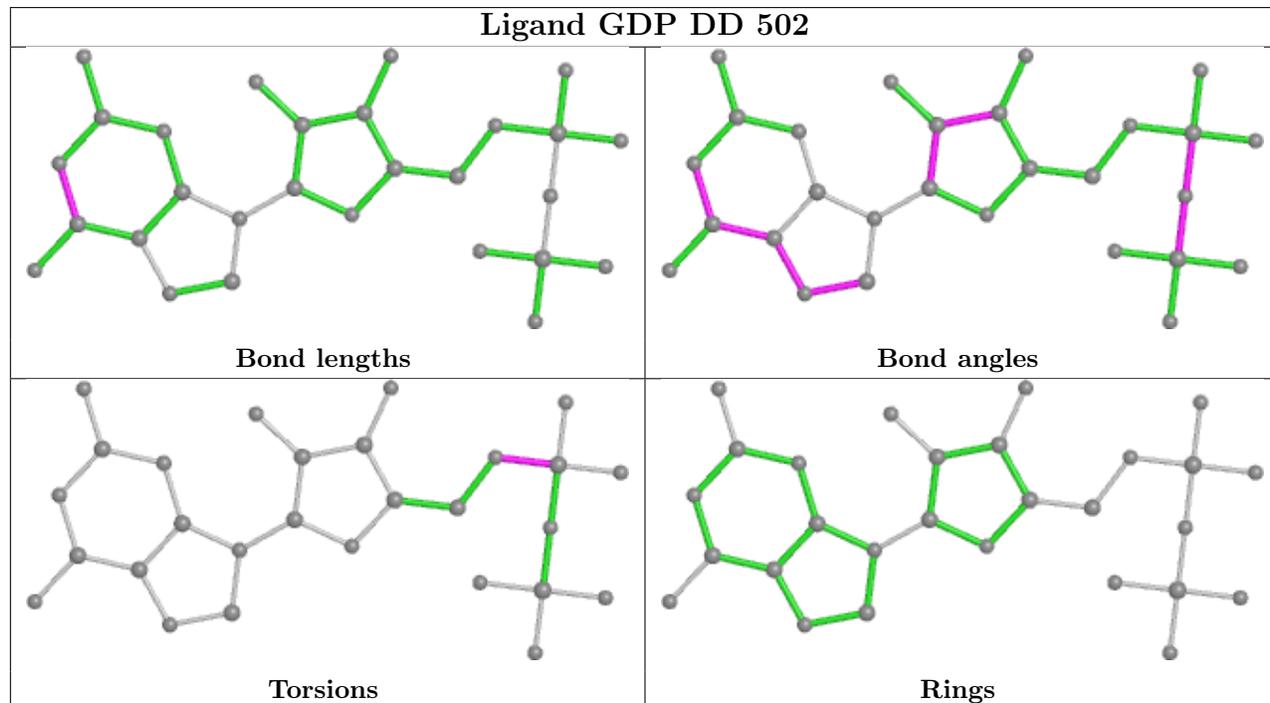
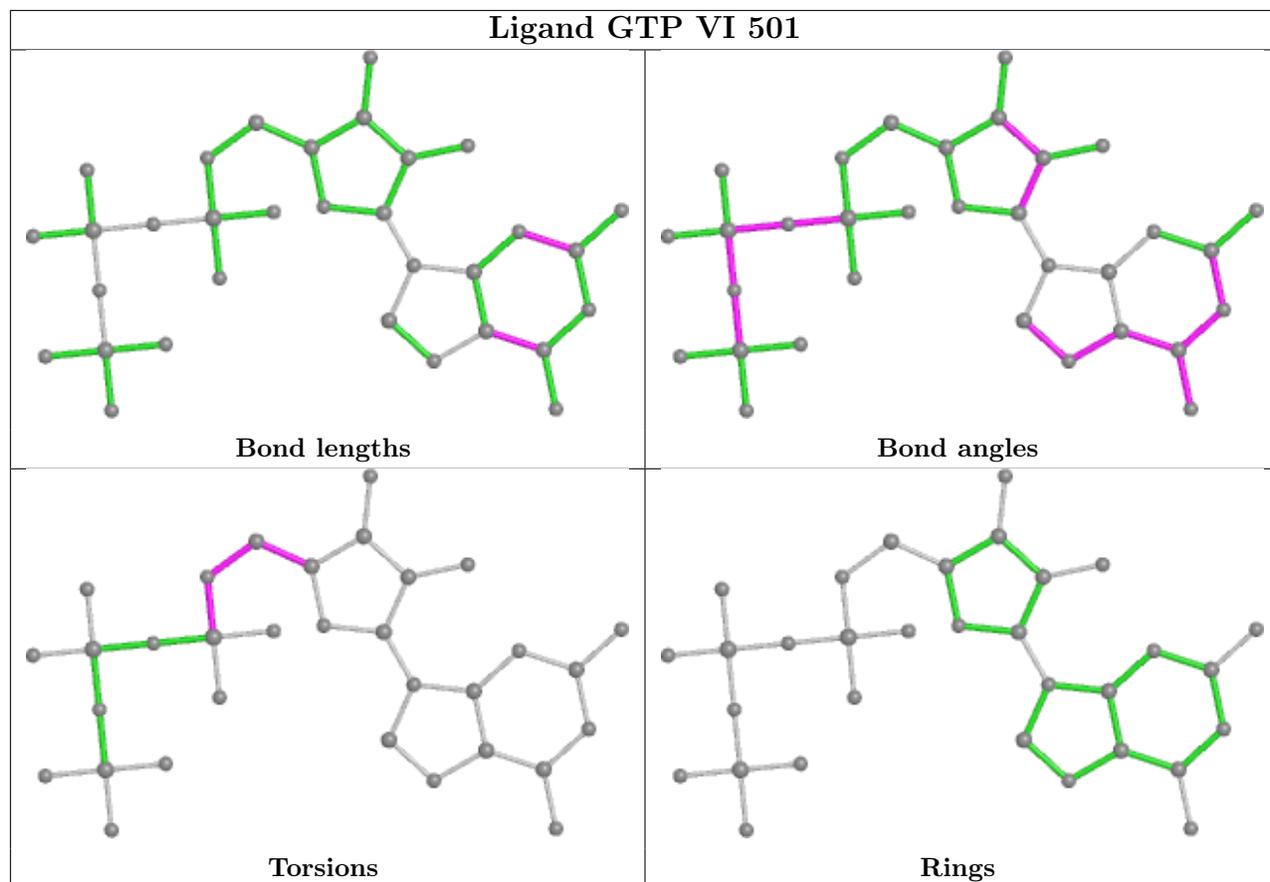


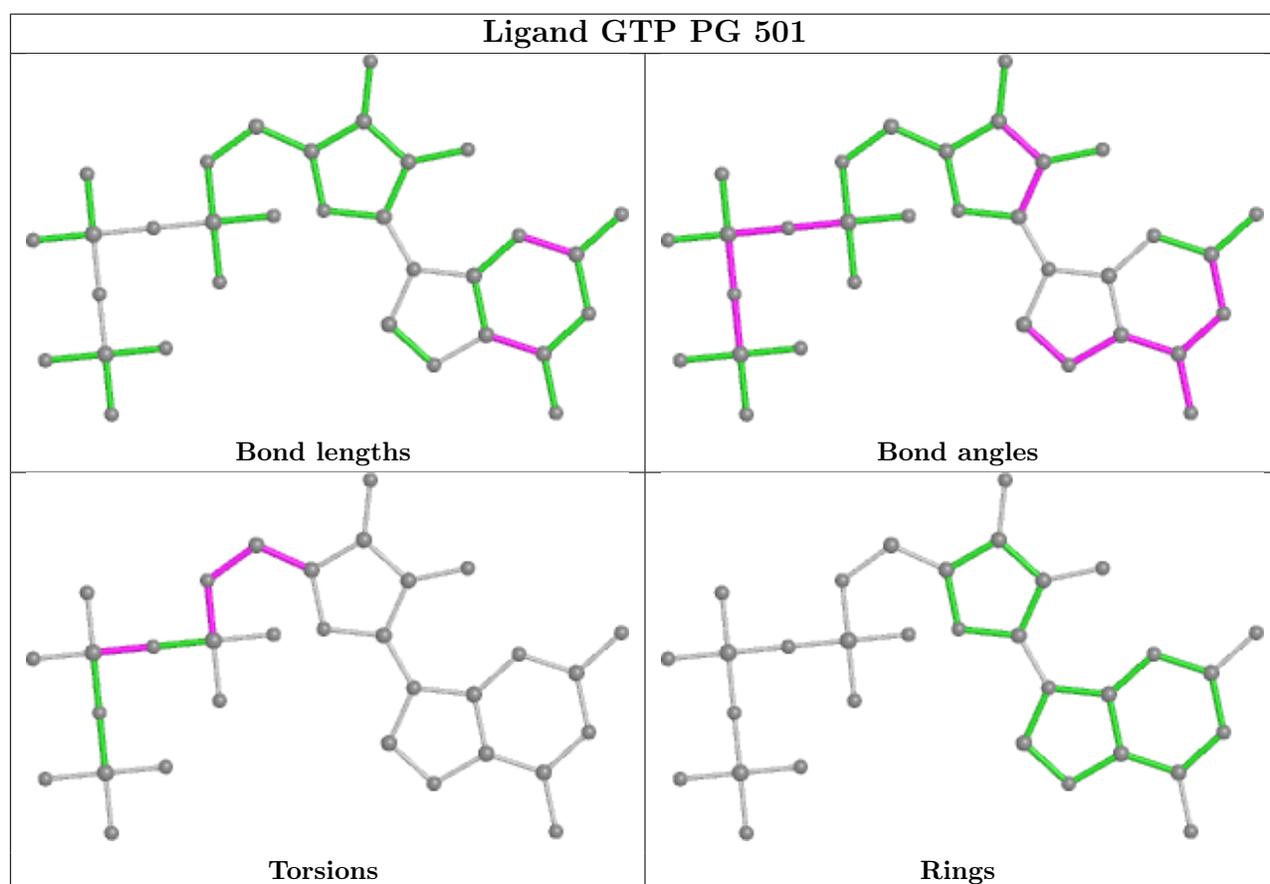
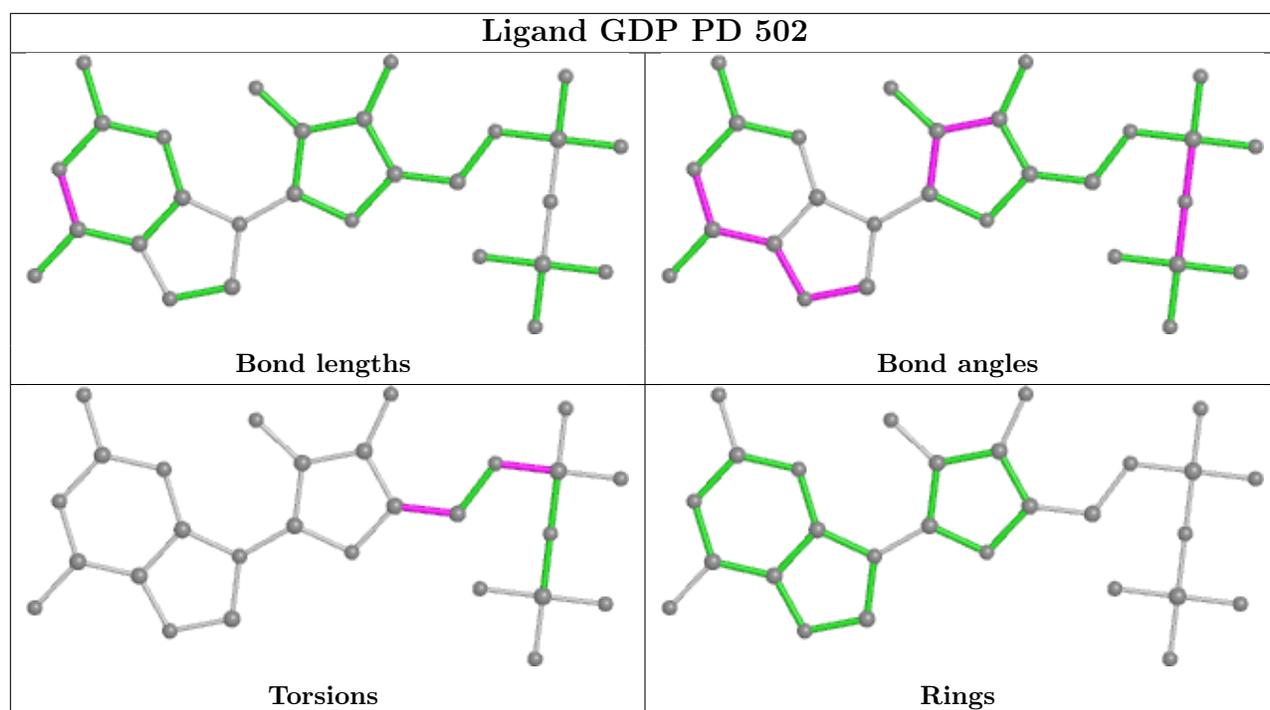


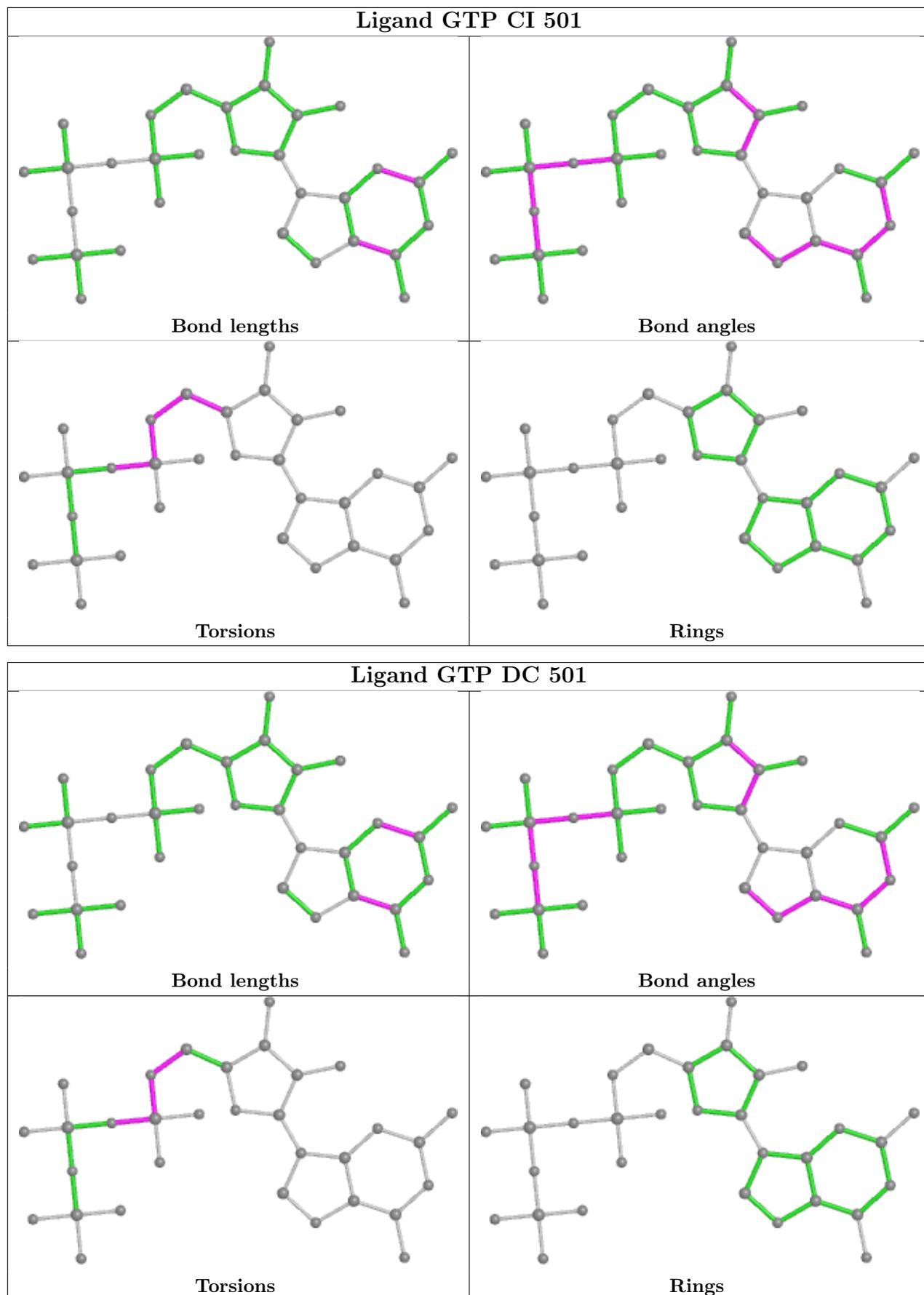


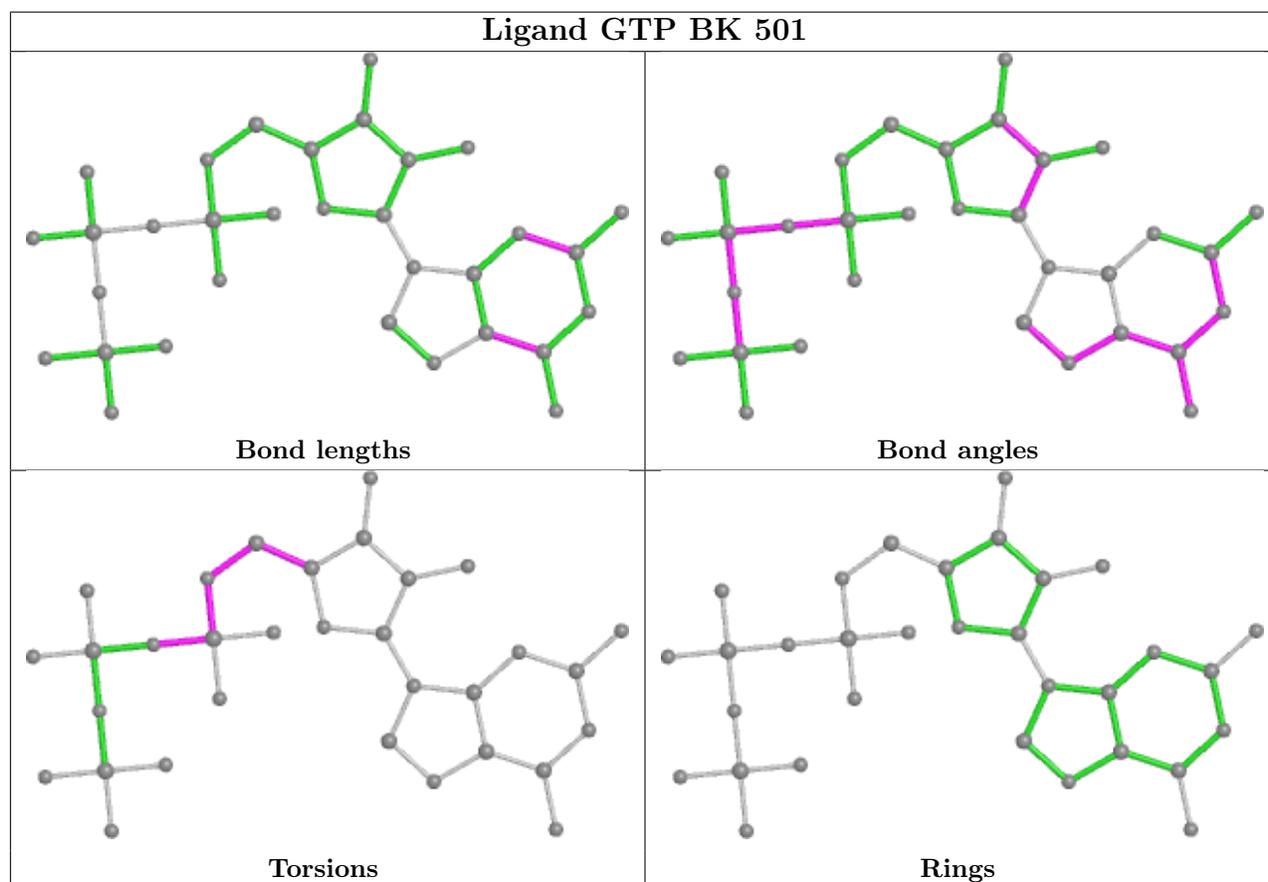
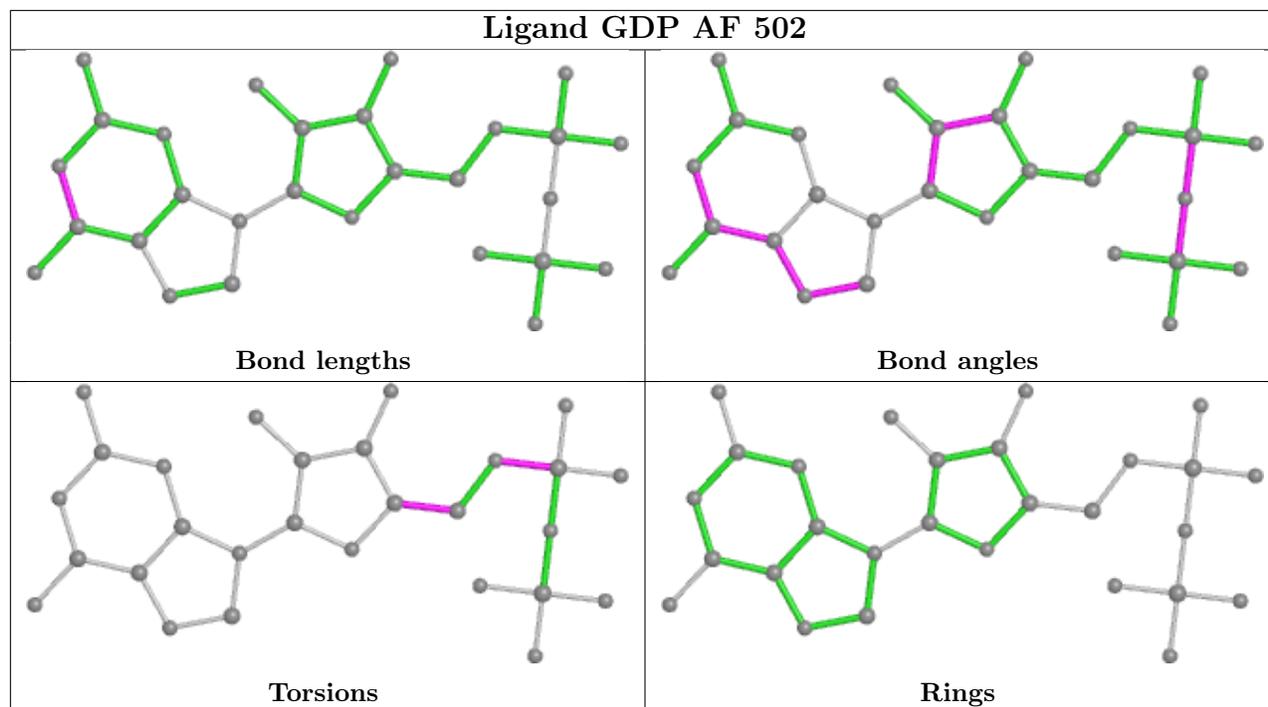


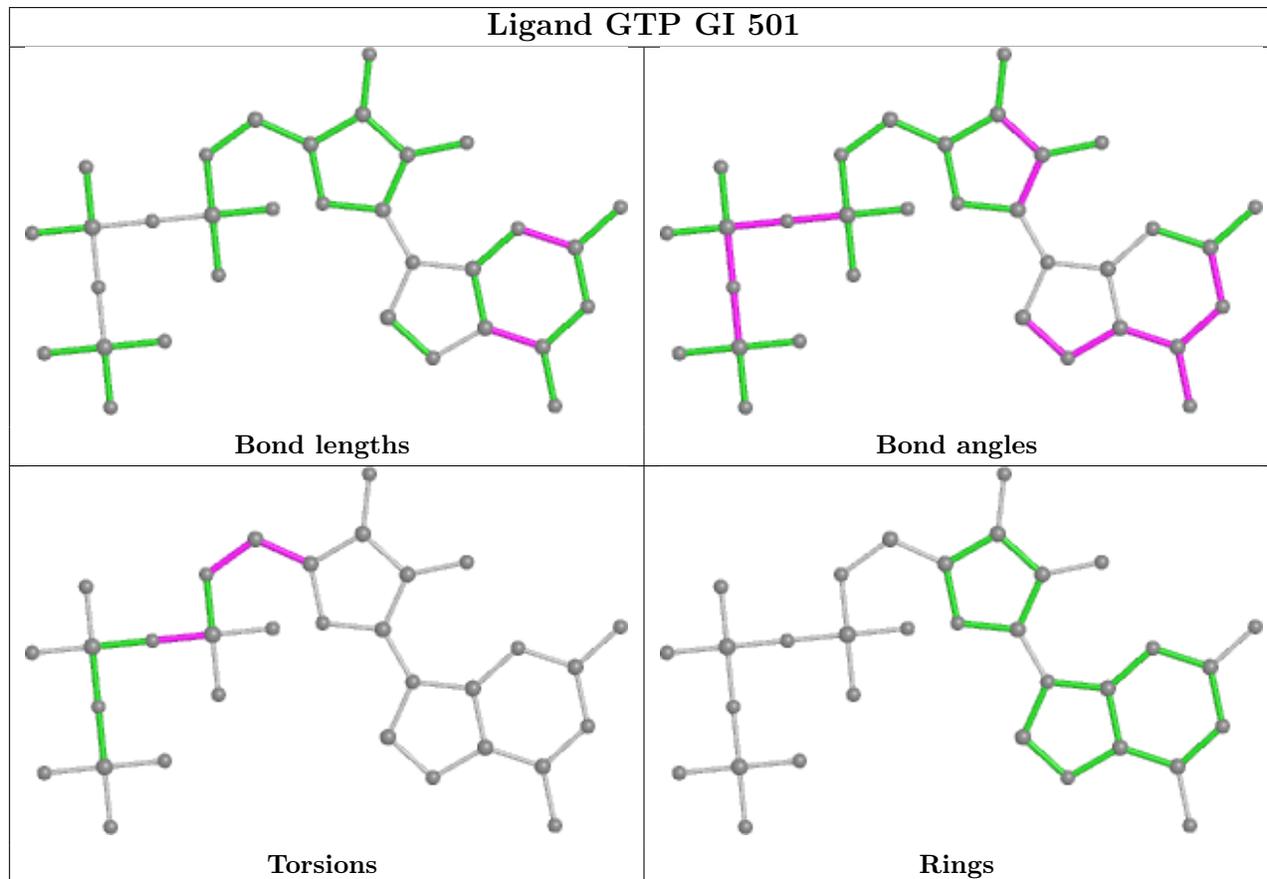
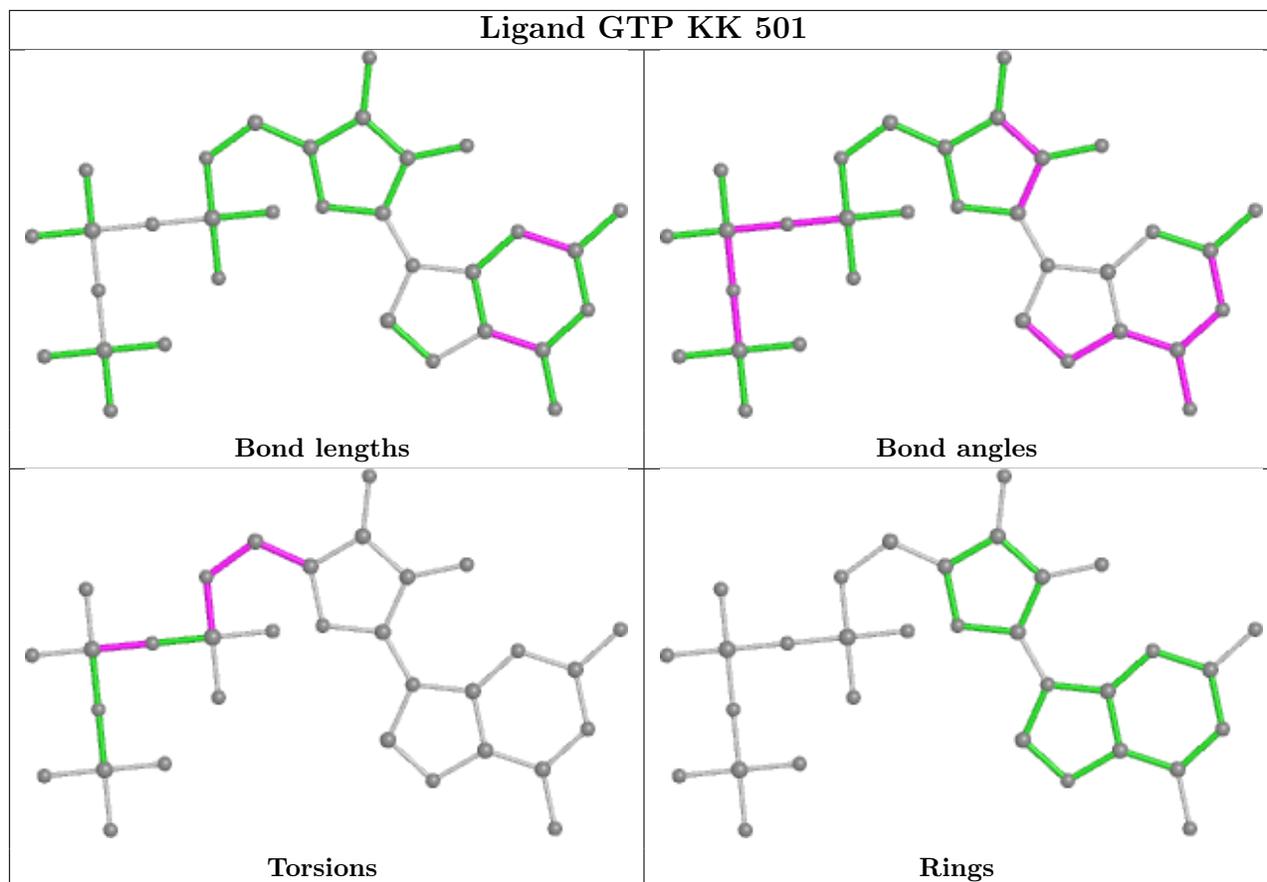


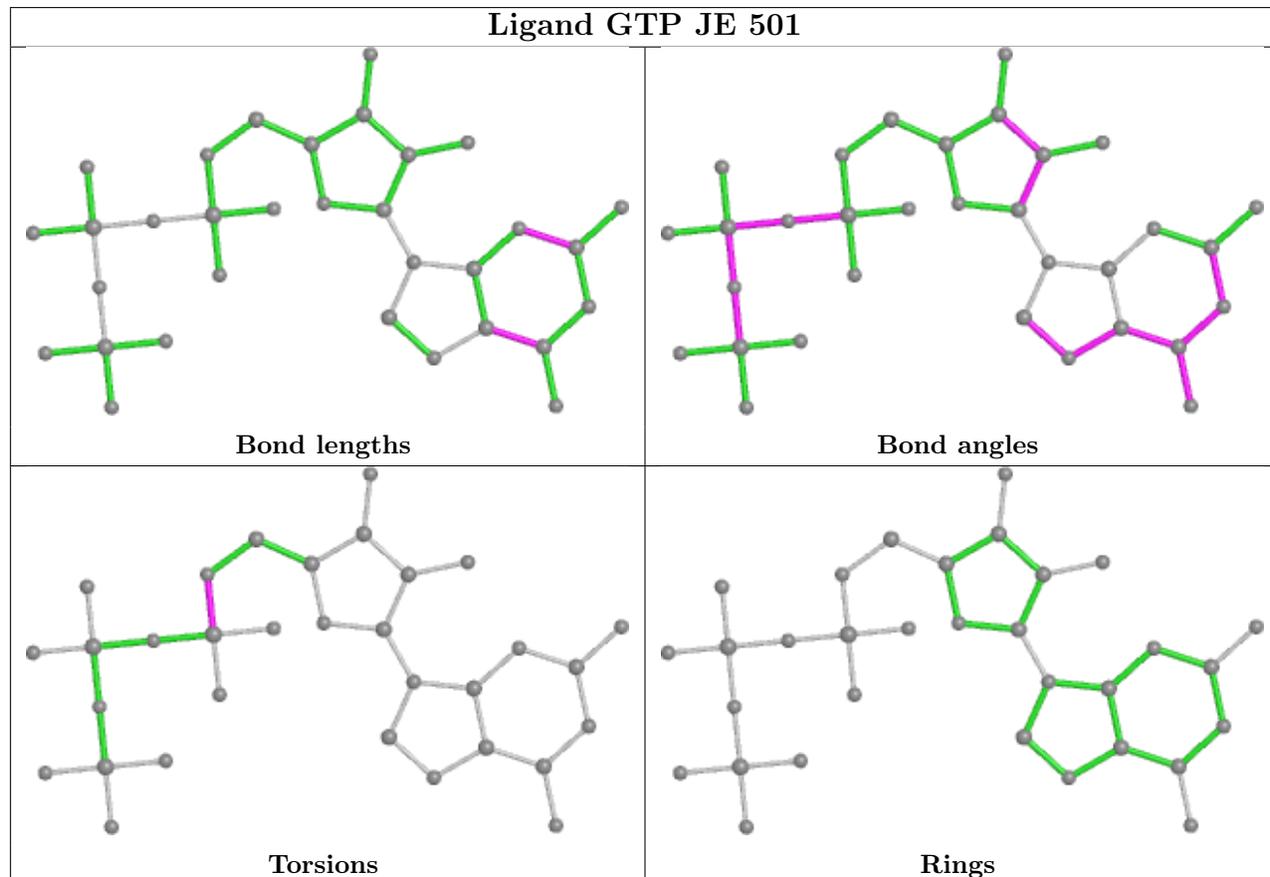
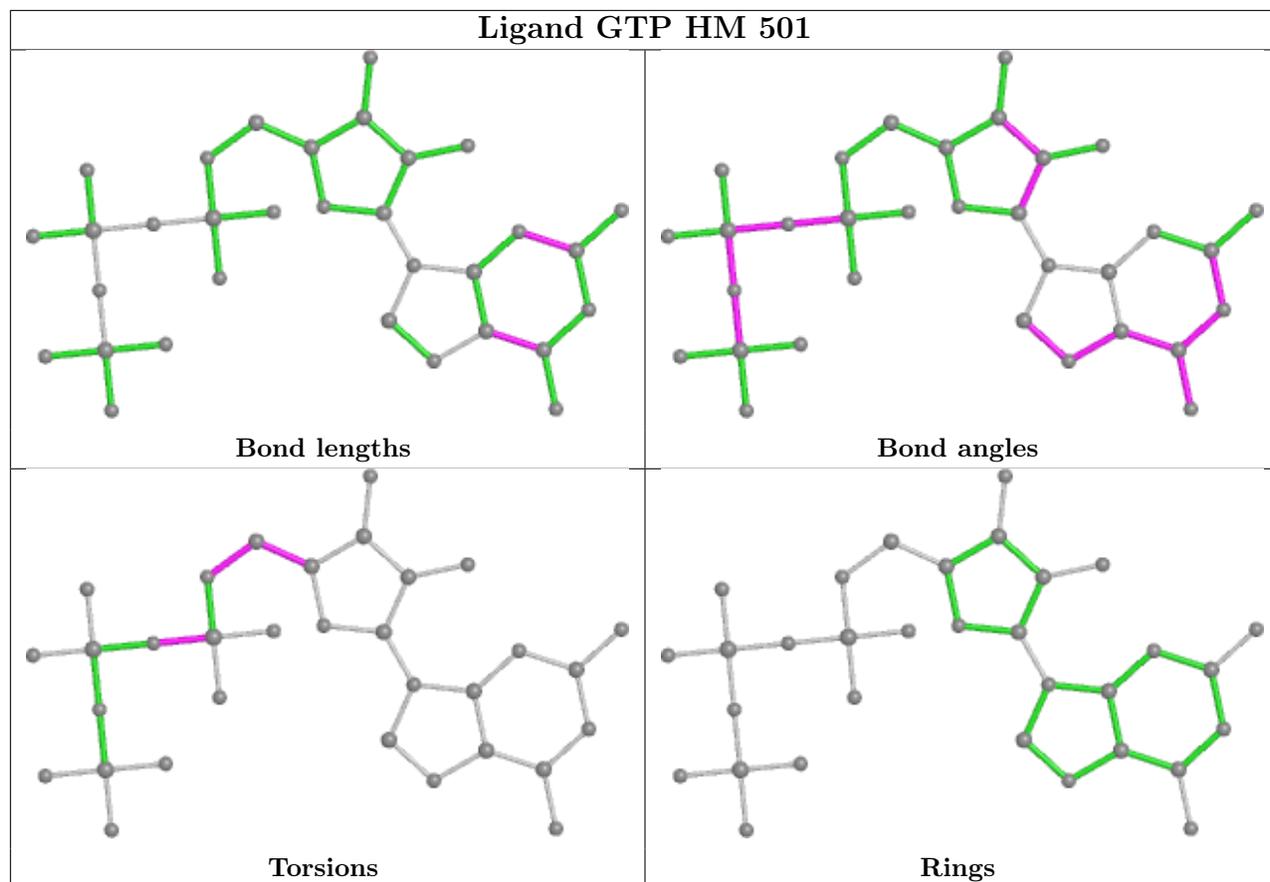


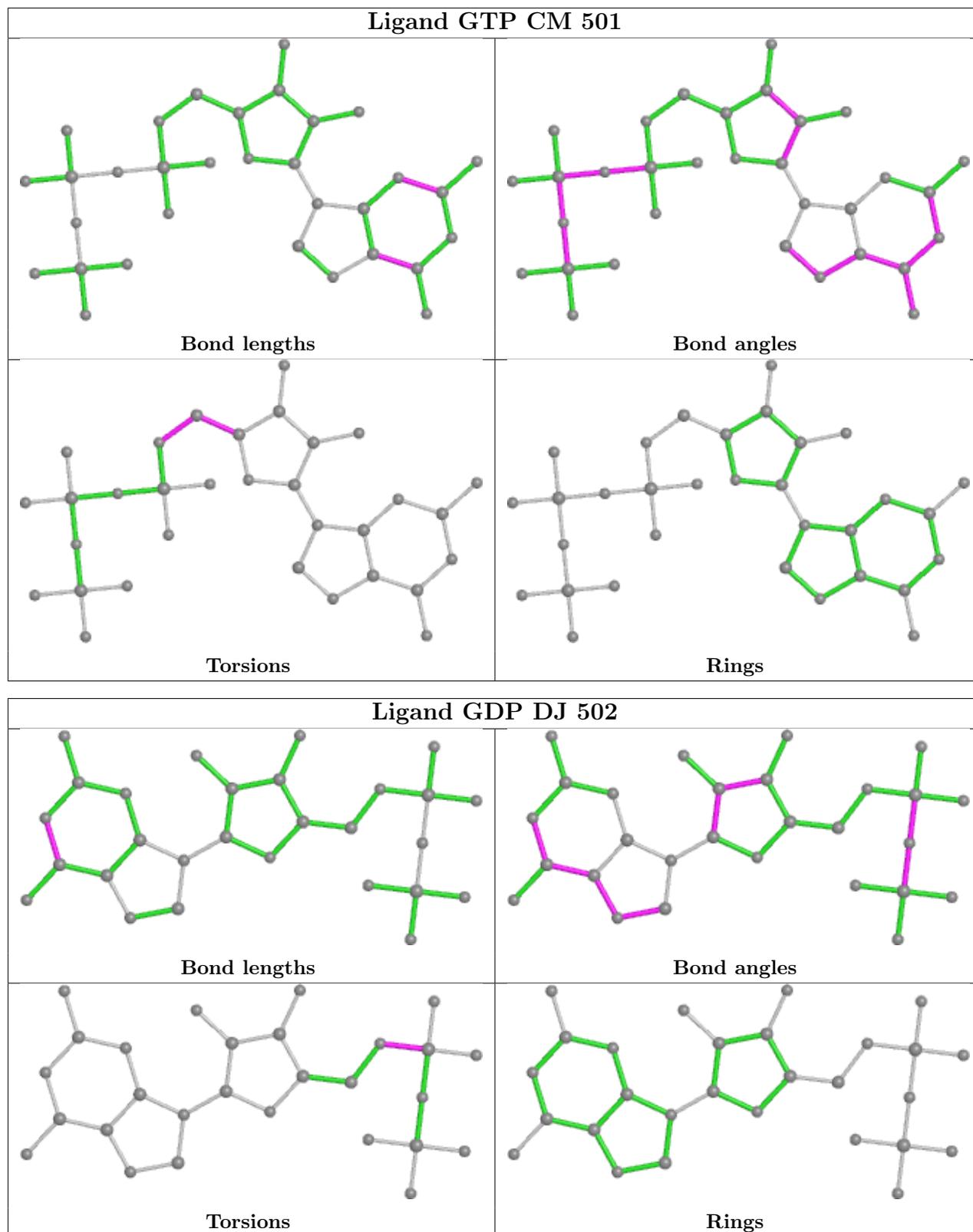


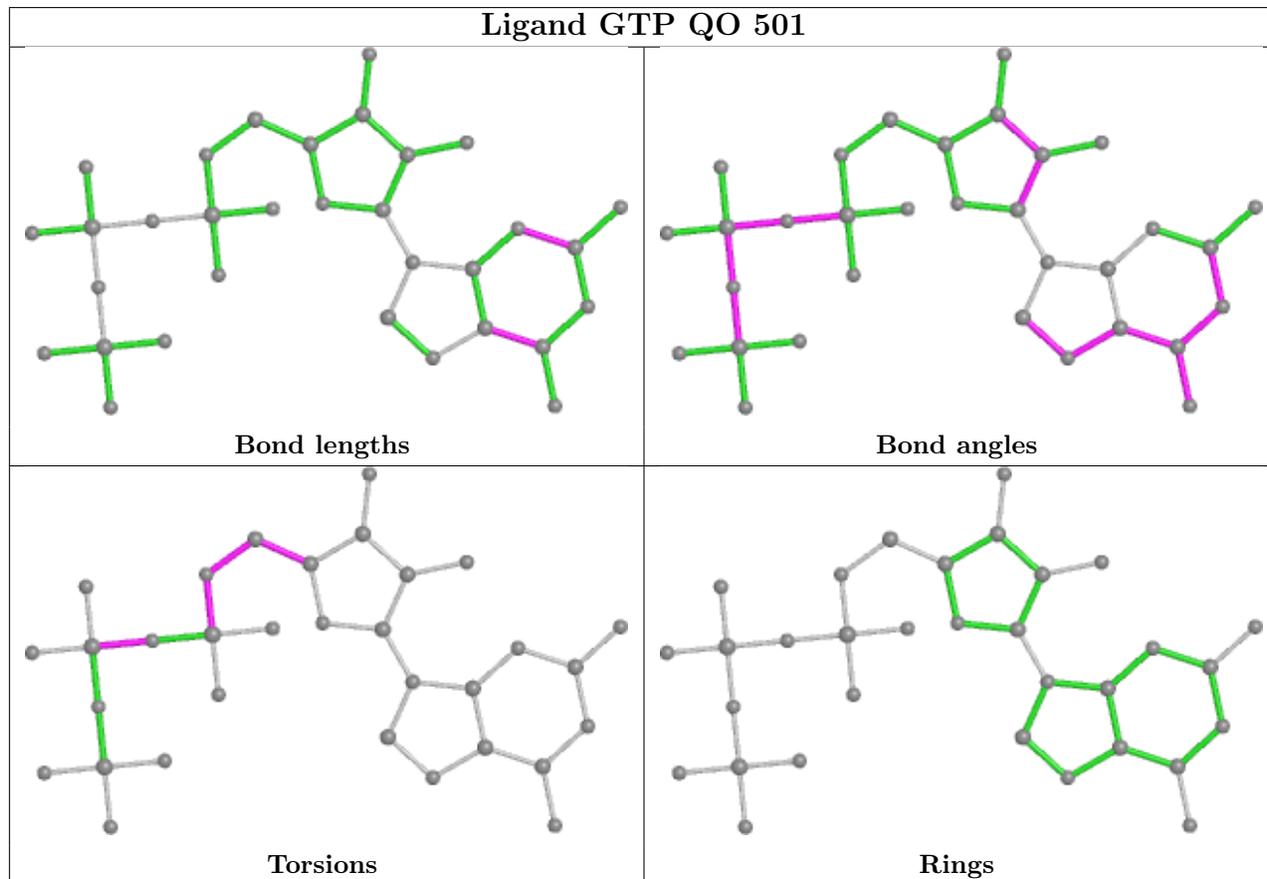
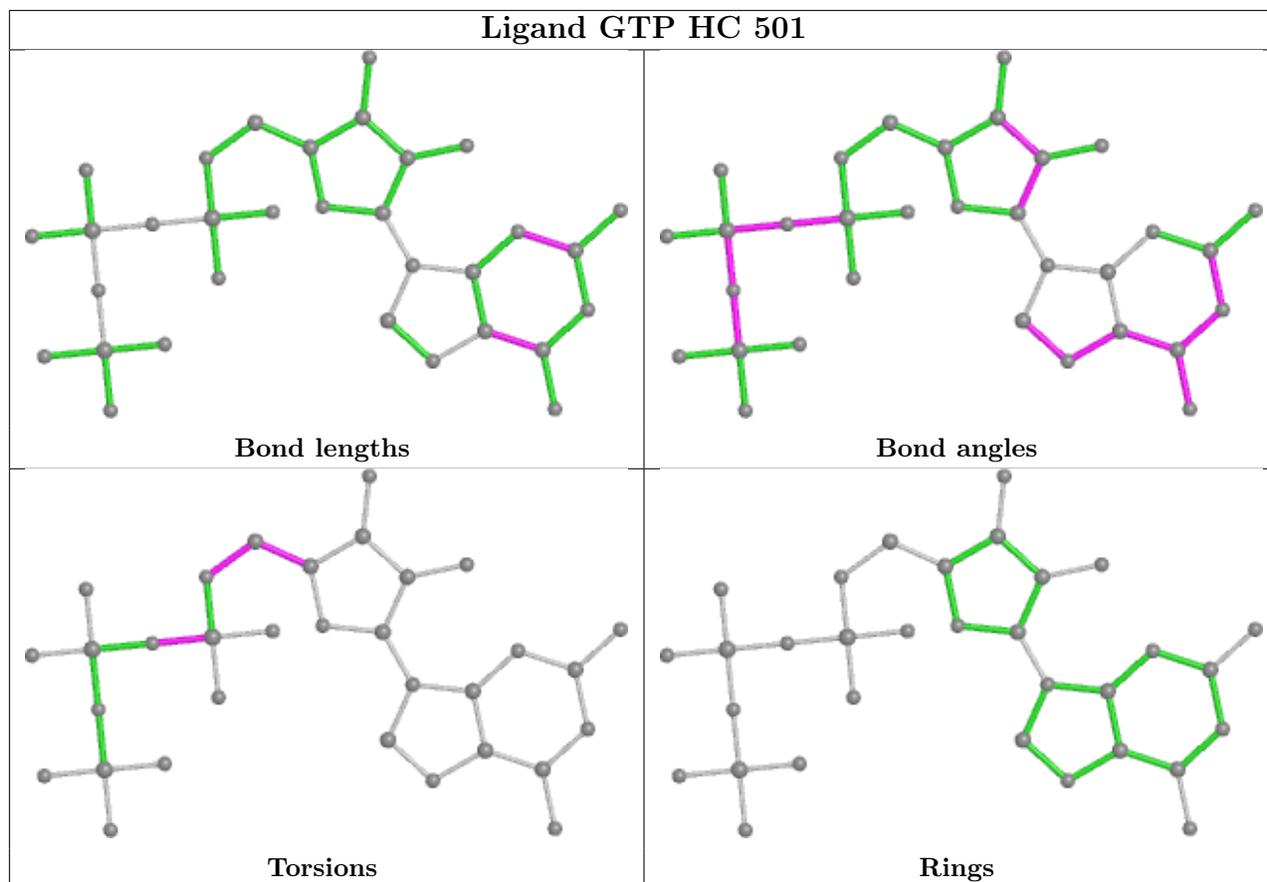


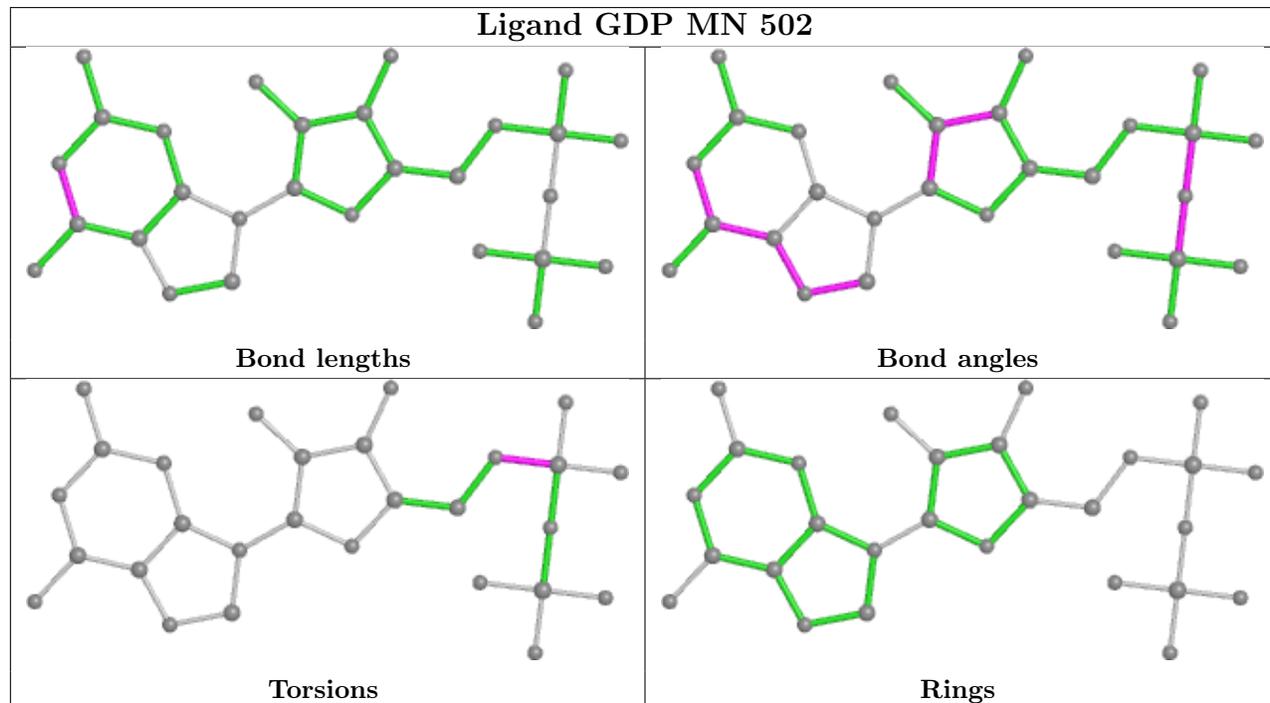
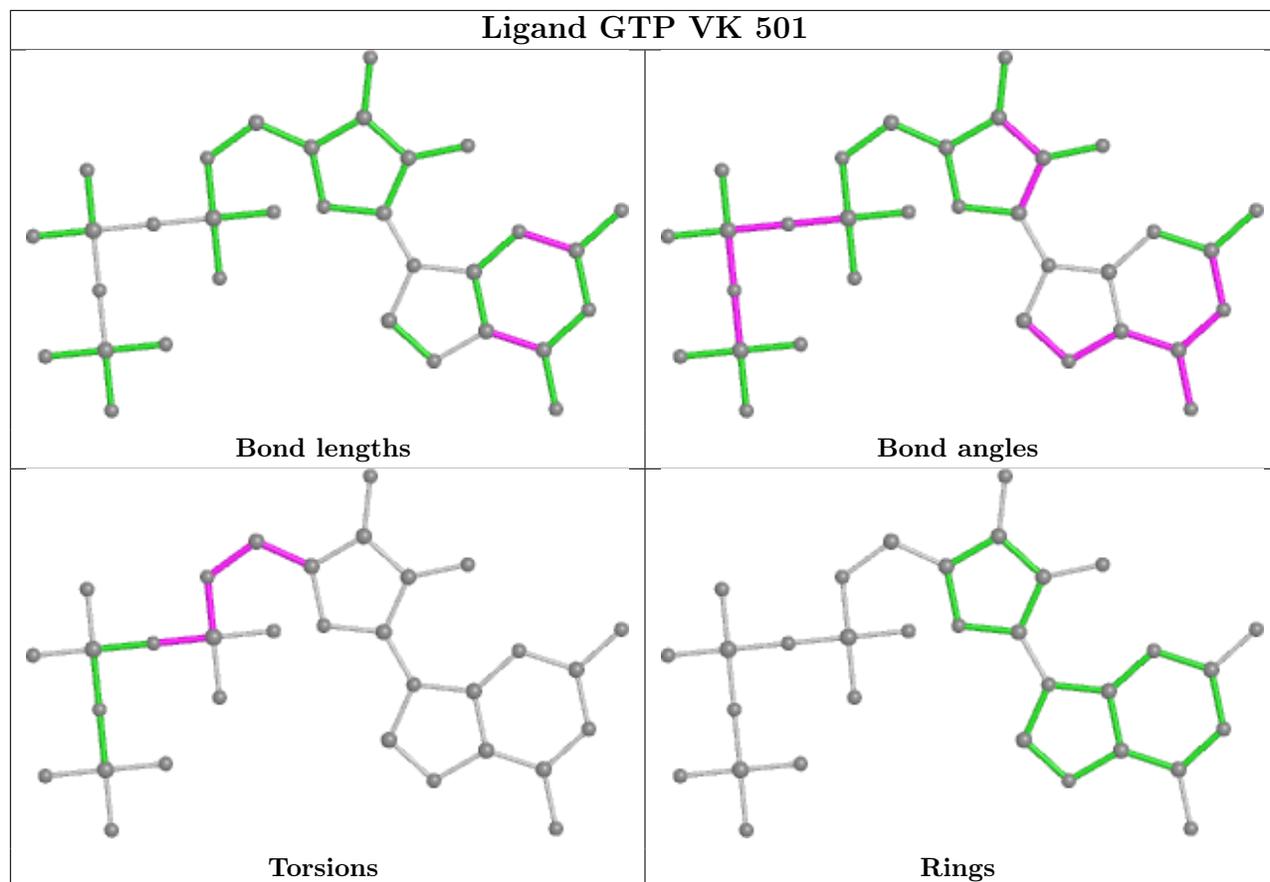


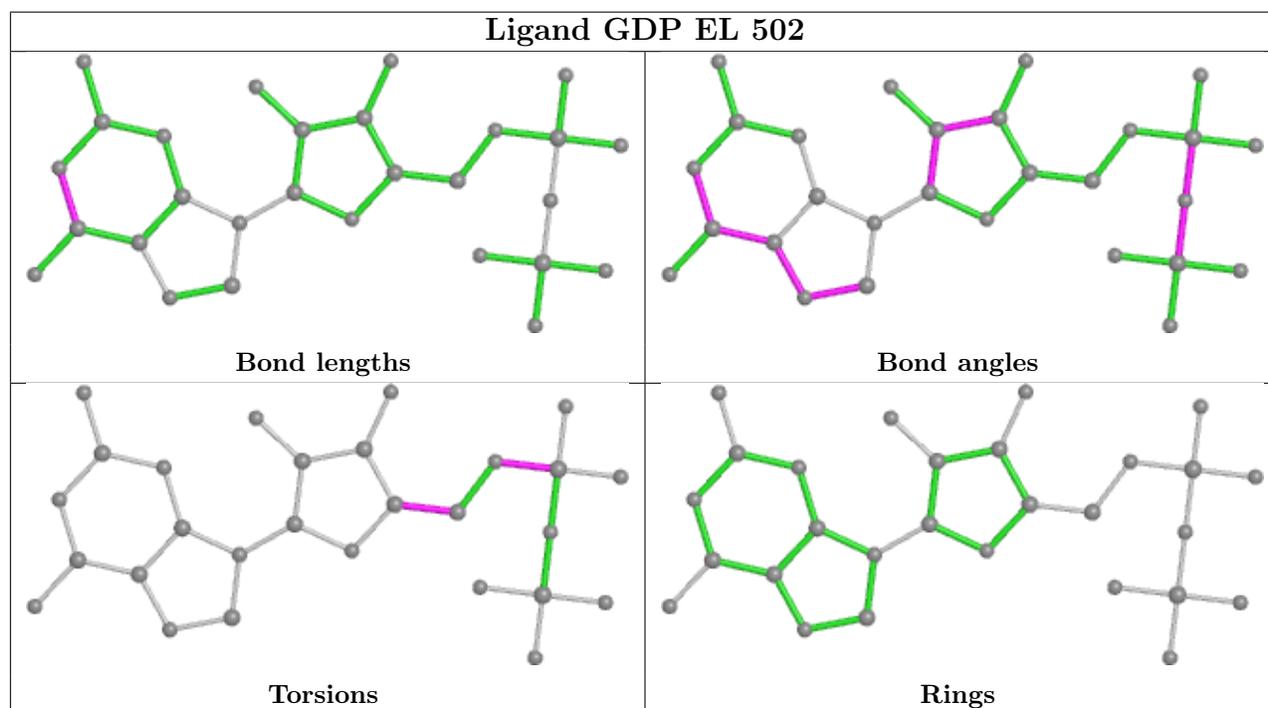
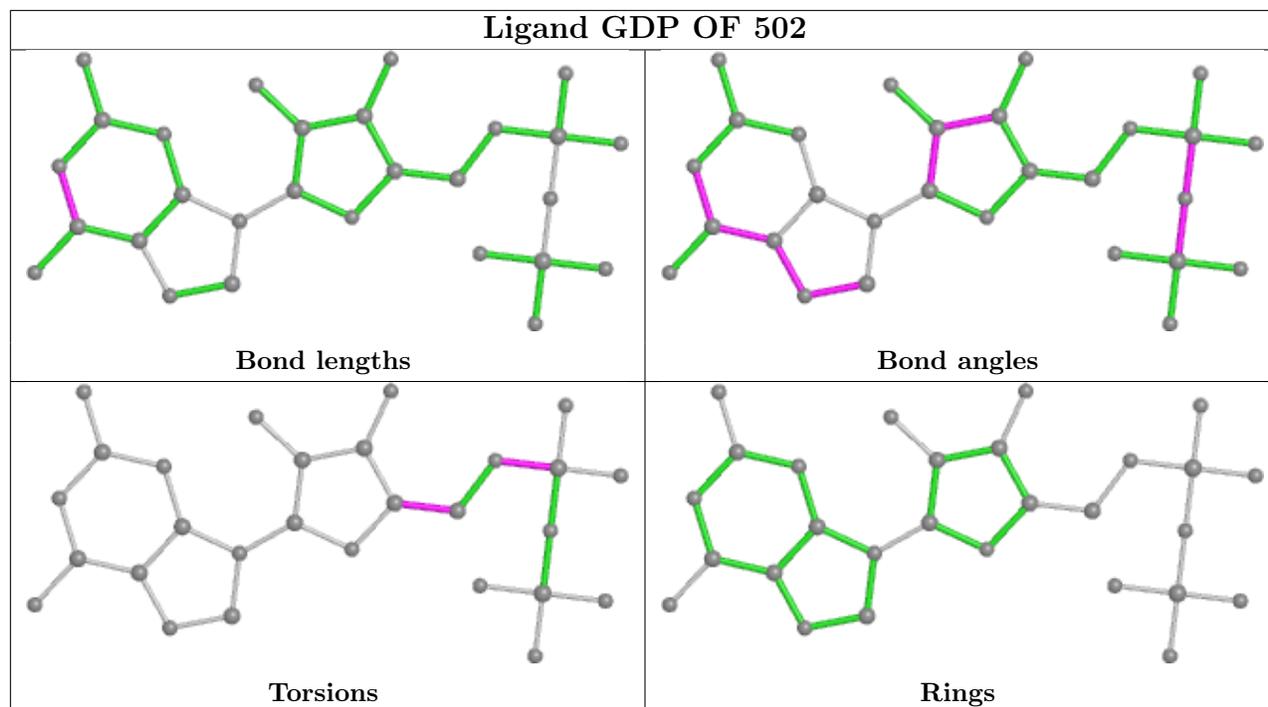


