



Full wwPDB EM Validation Report ⓘ

Nov 21, 2022 – 06:20 AM EST

PDB ID : 7N61
EMDB ID : EMD-24191
Title : structure of C2 projections and MIPs
Authors : Han, L.; Zhang, K.
Deposited on : 2021-06-07
Resolution : 3.50 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

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>.

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

EMDB validation analysis : 0.0.1.dev43
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 : **FAILED**
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

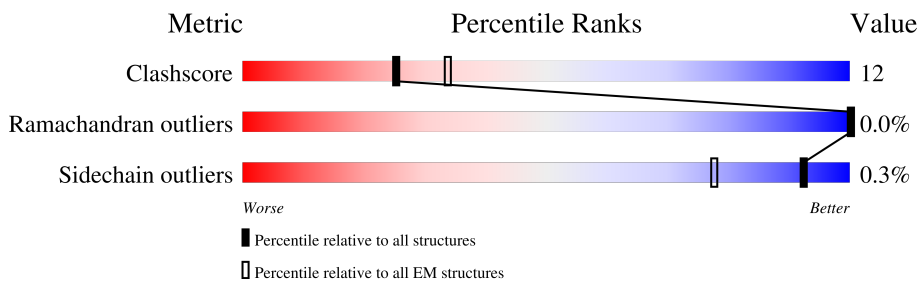
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.50 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.












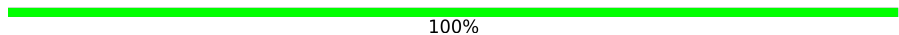
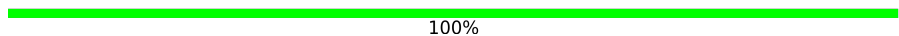
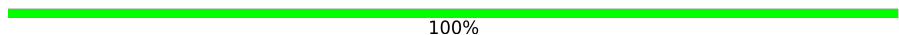
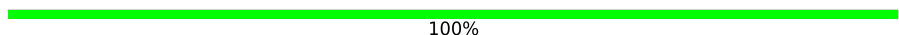
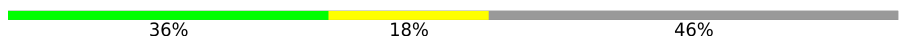

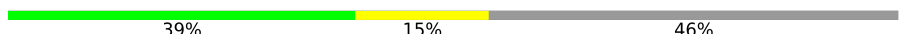



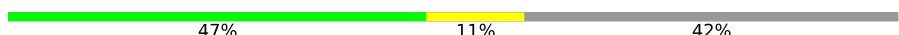
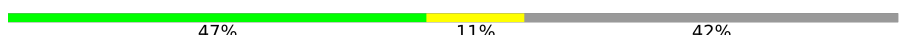
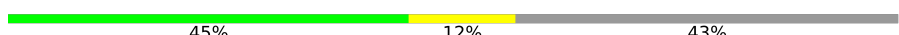
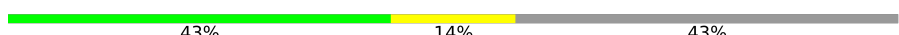
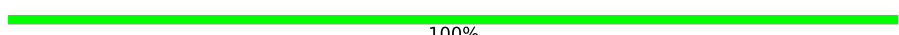
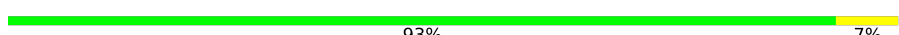
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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 ≥ 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 $\leq 5\%$.

Mol	Chain	Length	Quality of chain
1	0A	606	55% 22% 23%
1	0B	606	53% 24% 23%
1	0C	606	52% 26% 21%
1	0D	606	52% 26% 21%
2	0E	222	45% 13% 42%
2	0F	222	49% 9% 42%
2	0G	222	40% 18% 42%
2	0H	222	44% 14% 42%
3	0I	976	34% 12% 54%


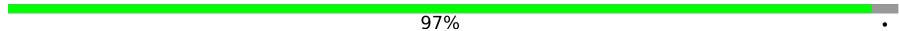
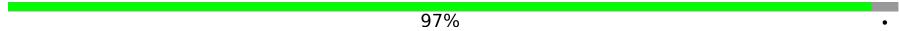
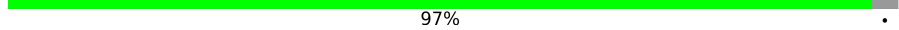
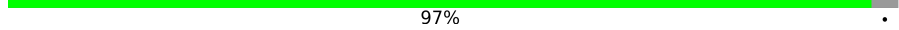
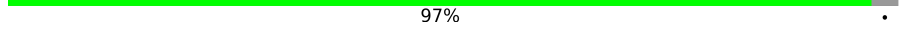
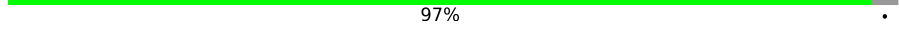
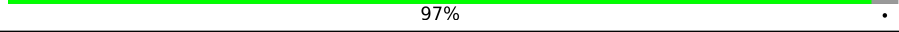
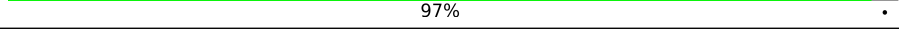
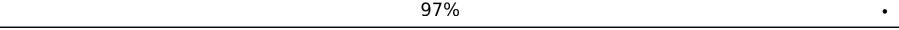
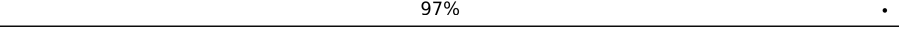
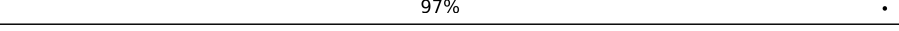
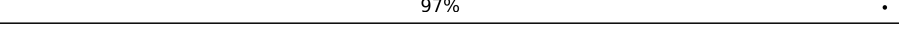
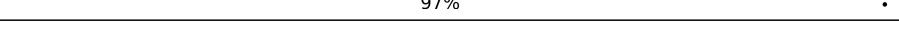
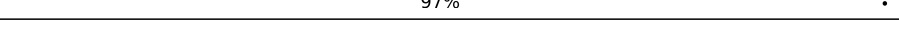
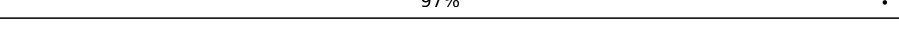
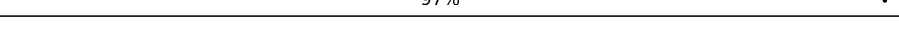
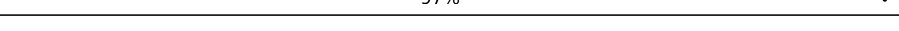
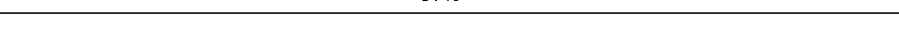
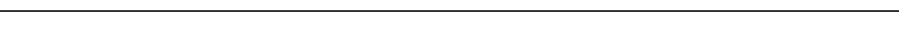

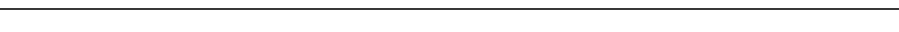
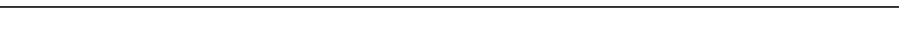


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Mol	Chain	Length	Quality of chain
3	0J	976	
4	0K	528	
4	0L	528	
5	0M	758	
5	0N	758	
6	0O	201	
6	0P	201	
7	0Q	618	
7	0S	618	
8	0T	169	
9	0U	170	
10	0V	160	
11	0W	39	
12	0X	776	
12	0Y	776	
12	0Z	776	
12	1A	776	
13	1B	2257	
13	1C	2257	
14	1D	1074	
14	1E	1074	
14	1F	1074	
14	1G	1074	
15	1H	88	
16	1L	174	

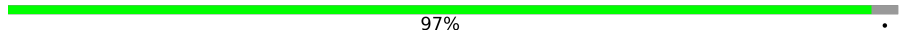
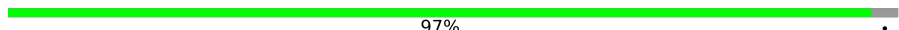
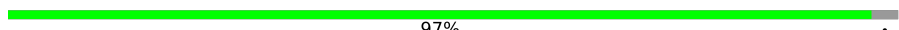
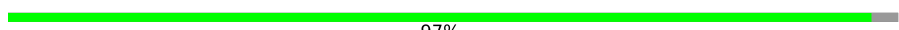
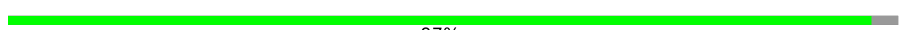





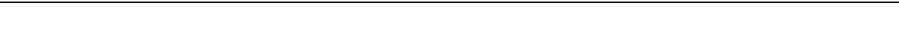

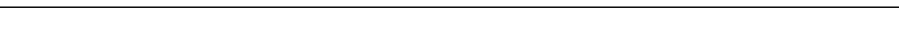
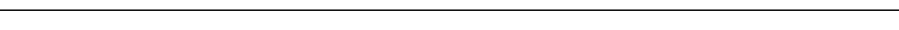
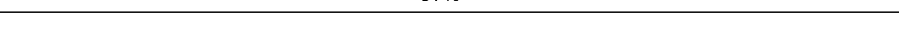
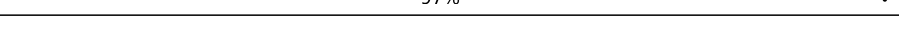
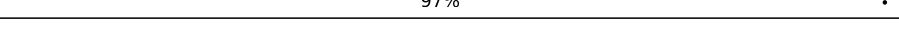
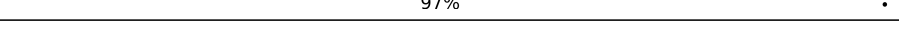
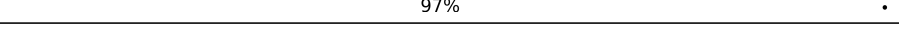
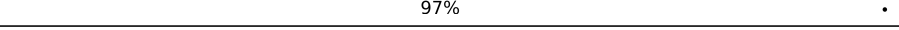
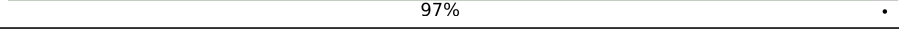
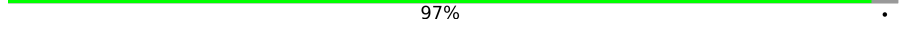
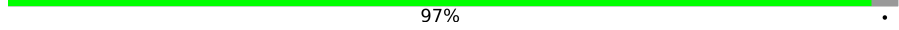
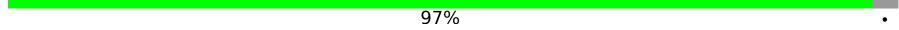
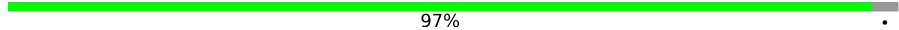
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Mol	Chain	Length	Quality of chain
16	1M	174	 90% 10%
17	1a	443	 97%
17	1c	443	 97%
17	1e	443	 97%
17	1g	443	 97%
17	2a	443	 97%
17	2c	443	 97%
17	2e	443	 97%
17	2g	443	 97%
17	3a	443	 97%
17	3c	443	 97%
17	3e	443	 97%
17	3g	443	 97%
17	4a	443	 97%
17	4c	443	 97%
17	4e	443	 97%
17	4g	443	 97%
17	5a	443	 97%
17	5c	443	 97%
17	5e	443	 97%
17	5g	443	 97%
17	6a	443	 97%
17	6c	443	 97%
17	6e	443	 97%
17	6g	443	 97%

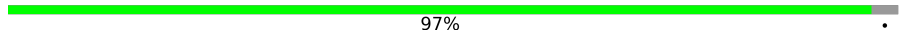
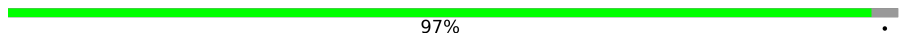
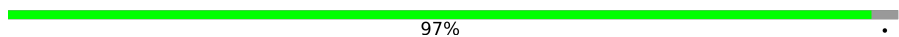
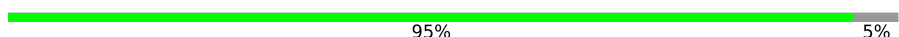

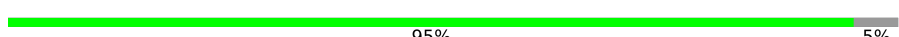
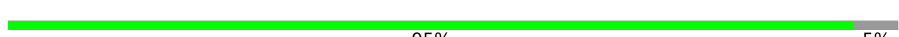



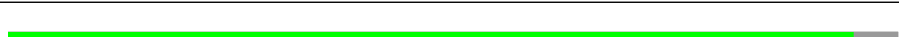


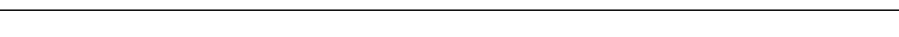
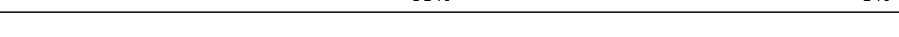
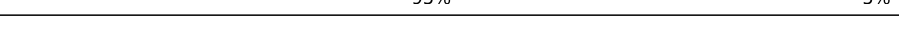
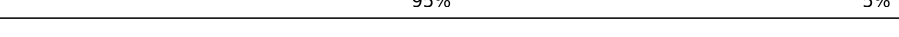
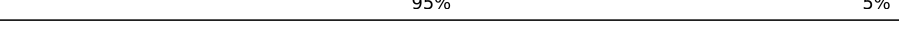
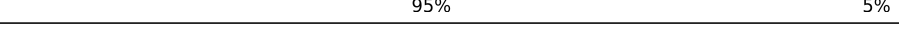
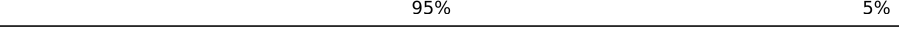
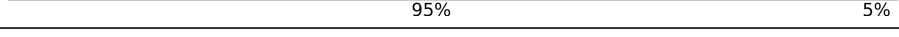
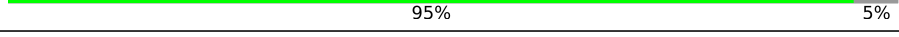
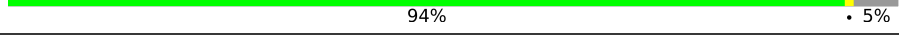
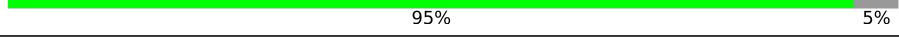
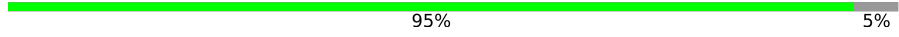
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Mol	Chain	Length	Quality of chain
17	7a	443	 97%
17	7c	443	 97%
17	7e	443	 97%
17	7g	443	 97%
17	8a	443	 97%
17	8c	443	 97%
17	8e	443	 97%
17	8g	443	 97%
17	9a	443	 97%
17	9c	443	 97%
17	9e	443	 97%
17	9g	443	 97%
17	Aa	443	 97%
17	Ac	443	 97%
17	Ae	443	 97%
17	Ag	443	 97%
17	Ba	443	 97%
17	Bc	443	 97%
17	Be	443	 97%
17	Bg	443	 97%
17	Ca	443	 97%
17	Cc	443	 97%
17	Ce	443	 97%
17	Cg	443	 97%
17	Da	443	 97%

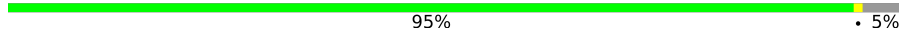
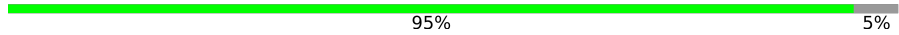
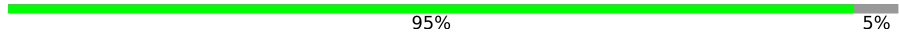
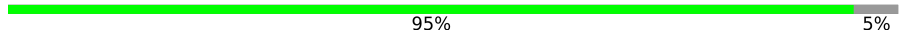
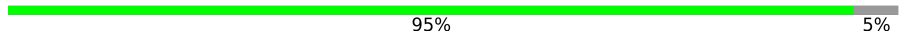
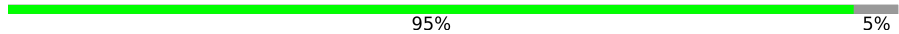
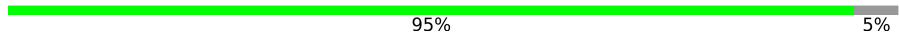
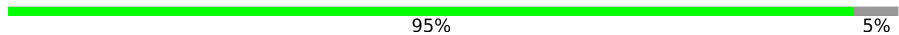
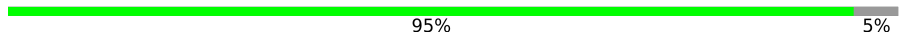
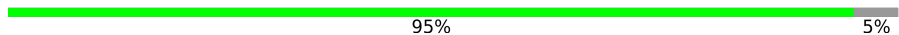
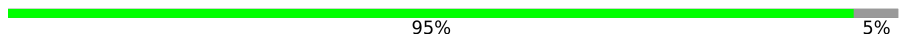
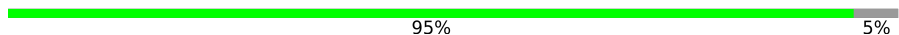
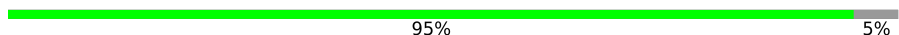
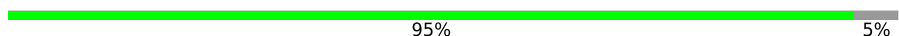
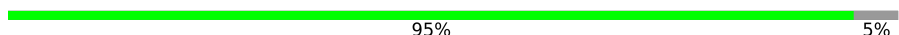
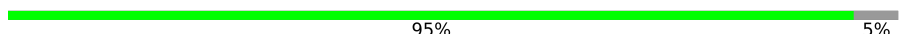
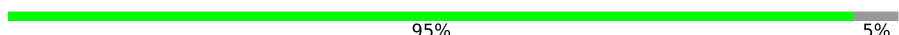
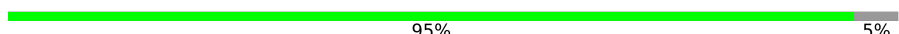
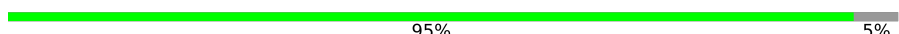
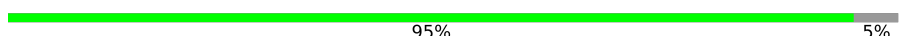
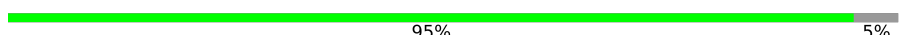
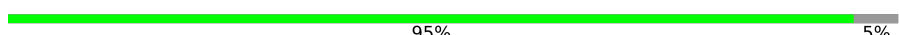
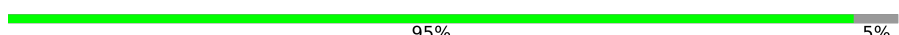
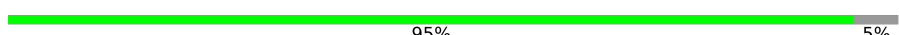
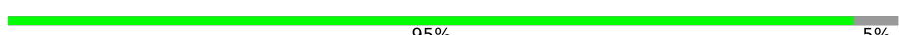
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Mol	Chain	Length	Quality of chain
17	Dc	443	 97%
17	De	443	 97%
17	Dg	443	 97%
18	1b	451	 95% 5%
18	1d	451	 95% 5%
18	1f	451	 95% 5%
18	1h	451	 95% 5%
18	2b	451	 95% 5%
18	2d	451	 95% 5%
18	2f	451	 95% 5%
18	2h	451	 95% 5%
18	3b	451	 95% 5%
18	3d	451	 95% 5%
18	3f	451	 95% 5%
18	3h	451	 95% 5%
18	4b	451	 95% 5%
18	4d	451	 95% 5%
18	4f	451	 95% 5%
18	4h	451	 95% 5%
18	5b	451	 95% 5%
18	5d	451	 95% 5%
18	5f	451	 94% 5%
18	5h	451	 95% 5%
18	6b	451	 95% 5%
18	6d	451	 95% 5%

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Mol	Chain	Length	Quality of chain
18	6f	451	 95% 5%
18	6h	451	 95% 5%
18	7b	451	 95% 5%
18	7d	451	 95% 5%
18	7f	451	 95% 5%
18	7h	451	 95% 5%
18	8b	451	 95% 5%
18	8d	451	 95% 5%
18	8f	451	 95% 5%
18	8h	451	 95% 5%
18	9b	451	 95% 5%
18	9d	451	 95% 5%
18	9f	451	 95% 5%
18	9h	451	 95% 5%
18	Ab	451	 95% 5%
18	Ad	451	 95% 5%
18	Af	451	 95% 5%
18	Ah	451	 95% 5%
18	Bb	451	 95% 5%
18	Bd	451	 95% 5%
18	Bf	451	 95% 5%
18	Bh	451	 95% 5%
18	Cb	451	 95% 5%
18	Cd	451	 95% 5%
18	Cf	451	 95% 5%

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Mol	Chain	Length	Quality of chain
18	Ch	451	 95% 5%
18	Db	451	 95% 5%
18	Dd	451	 95% 5%
18	Df	451	 95% 5%
18	Dh	451	 95% 5%

2 Entry composition [i](#)

There are 21 unique types of molecules in this entry. The entry contains 443856 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 Flagellar WD repeat-containing protein Pf20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	0A	467	Total 3656	C 2298	N 650	O 685	S 23	0	0
1	0B	467	Total 3656	C 2298	N 650	O 685	S 23	0	0
1	0C	476	Total 3726	C 2343	N 664	O 696	S 23	0	0
1	0D	476	Total 3726	C 2343	N 664	O 696	S 23	0	0

- Molecule 2 is a protein called FAP178.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	0E	128	Total 1008	C 640	N 180	O 184	S 4	0	0
2	0F	128	Total 1008	C 640	N 180	O 184	S 4	0	0
2	0G	128	Total 1008	C 640	N 180	O 184	S 4	0	0
2	0H	128	Total 1008	C 640	N 180	O 184	S 4	0	0

- Molecule 3 is a protein called FAP147.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	0I	448	Total 3321	C 2062	N 633	O 616	S 10	0	0
3	0J	448	Total 3321	C 2062	N 633	O 616	S 10	0	0

- Molecule 4 is a protein called FAP239.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	0K	166	Total	C	N	O	S	0	0
			1216	747	229	239	1		
4	0L	166	Total	C	N	O	S	0	0
			1216	747	229	239	1		

- Molecule 5 is a protein called FAP225.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	0M	515	Total	C	N	O	S	0	0
			4037	2487	769	768	13		
5	0N	515	Total	C	N	O	S	0	0
			4037	2487	769	768	13		

- Molecule 6 is a protein called FAP213.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	0O	188	Total	C	N	O	S	0	0
			1481	897	294	287	3		
6	0P	188	Total	C	N	O	S	0	0
			1481	897	294	287	3		

- Molecule 7 is a protein called FAP196.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	0Q	617	Total	C	N	O	S	0	0
			4537	2823	824	857	33		
7	0S	617	Total	C	N	O	S	0	0
			4537	2823	824	857	33		

- Molecule 8 is a protein called Unassigned protein-1.

Mol	Chain	Residues	Atoms				AltConf	Trace
8	0T	169	Total	C	N	O	0	0
			845	507	169	169		

- Molecule 9 is a protein called Unassigned protein-2.

Mol	Chain	Residues	Atoms				AltConf	Trace
9	0U	170	Total	C	N	O	0	0
			850	510	170	170		

- Molecule 10 is a protein called Unassigned protein-3.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
10	0V	160	800	480	160	160	0	0

- Molecule 11 is a protein called Unassigned protein-4.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
11	0W	39	195	117	39	39	0	0

- Molecule 12 is a protein called Kinesin-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	0X	420	3098	1921	561	608	8	0	0
12	0Y	404	2903	1800	527	569	7	0	0
12	0Z	420	3098	1921	561	608	8	0	0
12	1A	404	2903	1800	527	569	7	0	0

- Molecule 13 is a protein called FAP65.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	1B	630	4771	3018	865	874	14	0	0
13	1C	630	4771	3018	865	874	14	0	0

- Molecule 14 is a protein called FAP70.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	1D	623	4079	2527	756	781	15	0	0
14	1E	623	4079	2527	756	781	15	0	0
14	1F	614	4370	2725	808	821	16	0	0
14	1G	614	4370	2725	808	821	16	0	0

- Molecule 15 is a protein called Unassigned protein-5.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
15	1H	88	440	264	88	88	0	0

- Molecule 16 is a protein called Unassigned protein-6.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
16	1M	174	870	522	174	174	0	0
16	1L	174	870	522	174	174	0	0

- Molecule 17 is a protein called Tubulin beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	1a	431	3379	2121	579	649	30	0	0
17	1c	431	3379	2121	579	649	30	0	0
17	1e	431	3379	2121	579	649	30	0	0
17	1g	431	3379	2121	579	649	30	0	0
17	2a	431	3379	2121	579	649	30	0	0
17	2c	431	3379	2121	579	649	30	0	0
17	2e	431	3379	2121	579	649	30	0	0
17	2g	431	3379	2121	579	649	30	0	0
17	3a	431	3379	2121	579	649	30	0	0
17	3c	431	3379	2121	579	649	30	0	0
17	3e	431	3379	2121	579	649	30	0	0
17	3g	431	3379	2121	579	649	30	0	0
17	4a	431	3379	2121	579	649	30	0	0
17	4c	431	3379	2121	579	649	30	0	0
17	4e	431	3379	2121	579	649	30	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	4g	431	3379	2121	579	649	30	0	0
17	5a	431	3379	2121	579	649	30	0	0
17	5c	431	3379	2121	579	649	30	0	0
17	5e	431	3379	2121	579	649	30	0	0
17	5g	431	3379	2121	579	649	30	0	0
17	6a	431	3379	2121	579	649	30	0	0
17	6c	431	3379	2121	579	649	30	0	0
17	6e	431	3379	2121	579	649	30	0	0
17	6g	431	3379	2121	579	649	30	0	0
17	7a	431	3379	2121	579	649	30	0	0
17	7c	431	3379	2121	579	649	30	0	0
17	7e	431	3379	2121	579	649	30	0	0
17	7g	431	3379	2121	579	649	30	0	0
17	8a	431	3379	2121	579	649	30	0	0
17	8c	431	3379	2121	579	649	30	0	0
17	8e	431	3379	2121	579	649	30	0	0
17	8g	431	3379	2121	579	649	30	0	0
17	9a	431	3379	2121	579	649	30	0	0
17	9c	431	3379	2121	579	649	30	0	0
17	9e	431	3379	2121	579	649	30	0	0
17	9g	431	3379	2121	579	649	30	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	Aa	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Ac	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Ae	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Ag	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Ba	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Bc	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Be	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Bg	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Ca	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Cc	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Ce	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Cg	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Da	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Dc	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	De	431	Total 3379	C 2121	N 579	O 649	S 30	0	0
17	Dg	431	Total 3379	C 2121	N 579	O 649	S 30	0	0

- Molecule 18 is a protein called Tubulin alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	1b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	1d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	1f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	1h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	2b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	2d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	2f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	2h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	3b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	3d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	3f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	3h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	4b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	4d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	4f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	4h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	5b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	5d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	5f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	5h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	6b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	6d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	6f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	6h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0

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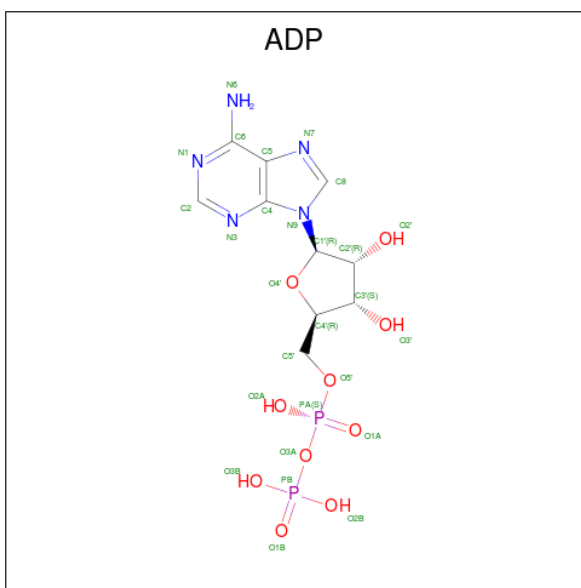
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
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18	7d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	7f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	7h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	8b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	8d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	8f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	8h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
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18	9d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	9f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	9h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Ab	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Ad	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Af	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Ah	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Bb	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Bd	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Bf	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Bh	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Cb	430	Total 3339	C 2115	N 568	O 634	S 22	0	0

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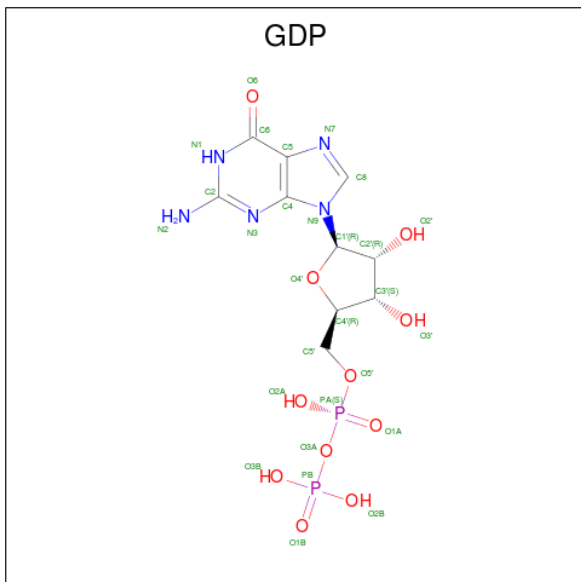
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	Cd	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Cf	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Ch	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Db	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Dd	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Df	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
18	Dh	430	Total 3339	C 2115	N 568	O 634	S 22	0	0

- Molecule 19 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
19	0X	1	Total 27	C 10	N 5	O 10	P 2	0
19	0Y	1	Total 27	C 10	N 5	O 10	P 2	0
19	0Z	1	Total 27	C 10	N 5	O 10	P 2	0
19	1A	1	Total 27	C 10	N 5	O 10	P 2	0

- Molecule 20 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	
20	1a	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	1c	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	1e	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	1g	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	2a	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	2c	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	2e	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	2g	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	3a	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	3c	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	3e	1	Total	C	N	O	P	0
			28	10	5	11	2	
20	3g	1	Total	C	N	O	P	0
			28	10	5	11	2	

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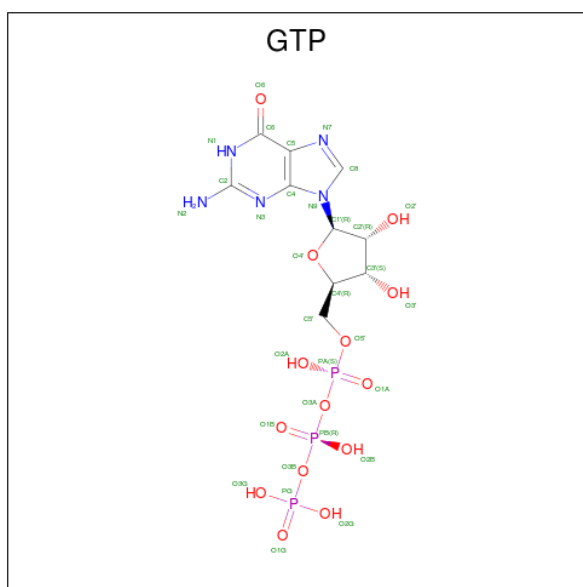
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
20	4a	1	Total 28	C 10	N 5	O 11	P 2	0
20	4c	1	Total 28	C 10	N 5	O 11	P 2	0
20	4e	1	Total 28	C 10	N 5	O 11	P 2	0
20	4g	1	Total 28	C 10	N 5	O 11	P 2	0
20	5a	1	Total 28	C 10	N 5	O 11	P 2	0
20	5c	1	Total 28	C 10	N 5	O 11	P 2	0
20	5e	1	Total 28	C 10	N 5	O 11	P 2	0
20	5g	1	Total 28	C 10	N 5	O 11	P 2	0
20	6a	1	Total 28	C 10	N 5	O 11	P 2	0
20	6c	1	Total 28	C 10	N 5	O 11	P 2	0
20	6e	1	Total 28	C 10	N 5	O 11	P 2	0
20	6g	1	Total 28	C 10	N 5	O 11	P 2	0
20	7a	1	Total 28	C 10	N 5	O 11	P 2	0
20	7c	1	Total 28	C 10	N 5	O 11	P 2	0
20	7e	1	Total 28	C 10	N 5	O 11	P 2	0
20	7g	1	Total 28	C 10	N 5	O 11	P 2	0
20	8a	1	Total 28	C 10	N 5	O 11	P 2	0
20	8c	1	Total 28	C 10	N 5	O 11	P 2	0
20	8e	1	Total 28	C 10	N 5	O 11	P 2	0
20	8g	1	Total 28	C 10	N 5	O 11	P 2	0
20	9a	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	
20	9c	1	Total 28	C 10	N 5	O 11	P 2	0
20	9e	1	Total 28	C 10	N 5	O 11	P 2	0
20	9g	1	Total 28	C 10	N 5	O 11	P 2	0
20	Aa	1	Total 28	C 10	N 5	O 11	P 2	0
20	Ac	1	Total 28	C 10	N 5	O 11	P 2	0
20	Ae	1	Total 28	C 10	N 5	O 11	P 2	0
20	Ag	1	Total 28	C 10	N 5	O 11	P 2	0
20	Ba	1	Total 28	C 10	N 5	O 11	P 2	0
20	Bc	1	Total 28	C 10	N 5	O 11	P 2	0
20	Be	1	Total 28	C 10	N 5	O 11	P 2	0
20	Bg	1	Total 28	C 10	N 5	O 11	P 2	0
20	Ca	1	Total 28	C 10	N 5	O 11	P 2	0
20	Cc	1	Total 28	C 10	N 5	O 11	P 2	0
20	Ce	1	Total 28	C 10	N 5	O 11	P 2	0
20	Cg	1	Total 28	C 10	N 5	O 11	P 2	0
20	Da	1	Total 28	C 10	N 5	O 11	P 2	0
20	Dc	1	Total 28	C 10	N 5	O 11	P 2	0
20	De	1	Total 28	C 10	N 5	O 11	P 2	0
20	Dg	1	Total 28	C 10	N 5	O 11	P 2	0

- Molecule 21 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
21	1b	1	Total 32	C 10	N 5	O 14	P 3	0
21	1d	1	Total 32	C 10	N 5	O 14	P 3	0
21	1f	1	Total 32	C 10	N 5	O 14	P 3	0
21	1h	1	Total 32	C 10	N 5	O 14	P 3	0
21	2b	1	Total 32	C 10	N 5	O 14	P 3	0
21	2d	1	Total 32	C 10	N 5	O 14	P 3	0
21	2f	1	Total 32	C 10	N 5	O 14	P 3	0
21	2h	1	Total 32	C 10	N 5	O 14	P 3	0
21	3b	1	Total 32	C 10	N 5	O 14	P 3	0
21	3d	1	Total 32	C 10	N 5	O 14	P 3	0
21	3f	1	Total 32	C 10	N 5	O 14	P 3	0
21	3h	1	Total 32	C 10	N 5	O 14	P 3	0
21	4b	1	Total 32	C 10	N 5	O 14	P 3	0
21	4d	1	Total 32	C 10	N 5	O 14	P 3	0

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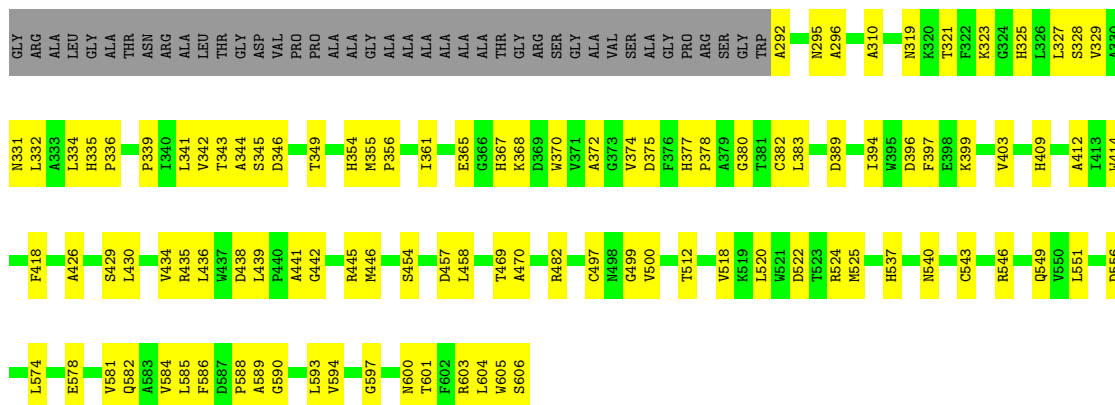
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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
21	4f	1	Total 32	10	5	14	3	0
21	4h	1	Total 32	10	5	14	3	0
21	5b	1	Total 32	10	5	14	3	0
21	5d	1	Total 32	10	5	14	3	0
21	5f	1	Total 32	10	5	14	3	0
21	5h	1	Total 32	10	5	14	3	0
21	6b	1	Total 32	10	5	14	3	0
21	6d	1	Total 32	10	5	14	3	0
21	6f	1	Total 32	10	5	14	3	0
21	6h	1	Total 32	10	5	14	3	0
21	7b	1	Total 32	10	5	14	3	0
21	7d	1	Total 32	10	5	14	3	0
21	7f	1	Total 32	10	5	14	3	0
21	7h	1	Total 32	10	5	14	3	0
21	8b	1	Total 32	10	5	14	3	0
21	8d	1	Total 32	10	5	14	3	0
21	8f	1	Total 32	10	5	14	3	0
21	8h	1	Total 32	10	5	14	3	0
21	9b	1	Total 32	10	5	14	3	0
21	9d	1	Total 32	10	5	14	3	0
21	9f	1	Total 32	10	5	14	3	0

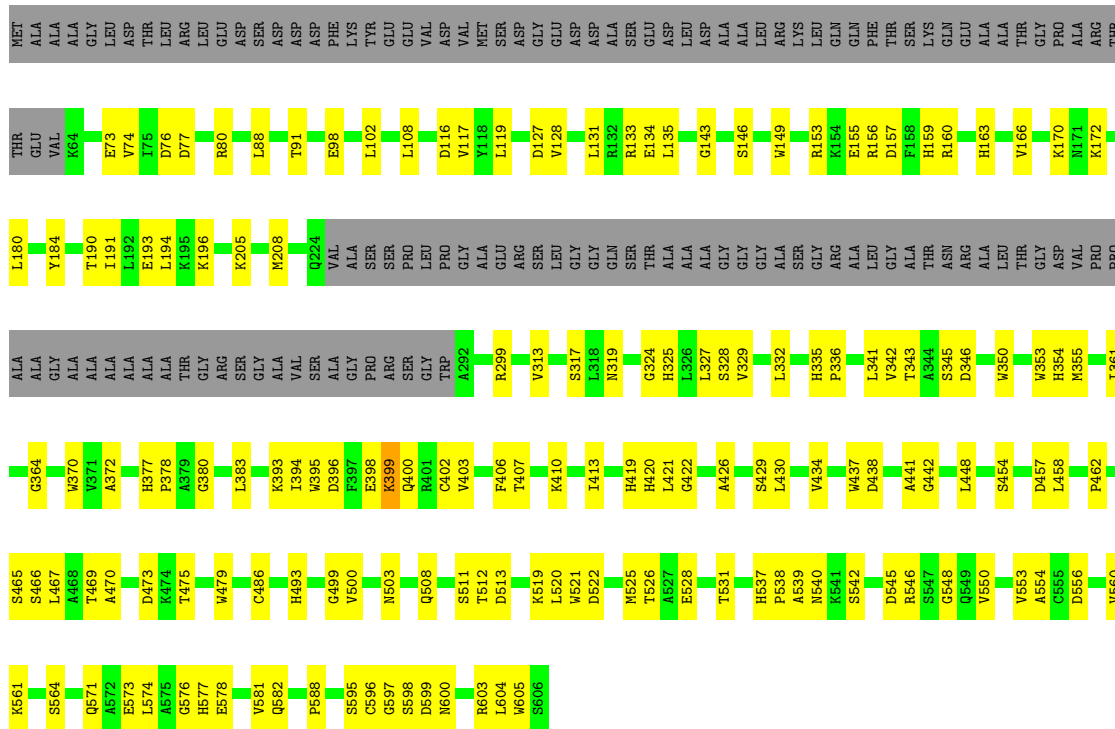
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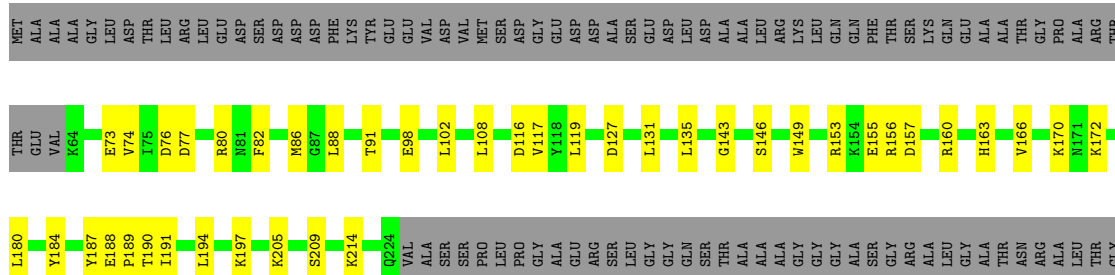
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
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21	Ad	1	Total 32	C 10	N 5	O 14	P 3	0
21	Af	1	Total 32	C 10	N 5	O 14	P 3	0
21	Ah	1	Total 32	C 10	N 5	O 14	P 3	0
21	Bb	1	Total 32	C 10	N 5	O 14	P 3	0
21	Bd	1	Total 32	C 10	N 5	O 14	P 3	0
21	Bf	1	Total 32	C 10	N 5	O 14	P 3	0
21	Bh	1	Total 32	C 10	N 5	O 14	P 3	0
21	Cb	1	Total 32	C 10	N 5	O 14	P 3	0
21	Cd	1	Total 32	C 10	N 5	O 14	P 3	0
21	Cf	1	Total 32	C 10	N 5	O 14	P 3	0
21	Ch	1	Total 32	C 10	N 5	O 14	P 3	0
21	Db	1	Total 32	C 10	N 5	O 14	P 3	0
21	Dd	1	Total 32	C 10	N 5	O 14	P 3	0
21	Df	1	Total 32	C 10	N 5	O 14	P 3	0
21	Dh	1	Total 32	C 10	N 5	O 14	P 3	0



● Molecule 1: Flagellar WD repeat-containing protein Pf20



● Molecule 1: Flagellar WD repeat-containing protein Pf20



T84	A85	S86	I87	Q88	K89	R90	Q93	Q96	R97	R98	L105	L106	D115	S118	A123	L127	K132	V133	R134	R135	K136	K137	K138	F150	I153	Q158	A160	F191	V194	I195	I196	E197	Q198	D216	I217	R218	D219	P220	L221	LYS	ARG	ARG	ASP	VAL	LEU								
LYS	GLY	GLU	LYS	GLU	ARG	ARG	LEU	MET	THR	GLY	GLY	GLY	GLY	ALA	ALA	SER	PRO	THR	ALA	GLY	ARG	GLY	ALA	GLY	PRO	LEU	GLY	ALA	GLY	LEU	THR	GLN	GLY	GLN	TRP	TRP	ILE	GLY	GLU	LEU	LEU	ALA	VAL	VAL	VAL	LYS	ALA	THR	PRO	ARG	GLY	THR	HIS
CYS	THR	ASP	GLY	VAL	GLY	GLY	TYR	VAL	VAL	ALA	ALA	ALA	VAL	VAL	LEU	ARG	PRO	MET	ASP	GLY	THR	THR	VAL	PRO	ALA	ALA	ALA	ALA	ALA	VAL	PRO	GLY	GLY	LYS	ASP	ILE	VAL	VAL	PRO	GLY	ALA	GLY	ALA	GLY	VAL	PRO	ARG	GLY	GLN	THR			
ASP	LEU	PHE	ASP	VAL	VAL	GLN	HIS	THR	VAL	HIS	ARG	THR	THR	GLY	ASP	GLY	HIS	LYS	GLY	GLY	THR	THR	VAL	HIS	GLY	ARG	ARG	ALA	ARG	ASP	LEU	ASP	GLY	ASP	GLY	GLN	GLN	GLN	LYS	ALA	VAL	VAL	VAL	VAL	VAL	ASP	GLY	PRO	THR	THR			
SER	ALA	PRO	ALA	ARG	GLY	ASP	GLN	LEU	LEU	HIS	ASP	ALA	ALA	TRP	LEU	ASP	LEU	ALA	SER	ALA	GLY	GLY	VAL	VAL	PRO	PRO	ARG	VAL	VAL	TYR	THR	THR	THR	THR	ASN	GLY	TYR	GLY	GLY	GLY	GLY	ASN	LYS	VAL	VAL	ASP	ALA	ALA	TRP				
LEU	GLU	HIS	GLY	GLY	LYS	VAL	VAL	GLN	PRO	ARG	ALA	ALA	ALA	ALA	LEU	LEU	SER	SER	ALA	LYS	VAL	VAL	VAL	PRO	LEU	PRO	VAL	VAL	VAL	ILE	GLY	ALA	ALA	ALA	ALA	ASN	ILE	GLY	GLN	THR	THR	THR	VAL	VAL	VAL	LYS	ASN	ASP	ALA	THR			
GLY	TRP																																																				

• Molecule 4: FAP239

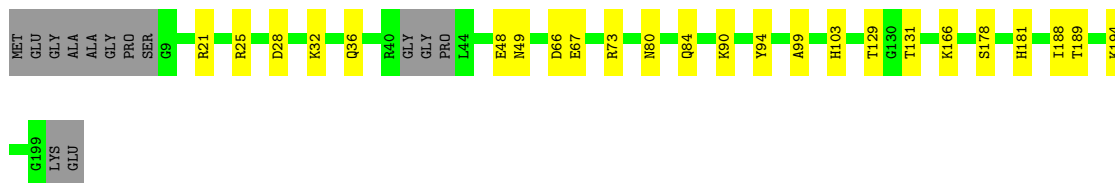


MET	PRO	PRO	GLN	LEU	GLY	ARG	GLU	VAL	VAL	GLN	THR	GLY	VAL	VAL	TYR	THR	GLY	ARG	ASN	GLN	THR	THR	LEU	VAL	ARG	ASN	ARG	SER	ILE	SER	ALA	PRO	ALA	PRO	THR	TYR	TRP	TRP	TYR	ASP	ASP	ASP	ASP	P56	D79	H80						
LYS	GLY	GLY	TYR	ARG	ARG	GLY	GLY	LEU	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY			
HIS	CYS	THR	ASP	GLY	GLY	GLY	GLY	TYR	VAL	VAL	ALA	THR	THR	GLY	PRO	ARG	ALA	ALA	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	
GLN	ASP	LEU	PHE	ASP	VAL	VAL	GLN	HIS	THR	VAL	VAL	VAL	HIS	THR	LEU	LYS	GLY	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	
THR	SER	ALA	PRO	ALA	ARG	GLY	ASP	GLN	GLN	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY		
TRP	LEU	HIS	GLY	GLY	ARG	LYS	VAL	VAL	GLN	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO
THR	GLY	TRP																																																		

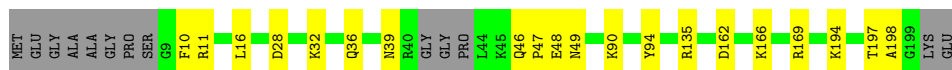
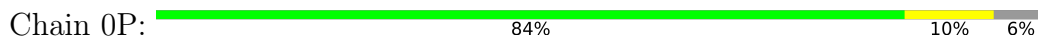
• Molecule 5: FAP225



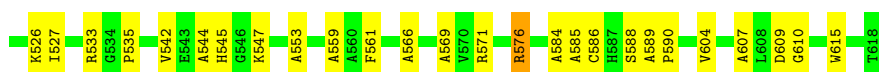
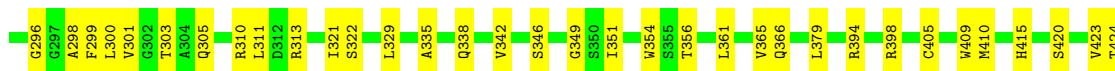
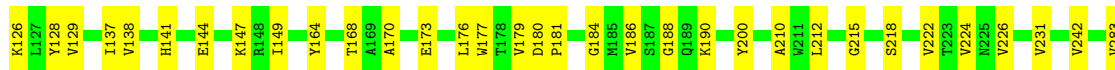
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-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



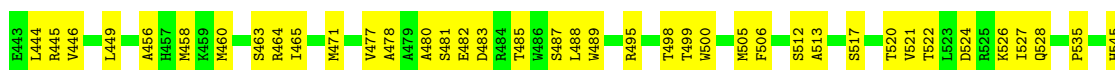
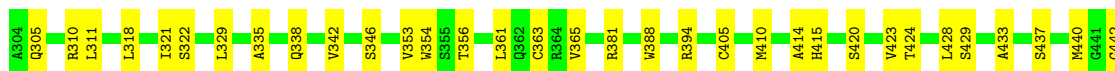
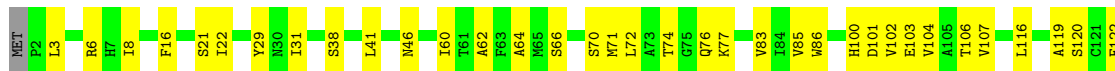
• Molecule 6: FAP213

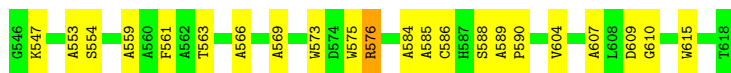


• Molecule 7: FAP196



• Molecule 7: FAP196





- Molecule 8: Unassigned protein-1



There are no outlier residues recorded for this chain.

- Molecule 9: Unassigned protein-2



There are no outlier residues recorded for this chain.

- Molecule 10: Unassigned protein-3



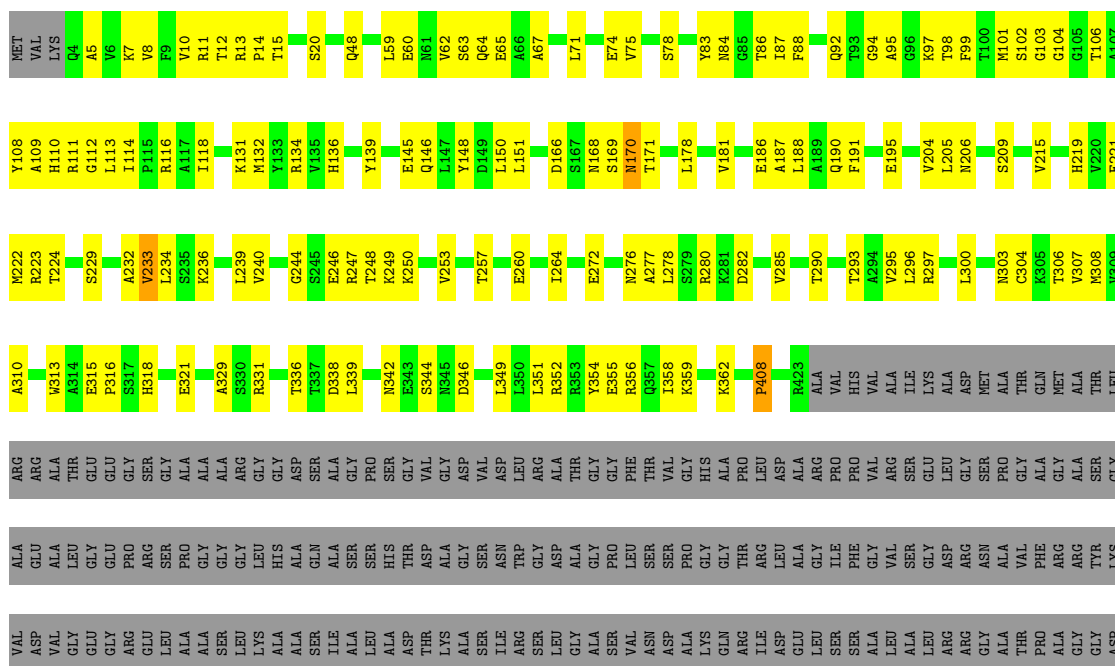
There are no outlier residues recorded for this chain.