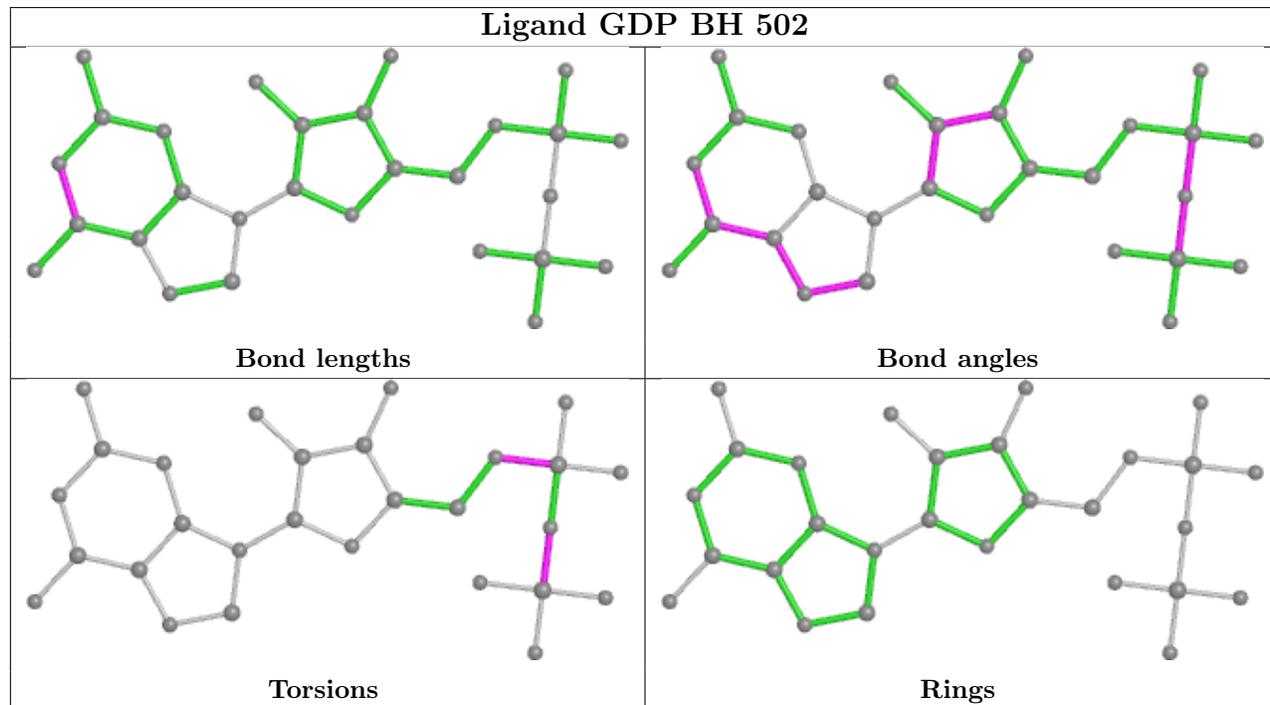
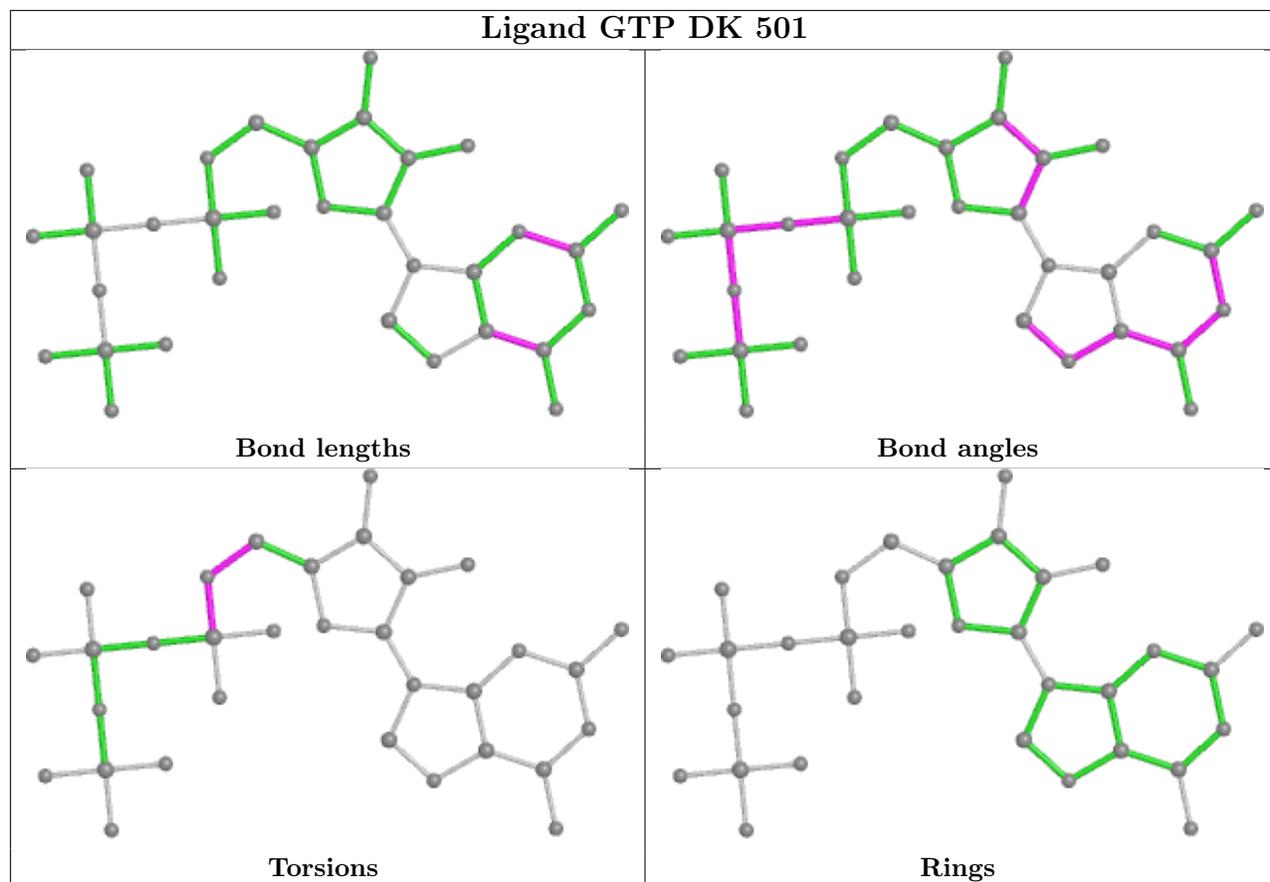


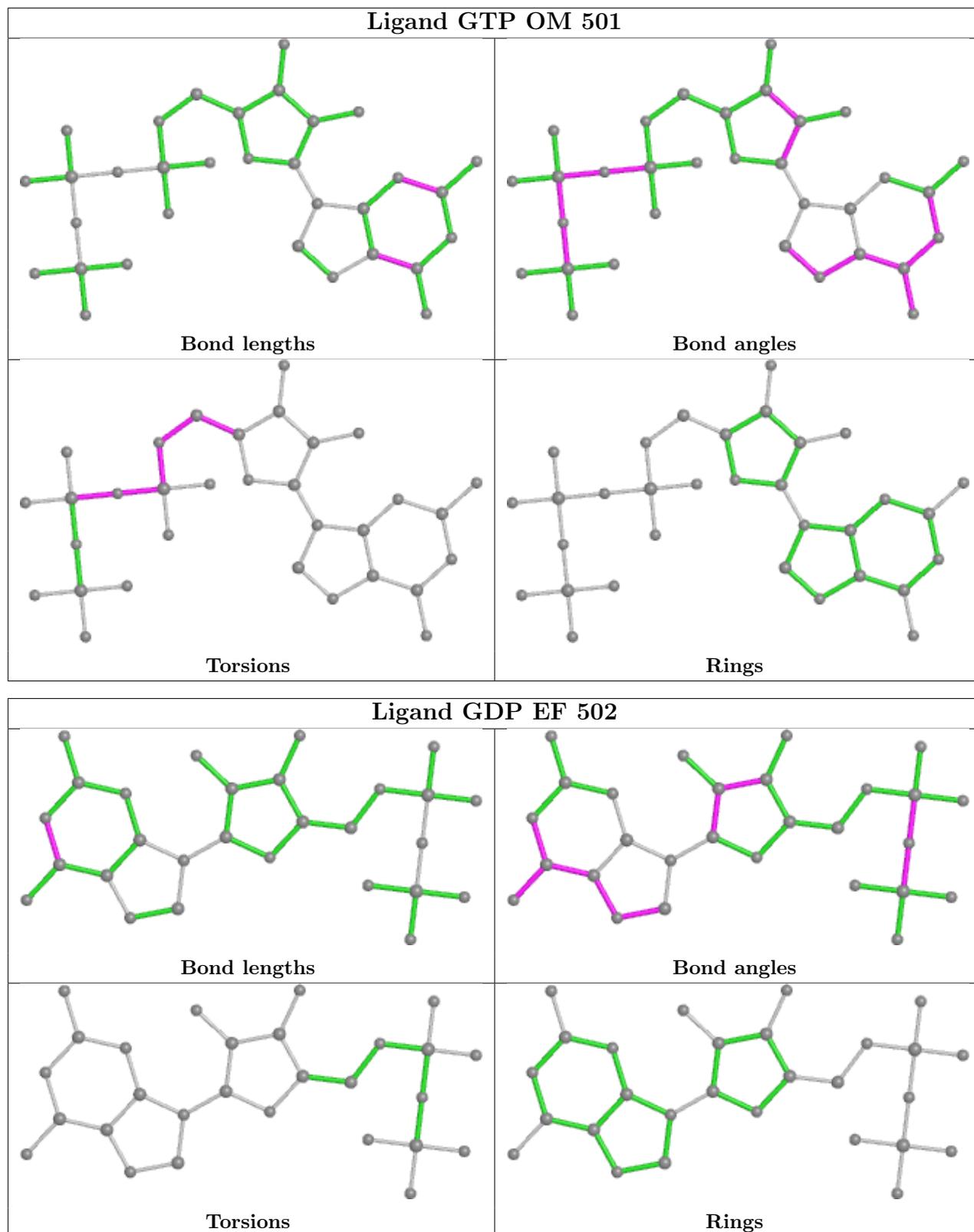


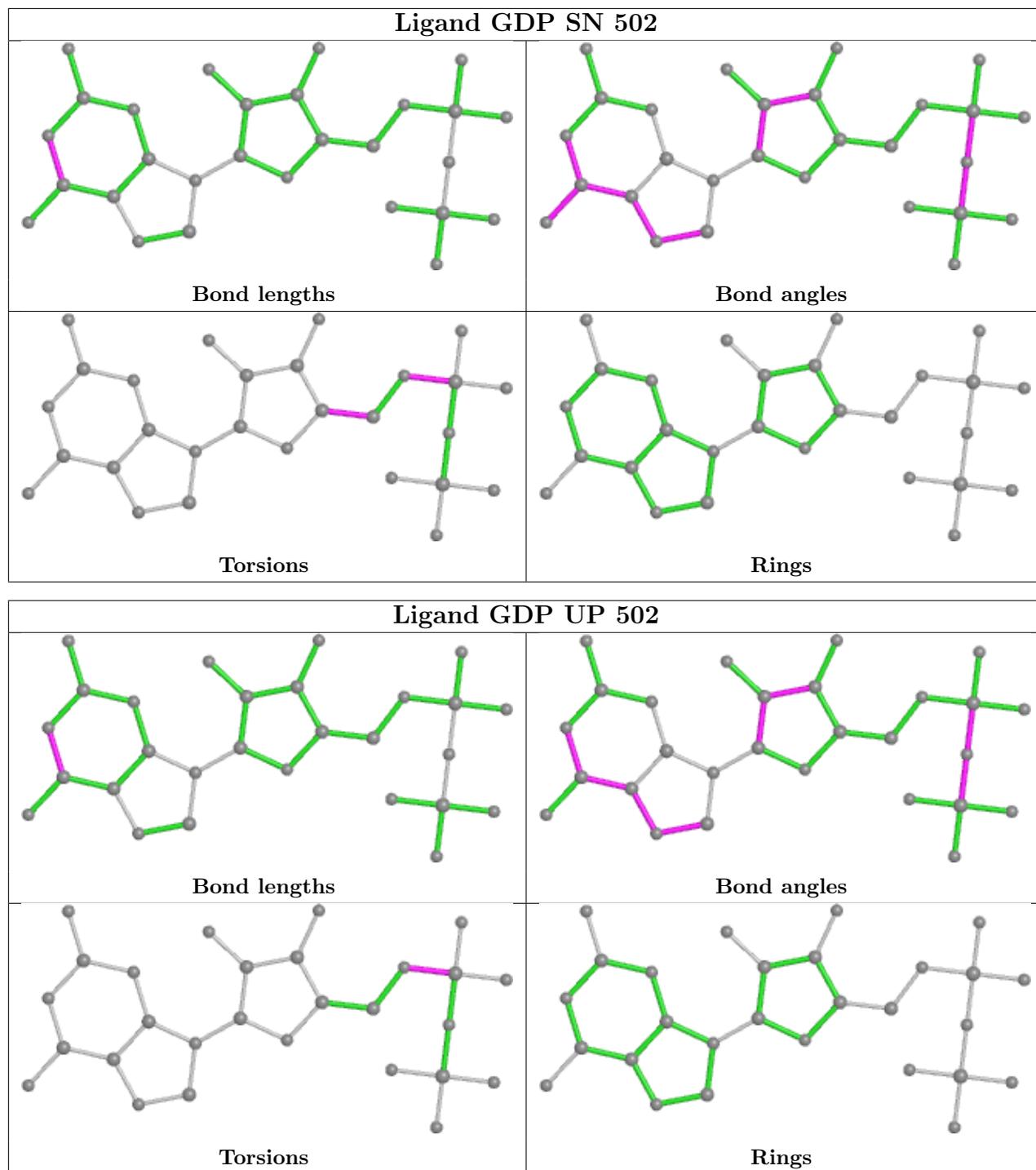


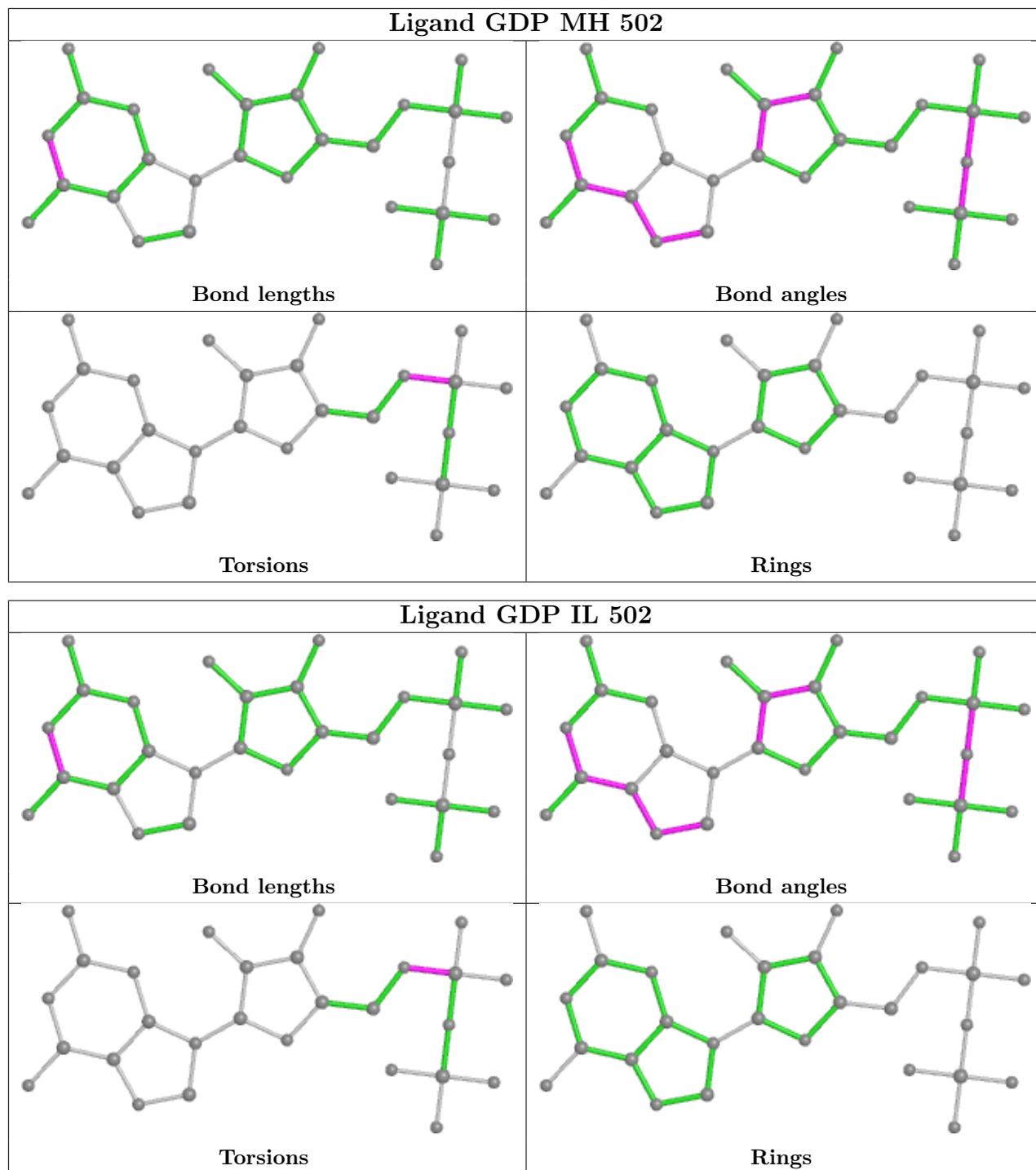


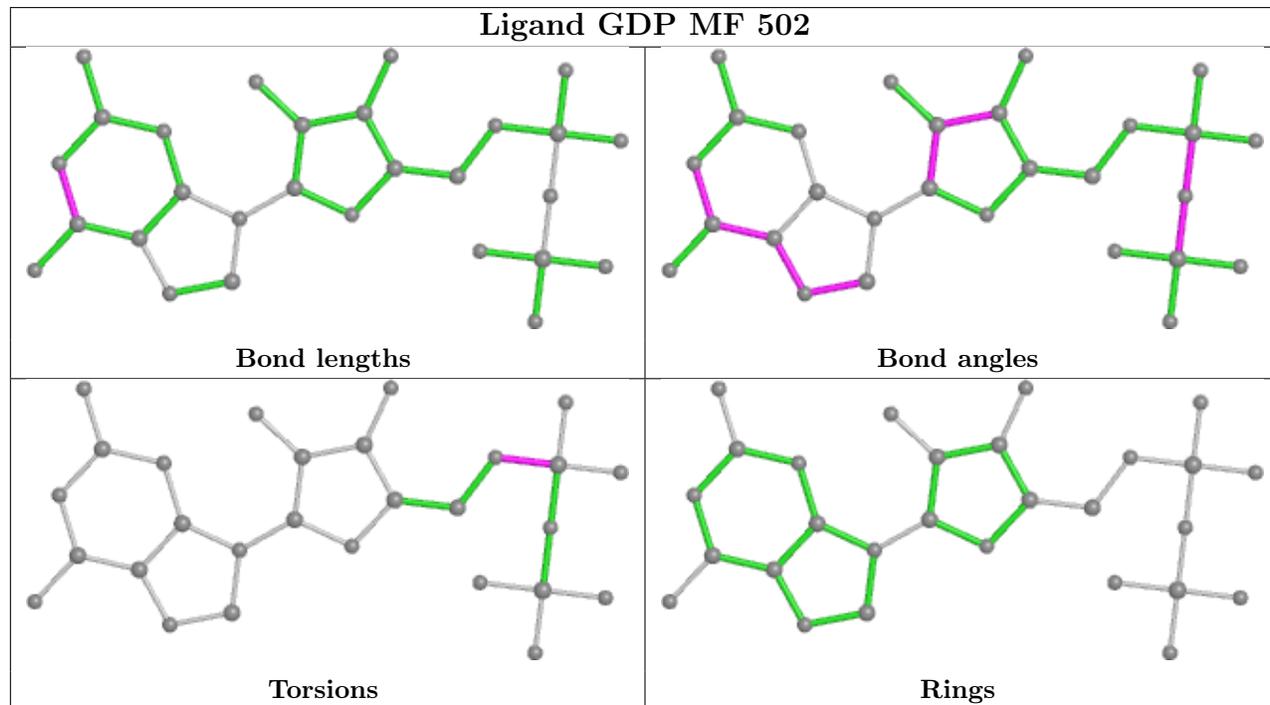
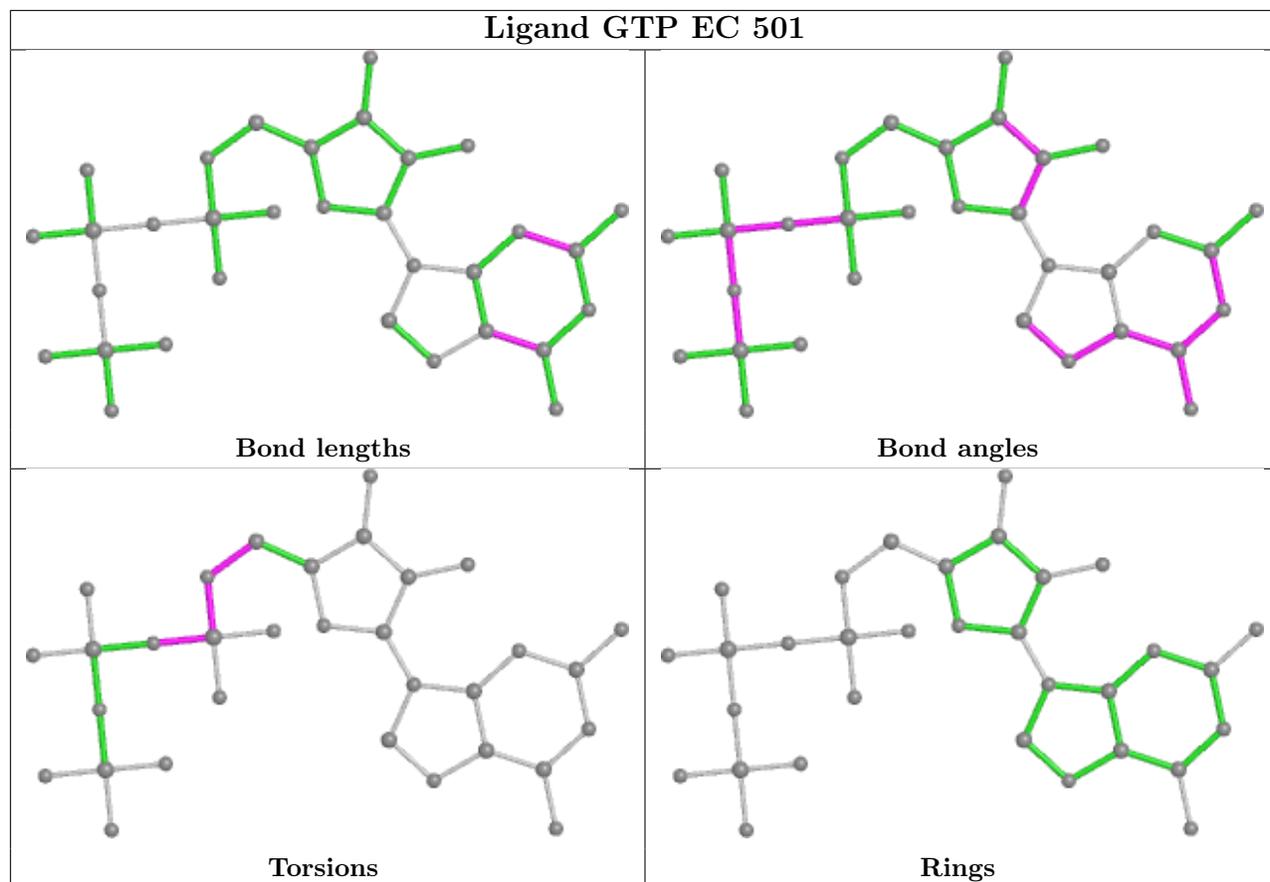


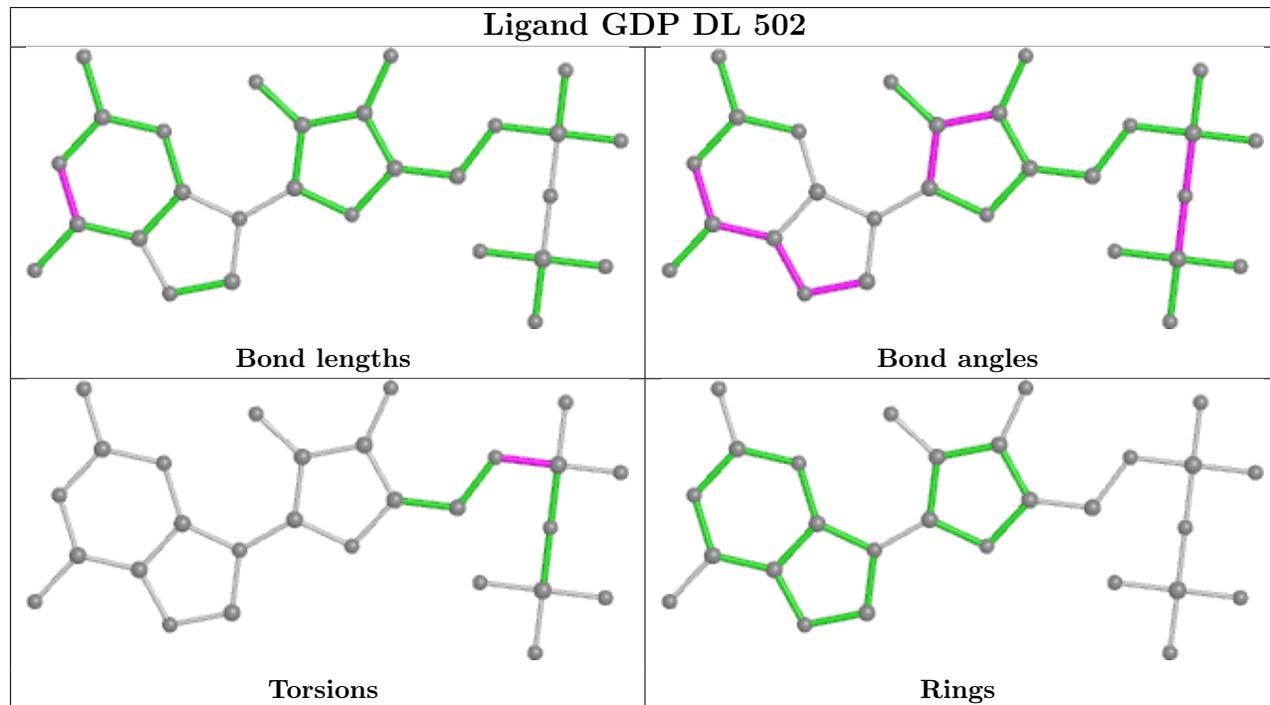
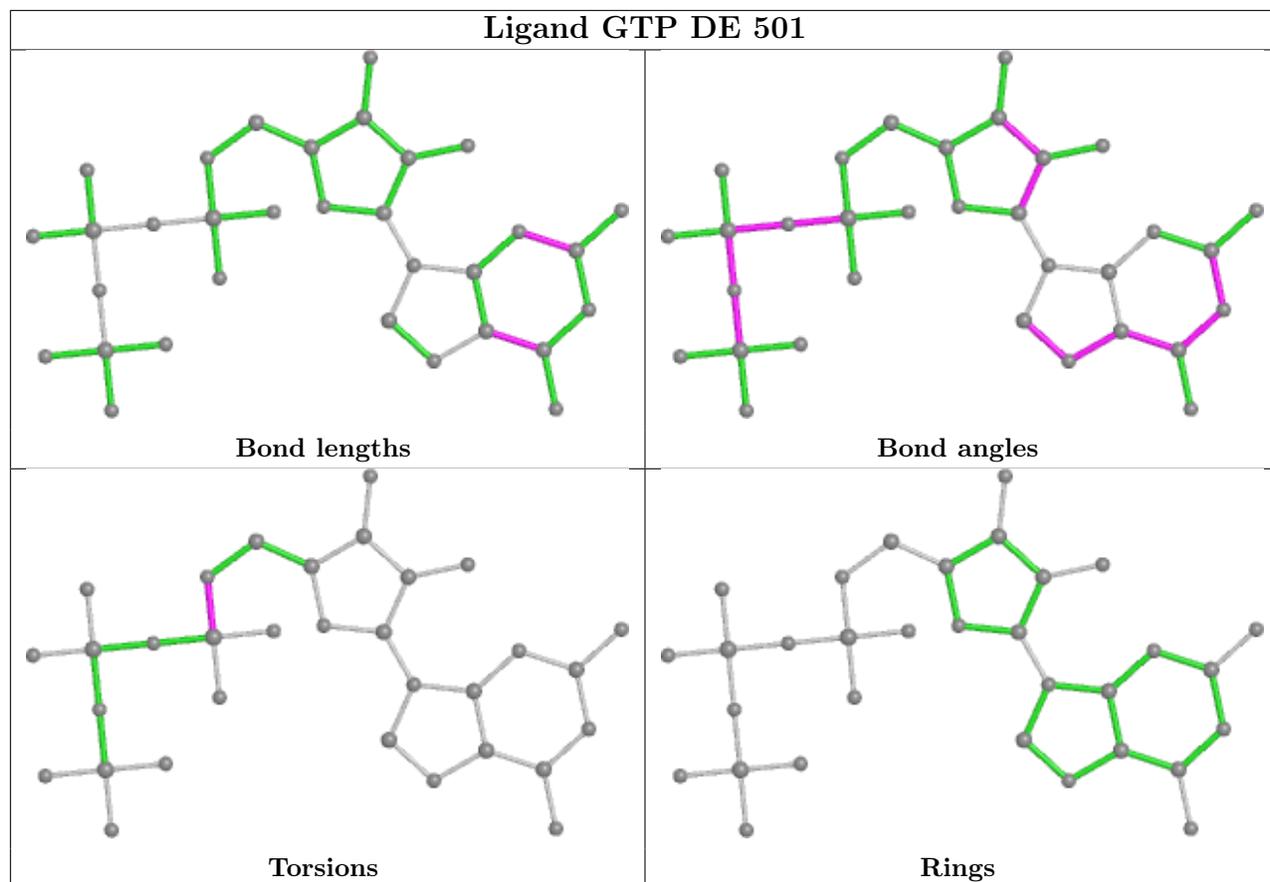


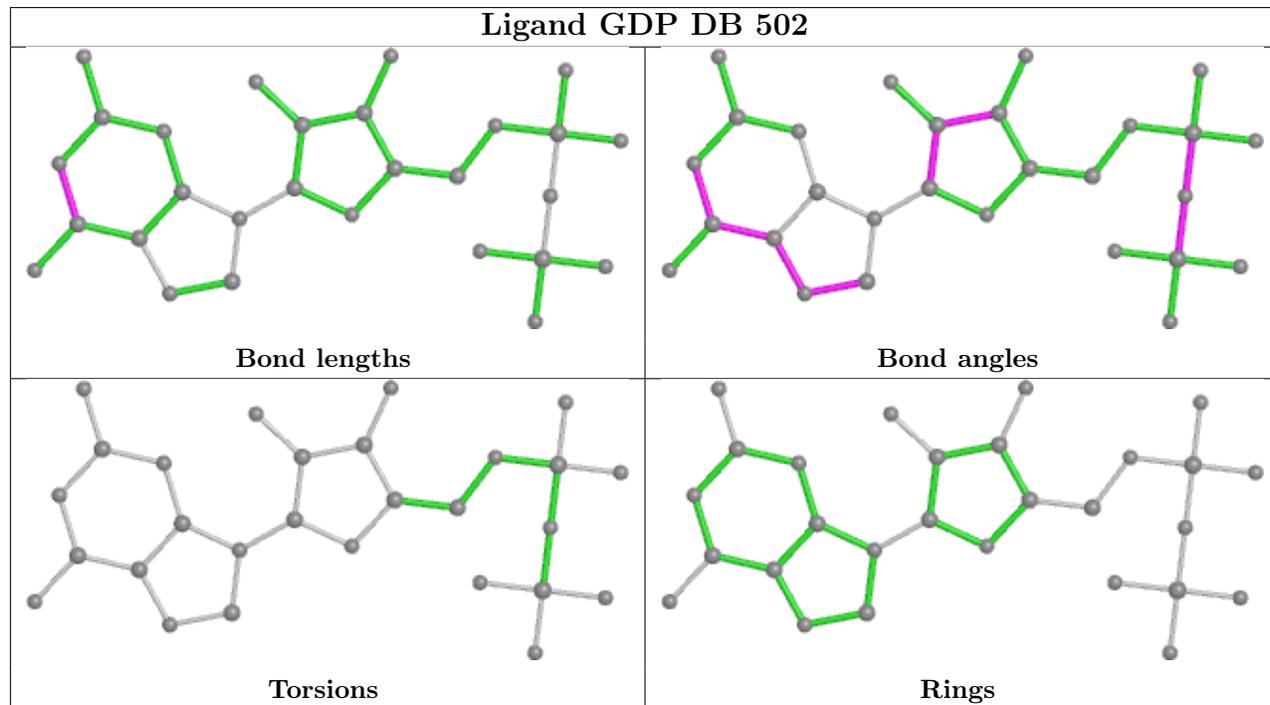
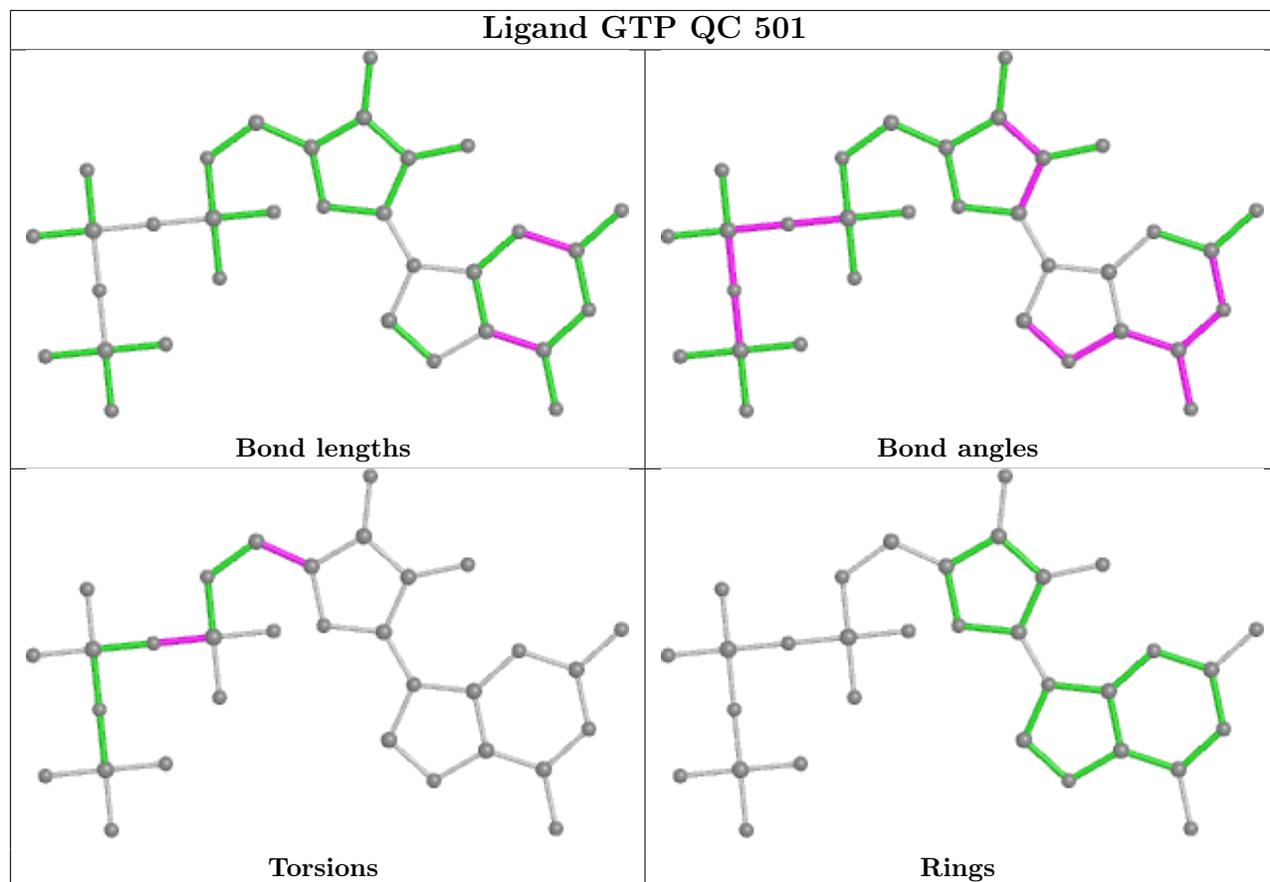


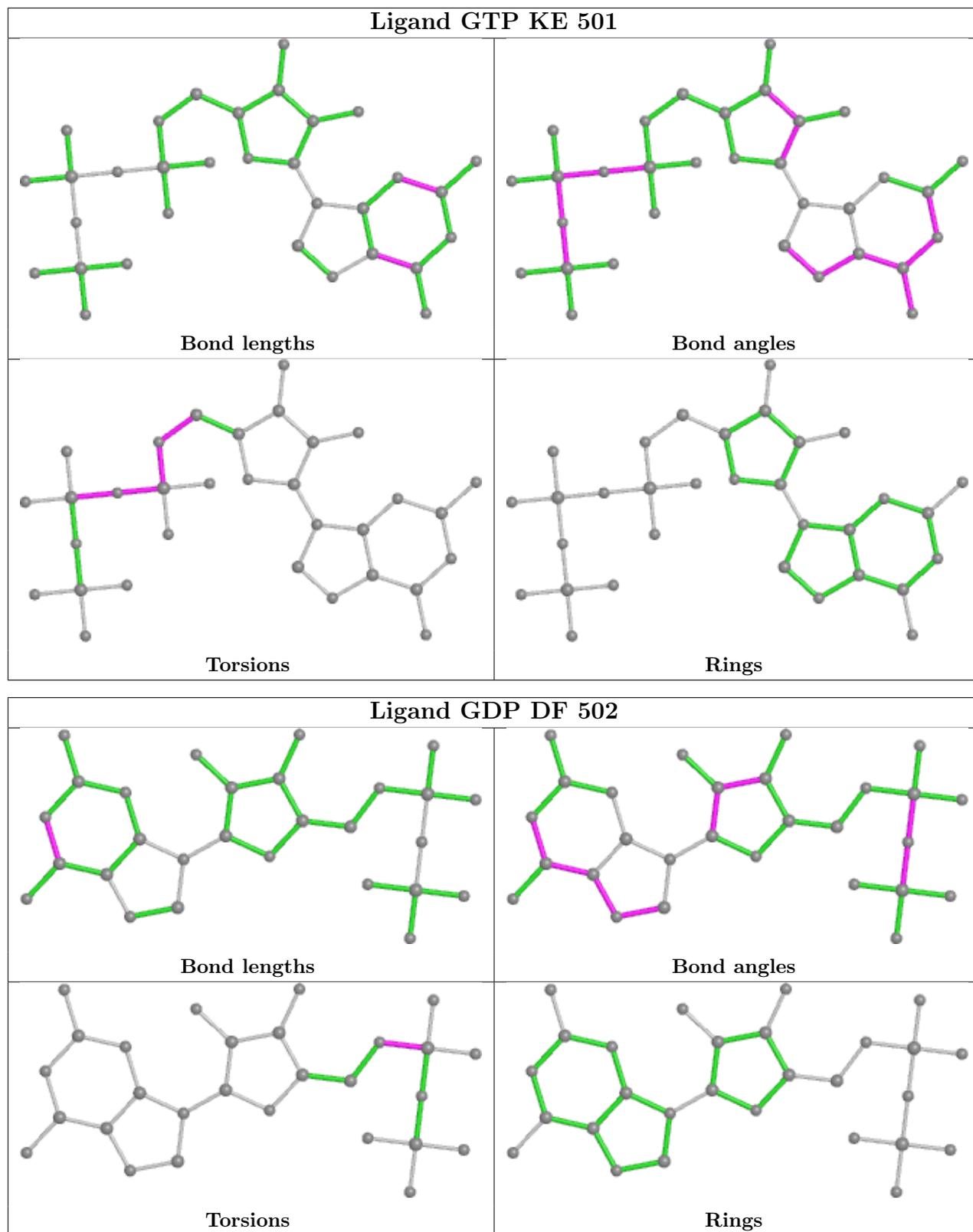


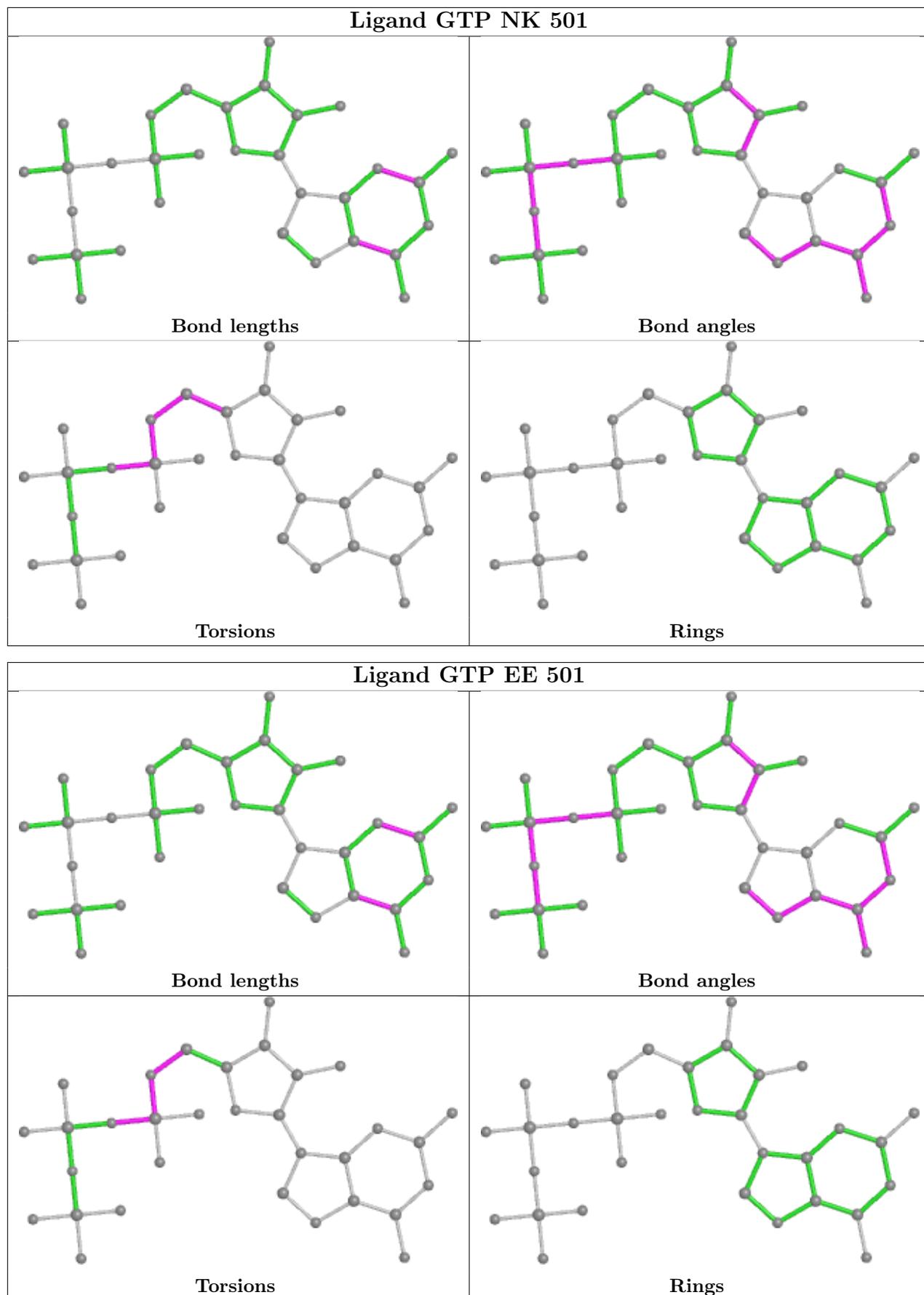


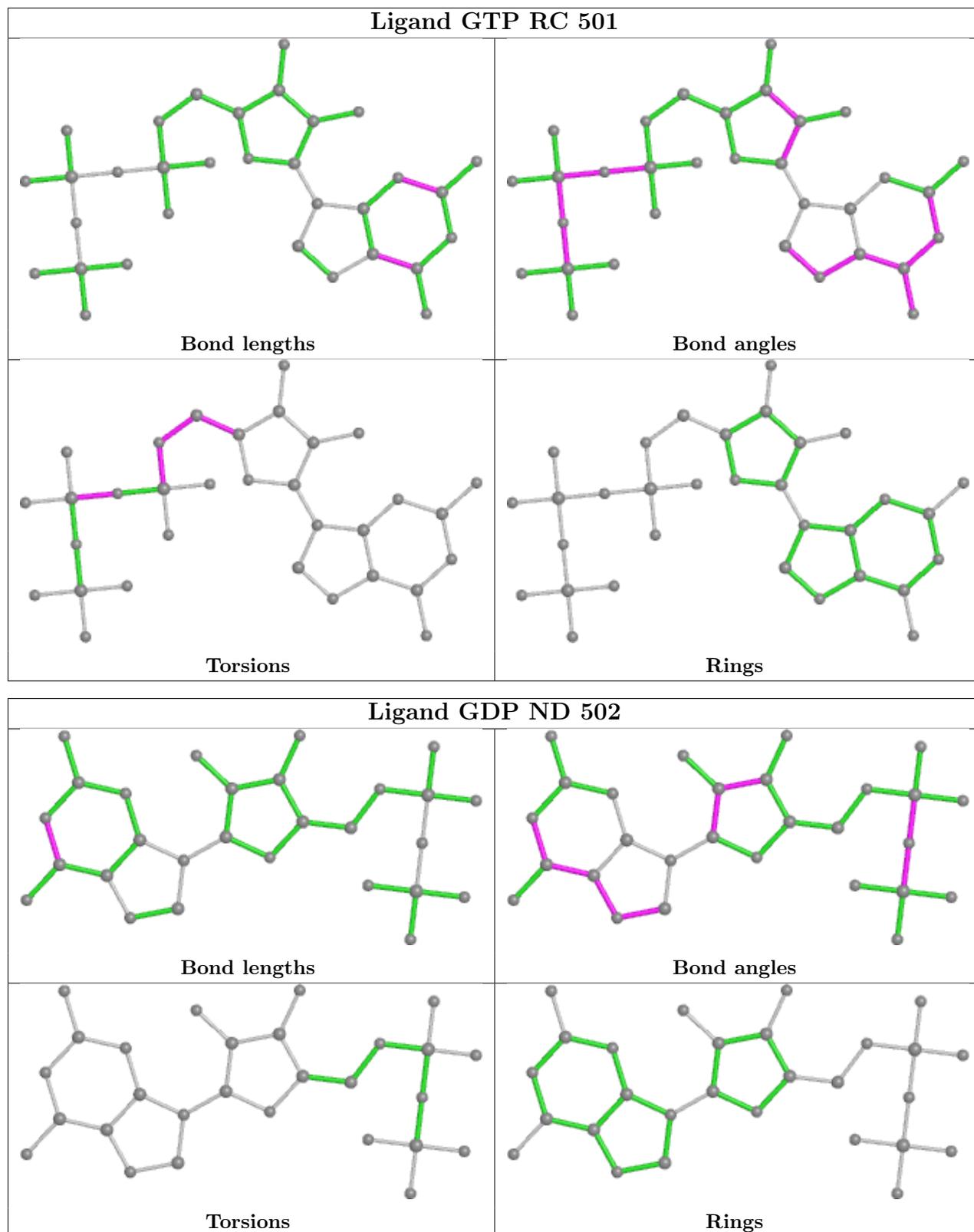


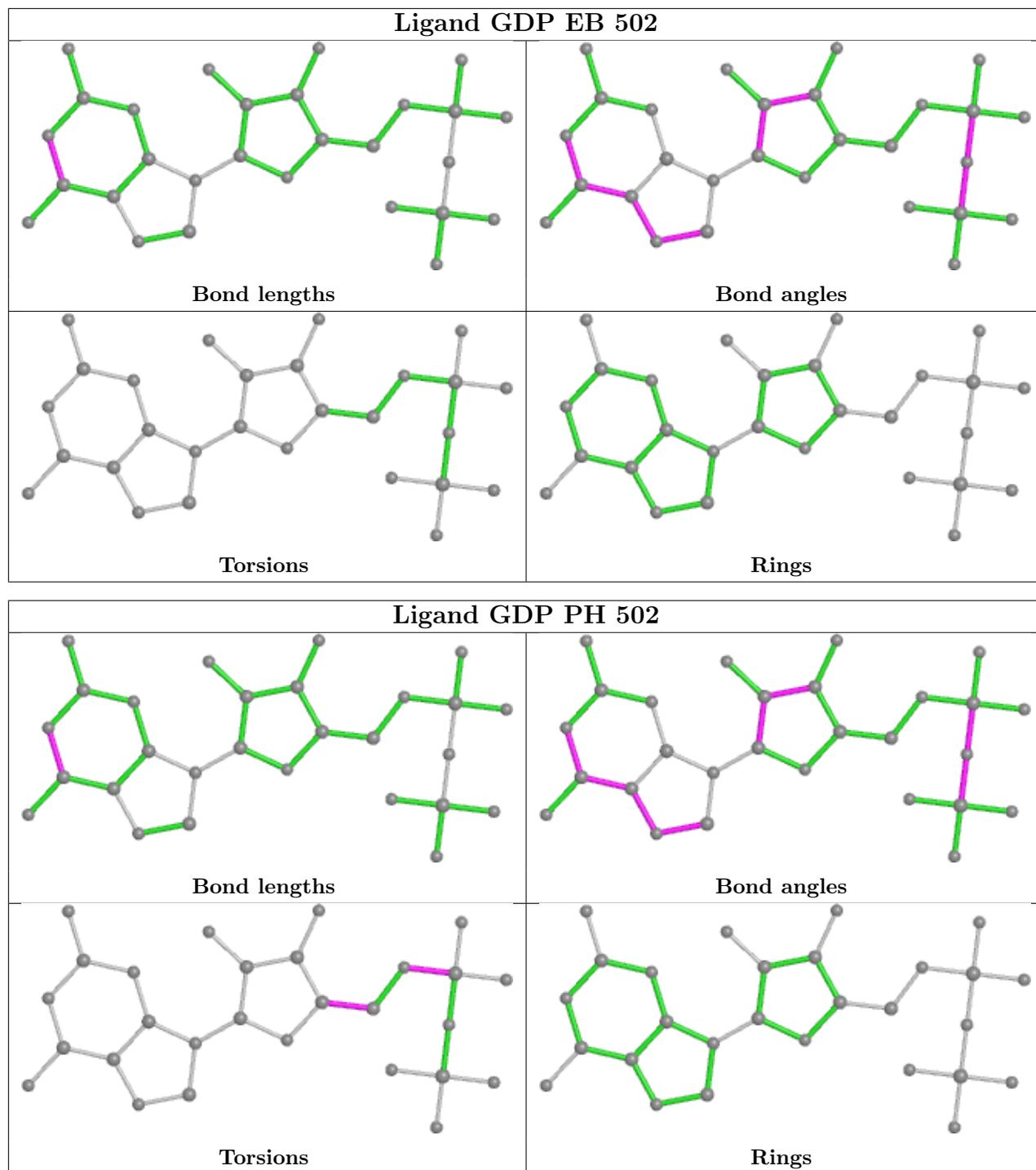


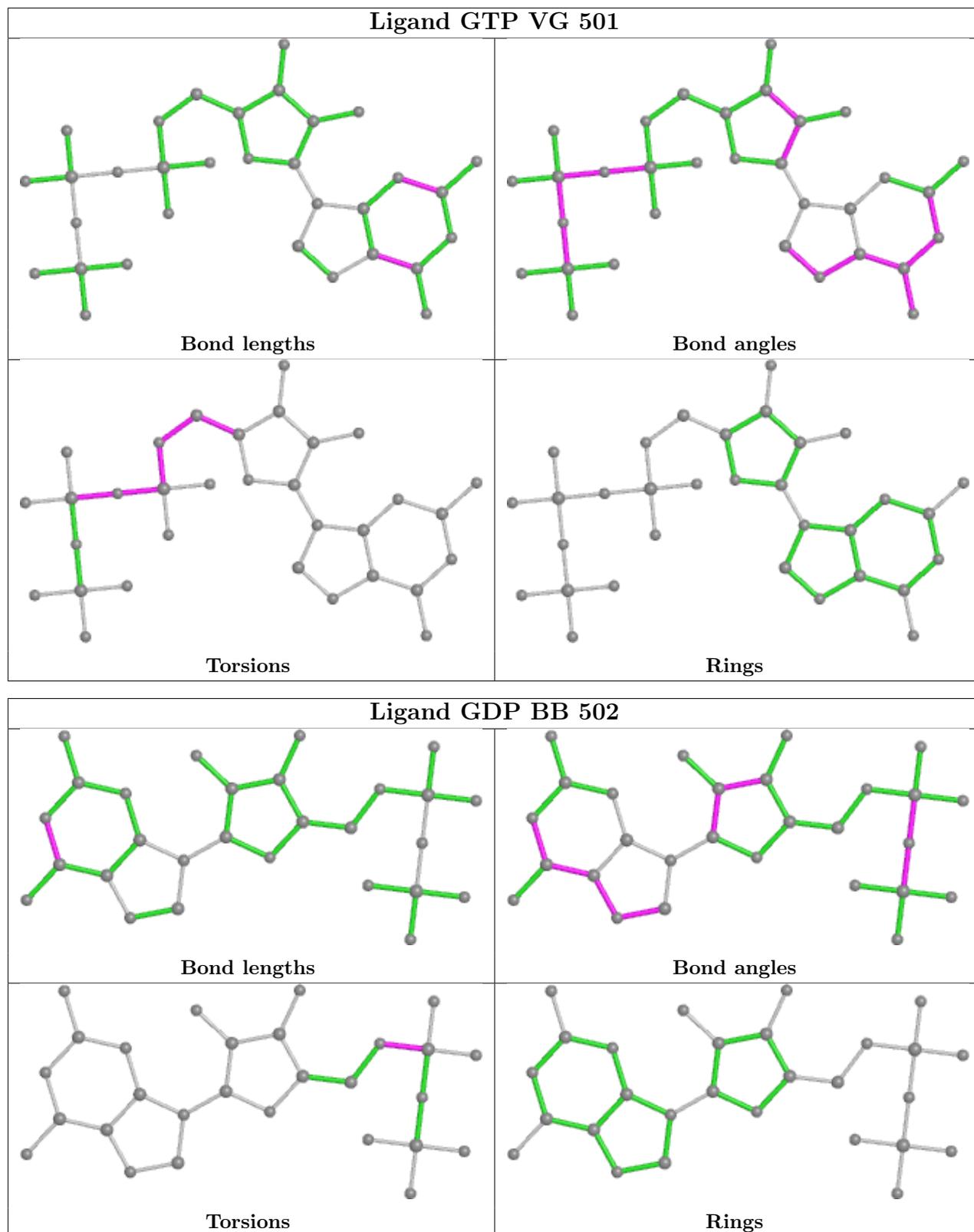


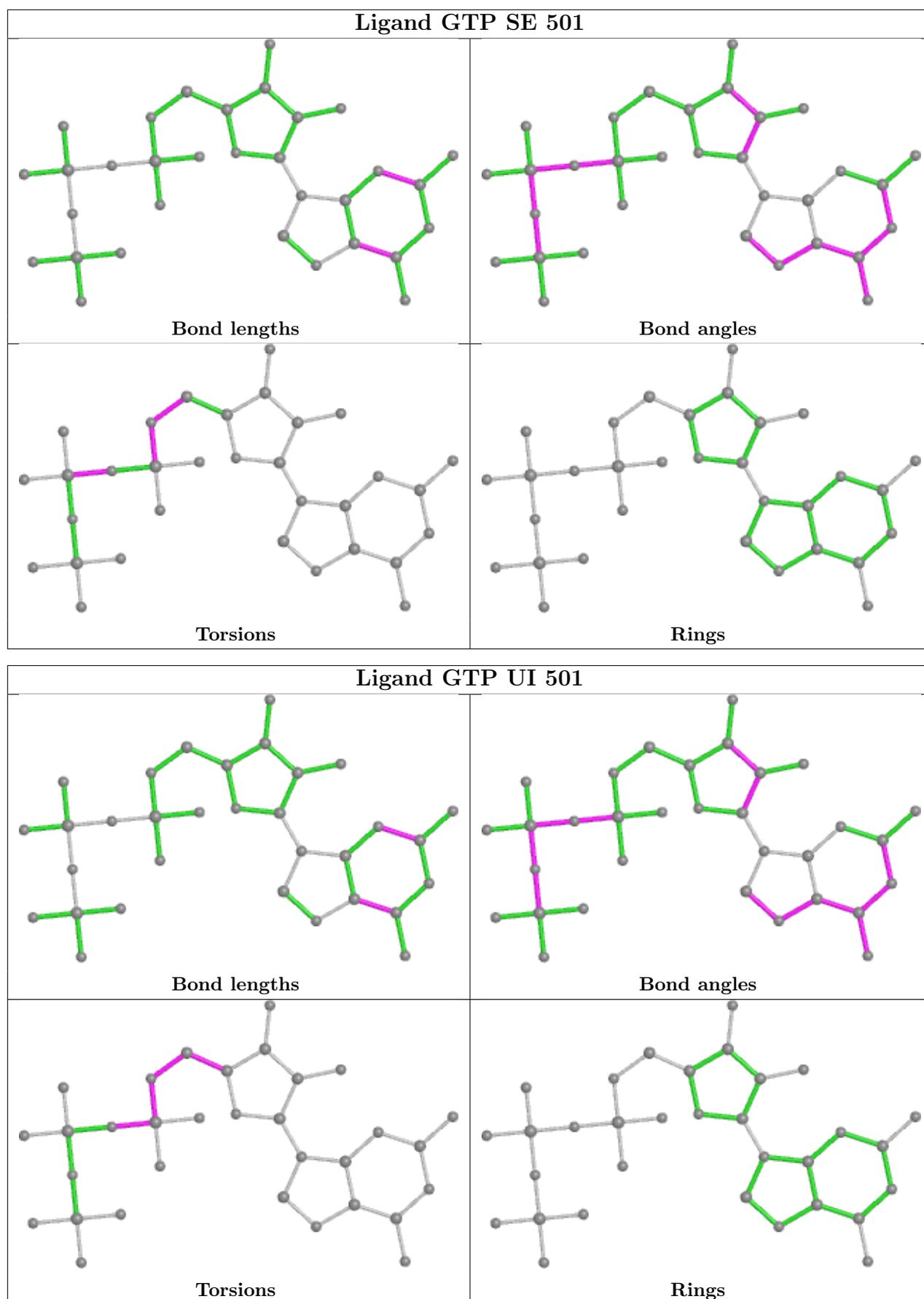


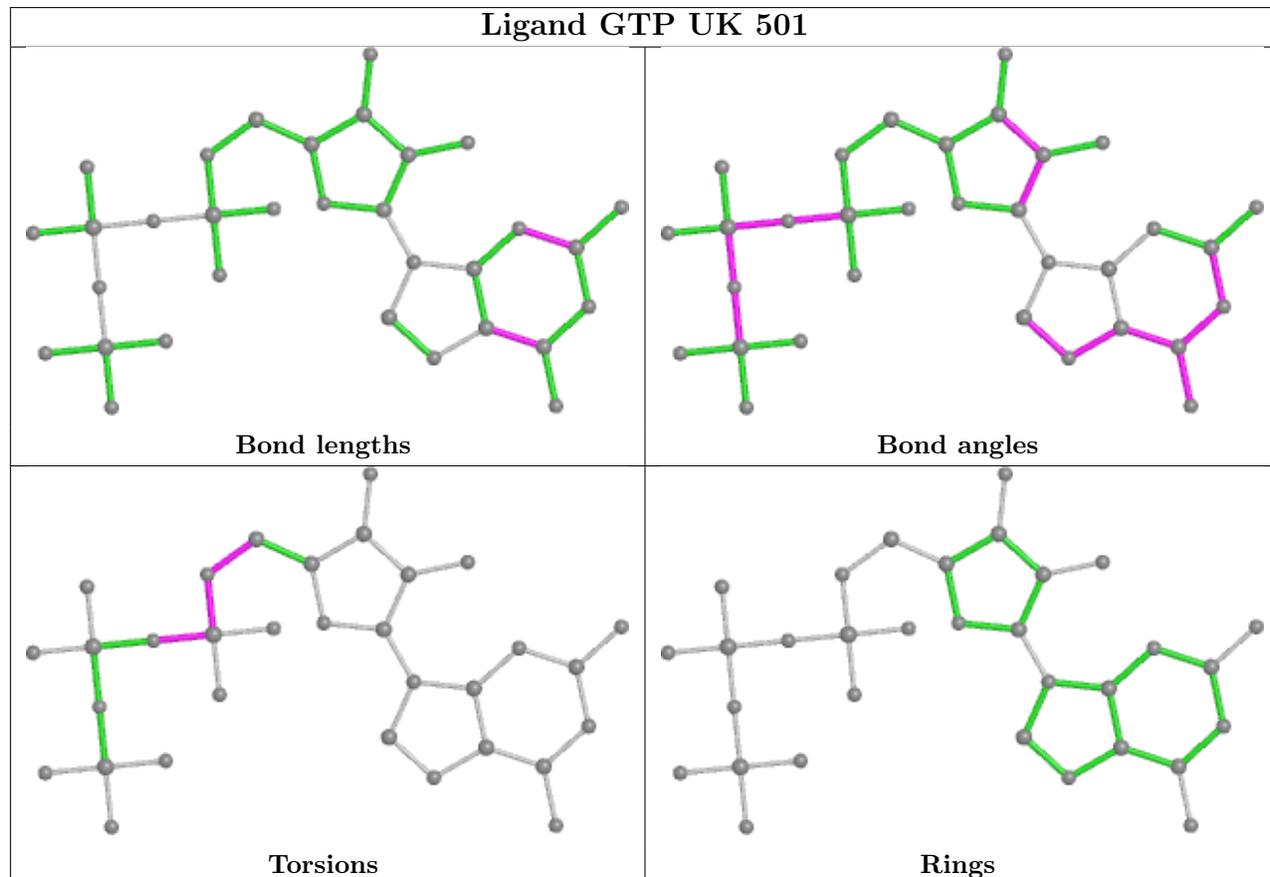
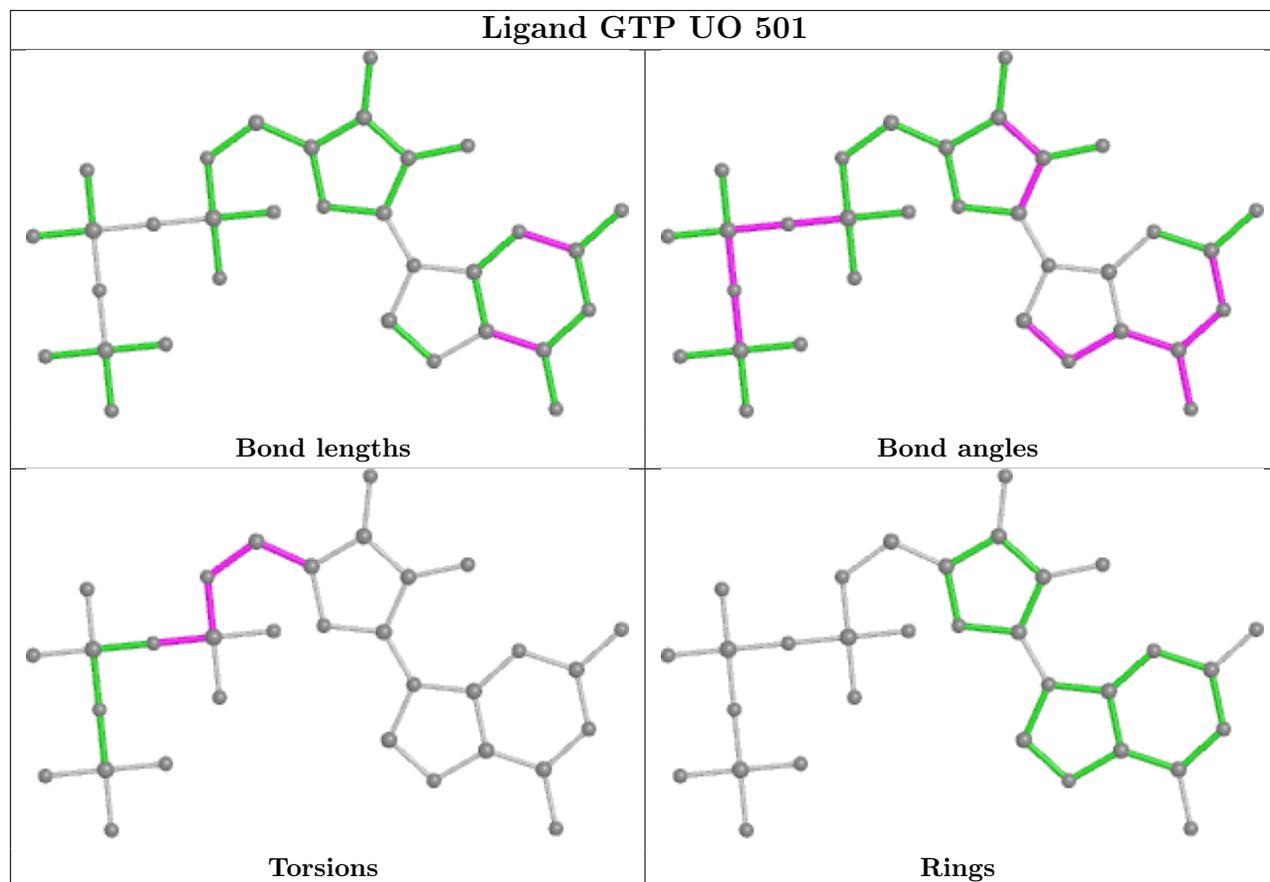


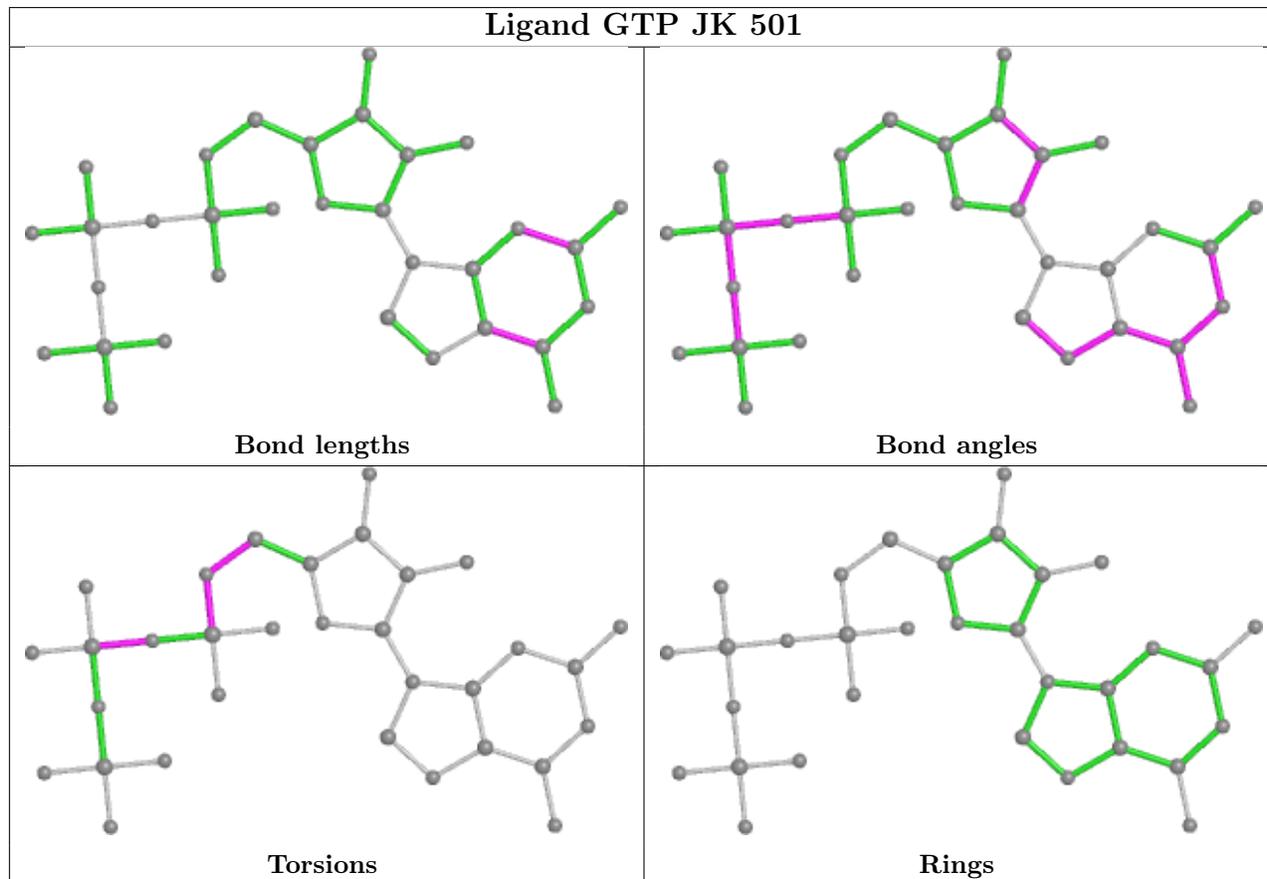
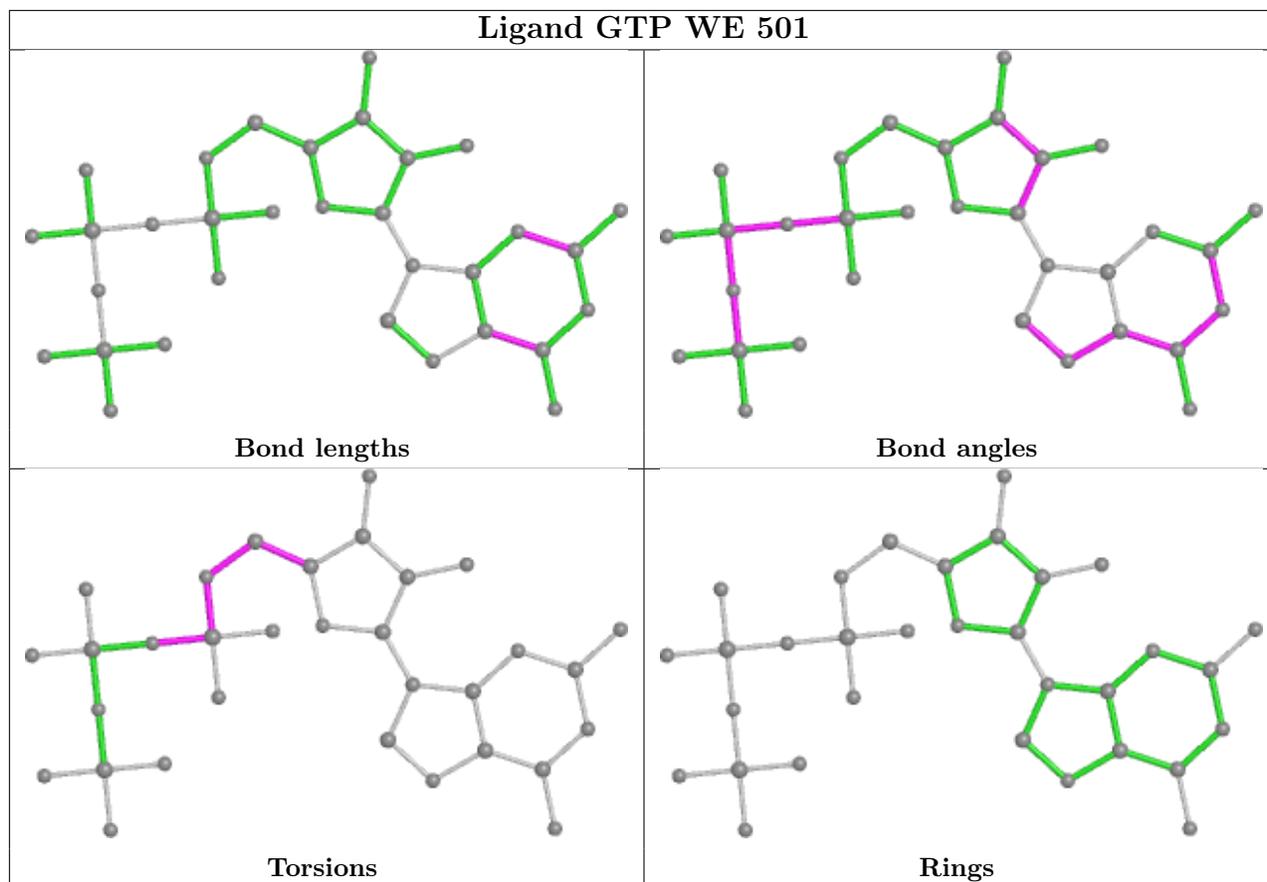


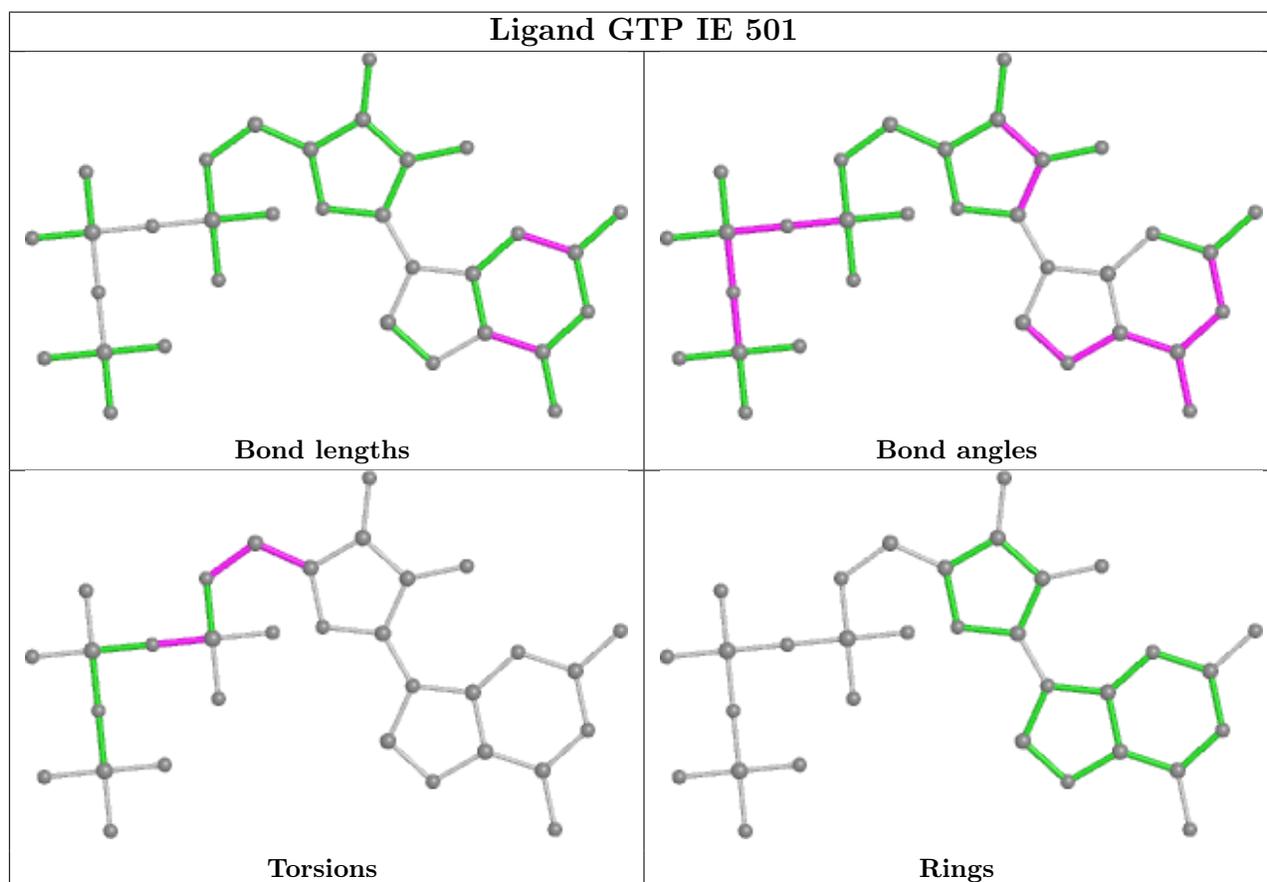
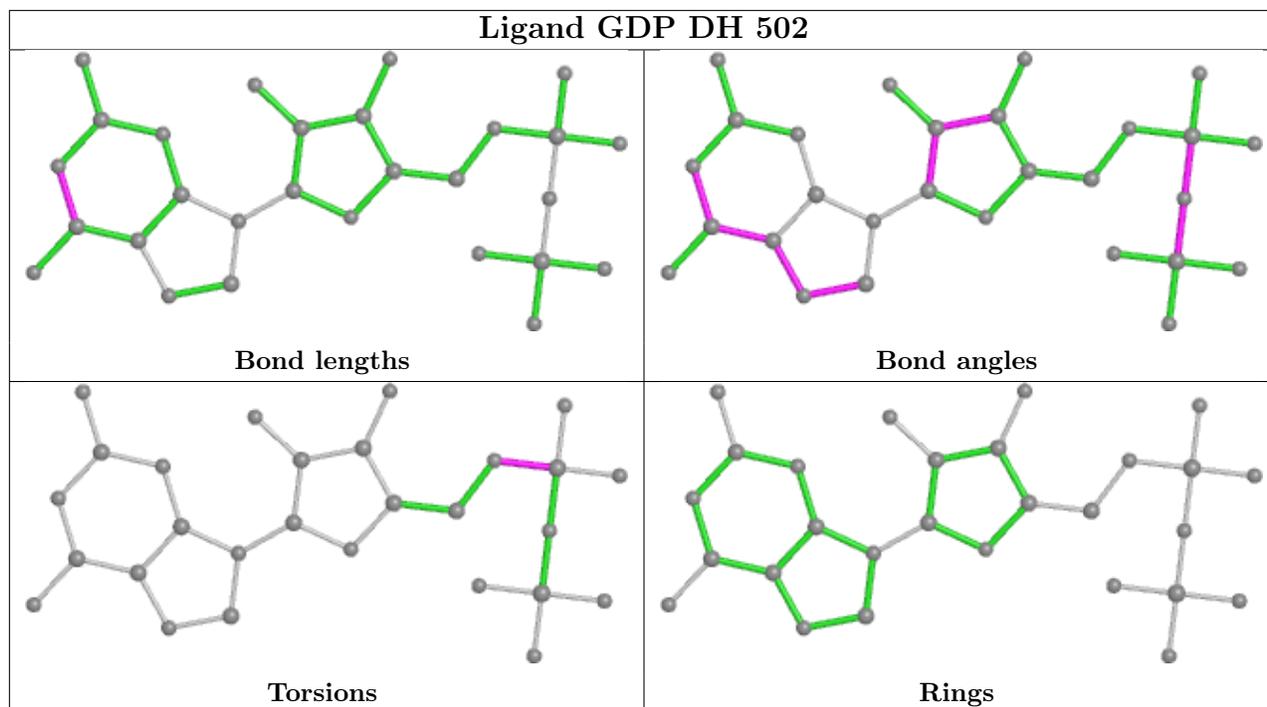


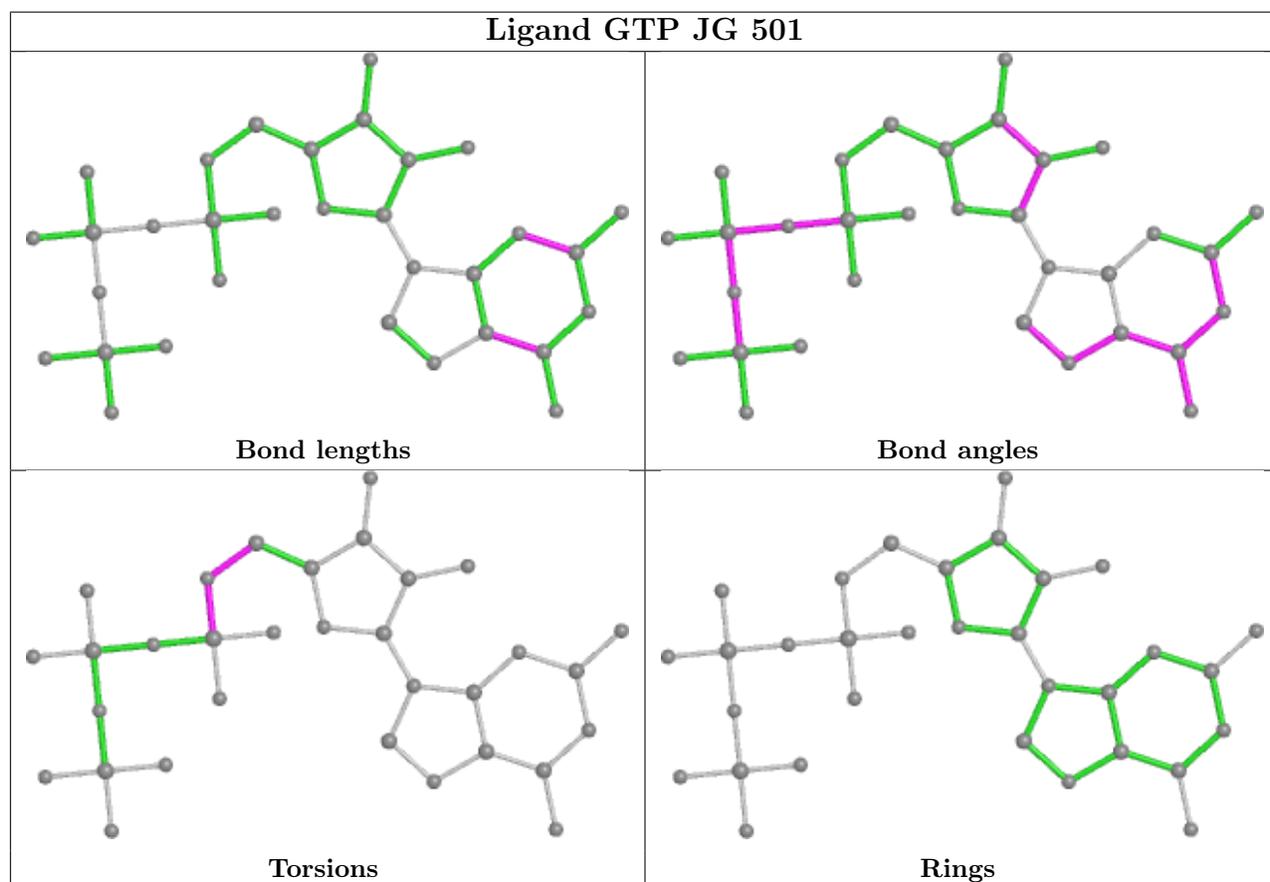
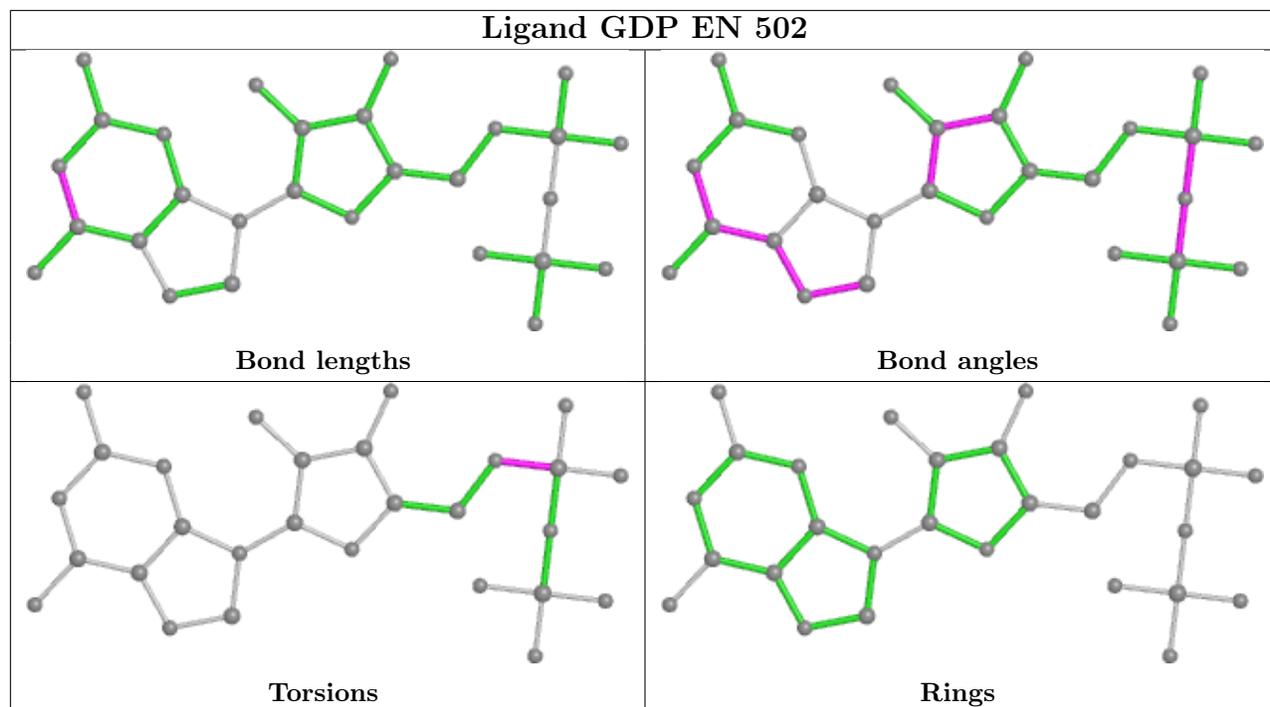


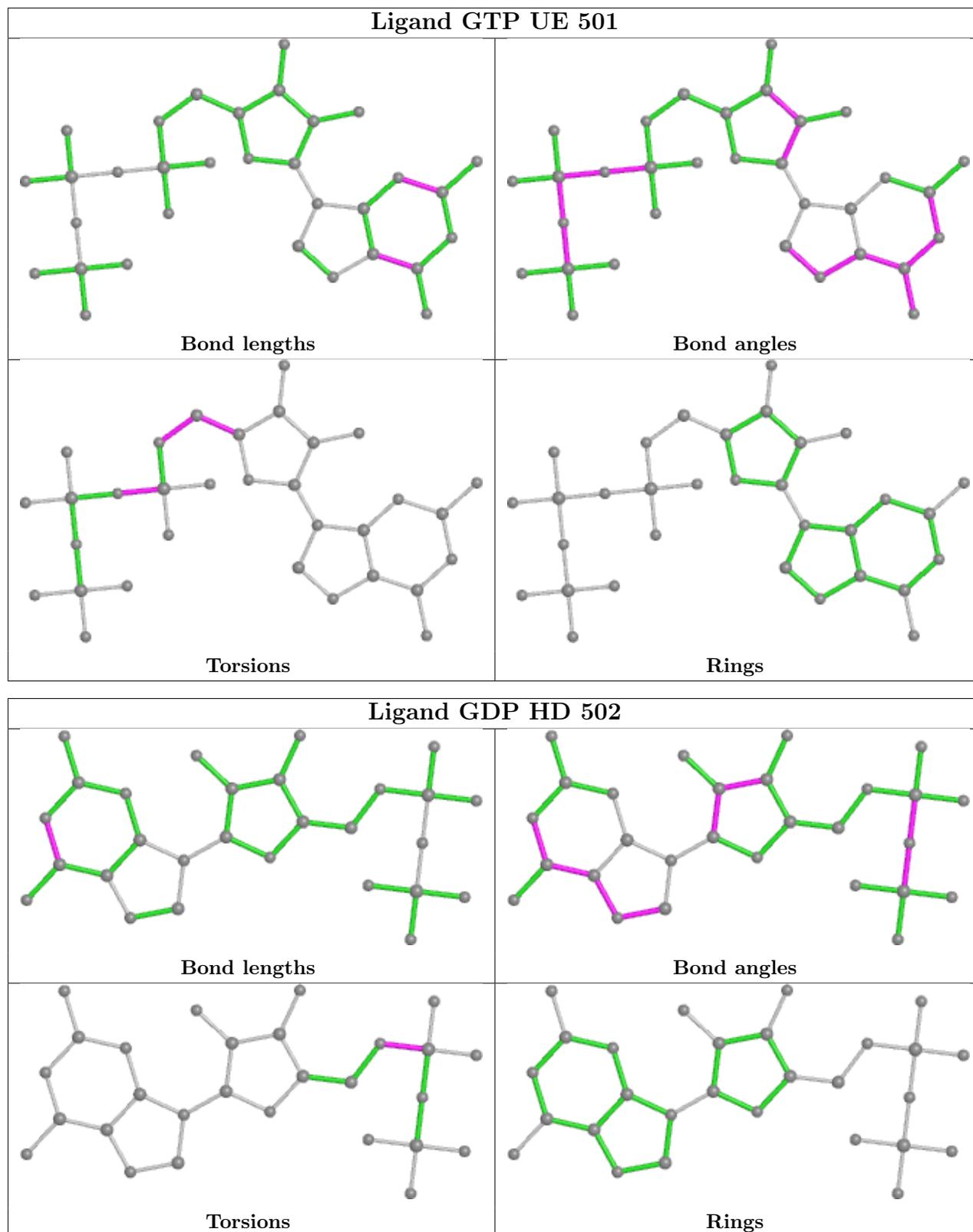


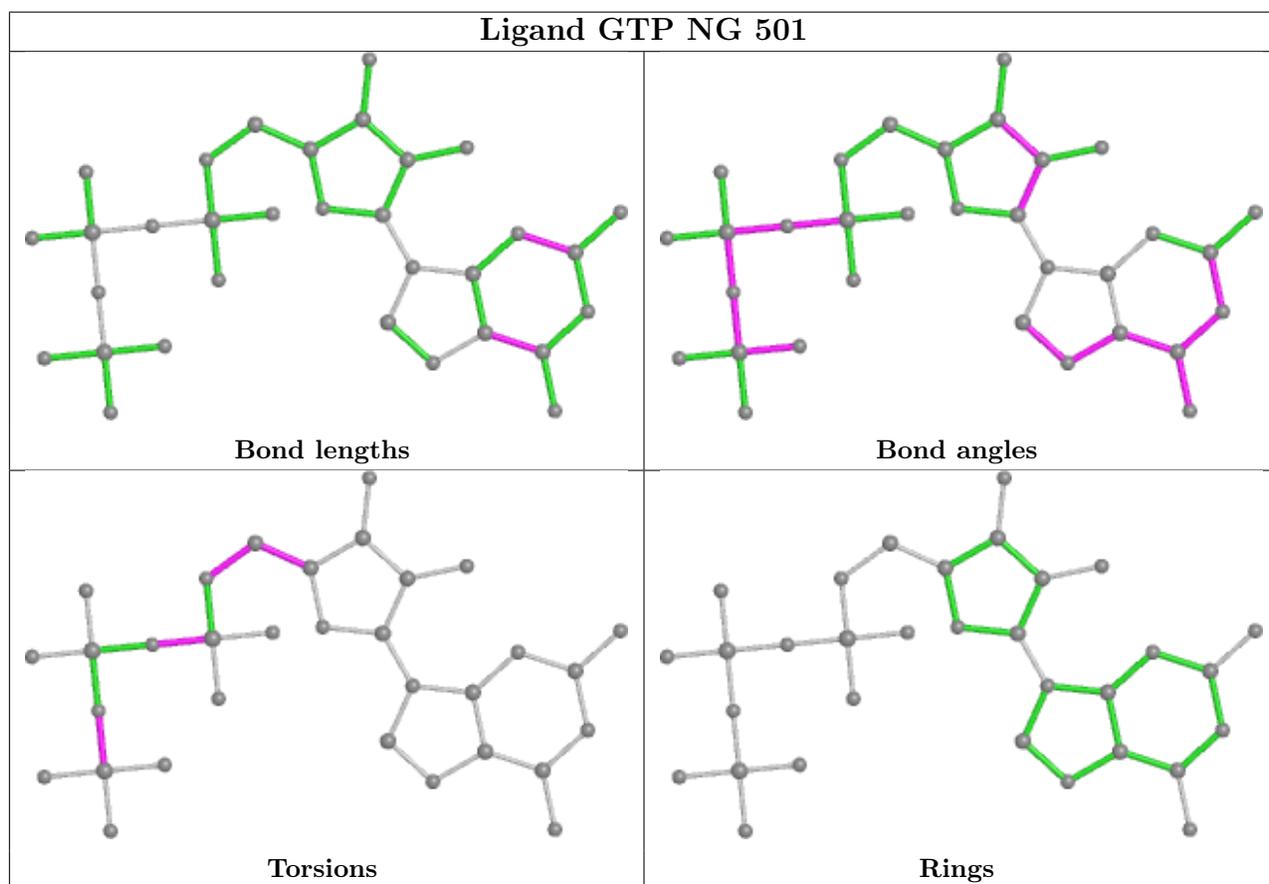
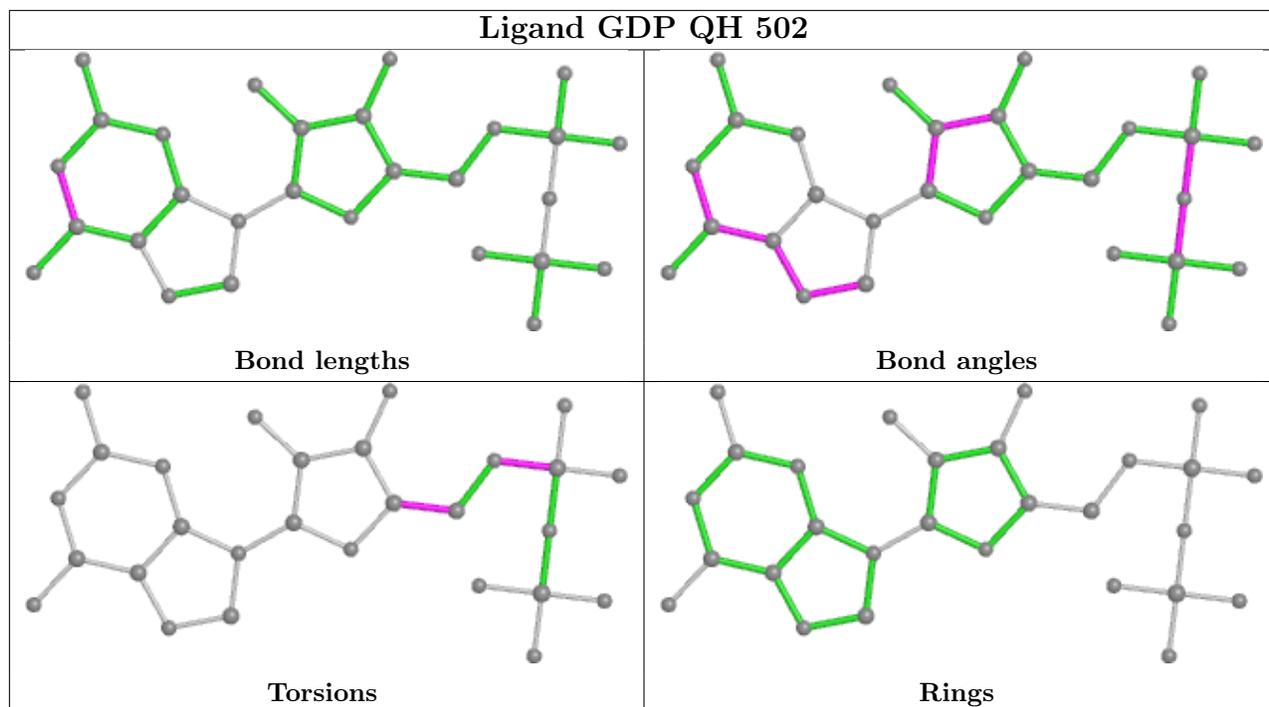


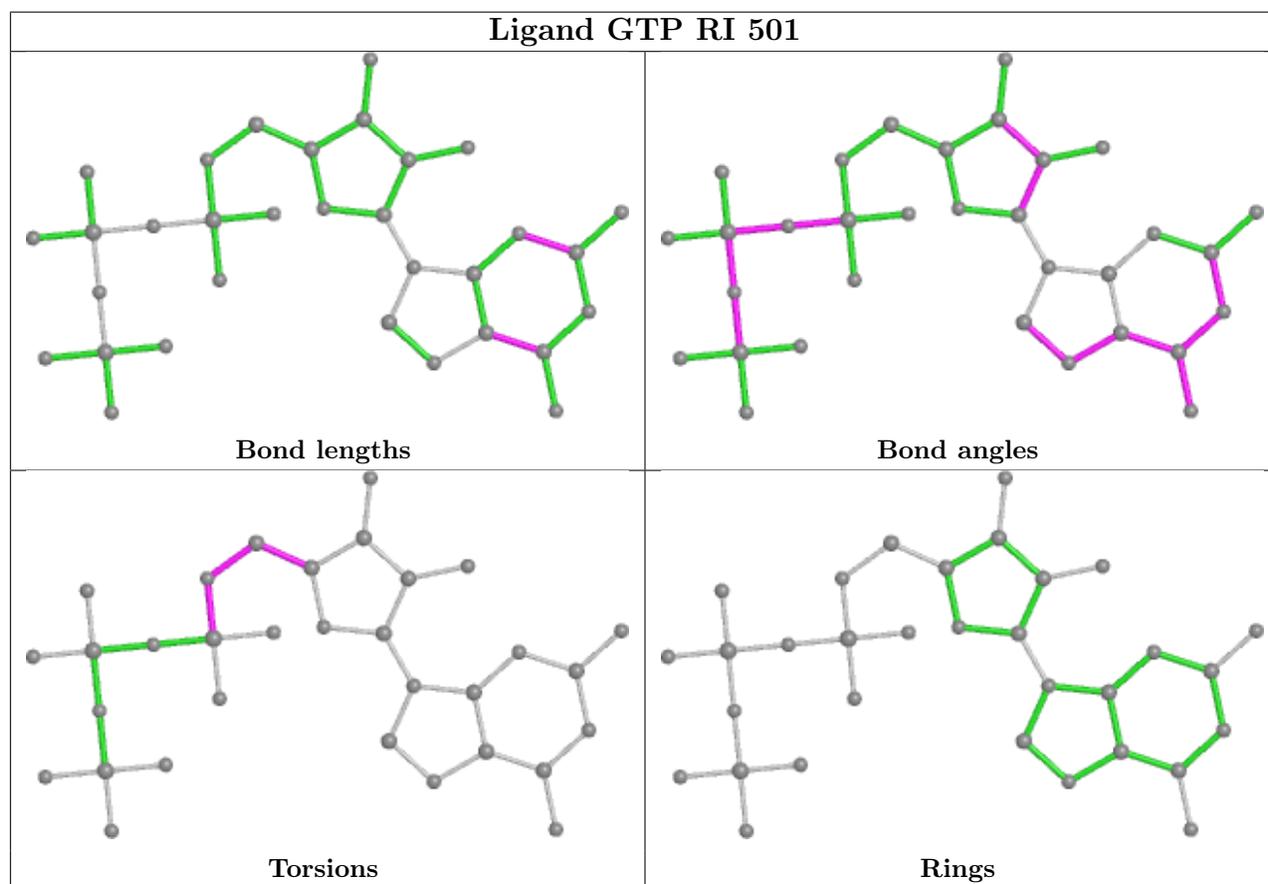
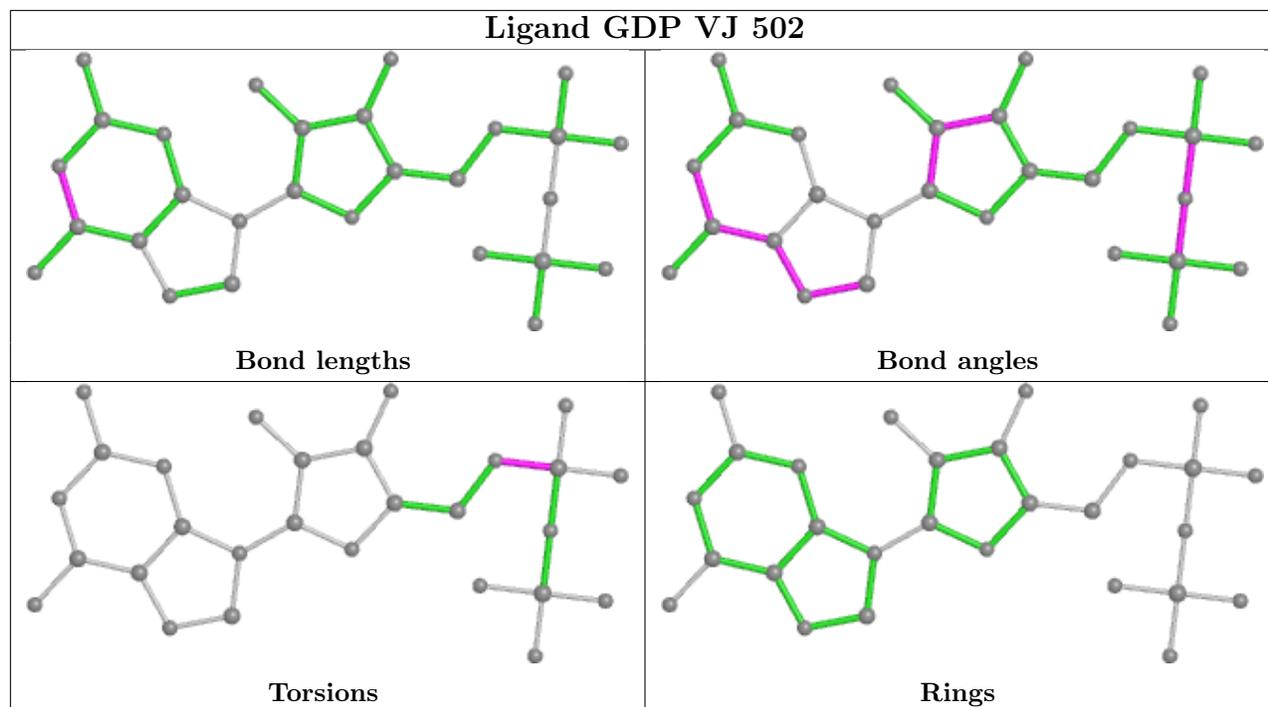


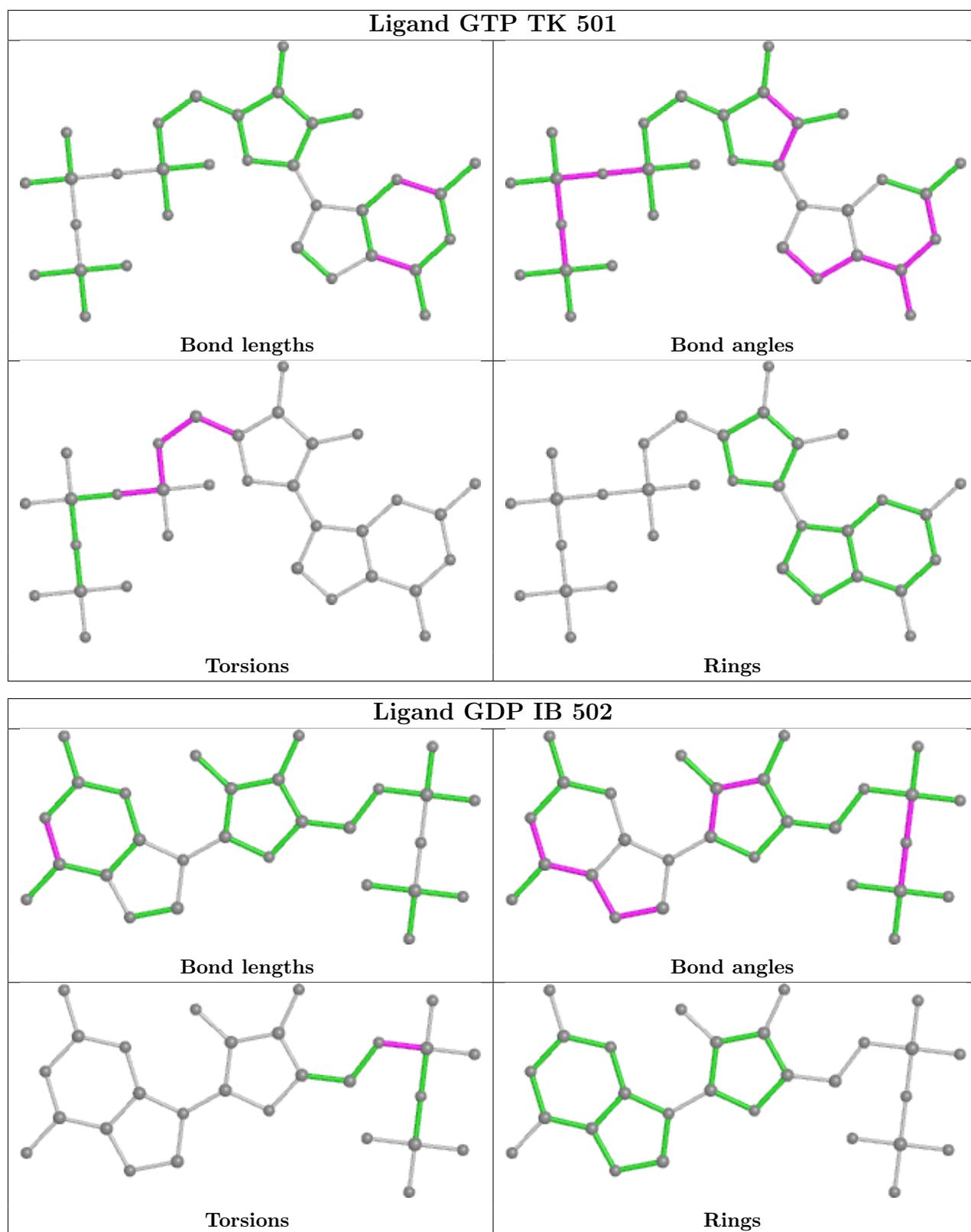


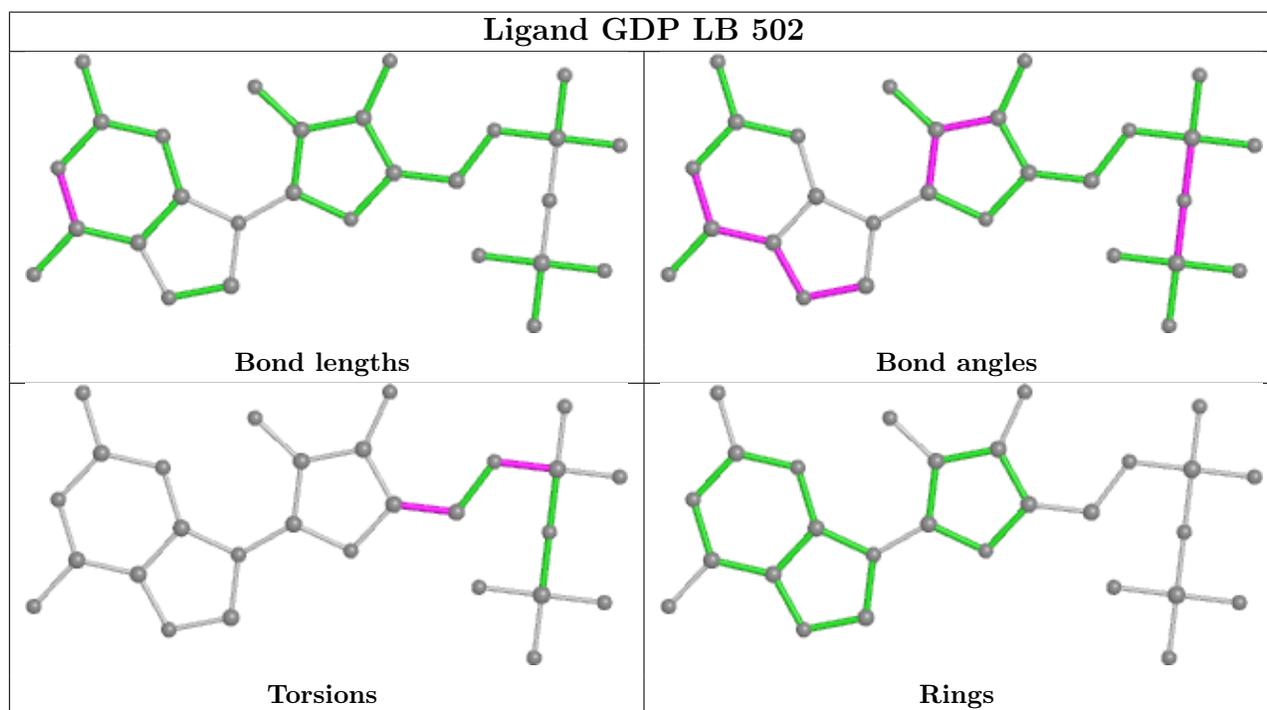
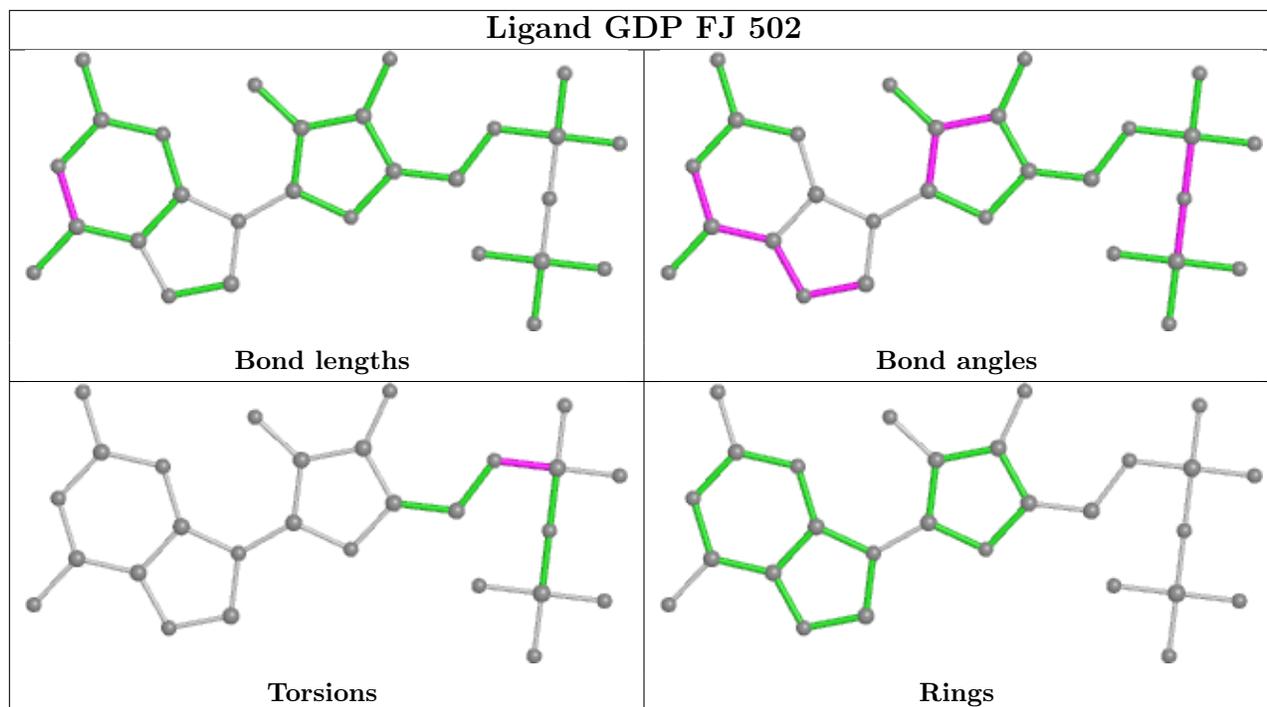