- Molecule 11: Unassigned protein-4



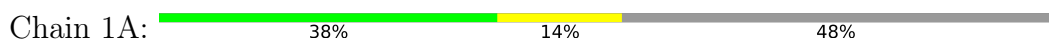
There are no outlier residues recorded for this chain.

- Molecule 12: Kinesin-like protein



L234	S235	K236	L239	V240	E246	R247	K248	T249	K250	V253	T257	E260	I264	N276	A277	L278	S279	R280	R281	D282	V285	T290	T293	L300	N303	C304	T306	V307	M308	V309	W313	E314	P316	S317	H318	A329	V332	T336	N342	E343							
S344	R345	D346	L349	L350	R351	R352	Y354	E355	R356	Q357	I358	K359	K362	P408	R423	ALA	VAL	HIS	VAL	ALA	ILE	LYS	ALA	V285	T290	T293	L300	N303	C304	T306	V307	M308	V309	W313	E314	P316	S317	H318	A329	V332	T336	N342	E343				
VAL	GLY	VAL	ASP	ARG	ALA	THR	GLY	ALA	THR	VAL	GLY	HIS	ALA	PRO	PRO	PRO	VAL	ALA	ALA	LEU	LEU	LEU	ASP	ALA	ALA	LEU	ARG	ALA	ALA	LEU	THR	GLY	SER	GLY	ALA	ALA	GLY	GLY	LEU	GLY	ALA	ASP	SER	ALA	THR		
ASP	ALA	GLY	SER	ASN	TRP	GLY	ASP	ALA	GLY	PRO	GLY	HIS	ALA	THR	THR	PRO	PHE	VAL	VAL	SER	LEU	VAL	VAL	ALA	ALA	LEU	VAL	ASP	GLY	GLY	GLY	ARG	VAL	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	ASP	
THR	LYS	ALA	ASP	ILE	ARG	SER	LEU	GLY	ALA	ALA	ALA	GLN	ILE	ILE	ASP	ALA	ALA	ALA	LEU	LEU	LEU	LEU	ALA	ALA	ALA	ASP	GLY	VAL	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
ARG	THR	ASP	PHE	ASP	SER	LEU	LYS	SER	ARG	ARG	PRO	ILE	GLN	ALA	VAL	VAL	ARG	ALA	GLY	LEU	LEU	ALA	PHE	ASP	ALA	ALA	ALA	SER	VAL	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	
GLU	GLU	ASP	GLU	MET	ALA	GLY	GLY	GLN	PHE	ARG	GLY	ALA	ILE	SER	GLU	ARG	ASP	SER	LEU	LEU	LEU	PHE	LEU	LEU	LEU	ALA	ALA	VAL	ARG	THR	PRO	ALA	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
LYS	MET	GLU	THR	HIS	GLN	ALA	VAL	ASN	ARG	ARG	GLY	ALA	ILE	SER	GLU	ARG	ASP	SER	LEU	LEU	LEU	PHE	LEU	LEU	ALA	ALA	VAL	ARG	THR	PRO	ALA	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR		

• Molecule 12: Kinesin-like protein



MET	VAL	L79	M80	G82	Y83	N84	G85	T86	I87	F88	A89	Y90	G91	Q92	T93	G94	S102	T106	A109																																	
H110	R111	G112	L113	I114	P115	R116	A117	V121	F122	R123	E124	R125	D126	M127	R128	Y133	R134	V135	H136	V137	S138	Y139	L147	L151	P155	D159	A160	L161	V163	D166	M170	R174	P180	E184	E185	E186	A187	L188	A189	Q190	F191	R198	N206	T214								
V215	F216	T217	V220	E221	M222	R223	T224	R231	A232	V233	L234	S235	K236	L237	N238	L239	V240	D241	L242	R247	T248	A277	V285	R286	F287	K291	L296	R297	D298	R299	L300	G301	C304	K305	T306	V307	E321	T322	L323	S324	T325	L326	A329	R333	THR	THR	THR	THR				
ASP	LEU	ALA	LEU	ASN	GLY	SER	ASN	ASP	PRO	A348	E403	P408	R423	ALA	ALA	PRO	VAL	VAL	VAL	ILE	LYS	ALA	ASP	MET	THR	THR	THR	LEU	ARG	GLY	THR	GLY	GLY	SER	ALA	ALA	ALA	ALA	ARG	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	
ASP	LEU	ARG	THR	ALA	GLY	GLY	PHE	THR	VAL	ASP	HIS	ALA	ALA	ALA	PRO	PRO	VAL	VAL	VAL	VAL	GLY	LEU	GLY	SER	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	
ASN	TRP	GLY	ASP	ALA	GLY	GLY	PRO	LEU	SER	THR	ARG	ARG	ARG	ARG	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	
ILE	ARG	SER	ALA	GLY	ALA	SER	VAL	ASN	ASP	THR	ARG	ARG	ARG	ARG	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA
ASP	SER	LEU	LYS	GLY	ALA	ALA	ARG	GLU	PRO	GLY	GLN	ILE	GLN	ILE	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
MET	ASP	ALA	GLY	GLN	GLU	PHE	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	

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ARG

● Molecule 13: FAP65

Chain 1B:  19% 8% 72%

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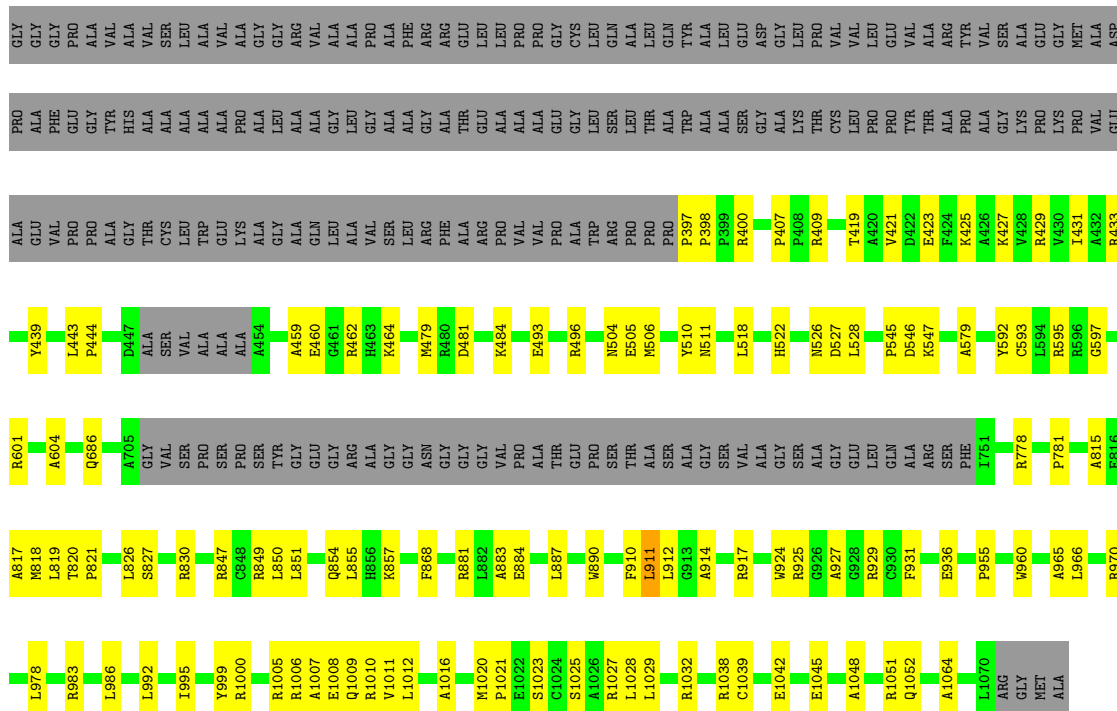
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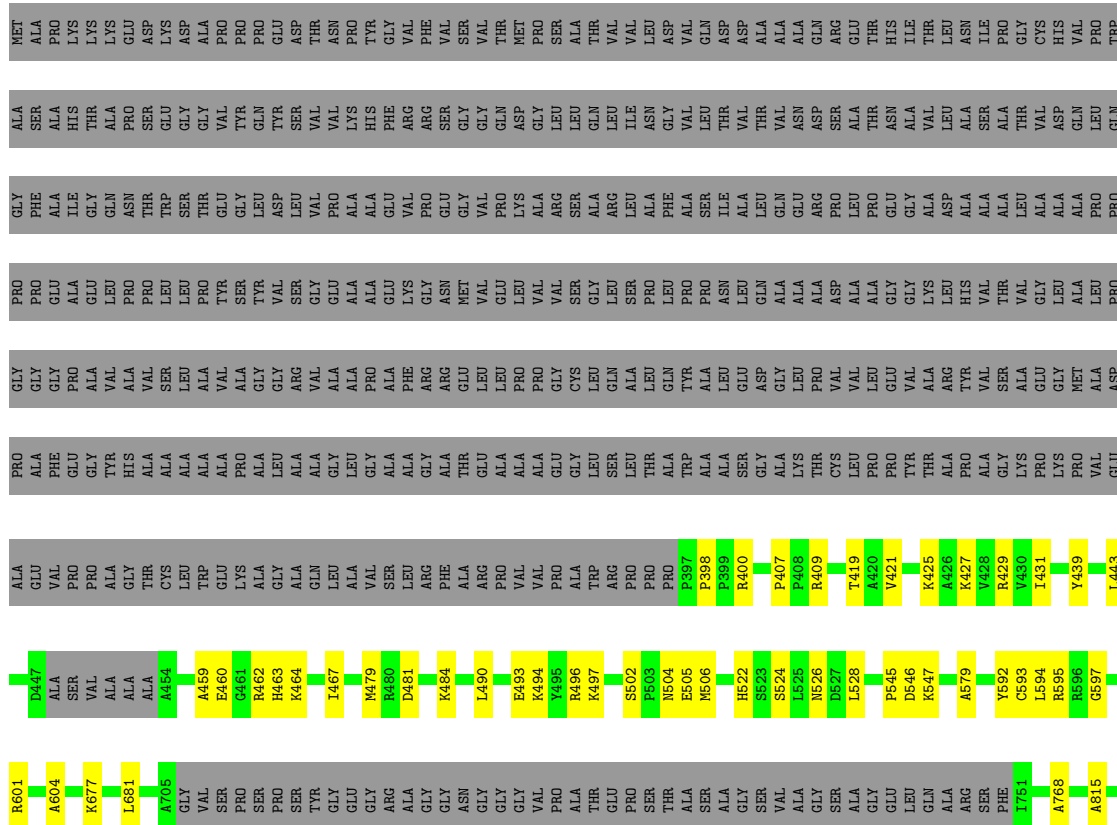
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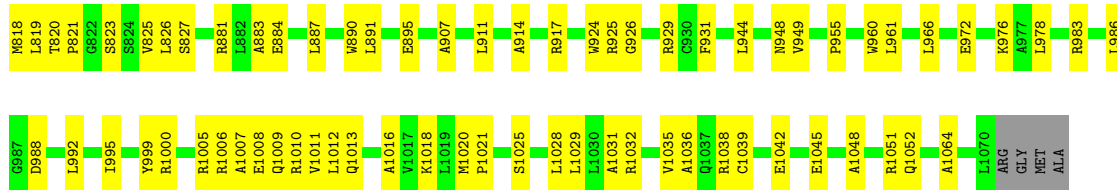
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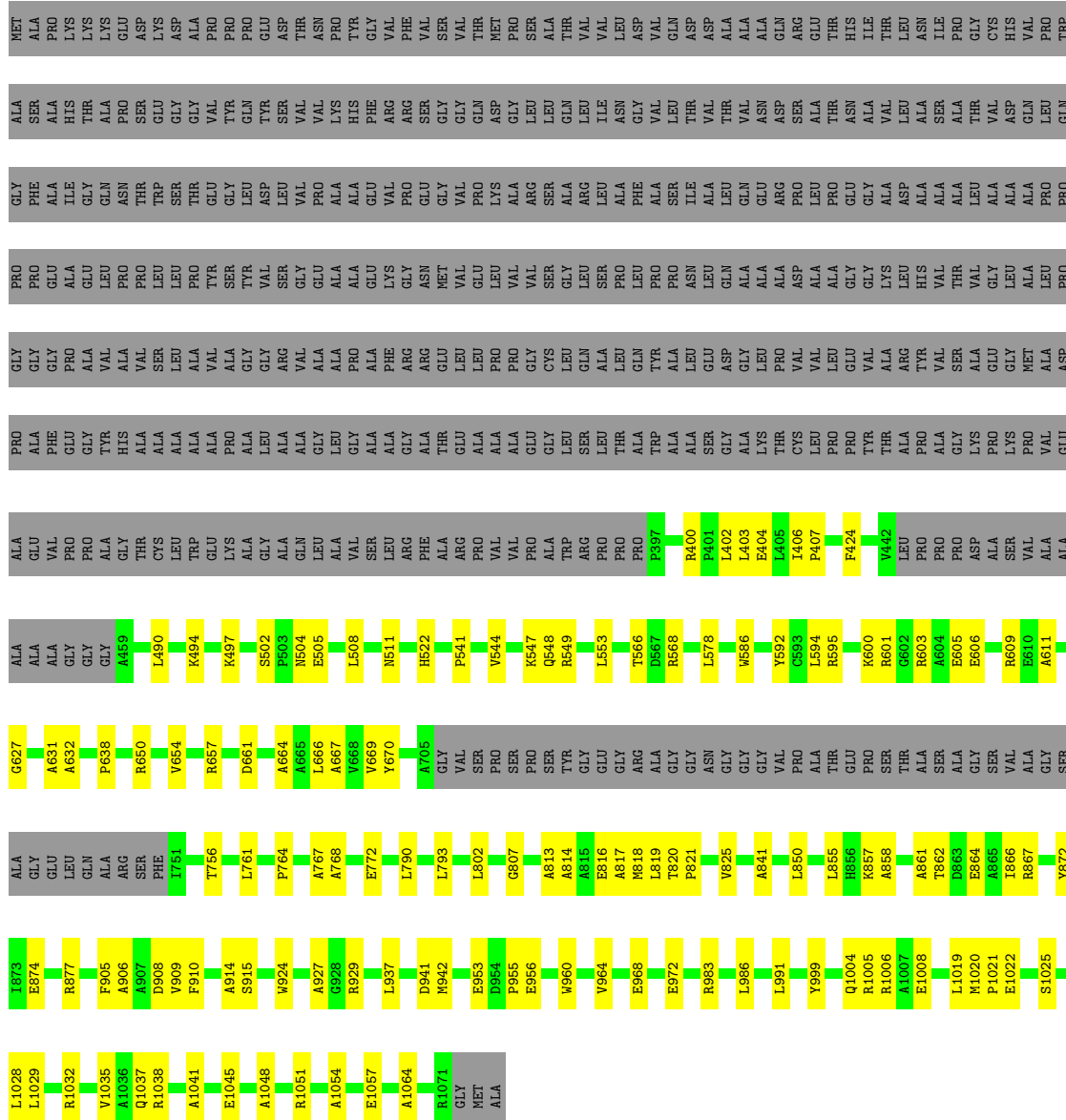
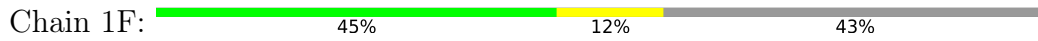


• Molecule 14: FAP70

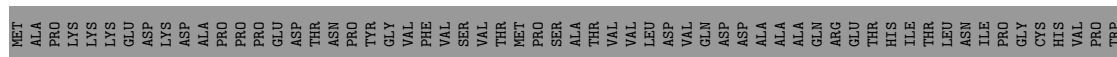




• Molecule 14: FAP70

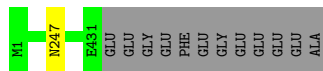


• Molecule 14: FAP70



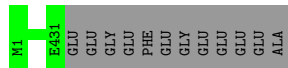
• Molecule 17: Tubulin beta

Chain 1a:  97%



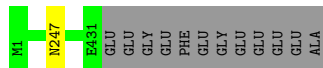
• Molecule 17: Tubulin beta

Chain 1c:  97%



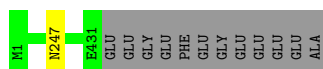
• Molecule 17: Tubulin beta

Chain 1e:  97%



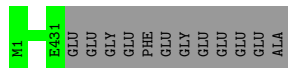
• Molecule 17: Tubulin beta

Chain 1g:  97%



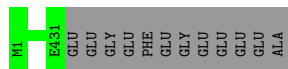
• Molecule 17: Tubulin beta

Chain 2a:  97%



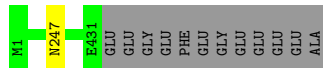
• Molecule 17: Tubulin beta

Chain 2c:  97%



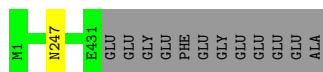
• Molecule 17: Tubulin beta

Chain 2e:  97%



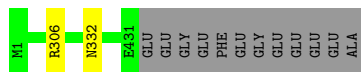
• Molecule 17: Tubulin beta

Chain 2g:  97%



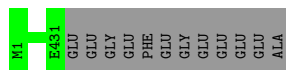
• Molecule 17: Tubulin beta

Chain 3a:  97%



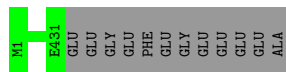
• Molecule 17: Tubulin beta

Chain 3c:  97%



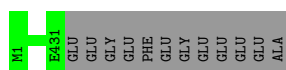
• Molecule 17: Tubulin beta

Chain 3e:  97%



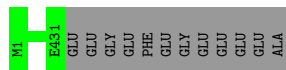
• Molecule 17: Tubulin beta

Chain 3g:  97%



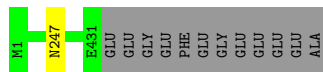
• Molecule 17: Tubulin beta

Chain 4a:  97%



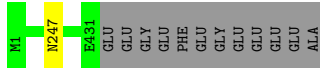
• Molecule 17: Tubulin beta

Chain 4c:  97%

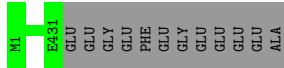


• Molecule 17: Tubulin beta

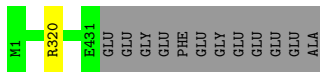
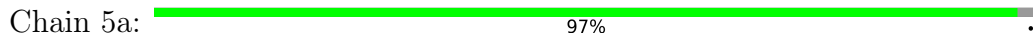
Chain 4e:  97%



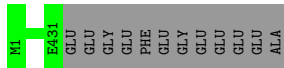
• Molecule 17: Tubulin beta



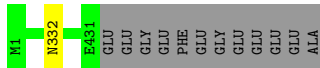
• Molecule 17: Tubulin beta



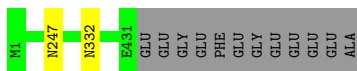
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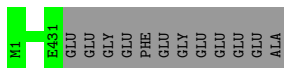
• Molecule 17: Tubulin beta



• Molecule 17: Tubulin beta

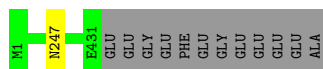


• Molecule 17: Tubulin beta

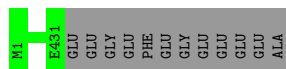


• Molecule 17: Tubulin beta

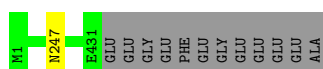




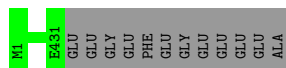
● Molecule 17: Tubulin beta



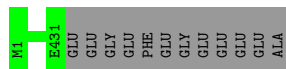
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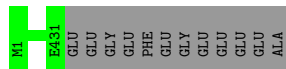
● Molecule 17: Tubulin beta



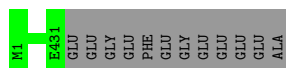
● Molecule 17: Tubulin beta



● Molecule 17: Tubulin beta

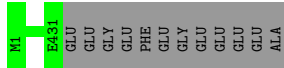


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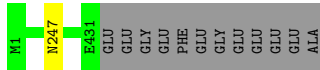


● Molecule 17: Tubulin beta

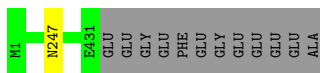




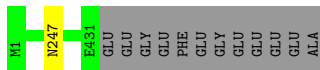
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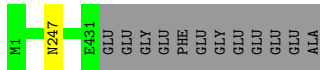
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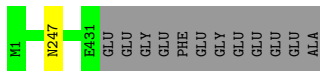
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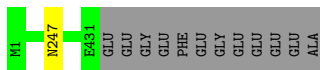
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• Molecule 17: Tubulin beta

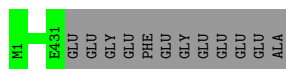


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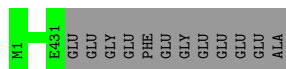


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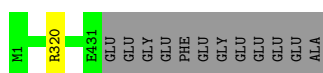




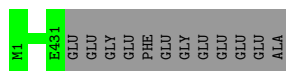
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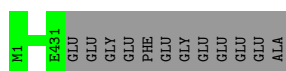
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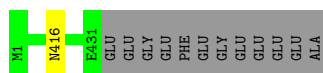
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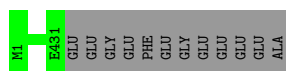
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• Molecule 17: Tubulin beta

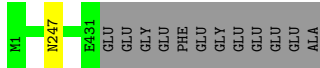


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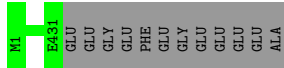


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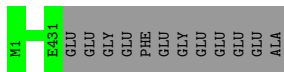
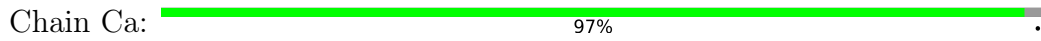




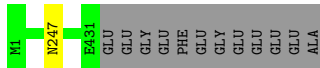
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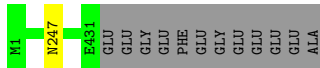
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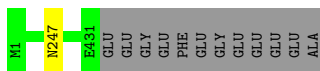
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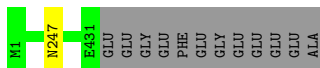
• Molecule 17: Tubulin beta



• Molecule 17: Tubulin beta

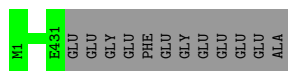


• Molecule 17: Tubulin beta

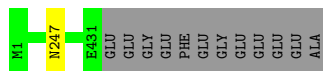


• Molecule 17: Tubulin beta

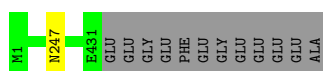




• Molecule 17: Tubulin beta



• Molecule 17: Tubulin beta



• Molecule 18: Tubulin alpha



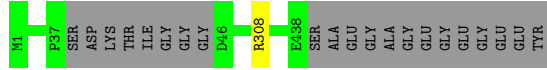
• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha





• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha

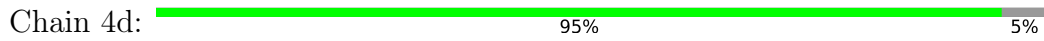




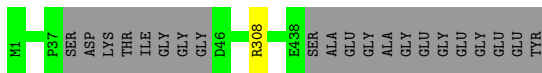
• Molecule 18: Tubulin alpha



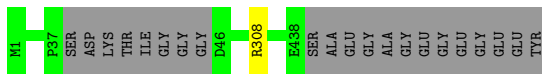
• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha





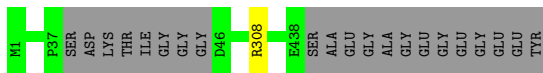
• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha





• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha





- Molecule 18: Tubulin alpha

Chain 9d: 95% 5%



- Molecule 18: Tubulin alpha

Chain 9f: 95% 5%



- Molecule 18: Tubulin alpha

Chain 9h: 95% 5%



- Molecule 18: Tubulin alpha

Chain Ab: 95% 5%



- Molecule 18: Tubulin alpha

Chain Ad: 95% 5%



- Molecule 18: Tubulin alpha

Chain Af: 95% 5%



- Molecule 18: Tubulin alpha

Chain Ah: 95% 5%



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha





• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



• Molecule 18: Tubulin alpha



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	192253	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	38.6	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	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: GDP, GTP, ADP

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	0A	0.29	0/3738	0.52	0/5058
1	0B	0.27	0/3738	0.53	0/5058
1	0C	0.26	0/3809	0.51	0/5153
1	0D	0.26	0/3809	0.51	0/5153
2	0E	0.27	0/1033	0.48	0/1399
2	0F	0.28	0/1033	0.50	0/1399
2	0G	0.27	0/1033	0.50	0/1399
2	0H	0.29	0/1033	0.49	0/1399
3	0I	0.29	0/3391	0.56	0/4613
3	0J	0.30	0/3391	0.57	0/4613
4	0K	0.26	0/1231	0.52	1/1674 (0.1%)
4	0L	0.24	0/1231	0.50	1/1674 (0.1%)
5	0M	0.26	0/4111	0.52	0/5556
5	0N	0.26	0/4111	0.52	0/5556
6	0O	0.26	0/1501	0.50	0/2016
6	0P	0.27	0/1501	0.51	0/2016
7	0Q	0.27	0/4634	0.53	0/6298
7	0S	0.26	0/4634	0.53	0/6298
12	0X	0.28	0/3143	0.56	1/4267 (0.0%)
12	0Y	0.30	0/2945	0.55	0/4003
12	0Z	0.28	0/3143	0.56	1/4267 (0.0%)
12	1A	0.29	0/2945	0.54	0/4003
13	1B	0.27	0/4891	0.53	0/6694
13	1C	0.28	0/4891	0.53	0/6694
14	1D	0.27	0/4141	0.50	0/5670
14	1E	0.26	0/4141	0.48	0/5670
14	1F	0.26	0/4441	0.51	0/6044
14	1G	0.27	0/4441	0.53	0/6044
17	1a	0.28	0/3453	0.48	0/4673
17	1c	0.28	0/3453	0.48	0/4673
17	1e	0.30	0/3453	0.49	0/4673
17	1g	0.29	0/3453	0.49	0/4673