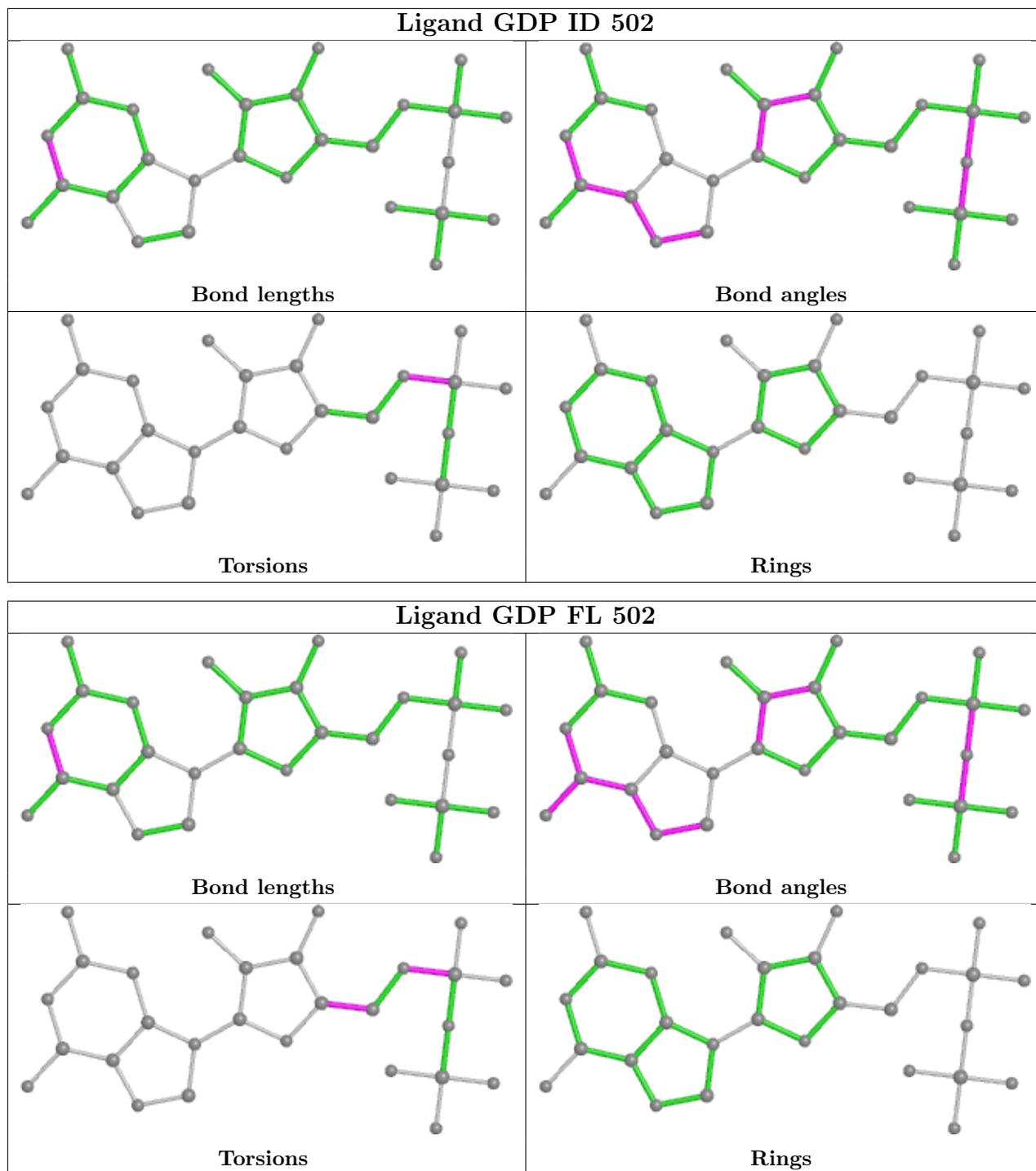


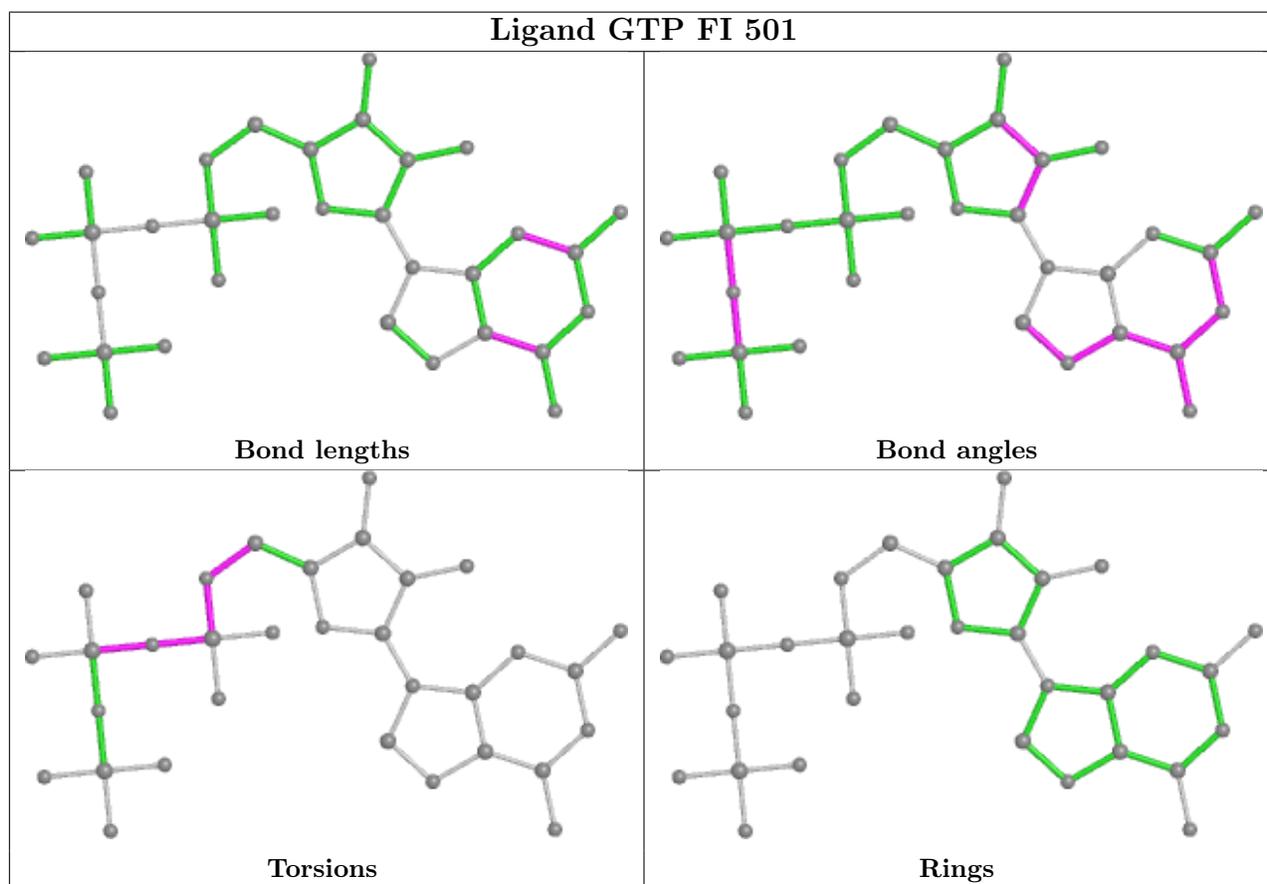
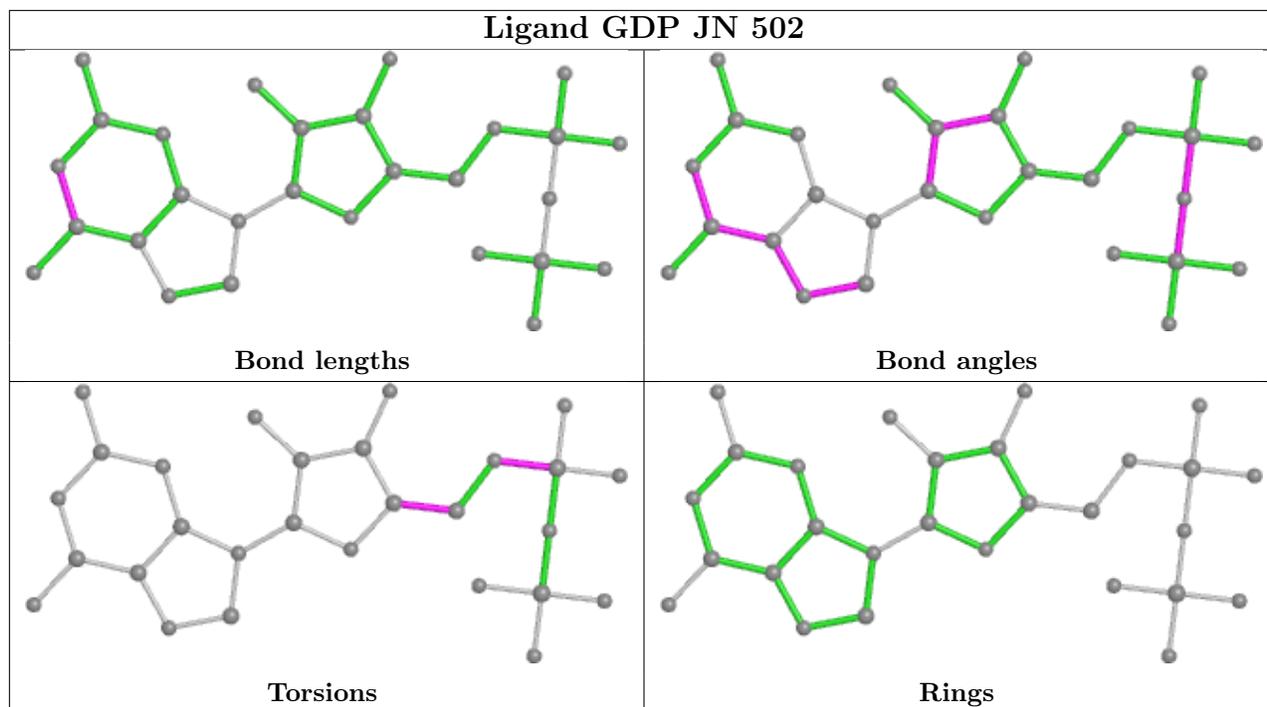


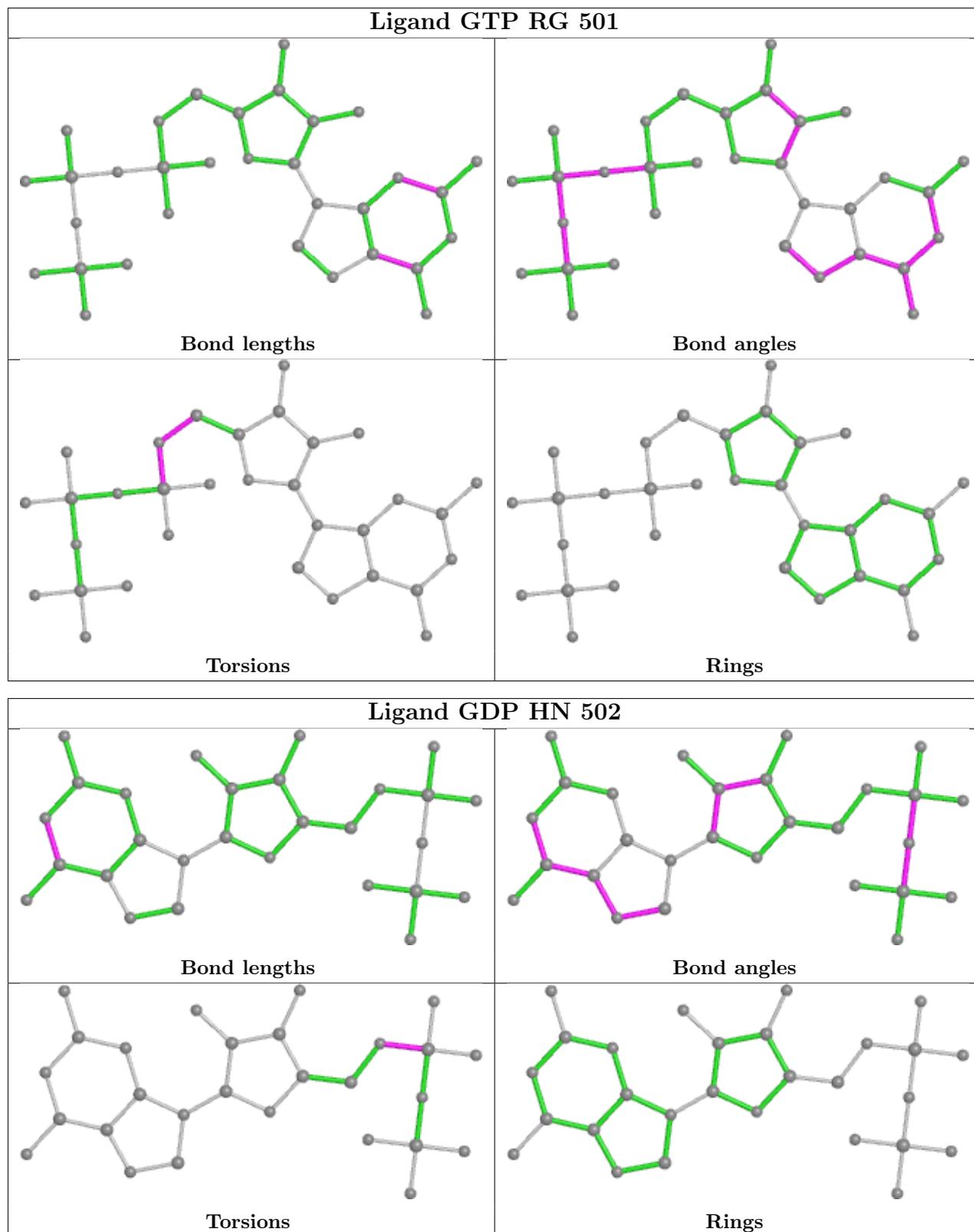


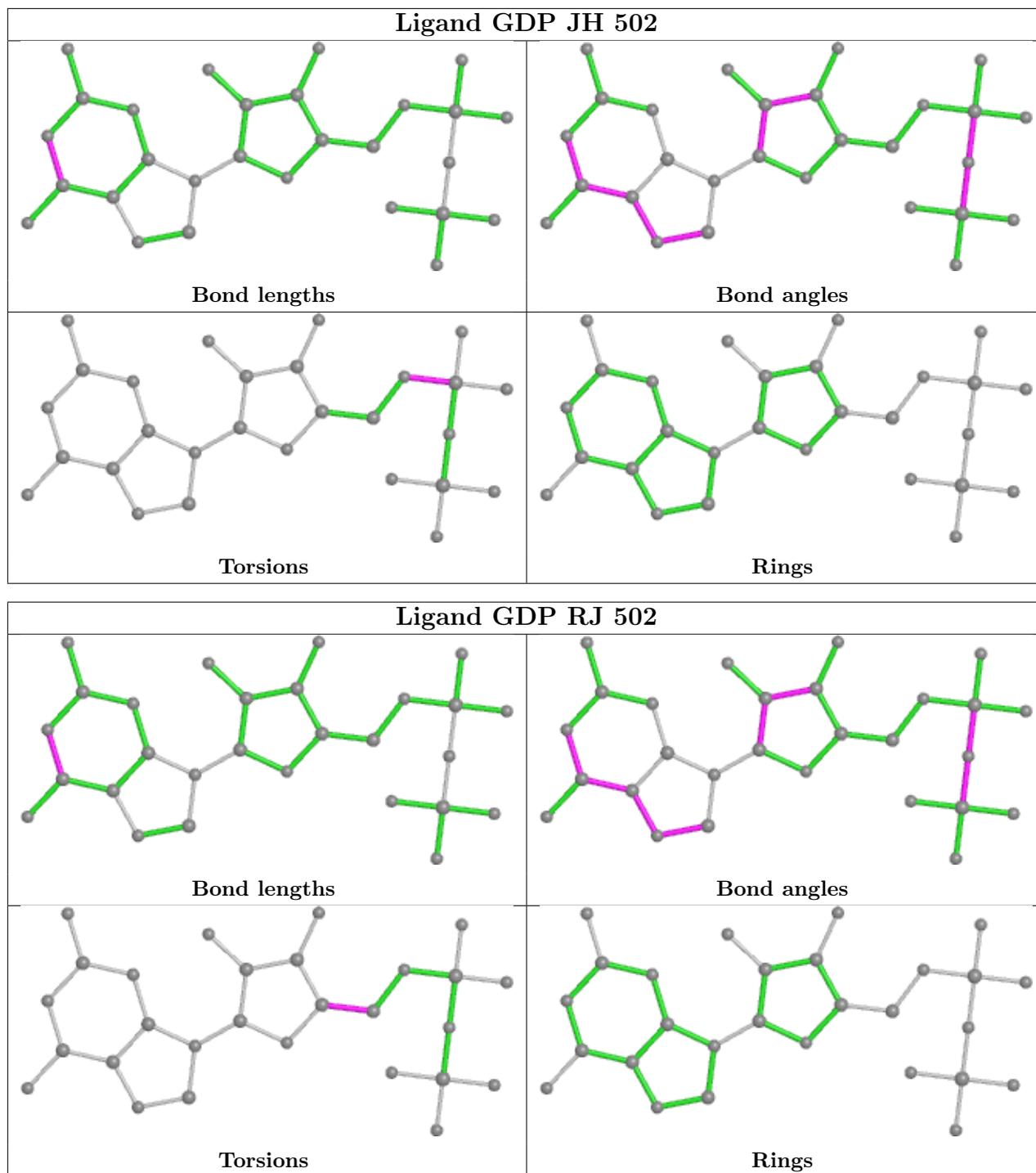


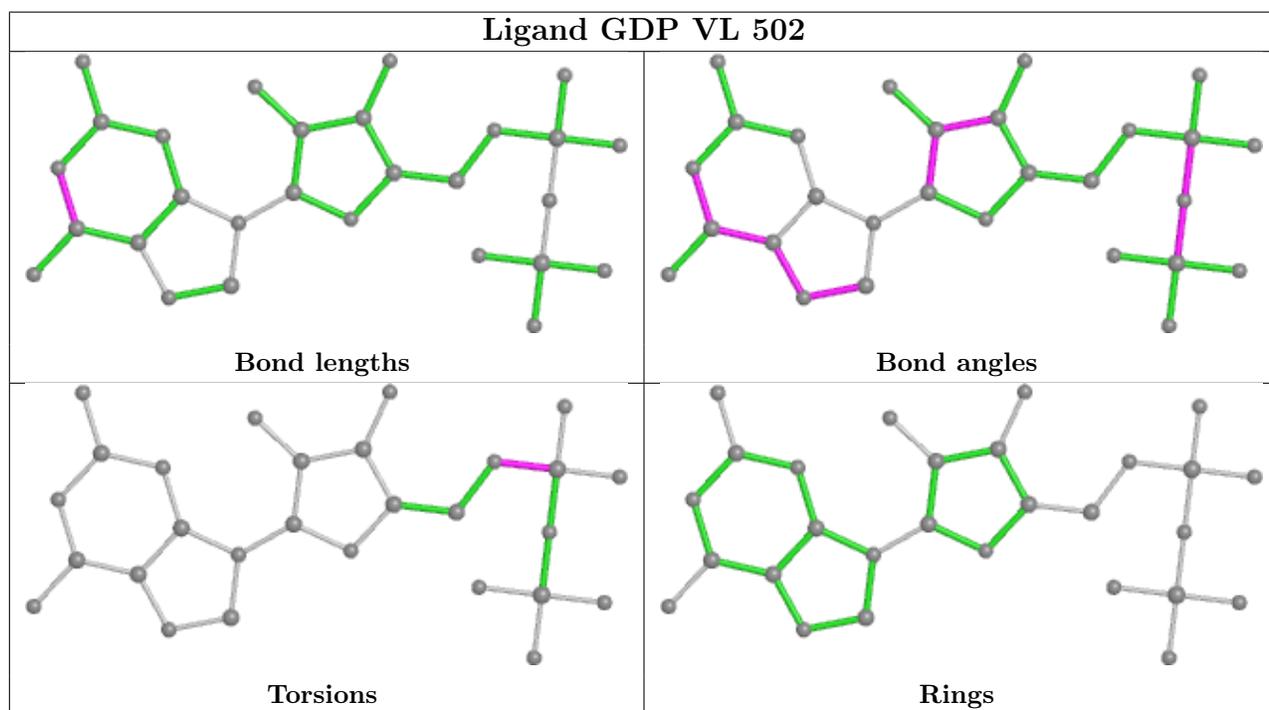
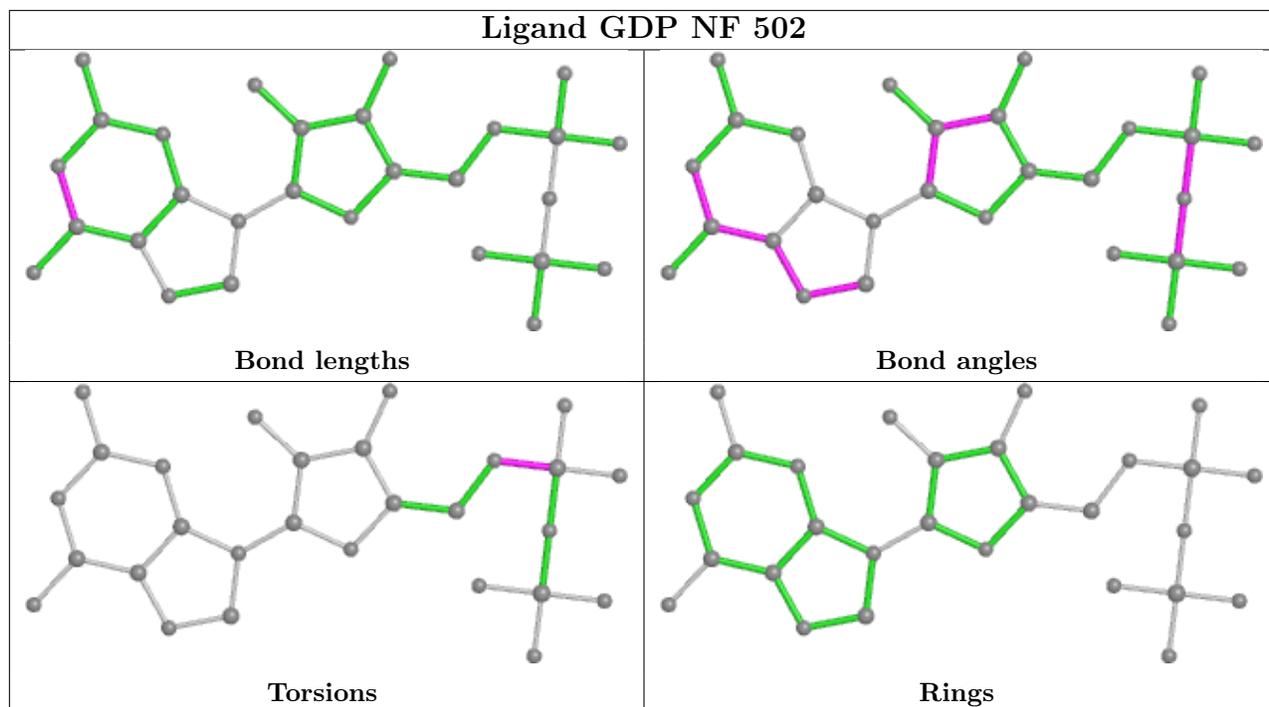


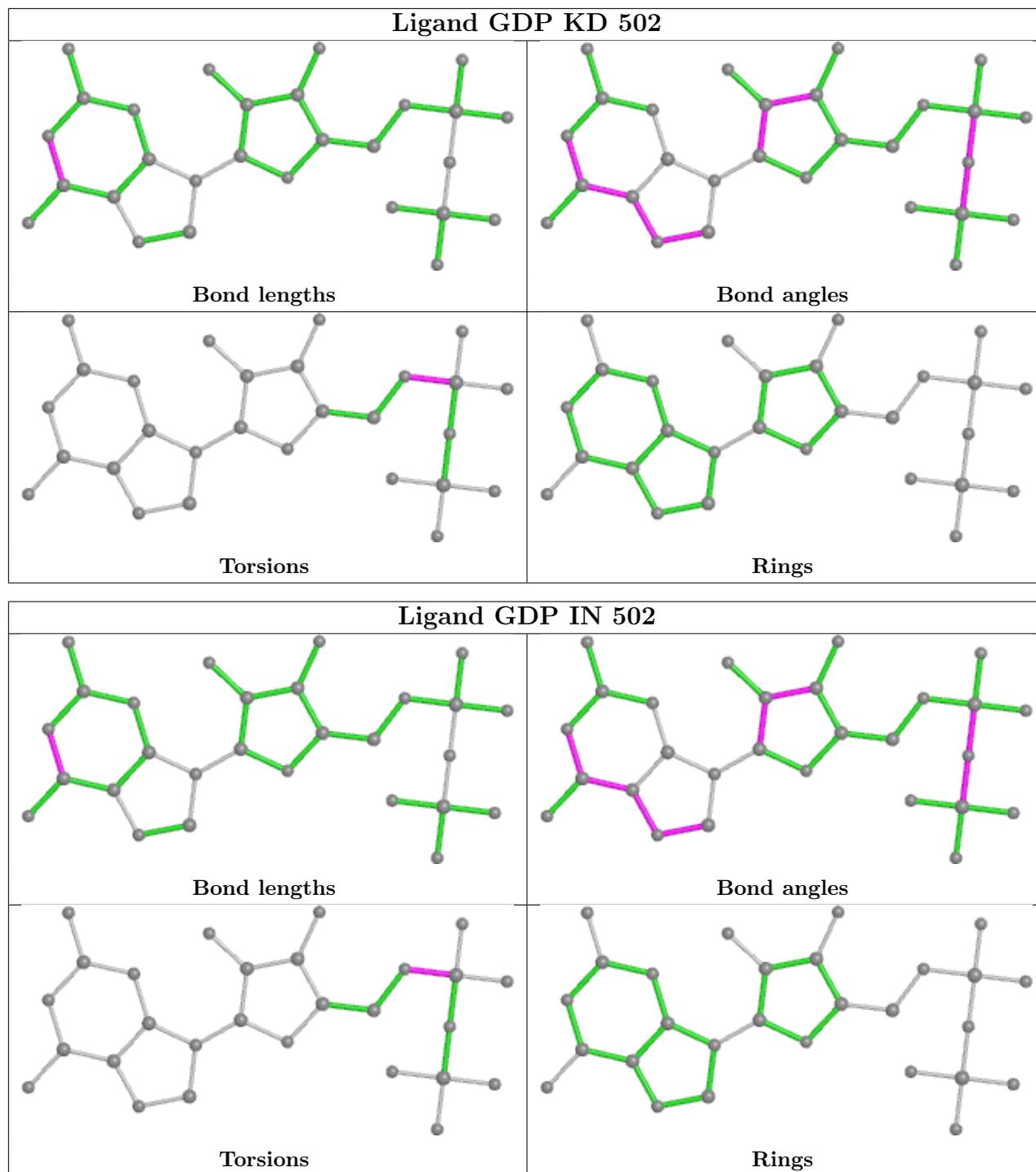


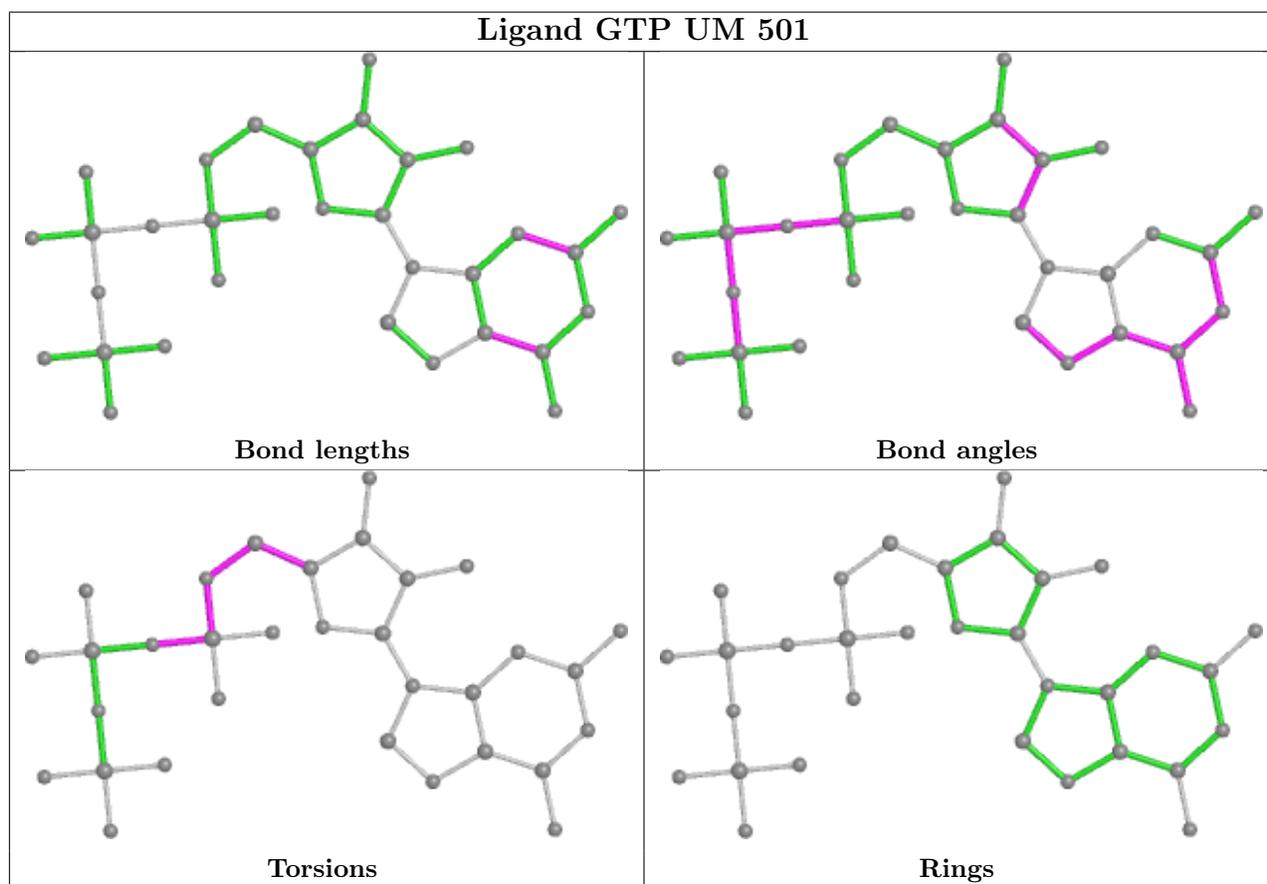
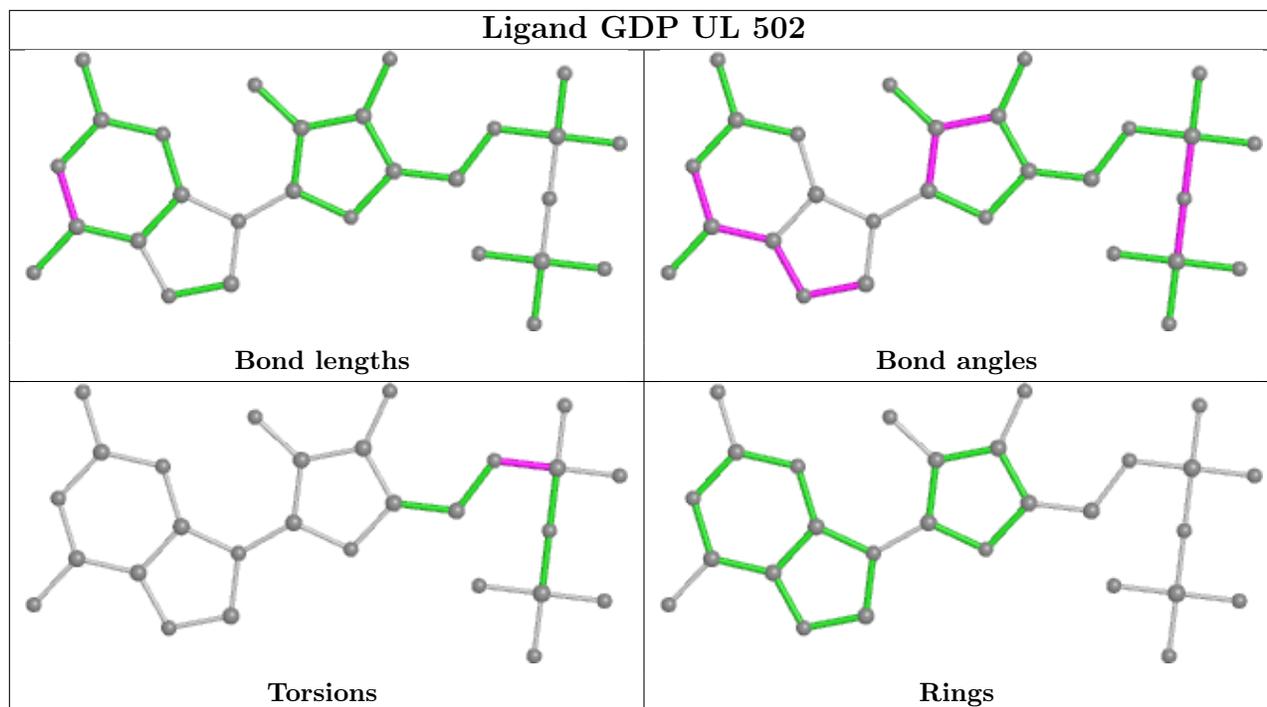


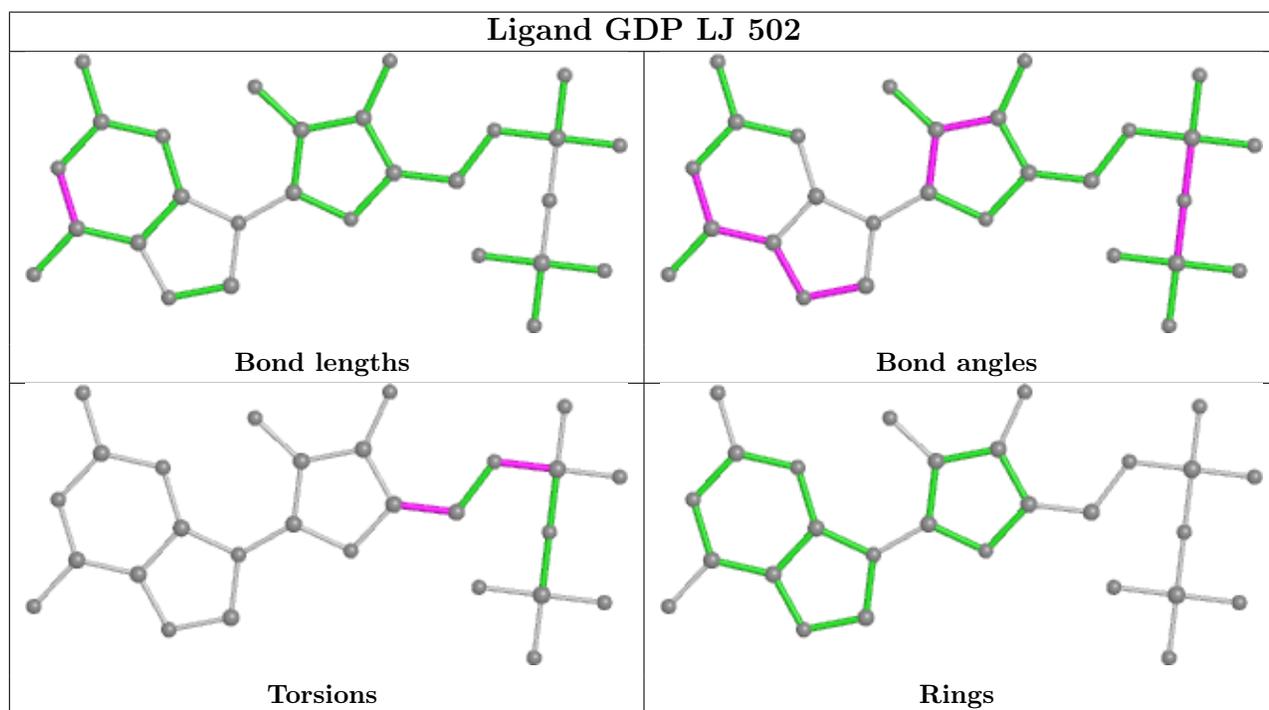
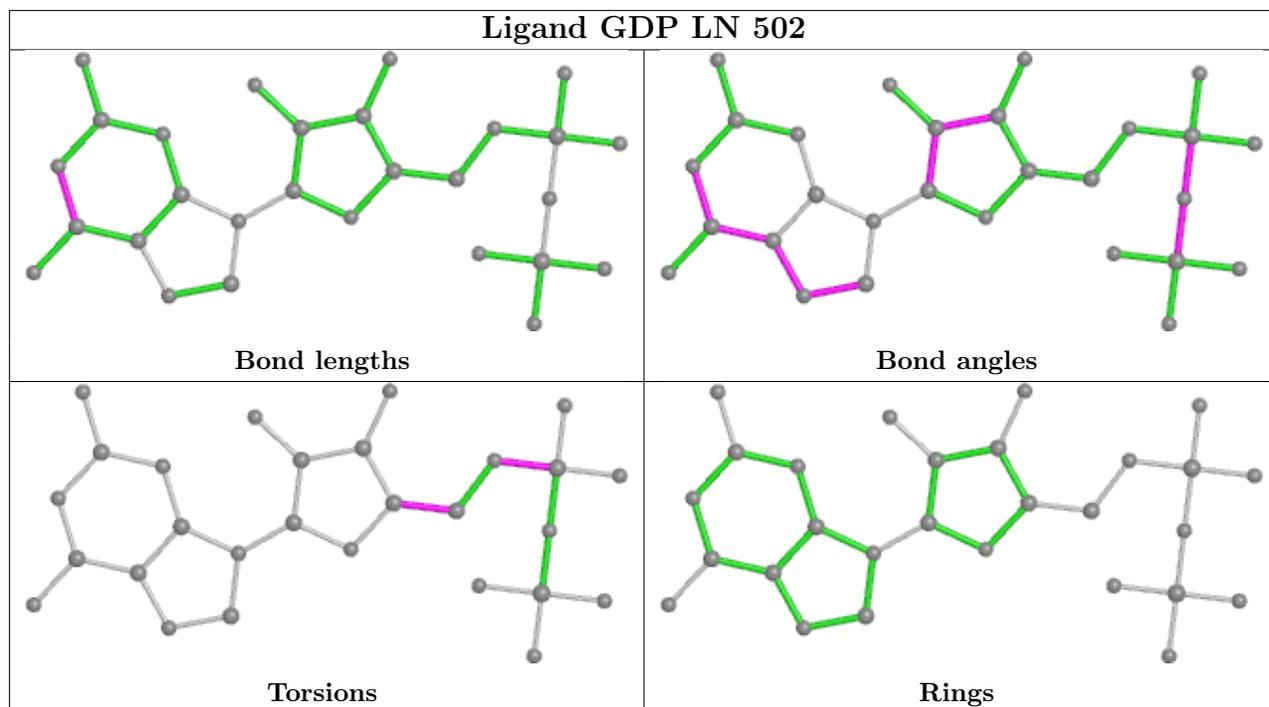


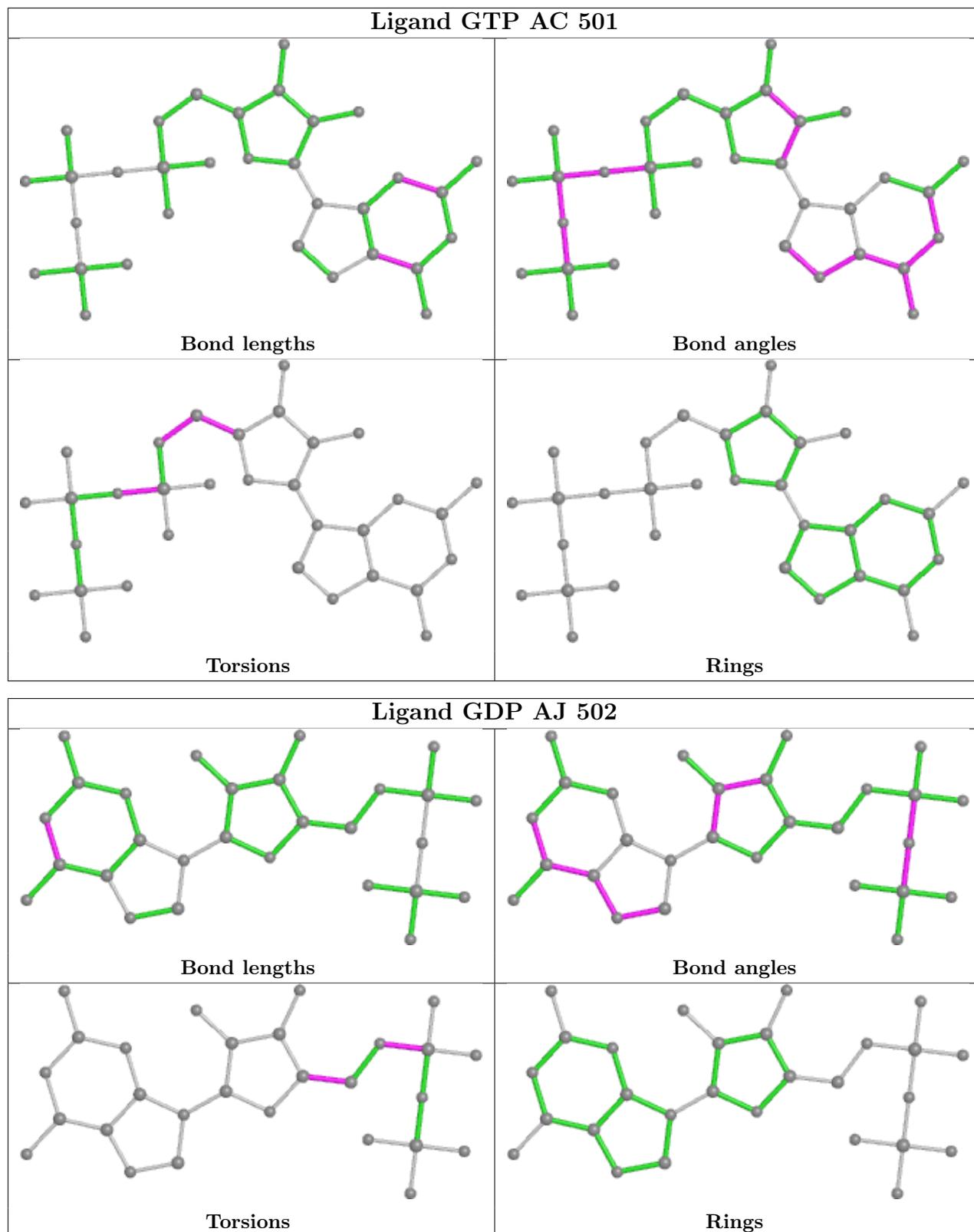


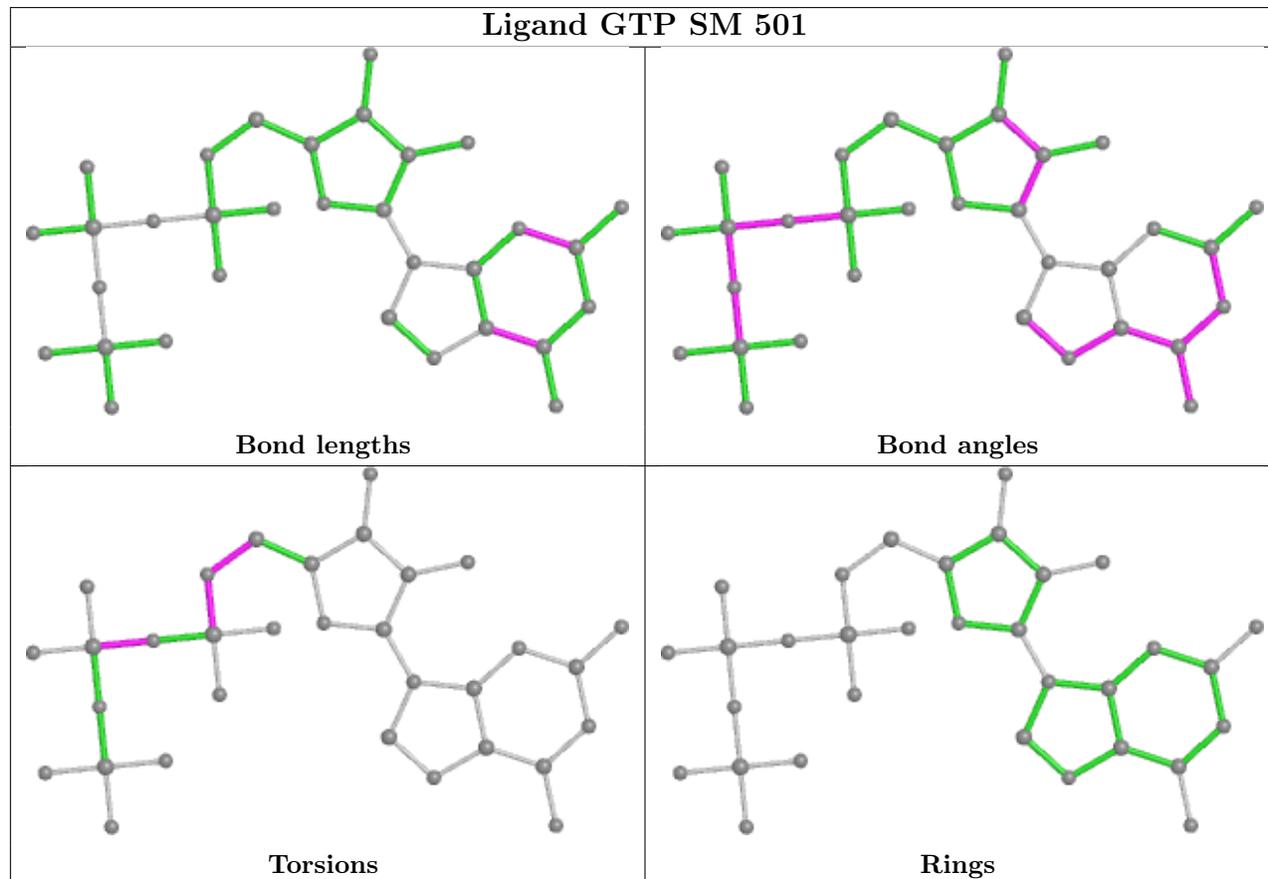
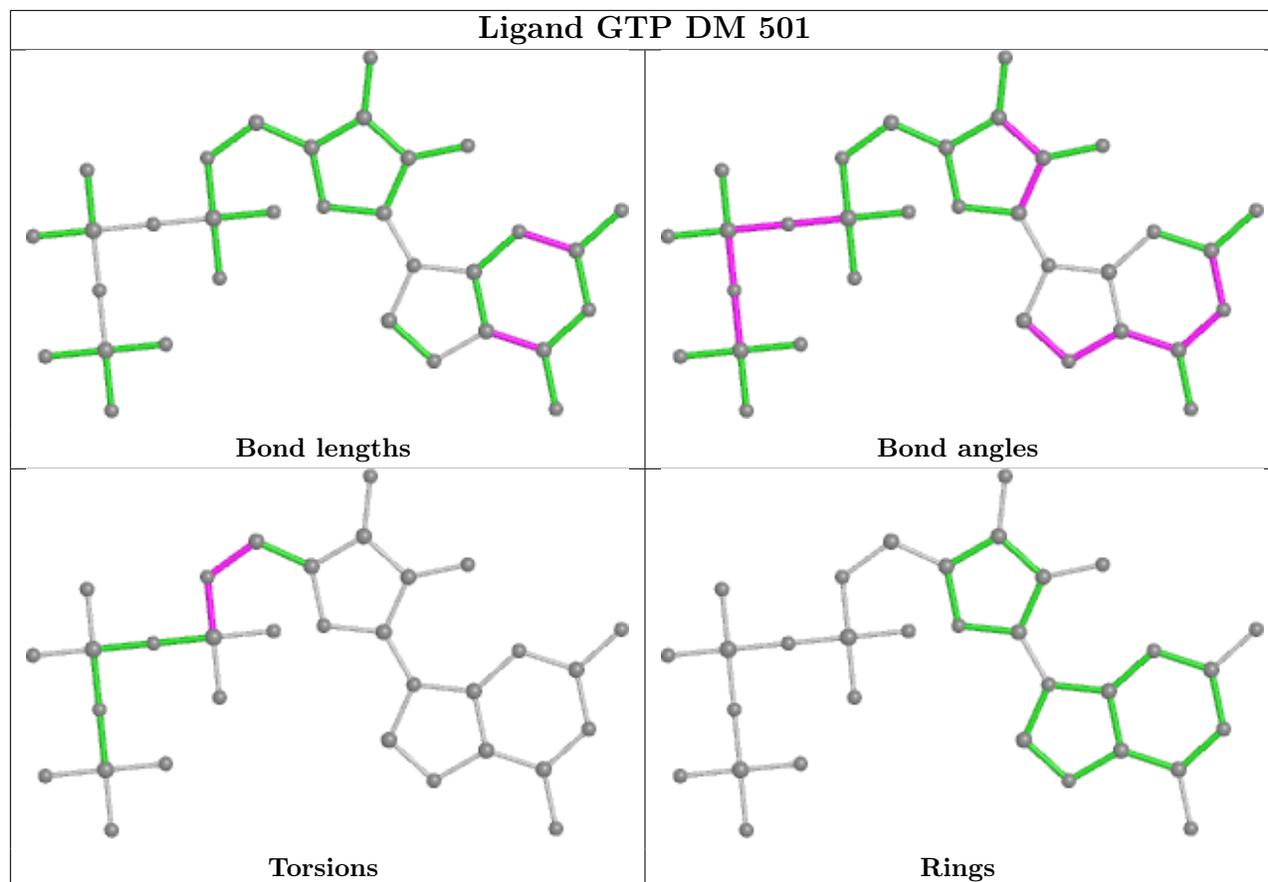


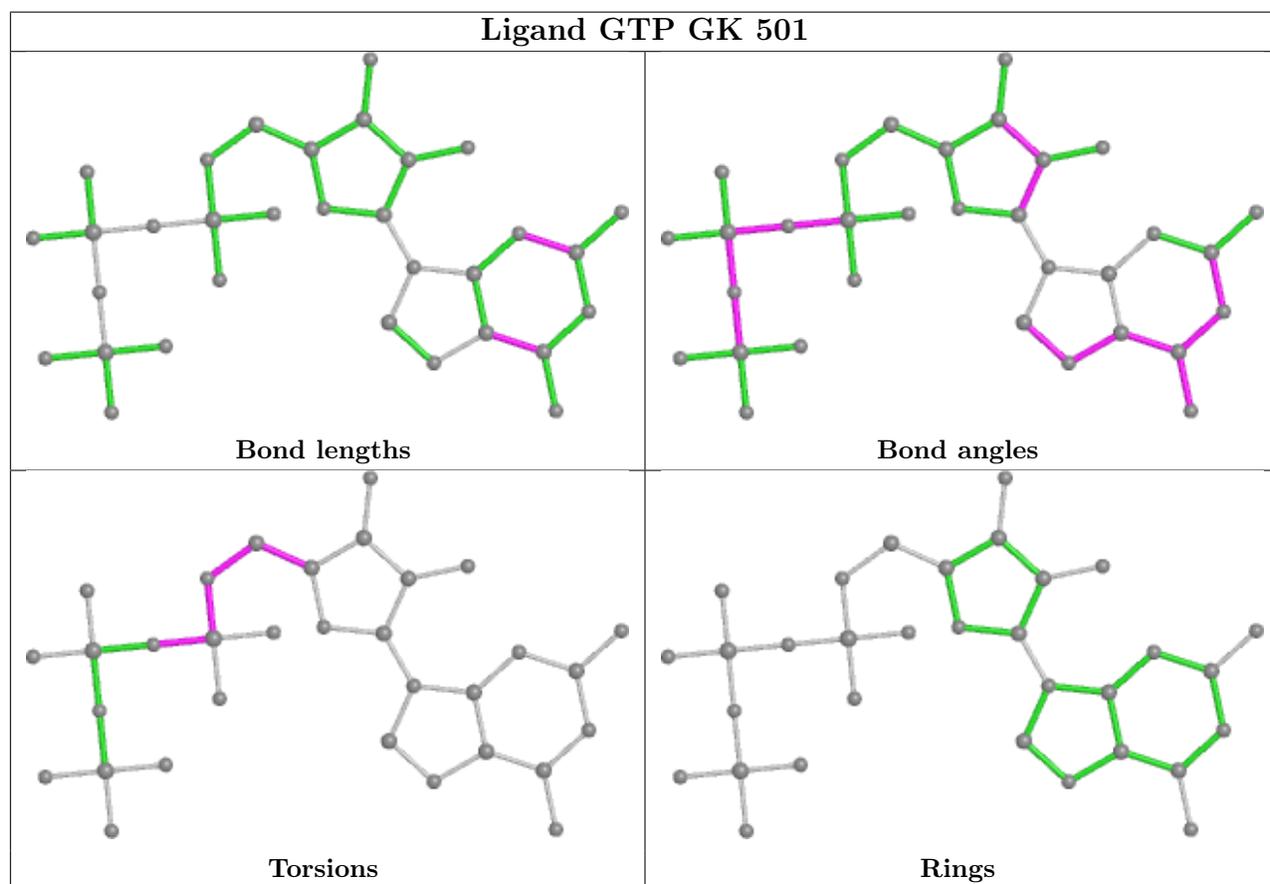
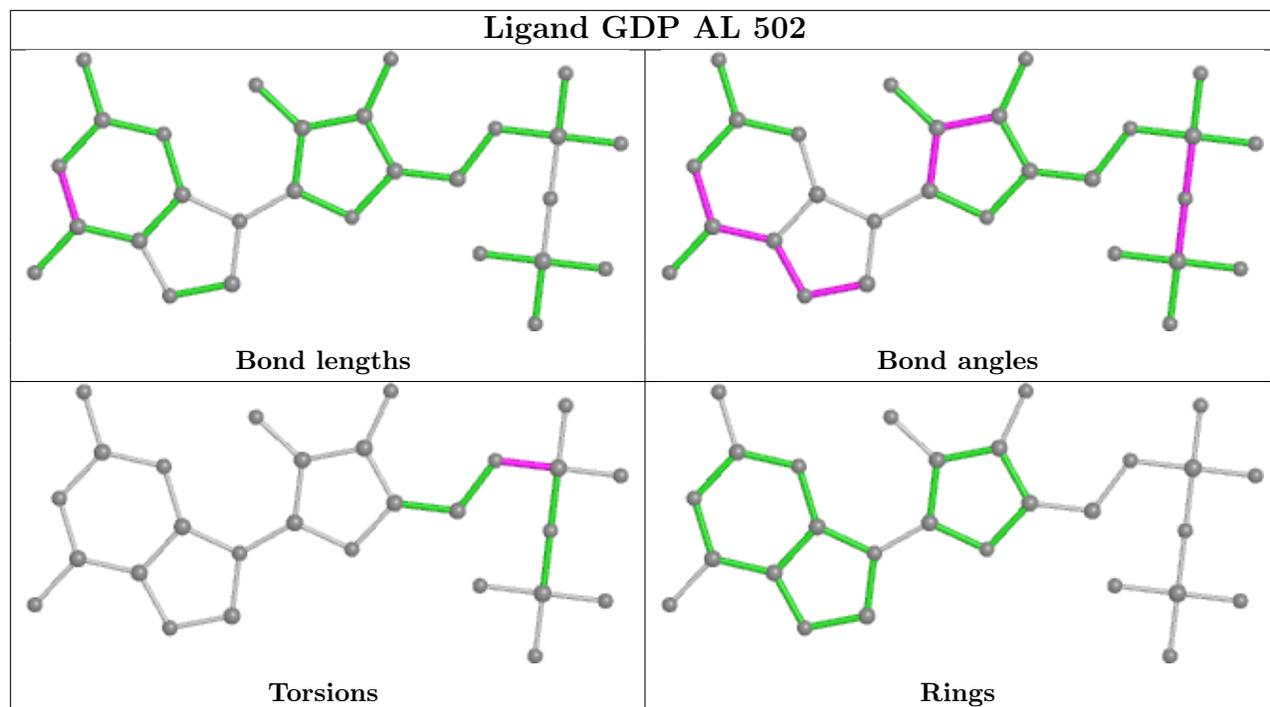


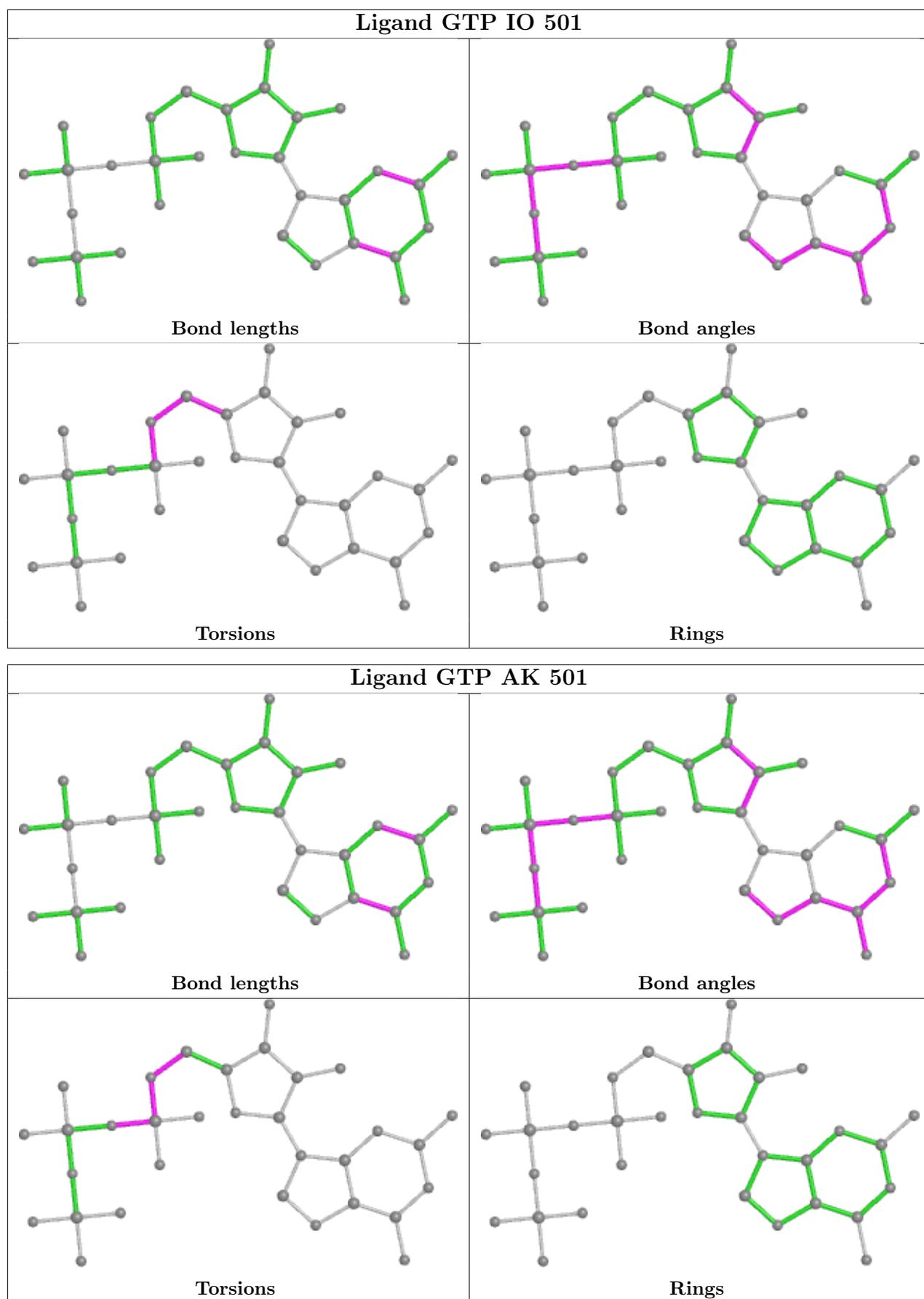


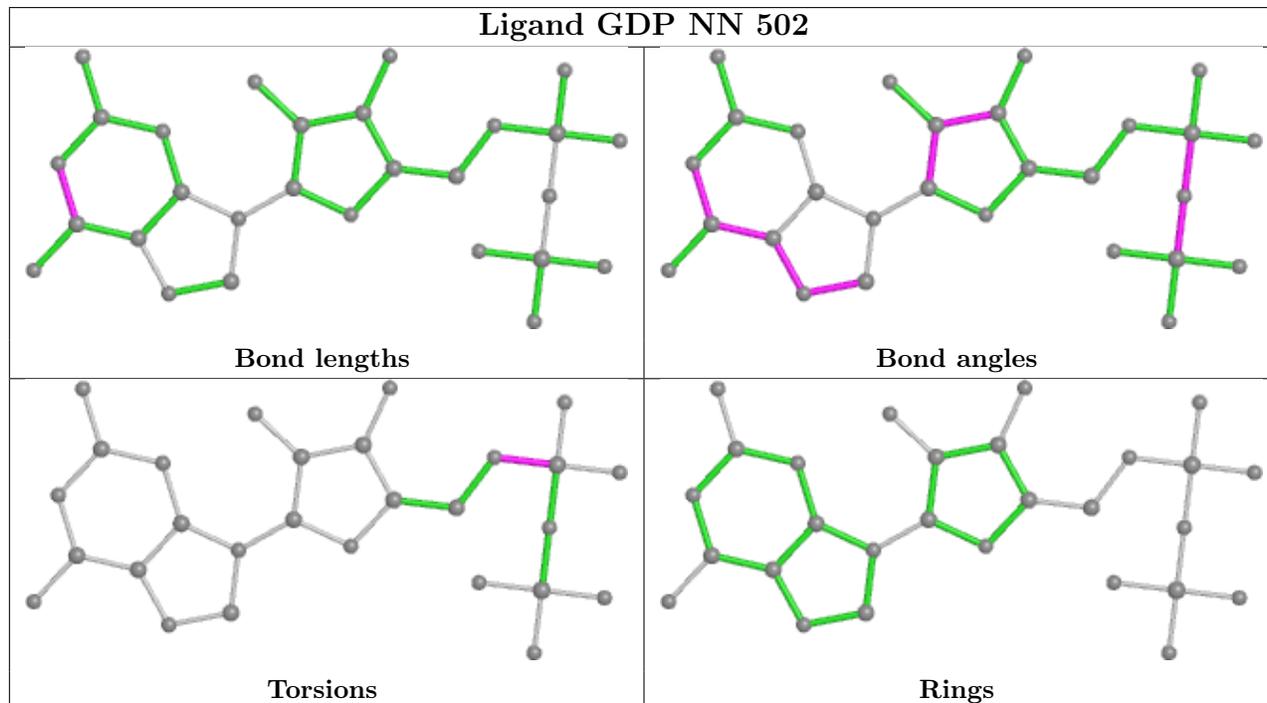
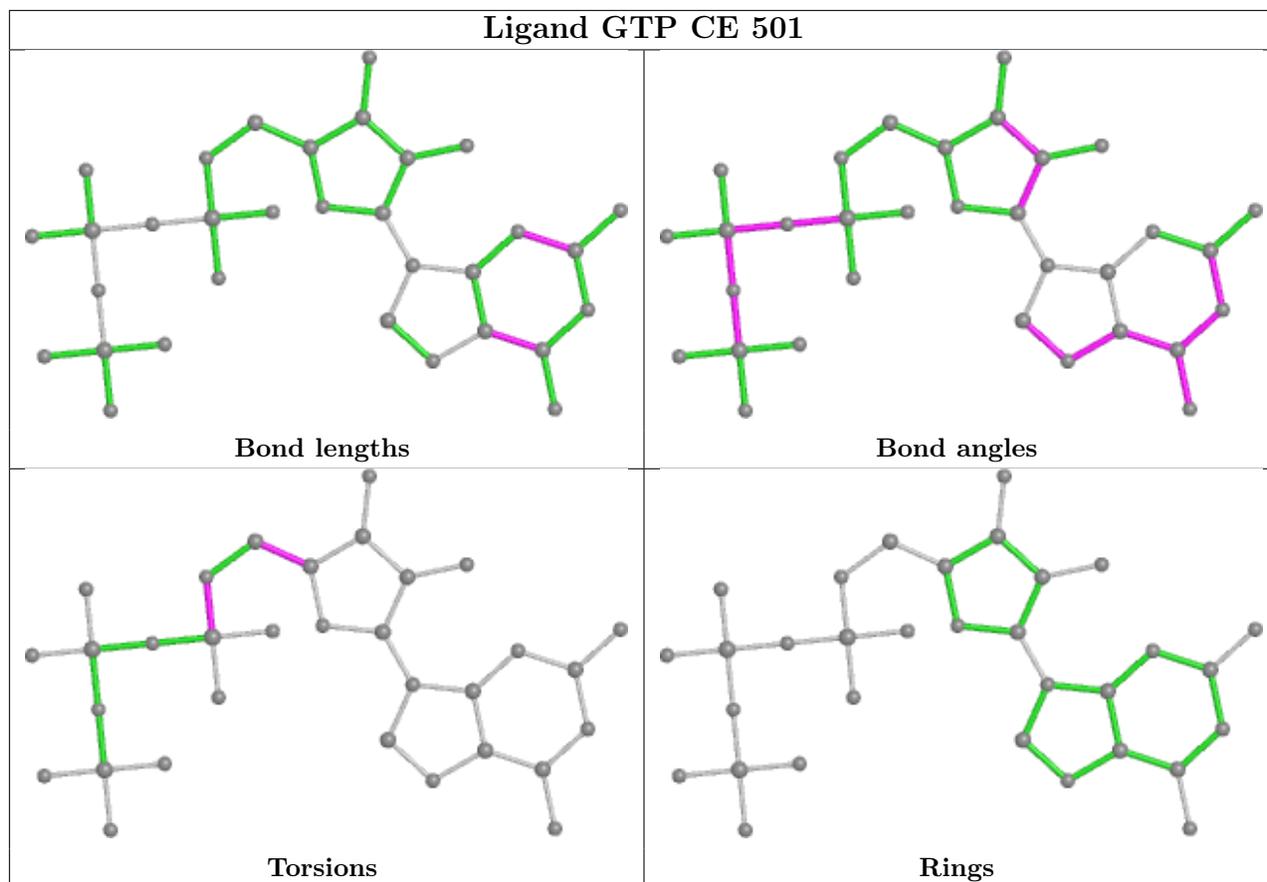


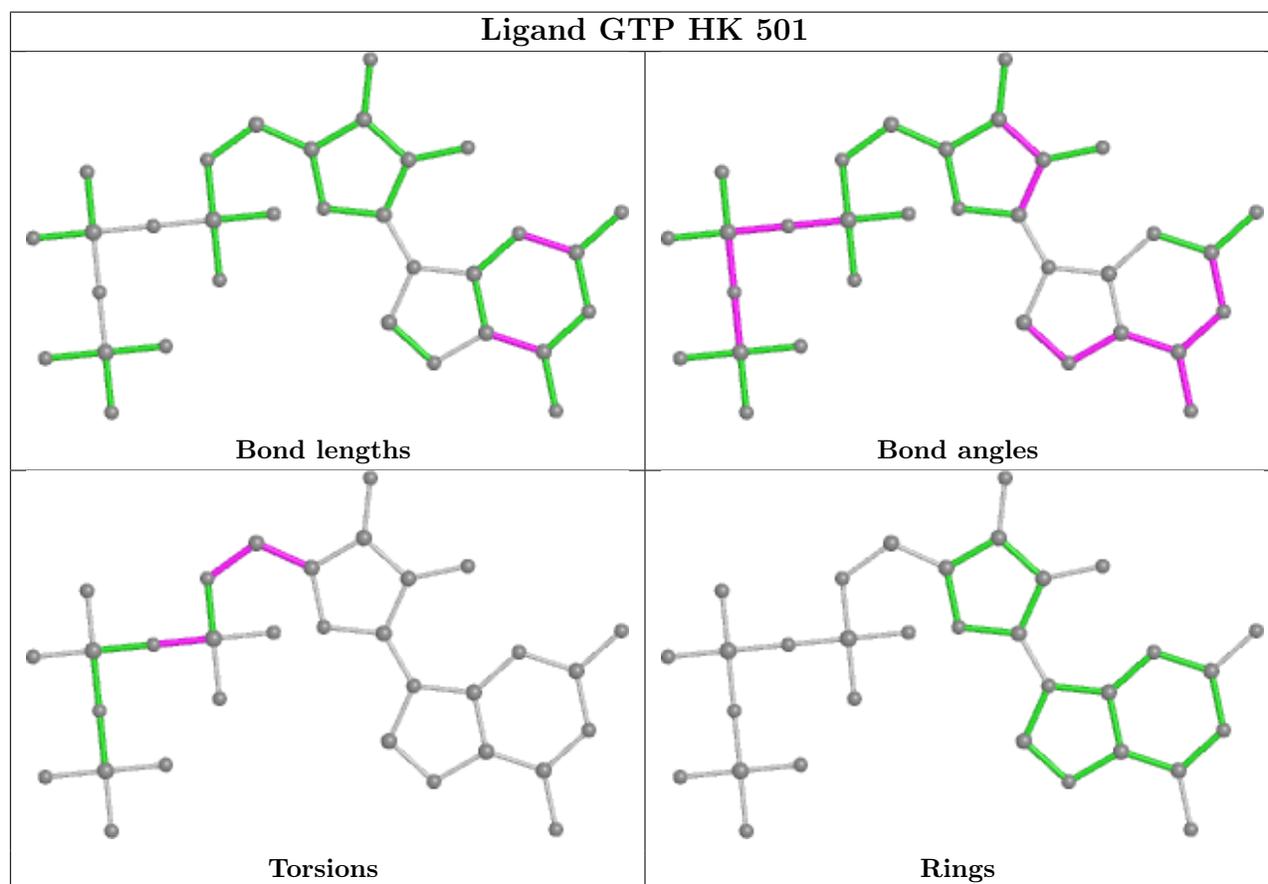
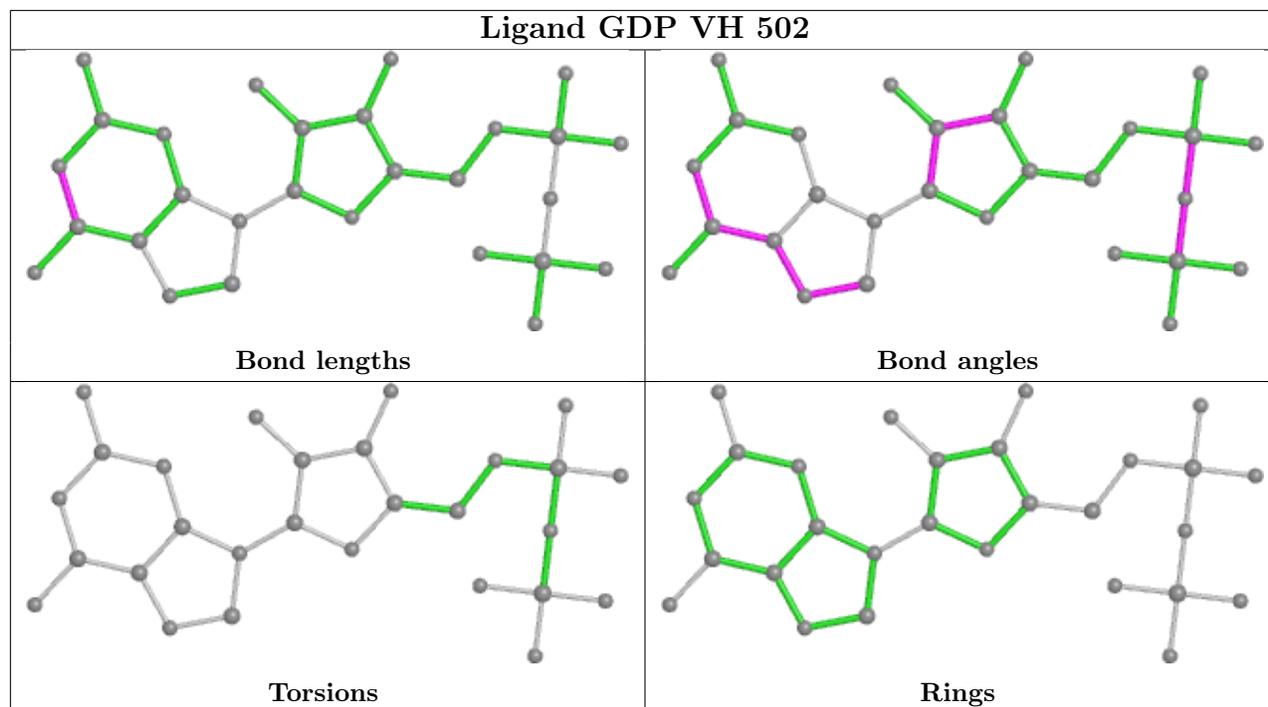


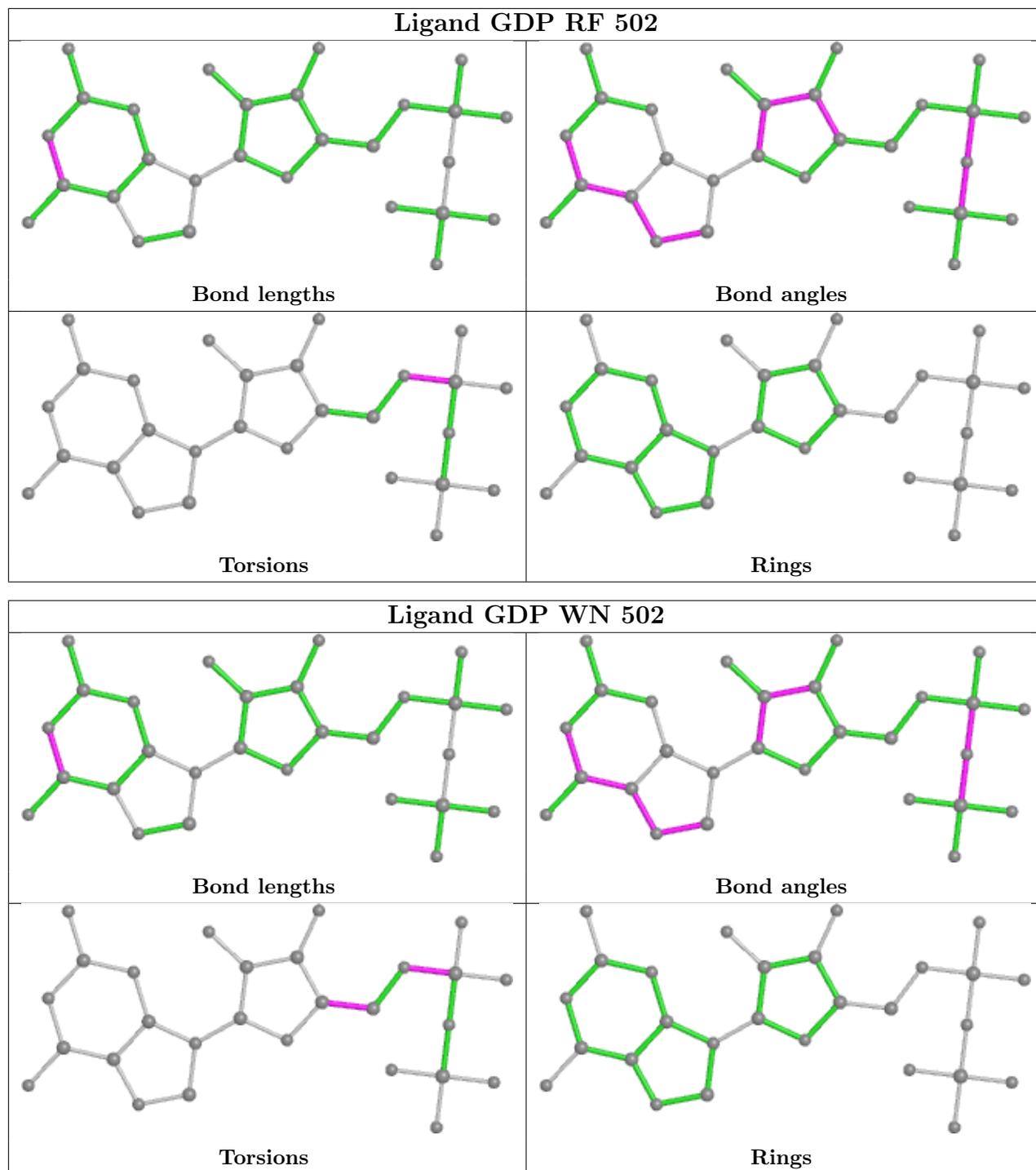


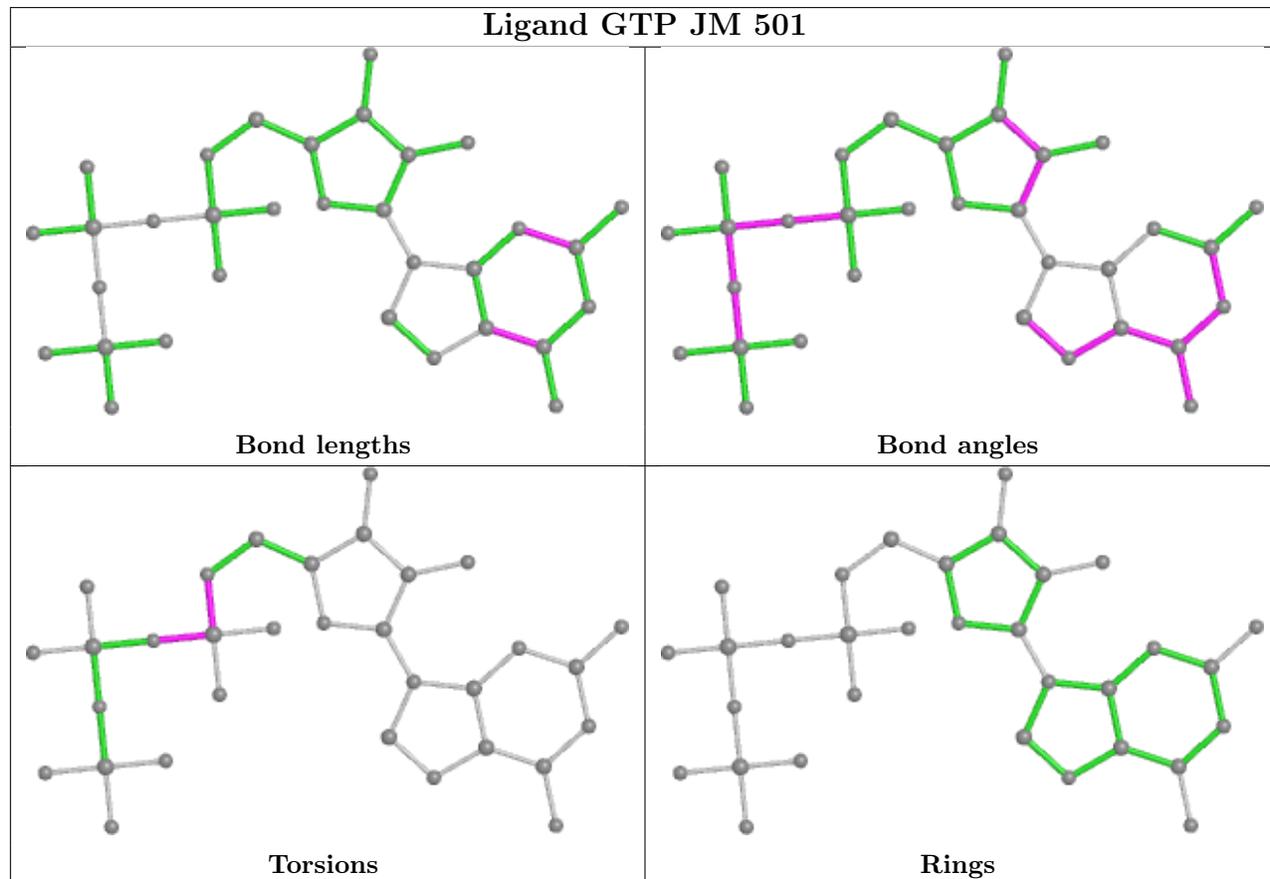
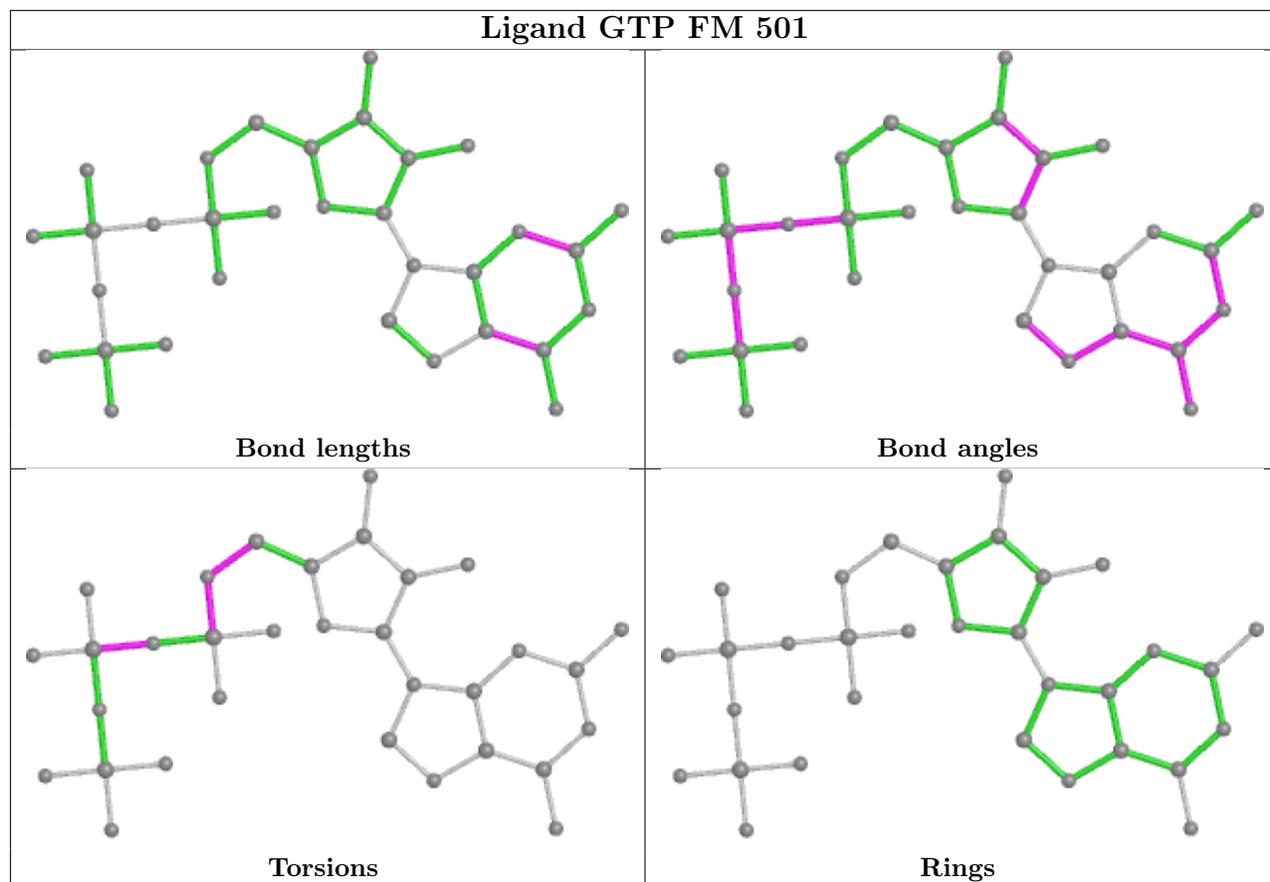


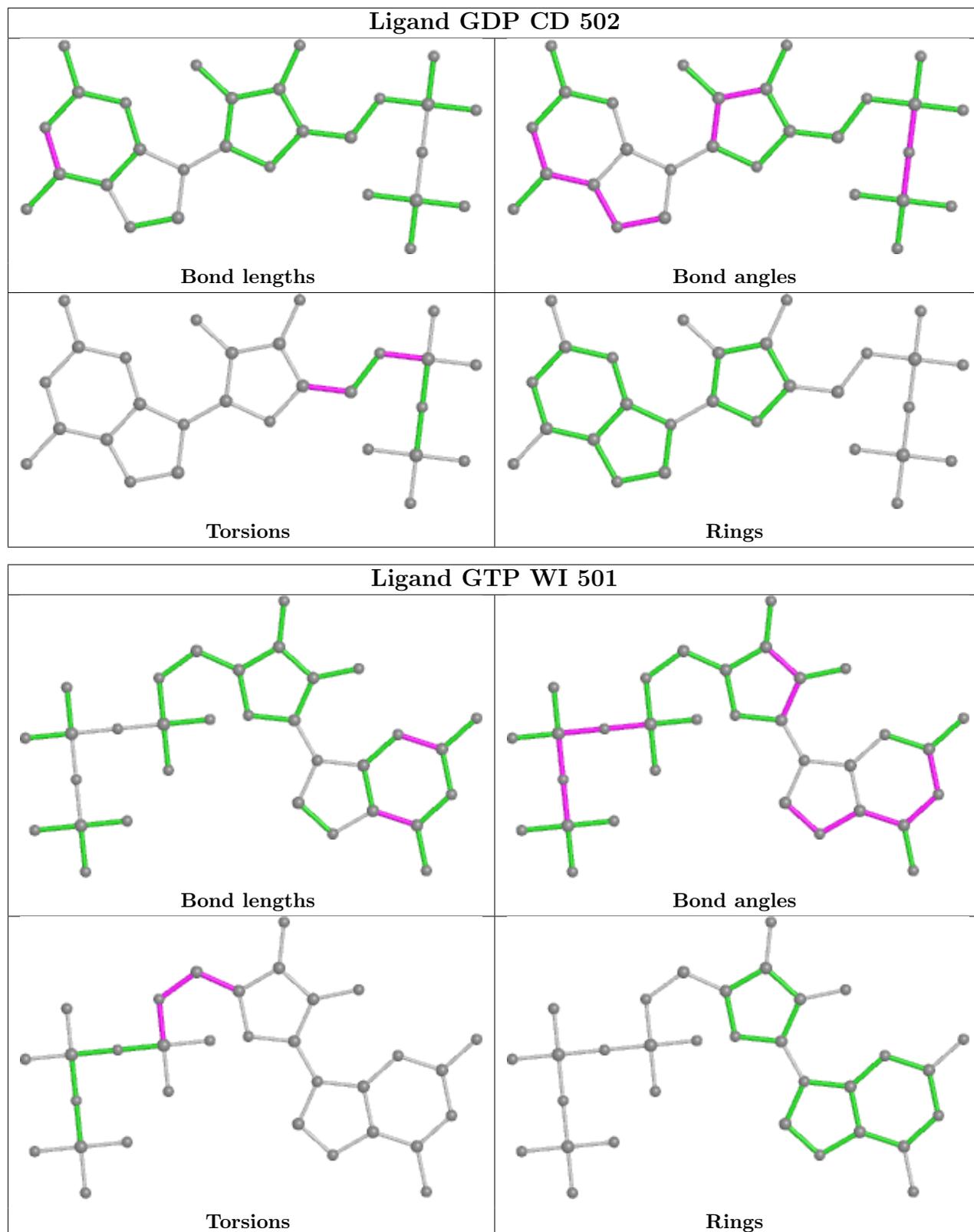


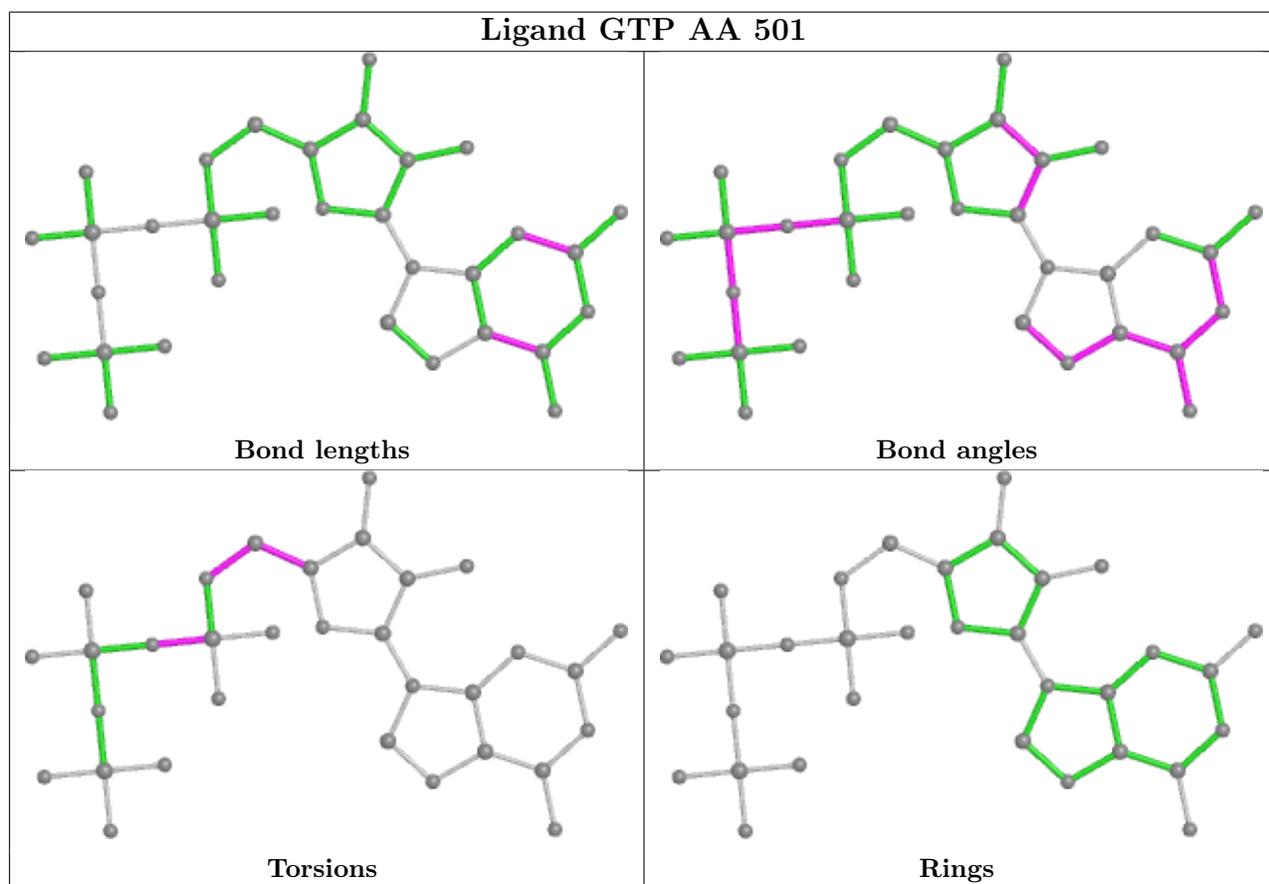
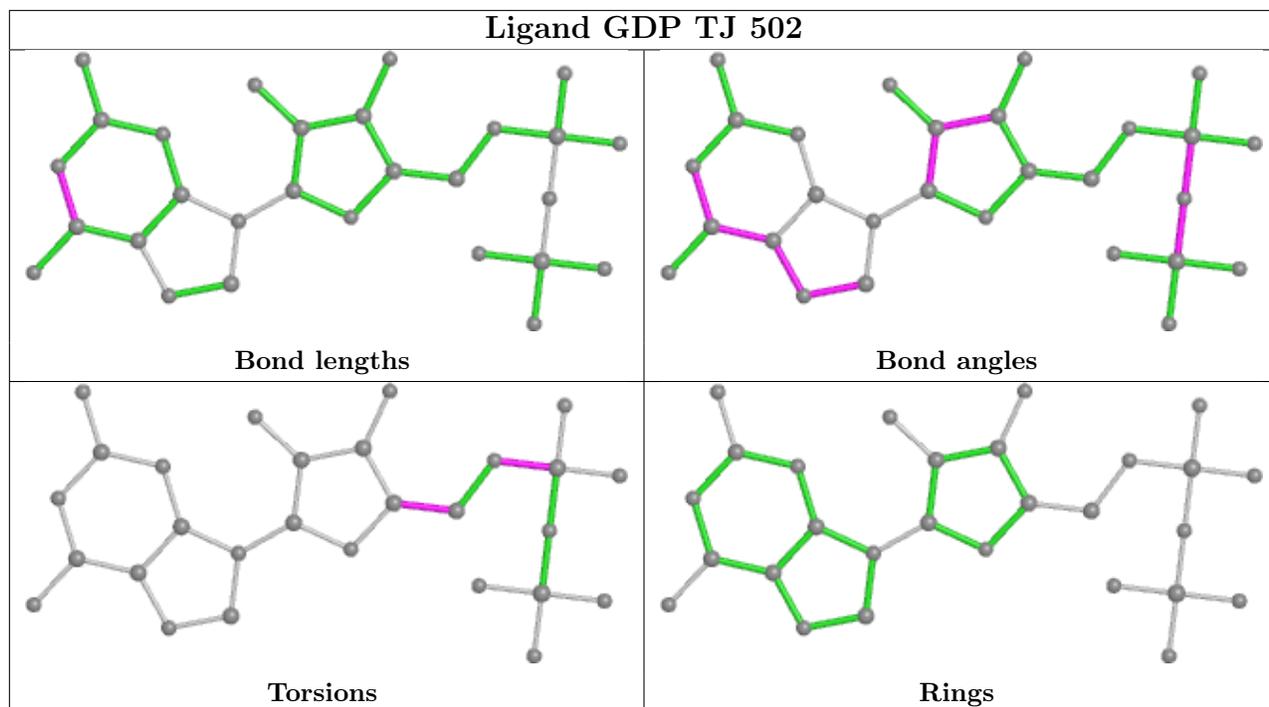


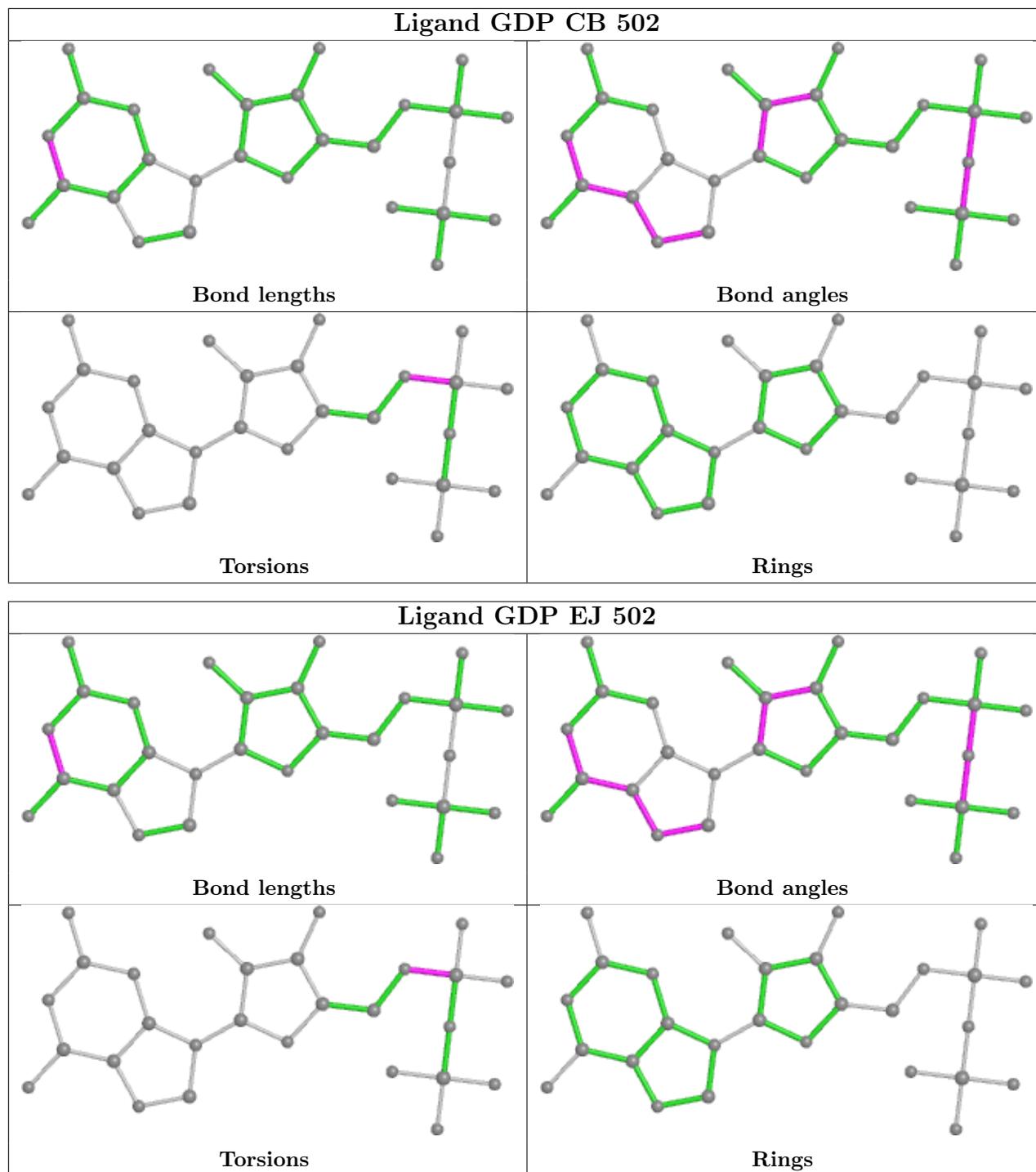


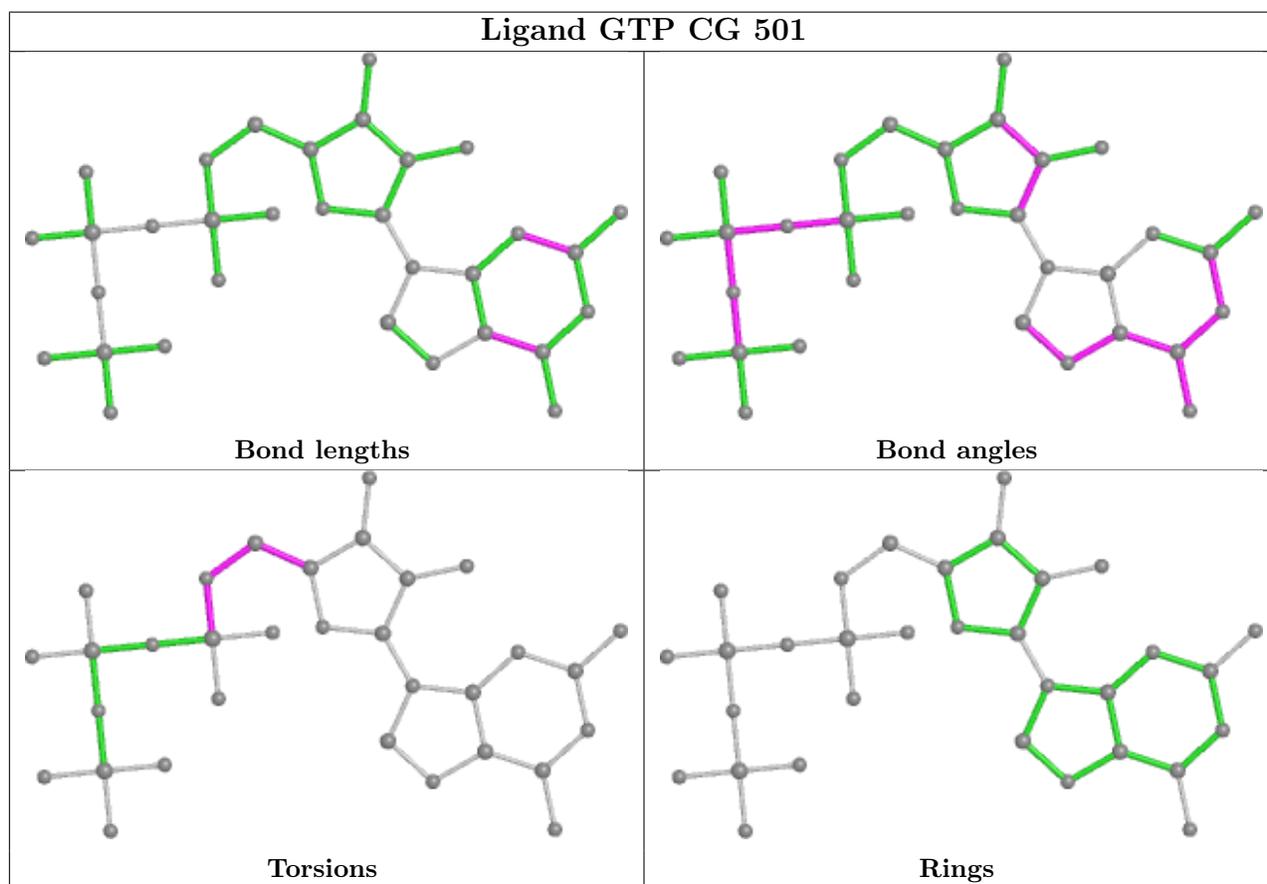
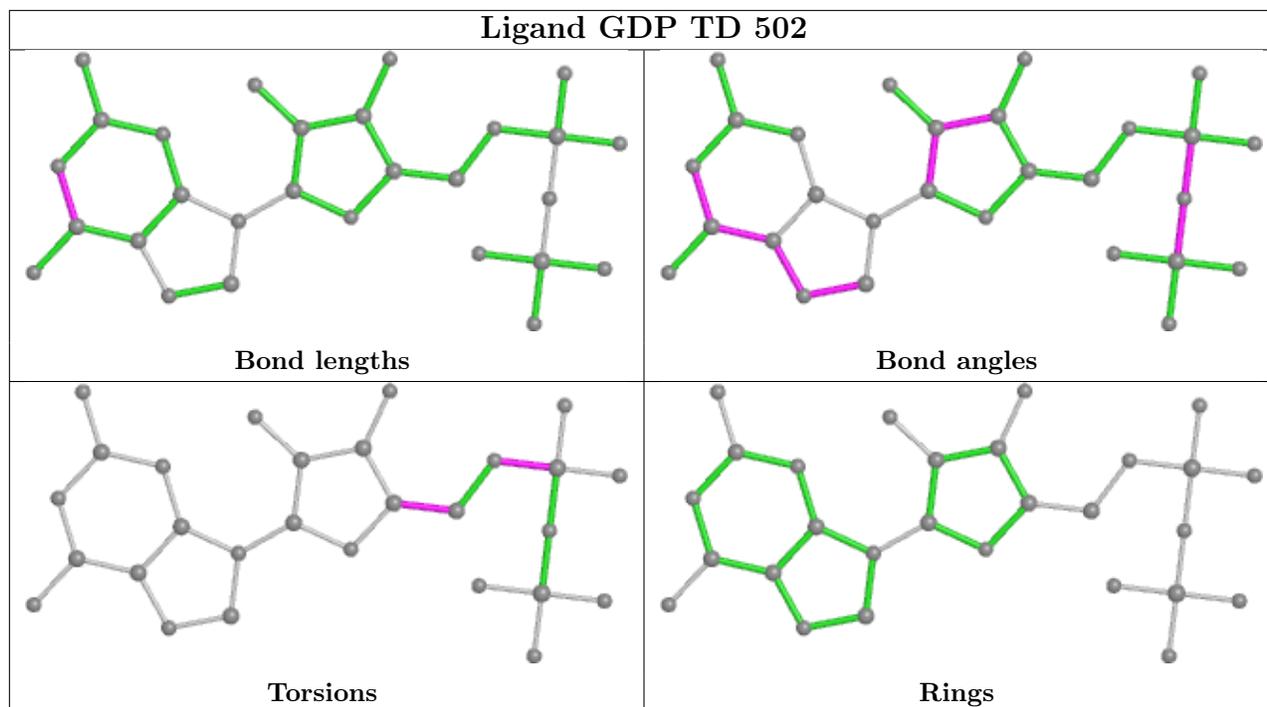


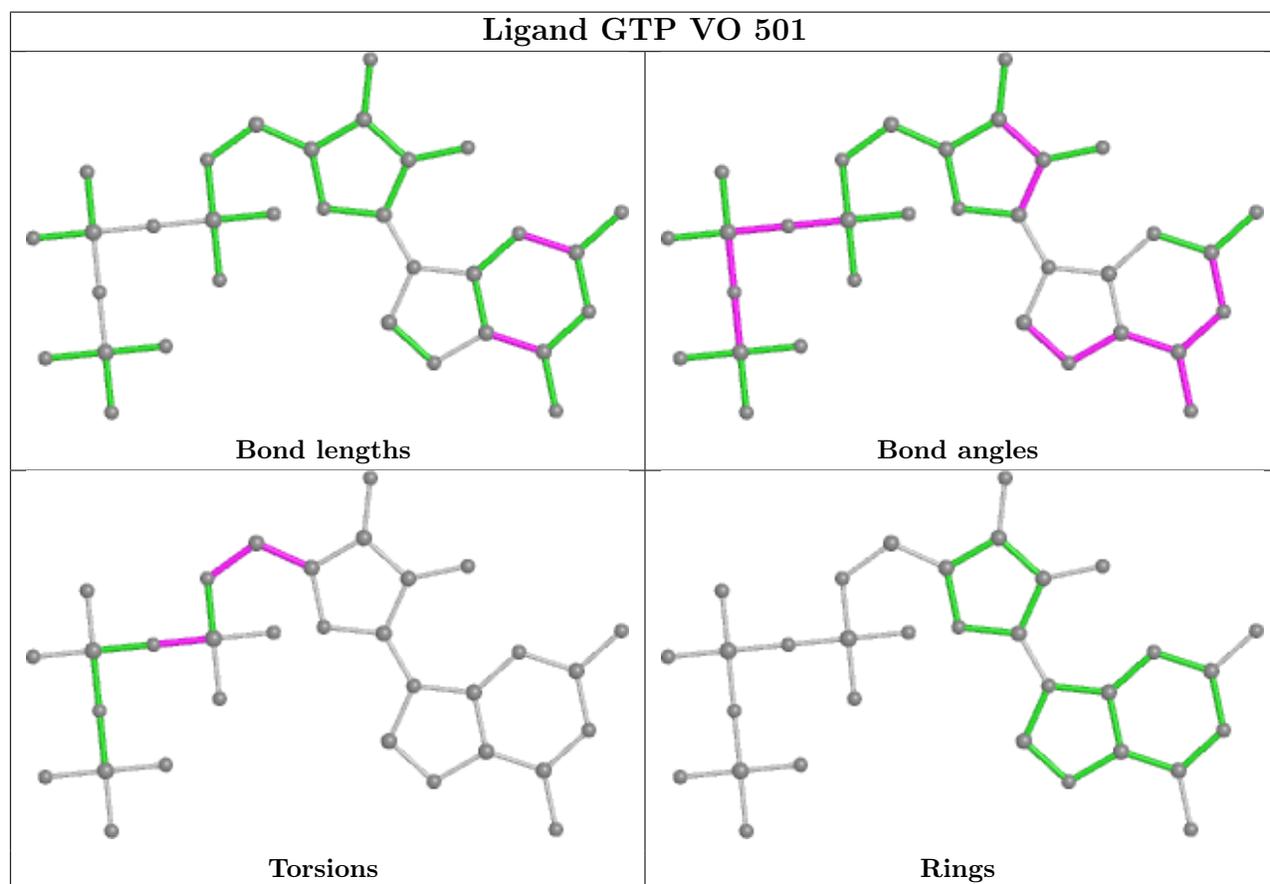
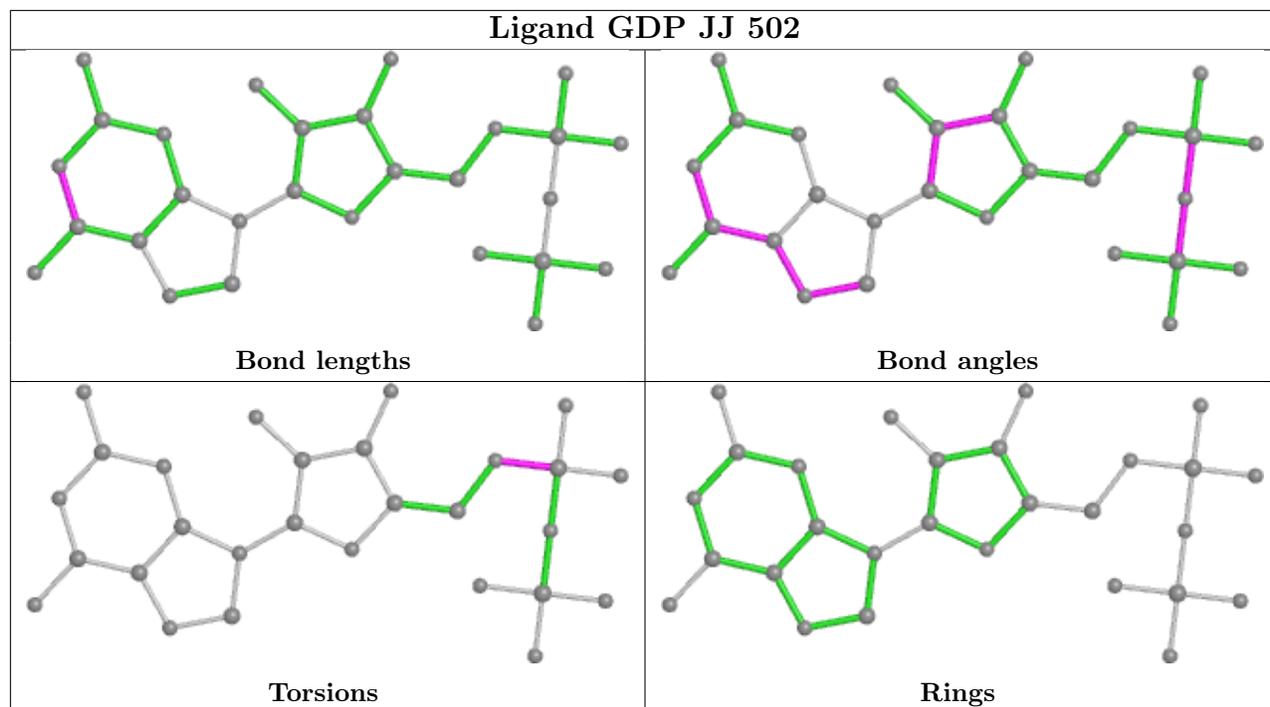


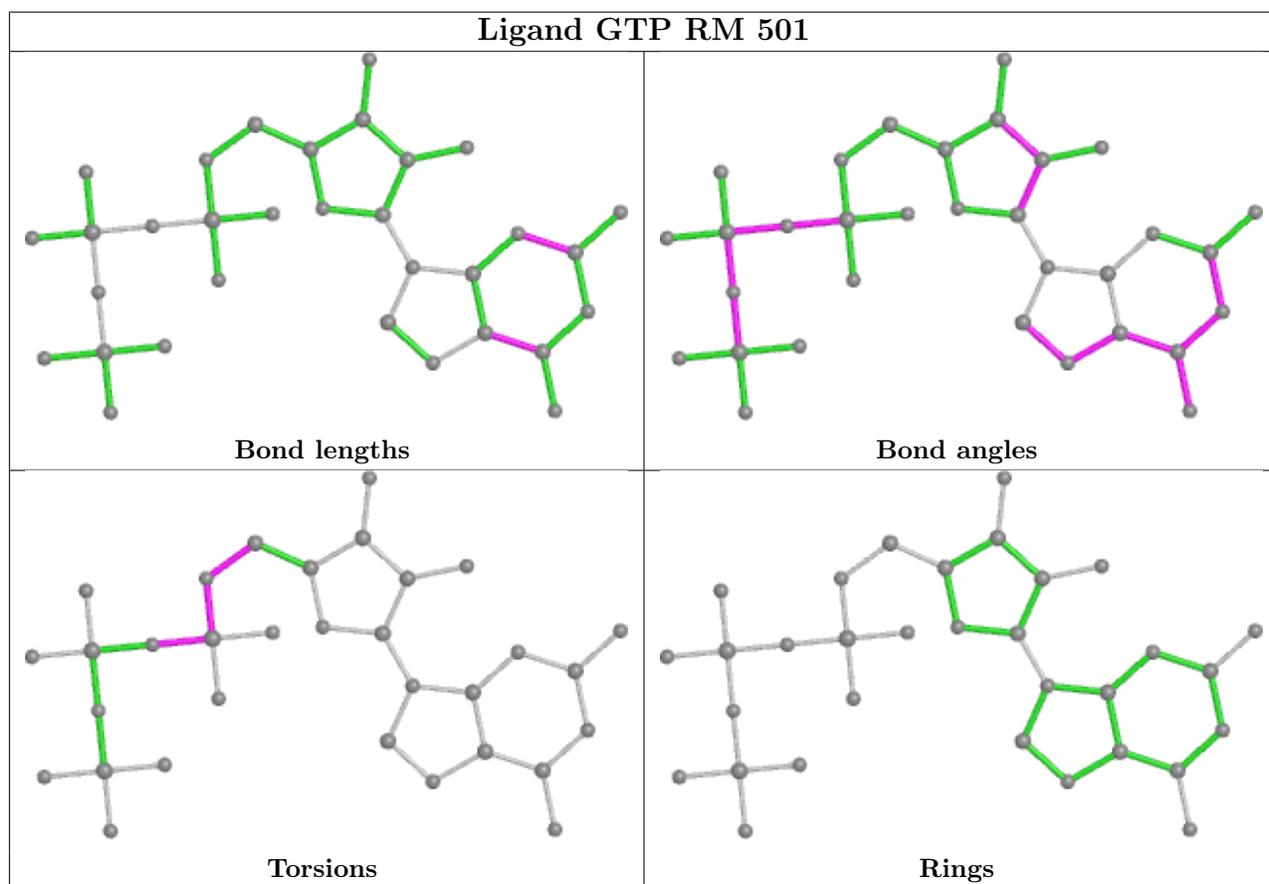
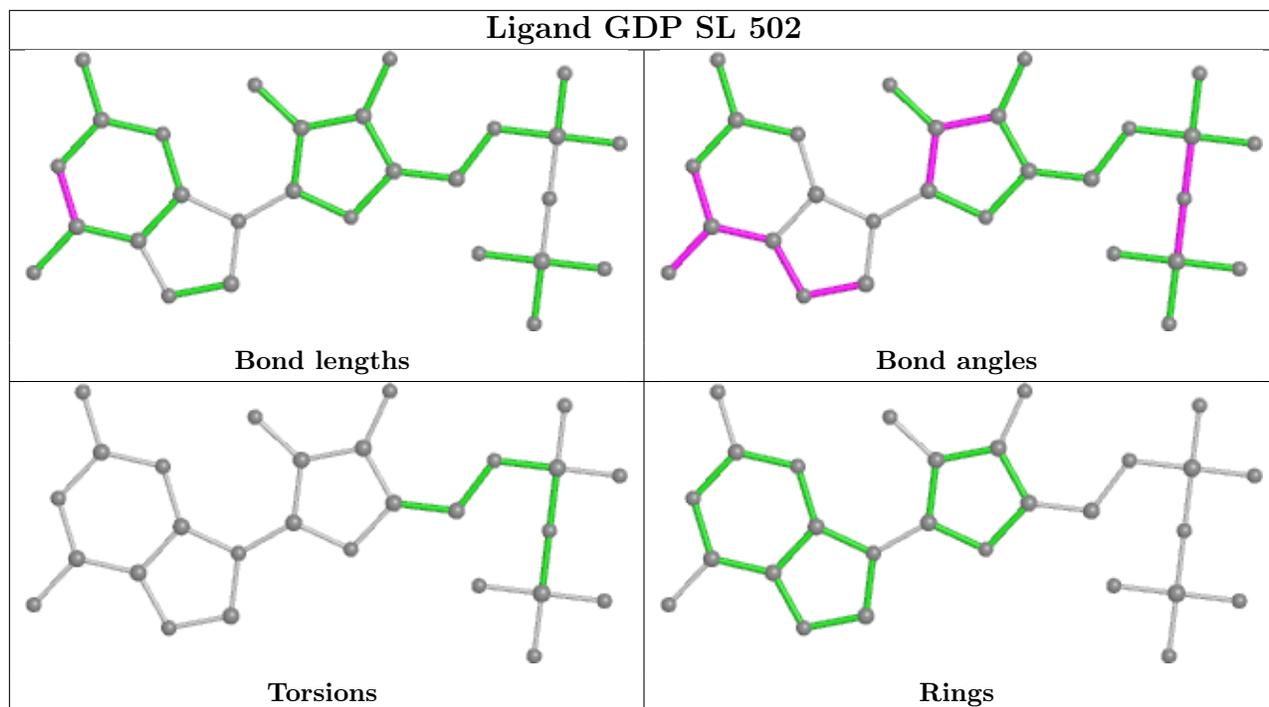