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	2a	0.29	0/3453	0.49	0/4673
17	2c	0.28	0/3453	0.49	0/4673
17	2e	0.28	0/3453	0.48	0/4673
17	2g	0.28	0/3453	0.48	0/4673
17	3a	0.27	0/3453	0.48	0/4673
17	3c	0.28	0/3453	0.48	0/4673
17	3e	0.28	0/3453	0.49	0/4673
17	3g	0.28	0/3453	0.49	0/4673
17	4a	0.27	0/3453	0.48	0/4673
17	4c	0.27	0/3453	0.48	0/4673
17	4e	0.27	0/3453	0.48	0/4673
17	4g	0.27	0/3453	0.48	0/4673
17	5a	0.26	0/3453	0.48	0/4673
17	5c	0.27	0/3453	0.48	0/4673
17	5e	0.27	0/3453	0.49	0/4673
17	5g	0.28	0/3453	0.48	0/4673
17	6a	0.26	0/3453	0.50	0/4673
17	6c	0.26	0/3453	0.49	0/4673
17	6e	0.27	0/3453	0.48	0/4673
17	6g	0.26	0/3453	0.48	0/4673
17	7a	0.26	0/3453	0.48	0/4673
17	7c	0.26	0/3453	0.48	0/4673
17	7e	0.26	0/3453	0.49	0/4673
17	7g	0.27	0/3453	0.49	0/4673
17	8a	0.27	0/3453	0.49	0/4673
17	8c	0.27	0/3453	0.49	0/4673
17	8e	0.27	0/3453	0.48	0/4673
17	8g	0.27	0/3453	0.49	0/4673
17	9a	0.33	0/3453	0.51	0/4673
17	9c	0.32	0/3453	0.50	0/4673
17	9e	0.32	0/3453	0.51	0/4673
17	9g	0.32	0/3453	0.51	0/4673
17	Aa	0.28	0/3453	0.50	0/4673
17	Ac	0.28	0/3453	0.49	0/4673
17	Ae	0.28	0/3453	0.48	0/4673
17	Ag	0.28	0/3453	0.49	0/4673
17	Ba	0.28	0/3453	0.51	0/4673
17	Bc	0.32	0/3453	0.52	0/4673
17	Be	0.29	0/3453	0.49	0/4673
17	Bg	0.32	0/3453	0.51	0/4673
17	Ca	0.27	0/3453	0.49	0/4673
17	Cc	0.30	0/3453	0.50	0/4673
17	Ce	0.30	0/3453	0.49	0/4673

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	Cg	0.29	0/3453	0.49	0/4673
17	Da	0.28	0/3453	0.49	0/4673
17	Dc	0.29	0/3453	0.48	0/4673
17	De	0.29	0/3453	0.49	0/4673
17	Dg	0.29	0/3453	0.49	0/4673
18	1b	0.27	0/3410	0.49	0/4623
18	1d	0.29	0/3410	0.49	0/4623
18	1f	0.29	0/3410	0.49	0/4623
18	1h	0.28	0/3410	0.49	0/4623
18	2b	0.27	0/3410	0.48	0/4623
18	2d	0.28	0/3410	0.49	0/4623
18	2f	0.28	0/3410	0.49	0/4623
18	2h	0.28	0/3410	0.48	0/4623
18	3b	0.28	0/3410	0.48	0/4623
18	3d	0.29	0/3410	0.49	0/4623
18	3f	0.27	0/3410	0.49	0/4623
18	3h	0.28	0/3410	0.49	0/4623
18	4b	0.27	0/3410	0.49	0/4623
18	4d	0.27	0/3410	0.49	0/4623
18	4f	0.27	0/3410	0.49	0/4623
18	4h	0.27	0/3410	0.49	0/4623
18	5b	0.27	0/3410	0.48	0/4623
18	5d	0.27	0/3410	0.49	0/4623
18	5f	0.29	0/3410	0.49	0/4623
18	5h	0.27	0/3410	0.49	0/4623
18	6b	0.26	0/3410	0.48	0/4623
18	6d	0.29	0/3410	0.49	0/4623
18	6f	0.28	0/3410	0.49	0/4623
18	6h	0.28	0/3410	0.49	0/4623
18	7b	0.26	0/3410	0.48	0/4623
18	7d	0.28	0/3410	0.49	0/4623
18	7f	0.27	0/3410	0.48	0/4623
18	7h	0.27	0/3410	0.49	0/4623
18	8b	0.27	0/3410	0.49	0/4623
18	8d	0.29	0/3410	0.49	0/4623
18	8f	0.29	0/3410	0.50	0/4623
18	8h	0.27	0/3410	0.48	0/4623
18	9b	0.32	0/3410	0.50	0/4623
18	9d	0.33	0/3410	0.53	0/4623
18	9f	0.32	0/3410	0.50	0/4623
18	9h	0.33	0/3410	0.52	0/4623
18	Ab	0.27	0/3410	0.48	0/4623
18	Ad	0.28	0/3410	0.50	0/4623

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
18	Af	0.28	0/3410	0.49	0/4623
18	Ah	0.28	0/3410	0.49	0/4623
18	Bb	0.28	0/3410	0.48	0/4623
18	Bd	0.31	0/3410	0.51	0/4623
18	Bf	0.30	0/3410	0.50	0/4623
18	Bh	0.31	0/3410	0.51	0/4623
18	Cb	0.28	0/3410	0.49	0/4623
18	Cd	0.29	0/3410	0.49	0/4623
18	Cf	0.29	0/3410	0.49	0/4623
18	Ch	0.29	0/3410	0.49	0/4623
18	Db	0.28	0/3410	0.49	0/4623
18	Dd	0.29	0/3410	0.50	0/4623
18	Df	0.29	0/3410	0.49	0/4623
18	Dh	0.28	0/3410	0.49	0/4623
All	All	0.28	0/444960	0.50	4/603080 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	0X	408	PRO	N-CA-CB	6.46	111.06	103.30
12	0Z	408	PRO	N-CA-CB	6.45	111.04	103.30
4	0K	220	PRO	N-CA-CB	5.79	110.25	103.30
4	0L	220	PRO	N-CA-CB	5.77	110.22	103.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0A	3656	0	3589	107	0
1	0B	3656	0	3589	116	0
1	0C	3726	0	3671	128	0
1	0D	3726	0	3671	130	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	0E	1008	0	980	25	0
2	0F	1008	0	980	17	0
2	0G	1008	0	980	27	0
2	0H	1008	0	980	19	0
3	0I	3321	0	3319	99	0
3	0J	3321	0	3319	108	0
4	0K	1216	0	1136	29	0
4	0L	1216	0	1136	28	0
5	0M	4037	0	3964	56	0
5	0N	4037	0	3964	56	0
6	0O	1481	0	1456	15	0
6	0P	1481	0	1456	17	0
7	0Q	4537	0	4426	110	0
7	0S	4537	0	4426	114	0
8	0T	845	0	185	0	0
9	0U	850	0	188	0	0
10	0V	800	0	171	0	0
11	0W	195	0	42	0	0
12	0X	3098	0	2933	101	0
12	0Y	2903	0	2675	75	0
12	0Z	3098	0	2933	84	0
12	1A	2903	0	2675	72	0
13	1B	4771	0	4774	152	0
13	1C	4771	0	4774	157	0
14	1D	4079	0	3607	95	0
14	1E	4079	0	3607	83	0
14	1F	4370	0	4195	93	0
14	1G	4370	0	4195	122	0
15	1H	440	0	97	0	0
16	1L	870	0	195	9	0
16	1M	870	0	195	19	0
17	1a	3379	0	3265	0	0
17	1c	3379	0	3265	0	0
17	1e	3379	0	3265	0	0
17	1g	3379	0	3265	0	0
17	2a	3379	0	3265	0	0
17	2c	3379	0	3265	0	0
17	2e	3379	0	3265	0	0
17	2g	3379	0	3265	0	0
17	3a	3379	0	3265	0	0
17	3c	3379	0	3265	0	0
17	3e	3379	0	3265	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
17	3g	3379	0	3265	0	0
17	4a	3379	0	3265	0	0
17	4c	3379	0	3265	0	0
17	4e	3379	0	3265	0	0
17	4g	3379	0	3265	0	0
17	5a	3379	0	3265	0	0
17	5c	3379	0	3265	0	0
17	5e	3379	0	3265	0	0
17	5g	3379	0	3265	0	0
17	6a	3379	0	3265	0	0
17	6c	3379	0	3265	0	0
17	6e	3379	0	3265	0	0
17	6g	3379	0	3265	0	0
17	7a	3379	0	3265	0	0
17	7c	3379	0	3265	0	0
17	7e	3379	0	3265	0	0
17	7g	3379	0	3265	0	0
17	8a	3379	0	3265	0	0
17	8c	3379	0	3265	0	0
17	8e	3379	0	3265	0	0
17	8g	3379	0	3265	0	0
17	9a	3379	0	3265	0	0
17	9c	3379	0	3265	0	0
17	9e	3379	0	3265	0	0
17	9g	3379	0	3265	0	0
17	Aa	3379	0	3265	0	0
17	Ac	3379	0	3265	0	0
17	Ae	3379	0	3265	0	0
17	Ag	3379	0	3265	0	0
17	Ba	3379	0	3265	0	0
17	Bc	3379	0	3265	0	0
17	Be	3379	0	3265	0	0
17	Bg	3379	0	3265	0	0
17	Ca	3379	0	3265	0	0
17	Cc	3379	0	3265	0	0
17	Ce	3379	0	3265	0	0
17	Cg	3379	0	3265	0	0
17	Da	3379	0	3265	0	0
17	Dc	3379	0	3265	0	0
17	De	3379	0	3265	0	0
17	Dg	3379	0	3265	0	0
18	1b	3339	0	3277	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
18	1d	3339	0	3277	0	0
18	1f	3339	0	3277	0	0
18	1h	3339	0	3277	0	0
18	2b	3339	0	3277	0	0
18	2d	3339	0	3277	0	0
18	2f	3339	0	3277	0	0
18	2h	3339	0	3277	0	0
18	3b	3339	0	3277	0	0
18	3d	3339	0	3277	0	0
18	3f	3339	0	3277	0	0
18	3h	3339	0	3277	0	0
18	4b	3339	0	3277	0	0
18	4d	3339	0	3277	0	0
18	4f	3339	0	3277	0	0
18	4h	3339	0	3277	0	0
18	5b	3339	0	3277	0	0
18	5d	3339	0	3277	0	0
18	5f	3339	0	3277	0	0
18	5h	3339	0	3277	0	0
18	6b	3339	0	3277	0	0
18	6d	3339	0	3277	0	0
18	6f	3339	0	3277	0	0
18	6h	3339	0	3277	0	0
18	7b	3339	0	3277	0	0
18	7d	3339	0	3277	0	0
18	7f	3339	0	3277	0	0
18	7h	3339	0	3277	0	0
18	8b	3339	0	3277	0	0
18	8d	3339	0	3277	0	0
18	8f	3339	0	3277	0	0
18	8h	3339	0	3277	0	0
18	9b	3339	0	3277	0	0
18	9d	3339	0	3277	0	0
18	9f	3339	0	3277	0	0
18	9h	3339	0	3277	0	0
18	Ab	3339	0	3277	0	0
18	Ad	3339	0	3277	0	0
18	Af	3339	0	3277	0	0
18	Ah	3339	0	3277	0	0
18	Bb	3339	0	3277	0	0
18	Bd	3339	0	3277	0	0
18	Bf	3339	0	3277	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
18	Bh	3339	0	3277	0	0
18	Cb	3339	0	3277	0	0
18	Cd	3339	0	3277	0	0
18	Cf	3339	0	3277	0	0
18	Ch	3339	0	3277	0	0
18	Db	3339	0	3277	0	0
18	Dd	3339	0	3277	0	0
18	Df	3339	0	3277	0	0
18	Dh	3339	0	3277	0	0
19	0X	27	0	12	2	0
19	0Y	27	0	12	4	0
19	0Z	27	0	12	2	0
19	1A	27	0	12	1	0
20	1a	28	0	12	0	0
20	1c	28	0	12	0	0
20	1e	28	0	12	0	0
20	1g	28	0	12	0	0
20	2a	28	0	12	0	0
20	2c	28	0	12	0	0
20	2e	28	0	12	0	0
20	2g	28	0	12	0	0
20	3a	28	0	12	0	0
20	3c	28	0	12	0	0
20	3e	28	0	12	0	0
20	3g	28	0	12	0	0
20	4a	28	0	12	0	0
20	4c	28	0	12	0	0
20	4e	28	0	12	0	0
20	4g	28	0	12	0	0
20	5a	28	0	12	0	0
20	5c	28	0	12	0	0
20	5e	28	0	12	0	0
20	5g	28	0	12	0	0
20	6a	28	0	12	0	0
20	6c	28	0	12	0	0
20	6e	28	0	12	0	0
20	6g	28	0	12	0	0
20	7a	28	0	12	0	0
20	7c	28	0	12	0	0
20	7e	28	0	12	0	0
20	7g	28	0	12	0	0
20	8a	28	0	12	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
20	8c	28	0	12	0	0
20	8e	28	0	12	0	0
20	8g	28	0	12	0	0
20	9a	28	0	12	0	0
20	9c	28	0	12	0	0
20	9e	28	0	12	0	0
20	9g	28	0	12	0	0
20	Aa	28	0	12	0	0
20	Ac	28	0	12	0	0
20	Ae	28	0	12	0	0
20	Ag	28	0	12	0	0
20	Ba	28	0	12	0	0
20	Bc	28	0	12	0	0
20	Be	28	0	12	0	0
20	Bg	28	0	12	0	0
20	Ca	28	0	12	0	0
20	Cc	28	0	12	0	0
20	Ce	28	0	12	0	0
20	Cg	28	0	12	0	0
20	Da	28	0	12	0	0
20	Dc	28	0	12	0	0
20	De	28	0	12	0	0
20	Dg	28	0	12	0	0
21	1b	32	0	12	0	0
21	1d	32	0	12	0	0
21	1f	32	0	12	0	0
21	1h	32	0	12	0	0
21	2b	32	0	12	0	0
21	2d	32	0	12	0	0
21	2f	32	0	12	0	0
21	2h	32	0	12	0	0
21	3b	32	0	12	0	0
21	3d	32	0	12	0	0
21	3f	32	0	12	0	0
21	3h	32	0	12	0	0
21	4b	32	0	12	0	0
21	4d	32	0	12	0	0
21	4f	32	0	12	0	0
21	4h	32	0	12	0	0
21	5b	32	0	12	0	0
21	5d	32	0	12	0	0
21	5f	32	0	12	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	5h	32	0	12	0	0
21	6b	32	0	12	0	0
21	6d	32	0	12	0	0
21	6f	32	0	12	0	0
21	6h	32	0	12	0	0
21	7b	32	0	12	0	0
21	7d	32	0	12	0	0
21	7f	32	0	12	0	0
21	7h	32	0	12	0	0
21	8b	32	0	12	0	0
21	8d	32	0	12	0	0
21	8f	32	0	12	0	0
21	8h	32	0	12	0	0
21	9b	32	0	12	0	0
21	9d	32	0	12	0	0
21	9f	32	0	12	0	0
21	9h	32	0	12	0	0
21	Ab	32	0	12	0	0
21	Ad	32	0	12	0	0
21	Af	32	0	12	0	0
21	Ah	32	0	12	0	0
21	Bb	32	0	12	0	0
21	Bd	32	0	12	0	0
21	Bf	32	0	12	0	0
21	Bh	32	0	12	0	0
21	Cb	32	0	12	0	0
21	Cd	32	0	12	0	0
21	Cf	32	0	12	0	0
21	Ch	32	0	12	0	0
21	Db	32	0	12	0	0
21	Dd	32	0	12	0	0
21	Df	32	0	12	0	0
21	Dh	32	0	12	0	0
All	All	443856	0	425963	2096	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 12.