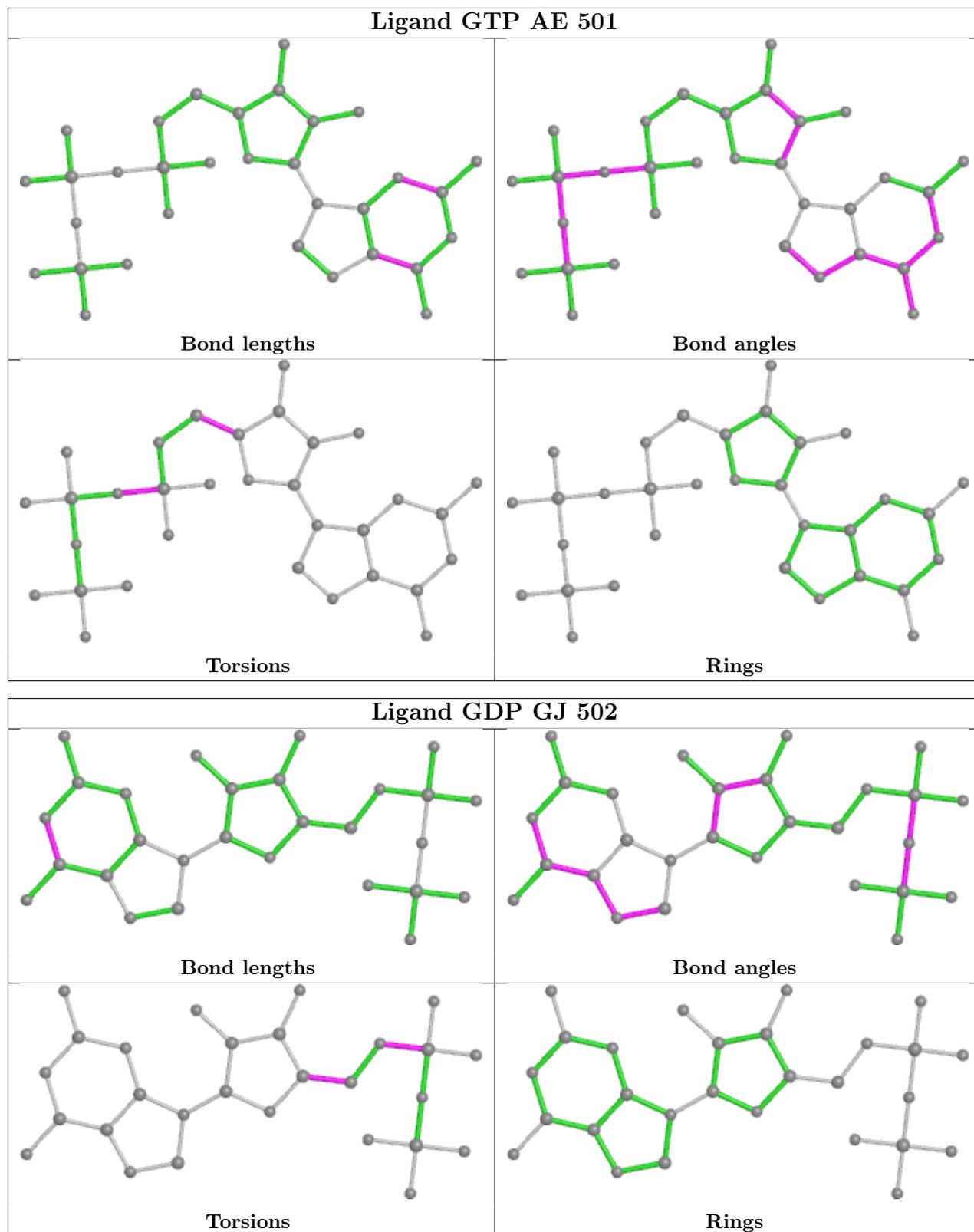


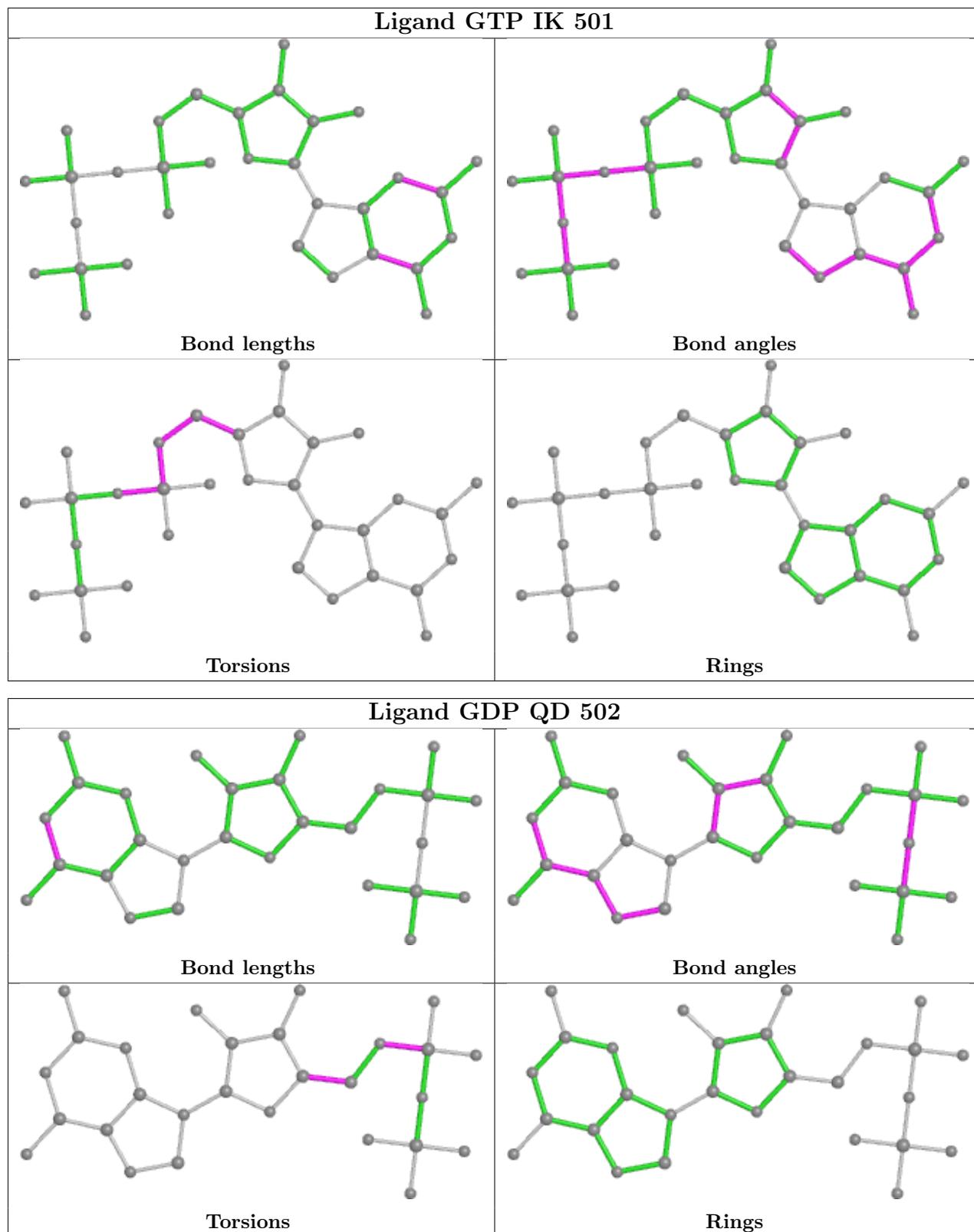


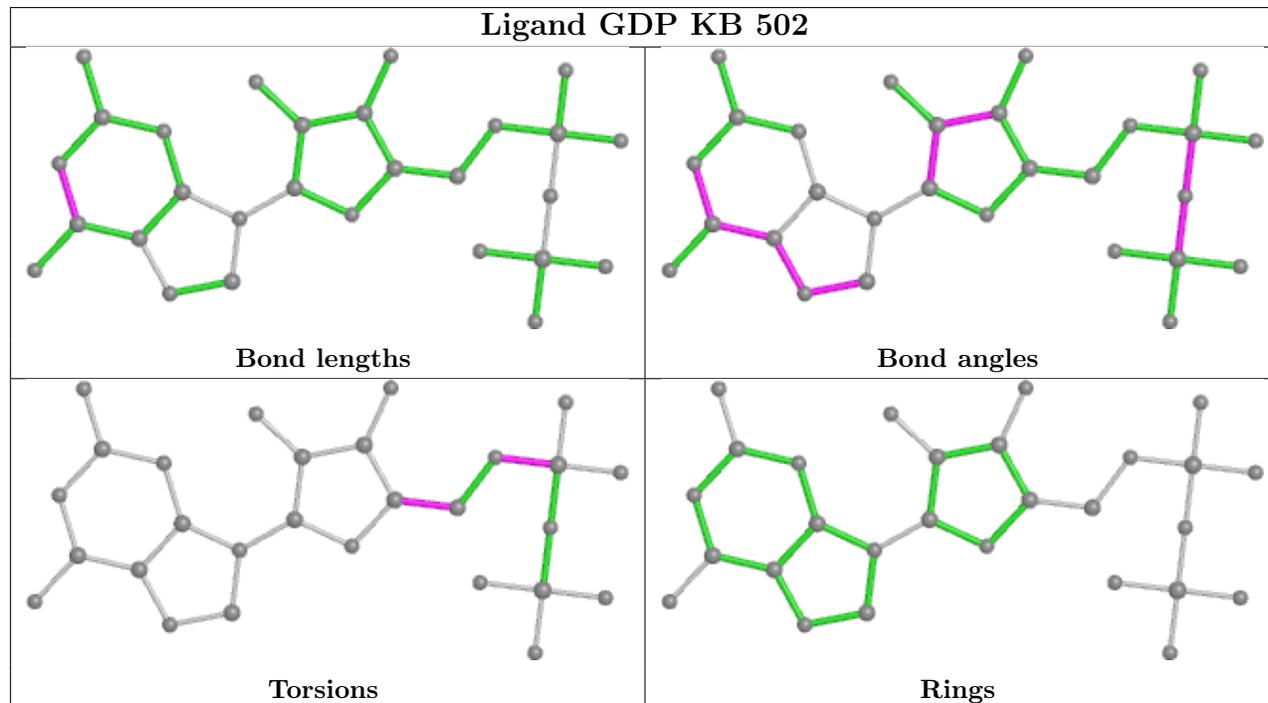
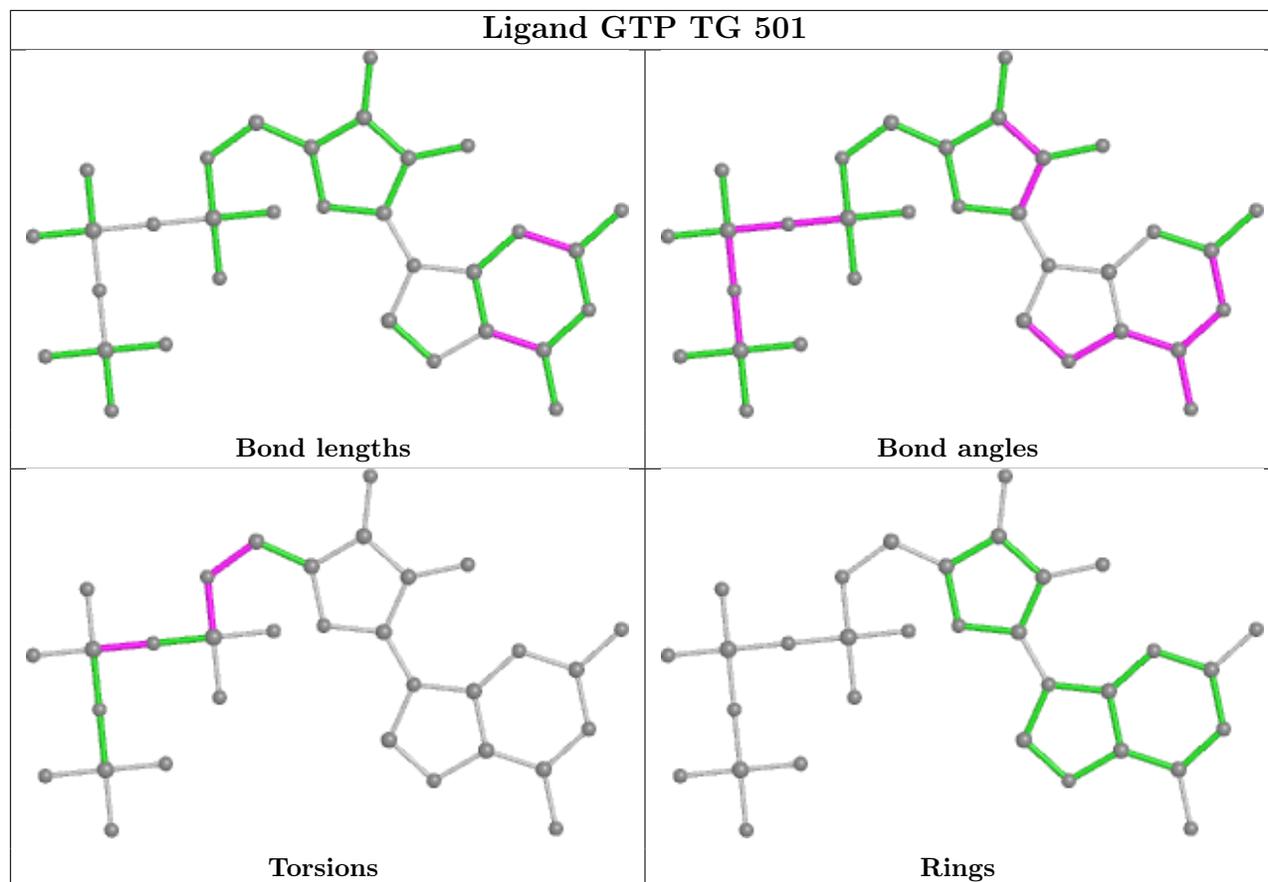


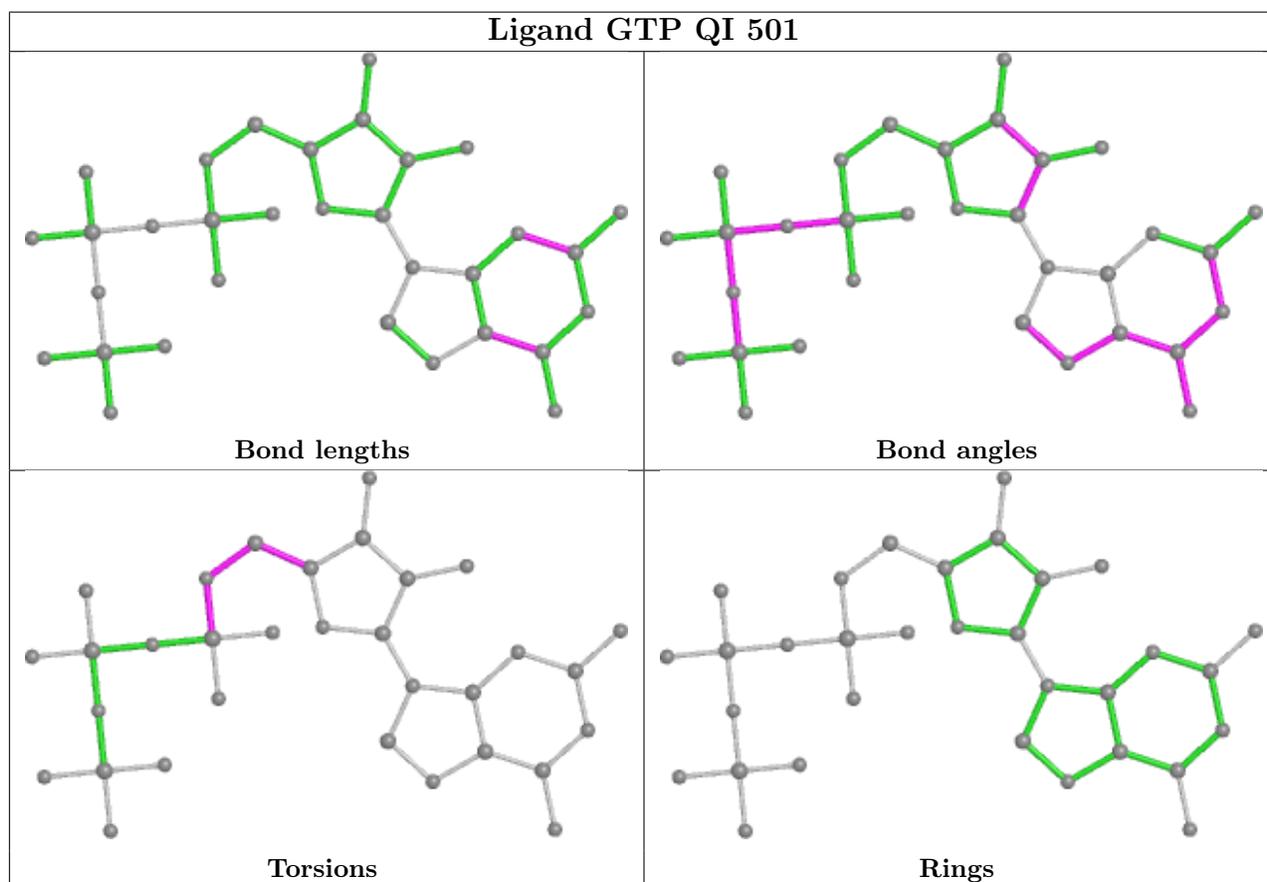
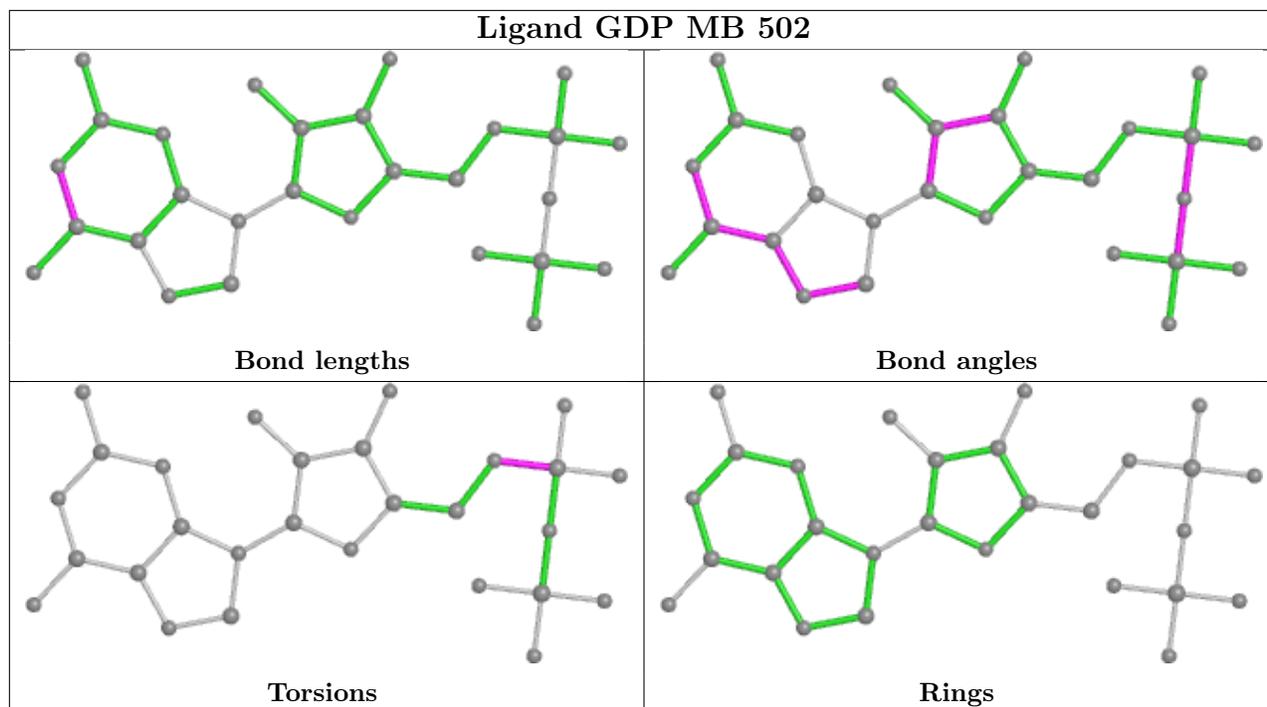


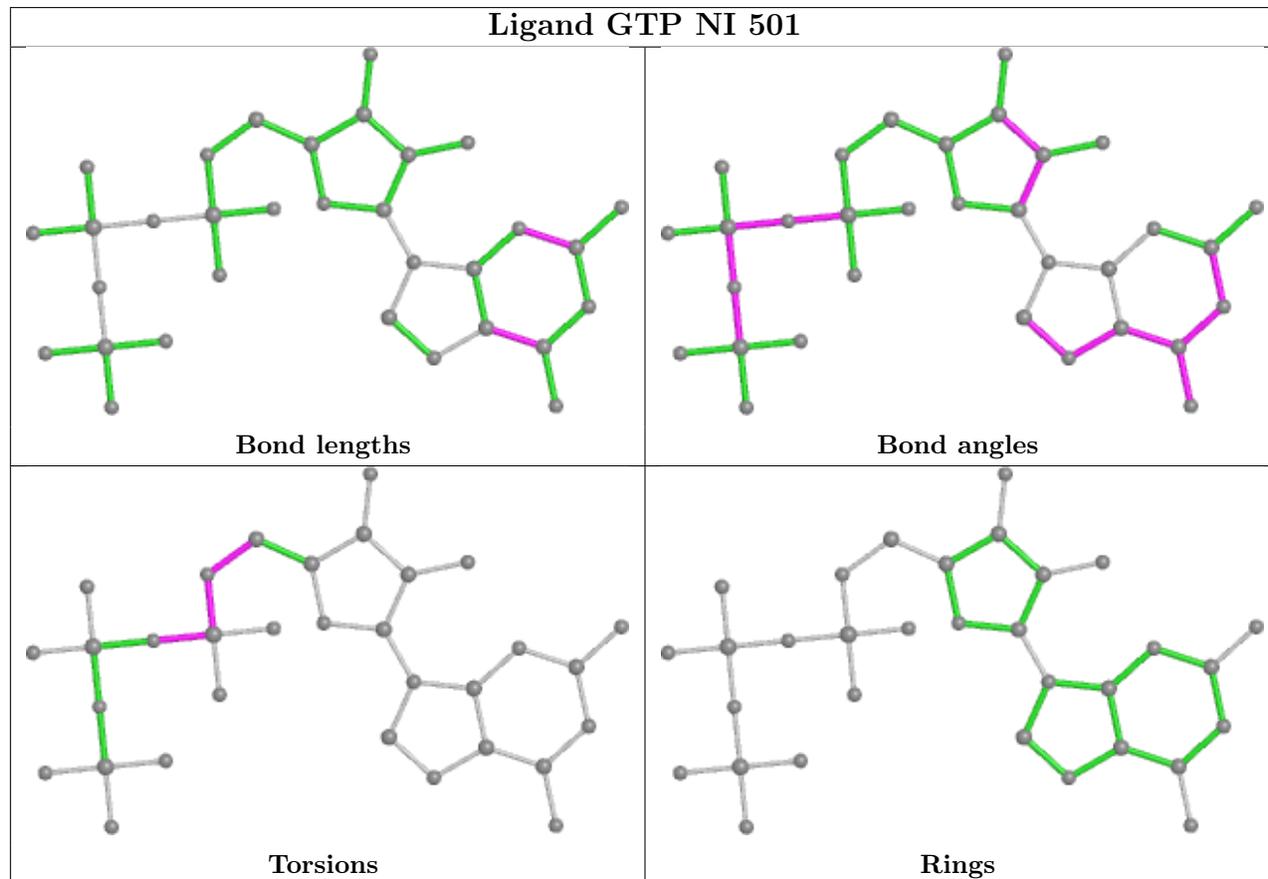
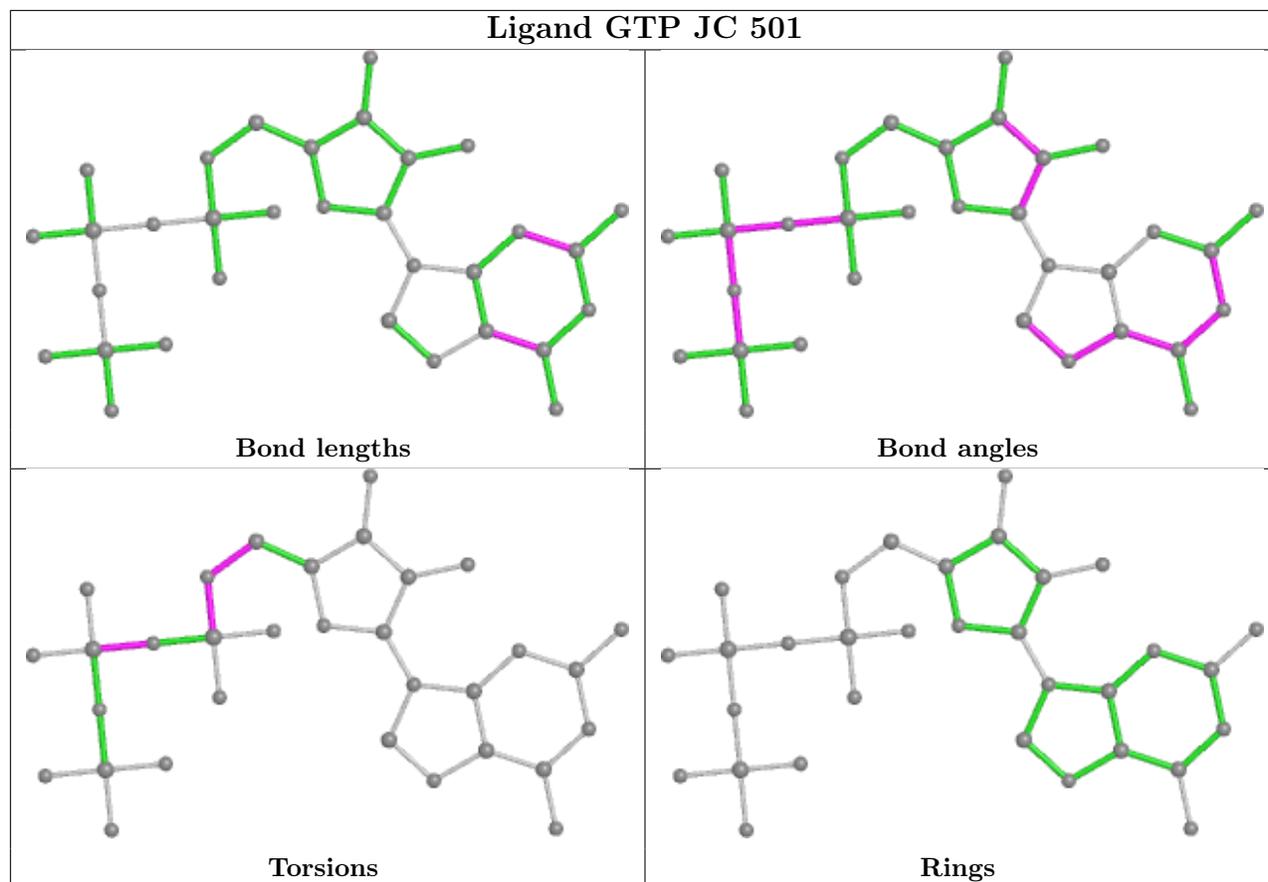


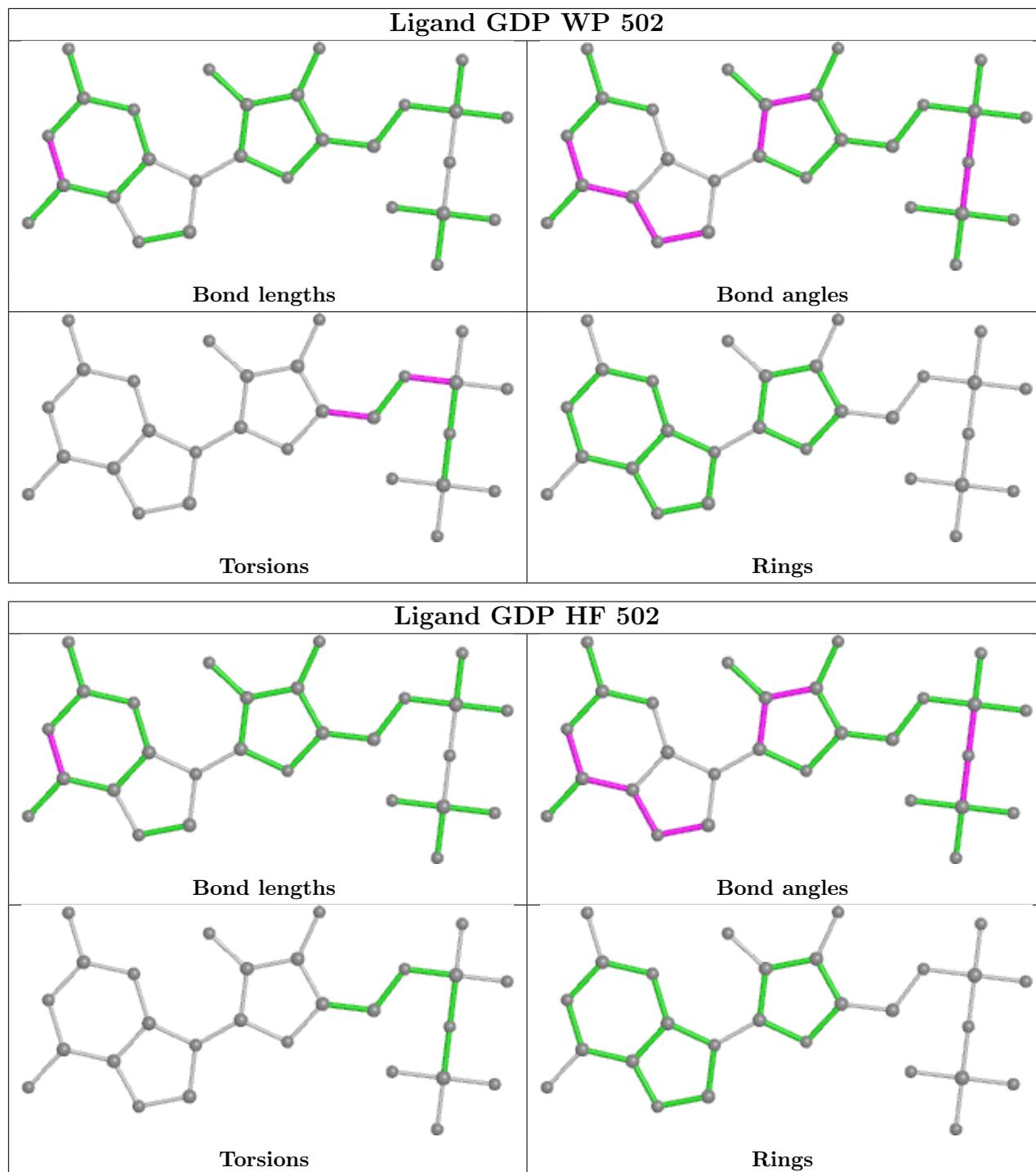


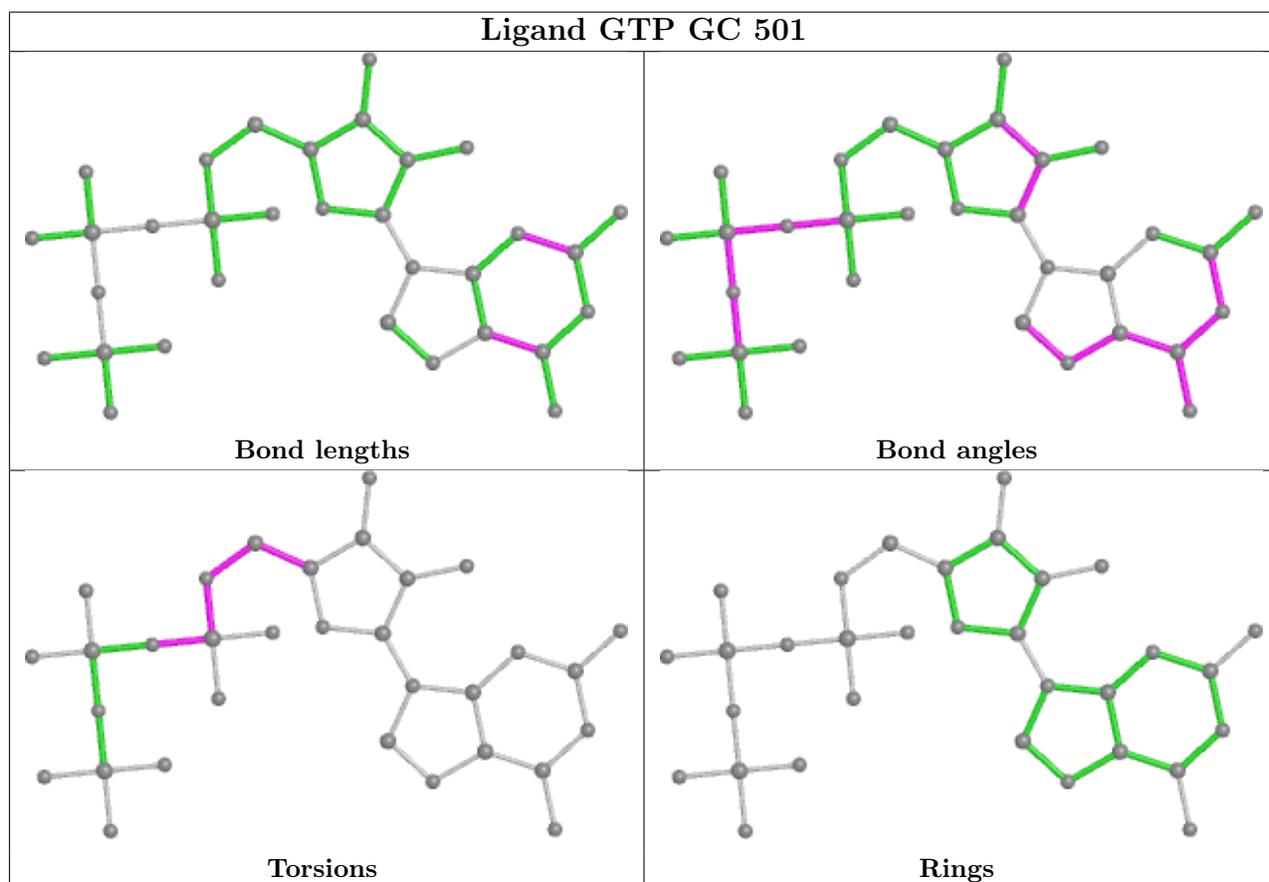
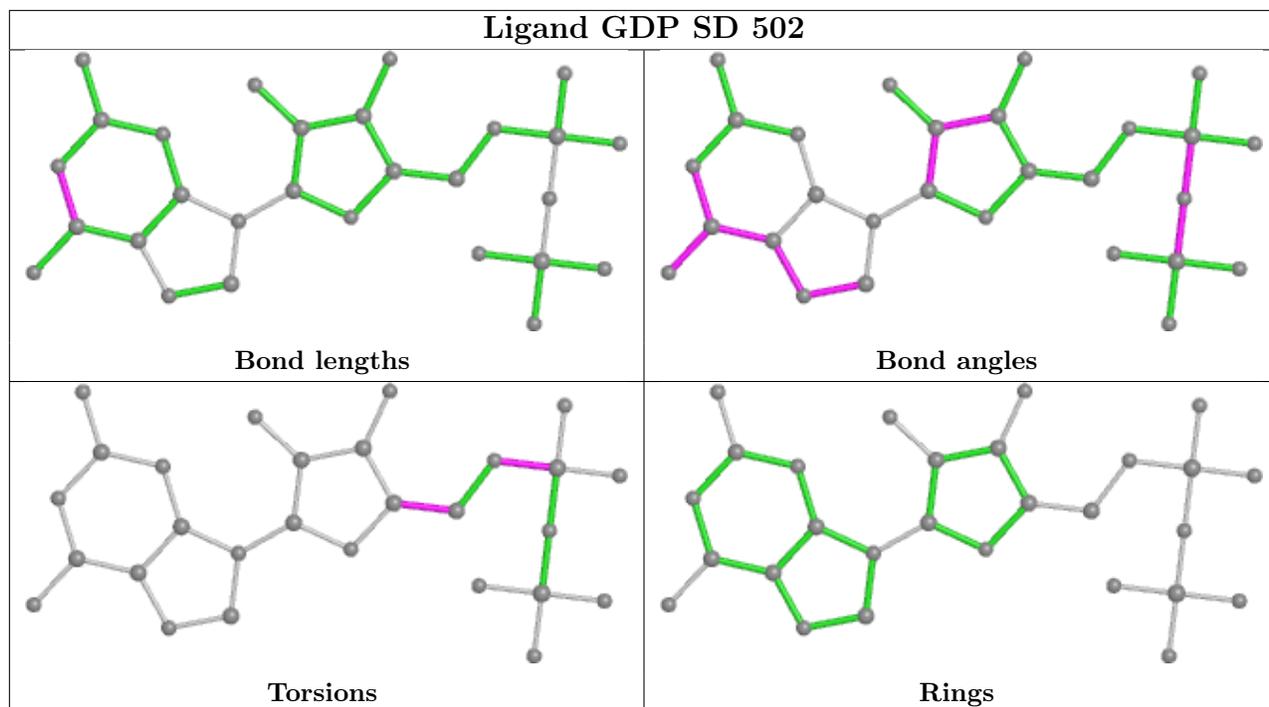


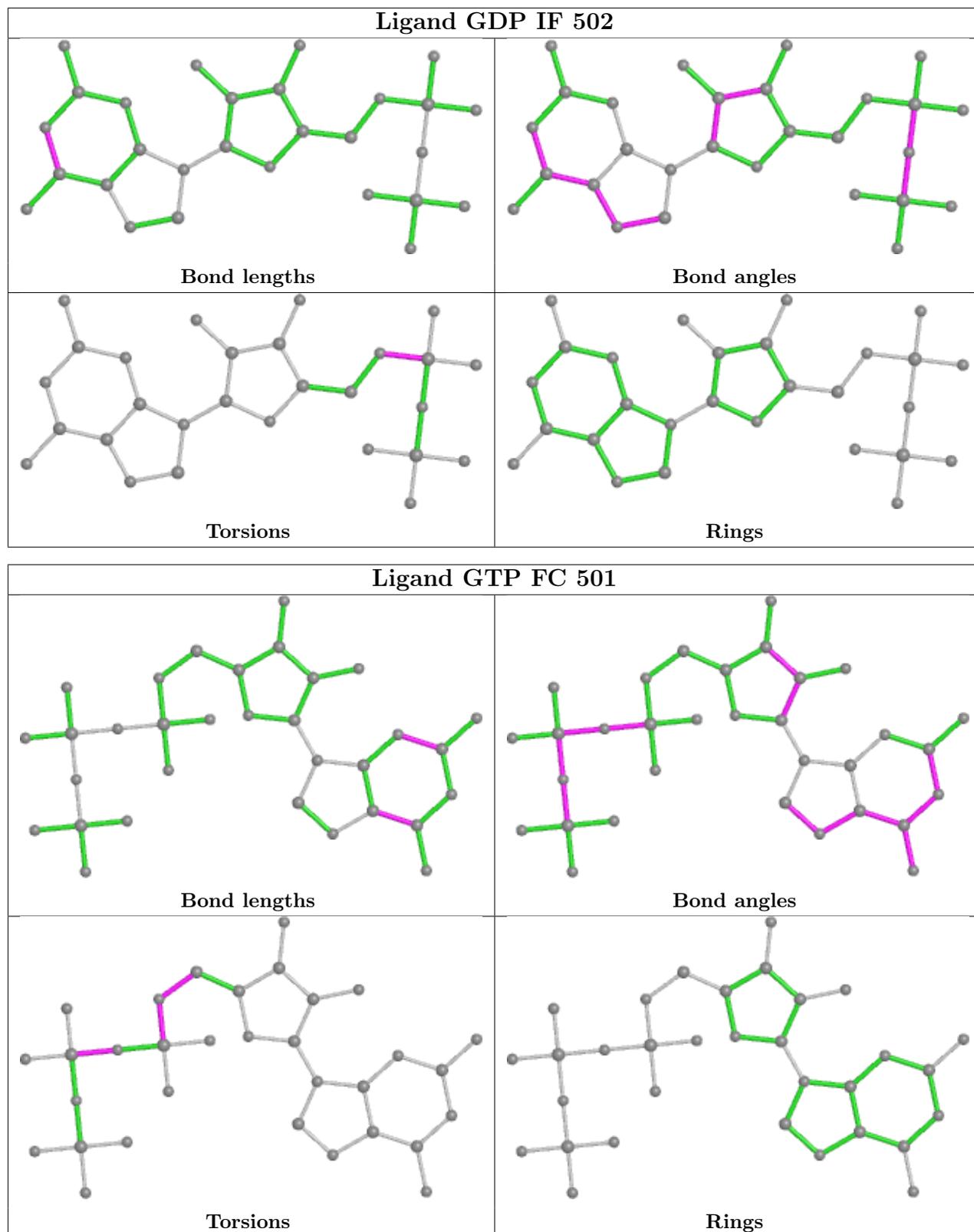


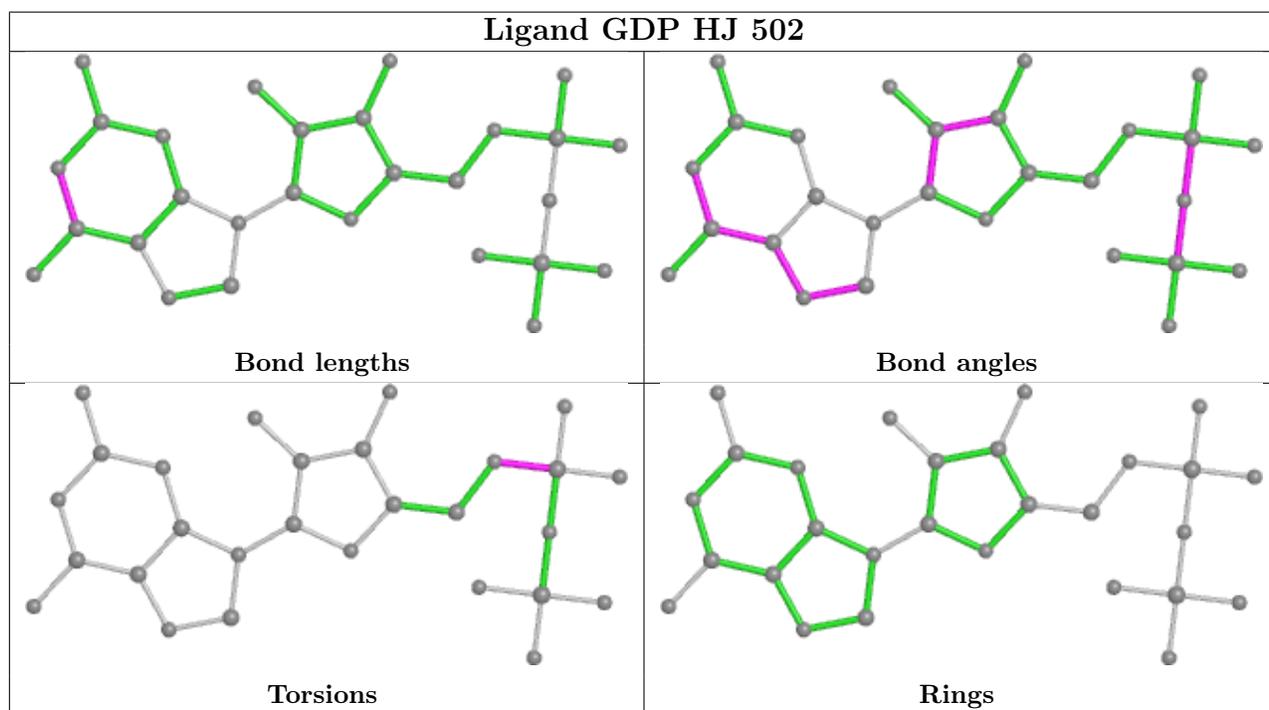
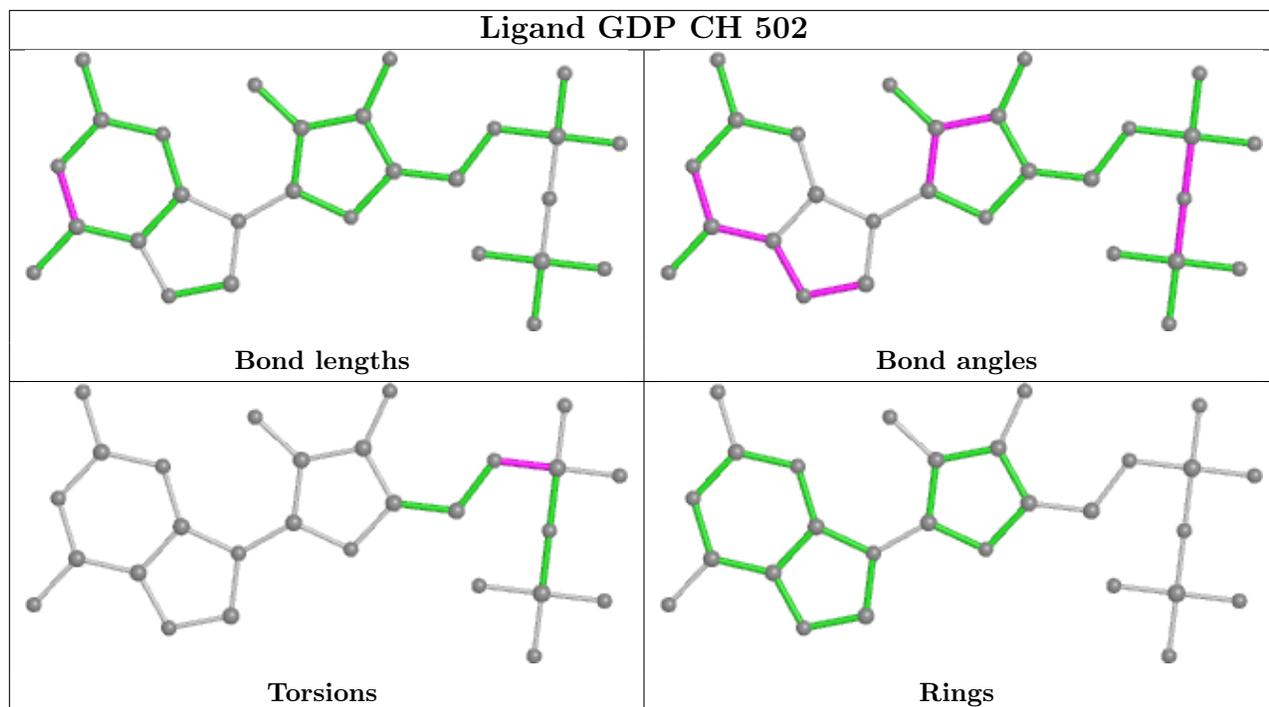


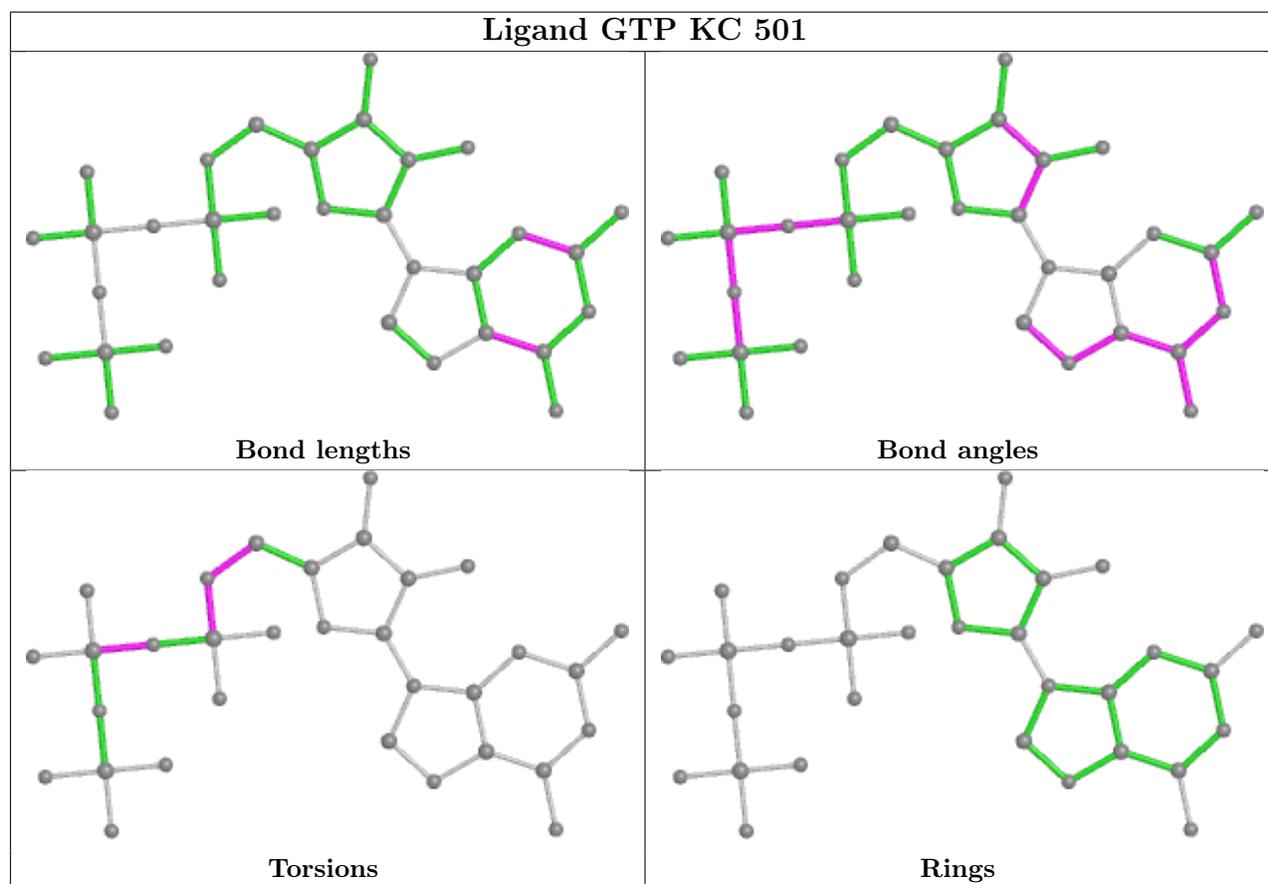
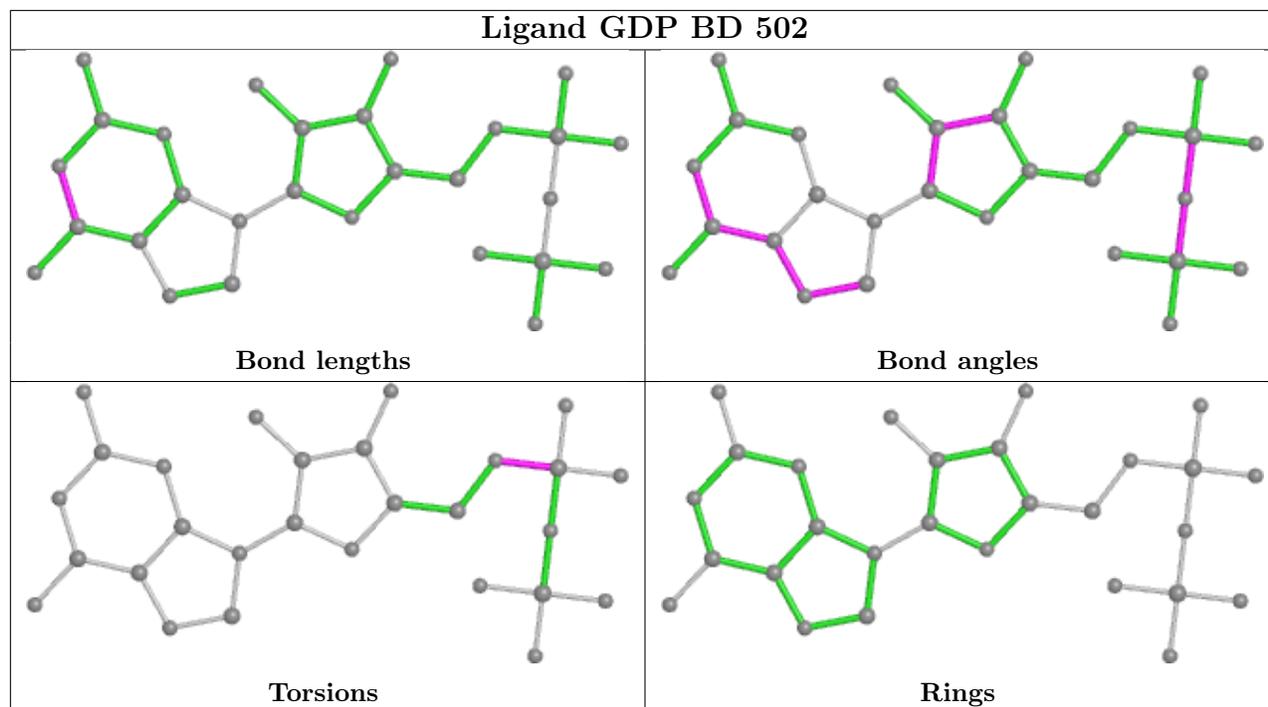


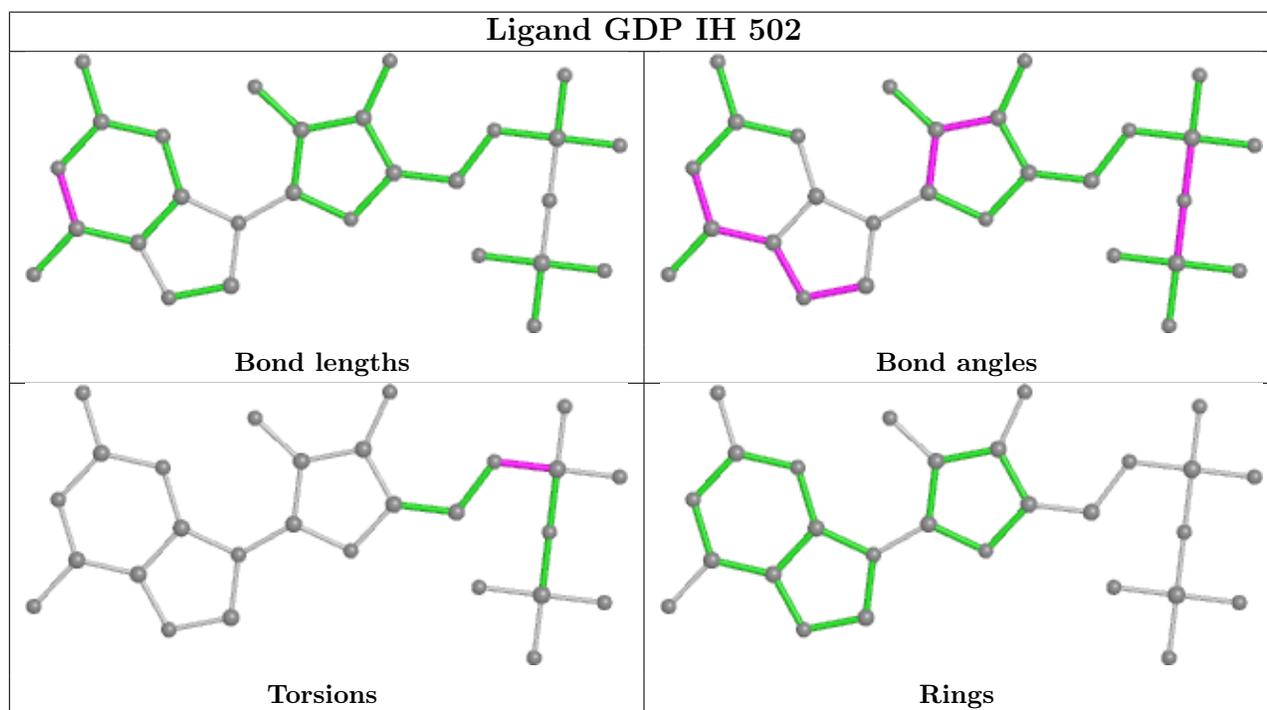
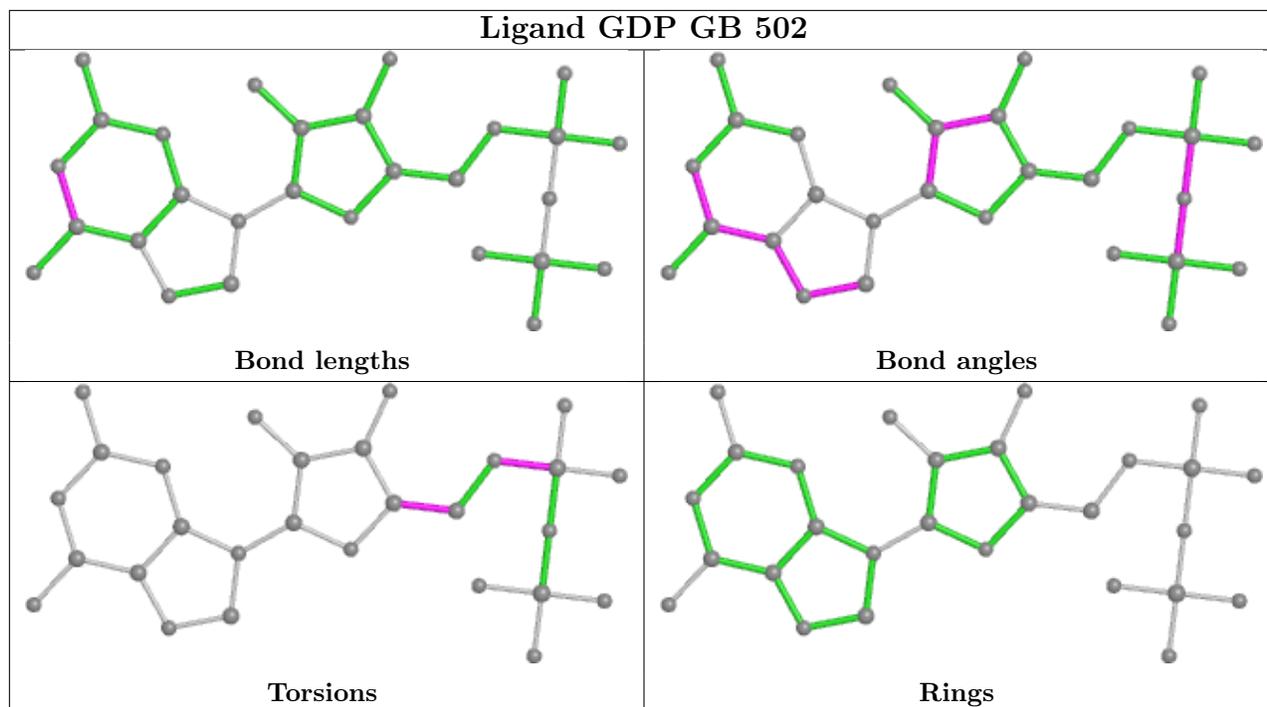


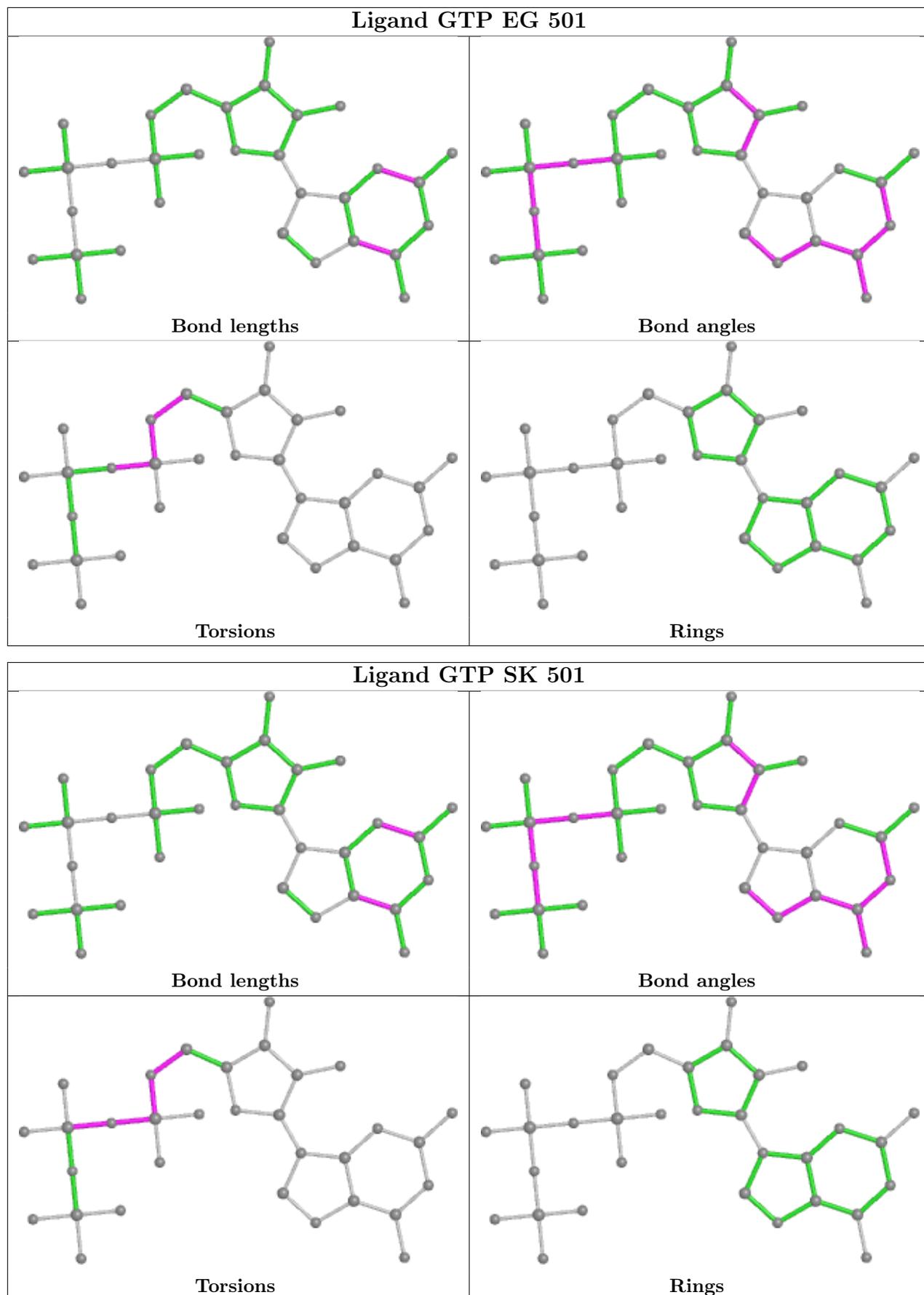


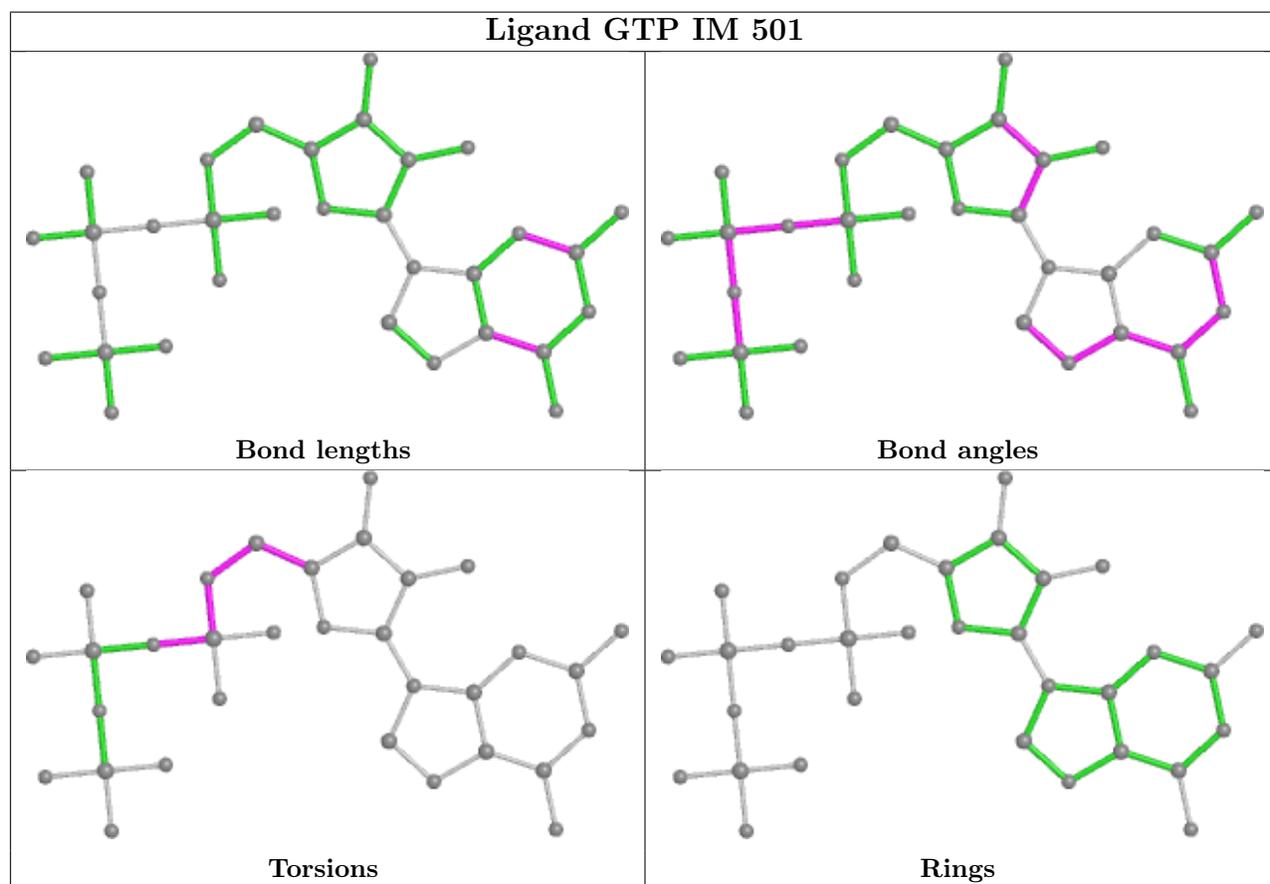
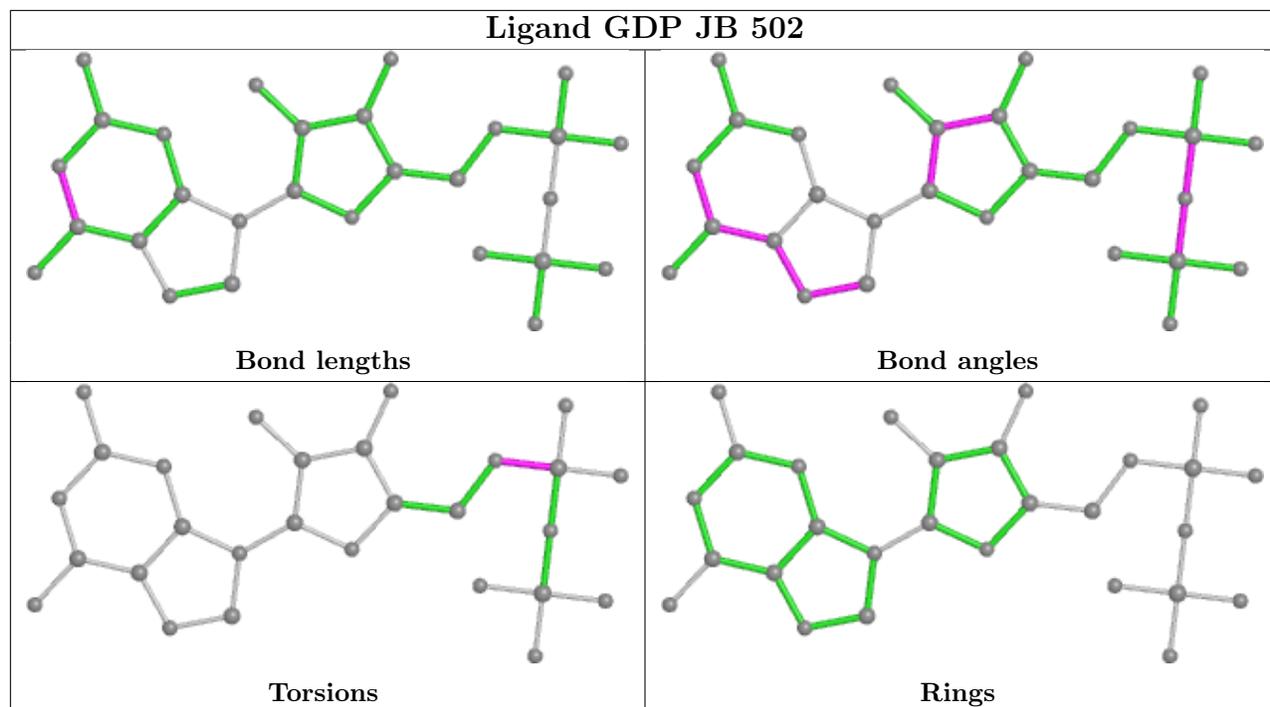


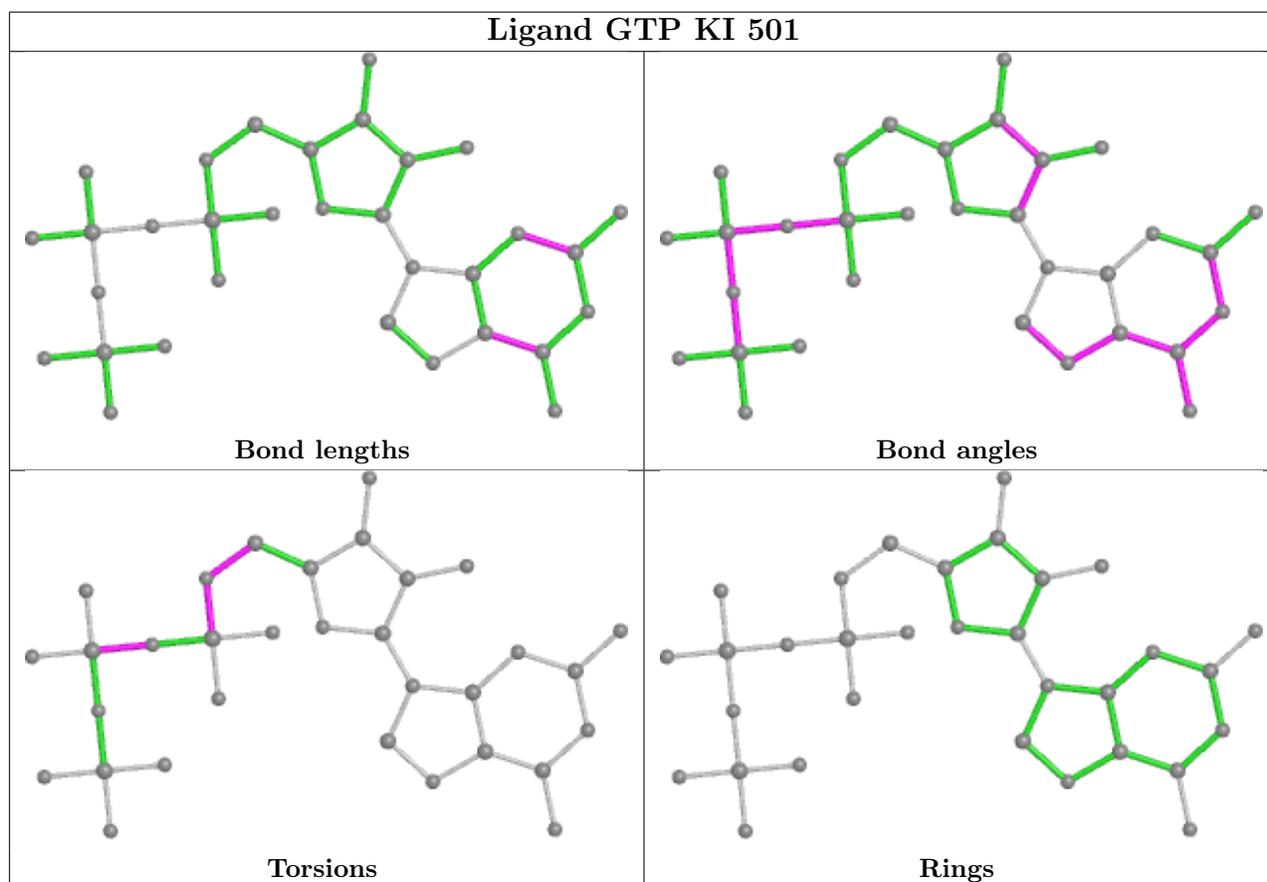
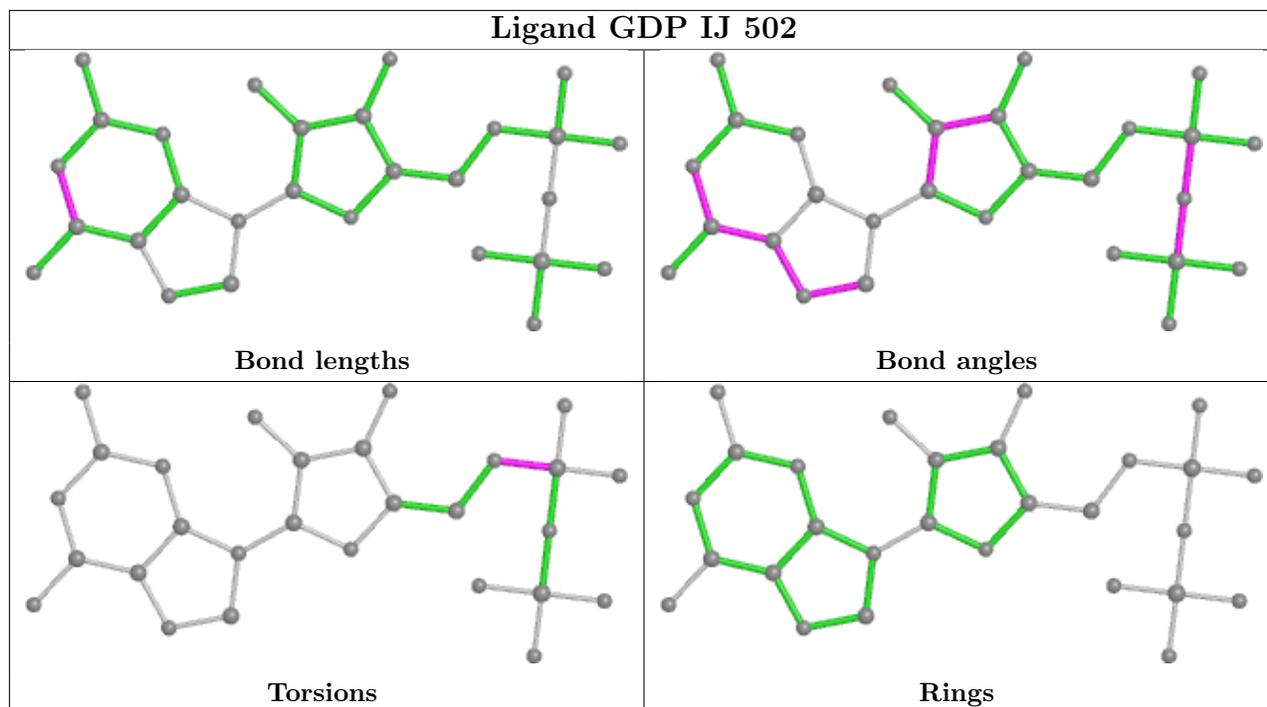


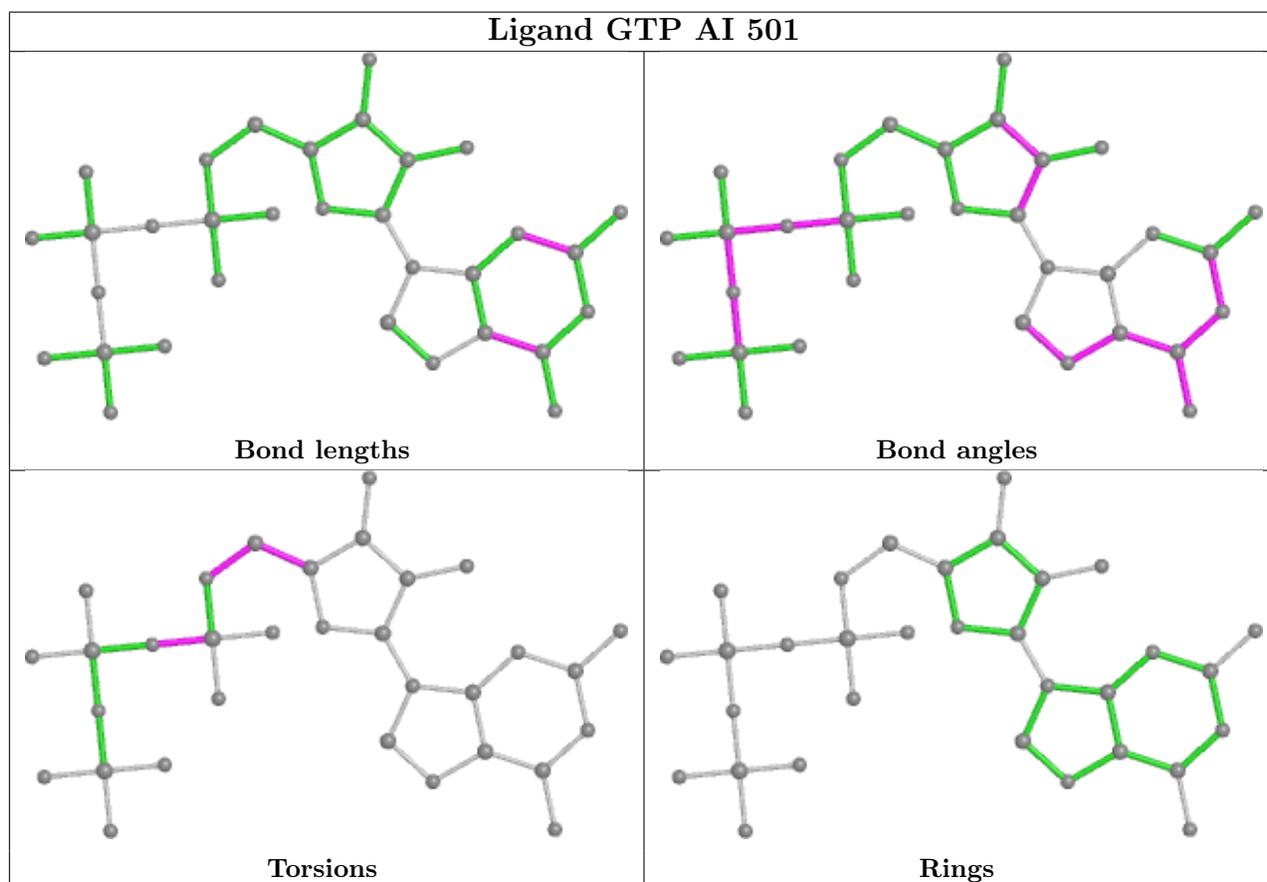
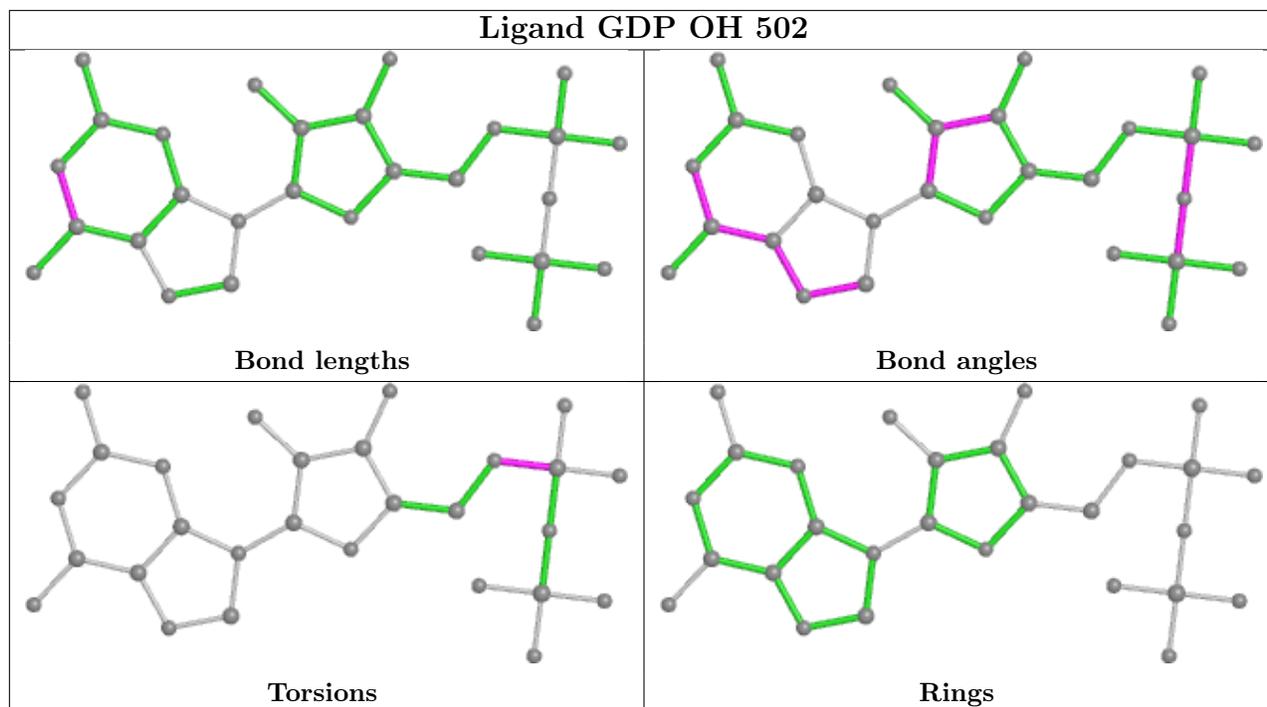


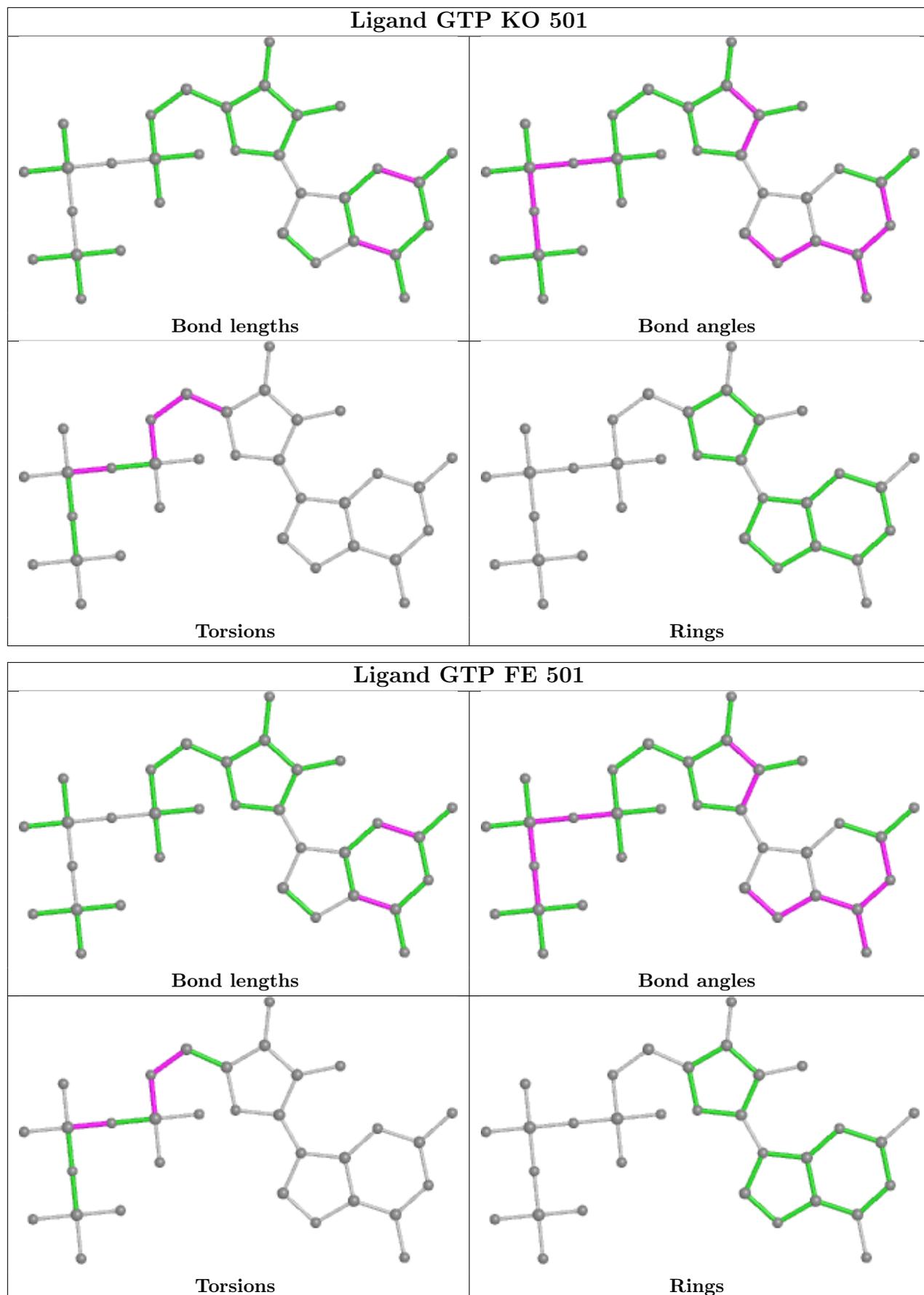


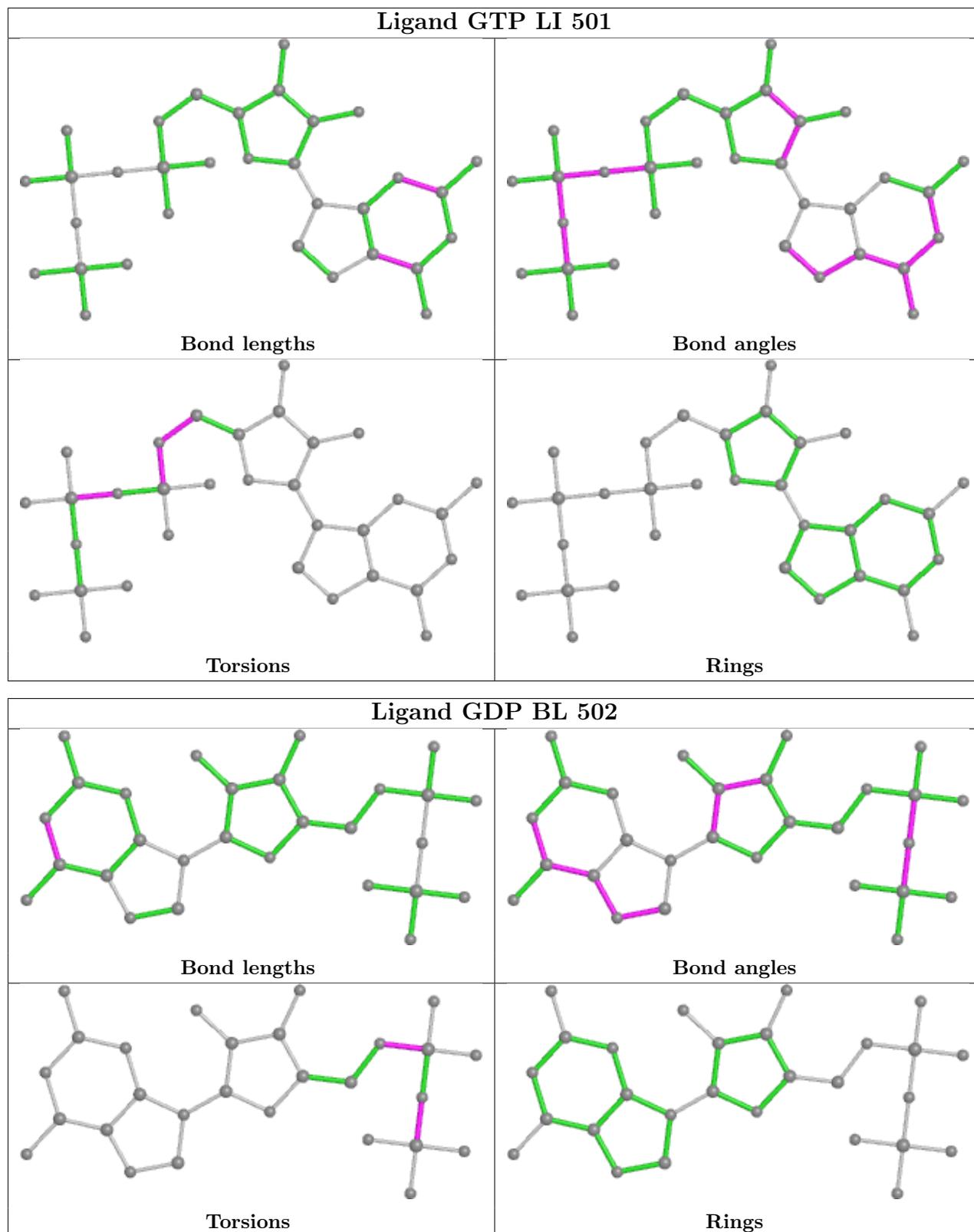


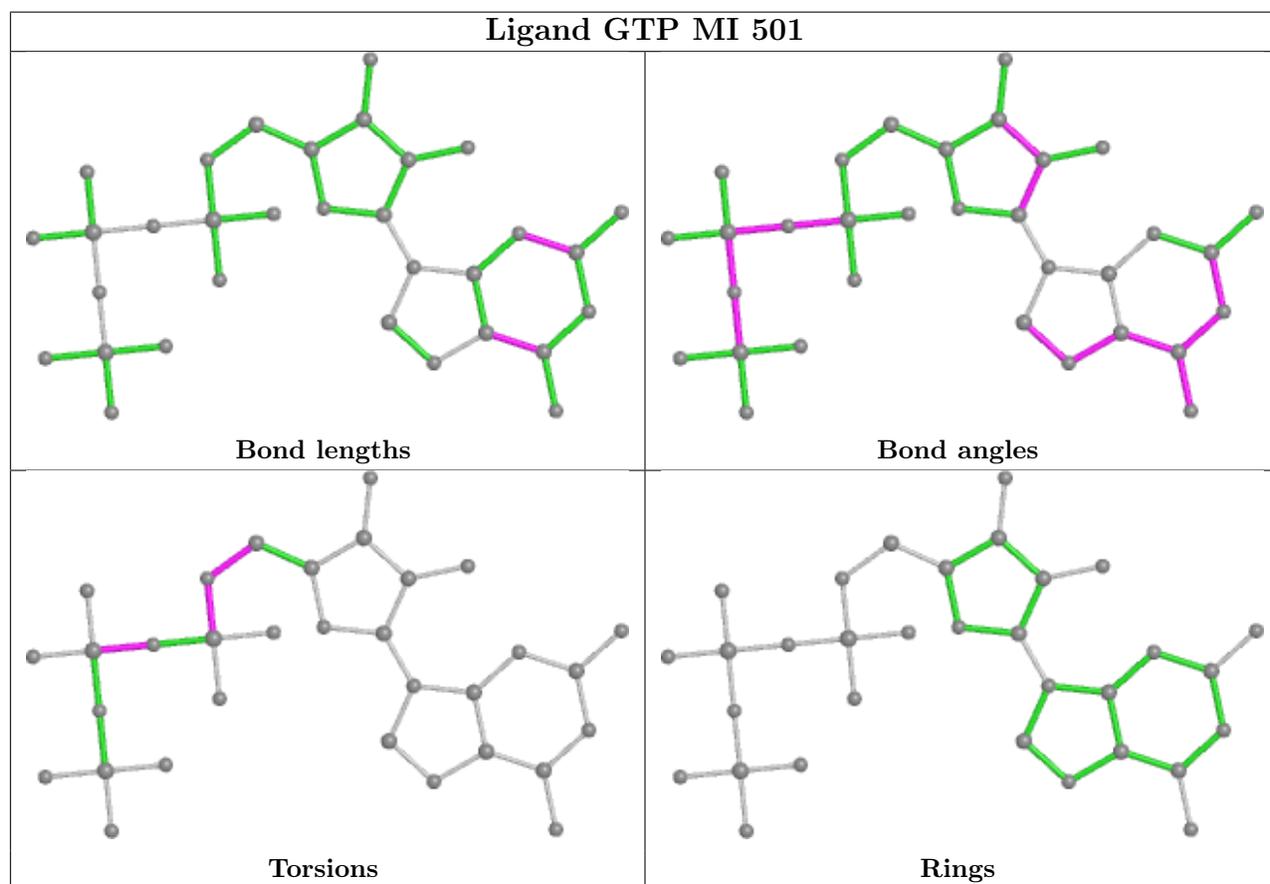
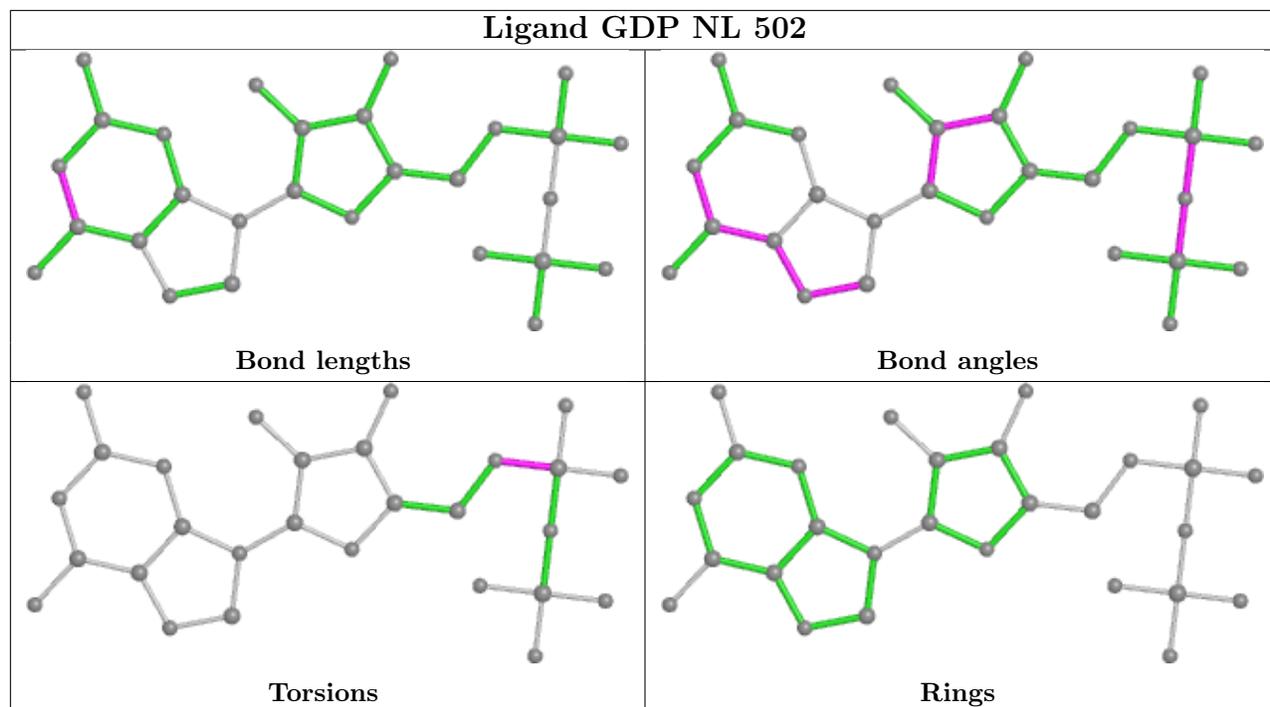


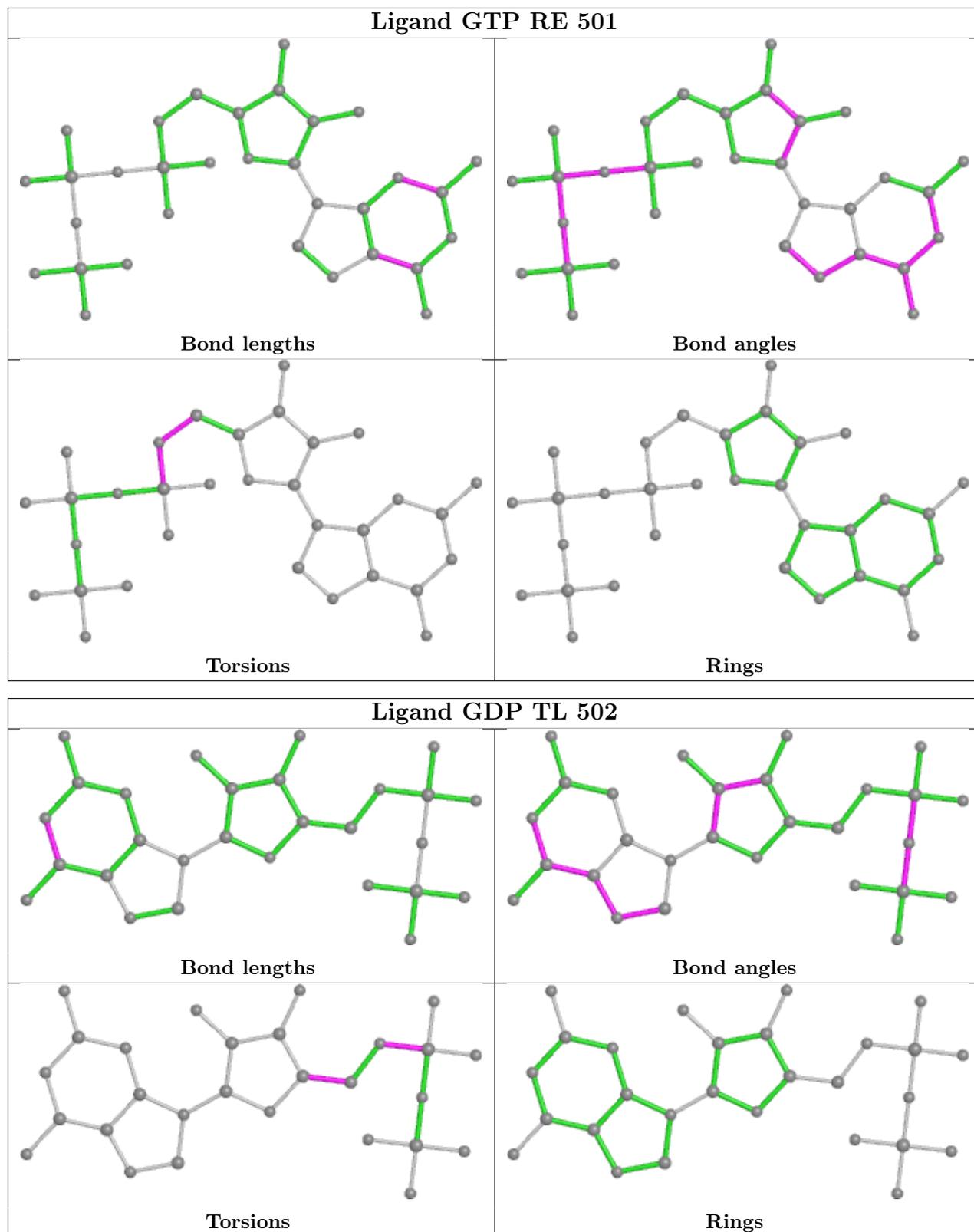


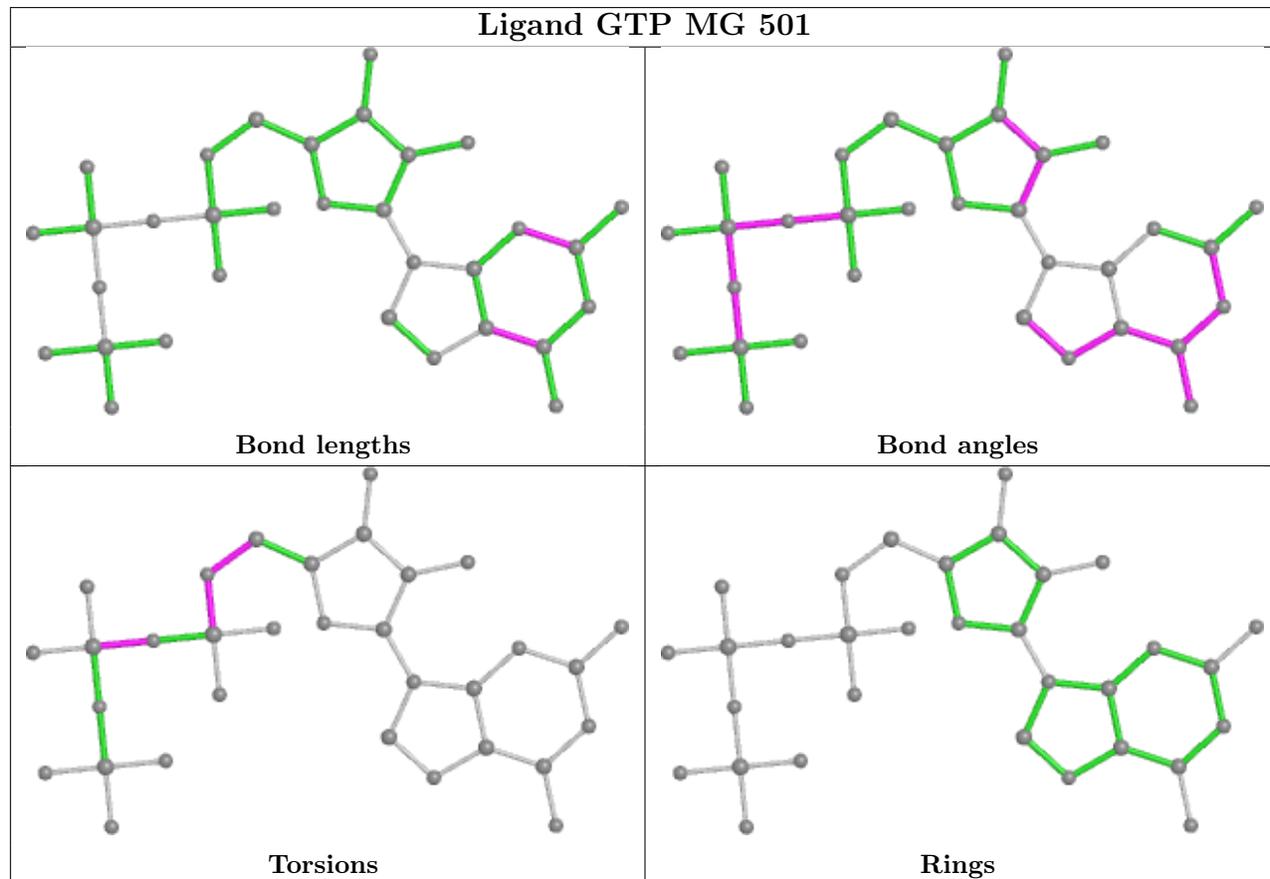
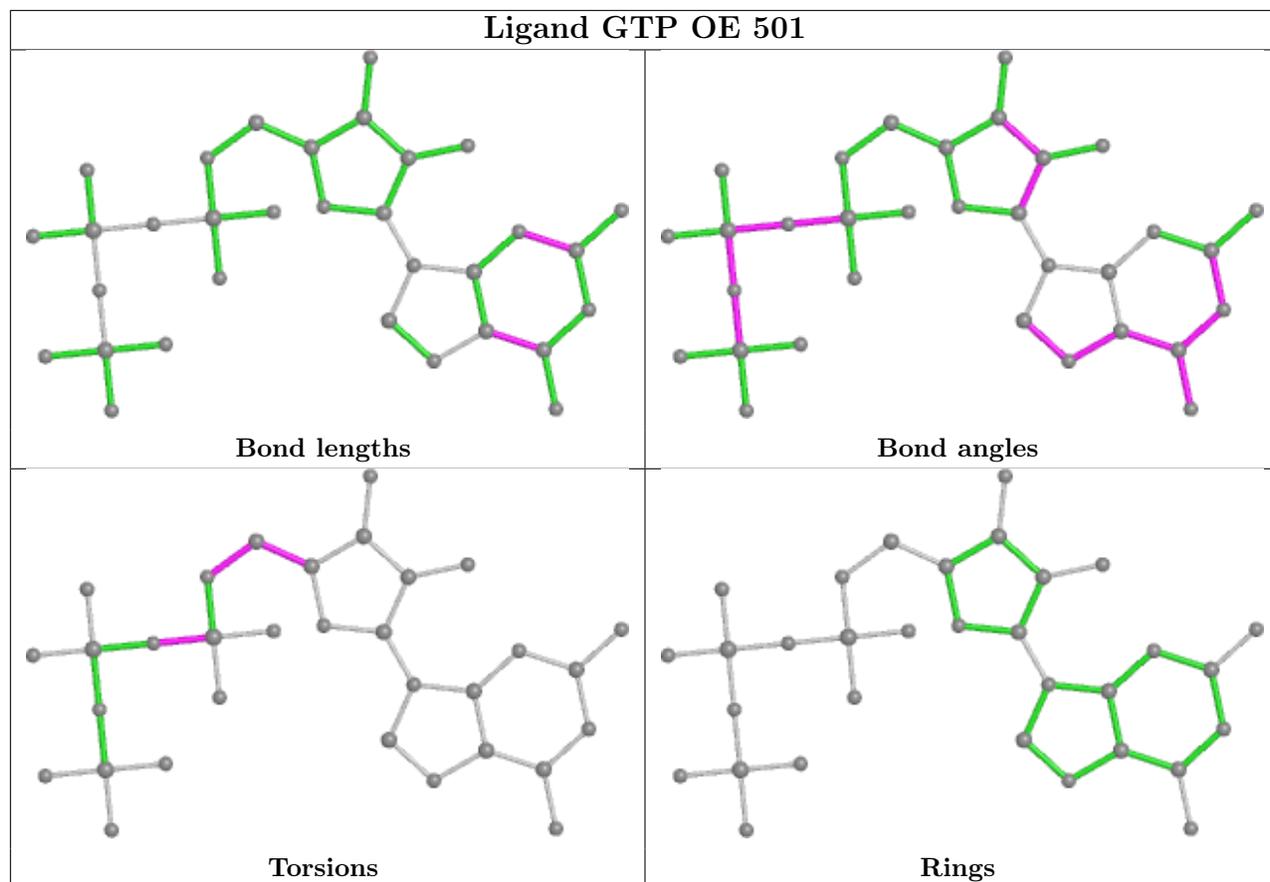


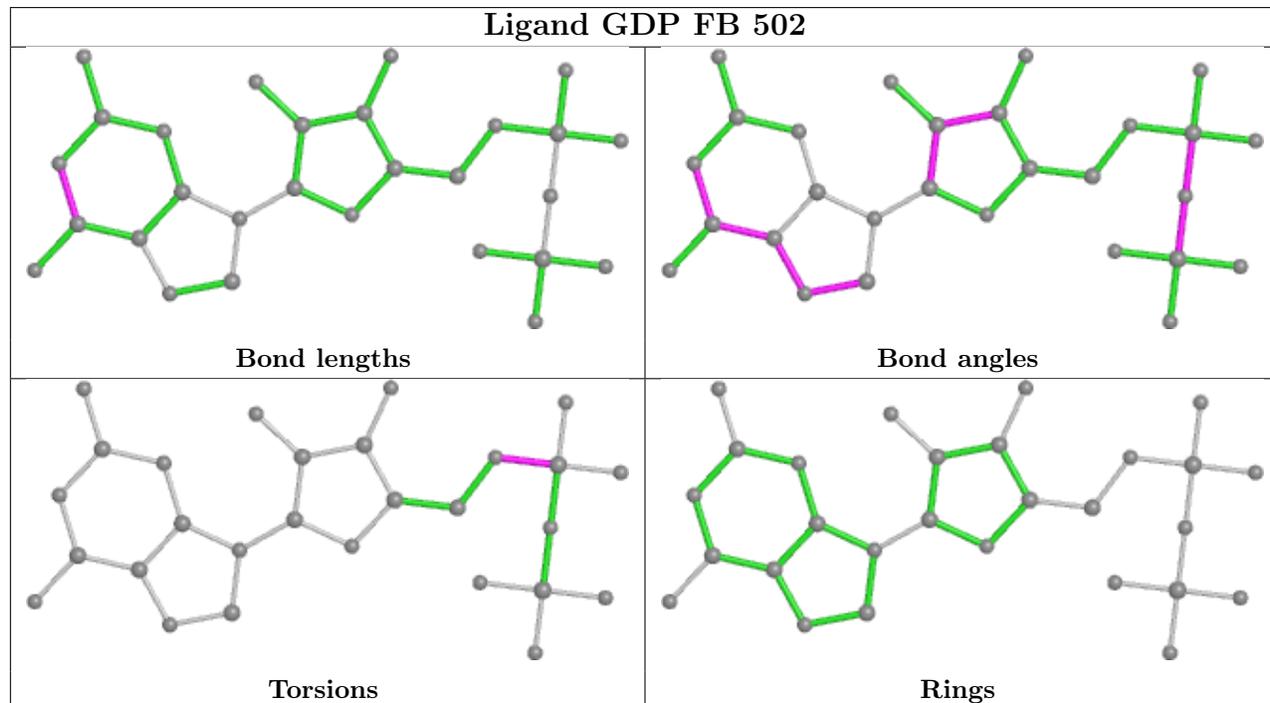
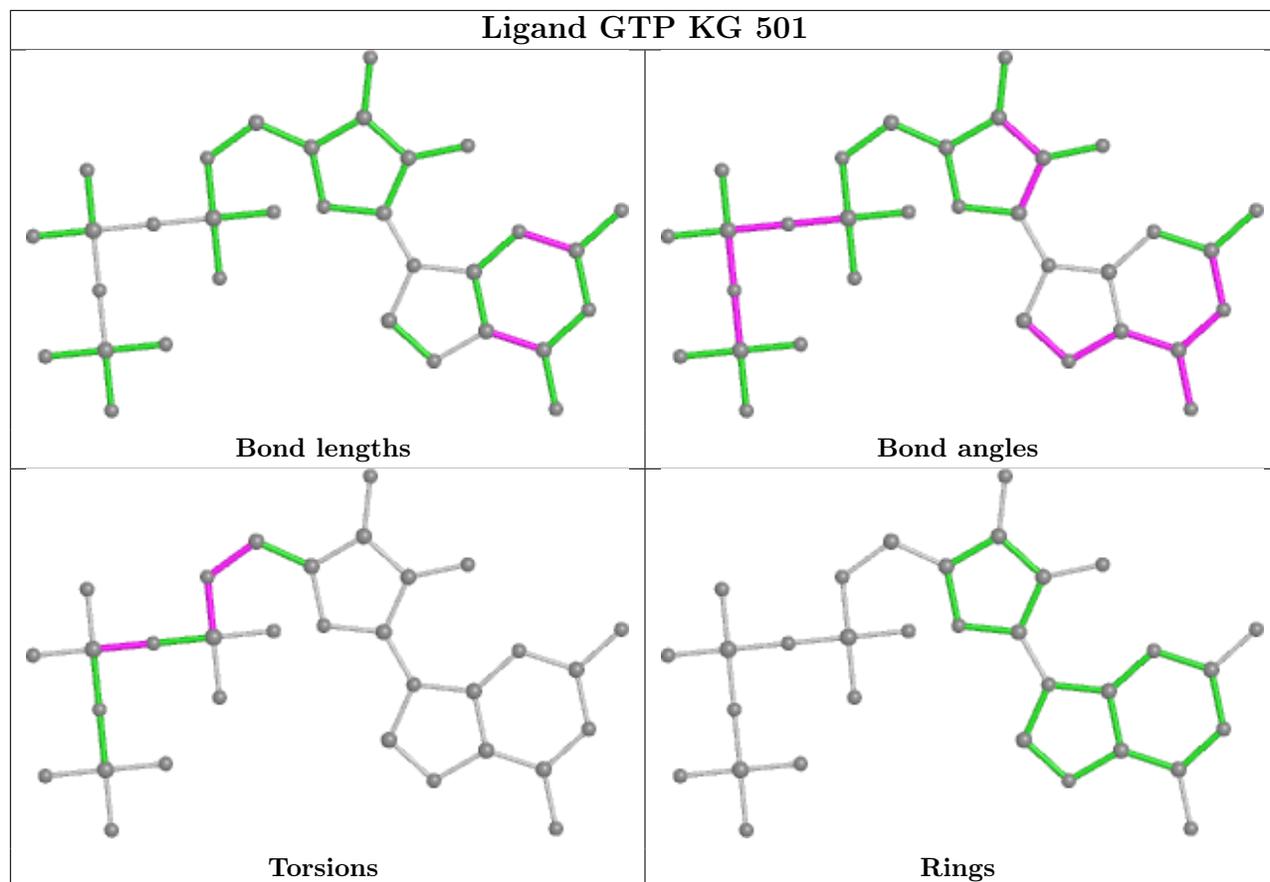


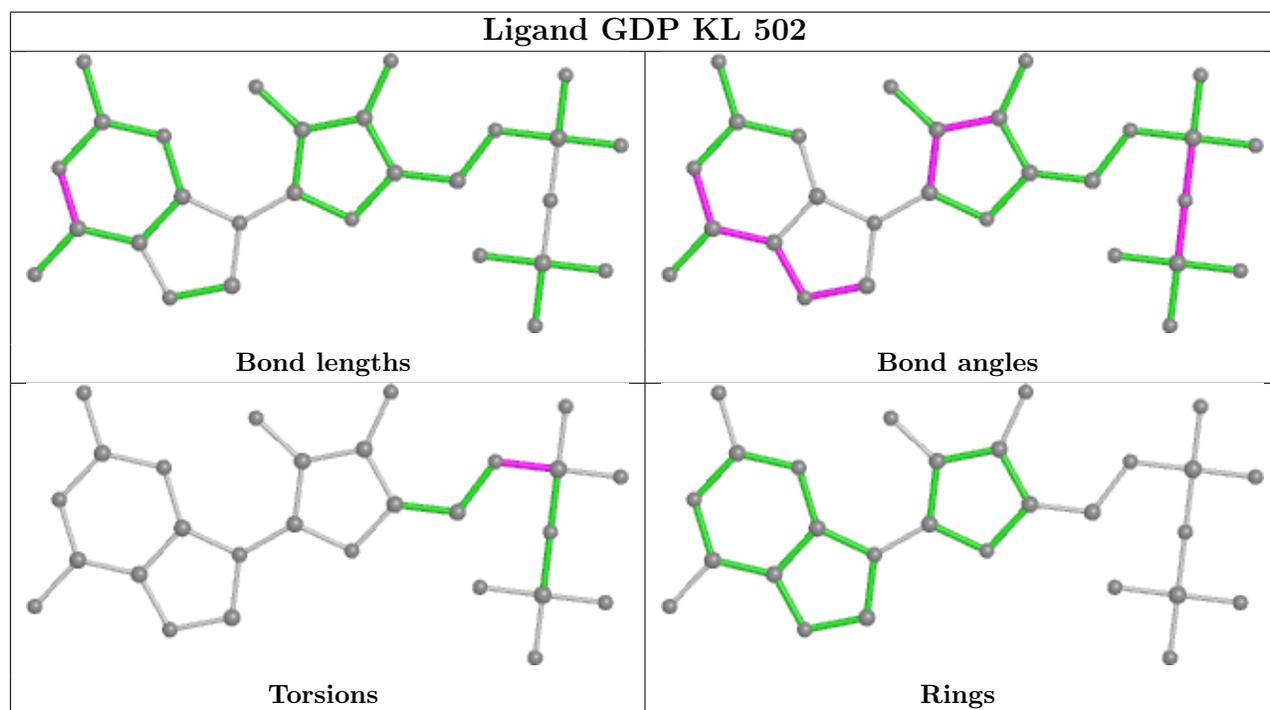
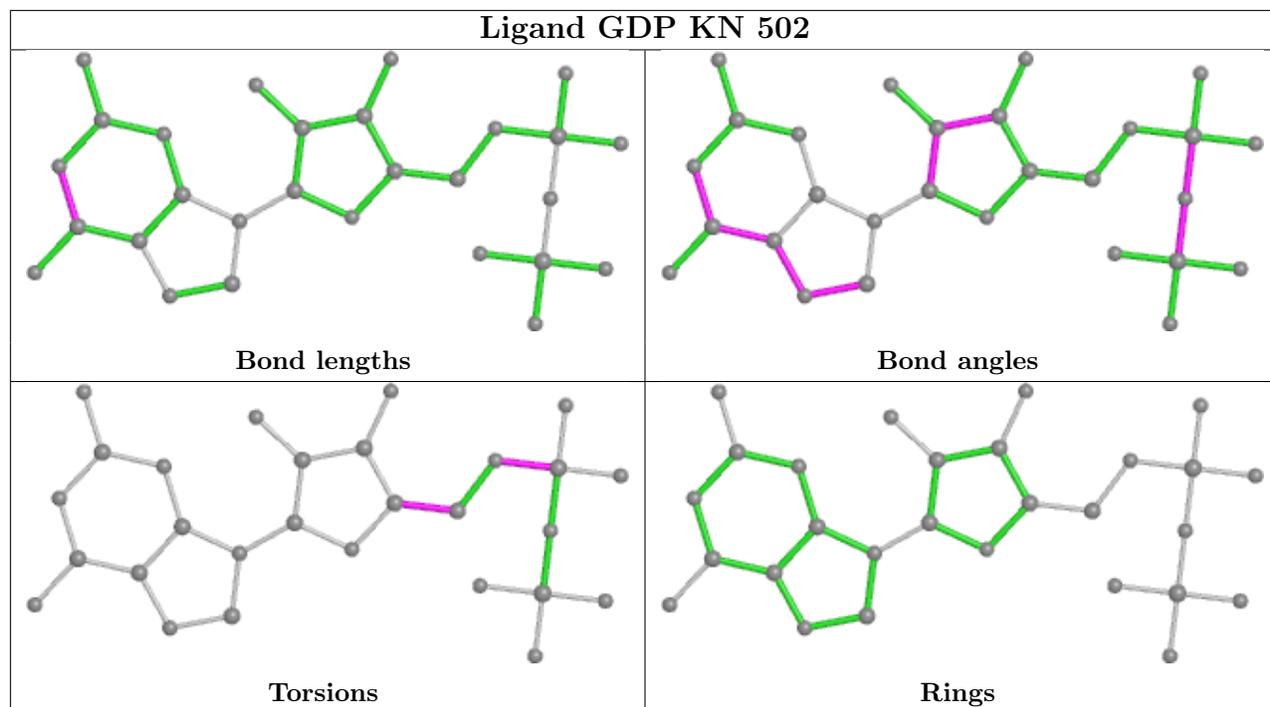


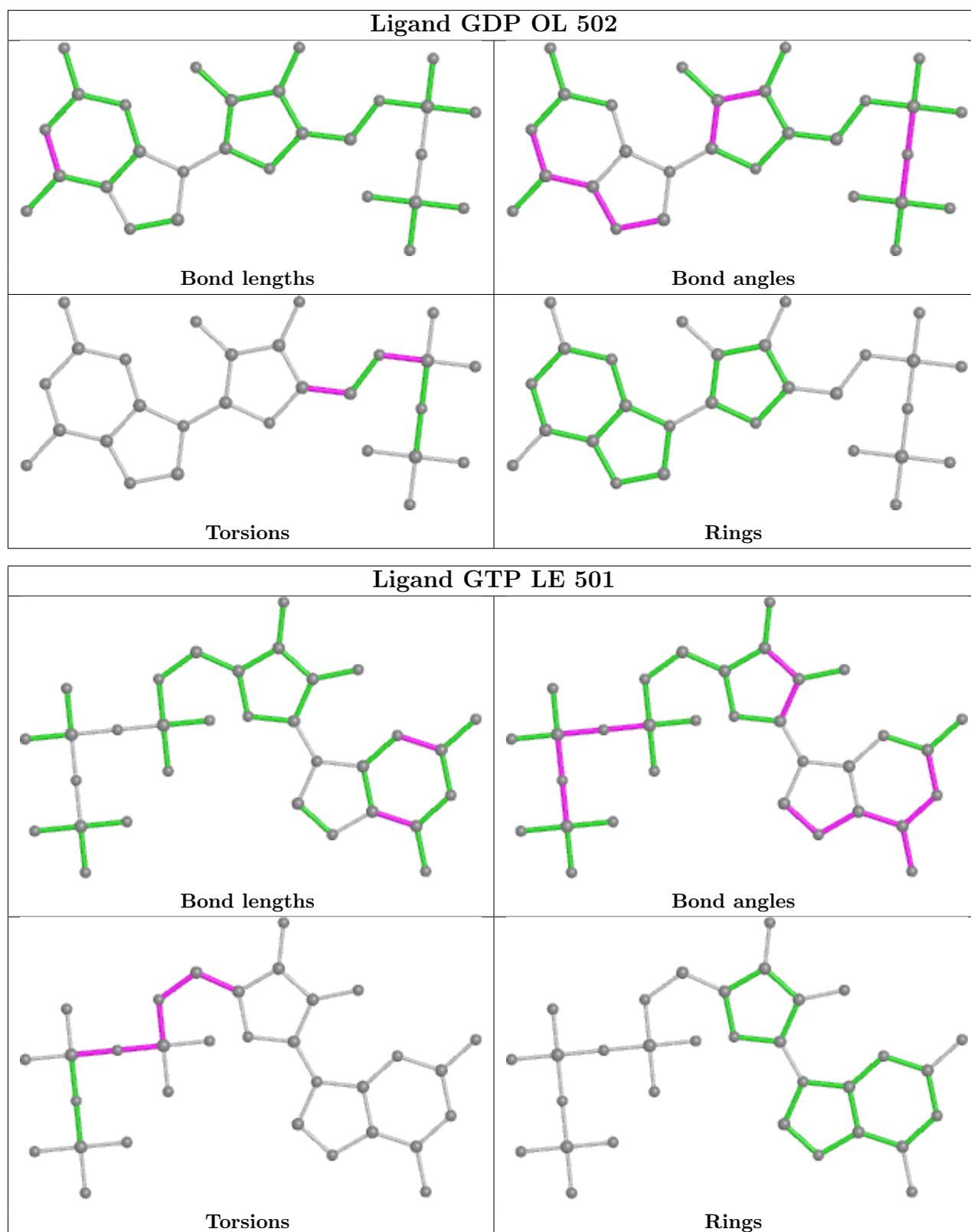












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

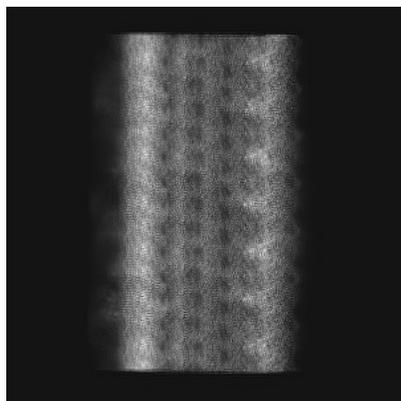
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-26624. These allow visual inspection of the internal detail of the map and identification of artifacts.