All (2096) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:1B:1659:ALA:HB2	16:1M:22:UNK:CB	1.25	1.57
13:1B:1659:ALA:CB	16:1M:22:UNK:CB	2.19	1.20
13:1B:1650:GLU:OE1	16:1M:30:UNK:O	1.69	1.10
7:0Q:488:LEU:HB3	7:0Q:498:THR:HG21	1.53	0.91
7:0S:460:MET:HE2	7:0S:495:ARG:HH12	1.33	0.91
12:0Y:106:THR:H	12:0Y:111:ARG:HG2	1.36	0.88
12:1A:106:THR:H	12:1A:111:ARG:HG2	1.37	0.88
14:1G:551:GLY:H	14:1G:576:ARG:HH22	1.24	0.86
12:0Y:78:SER:O	12:0Y:82:GLY:HA3	1.77	0.85
12:1A:78:SER:O	12:1A:82:GLY:HA3	1.78	0.83
1:0B:430:LEU:O	2:0F:62:LYS:NZ	2.12	0.82
14:1F:632:ALA:H	14:1F:638:PRO:HB2	1.45	0.82
14:1G:772:GLU:HG2	14:1G:802:LEU:HD21	1.61	0.82
14:1G:632:ALA:H	14:1G:638:PRO:HB2	1.45	0.81
14:1G:1028:LEU:HB3	14:1G:1032:ARG:HH12	1.44	0.81
14:1G:769:LEU:HG	14:1G:771:LEU:H	1.48	0.79
7:0Q:329:LEU:HD13	7:0Q:610:GLY:HA2	1.65	0.79
14:1F:402:LEU:HB3	14:1F:406:ILE:HG21	1.63	0.79
14:1D:850:LEU:HG	14:1D:854:GLN:HE22	1.46	0.78
1:0D:508:GLN:HB3	1:0D:520:LEU:HD11	1.65	0.78
14:1G:400:ARG:HG3	14:1G:402:LEU:H	1.50	0.77
1:0C:508:GLN:HB3	1:0C:520:LEU:HD11	1.65	0.77
12:0X:99:PHE:HA	12:0X:103:GLY:HA3	1.65	0.77
12:0X:278:LEU:HG	12:0X:285:VAL:HG21	1.65	0.77
14:1F:1032:ARG:NH1	14:1F:1045:GLU:OE2	2.18	0.77
12:0Y:161:LEU:HA	12:0Y:174:ARG:O	1.85	0.77
7:0S:329:LEU:HD13	7:0S:610:GLY:HA2	1.66	0.76
1:0D:346:ASP:OD2	2:0G:152:ARG:NH2	2.18	0.76
7:0Q:487:SER:HG	7:0Q:489:TRP:HE1	1.32	0.76
14:1F:772:GLU:HG2	14:1F:802:LEU:HD21	1.66	0.76
14:1G:402:LEU:HB3	14:1G:406:ILE:HG21	1.67	0.76
3:0J:150:GLN:HG2	3:0J:153:LYS:HE3	1.67	0.76
14:1F:547:LYS:HG3	14:1F:548:GLN:HG2	1.67	0.76
12:0Z:300:LEU:H	12:0Z:306:THR:HG21	1.50	0.76
12:1A:161:LEU:HA	12:1A:174:ARG:O	1.86	0.76
13:1C:1487:MET:O	13:1C:1519:LYS:NZ	2.18	0.76
12:0Z:65:GLU:HG3	12:0Z:116:ARG:HH22	1.49	0.75
12:0X:65:GLU:HG3	12:0X:116:ARG:HH22	1.50	0.75
1:0B:177:LEU:HD11	1:0C:180:LEU:HD13	1.69	0.75
2:0F:70:ASN:HA	2:0F:100:LYS:HG2	1.69	0.75
7:0Q:46:ASN:ND2	7:0Q:321:ILE:O	2.20	0.74
13:1C:1581:ILE:HG12	13:1C:1583:PRO:HD2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:1C:1242:MET:SD	13:1C:1245:ARG:NH1	2.59	0.74
1:0A:537:HIS:HB3	1:0A:556:ASP:HB2	1.69	0.74
14:1E:1009:GLN:O	14:1E:1013:GLN:NE2	2.20	0.74
1:0D:328:SER:HA	1:0D:600:ASN:HA	1.69	0.74
2:0H:70:ASN:HA	2:0H:100:LYS:HG2	1.70	0.74
3:0J:151:GLN:HA	3:0J:154:TRP:HD1	1.52	0.74
3:0J:217:ARG:H	3:0J:232:ILE:HG12	1.52	0.74
12:0X:169:SER:OG	12:0X:342:ASN:ND2	2.21	0.74
12:0Z:13:ARG:NH1	12:0Z:94:GLY:O	2.21	0.74
14:1D:999:TYR:HB3	14:1D:1008:GLU:HG2	1.68	0.74
1:0A:177:LEU:HD11	1:0D:180:LEU:HD13	1.70	0.73
12:0Z:99:PHE:HA	12:0Z:103:GLY:HA3	1.69	0.73
13:1C:1493:LEU:HG	13:1C:1519:LYS:HE2	1.67	0.73
7:0S:495:ARG:NH1	7:0S:499:THR:OG1	2.21	0.73
7:0Q:72:LEU:HD21	7:0Q:83:VAL:HG13	1.69	0.72
12:0X:229:SER:HB3	12:0X:349:LEU:HA	1.70	0.72
1:0C:157:ASP:OD1	1:0C:160:ARG:NH2	2.22	0.72
13:1B:1242:MET:SD	13:1B:1245:ARG:NH1	2.62	0.72
12:0Z:278:LEU:HG	12:0Z:285:VAL:HG21	1.69	0.72
14:1D:849:ARG:CZ	14:1D:868:PHE:HA	2.19	0.72
4:0L:218:ARG:HH12	13:1C:1215:GLU:HG2	1.55	0.72
7:0Q:444:LEU:HD21	7:0Q:478:ALA:HB2	1.72	0.72
13:1C:1123:LYS:HB2	13:1C:1498:LEU:HD21	1.72	0.72
3:0J:455:TRP:HD1	3:0J:516:ARG:HH12	1.38	0.72
5:0N:244:ILE:HB	5:0N:280:LEU:HB2	1.71	0.72
13:1B:1648:PHE:HB3	16:1M:32:UNK:CB	2.19	0.72
1:0B:537:HIS:HB3	1:0B:556:ASP:HB2	1.70	0.72
6:0P:39:ASN:O	6:0P:46:GLN:NE2	2.21	0.72
12:0X:109:ALA:O	12:0X:110:HIS:ND1	2.23	0.72
12:1A:247:ARG:HH21	12:1A:324:SER:HB2	1.53	0.72
13:1C:1685:PRO:HG2	13:1C:1688:GLN:HB2	1.72	0.72
7:0S:46:ASN:ND2	7:0S:321:ILE:O	2.22	0.72
12:0Z:221:GLU:HG2	12:0Z:233:VAL:HG13	1.72	0.72
12:0Z:246:GLU:HG3	12:0Z:248:THR:H	1.55	0.71
1:0B:327:LEU:HD11	2:0F:152:ARG:HB3	1.72	0.71
12:0X:221:GLU:HG2	12:0X:233:VAL:HG13	1.73	0.71
12:0X:272:GLU:OE1	12:0X:331:ARG:NH2	2.24	0.71
3:0I:265:LEU:HD21	3:0I:330:LEU:HB3	1.70	0.71
13:1B:1123:LYS:HB2	13:1B:1498:LEU:HD21	1.72	0.71
14:1F:820:THR:HB	14:1F:825:VAL:HG21	1.73	0.71
12:0Z:229:SER:HB3	12:0Z:349:LEU:HA	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:0I:225:PHE:HE1	6:0O:166:LYS:HG3	1.56	0.71
12:0X:59:LEU:HD23	12:0X:62:VAL:HG21	1.73	0.71
12:0Z:232:ALA:O	12:0Z:344:SER:N	2.23	0.71
14:1D:545:PRO:HD2	14:1D:579:ALA:HB1	1.72	0.71
14:1G:820:THR:HB	14:1G:825:VAL:HG21	1.71	0.71
12:0X:300:LEU:H	12:0X:306:THR:HG21	1.56	0.71
5:0M:244:ILE:HB	5:0M:280:LEU:HB2	1.73	0.70
1:0C:327:LEU:HD23	2:0E:152:ARG:HH11	1.55	0.70
3:0J:196:ARG:NH2	3:0J:205:GLU:O	2.25	0.70
13:1B:1581:ILE:HG12	13:1B:1583:PRO:HD2	1.72	0.70
13:1C:1588:LEU:HD21	13:1C:1594:LEU:HB2	1.72	0.70
12:0Z:169:SER:OG	12:0Z:342:ASN:ND2	2.24	0.70
13:1B:1297:GLN:HG2	13:1B:1335:LEU:HA	1.72	0.70
2:0G:70:ASN:HD21	2:0G:93:ASN:HA	1.57	0.70
3:0I:265:LEU:HD23	3:0I:331:ARG:HH21	1.55	0.70
14:1E:545:PRO:HD2	14:1E:579:ALA:HB1	1.72	0.70
12:0X:246:GLU:HG3	12:0X:248:THR:H	1.56	0.70
13:1C:1244:PRO:HG2	13:1C:1257:VAL:HA	1.73	0.70
1:0A:334:LEU:HD13	1:0A:585:LEU:HD23	1.75	0.69
3:0J:265:LEU:HD21	3:0J:330:LEU:HB3	1.74	0.69
13:1B:1347:LEU:HD22	13:1B:1389:VAL:HG21	1.75	0.69
7:0S:488:LEU:HB3	7:0S:498:THR:HG21	1.72	0.69
14:1F:544:VAL:HG13	14:1F:547:LYS:HG2	1.74	0.69
7:0S:500:TRP:HE1	7:0S:535:PRO:HA	1.58	0.69
13:1B:1272:PRO:HB2	13:1B:1284:ARG:HH11	1.56	0.69
1:0D:582:GLN:H	1:0D:597:GLY:HA2	1.56	0.69
4:0K:218:ARG:HH12	13:1B:1215:GLU:HG2	1.58	0.69
12:0X:181:VAL:HG11	12:0X:187:ALA:HB2	1.75	0.69
14:1E:425:LYS:HD2	14:1E:524:SER:HB3	1.74	0.69
5:0N:419:ASN:HB3	5:0N:422:MET:HG2	1.74	0.68
12:0X:232:ALA:O	12:0X:344:SER:N	2.23	0.68
1:0A:349:THR:HG22	1:0A:365:GLU:HB3	1.75	0.68
13:1C:1190:GLU:HG2	13:1C:1485:ALA:HB2	1.75	0.68
14:1G:1002:ALA:O	14:1G:1004:GLN:NE2	2.26	0.68
4:0K:137:LYS:NZ	13:1B:1217:TRP:O	2.24	0.68
1:0C:194:LEU:HD21	4:0K:106:LEU:HD11	1.75	0.68
2:0E:44:LEU:HD23	2:0E:135:ILE:HG23	1.74	0.68
3:0I:322:ARG:HE	3:0I:326:TYR:HE2	1.39	0.68
3:0J:92:LEU:O	3:0J:96:HIS:ND1	2.27	0.68
3:0J:135:MET:O	3:0J:142:ARG:NH2	2.26	0.68
12:0Z:59:LEU:HD23	12:0Z:62:VAL:HG21	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1E:1029:LEU:HD22	14:1E:1064:ALA:HB1	1.74	0.68
1:0C:146:SER:HA	1:0C:149:TRP:CD1	2.28	0.68
5:0M:161:LEU:HA	5:0M:174:ALA:HB3	1.76	0.67
14:1G:544:VAL:HG13	14:1G:547:LYS:HG2	1.75	0.67
3:0I:457:TRP:HE1	3:0I:483:GLN:HG2	1.59	0.67
13:1C:1250:GLU:HG3	13:1C:1253:ALA:HB2	1.76	0.67
1:0D:434:VAL:HG21	1:0D:469:THR:HG21	1.76	0.67
1:0C:332:LEU:HB3	1:0C:341:LEU:HD11	1.74	0.67
3:0I:217:ARG:H	3:0I:232:ILE:HG12	1.58	0.67
13:1C:1190:GLU:HG3	13:1C:1484:SER:HB3	1.77	0.67
13:1C:1481:SER:HA	13:1C:1498:LEU:HD12	1.76	0.67
3:0J:508:ARG:HH22	14:1F:942:MET:HA	1.60	0.67
12:0X:233:VAL:HG12	12:0X:234:LEU:H	1.59	0.67
13:1C:1347:LEU:HD22	13:1C:1389:VAL:HG21	1.76	0.67
1:0B:169:GLU:HA	1:0B:172:LYS:HD2	1.77	0.67
3:0J:424:PHE:HZ	3:0J:514:VAL:HG21	1.60	0.67
4:0L:218:ARG:NH2	13:1C:1214:LEU:O	2.28	0.67
6:0P:36:GLN:NE2	6:0P:49:ASN:O	2.27	0.67
1:0A:296:ALA:HB2	1:0A:482:ARG:HD3	1.75	0.67
13:1B:1390:GLU:HG3	13:1B:1404:GLU:HG2	1.75	0.67
1:0D:332:LEU:HD22	1:0D:341:LEU:HD21	1.76	0.66
1:0D:407:THR:O	1:0D:410:LYS:NZ	2.27	0.66
3:0J:265:LEU:HD23	3:0J:331:ARG:HH21	1.60	0.66
7:0Q:442:GLY:HA2	7:0Q:465:ILE:HG12	1.76	0.66
1:0D:157:ASP:OD1	1:0D:160:ARG:NH2	2.28	0.66
2:0E:70:ASN:HD21	2:0E:93:ASN:HA	1.61	0.66
7:0S:429:SER:HB3	7:0S:433:ALA:H	1.60	0.66
13:1B:1684:LEU:HD22	13:1B:1689:TYR:HB2	1.77	0.66
1:0B:88:LEU:HD22	1:0C:98:GLU:HG3	1.76	0.66
12:0X:106:THR:H	12:0X:111:ARG:HG2	1.60	0.66
14:1F:790:LEU:HD11	14:1F:841:ALA:HB2	1.77	0.66
13:1B:1250:GLU:HG3	13:1B:1253:ALA:HB2	1.78	0.66
13:1B:1659:ALA:HB2	16:1M:22:UNK:CA	2.20	0.66
12:0X:13:ARG:NH1	12:0X:94:GLY:O	2.29	0.66
12:0Z:233:VAL:HG12	12:0Z:234:LEU:H	1.60	0.66
1:0A:88:LEU:HD22	1:0D:98:GLU:HG3	1.77	0.66
1:0D:146:SER:HA	1:0D:149:TRP:CD1	2.30	0.66
13:1C:1313:VAL:HA	13:1C:1750:TYR:HE1	1.61	0.66
14:1E:883:ALA:O	14:1E:917:ARG:NH1	2.29	0.66
7:0S:589:ALA:HB3	7:0S:607:ALA:HB1	1.77	0.66
12:0X:249:LYS:HG3	12:0X:250:LYS:HD3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1F:502:SER:OG	14:1F:505:GLU:OE1	2.12	0.66
1:0C:434:VAL:HG21	1:0C:469:THR:HG21	1.77	0.65
12:0Z:249:LYS:HG3	12:0Z:250:LYS:HD3	1.77	0.65
13:1B:1302:PRO:HD2	13:1B:1305:LEU:HB2	1.79	0.65
14:1E:522:HIS:O	14:1E:526:ASN:ND2	2.29	0.65
1:0A:76:ASP:OD1	1:0A:80:ARG:NH2	2.29	0.65
12:0X:20:SER:HB3	12:0X:316:PRO:HG3	1.77	0.65
14:1D:1007:ALA:HA	14:1D:1010:ARG:HD2	1.77	0.65
16:1L:83:UNK:O	16:1L:144:UNK:N	2.29	0.65
1:0C:194:LEU:HD11	4:0K:106:LEU:HD21	1.78	0.65
13:1B:1244:PRO:HG2	13:1B:1257:VAL:HA	1.76	0.65
14:1G:666:LEU:HG	14:1G:670:TYR:CE1	2.32	0.65
16:1M:83:UNK:O	16:1M:144:UNK:N	2.29	0.65
7:0Q:500:TRP:HE1	7:0Q:535:PRO:HA	1.61	0.65
7:0S:64:ALA:HB2	7:0S:107:VAL:HG13	1.78	0.65
7:0S:442:GLY:HA2	7:0S:465:ILE:HG12	1.79	0.65
13:1B:1190:GLU:HG2	13:1B:1485:ALA:HB2	1.79	0.65
13:1B:1313:VAL:HA	13:1B:1750:TYR:HE1	1.62	0.65
7:0S:460:MET:HE2	7:0S:495:ARG:NH1	2.09	0.65
14:1D:522:HIS:O	14:1D:526:ASN:ND2	2.29	0.65
12:0X:204:VAL:HG23	12:0X:205:LEU:HD12	1.78	0.65
12:0Y:94:GLY:HA2	12:0Y:206:ASN:HD22	1.62	0.65
14:1D:493:GLU:O	14:1D:496:ARG:NH1	2.30	0.65
5:0M:137:GLN:O	5:0M:138:HIS:ND1	2.29	0.65
6:0O:32:LYS:HE3	6:0O:48:GLU:HG3	1.77	0.65
3:0I:450:THR:HA	3:0I:489:PRO:HB3	1.79	0.64
7:0Q:46:ASN:HD21	7:0Q:322:SER:HB3	1.62	0.64
14:1E:929:ARG:HG2	14:1E:960:TRP:CE2	2.32	0.64
14:1G:551:GLY:H	14:1G:576:ARG:NH2	1.94	0.64
1:0B:116:ASP:HA	1:0B:119:LEU:HD12	1.79	0.64
3:0J:322:ARG:HE	3:0J:326:TYR:HE2	1.43	0.64
3:0J:482:LEU:HD23	3:0J:495:VAL:HG22	1.79	0.64
7:0Q:589:ALA:HB3	7:0Q:607:ALA:HB1	1.78	0.64
1:0B:146:SER:HA	1:0B:149:TRP:NE1	2.13	0.64
1:0C:582:GLN:H	1:0C:597:GLY:HA2	1.60	0.64
3:0I:496:ALA:O	14:1G:511:ASN:ND2	2.30	0.64
13:1B:1303:PRO:HA	13:1B:1306:ARG:HE	1.62	0.64
14:1D:883:ALA:O	14:1D:917:ARG:NH1	2.30	0.64
1:0B:578:GLU:OE1	1:0B:603:ARG:NH2	2.31	0.64
1:0D:332:LEU:HB3	1:0D:341:LEU:HD11	1.77	0.64
7:0Q:424:THR:OG1	7:0Q:465:ILE:O	2.16	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:1C:1297:GLN:HG2	13:1C:1335:LEU:HA	1.78	0.64
1:0D:346:ASP:HB2	2:0G:152:ARG:HH12	1.63	0.64
12:0Z:181:VAL:HG11	12:0Z:187:ALA:HB2	1.79	0.64
1:0D:458:LEU:HG	1:0D:467:LEU:HD11	1.79	0.64
6:0O:188:ILE:HG22	6:0O:189:THR:HG23	1.80	0.64
5:0M:138:HIS:H	5:0M:140:LYS:HG2	1.63	0.64
14:1F:400:ARG:HH12	14:1F:404:GLU:HA	1.63	0.64
1:0A:146:SER:HA	1:0A:149:TRP:NE1	2.13	0.64
12:0Z:221:GLU:HA	12:0Z:233:VAL:HA	1.78	0.64
13:1C:1526:PHE:O	13:1C:1585:ALA:HA	1.97	0.64
12:0Y:68:TYR:HB2	12:0Y:116:ARG:HE	1.62	0.63
13:1B:1659:ALA:CB	16:1M:22:UNK:C	2.76	0.63
7:0S:215:GLY:HA3	7:0S:242:VAL:HG11	1.80	0.63
13:1C:1501:LEU:HD12	13:1C:1609:PHE:HZ	1.64	0.63
1:0A:152:PHE:HD2	1:0D:149:TRP:HB2	1.64	0.63
7:0S:38:SER:H	7:0S:588:SER:HB2	1.63	0.63
12:0Y:88:PHE:HB3	12:0Y:240:VAL:HB	1.81	0.63
14:1D:1029:LEU:HD22	14:1D:1064:ALA:HB1	1.81	0.63
1:0C:325:HIS:NE2	1:0C:343:THR:OG1	2.30	0.63
1:0D:194:LEU:HD11	4:0L:106:LEU:HD21	1.80	0.63
7:0Q:429:SER:HB3	7:0Q:433:ALA:H	1.63	0.63
12:0Y:11:ARG:NH2	12:0Y:64:GLN:OE1	2.32	0.63
12:0Y:59:LEU:HD23	12:0Y:62:VAL:HG11	1.78	0.63
13:1B:1738:ARG:NH2	13:1B:1750:TYR:O	2.31	0.63
13:1C:1302:PRO:HD2	13:1C:1305:LEU:HB2	1.80	0.63
4:0K:137:LYS:HZ1	13:1B:1219:GLU:HG3	1.63	0.63
12:0X:221:GLU:HA	12:0X:233:VAL:HA	1.79	0.63
13:1B:1201:TRP:HZ2	13:1B:1255:CYS:HG	1.44	0.63
14:1D:911:LEU:HB2	14:1G:400:ARG:HH12	1.63	0.63
1:0A:198:TYR:O	1:0A:202:MET:HG2	1.99	0.63
13:1B:1481:SER:HA	13:1B:1498:LEU:HD12	1.81	0.63
1:0B:334:LEU:HD13	1:0B:585:LEU:HD23	1.79	0.63
14:1E:493:GLU:O	14:1E:496:ARG:NH1	2.32	0.63
14:1F:1005:ARG:NH1	14:1F:1008:GLU:OE2	2.32	0.63
1:0C:196:LYS:HB2	4:0K:98:ARG:NH2	2.12	0.63
12:0X:169:SER:HG	12:0X:342:ASN:ND2	1.96	0.63
12:0X:355:GLU:HA	12:0X:358:ILE:HG22	1.81	0.63
13:1B:1413:PRO:HD2	13:1B:1749:ARG:HH12	1.62	0.63
1:0D:419:HIS:HB3	1:0D:422:GLY:H	1.63	0.62
5:0M:193:VAL:HG11	5:0M:217:LEU:HD11	1.81	0.62
1:0C:419:HIS:HB3	1:0C:422:GLY:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:0Y:131:LYS:NZ	12:0Y:224:THR:OG1	2.30	0.62
13:1C:1390:GLU:HG3	13:1C:1404:GLU:HG2	1.79	0.62
14:1G:790:LEU:HD11	14:1G:841:ALA:HB2	1.81	0.62
7:0Q:21:SER:HB3	7:0Q:300:LEU:HD23	1.80	0.62
7:0Q:299:PHE:HD2	7:0Q:311:LEU:HD23	1.64	0.62
13:1B:1526:PHE:O	13:1B:1585:ALA:HA	1.98	0.62
14:1D:1039:CYS:HA	14:1D:1042:GLU:HB2	1.81	0.62
2:0G:108:GLN:NE2	2:0G:123:VAL:HG21	2.14	0.62
3:0I:482:LEU:HD23	3:0I:495:VAL:HG22	1.80	0.62
14:1E:999:TYR:HB3	14:1E:1008:GLU:HG2	1.81	0.62
1:0A:135:LEU:HB2	1:0D:135:LEU:HD13	1.81	0.62
1:0B:332:LEU:HD22	1:0B:341:LEU:HD21	1.81	0.62
7:0Q:149:ILE:HD13	7:0Q:170:ALA:HB2	1.82	0.62
14:1D:504:ASN:OD1	14:1D:505:GLU:N	2.32	0.62
1:0A:141:ILE:HD12	1:0A:144:ARG:HD2	1.82	0.62
1:0A:368:LYS:NZ	2:0H:40:ASP:OD2	2.32	0.62
1:0D:190:THR:HG22	4:0L:105:LEU:HB3	1.81	0.62
1:0C:458:LEU:HG	1:0C:467:LEU:HD11	1.81	0.62
12:0X:84:ASN:ND2	12:0X:303:ASN:O	2.32	0.62
1:0A:102:LEU:HD12	1:0D:88:LEU:HD23	1.82	0.62
1:0D:194:LEU:HD21	4:0L:106:LEU:HD11	1.82	0.62
14:1G:1005:ARG:NH1	14:1G:1008:GLU:OE2	2.33	0.62
3:0J:217:ARG:HH11	3:0J:219:LEU:HD21	1.64	0.62
5:0N:624:ASP:OD1	5:0N:625:THR:N	2.33	0.62
12:0Y:137:VAL:HG21	12:0Y:190:GLN:NE2	2.15	0.62
13:1B:1177:THR:HG22	13:1B:1290:VAL:HB	1.81	0.62
14:1F:1025:SER:HA	14:1F:1028:LEU:HD12	1.81	0.62
14:1G:1025:SER:HA	14:1G:1028:LEU:HD12	1.81	0.62
1:0C:335:HIS:HE2	1:0C:380:GLY:HA3	1.65	0.61
12:0X:171:THR:O	12:0X:236:LYS:NZ	2.31	0.61
13:1C:1120:GLY:HA2	13:1C:1614:ARG:HH22	1.65	0.61
13:1C:1272:PRO:HB2	13:1C:1284:ARG:HH11	1.65	0.61
13:1C:1738:ARG:NH2	13:1C:1750:TYR:O	2.33	0.61
14:1E:911:LEU:HG	14:1F:400:ARG:HD3	1.83	0.61
1:0A:149:TRP:HB3	1:0D:149:TRP:HB3	1.82	0.61
1:0B:102:LEU:HD12	1:0C:88:LEU:HD23	1.81	0.61
12:0Y:137:VAL:HG21	12:0Y:190:GLN:HE21	1.64	0.61
12:0Z:169:SER:HG	12:0Z:342:ASN:ND2	1.98	0.61
13:1B:1234:ILE:HD11	13:1B:1269:PHE:HB3	1.82	0.61
14:1F:666:LEU:HG	14:1F:670:TYR:CE1	2.35	0.61
14:1G:666:LEU:HD12	14:1G:669:VAL:HB	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0B:135:LEU:HB2	1:0C:135:LEU:HD13	1.81	0.61
5:0M:40:THR:HA	5:0M:54:PRO:HD3	1.82	0.61
12:1A:59:LEU:HD23	12:1A:62:VAL:HG11	1.81	0.61
14:1G:820:THR:OG1	14:1G:821:PRO:HD3	2.00	0.61
1:0C:299:ARG:HH21	1:0C:465:SER:HB3	1.66	0.61
7:0S:424:THR:OG1	7:0S:465:ILE:O	2.18	0.61
12:1A:68:TYR:HB2	12:1A:116:ARG:HE	1.65	0.61
13:1B:1120:GLY:HA2	13:1B:1614:ARG:HH22	1.65	0.61
14:1E:407:PRO:HB2	14:1E:409:ARG:HH12	1.64	0.61
1:0C:328:SER:OG	2:0E:152:ARG:NH2	2.34	0.61
1:0C:512:THR:HB	1:0C:539:ALA:HB3	1.82	0.61
7:0Q:72:LEU:HD22	7:0Q:107:VAL:HG21	1.83	0.61
1:0A:431:ASP:OD2	1:0A:433:THR:OG1	2.19	0.61
7:0S:446:VAL:HB	7:0S:456:ALA:HB3	1.82	0.61
13:1C:1610:GLU:HG3	13:1C:1736:ARG:HB2	1.81	0.61
14:1F:874:GLU:OE2	14:1F:877:ARG:NH2	2.33	0.61
12:0X:356:ARG:HA	12:0X:359:LYS:HE3	1.83	0.61
7:0S:149:ILE:HD13	7:0S:170:ALA:HB2	1.83	0.61
12:1A:13:ARG:NH1	12:1A:94:GLY:O	2.33	0.61
12:1A:123:ARG:O	12:1A:127:MET:HG2	2.01	0.61
13:1B:1533:LEU:HD21	13:1B:1611:GLY:HA3	1.81	0.61
13:1B:1688:GLN:OE1	13:1B:1712:ARG:NH2	2.34	0.61
14:1G:667:ALA:O	14:1G:778:ARG:NH1	2.34	0.61
5:0M:345:LEU:HD22	5:0M:352:ALA:HB1	1.82	0.61
7:0S:588:SER:OG	7:0S:609:ASP:OD2	2.18	0.61
12:0Z:106:THR:H	12:0Z:111:ARG:HG2	1.66	0.61
3:0I:508:ARG:HH22	14:1G:942:MET:HA	1.64	0.60
3:0J:554:GLU:HB2	3:0J:558:ARG:HH21	1.66	0.60
13:1B:1501:LEU:HD12	13:1B:1609:PHE:HZ	1.65	0.60
1:0B:296:ALA:HB2	1:0B:482:ARG:HD3	1.82	0.60
3:0J:496:ALA:O	14:1F:511:ASN:ND2	2.34	0.60
7:0Q:38:SER:H	7:0Q:588:SER:HB2	1.66	0.60
7:0S:423:VAL:HG21	7:0S:437:SER:HB2	1.83	0.60
12:0X:134:ARG:HB2	12:0X:221:GLU:HB2	1.83	0.60
13:1C:1688:GLN:OE1	13:1C:1712:ARG:NH2	2.34	0.60
1:0B:76:ASP:OD1	1:0B:80:ARG:NH2	2.34	0.60
1:0B:152:PHE:HD2	1:0C:149:TRP:HB2	1.66	0.60
3:0I:150:GLN:HA	3:0I:153:LYS:HG2	1.82	0.60
4:0K:115:ASP:HB2	4:0K:118:SER:HB3	1.82	0.60
14:1G:424:PHE:CG	14:1G:490:LEU:HD11	2.36	0.60
14:1G:501:MET:HA	14:1G:506:MET:HE3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0B:436:LEU:HD12	1:0B:446:MET:HB2	1.84	0.60
1:0D:599:ASP:OD2	1:0D:603:ARG:NH2	2.34	0.60
12:1A:11:ARG:NH2	12:1A:64:GLN:OE1	2.34	0.60
13:1C:1530:LEU:HD12	13:1C:1534:ALA:HA	1.82	0.60
13:1C:1582:SER:OG	13:1C:1583:PRO:HD3	2.01	0.60
14:1F:424:PHE:CG	14:1F:490:LEU:HD11	2.36	0.60
13:1C:1226:GLU:HA	13:1C:1229:ARG:HG2	1.83	0.60
14:1G:490:LEU:O	14:1G:494:LYS:HG2	2.01	0.60
1:0C:342:VAL:HG11	1:0C:383:LEU:HD21	1.82	0.60
1:0B:349:THR:HG22	1:0B:365:GLU:HB3	1.83	0.60
1:0A:546:ARG:NH1	1:0A:588:PRO:O	2.35	0.60
5:0N:286:VAL:O	5:0N:290:GLU:HG3	2.02	0.60
3:0J:447:SER:HB3	3:0J:487:LEU:HD21	1.82	0.60
5:0M:42:THR:HA	5:0M:51:ARG:HA	1.83	0.60
6:0P:11:ARG:NH1	7:0Q:137:ILE:O	2.34	0.60
7:0Q:176:LEU:HD13	7:0Q:226:VAL:HG13	1.84	0.60
12:0Z:181:VAL:HG13	12:0Z:186:GLU:HG2	1.83	0.60
1:0B:141:ILE:HD12	1:0B:144:ARG:HD2	1.83	0.59
1:0C:346:ASP:HB2	2:0E:152:ARG:HH12	1.67	0.59
4:0K:218:ARG:NH2	13:1B:1214:LEU:O	2.35	0.59
4:0L:183:THR:HG21	4:0L:200:TYR:HB2	1.84	0.59
7:0Q:428:LEU:HD11	7:0Q:449:LEU:HD11	1.84	0.59
7:0S:444:LEU:HD21	7:0S:478:ALA:HB2	1.84	0.59
14:1E:460:GLU:O	14:1E:464:LYS:HG2	2.02	0.59
14:1E:1020:MET:SD	14:1E:1021:PRO:HD3	2.42	0.59
14:1G:807:GLY:HA2	14:1G:813:ALA:HB3	1.84	0.59
14:1G:1054:ALA:HB3	14:1G:1057:GLU:HB2	1.84	0.59
1:0B:169:GLU:OE1	1:0C:170:LYS:NZ	2.29	0.59
5:0N:626:SER:O	5:0N:630:SER:HB3	2.02	0.59
14:1F:490:LEU:O	14:1F:494:LYS:HG2	2.01	0.59
5:0N:94:LEU:HD13	5:0N:143:TYR:HB2	1.84	0.59
14:1D:1005:ARG:HA	14:1D:1008:GLU:HG3	1.85	0.59
1:0D:160:ARG:HH22	13:1C:1157:GLY:HA3	1.68	0.59
3:0I:512:GLU:HA	3:0I:529:LEU:H	1.67	0.59
7:0S:481:SER:HB2	7:0S:505:MET:HE1	1.84	0.59
13:1B:1154:GLN:HB2	13:1B:1282:ARG:HH12	1.68	0.59
13:1B:1493:LEU:HG	13:1B:1519:LYS:NZ	2.18	0.59
13:1B:1493:LEU:HG	13:1B:1519:LYS:HZ3	1.68	0.59
14:1E:1025:SER:OG	14:1E:1052:GLN:NE2	2.35	0.59
3:0I:196:ARG:NH2	3:0I:205:GLU:O	2.36	0.59
14:1G:400:ARG:HD3	14:1G:401:PRO:HD2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:0H:62:LYS:N	2:0H:67:ASP:OD2	2.36	0.59
3:0I:453:VAL:HG23	3:0I:516:ARG:HH11	1.66	0.59
5:0N:138:HIS:H	5:0N:140:LYS:HG2	1.67	0.59
7:0S:566:ALA:HA	7:0S:590:PRO:HB3	1.85	0.59
14:1E:504:ASN:OD1	14:1E:505:GLU:N	2.36	0.59
14:1F:820:THR:OG1	14:1F:821:PRO:HD3	2.02	0.59
14:1G:999:TYR:HB3	14:1G:1008:GLU:HG2	1.84	0.59
12:0Z:234:LEU:HD23	12:0Z:344:SER:HA	1.83	0.59
13:1B:1582:SER:OG	13:1B:1583:PRO:HD3	2.03	0.59
13:1C:1117:TYR:HA	13:1C:1123:LYS:NZ	2.17	0.59
14:1D:1020:MET:SD	14:1D:1021:PRO:HD3	2.43	0.59
1:0B:546:ARG:NH1	1:0B:588:PRO:O	2.36	0.59
1:0D:76:ASP:OD2	1:0D:80:ARG:NH2	2.36	0.59
3:0I:555:LYS:HG3	3:0I:558:ARG:HH21	1.68	0.59
5:0M:135:PRO:HA	5:0M:141:VAL:HG13	1.85	0.59
12:0Y:64:GLN:HB3	12:0Y:116:ARG:HH22	1.66	0.59
14:1E:497:LYS:NZ	14:1E:505:GLU:O	2.35	0.59
1:0A:434:VAL:HG21	1:0A:469:THR:HG21	1.83	0.58
1:0A:540:ASN:ND2	1:0A:581:VAL:O	2.34	0.58
1:0B:149:TRP:HB3	1:0C:149:TRP:HB3	1.85	0.58
5:0M:49:LEU:HD13	5:0M:51:ARG:HH21	1.68	0.58
12:1A:106:THR:N	12:1A:111:ARG:HG2	2.15	0.58
13:1C:1413:PRO:HD2	13:1C:1749:ARG:HH12	1.68	0.58
14:1F:999:TYR:HB3	14:1F:1008:GLU:HG2	1.85	0.58
7:0S:72:LEU:HD21	7:0S:83:VAL:HG13	1.84	0.58
12:0X:234:LEU:HD23	12:0X:344:SER:HA	1.85	0.58
12:0Z:134:ARG:HB2	12:0Z:221:GLU:HB2	1.85	0.58
1:0A:178:ARG:HH22	4:0L:134:ARG:HH12	1.51	0.58
1:0B:146:SER:HA	1:0B:149:TRP:CD1	2.39	0.58
12:0Z:84:ASN:ND2	12:0Z:303:ASN:O	2.36	0.58
1:0D:578:GLU:OE1	1:0D:603:ARG:NH2	2.35	0.58
13:1C:1338:ARG:NH1	13:1C:1339:LEU:O	2.37	0.58
14:1E:978:LEU:HD11	14:1E:995:ILE:HG21	1.85	0.58
1:0A:146:SER:HA	1:0A:149:TRP:CD1	2.39	0.58
7:0Q:495:ARG:NH1	7:0Q:497:ARG:O	2.35	0.58
1:0B:89:SER:HA	1:0B:92:CYS:HB2	1.85	0.58
3:0J:434:HIS:HB2	14:1E:1006:ARG:HH12	1.68	0.58
13:1B:1588:LEU:HD21	13:1B:1594:LEU:HB2	1.84	0.58
14:1E:1039:CYS:HA	14:1E:1042:GLU:HB2	1.85	0.58
14:1G:544:VAL:HG11	14:1G:548:GLN:HG3	1.85	0.58
1:0C:407:THR:O	1:0C:410:LYS:NZ	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:0I:141:THR:HG22	16:1M:75:UNK:O	2.03	0.58
7:0Q:168:THR:HB	7:0Q:177:TRP:HE1	1.68	0.58
12:1A:64:GLN:HB3	12:1A:116:ARG:HH22	1.67	0.58
14:1D:978:LEU:HD11	14:1D:995:ILE:HG21	1.84	0.58
14:1G:1029:LEU:HD22	14:1G:1064:ALA:HB1	1.86	0.58
3:0J:438:LYS:HZ1	3:0J:498:THR:HB	1.69	0.58
13:1B:1525:ALA:HB3	13:1B:1618:ARG:HG3	1.86	0.58
2:0H:121:ASP:OD1	2:0H:122:LEU:N	2.36	0.58
3:0J:270:LEU:HD11	3:0J:323:VAL:HG11	1.86	0.58
7:0S:29:TYR:HB3	7:0S:41:LEU:HG	1.86	0.58
12:0Z:280:ARG:NH1	12:0Z:282:ASP:OD2	2.37	0.58
13:1C:1317:GLU:OE2	13:1C:1744:GLN:NE2	2.37	0.58
13:1C:1503:VAL:HG21	13:1C:1751:VAL:HG23	1.86	0.58
14:1E:443:LEU:HD21	14:1E:462:ARG:HE	1.69	0.58
1:0A:436:LEU:HD12	1:0A:446:MET:HB2	1.86	0.57
1:0C:578:GLU:OE1	1:0C:603:ARG:NH2	2.37	0.57
3:0I:193:ALA:HB2	3:0I:333:LEU:HD12	1.86	0.57
3:0I:536:GLU:HB2	14:1G:980:PHE:CE2	2.39	0.57
5:0M:232:ILE:O	5:0M:236:MET:HG2	2.04	0.57
7:0S:21:SER:HB3	7:0S:300:LEU:HD23	1.86	0.57
12:0Z:356:ARG:HA	12:0Z:359:LYS:HE3	1.87	0.57
12:1A:88:PHE:HB3	12:1A:240:VAL:HB	1.86	0.57
14:1F:1029:LEU:HD22	14:1F:1064:ALA:HB1	1.87	0.57
14:1F:960:TRP:CE2	14:1F:991:LEU:HD21	2.39	0.57
14:1G:595:ARG:HA	14:1G:768:ALA:HB2	1.86	0.57
1:0D:579:ASP:OD1	1:0D:580:ALA:N	2.37	0.57
12:0Y:151:LEU:HD21	12:0Y:190:GLN:HG3	1.85	0.57
14:1D:460:GLU:O	14:1D:464:LYS:HG2	2.03	0.57
3:0J:150:GLN:HA	3:0J:153:LYS:HG2	1.86	0.57
4:0K:191:PHE:HB2	4:0K:194:VAL:HB	1.86	0.57
12:0X:63:SER:OG	12:0X:65:GLU:OE1	2.19	0.57
12:0X:139:TYR:HB3	12:0X:151:LEU:HD13	1.87	0.57
13:1B:1338:ARG:NH1	13:1B:1339:LEU:O	2.38	0.57
13:1B:1530:LEU:HD12	13:1B:1534:ALA:HA	1.86	0.57
14:1G:821:PRO:HA	14:1G:825:VAL:HB	1.86	0.57
1:0C:346:ASP:OD2	2:0E:152:ARG:NH2	2.32	0.57
3:0I:538:ARG:HH22	14:1G:983:ARG:HB3	1.70	0.57
3:0J:450:THR:HA	3:0J:489:PRO:HB3	1.85	0.57
7:0Q:588:SER:OG	7:0Q:609:ASP:OD2	2.20	0.57
7:0S:342:VAL:HG11	7:0S:604:VAL:HG11	1.86	0.57
13:1B:1138:HIS:O	13:1B:1281:LYS:NZ	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:1C:1184:PRO:HG2	13:1C:1262:ARG:HH11	1.67	0.57
3:0I:362:ILE:HA	3:0I:366:GLU:HB2	1.86	0.57
12:0X:277:ALA:HB3	12:0X:285:VAL:HG23	1.86	0.57
12:0Y:87:ILE:HG12	12:0Y:307:VAL:HB	1.86	0.57
12:0Z:63:SER:OG	12:0Z:65:GLU:OE1	2.19	0.57
1:0C:398:GLU:O	1:0C:400:GLN:NE2	2.37	0.57
13:1B:1299:LEU:HD21	13:1B:1327:LEU:HD13	1.86	0.57
14:1G:874:GLU:OE2	14:1G:877:ARG:NH2	2.38	0.57
1:0B:434:VAL:HG21	1:0B:469:THR:HG21	1.86	0.57
1:0B:540:ASN:ND2	1:0B:581:VAL:O	2.35	0.57
2:0G:56:ASP:O	2:0G:80:ARG:NE	2.36	0.57
7:0Q:487:SER:OG	7:0Q:489:TRP:NE1	2.26	0.57
7:0S:299:PHE:HD2	7:0S:311:LEU:HD23	1.69	0.57
13:1C:1751:VAL:HG21	13:1C:1759:ALA:HB2	1.85	0.57
14:1F:605:GLU:HG2	14:1F:627:GLY:HA3	1.86	0.57
3:0I:512:GLU:HA	3:0I:528:THR:HA	1.85	0.57
12:0X:351:LEU:O	12:0X:355:GLU:HG2	2.05	0.57
14:1F:406:ILE:HG13	14:1F:407:PRO:HD3	1.86	0.57
1:0D:512:THR:HB	1:0D:539:ALA:HB3	1.86	0.56
2:0F:81:TYR:CZ	2:0F:145:PHE:HB3	2.41	0.56
3:0J:512:GLU:HA	3:0J:528:THR:HA	1.87	0.56
5:0M:222:LEU:HD22	5:0M:232:ILE:HG13	1.86	0.56
12:1A:233:VAL:HG23	12:1A:234:LEU:H	1.69	0.56
14:1D:419:THR:HG22	14:1D:421:VAL:H	1.70	0.56
16:1M:38:UNK:O	16:1M:40:UNK:N	2.38	0.56
16:1L:38:UNK:O	16:1L:40:UNK:N	2.38	0.56
1:0A:184:TYR:CZ	1:0D:184:TYR:HB3	2.40	0.56
7:0Q:141:HIS:HE1	7:0Q:188:GLY:H	1.52	0.56
7:0Q:224:VAL:HG12	7:0Q:231:VAL:HA	1.87	0.56
14:1G:960:TRP:CE2	14:1G:991:LEU:HD21	2.40	0.56
1:0A:162:HIS:HB3	1:0D:163:HIS:CE1	2.40	0.56
1:0B:321:THR:HG22	1:0B:603:ARG:HG2	1.86	0.56
3:0J:504:ALA:HA	3:0J:535:ALA:HB3	1.87	0.56
5:0M:253:ILE:HD12	5:0M:265:VAL:HG13	1.87	0.56
5:0M:419:ASN:H	5:0M:422:MET:HE2	1.70	0.56
6:0O:90:LYS:HG2	6:0O:94:TYR:CE1	2.40	0.56
7:0Q:173:GLU:OE2	7:0Q:190:LYS:NZ	2.39	0.56
7:0Q:215:GLY:HA3	7:0Q:242:VAL:HG11	1.86	0.56
7:0S:559:ALA:HA	7:0S:576:ARG:HH22	1.69	0.56
12:0Z:171:THR:O	12:0Z:236:LYS:NZ	2.37	0.56
13:1B:1314:ALA:HB3	13:1B:1317:GLU:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:1B:1326:VAL:HG13	13:1B:1372:VAL:HG13	1.87	0.56
14:1E:1029:LEU:HB2	14:1E:1045:GLU:HB3	1.86	0.56
14:1G:666:LEU:HG	14:1G:670:TYR:HE1	1.69	0.56
3:0I:173:ALA:HA	3:0I:176:ARG:HE	1.70	0.56
3:0I:195:PRO:HD2	3:0I:326:TYR:HE1	1.71	0.56
12:0X:11:ARG:NH2	12:0X:64:GLN:OE1	2.38	0.56
12:1A:137:VAL:HG21	12:1A:190:GLN:NE2	2.19	0.56
14:1G:654:VAL:O	14:1G:657:ARG:C	2.44	0.56
5:0N:243:LEU:HB3	5:0N:279:GLU:HB3	1.86	0.56
7:0Q:559:ALA:HA	7:0Q:576:ARG:HH22	1.69	0.56
12:0X:315:GLU:HB2	12:0X:318:HIS:HB2	1.87	0.56
12:0Y:233:VAL:HG23	12:0Y:234:LEU:H	1.70	0.56
14:1E:820:THR:O	14:1E:823:SER:OG	2.19	0.56
1:0A:208:MET:HE3	1:0D:209:SER:N	2.21	0.56
1:0B:328:SER:HA	1:0B:600:ASN:HA	1.87	0.56
3:0I:452:ALA:HB2	3:0I:489:PRO:HD3	1.88	0.56
5:0M:70:ASP:OD2	5:0M:128:ARG:NH2	2.35	0.56
7:0Q:335:ALA:HB3	7:0Q:338:GLN:HB2	1.86	0.56
13:1B:1155:ASP:O	13:1B:1156:ARG:HG2	2.06	0.56
1:0A:95:PHE:HA	1:0D:91:THR:HG22	1.87	0.56
7:0Q:180:ASP:O	7:0Q:184:GLY:N	2.36	0.56
12:0Z:145:GLU:OE1	12:0Z:290:THR:OG1	2.23	0.56
12:1A:151:LEU:HD21	12:1A:190:GLN:HG3	1.87	0.56
1:0C:76:ASP:OD2	1:0C:80:ARG:NH2	2.39	0.56
1:0C:313:VAL:HG11	1:0C:550:VAL:HG11	1.88	0.56
12:0X:171:THR:HG21	12:0X:297:ARG:HB3	1.86	0.56
14:1D:965:ALA:HA	14:1D:970:ARG:HE	1.71	0.56
14:1E:820:THR:HB	14:1E:826:LEU:HD11	1.88	0.56
1:0C:561:LYS:HG2	1:0C:573:GLU:HG3	1.88	0.56
1:0D:370:TRP:HZ3	1:0D:372:ALA:HB2	1.71	0.56
7:0S:329:LEU:HA	7:0S:346:SER:HA	1.88	0.56
12:0Y:122:PHE:HA	12:0Y:125:VAL:HG22	1.86	0.56
5:0N:252:GLY:HA2	5:0N:255:LYS:HD2	1.88	0.56
7:0S:106:THR:HG22	7:0S:119:ALA:HB3	1.87	0.56
12:0X:170:ASN:O	12:0X:170:ASN:ND2	2.38	0.56
12:1A:155:PRO:HB3	12:1A:159:ASP:HB2	1.88	0.56
14:1D:929:ARG:HG2	14:1D:960:TRP:CE2	2.40	0.56
1:0C:457:ASP:HB3	1:0C:500:VAL:HG12	1.88	0.55
1:0D:394:ILE:O	1:0D:403:VAL:N	2.37	0.55
2:0G:70:ASN:ND2	2:0G:72:PHE:HB2	2.20	0.55
5:0M:274:VAL:HB	5:0M:278:GLY:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:0Q:210:ALA:HA	7:0Q:226:VAL:HB	1.87	0.55
12:0X:118:ILE:HD11	12:0X:188:LEU:HD23	1.87	0.55
12:0X:229:SER:HB2	12:0X:352:ARG:HD2	1.89	0.55
13:1C:1142:GLU:HG3	13:1C:1144:THR:H	1.70	0.55
13:1C:1326:VAL:HG13	13:1C:1372:VAL:HG13	1.88	0.55
14:1E:1007:ALA:HA	14:1E:1010:ARG:HD2	1.88	0.55
14:1F:1038:ARG:HG3	14:1F:1041:ALA:HB3	1.87	0.55
1:0D:457:ASP:HB3	1:0D:500:VAL:HG12	1.89	0.55
3:0J:150:GLN:O	3:0J:154:TRP:CD1	2.59	0.55
5:0M:180:PRO:O	5:0M:183:TRP:HD1	1.89	0.55
7:0Q:29:TYR:HB3	7:0Q:41:LEU:HG	1.86	0.55
7:0S:71:MET:HB2	7:0S:86:TRP:HB2	1.87	0.55
7:0S:176:LEU:HD13	7:0S:226:VAL:HG13	1.87	0.55
7:0S:414:ALA:O	7:0S:445:ARG:NH1	2.40	0.55
12:0Y:240:VAL:HG21	12:0Y:296:LEU:HD11	1.88	0.55
13:1C:1201:TRP:HZ2	13:1C:1255:CYS:HG	1.52	0.55
14:1D:820:THR:OG1	14:1D:821:PRO:HD3	2.06	0.55
14:1E:914:ALA:HB1	14:1E:924:TRP:CE2	2.41	0.55
14:1F:1054:ALA:HB3	14:1F:1057:GLU:HB2	1.88	0.55
7:0Q:409:TRP:CD2	7:0Q:452:ARG:HD3	2.40	0.55
13:1B:1317:GLU:OE2	13:1B:1744:GLN:NE2	2.38	0.55
13:1B:1525:ALA:N	13:1B:1620:ASP:OD1	2.39	0.55
16:1L:38:UNK:O	16:1L:39:UNK:C	2.53	0.55
1:0B:166:VAL:HG12	1:0C:166:VAL:HG12	1.88	0.55
1:0C:377:HIS:ND1	1:0C:378:PRO:O	2.40	0.55
6:0O:178:SER:HA	6:0O:181:HIS:CE1	2.41	0.55
7:0S:420:SER:HB2	7:0S:440:MET:HB3	1.88	0.55
13:1B:1314:ALA:HA	13:1B:1410:PHE:HB3	1.87	0.55
16:1M:38:UNK:O	16:1M:39:UNK:C	2.53	0.55
4:0L:137:LYS:HD3	13:1C:1219:GLU:HG3	1.89	0.55
12:0X:178:LEU:HD11	12:0X:219:HIS:HD2	1.72	0.55
12:0Y:155:PRO:HB3	12:0Y:159:ASP:HB2	1.88	0.55
12:0Z:11:ARG:NH2	12:0Z:64:GLN:OE1	2.39	0.55
13:1C:1314:ALA:HA	13:1C:1410:PHE:HB3	1.88	0.55
5:0N:161:LEU:HA	5:0N:174:ALA:HB3	1.88	0.55
12:0X:280:ARG:NH1	12:0X:282:ASP:OD2	2.40	0.55
13:1B:1152:ALA:O	13:1B:1156:ARG:NH1	2.38	0.55
13:1B:1494:VAL:HG13	13:1B:1514:ILE:HG23	1.88	0.55
13:1C:1204:HIS:HB3	13:1C:1274:PHE:CE2	2.42	0.55
14:1D:887:LEU:HA	14:1D:890:TRP:HD1	1.70	0.55
14:1G:406:ILE:HG13	14:1G:407:PRO:HD3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0D:342:VAL:HG11	1:0D:383:LEU:HD21	1.89	0.55
3:0J:417:GLN:O	3:0J:449:GLY:HA2	2.06	0.55
12:0X:67:ALA:O	12:0X:71:LEU:HB2	2.07	0.55
12:1A:87:ILE:HG12	12:1A:307:VAL:HB	1.88	0.55
14:1E:439:TYR:CE1	14:1E:443:LEU:HD22	2.41	0.55
1:0B:325:HIS:NE2	1:0B:343:THR:OG1	2.35	0.55
1:0D:438:ASP:HB3	1:0D:441:ALA:HB3	1.88	0.55
1:0D:582:GLN:N	1:0D:596:CYS:O	2.40	0.55
13:1B:1204:HIS:HB3	13:1B:1274:PHE:CE2	2.41	0.55
1:0D:102:LEU:HD21	1:0D:108:LEU:HB2	1.89	0.55
3:0I:417:GLN:O	3:0I:449:GLY:HA2	2.06	0.55
7:0Q:423:VAL:HG21	7:0Q:437:SER:HB2	1.89	0.55
7:0S:141:HIS:HE1	7:0S:188:GLY:H	1.55	0.55
12:0Z:92:GLN:HB2	12:0Z:95:ALA:HB2	1.87	0.55
12:0Z:222:MET:SD	12:0Z:223:ARG:N	2.80	0.55
13:1C:1155:ASP:O	13:1C:1156:ARG:HG2	2.07	0.55
13:1C:1299:LEU:HD21	13:1C:1327:LEU:HD13	1.89	0.55
1:0C:370:TRP:HZ3	1:0C:372:ALA:HB2	1.72	0.55
3:0J:458:ARG:HH21	3:0J:513:LEU:HD22	1.72	0.55
7:0S:463:SER:OG	7:0S:483:ASP:OD1	2.25	0.55
14:1G:554:LEU:H	14:1G:576:ARG:HH21	1.54	0.55
5:0N:40:THR:HA	5:0N:54:PRO:HD3	1.89	0.54
6:0O:129:THR:HG23	6:0O:131:THR:H	1.70	0.54
7:0Q:303:THR:HG22	7:0Q:305:GLN:H	1.70	0.54
7:0Q:463:SER:OG	7:0Q:483:ASP:OD1	2.26	0.54
14:1G:1019:LEU:HB3	14:1G:1022:GLU:OE1	2.08	0.54
1:0A:89:SER:HA	1:0A:92:CYS:HB2	1.89	0.54
1:0D:342:VAL:HG22	1:0D:352:MET:HB2	1.87	0.54
7:0S:173:GLU:OE2	7:0S:190:LYS:NZ	2.41	0.54
7:0S:303:THR:HG22	7:0S:305:GLN:H	1.71	0.54
12:0X:92:GLN:HB2	12:0X:95:ALA:HB2	1.88	0.54
12:0Z:98:THR:N	19:0Z:801:ADP:O2A	2.40	0.54
13:1C:1525:ALA:HB3	13:1C:1618:ARG:HG3	1.89	0.54
2:0G:121:ASP:OD1	2:0G:122:LEU:N	2.41	0.54
5:0M:273:ASP:HB2	5:0M:284:GLU:HG2	1.88	0.54
12:0X:181:VAL:HG13	12:0X:186:GLU:HG2	1.88	0.54
12:0Z:139:TYR:HB3	12:0Z:151:LEU:HD13	1.90	0.54
12:1A:300:LEU:HA	12:1A:306:THR:HG21	1.90	0.54
13:1C:1383:GLU:HB2	13:1C:1385:LYS:HG2	1.89	0.54
14:1G:818:MET:HA	14:1G:855:LEU:HD21	1.90	0.54
1:0A:470:ALA:HB1	1:0A:497:CYS:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0B:329:VAL:HA	1:0B:345:SER:HA	1.88	0.54
1:0C:160:ARG:NH2	13:1B:1156:ARG:O	2.41	0.54
3:0J:202:ASN:HB2	3:0J:205:GLU:HB3	1.90	0.54
14:1D:1009:GLN:HG2	14:1D:1032:ARG:HE	1.71	0.54
14:1E:820:THR:OG1	14:1E:821:PRO:HD3	2.07	0.54
14:1G:605:GLU:HG2	14:1G:627:GLY:HA3	1.89	0.54
5:0N:180:PRO:O	5:0N:183:TRP:HD1	1.90	0.54
5:0N:362:THR:HG1	5:0N:364:CYS:HG	1.56	0.54
6:0P:197:THR:OG1	6:0P:198:ALA:N	2.41	0.54
7:0Q:566:ALA:HA	7:0Q:590:PRO:HB3	1.89	0.54
14:1F:818:MET:HA	14:1F:855:LEU:HD21	1.89	0.54
14:1G:1028:LEU:HB3	14:1G:1032:ARG:NH1	2.19	0.54
1:0B:522:ASP:HB3	1:0B:525:MET:HB2	1.90	0.54
12:0Y:13:ARG:NH1	12:0Y:94:GLY:O	2.39	0.54
13:1B:1383:GLU:HB2	13:1B:1385:LYS:HG2	1.88	0.54
14:1D:443:LEU:HD21	14:1D:462:ARG:HE	1.71	0.54
7:0Q:545:HIS:NE2	7:0Q:569:ALA:O	2.34	0.54
12:0X:98:THR:N	19:0X:801:ADP:O2A	2.41	0.54
12:0Y:65:GLU:OE2	12:0Y:116:ARG:NH1	2.39	0.54
14:1F:1019:LEU:HD13	14:1F:1022:GLU:HG3	1.90	0.54
1:0B:115:PRO:HB2	1:0B:118:TYR:HD1	1.73	0.54
1:0C:394:ILE:O	1:0C:403:VAL:N	2.39	0.54
2:0G:44:LEU:HD23	2:0G:135:ILE:HG23	1.90	0.54