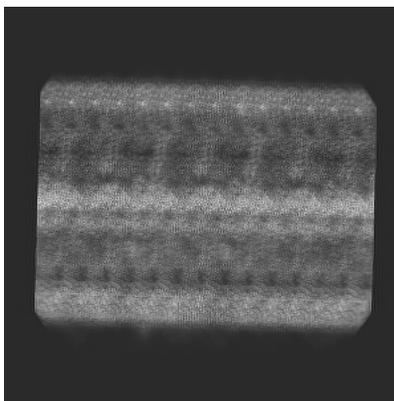
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

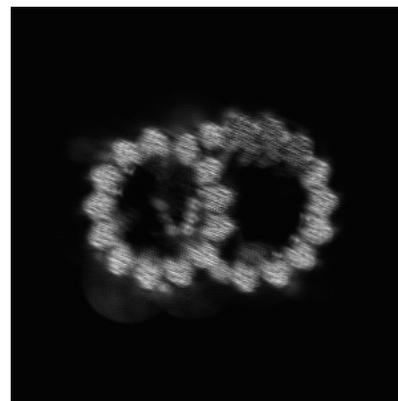
#### 6.1.1 Primary map



X

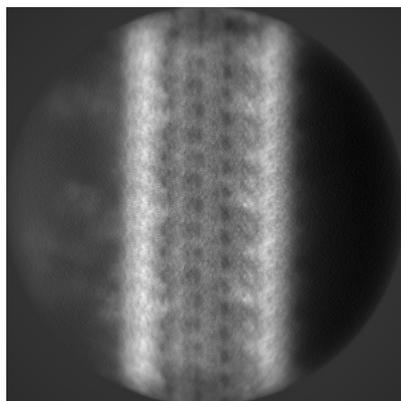


Y

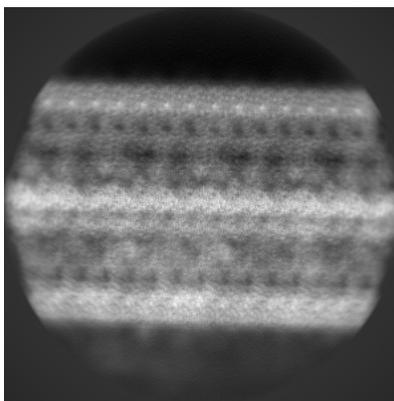


Z

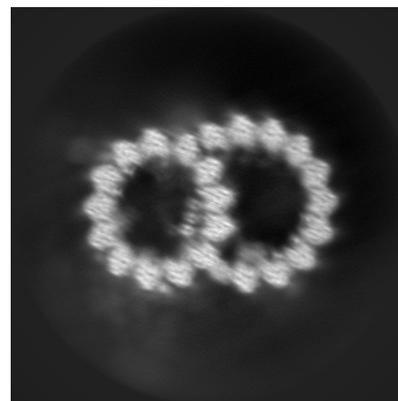
#### 6.1.2 Raw map



X



Y

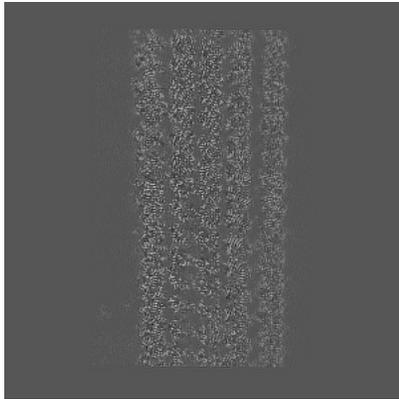


Z

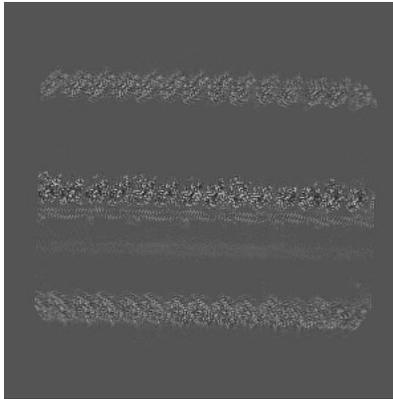
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

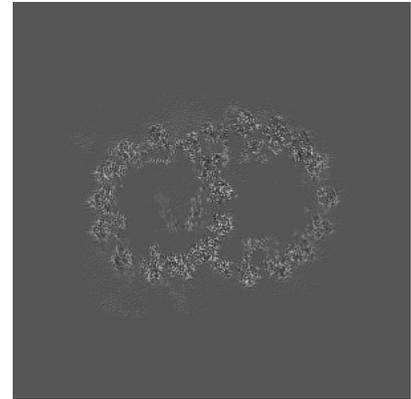
### 6.2.1 Primary map



X Index: 256

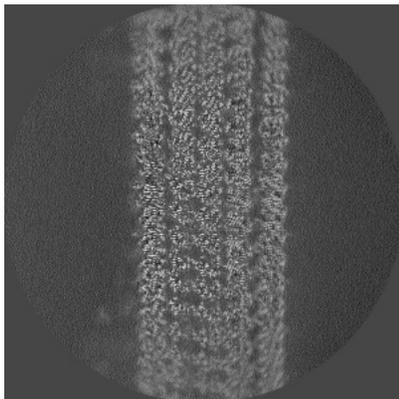


Y Index: 256

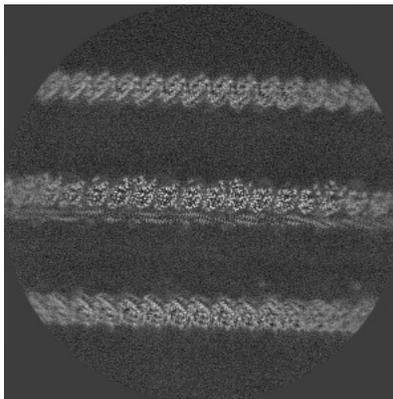


Z Index: 256

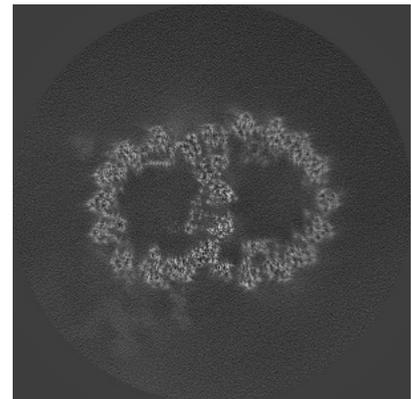
### 6.2.2 Raw map



X Index: 256



Y Index: 256

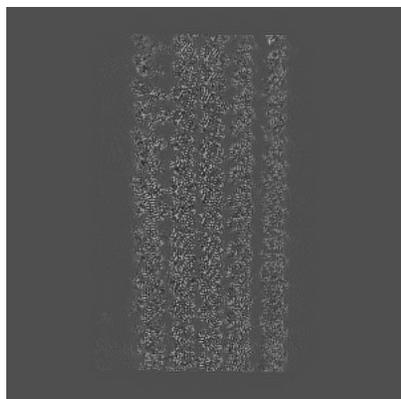


Z Index: 256

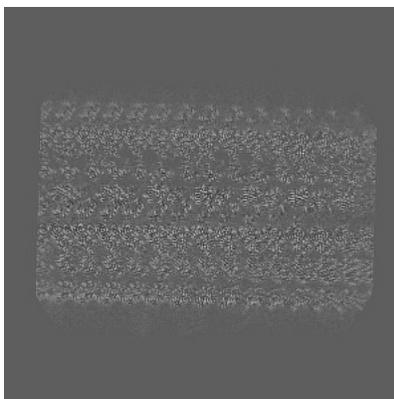
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

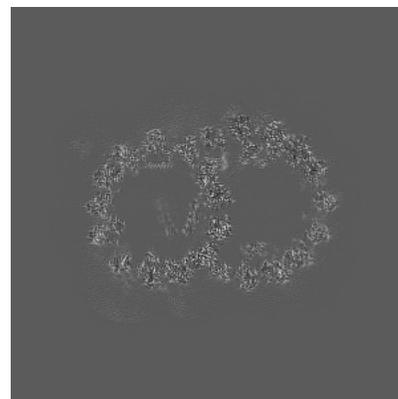
### 6.3.1 Primary map



X Index: 261

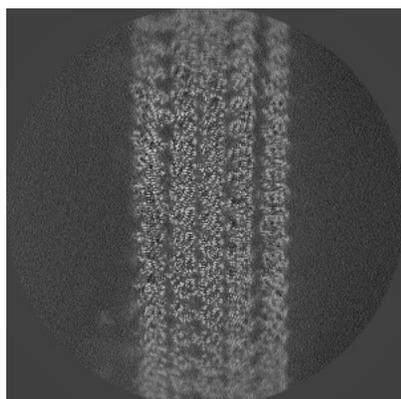


Y Index: 176

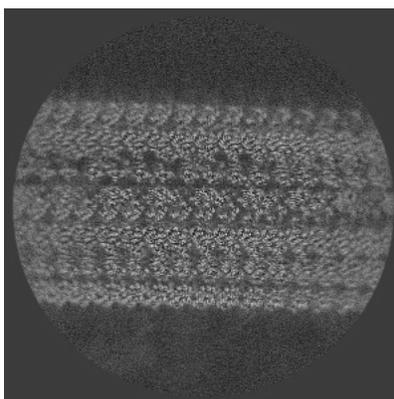


Z Index: 257

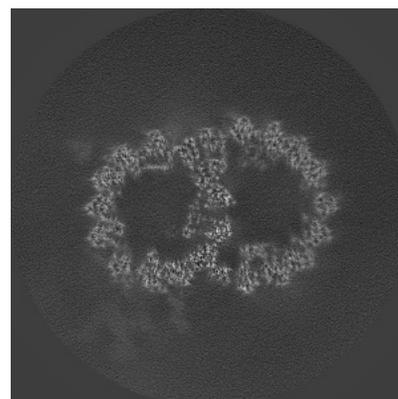
### 6.3.2 Raw map



X Index: 259



Y Index: 177

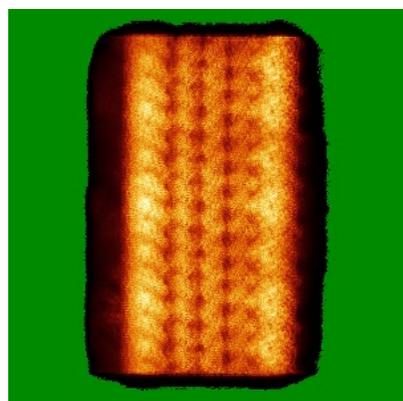


Z Index: 256

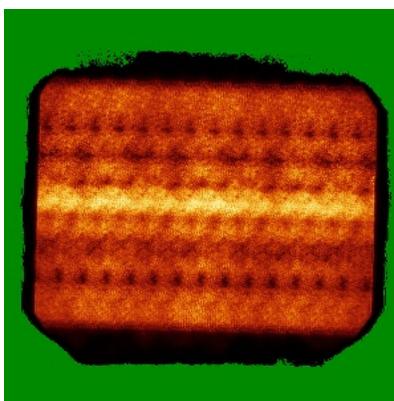
The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal standard-deviation projections (False-color) [i](#)

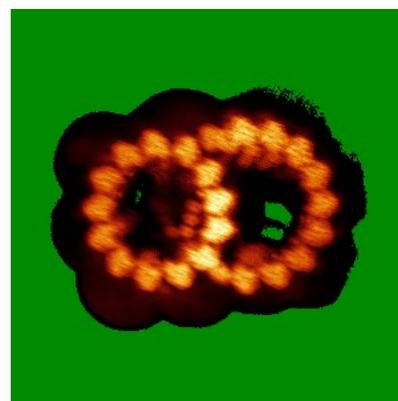
### 6.4.1 Primary map



X

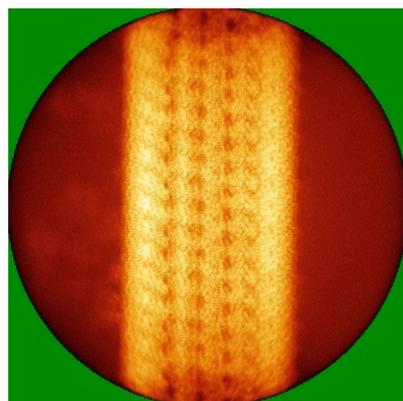


Y

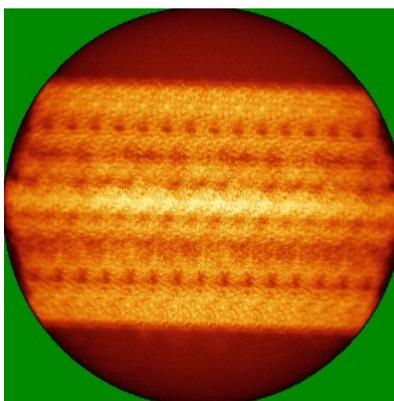


Z

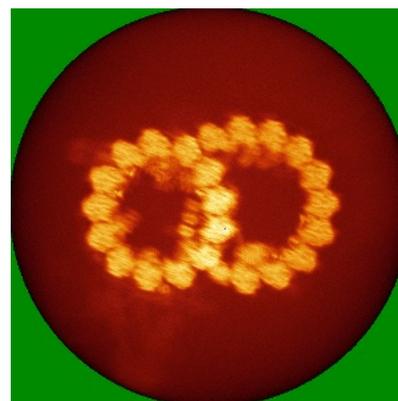
### 6.4.2 Raw map



X



Y

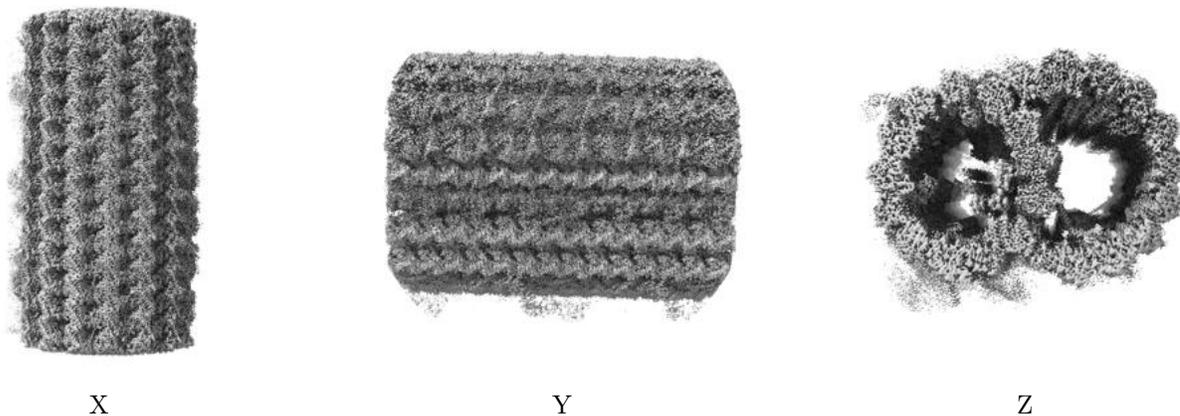


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

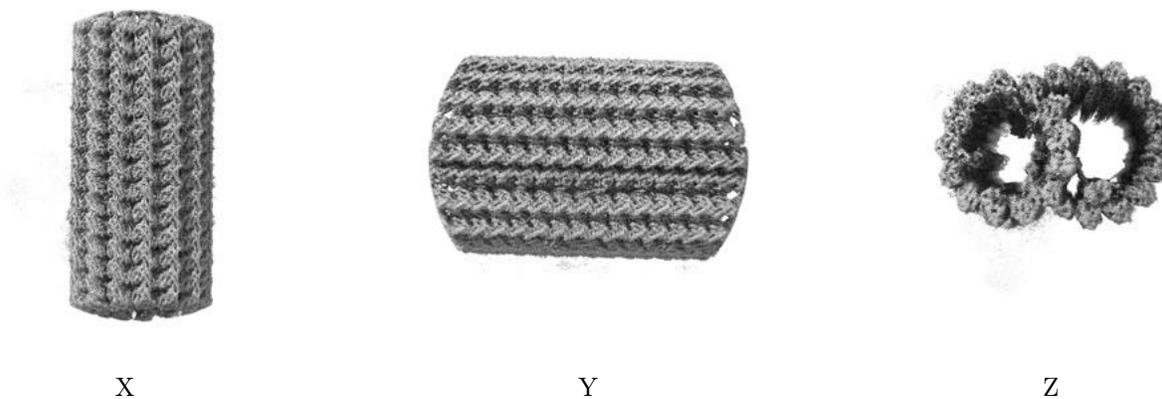
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 1.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

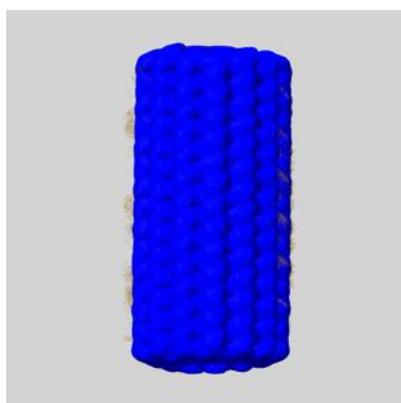
## 6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

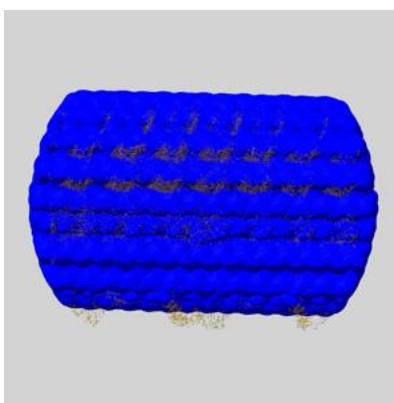
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

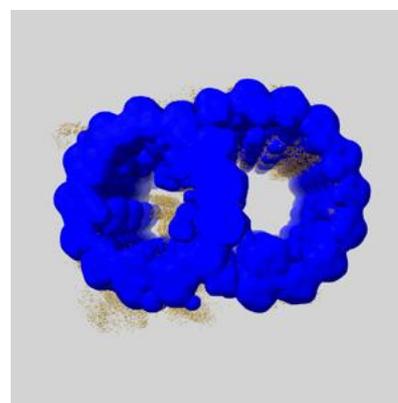
### 6.6.1 emd\_26624\_msk\_1.map [i](#)



X



Y

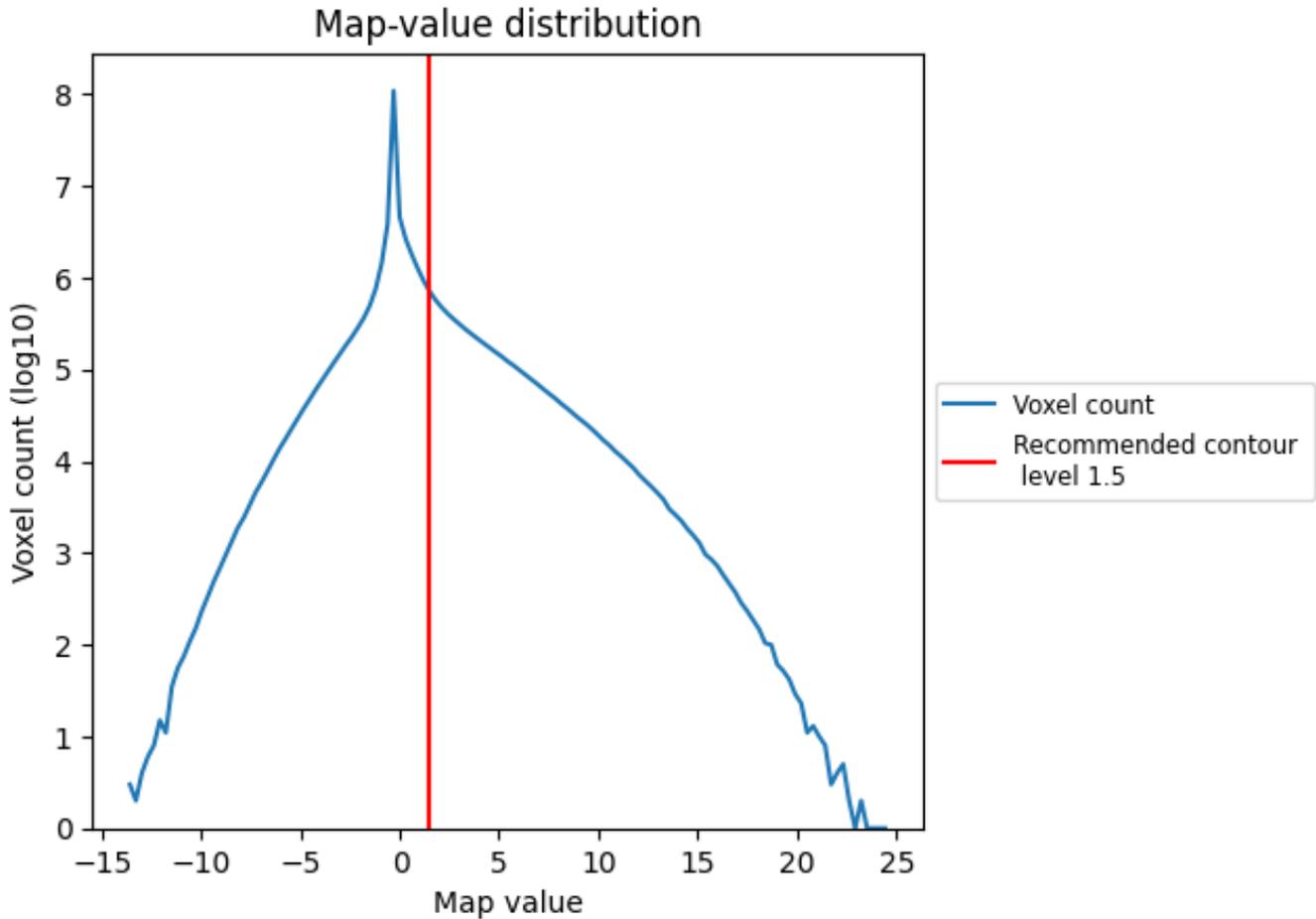


Z

## 7 Map analysis [i](#)

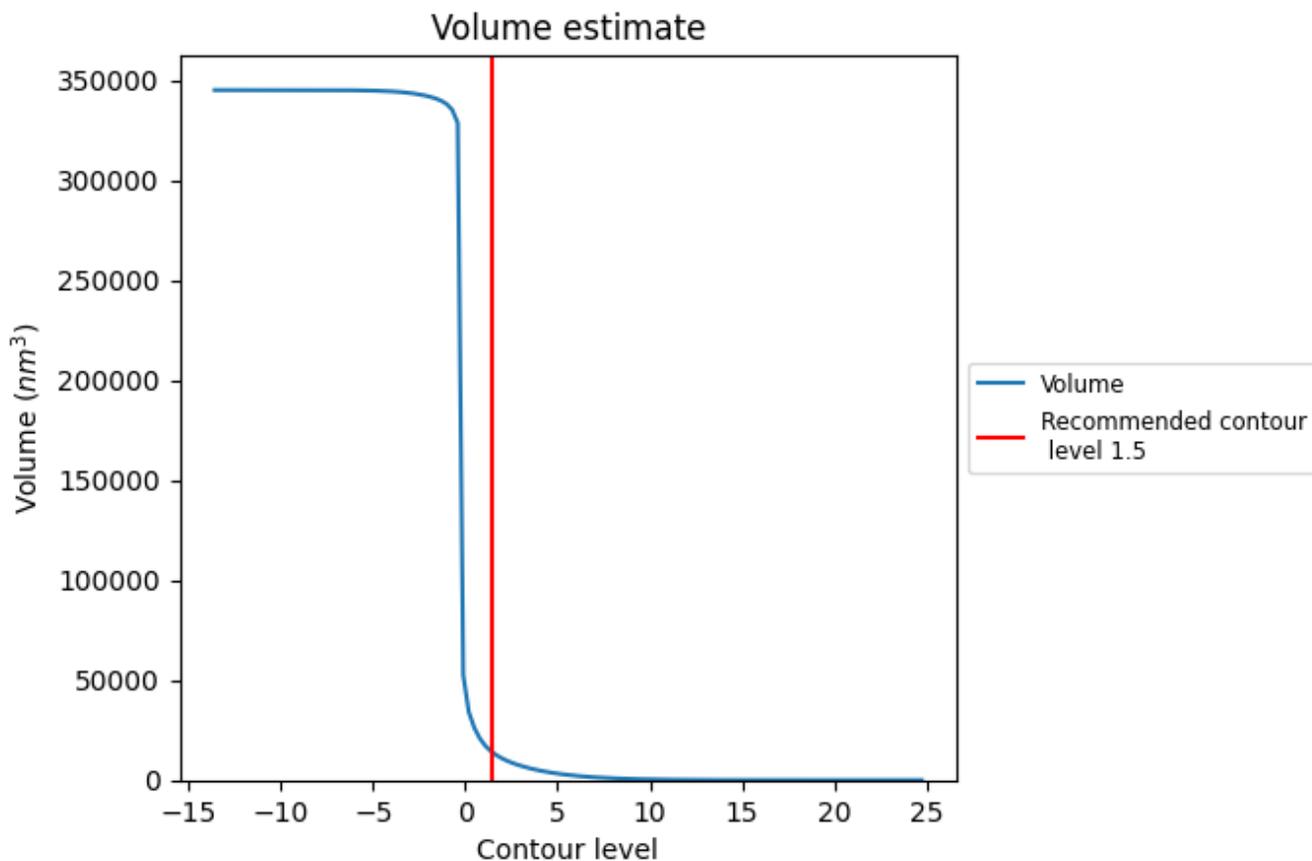
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

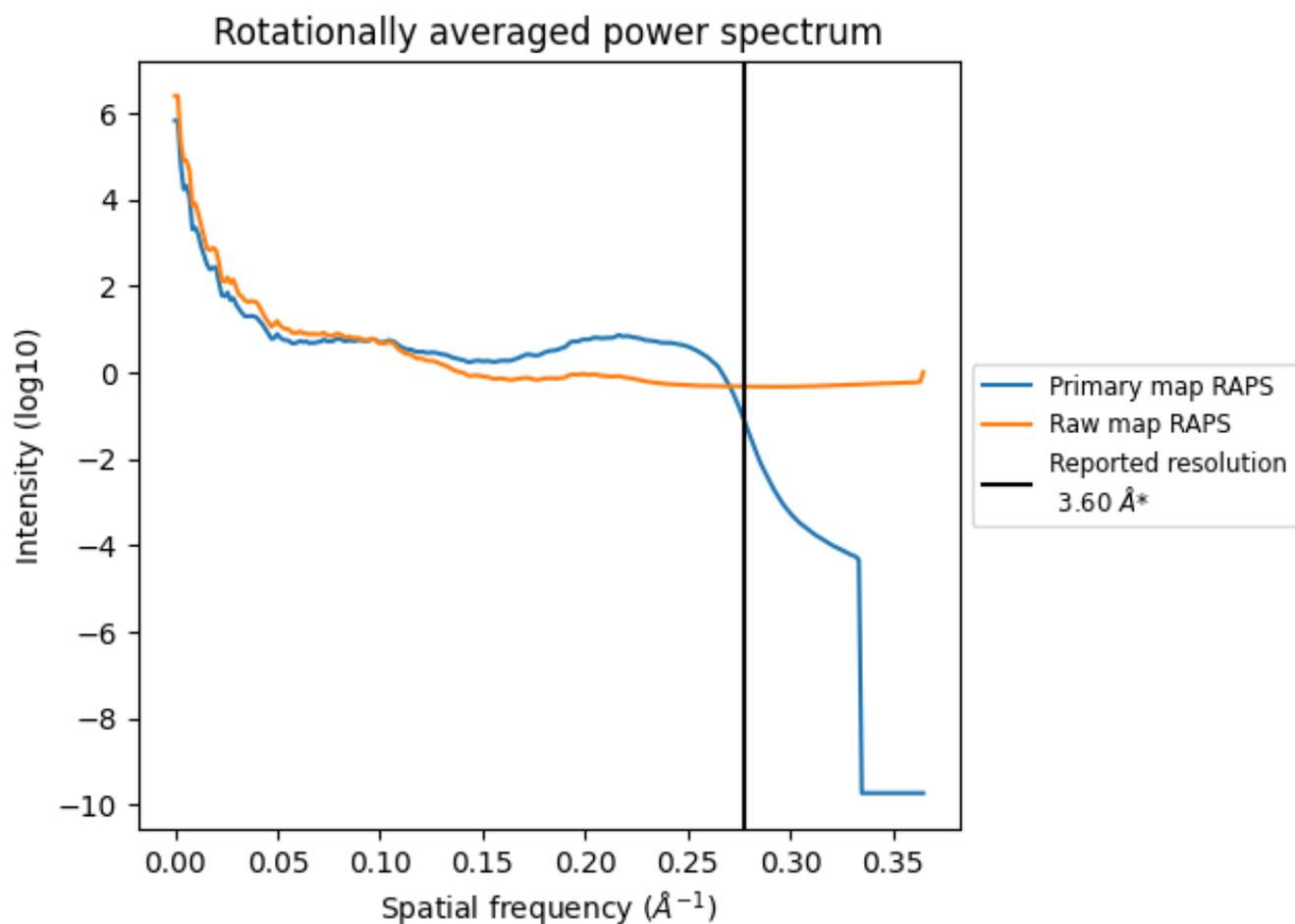
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 13718 nm<sup>3</sup>; this corresponds to an approximate mass of 12392 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

### 7.3 Rotationally averaged power spectrum i

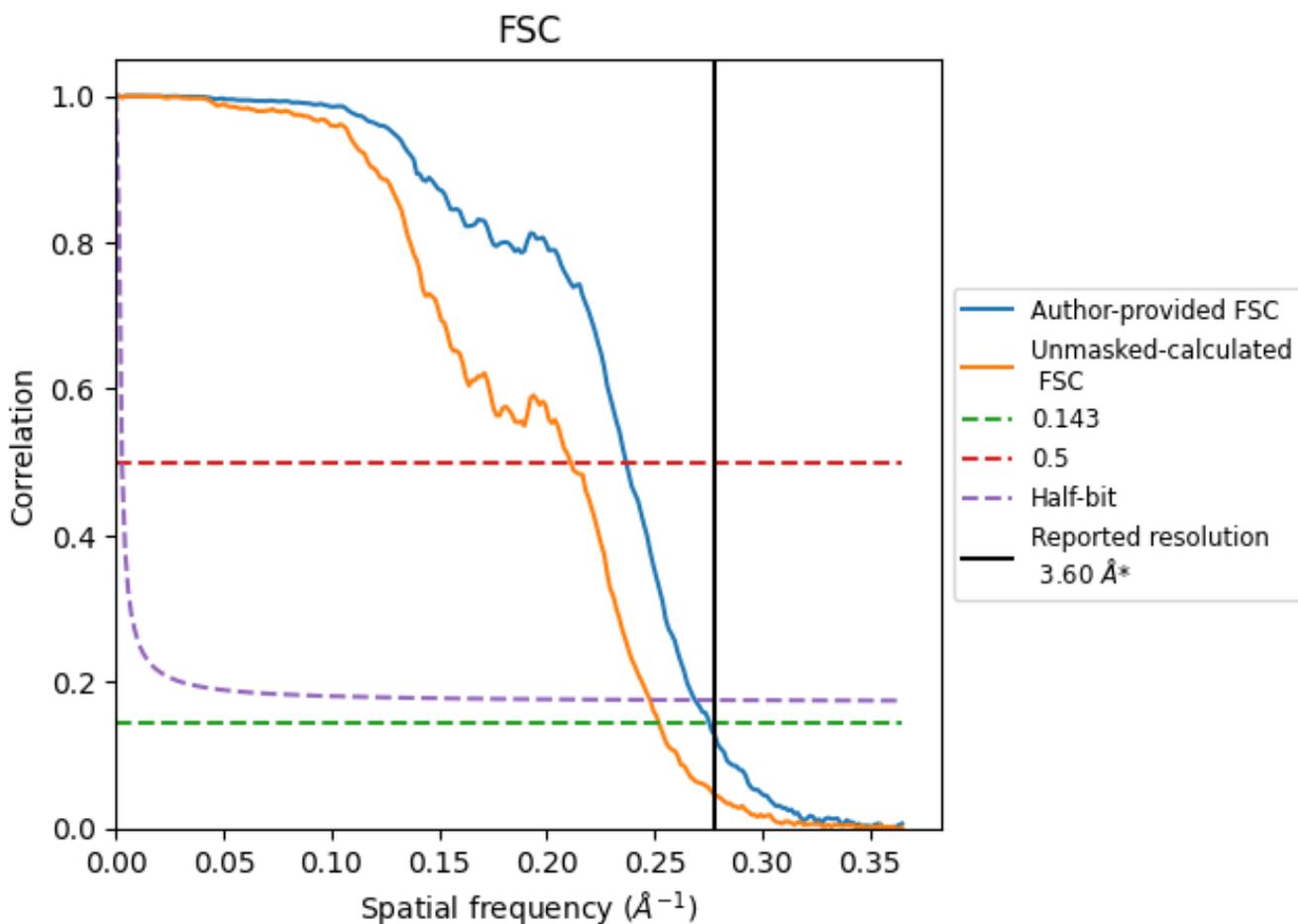


\*Reported resolution corresponds to spatial frequency of 0.278 Å<sup>-1</sup>

## 8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.278 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

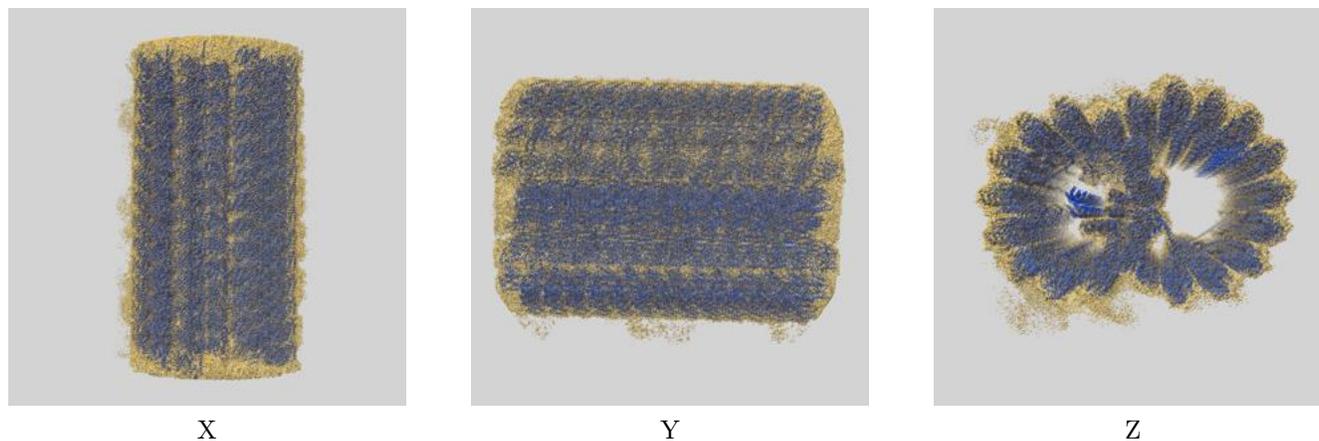
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.60	-	-
Author-provided FSC curve	3.63	4.22	3.72
Unmasked-calculated*	3.97	4.74	4.03

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.97 differs from the reported value 3.6 by more than 10 %

## 9 Map-model fit [i](#)

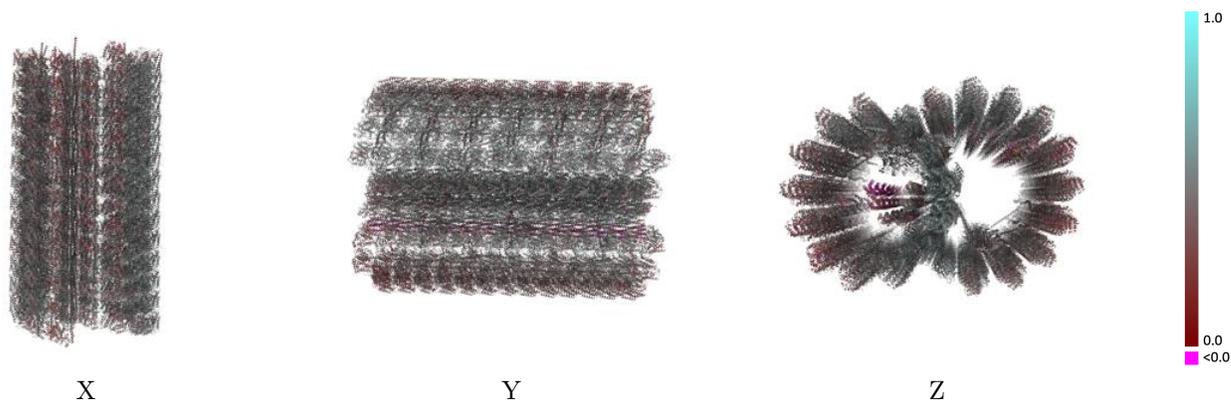
This section contains information regarding the fit between EMDB map EMD-26624 and PDB model 7UNG. Per-residue inclusion information can be found in section [3](#) on page [68](#).

### 9.1 Map-model overlay [i](#)



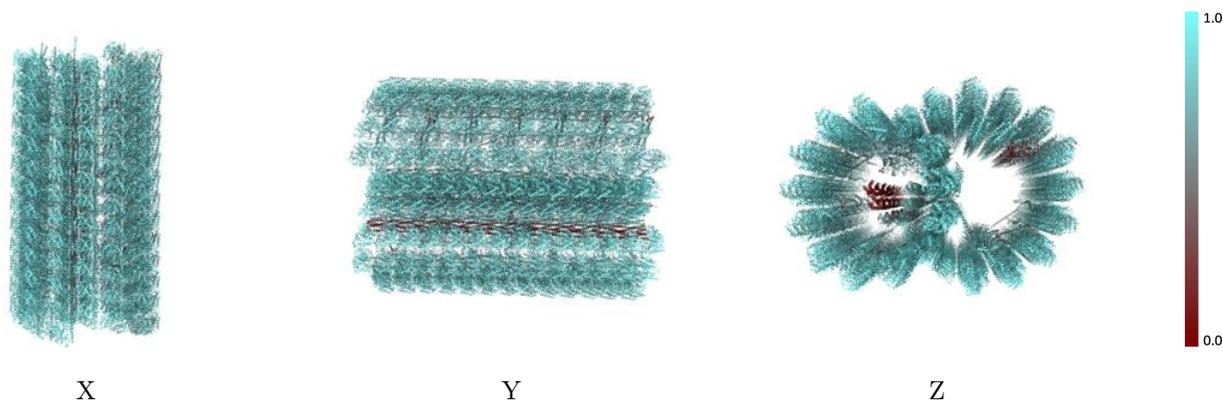
The images above show the 3D surface view of the map at the recommended contour level 1.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Q-score mapped to coordinate model [i](#)



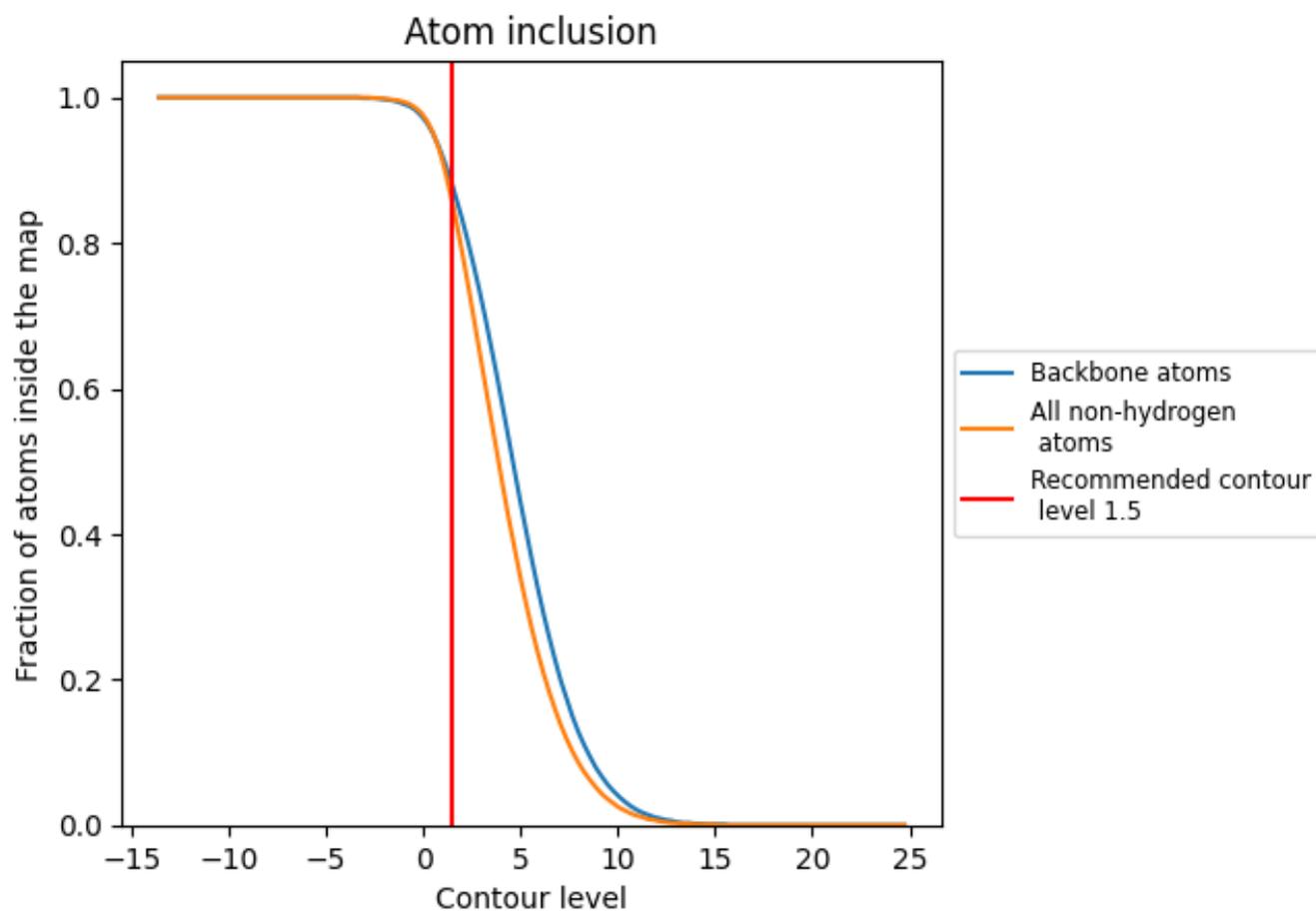
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

## 9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (1.5).

## 9.4 Atom inclusion [i](#)



At the recommended contour level, 88% of all backbone atoms, 86% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (1.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8550	 0.4460
0	 0.8360	 0.4810
1	 0.7510	 0.4290
2	 0.8060	 0.4540
3	 0.7360	 0.3800
4	 0.7410	 0.3840
5	 0.8090	 0.4610
6	 0.8270	 0.4530
7	 0.7460	 0.4420
8	 0.8130	 0.4580
9	 0.8470	 0.4510
A	 0.8060	 0.4430
A0	 0.7690	 0.4190
A1	 0.7950	 0.4320
A2	 0.8040	 0.4390
A3	 0.8090	 0.4370
A4	 0.8380	 0.4290
AA	 0.9310	 0.5070
AB	 0.9190	 0.5000
AC	 0.9260	 0.5130
AD	 0.9260	 0.5000
AE	 0.9430	 0.5210
AF	 0.9250	 0.5080
AG	 0.9340	 0.5250
AH	 0.9240	 0.5120
AI	 0.9360	 0.5170
AJ	 0.9060	 0.5020
AK	 0.9230	 0.5210
AL	 0.9150	 0.5010
AM	 0.9410	 0.5170
B	 0.7340	 0.4020
B0	 0.7880	 0.4240
B1	 0.8060	 0.4330
B2	 0.8130	 0.4440
B3	 0.8050	 0.4380



*Continued on next page...*

*Continued from previous page...*

Chain	Atom inclusion	Q-score
B4	 0.8500	 0.4480
B5	 0.0240	 0.2130
B6	 0.1080	 0.2200
B7	 0.1380	 0.2550
B8	 0.1390	 0.2410
B9	 0.1080	 0.2350
BA	 0.9000	 0.4570
BB	 0.9120	 0.4900
BC	 0.9120	 0.4880
BD	 0.9210	 0.4860
BE	 0.9190	 0.4740
BF	 0.9200	 0.4930
BG	 0.9240	 0.4950
BH	 0.9240	 0.4960
BI	 0.9150	 0.4790
BJ	 0.9100	 0.4750
BK	 0.9100	 0.4910
BL	 0.9210	 0.4940
BM	 0.9110	 0.4760
C	 0.6900	 0.3900
C0	 0.5680	 0.3630
C1	 0.5290	 0.3350
C2	 0.6150	 0.3650
C3	 0.6080	 0.3670
C4	 0.5970	 0.3660
CA	 0.9010	 0.4060
CB	 0.9090	 0.4340
CC	 0.9090	 0.4490
CD	 0.8990	 0.4430
CE	 0.9040	 0.4390
CF	 0.9090	 0.4580
CG	 0.9130	 0.4670
CH	 0.9120	 0.4610
CI	 0.9140	 0.4450
CJ	 0.9080	 0.4540
CK	 0.9120	 0.4710
CL	 0.9010	 0.4620
CM	 0.9130	 0.4450
D	 0.7690	 0.4540
D0	 0.7340	 0.4010
D1	 0.7750	 0.4220
D2	 0.7750	 0.4300

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Chain	Atom inclusion	Q-score
D3	 0.7780	 0.4200
D5	 0.0300	 0.1300
D6	 0.0830	 0.1470
D7	 0.1000	 0.1630
D8	 0.0510	 0.1500
DA	 0.8690	 0.3030
DB	 0.9010	 0.3850
DC	 0.8960	 0.3940
DD	 0.8910	 0.4070
DE	 0.8790	 0.3880
DF	 0.8910	 0.4130
DG	 0.8920	 0.4270
DH	 0.9040	 0.4320
DI	 0.8980	 0.4080
DJ	 0.9120	 0.4150
DK	 0.9050	 0.4210
DL	 0.9100	 0.4170
DM	 0.9180	 0.4080
E	 0.8450	 0.4790
EB	 0.8810	 0.3580
EC	 0.8600	 0.3720
ED	 0.8680	 0.3900
EE	 0.8630	 0.3790
EF	 0.8750	 0.3940
EG	 0.8780	 0.4130
EH	 0.8820	 0.4150
EI	 0.8720	 0.3970
EJ	 0.8760	 0.3830
EK	 0.8560	 0.3870
EL	 0.8810	 0.3940
EM	 0.8610	 0.3770
EN	 0.8700	 0.3030
F	 0.7960	 0.4630
F0	 0.8720	 0.4380
F1	 0.8190	 0.4250
F2	 0.4080	 0.3270
F3	 0.8890	 0.4460
F4	 0.8030	 0.4320
F5	 0.2070	 0.3030
F6	 0.9420	 0.4520
F7	 0.9280	 0.4570
F8	 0.5270	 0.3490

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Chain	Atom inclusion	Q-score
FB	 0.8620	 0.3550
FC	 0.8780	 0.3850
FD	 0.8760	 0.3910
FE	 0.8760	 0.3810
FF	 0.8590	 0.3820
FG	 0.8670	 0.4010
FH	 0.8680	 0.4030
FI	 0.8730	 0.3960
FJ	 0.8670	 0.3730
FK	 0.8700	 0.3840
FL	 0.8550	 0.3710
FM	 0.8600	 0.3660
FN	 0.8330	 0.3050
G	 0.6740	 0.3620
G0	 0.9360	 0.4770
G1	 0.8520	 0.4490
G2	 0.4210	 0.3190
G3	 0.9250	 0.4420
G4	 0.9240	 0.4420
G5	 0.7450	 0.3880
G6	 0.8870	 0.4530
G7	 0.8010	 0.4450
G8	 0.1640	 0.2890
GB	 0.8740	 0.3840
GC	 0.8760	 0.4050
GD	 0.8860	 0.4300
GE	 0.8930	 0.4180
GF	 0.8800	 0.4020
GG	 0.8720	 0.4110
GH	 0.8850	 0.4260
GI	 0.8890	 0.4230
GJ	 0.8800	 0.3960
GK	 0.8750	 0.3980
GL	 0.8710	 0.3900
GM	 0.8570	 0.3750
GN	 0.8530	 0.3440
H	 0.7750	 0.4560
H0	 0.8740	 0.4530
H1	 0.8460	 0.4470
H2	 0.5860	 0.3820
HB	 0.9080	 0.4390
HC	 0.9150	 0.4630

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Chain	Atom inclusion	Q-score
HD	 0.9100	 0.4690
HE	 0.9020	 0.4650
HF	 0.9030	 0.4480
HG	 0.9050	 0.4450
HH	 0.9070	 0.4660
HI	 0.9060	 0.4590
HJ	 0.8930	 0.4350
HK	 0.8970	 0.4270
HL	 0.8920	 0.4360
HM	 0.9020	 0.4340
HN	 0.8650	 0.3770
HO	 0.8750	 0.3580
I	 0.3790	 0.3310
I1	 0.8220	 0.4920
IB	 0.8990	 0.4370
IC	 0.8940	 0.4650
ID	 0.9030	 0.4830
IE	 0.9120	 0.4800
IF	 0.9070	 0.4540
IG	 0.9050	 0.4690
IH	 0.9050	 0.4830
II	 0.9170	 0.4860
IJ	 0.8900	 0.4540
IK	 0.9030	 0.4600
IL	 0.8930	 0.4500
IM	 0.9010	 0.4540
IN	 0.8850	 0.4180
IO	 0.8710	 0.3890
J	 0.7410	 0.4300
J1	 0.8750	 0.4650
J2	 0.9200	 0.4720
J3	 0.9220	 0.4680
J4	 0.9250	 0.4630
J5	 0.9280	 0.5010
JB	 0.9080	 0.4870
JC	 0.8850	 0.4860
JD	 0.9060	 0.4990
JE	 0.8890	 0.4770
JF	 0.8980	 0.4880
JG	 0.8960	 0.4920
JH	 0.9110	 0.4930
JI	 0.8910	 0.4840

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Chain	Atom inclusion	Q-score
JJ	 0.8950	 0.4740
JK	 0.8680	 0.4510
JL	 0.9010	 0.4730
JM	 0.8850	 0.4590
JN	 0.8950	 0.4410
K	 0.4650	 0.3750
K1	 0.7990	 0.4100
KB	 0.9280	 0.5170
KC	 0.9210	 0.5200
KD	 0.9210	 0.5250
KE	 0.9260	 0.5350
KF	 0.9310	 0.5350
KG	 0.9200	 0.5240
KH	 0.9170	 0.5280
KI	 0.9150	 0.5290
KJ	 0.9280	 0.5400
KK	 0.9160	 0.5240
KL	 0.9110	 0.5250
KM	 0.9210	 0.5410
KN	 0.9330	 0.5440
KO	 0.9300	 0.5250
L	 0.7280	 0.4230
L1	 0.7810	 0.4340
L2	 0.8090	 0.4420
LB	 0.9240	 0.5180
LC	 0.9140	 0.5230
LD	 0.9190	 0.5340
LE	 0.9130	 0.5330
LF	 0.9090	 0.5240
LG	 0.9120	 0.5320
LH	 0.9210	 0.5380
LI	 0.9020	 0.5240
LJ	 0.9020	 0.5250
LK	 0.9100	 0.5230
LL	 0.9170	 0.5310
LM	 0.9210	 0.5330
LN	 0.9090	 0.5200
M	 0.5150	 0.3930
M1	 0.6180	 0.3960
M2	 0.7590	 0.4620
M3	 0.7070	 0.4420
M4	 0.7320	 0.4490

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Chain	Atom inclusion	Q-score
MB	 0.9200	 0.4910
MC	 0.9030	 0.4900
MD	 0.9030	 0.4950
ME	 0.8970	 0.4910
MF	 0.9050	 0.4950
MG	 0.8950	 0.4980
MH	 0.9000	 0.4960
MI	 0.8990	 0.4970
MJ	 0.9030	 0.4950
MK	 0.9000	 0.4850
ML	 0.9010	 0.4790
MM	 0.9020	 0.4790
MN	 0.9060	 0.4740
N	 0.6990	 0.4200
NB	 0.8640	 0.4460
NC	 0.8590	 0.4520
ND	 0.8730	 0.4640
NE	 0.8720	 0.4730
NF	 0.8810	 0.4600
NG	 0.8820	 0.4730
NH	 0.8690	 0.4680
NI	 0.8730	 0.4740
NJ	 0.8720	 0.4520
NK	 0.8820	 0.4580
NL	 0.8710	 0.4540
NM	 0.8670	 0.4550
NN	 0.8560	 0.4280
O	 0.8900	 0.4650
OB	 0.7960	 0.4710
OC	 0.8200	 0.4870
OD	 0.8320	 0.4970
OE	 0.8300	 0.4960
OF	 0.8300	 0.4900
OG	 0.8450	 0.4940
OH	 0.8480	 0.5060
OI	 0.8490	 0.5030
OJ	 0.8300	 0.4940
OK	 0.8370	 0.5020
OL	 0.8310	 0.4980
OM	 0.8310	 0.4990
ON	 0.8130	 0.4900
OO	 0.7930	 0.4740

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Chain	Atom inclusion	Q-score
P	 0.8460	 0.4830
PC	 0.7970	 0.4760
PD	 0.8200	 0.4860
PE	 0.8210	 0.4920
PF	 0.8070	 0.4800
PG	 0.8360	 0.4870
PH	 0.8480	 0.5130
PI	 0.8450	 0.5110
PJ	 0.8100	 0.4850
PK	 0.8270	 0.4810
PL	 0.8140	 0.4870
PM	 0.8270	 0.5080
PN	 0.8030	 0.4910
PO	 0.7920	 0.4840
Q	 0.8700	 0.4660
QC	 0.7450	 0.4440
QD	 0.8040	 0.4710
QE	 0.8000	 0.4770
QF	 0.7900	 0.4760
QG	 0.8130	 0.4750
QH	 0.8280	 0.5000
QI	 0.8320	 0.4840
QJ	 0.7870	 0.4740
QK	 0.7960	 0.4650
QL	 0.8100	 0.4900
QM	 0.8110	 0.4840
QN	 0.8030	 0.4850
QO	 0.7640	 0.4570
R	 0.5140	 0.3780
RC	 0.7800	 0.3630
RD	 0.8420	 0.4170
RE	 0.8400	 0.4210
RF	 0.8310	 0.4000
RG	 0.8380	 0.3940
RH	 0.8650	 0.4210
RI	 0.8520	 0.4230
RJ	 0.8290	 0.3990
RK	 0.8230	 0.3910
RL	 0.8600	 0.4130
RM	 0.8420	 0.4240
RN	 0.8470	 0.4430
RO	 0.8260	 0.4300

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Chain	Atom inclusion	Q-score
S	0.5100	0.3910
SD	0.8510	0.3920
SE	0.8460	0.3880
SF	0.8560	0.3970
SG	0.8570	0.3730
SH	0.8580	0.3810
SI	0.8590	0.3950
SJ	0.8550	0.3920
SK	0.8770	0.3960
SL	0.8770	0.3930
SM	0.8870	0.4290
SN	0.8850	0.4350
SO	0.8930	0.4420
T	0.8530	0.4620
TD	0.8330	0.3450
TE	0.8300	0.3520
TF	0.8430	0.3700
TG	0.8670	0.3600
TH	0.8720	0.3700
TI	0.8710	0.3950
TJ	0.8640	0.3950
TK	0.8730	0.3840
TL	0.8900	0.3900
TM	0.8810	0.3980
TN	0.8740	0.4030
TO	0.8700	0.4000
TP	0.8520	0.3780
U	0.8680	0.4770
UD	0.8710	0.3940
UE	0.8690	0.4110
UF	0.8810	0.4210
UG	0.8980	0.4210
UH	0.8970	0.4280
UI	0.8910	0.4350
UJ	0.9060	0.4550
UK	0.9050	0.4440
UL	0.8930	0.4300
UM	0.8970	0.4410
UN	0.8990	0.4510
UO	0.9020	0.4520
UP	0.8730	0.4170
V	0.8590	0.4620

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Chain	Atom inclusion	Q-score
VD	 0.8960	 0.4110
VE	 0.8950	 0.4280
VF	 0.8900	 0.4360
VG	 0.8880	 0.4260
VH	 0.9010	 0.4440
VI	 0.8960	 0.4540
VJ	 0.9030	 0.4730
VK	 0.9070	 0.4680
VL	 0.8930	 0.4410
VM	 0.8900	 0.4480
VN	 0.9020	 0.4710
VO	 0.9100	 0.4690
VP	 0.9100	 0.4600
W	 0.7910	 0.4280
WD	 0.8970	 0.4260
WE	 0.8880	 0.4410
WF	 0.9030	 0.4510
WG	 0.8970	 0.4550
WH	 0.9010	 0.4580
WI	 0.8860	 0.4500
WJ	 0.9080	 0.4750
WK	 0.8890	 0.4560
WL	 0.8830	 0.4430
WM	 0.8850	 0.4460
WN	 0.9040	 0.4760
WO	 0.8930	 0.4670
WP	 0.8940	 0.4530
X	 0.8030	 0.4500
XA	 0.9160	 0.4780
XB	 0.9210	 0.4910
XC	 0.9120	 0.4920
XD	 0.9060	 0.4970
XE	 0.9130	 0.4890
XF	 0.9010	 0.4970
XG	 0.9080	 0.4870
Y	 0.8030	 0.4340
YB	 0.9160	 0.5020
YC	 0.9180	 0.5050
YD	 0.9230	 0.5120
YE	 0.9000	 0.5010
YF	 0.9100	 0.5090
YG	 0.8200	 0.4780

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Chain	Atom inclusion	Q-score
Z	 0.7690	 0.3870
a	 0.7000	 0.3840
b	 0.6700	 0.3810
c	 0.6370	 0.3560
d	 0.6820	 0.3850
e	 0.8390	 0.4470
f	 0.8510	 0.4750
g	 0.8540	 0.4830
h	 0.8160	 0.4460
i	 0.7810	 0.4640
j	 0.7740	 0.4550
k	 0.8280	 0.4810
l	 0.9080	 0.5150
m	 0.8970	 0.5200
n	 0.8980	 0.5240
o	 0.7210	 0.3900
o1	 0.7690	 0.4440
p	 0.7930	 0.4170
q	 0.8500	 0.4830
r	 0.8550	 0.4690
s	 0.8360	 0.4600
y	 0.8590	 0.4070
z	 0.8380	 0.4030