3:0J:577:ARG:HG3	3:0J:578:PRO:HD3	1.90	0.54
5:0M:136:ALA:HB3	5:0M:140:LYS:HB2	1.90	0.54
5:0N:135:PRO:HA	5:0N:141:VAL:HG13	1.90	0.54
7:0S:168:THR:HB	7:0S:177:TRP:HE1	1.71	0.54
1:0A:582:GLN:H	1:0A:597:GLY:HA2	1.71	0.54
1:0C:328:SER:HA	1:0C:600:ASN:HA	1.88	0.54
2:0G:81:TYR:CZ	2:0G:145:PHE:HB3	2.42	0.54
3:0J:442:SER:HA	3:0J:496:ALA:HA	1.89	0.54
4:0K:80:HIS:HA	4:0K:83:LEU:HD12	1.88	0.54
12:1A:137:VAL:HG21	12:1A:190:GLN:HE21	1.73	0.54
7:0S:545:HIS:NE2	7:0S:569:ALA:O	2.40	0.54
12:1A:94:GLY:N	19:1A:801:ADP:O3B	2.41	0.54
1:0A:335:HIS:CD2	1:0A:336:PRO:HD2	2.43	0.53
1:0A:396:ASP:HB3	1:0A:399:LYS:HG2	1.89	0.53
1:0B:95:PHE:HA	1:0C:91:THR:HG22	1.90	0.53
1:0C:599:ASP:OD2	1:0C:603:ARG:NH2	2.36	0.53
12:0Y:114:ILE:HG12	12:0Y:239:LEU:HD22	1.89	0.53
12:0Z:84:ASN:HB2	12:0Z:304:CYS:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1D:597:GLY:O	14:1D:601:ARG:N	2.41	0.53
14:1G:563:MET:SD	14:1G:925:ARG:NH2	2.81	0.53
1:0C:540:ASN:ND2	1:0C:581:VAL:O	2.40	0.53
3:0I:453:VAL:HG21	3:0I:516:ARG:HD3	1.89	0.53
3:0J:225:PHE:CE2	6:0P:166:LYS:HG3	2.43	0.53
12:0X:222:MET:SD	12:0X:223:ARG:N	2.81	0.53
12:1A:240:VAL:HG21	12:1A:296:LEU:HD11	1.90	0.53
13:1C:1152:ALA:O	13:1C:1156:ARG:NH1	2.40	0.53
14:1F:666:LEU:HD12	14:1F:669:VAL:HB	1.90	0.53
1:0B:582:GLN:H	1:0B:597:GLY:HA2	1.72	0.53
1:0C:413:ILE:HD13	1:0C:429:SER:HB2	1.90	0.53
12:0Z:15:THR:HG22	12:0Z:313:TRP:HE1	1.73	0.53
13:1C:1525:ALA:N	13:1C:1620:ASP:OD1	2.40	0.53
14:1D:881:ARG:NH1	14:1D:884:GLU:OE1	2.36	0.53
14:1E:825:VAL:O	14:1E:827:SER:N	2.39	0.53
1:0A:578:GLU:OE1	1:0A:603:ARG:NH2	2.42	0.53
1:0B:341:LEU:HD22	1:0B:594:VAL:HG11	1.90	0.53
4:0L:200:TYR:CD1	4:0L:202:PRO:HD3	2.44	0.53
12:0Z:346:ASP:HB2	12:0Z:349:LEU:HB2	1.91	0.53
12:1A:122:PHE:HA	12:1A:125:VAL:HG22	1.90	0.53
14:1F:549:ARG:HG2	14:1F:553:LEU:HG	1.90	0.53
14:1G:567:ASP:OD1	14:1G:568:ARG:N	2.42	0.53
1:0A:377:HIS:ND1	1:0A:378:PRO:O	2.40	0.53
5:0N:222:LEU:HD22	5:0N:232:ILE:HG13	1.90	0.53
13:1B:1610:GLU:HG3	13:1B:1736:ARG:HB2	1.91	0.53
14:1E:597:GLY:O	14:1E:601:ARG:N	2.41	0.53
1:0A:132:ARG:HG3	1:0A:133:ARG:HG3	1.90	0.53
2:0E:70:ASN:ND2	2:0E:72:PHE:HB2	2.23	0.53
5:0N:232:ILE:O	5:0N:236:MET:HB2	2.09	0.53
5:0N:322:LEU:O	5:0N:386:ARG:NH2	2.42	0.53
12:0X:101:MET:HE1	12:0X:239:LEU:HB3	1.91	0.53
12:0X:233:VAL:HG12	12:0X:234:LEU:N	2.23	0.53
13:1B:1142:GLU:HG3	13:1B:1144:THR:H	1.73	0.53
5:0N:337:MET:HG3	5:0N:383:ILE:HG12	1.89	0.53
7:0S:365:VAL:HG22	7:0S:405:CYS:HB2	1.90	0.53
12:1A:184:GLU:O	12:1A:188:LEU:HG	2.09	0.53
13:1C:1112:GLU:HG3	13:1C:1194:PRO:HG3	1.90	0.53
13:1C:1518:ASN:HD21	13:1C:1588:LEU:HB3	1.72	0.53
13:1C:1533:LEU:HD21	13:1C:1611:GLY:HA3	1.90	0.53
14:1D:827:SER:O	14:1D:830:ARG:N	2.41	0.53
14:1G:937:LEU:HD13	14:1G:968:GLU:HG3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0C:457:ASP:HB2	1:0C:499:GLY:HA2	1.89	0.53
7:0Q:584:ALA:HB3	7:0Q:615:TRP:HZ3	1.73	0.53
13:1B:1184:PRO:HG2	13:1B:1262:ARG:HH11	1.72	0.53
1:0B:414:TRP:HZ3	2:0F:46:ARG:HG3	1.74	0.53
3:0J:362:ILE:HA	3:0J:366:GLU:HB2	1.91	0.53
5:0N:249:PHE:O	5:0N:253:ILE:HG12	2.08	0.53
6:0P:10:PHE:HD1	7:0Q:181:PRO:HB2	1.73	0.53
7:0Q:329:LEU:HA	7:0Q:346:SER:HA	1.91	0.53
7:0S:482:GLU:H	7:0S:505:MET:HB2	1.73	0.53
7:0S:512:SER:HB3	7:0S:517:SER:HB2	1.90	0.53
12:1A:80:MET:HG2	12:1A:124:GLU:HB3	1.91	0.53
13:1C:1249:LEU:HD11	13:1C:1255:CYS:HB2	1.89	0.53
13:1C:1314:ALA:HB3	13:1C:1317:GLU:HB2	1.91	0.53
1:0B:323:LYS:H	1:0B:601:THR:HG23	1.72	0.52
12:0X:145:GLU:OE1	12:0X:290:THR:OG1	2.27	0.52
14:1D:439:TYR:CE1	14:1D:443:LEU:HD22	2.44	0.52
14:1D:817:ALA:HB1	14:1D:855:LEU:HD13	1.91	0.52
1:0B:377:HIS:ND1	1:0B:378:PRO:O	2.41	0.52
1:0C:582:GLN:N	1:0C:596:CYS:O	2.42	0.52
7:0S:458:MET:HB3	7:0S:489:TRP:CZ3	2.44	0.52
12:0Z:118:ILE:HD11	12:0Z:188:LEU:HD12	1.90	0.52
14:1E:459:ALA:O	14:1E:462:ARG:HG2	2.10	0.52
14:1E:881:ARG:NH1	14:1E:884:GLU:OE1	2.37	0.52
1:0A:334:LEU:HD12	1:0A:341:LEU:HD13	1.91	0.52
1:0B:184:TYR:CZ	1:0C:184:TYR:HB3	2.44	0.52
3:0I:225:PHE:CE1	6:0O:166:LYS:HG3	2.40	0.52
4:0K:132:LYS:HG2	4:0K:135:ARG:HH21	1.75	0.52
5:0N:42:THR:HB	5:0N:49:LEU:HD22	1.90	0.52
12:0Z:106:THR:O	12:0Z:111:ARG:NH1	2.42	0.52
13:1C:1234:ILE:HD11	13:1C:1269:PHE:HB3	1.90	0.52
13:1C:1769:TRP:HB2	14:1D:522:HIS:NE2	2.25	0.52
1:0B:370:TRP:NE1	2:0F:44:LEU:O	2.42	0.52
1:0D:398:GLU:O	1:0D:400:GLN:NE2	2.42	0.52
3:0I:563:ALA:O	3:0I:567:ARG:HG3	2.07	0.52
3:0J:421:HIS:ND1	3:0J:522:SER:HB2	2.24	0.52
5:0N:193:VAL:HG11	5:0N:217:LEU:HD11	1.90	0.52
7:0Q:6:ARG:NH2	7:0Q:356:THR:O	2.43	0.52
12:0Y:9:PHE:CE2	12:0Y:57:GLY:HA3	2.45	0.52
12:0Z:233:VAL:HG12	12:0Z:234:LEU:N	2.24	0.52
13:1C:1738:ARG:NH1	13:1C:1752:PRO:HG3	2.24	0.52
14:1D:459:ALA:O	14:1D:462:ARG:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1E:419:THR:HG22	14:1E:421:VAL:H	1.74	0.52
14:1G:864:GLU:HA	14:1G:867:ARG:HD2	1.91	0.52
14:1G:1048:ALA:HA	14:1G:1051:ARG:NH1	2.24	0.52
1:0B:191:ILE:HD11	1:0C:191:ILE:HD11	1.90	0.52
5:0M:243:LEU:HB3	5:0M:279:GLU:HB3	1.91	0.52
12:0X:232:ALA:HB1	12:0X:233:VAL:HG23	1.92	0.52
12:0Z:276:ASN:HB3	12:0Z:280:ARG:HH21	1.75	0.52
13:1C:1234:ILE:HG12	13:1C:1239:LEU:HD12	1.92	0.52
13:1C:1299:LEU:HD11	13:1C:1327:LEU:HB3	1.90	0.52
14:1F:790:LEU:HD13	14:1F:793:LEU:HD12	1.91	0.52
1:0A:166:VAL:HG12	1:0D:166:VAL:HG12	1.91	0.52
3:0J:456:SER:HB2	3:0J:515:THR:HG23	1.91	0.52
5:0N:345:LEU:HD22	5:0N:352:ALA:HB1	1.91	0.52
7:0Q:283:VAL:HG11	7:0Q:301:VAL:HG11	1.92	0.52
7:0Q:342:VAL:HG11	7:0Q:604:VAL:HG11	1.89	0.52
13:1B:1116:VAL:HG22	13:1B:1189:VAL:HG22	1.92	0.52
5:0M:626:SER:O	5:0M:630:SER:HB3	2.09	0.52
7:0S:100:HIS:HD1	7:0S:120:SER:HB2	1.74	0.52
12:0X:215:VAL:HG13	12:0X:240:VAL:HG22	1.92	0.52
12:0Z:109:ALA:O	12:0Z:110:HIS:ND1	2.43	0.52
12:1A:94:GLY:HA2	12:1A:206:ASN:HD22	1.75	0.52
14:1E:1005:ARG:HA	14:1E:1008:GLU:HG3	1.90	0.52
3:0J:512:GLU:HA	3:0J:529:LEU:H	1.74	0.52
7:0S:8:ILE:HD11	7:0S:586:CYS:HB3	1.92	0.52
12:0Z:86:THR:HB	12:0Z:306:THR:HG22	1.92	0.52
13:1B:1769:TRP:HB2	14:1E:522:HIS:NE2	2.25	0.52
14:1D:820:THR:HB	14:1D:826:LEU:HD11	1.91	0.52
14:1D:1025:SER:OG	14:1D:1052:GLN:NE2	2.43	0.52
1:0B:335:HIS:CD2	1:0B:336:PRO:HD2	2.45	0.52
3:0I:450:THR:O	13:1C:1383:GLU:HG2	2.10	0.52
3:0J:512:GLU:HG2	3:0J:528:THR:HB	1.91	0.52
7:0Q:64:ALA:HB2	7:0Q:107:VAL:HG13	1.92	0.52
7:0S:465:ILE:HD12	7:0S:478:ALA:HB1	1.92	0.52
12:0Z:12:THR:OG1	12:0Z:60:GLU:O	2.28	0.52
13:1B:1305:LEU:HD22	13:1B:1325:TYR:HE1	1.75	0.52
13:1C:1127:TRP:HA	13:1C:1132:LEU:HD12	1.92	0.52
13:1C:1521:ARG:NH2	13:1C:1522:TYR:OH	2.42	0.52
14:1F:864:GLU:HA	14:1F:867:ARG:HD2	1.91	0.52
1:0A:367:HIS:ND1	1:0A:389:ASP:OD2	2.33	0.52
1:0D:180:LEU:HD11	4:0L:123:ALA:HB2	1.92	0.52
3:0I:433:CYS:O	3:0I:535:ALA:HA	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:0I:453:VAL:HG12	3:0I:518:PRO:HG2	1.91	0.52
7:0Q:106:THR:HG22	7:0Q:119:ALA:HB3	1.90	0.52
7:0S:46:ASN:HD21	7:0S:322:SER:HB3	1.75	0.52
13:1B:1524:LEU:HB3	13:1B:1617:VAL:HG13	1.91	0.52
14:1D:999:TYR:CE2	14:1D:1007:ALA:HB1	2.45	0.52
14:1F:929:ARG:HG2	14:1F:960:TRP:CE2	2.45	0.52
5:0M:203:GLY:HA3	5:0M:308:GLN:HG2	1.92	0.51
5:0M:339:HIS:NE2	5:0M:417:VAL:O	2.40	0.51
7:0S:72:LEU:HD22	7:0S:107:VAL:HG21	1.92	0.51
13:1C:1116:VAL:HA	13:1C:1188:HIS:O	2.10	0.51
1:0A:191:ILE:HD11	1:0D:191:ILE:HD11	1.91	0.51
1:0C:180:LEU:HD11	4:0K:123:ALA:HB2	1.93	0.51
1:0D:316:LEU:HG	1:0D:317:SER:H	1.75	0.51
2:0E:56:ASP:O	2:0E:80:ARG:NE	2.43	0.51
3:0J:193:ALA:HB2	3:0J:333:LEU:HD12	1.93	0.51
5:0M:197:LEU:HD22	5:0M:201:ARG:HH21	1.75	0.51
5:0N:136:ALA:HB3	5:0N:140:LYS:HB2	1.92	0.51
14:1D:966:LEU:HD11	14:1D:999:TYR:CE1	2.45	0.51
1:0A:135:LEU:CB	1:0D:135:LEU:HB3	2.40	0.51
4:0K:196:ILE:HG13	4:0K:198:GLN:H	1.75	0.51
4:0L:80:HIS:O	4:0L:84:THR:HG23	2.11	0.51
12:0X:15:THR:HG22	12:0X:313:TRP:HE1	1.75	0.51
13:1C:1177:THR:HG22	13:1C:1290:VAL:HB	1.91	0.51
14:1F:594:LEU:HD23	14:1F:601:ARG:HG2	1.90	0.51
5:0N:203:GLY:HA3	5:0N:308:GLN:HG2	1.92	0.51
7:0S:298:ALA:HB1	7:0S:310:ARG:HG3	1.93	0.51
12:0Z:229:SER:HB2	12:0Z:352:ARG:HD2	1.93	0.51
13:1B:1325:TYR:HE2	13:1B:1403:ILE:HD13	1.75	0.51
14:1E:999:TYR:CE2	14:1E:1007:ALA:HB1	2.45	0.51
2:0H:81:TYR:CZ	2:0H:145:PHE:HB3	2.46	0.51
13:1C:1135:LEU:HD21	13:1C:1285:LEU:HD21	1.92	0.51
1:0B:132:ARG:HG3	1:0B:133:ARG:HG3	1.93	0.51
1:0C:564:SER:HB2	1:0C:571:GLN:HE21	1.75	0.51
3:0I:457:TRP:NE1	3:0I:483:GLN:HG2	2.25	0.51
5:0M:147:ILE:O	5:0M:151:GLU:HB2	2.10	0.51
5:0M:388:VAL:O	5:0M:392:MET:HG3	2.10	0.51
7:0S:428:LEU:HD11	7:0S:449:LEU:HD11	1.91	0.51
7:0S:584:ALA:HB3	7:0S:615:TRP:HZ3	1.76	0.51
13:1C:1313:VAL:HA	13:1C:1750:TYR:CE1	2.43	0.51
14:1D:493:GLU:HA	14:1D:496:ARG:HH22	1.75	0.51
14:1G:596:ARG:HA	14:1G:596:ARG:NH1	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0A:121:ASN:ND2	1:0D:117:VAL:HG23	2.25	0.51
1:0B:162:HIS:HB3	1:0C:163:HIS:CE1	2.45	0.51
7:0S:74:THR:HB	7:0S:104:VAL:HB	1.92	0.51
12:0Y:123:ARG:O	12:0Y:127:MET:HG2	2.11	0.51
12:0Z:67:ALA:O	12:0Z:71:LEU:HB2	2.11	0.51
12:0Z:215:VAL:HG13	12:0Z:240:VAL:HG22	1.92	0.51
12:1A:136:HIS:CE1	12:1A:180:PRO:HB3	2.46	0.51
1:0D:294:LEU:HD13	1:0D:421:LEU:HD12	1.93	0.51
5:0N:142:HIS:ND1	5:0N:144:MET:HB2	2.26	0.51
13:1B:1313:VAL:HA	13:1B:1750:TYR:CE1	2.43	0.51
1:0B:135:LEU:CB	1:0C:135:LEU:HB3	2.41	0.51
1:0C:537:HIS:HB3	1:0C:556:ASP:HB2	1.93	0.51
3:0I:577:ARG:HG3	3:0I:578:PRO:HD3	1.93	0.51
7:0Q:8:ILE:HD11	7:0Q:586:CYS:HB3	1.93	0.51
7:0Q:298:ALA:HB1	7:0Q:310:ARG:HG3	1.93	0.51
13:1B:1249:LEU:HD11	13:1B:1255:CYS:HB2	1.92	0.51
13:1C:1130:LEU:HB2	13:1C:1132:LEU:HG	1.93	0.51
13:1C:1747:ALA:HB3	13:1C:1749:ARG:HG2	1.91	0.51
3:0J:450:THR:O	13:1B:1383:GLU:HG2	2.11	0.51
5:0M:94:LEU:HD13	5:0M:143:TYR:HB2	1.92	0.51
12:1A:220:VAL:O	12:1A:235:SER:HB2	2.11	0.51
13:1B:1146:THR:HG22	13:1B:1150:LEU:HD13	1.93	0.51
14:1D:506:MET:HG3	14:1D:510:TYR:HE1	1.75	0.51
1:0C:329:VAL:HA	1:0C:345:SER:HA	1.93	0.50
1:0C:438:ASP:HB3	1:0C:441:ALA:HB3	1.93	0.50
4:0K:137:LYS:NZ	13:1B:1219:GLU:HG3	2.25	0.50
12:0Y:300:LEU:HA	12:0Y:306:THR:HG21	1.93	0.50
12:0Z:355:GLU:HA	12:0Z:358:ILE:HG22	1.93	0.50
12:1A:198:ARG:HH21	12:1A:214:THR:HG1	1.57	0.50
13:1B:1193:ASN:ND2	13:1B:1249:LEU:O	2.44	0.50
13:1B:1224:ARG:HD3	13:1B:1229:ARG:HH21	1.76	0.50
13:1C:1116:VAL:HG22	13:1C:1189:VAL:HG22	1.92	0.50
13:1C:1515:VAL:HG12	13:1C:1595:VAL:HA	1.93	0.50
14:1E:1025:SER:HA	14:1E:1028:LEU:HD12	1.92	0.50
4:0K:86:SER:O	4:0K:90:ARG:HG3	2.11	0.50
5:0N:111:ARG:HG3	5:0N:130:VAL:HG21	1.93	0.50
12:1A:65:GLU:OE2	12:1A:116:ARG:NH1	2.43	0.50
12:1A:85:GLY:HA2	12:1A:305:LYS:H	1.76	0.50
14:1D:992:LEU:HD12	14:1D:1011:VAL:HG13	1.93	0.50
14:1D:1006:ARG:HA	14:1D:1009:GLN:OE1	2.11	0.50
14:1G:549:ARG:HG2	14:1G:553:LEU:HG	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0B:368:LYS:NZ	2:0F:40:ASP:OD2	2.39	0.50
2:0G:65:ARG:NH2	2:0G:129:GLY:O	2.37	0.50
3:0J:90:SER:N	3:0J:93:THR:HG1	2.09	0.50
3:0J:196:ARG:HH22	3:0J:215:TRP:HZ3	1.58	0.50
3:0J:457:TRP:HE1	3:0J:483:GLN:HG2	1.76	0.50
7:0S:212:LEU:HB3	7:0S:224:VAL:HG22	1.94	0.50
14:1D:506:MET:HG3	14:1D:510:TYR:CE1	2.46	0.50
14:1G:598:GLY:HA2	14:1G:601:ARG:HG3	1.92	0.50
1:0A:321:THR:HG22	1:0A:603:ARG:HG2	1.92	0.50
1:0A:438:ASP:O	1:0A:442:GLY:N	2.41	0.50
1:0C:470:ALA:HB2	1:0C:500:VAL:HB	1.93	0.50
2:0F:78:PHE:HD1	2:0F:110:PHE:HE2	1.57	0.50
3:0I:545:ARG:HE	3:0I:548:LEU:HD12	1.76	0.50
12:0Z:351:LEU:O	12:0Z:355:GLU:HG2	2.11	0.50
13:1B:1487:MET:O	13:1B:1519:LYS:HE3	2.10	0.50
14:1G:680:GLU:O	14:1G:778:ARG:NH2	2.42	0.50
3:0I:447:SER:HB3	3:0I:487:LEU:HD21	1.93	0.50
3:0J:267:PRO:HG3	3:0J:323:VAL:HG13	1.94	0.50
12:0X:84:ASN:HB2	12:0X:304:CYS:HA	1.93	0.50
12:1A:287:PHE:CE1	12:1A:297:ARG:HA	2.47	0.50
13:1B:1521:ARG:NH2	13:1B:1522:TYR:OH	2.44	0.50
1:0A:115:PRO:HB2	1:0A:118:TYR:HD1	1.76	0.50
3:0I:442:SER:HA	3:0I:496:ALA:HA	1.93	0.50
7:0Q:465:ILE:HD12	7:0Q:478:ALA:HB1	1.93	0.50
12:0X:75:VAL:HG21	12:0X:87:ILE:HD11	1.93	0.50
12:0Z:75:VAL:HG21	12:0Z:87:ILE:HD11	1.94	0.50
14:1F:929:ARG:HE	14:1F:960:TRP:HE1	1.59	0.50
1:0D:329:VAL:HA	1:0D:345:SER:HA	1.93	0.50
3:0J:172:LEU:HD12	3:0J:173:ALA:H	1.77	0.50
3:0J:195:PRO:HD2	3:0J:326:TYR:HE1	1.76	0.50
6:0P:135:ARG:HG2	6:0P:135:ARG:HH11	1.76	0.50
13:1C:1311:GLU:HB2	13:1C:1323:GLN:HE22	1.75	0.50
13:1C:1524:LEU:HB3	13:1C:1617:VAL:HG13	1.94	0.50
14:1D:914:ALA:HB1	14:1D:924:TRP:CE2	2.47	0.50
14:1F:667:ALA:HA	14:1F:670:TYR:HD1	1.76	0.50
1:0D:354:HIS:HB2	1:0D:361:ILE:HD11	1.94	0.50
3:0J:563:ALA:O	3:0J:567:ARG:HG3	2.10	0.50
7:0S:415:HIS:NE2	7:0S:437:SER:OG	2.31	0.50
12:0Z:315:GLU:HB2	12:0Z:318:HIS:HB2	1.93	0.50
13:1C:1241:GLU:OE1	13:1C:1243:ARG:NH1	2.44	0.50
14:1D:397:PRO:HB3	14:1D:686:GLN:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0D:582:GLN:HG2	1:0D:597:GLY:HA2	1.93	0.50
3:0J:564:ALA:O	3:0J:568:VAL:HG23	2.12	0.50
4:0K:80:HIS:O	4:0K:84:THR:HG23	2.12	0.50
4:0L:111:GLY:O	4:0L:115:ASP:HB2	2.11	0.50
5:0N:147:ILE:O	5:0N:151:GLU:HB2	2.12	0.50
12:1A:233:VAL:HG23	12:1A:234:LEU:N	2.26	0.50
14:1G:667:ALA:HB1	14:1G:778:ARG:CZ	2.41	0.50
5:0M:322:LEU:O	5:0M:386:ARG:NH2	2.45	0.49
12:0Y:85:GLY:HA2	12:0Y:305:LYS:H	1.76	0.49
12:0Y:233:VAL:HG23	12:0Y:234:LEU:N	2.27	0.49
13:1B:1146:THR:HG23	13:1B:1149:ARG:HD3	1.94	0.49
13:1B:1241:GLU:OE1	13:1B:1243:ARG:NH1	2.43	0.49
14:1F:807:GLY:HA2	14:1F:813:ALA:HB3	1.94	0.49
14:1G:554:LEU:N	14:1G:576:ARG:HH21	2.09	0.49
14:1G:816:GLU:HA	14:1G:819:LEU:HG	1.94	0.49
16:1L:41:UNK:O	16:1L:43:UNK:N	2.45	0.49
1:0B:367:HIS:ND1	1:0B:389:ASP:OD2	2.34	0.49
1:0C:574:LEU:HD13	1:0C:605:TRP:CD2	2.47	0.49
3:0I:580:PRO:O	3:0I:583:SER:OG	2.29	0.49
12:0Y:220:VAL:O	12:0Y:235:SER:HB2	2.12	0.49
12:0Z:101:MET:SD	12:0Z:113:LEU:HD23	2.51	0.49
12:0Z:136:HIS:HB3	12:0Z:178:LEU:HG	1.94	0.49
13:1B:1747:ALA:HB3	13:1B:1749:ARG:HG2	1.93	0.49
13:1C:1193:ASN:ND2	13:1C:1249:LEU:O	2.45	0.49
14:1D:592:TYR:HA	14:1D:595:ARG:HD2	1.94	0.49
14:1E:493:GLU:HA	14:1E:496:ARG:HH22	1.77	0.49
14:1E:1016:ALA:HB2	14:1E:1028:LEU:HD11	1.92	0.49
16:1M:41:UNK:O	16:1M:43:UNK:N	2.45	0.49
1:0A:319:ASN:HB2	1:0A:606:SER:H	1.78	0.49
1:0A:523:THR:HB	1:0A:524:ARG:HH11	1.77	0.49
1:0D:86:MET:SD	1:0D:86:MET:N	2.85	0.49
2:0G:139:GLU:O	2:0G:143:GLU:HG2	2.12	0.49
3:0I:135:MET:O	3:0I:142:ARG:NH2	2.45	0.49
5:0M:272:CYS:SG	5:0M:288:ARG:HD3	2.53	0.49
13:1B:1177:THR:HA	13:1B:1290:VAL:O	2.12	0.49
13:1B:1226:GLU:OE2	13:1B:1229:ARG:NH1	2.42	0.49
14:1F:606:GLU:HG2	14:1F:609:ARG:HD3	1.93	0.49
14:1G:929:ARG:HG2	14:1G:960:TRP:CE2	2.47	0.49
1:0A:438:ASP:HB3	1:0A:441:ALA:HB3	1.94	0.49
1:0D:335:HIS:HE2	1:0D:380:GLY:HA3	1.78	0.49
3:0J:433:CYS:O	3:0J:535:ALA:HA	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:0J:517:PRO:HB2	3:0J:518:PRO:HD3	1.93	0.49
3:0J:574:MET:SD	3:0J:577:ARG:NH2	2.84	0.49
13:1B:1311:GLU:HB2	13:1B:1323:GLN:NE2	2.28	0.49
13:1B:1659:ALA:HB2	16:1M:22:UNK:C	2.39	0.49
1:0B:181:LYS:NZ	4:0K:127:LEU:HD12	2.27	0.49
5:0N:345:LEU:HD12	5:0N:412:LEU:HD23	1.95	0.49
7:0Q:420:SER:HB2	7:0Q:440:MET:HB3	1.94	0.49
12:0Y:94:GLY:N	19:0Y:801:ADP:O1B	2.45	0.49
13:1C:1305:LEU:HD22	13:1C:1325:TYR:HE1	1.77	0.49
14:1D:407:PRO:HB2	14:1D:409:ARG:HH12	1.77	0.49
14:1E:592:TYR:HA	14:1E:595:ARG:HD2	1.95	0.49
14:1G:502:SER:OG	14:1G:505:GLU:OE1	2.28	0.49
1:0A:163:HIS:HB2	1:0D:163:HIS:HB2	1.95	0.49
1:0A:430:LEU:HD12	1:0A:454:SER:HB2	1.93	0.49
1:0B:156:ARG:HG3	1:0C:155:GLU:HB3	1.95	0.49
1:0B:438:ASP:O	1:0B:442:GLY:N	2.42	0.49
2:0E:74:VAL:HG13	2:0E:141:LEU:HD11	1.94	0.49
4:0L:154:GLN:O	4:0L:157:LEU:N	2.45	0.49
5:0M:229:LEU:HD21	5:0M:286:VAL:HA	1.95	0.49
5:0M:252:GLY:HA2	5:0M:255:LYS:HD2	1.95	0.49
7:0Q:116:LEU:O	7:0Q:129:VAL:HA	2.13	0.49
13:1C:1275:LEU:HD12	13:1C:1283:LEU:HB2	1.95	0.49
14:1D:429:ARG:HG3	14:1D:528:LEU:HD11	1.93	0.49
14:1E:992:LEU:HD12	14:1E:1011:VAL:HG13	1.94	0.49
14:1F:654:VAL:O	14:1F:657:ARG:C	2.51	0.49
1:0B:470:ALA:HB2	1:0B:500:VAL:HG13	1.95	0.49
1:0C:332:LEU:HD22	1:0C:341:LEU:HD21	1.95	0.49
5:0N:273:ASP:HB2	5:0N:284:GLU:HG2	1.93	0.49
12:0X:88:PHE:CZ	12:0X:308:MET:HG3	2.47	0.49
12:1A:198:ARG:NH2	12:1A:214:THR:OG1	2.30	0.49
13:1C:1494:VAL:HG13	13:1C:1514:ILE:HG23	1.93	0.49
7:0S:283:VAL:HG11	7:0S:301:VAL:HG11	1.94	0.49
12:0Y:106:THR:N	12:0Y:111:ARG:HG2	2.15	0.49
12:0Z:232:ALA:HB1	12:0Z:233:VAL:HG23	1.95	0.49
13:1C:1146:THR:HG22	13:1C:1150:LEU:HD13	1.94	0.49
14:1D:818:MET:SD	14:1D:857:LYS:HA	2.52	0.49
1:0A:370:TRP:NE1	2:0H:44:LEU:O	2.45	0.49
1:0B:586:PHE:HE2	1:0B:590:GLY:HA2	1.77	0.49
4:0L:115:ASP:HB2	4:0L:118:SER:HB3	1.94	0.49
5:0M:121:LEU:HB3	5:0M:125:GLU:HB2	1.95	0.49
7:0S:463:SER:HB2	7:0S:482:GLU:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0D:574:LEU:HD13	1:0D:605:TRP:CD2	2.48	0.49
3:0J:215:TRP:CD1	3:0J:235:ARG:HD3	2.47	0.49
12:0X:48:GLN:HG2	12:0X:48:GLN:O	2.12	0.49
12:0X:170:ASN:HD22	12:0X:170:ASN:C	2.15	0.49
12:0Z:71:LEU:HD22	12:0Z:309:VAL:HG22	1.94	0.49
13:1B:1311:GLU:HB2	13:1B:1323:GLN:HE22	1.78	0.49
14:1E:677:LYS:O	14:1E:681:LEU:N	2.43	0.49
14:1E:948:ASN:OD1	14:1E:949:VAL:N	2.46	0.49
14:1G:568:ARG:NH2	14:1G:956:GLU:OE1	2.45	0.49
14:1G:960:TRP:CD2	14:1G:991:LEU:HD21	2.48	0.49
1:0A:75:ILE:HG22	1:0A:111:SER:HB3	1.95	0.48
1:0B:121:ASN:ND2	1:0C:117:VAL:HG23	2.28	0.48
1:0C:190:THR:HG22	4:0K:105:LEU:HB3	1.94	0.48
3:0I:106:GLY:O	3:0I:110:PRO:HD2	2.12	0.48
6:0P:90:LYS:HG2	6:0P:94:TYR:CE1	2.48	0.48
13:1C:1581:ILE:HD11	13:1C:1596:CYS:HB3	1.94	0.48
14:1D:481:ASP:O	14:1D:484:LYS:HG2	2.13	0.48
14:1D:1025:SER:HA	14:1D:1028:LEU:HB2	1.95	0.48
14:1F:650:ARG:CB	14:1F:666:LEU:HD13	2.43	0.48
1:0A:331:ASN:HD22	1:0A:374:VAL:H	1.61	0.48
1:0D:354:HIS:O	1:0D:358:GLY:N	2.45	0.48
2:0H:78:PHE:HD1	2:0H:110:PHE:HE2	1.61	0.48
3:0J:106:GLY:O	3:0J:110:PRO:HD2	2.12	0.48
3:0J:544:GLY:HA2	14:1F:578:LEU:HD11	1.95	0.48
6:0O:66:ASP:OD1	6:0O:67:GLU:N	2.44	0.48
7:0S:224:VAL:HG12	7:0S:231:VAL:HA	1.95	0.48
12:0X:136:HIS:HB3	12:0X:178:LEU:HG	1.95	0.48
13:1B:1135:LEU:HD21	13:1B:1285:LEU:HD21	1.94	0.48
13:1C:1322:LEU:HD23	13:1C:1378:ARG:HG2	1.96	0.48
13:1C:1473:TRP:NE1	13:1C:1498:LEU:HB3	2.29	0.48
1:0A:546:ARG:NH2	1:0A:589:ALA:O	2.46	0.48
1:0B:396:ASP:HB3	1:0B:399:LYS:HG2	1.94	0.48
1:0D:438:ASP:O	1:0D:442:GLY:N	2.42	0.48
3:0J:246:ARG:HH11	3:0J:263:THR:HG21	1.77	0.48
3:0J:306:LEU:HD23	3:0J:309:ARG:HH21	1.78	0.48
13:1C:1117:TYR:HA	13:1C:1123:LYS:HZ3	1.76	0.48
13:1C:1680:LEU:O	13:1C:1683:ARG:HB2	2.13	0.48
14:1D:847:ARG:HH11	14:1D:847:ARG:HA	1.78	0.48
14:1E:1025:SER:HA	14:1E:1028:LEU:HB2	1.95	0.48
14:1G:1038:ARG:HG3	14:1G:1041:ALA:HB3	1.94	0.48
1:0C:319:ASN:HB2	1:0C:604:LEU:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:0I:440:HIS:CD2	14:1G:508:LEU:HD22	2.48	0.48
3:0J:580:PRO:O	3:0J:583:SER:OG	2.27	0.48
7:0Q:354:TRP:HD1	7:0Q:361:LEU:HA	1.78	0.48
13:1C:1444:ASP:O	13:1C:1450:ALA:HB2	2.14	0.48
14:1G:905:PHE:HA	14:1G:908:ASP:OD2	2.13	0.48
1:0B:292:ALA:HA	1:0B:295:ASN:HD22	1.77	0.48
1:0C:193:GLU:O	4:0K:98:ARG:NH2	2.47	0.48
1:0D:429:SER:OG	1:0D:430:LEU:N	2.47	0.48
1:0D:473:ASP:OD1	1:0D:475:THR:OG1	2.26	0.48
7:0Q:365:VAL:HG22	7:0Q:405:CYS:HB2	1.95	0.48
12:0X:10:VAL:HG22	12:0X:310:ALA:HB3	1.96	0.48
12:1A:138:SER:OG	12:1A:217:THR:OG1	2.19	0.48
12:1A:139:TYR:HB3	12:1A:151:LEU:HD13	1.96	0.48
13:1B:1495:ASP:HB2	13:1B:1515:VAL:HG23	1.94	0.48
14:1G:797:LEU:HD21	14:1G:847:ARG:HG2	1.95	0.48
1:0B:546:ARG:NH2	1:0B:589:ALA:O	2.46	0.48
3:0I:231:LYS:HE2	3:0I:233:ARG:HD3	1.94	0.48
5:0M:360:ASP:HA	5:0M:367:LEU:HD21	1.96	0.48
7:0Q:512:SER:HB3	7:0Q:517:SER:HB2	1.95	0.48
12:1A:114:ILE:HG12	12:1A:239:LEU:HD22	1.95	0.48
13:1B:1685:PRO:HG2	13:1B:1688:GLN:HB2	1.95	0.48
1:0D:537:HIS:HB3	1:0D:556:ASP:HB2	1.95	0.48
7:0S:354:TRP:HD1	7:0S:361:LEU:HA	1.79	0.48
12:0Y:287:PHE:CE1	12:0Y:297:ARG:HA	2.49	0.48
12:0Z:308:MET:HE2	12:0Z:332:VAL:HG11	1.96	0.48
14:1F:960:TRP:CD2	14:1F:991:LEU:HD21	2.49	0.48
14:1G:1020:MET:HB2	14:1G:1021:PRO:HD3	1.95	0.48
1:0C:116:ASP:HB2	1:0C:119:LEU:HB2	1.95	0.48
1:0C:522:ASP:HB3	1:0C:525:MET:HB3	1.94	0.48
1:0D:116:ASP:HB2	1:0D:119:LEU:HB2	1.94	0.48
12:0X:110:HIS:O	12:0X:116:ARG:NH2	2.43	0.48
12:0Y:64:GLN:HB3	12:0Y:116:ARG:NH2	2.27	0.48
12:0Z:48:GLN:O	12:0Z:48:GLN:HG2	2.13	0.48
14:1E:1000:ARG:HH21	14:1E:1012:LEU:HD21	1.78	0.48
1:0C:160:ARG:HH22	13:1B:1157:GLY:HA3	1.79	0.48
1:0C:577:HIS:NE2	1:0C:595:SER:OG	2.45	0.48
2:0H:68:VAL:HG12	2:0H:126:CYS:SG	2.54	0.48
3:0I:172:LEU:HD12	3:0I:173:ALA:H	1.79	0.48
3:0I:440:HIS:CD2	3:0I:498:THR:HG22	2.49	0.48
7:0Q:296:GLY:O	7:0Q:313:ARG:NH1	2.46	0.48
12:0X:86:THR:HB	12:0X:306:THR:HG22	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:1C:1201:TRP:HZ3	13:1C:1203:LEU:HG	1.79	0.48
14:1F:850:LEU:HB2	14:1F:872:TYR:CE1	2.49	0.48
1:0A:411:GLN:HB3	1:0A:430:LEU:HB3	1.96	0.48
1:0C:406:PHE:HB3	1:0C:437:TRP:CH2	2.49	0.48
2:0G:104:TRP:O	2:0G:108:GLN:HG2	2.14	0.48
2:0H:44:LEU:HD11	2:0H:64:CYS:HB2	1.95	0.48
5:0M:49:LEU:HD13	5:0M:51:ARG:NH2	2.29	0.48
12:0X:168:ASN:O	12:0X:342:ASN:ND2	2.45	0.48
12:0Z:78:SER:HB2	12:0Z:83:TYR:HB2	1.96	0.48
13:1C:1311:GLU:HB2	13:1C:1323:GLN:NE2	2.29	0.48
1:0C:395:TRP:HA	1:0C:402:CYS:HA	1.95	0.47
2:0F:59:GLN:NE2	2:0F:73:LEU:HA	2.29	0.47
3:0I:196:ARG:HH22	3:0I:215:TRP:HZ3	1.62	0.47
3:0I:416:PRO:HB3	3:0I:448:ARG:HB2	1.96	0.47
5:0M:111:ARG:HG3	5:0M:130:VAL:HG21	1.95	0.47
12:0X:346:ASP:HB2	12:0X:349:LEU:HB2	1.94	0.47
12:1A:64:GLN:HB3	12:1A:116:ARG:NH2	2.28	0.47
13:1B:1201:TRP:HZ3	13:1B:1203:LEU:HG	1.79	0.47
13:1B:1340:ASP:HB2	13:1B:1392:PRO:HG2	1.96	0.47
14:1F:906:ALA:HA	14:1F:909:VAL:HG22	1.96	0.47
3:0J:458:ARG:HE	3:0J:513:LEU:HD13	1.79	0.47
3:0J:474:GLN:HG3	14:1F:522:HIS:CD2	2.49	0.47
5:0M:369:VAL:HA	5:0M:392:MET:HE1	1.95	0.47
5:0N:387:GLN:O	5:0N:391:VAL:HG23	2.14	0.47
12:0Y:147:LEU:HD11	12:0Y:163:VAL:HG13	1.97	0.47
13:1B:1501:LEU:HD12	13:1B:1609:PHE:CZ	2.48	0.47
14:1E:966:LEU:HD11	14:1E:999:TYR:CE1	2.49	0.47
1:0C:538:PRO:HD2	1:0C:556:ASP:HB2	1.95	0.47
1:0D:377:HIS:ND1	1:0D:378:PRO:O	2.47	0.47
2:0E:139:GLU:O	2:0E:143:GLU:HG2	2.14	0.47
5:0M:286:VAL:O	5:0M:290:GLU:HG3	2.14	0.47
5:0N:63:ALA:HB2	5:0N:128:ARG:HB3	1.97	0.47
5:0N:197:LEU:HD22	5:0N:201:ARG:HH21	1.79	0.47
6:0P:28:ASP:O	6:0P:32:LYS:HG2	2.15	0.47
12:0X:106:THR:O	12:0X:111:ARG:NH1	2.47	0.47
12:0Y:121:VAL:HG12	12:0Y:122:PHE:HD1	1.78	0.47
12:0Y:215:VAL:HG13	12:0Y:240:VAL:HG22	1.95	0.47
12:0Z:142:ILE:HG12	12:0Z:147:LEU:HD23	1.96	0.47
13:1B:1473:TRP:HA	13:1B:1476:TRP:CD2	2.49	0.47
1:0B:470:ALA:HB1	1:0B:497:CYS:HB3	1.96	0.47
2:0G:118:LEU:HD13	2:0G:141:LEU:HD21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:0J:265:LEU:HB3	3:0J:331:ARG:NH2	2.30	0.47
7:0Q:473:ASP:OD1	7:0Q:473:ASP:N	2.47	0.47
7:0S:498:THR:OG1	7:0S:499:THR:N	2.46	0.47
12:0X:97:LYS:HZ3	12:0X:244:GLY:HA2	1.79	0.47
13:1B:1322:LEU:HB2	13:1B:1607:GLN:HG2	1.96	0.47
14:1F:857:LYS:H	14:1F:857:LYS:HD2	1.78	0.47
1:0C:193:GLU:HA	4:0K:98:ARG:HH22	1.80	0.47
3:0J:99:ARG:HG2	3:0J:362:ILE:HD11	1.95	0.47
5:0M:71:ARG:NH1	5:0M:75:ASP:OD2	2.47	0.47
7:0Q:74:THR:HB	7:0Q:104:VAL:HB	1.95	0.47
7:0Q:218:SER:O	7:0Q:218:SER:OG	2.31	0.47
7:0Q:394:ARG:HG2	7:0Q:410:MET:SD	2.54	0.47
12:0Y:301:GLY:N	12:0Y:304:CYS:SG	2.87	0.47
13:1B:1203:LEU:HD23	13:1B:1275:LEU:HA	1.96	0.47
13:1B:1322:LEU:HD23	13:1B:1378:ARG:HG2	1.97	0.47
14:1D:425:LYS:NZ	14:1D:527:ASP:OD2	2.45	0.47
14:1F:937:LEU:HD13	14:1F:968:GLU:HG3	1.97	0.47
5:0M:391:VAL:HA	5:0M:394:VAL:HG22	1.96	0.47
7:0Q:81:SER:OG	7:0Q:100:HIS:O	2.32	0.47
7:0Q:553:ALA:O	7:0Q:561:PHE:HB2	2.14	0.47
12:0X:131:LYS:HG3	12:0X:224:THR:HA	1.96	0.47
12:1A:9:PHE:CE2	12:1A:57:GLY:HA3	2.50	0.47
1:0A:160:ARG:HG2	1:0A:164:LYS:NZ	2.30	0.47
1:0A:208:MET:HE3	1:0D:209:SER:CA	2.44	0.47
1:0A:292:ALA:HA	1:0A:295:ASN:HD22	1.78	0.47
1:0B:75:ILE:HG22	1:0B:111:SER:HB3	1.95	0.47
1:0B:582:GLN:HG2	1:0B:597:GLY:HA2	1.97	0.47
1:0C:466:SER:HA	1:0C:479:TRP:O	2.15	0.47
1:0D:470:ALA:HB2	1:0D:500:VAL:HB	1.95	0.47
3:0I:361:PRO:O	3:0I:363:THR:HG23	2.14	0.47
3:0I:550:GLU:O	3:0I:554:GLU:OE1	2.33	0.47
5:0M:345:LEU:HD12	5:0M:412:LEU:HD23	1.97	0.47
7:0Q:138:VAL:HG21	7:0Q:186:VAL:HG23	1.96	0.47
7:0S:21:SER:HB2	7:0S:293:SER:HB2	1.96	0.47
7:0S:180:ASP:O	7:0S:184:GLY:N	2.46	0.47
13:1B:1116:VAL:HA	13:1B:1188:HIS:O	2.14	0.47
13:1B:1168:MET:SD	13:1B:1284:ARG:HB2	2.54	0.47
13:1B:1607:GLN:OE1	13:1B:1609:PHE:HB3	2.15	0.47
14:1D:912:LEU:HG	14:1G:400:ARG:HH21	1.80	0.47
14:1F:761:LEU:HD11	14:1F:802:LEU:HD11	1.97	0.47
14:1G:929:ARG:HE	14:1G:960:TRP:HE1	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:1M:41:UNK:C	16:1M:43:UNK:N	2.78	0.47
16:1L:41:UNK:C	16:1L:43:UNK:N	2.78	0.47
1:0C:102:LEU:HD21	1:0C:108:LEU:HB2	1.97	0.47
1:0D:430:LEU:HD12	1:0D:454:SER:HB2	1.97	0.47
3:0I:250:PRO:HB2	3:0I:344:VAL:HG13	1.95	0.47
12:1A:291:LYS:HD3	12:1A:291:LYS:HA	1.74	0.47
13:1B:1239:LEU:O	13:1B:1261:PHE:HA	2.14	0.47
13:1C:1684:LEU:HD22	13:1C:1689:TYR:HD1	1.80	0.47
14:1E:481:ASP:O	14:1E:484:LYS:HG2	2.14	0.47
1:0A:543:CYS:SG	1:0A:585:LEU:HD12	2.54	0.47
7:0Q:506:PHE:HD1	7:0Q:522:THR:HG22	1.79	0.47
7:0S:335:ALA:HB3	7:0S:338:GLN:HB2	1.96	0.47
12:1A:37:LYS:HE2	12:1A:46:ASN:HB2	1.97	0.47
13:1C:1138:HIS:O	13:1C:1281:LYS:NZ	2.33	0.47
14:1F:631:ALA:HA	14:1F:638:PRO:HG2	1.97	0.47
14:1F:955:PRO:HB2	14:1F:986:LEU:H	1.79	0.47
14:1G:914:ALA:HB1	14:1G:924:TRP:CE2	2.50	0.47
1:0A:339:PRO:HB2	1:0A:356:PRO:HD3	1.97	0.47
13:1B:1138:HIS:HB3	13:1B:1283:LEU:HD11	1.97	0.47
14:1G:502:SER:O	14:1G:506:MET:HG2	2.15	0.47
1:0A:412:ALA:C	1:0A:429:SER:HG	2.18	0.46
1:0B:160:ARG:HG2	1:0C:159:HIS:NE2	2.30	0.46
2:0G:68:VAL:HG12	2:0G:126:CYS:SG	2.54	0.46
3:0I:311:ARG:HG2	3:0I:311:ARG:O	2.15	0.46
7:0Q:547:LYS:HB3	7:0Q:566:ALA:HB3	1.97	0.46
13:1C:1499:VAL:O	13:1C:1735:LEU:HA	2.15	0.46
1:0B:152:PHE:CD2	1:0C:149:TRP:HB2	2.49	0.46
3:0I:90:SER:N	3:0I:93:THR:HG1	2.13	0.46
12:0Y:210:SER:N	19:0Y:801:ADP:O3B	2.34	0.46
13:1B:1473:TRP:HA	13:1B:1476:TRP:CE2	2.50	0.46
13:1C:1325:TYR:HE2	13:1C:1403:ILE:HD13	1.80	0.46
14:1F:816:GLU:HA	14:1F:819:LEU:HG	1.96	0.46
14:1F:905:PHE:HA	14:1F:908:ASP:OD2	2.15	0.46
1:0A:169:GLU:OE1	1:0D:170:LYS:NZ	2.31	0.46
1:0C:479:TRP:CZ3	1:0C:486:CYS:HB2	2.49	0.46
1:0D:406:PHE:HB3	1:0D:437:TRP:CH2	2.50	0.46
3:0I:135:MET:SD	3:0I:142:ARG:NH1	2.81	0.46
7:0S:465:ILE:HD13	7:0S:480:ALA:HA	1.97	0.46
12:1A:68:TYR:CB	12:1A:116:ARG:HE	2.29	0.46
13:1B:1659:ALA:HB3	13:1B:1660:PRO:HD3	1.97	0.46
14:1D:966:LEU:HD23	14:1D:966:LEU:HA	1.77	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1G:544:VAL:HG21	14:1G:548:GLN:HE21	1.80	0.46
14:1G:631:ALA:HA	14:1G:638:PRO:HG2	1.96	0.46
14:1G:761:LEU:HD11	14:1G:802:LEU:HD11	1.96	0.46
16:1M:40:UNK:HA	16:1M:153:UNK:HA	1.97	0.46
2:0F:59:GLN:HE21	2:0F:73:LEU:HA	1.81	0.46
3:0I:421:HIS:ND1	3:0I:522:SER:HB2	2.30	0.46
3:0I:504:ALA:HA	3:0I:535:ALA:HB3	1.96	0.46
7:0Q:126:LYS:HE2	7:0Q:128:TYR:HE2	1.80	0.46
12:0X:104:GLY:HA2	12:0X:108:TYR:HE1	1.81	0.46
12:0Z:20:SER:HB3	12:0Z:316:PRO:HG3	1.97	0.46
12:1A:215:VAL:HG13	12:1A:240:VAL:HG22	1.96	0.46
12:1A:224:THR:HB	12:1A:231:ARG:NH2	2.31	0.46
13:1C:1479:LEU:HD21	13:1C:1498:LEU:HD13	1.97	0.46
14:1D:955:PRO:CB	14:1D:986:LEU:H	2.28	0.46
14:1D:999:TYR:CB	14:1D:1008:GLU:HG2	2.39	0.46
14:1D:1005:ARG:HA	14:1D:1008:GLU:CG	2.45	0.46
14:1G:504:ASN:O	14:1G:508:LEU:HG	2.15	0.46
16:1M:84:UNK:HA	16:1M:143:UNK:HA	1.97	0.46
1:0D:74:VAL:HG13	1:0D:77:ASP:H	1.80	0.46
1:0D:153:ARG:HA	1:0D:156:ARG:HG2	1.96	0.46
4:0L:150:PHE:HA	4:0L:153:ILE:HG22	1.98	0.46
5:0N:274:VAL:HB	5:0N:278:GLY:H	1.81	0.46
6:0O:99:ALA:O	6:0O:103:HIS:ND1	2.39	0.46
7:0S:547:LYS:HB3	7:0S:566:ALA:HB3	1.98	0.46
12:0Y:198:ARG:HH21	12:0Y:214:THR:HG1	1.61	0.46
12:0Z:182:ARG:HA	12:0Z:182:ARG:HD2	1.63	0.46
12:0Z:290:THR:HG23	12:0Z:293:THR:H	1.80	0.46
12:1A:301:GLY:N	12:1A:304:CYS:SG	2.89	0.46
13:1C:1136:ASN:ND2	13:1C:1478:GLY:HA3	2.31	0.46
14:1G:576:ARG:HH11	14:1G:585:VAL:HG12	1.79	0.46
14:1G:596:ARG:HA	14:1G:596:ARG:CZ	2.46	0.46
16:1L:40:UNK:HA	16:1L:153:UNK:HA	1.97	0.46
16:1L:84:UNK:HA	16:1L:143:UNK:HA	1.97	0.46
1:0A:406:PHE:HB3	1:0A:437:TRP:CH2	2.50	0.46
1:0B:163:HIS:HB2	1:0C:163:HIS:HB2	1.98	0.46
1:0C:430:LEU:HD12	1:0C:454:SER:HB2	1.97	0.46
1:0C:582:GLN:HG2	1:0C:597:GLY:HA2	1.97	0.46
7:0S:463:SER:OG	7:0S:481:SER:O	2.33	0.46
7:0S:512:SER:OG	7:0S:513:ALA:N	2.47	0.46
13:1C:1343:PRO:HG2	13:1C:1391:VAL:HG12	1.97	0.46
14:1G:906:ALA:HA	14:1G:909:VAL:HG22	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0D:316:LEU:HD12	1:0D:605:TRP:HZ3	1.80	0.46
5:0N:51:ARG:O	5:0N:51:ARG:HD2	2.16	0.46
5:0N:176:ALA:HB1	5:0N:713:GLN:NE2	2.31	0.46
12:0X:151:LEU:HD21	12:0X:190:GLN:HB3	1.97	0.46
12:0Y:22:LEU:HB3	12:0Y:33:VAL:HG13	1.97	0.46
12:0Y:134:ARG:HB3	12:0Y:221:GLU:CG	2.46	0.46
13:1B:1112:GLU:HG3	13:1B:1194:PRO:HG3	1.96	0.46
13:1C:1140:ARG:HD3	13:1C:1477:ARG:NH1	2.31	0.46
14:1E:926:GLY:HA2	14:1E:929:ARG:HD2	1.97	0.46
14:1G:910:PHE:HB3	14:1G:927:ALA:HB2	1.97	0.46
1:0B:139:LYS:HZ2	1:0C:135:LEU:HD23	1.80	0.46
1:0D:143:GLY:O	1:0D:146:SER:OG	2.23	0.46
2:0E:152:ARG:HD2	2:0E:152:ARG:O	2.16	0.46
2:0F:47:ASP:OD1	2:0F:48:VAL:N	2.49	0.46
3:0J:226:SER:HB3	3:0J:228:LEU:HD23	1.96	0.46
5:0N:236:MET:CE	5:0N:249:PHE:HA	2.46	0.46
12:0Z:151:LEU:HD21	12:0Z:190:GLN:HB3	1.97	0.46
12:0Z:253:VAL:HG23	12:0Z:257:THR:HB	1.98	0.46
13:1C:1519:LYS:HB2	13:1C:1519:LYS:HE3	1.60	0.46
1:0C:341:LEU:HB3	1:0C:355:MET:SD	2.56	0.46
2:0E:70:ASN:ND2	2:0E:93:ASN:OD1	2.48	0.46
3:0J:286:LEU:HD13	3:0J:293:LEU:HD21	1.97	0.46
12:0X:8:VAL:HG11	12:0X:329:ALA:HB1	1.98	0.46
12:0X:114:ILE:HG21	12:0X:191:PHE:CE1	2.51	0.46
13:1B:1276:HIS:HA	13:1B:1282:ARG:HG2	1.96	0.46
13:1C:1164:ALA:O	13:1C:1168:MET:HG3	2.15	0.46
13:1C:1322:LEU:HB2	13:1C:1607:GLN:HG2	1.98	0.46
14:1G:862:THR:O	14:1G:866:ILE:HG12	2.16	0.46
1:0A:160:ARG:HG2	1:0A:164:LYS:HZ3	1.81	0.46
1:0A:178:ARG:HG3	4:0L:127:LEU:HD22	1.98	0.46
1:0B:332:LEU:HB3	1:0B:341:LEU:HD11	1.98	0.46
1:0B:412:ALA:C	1:0B:429:SER:HG	2.19	0.46
1:0D:540:ASN:HD22	1:0D:582:GLN:HA	1.80	0.46
3:0I:458:ARG:HH21	3:0I:513:LEU:HD22	1.81	0.46
5:0N:121:LEU:HB3	5:0N:125:GLU:HB2	1.97	0.46
7:0Q:179:VAL:HG22	7:0Q:186:VAL:HG22	1.97	0.46
12:0X:101:MET:SD	12:0X:113:LEU:HD23	2.56	0.46
12:0X:290:THR:HG23	12:0X:293:THR:H	1.80	0.46
12:0Z:277:ALA:HB3	12:0Z:285:VAL:HG23	1.97	0.46
12:1A:86:THR:HG22	12:1A:238:ASN:HB2	1.98	0.46
13:1C:1154:GLN:HB2	13:1C:1282:ARG:HH12	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1E:1032:ARG:HD2	14:1E:1038:ARG:HD2	1.97	0.46
1:0A:584:VAL:HG23	1:0A:593:LEU:HD21	1.96	0.45
1:0B:543:CYS:SG	1:0B:585:LEU:HD12	2.56	0.45
1:0C:143:GLY:O	1:0C:146:SER:OG	2.23	0.45
1:0C:426:ALA:HB3	1:0C:458:LEU:HD21	1.98	0.45
1:0C:448:LEU:HD22	1:0C:479:TRP:CE3	2.51	0.45
2:0H:47:ASP:OD1	2:0H:48:VAL:N	2.49	0.45
3:0I:215:TRP:CD1	3:0I:235:ARG:HD3	2.50	0.45
3:0I:250:PRO:HD2	16:1M:102:UNK:HA	1.97	0.45
3:0I:550:GLU:O	3:0I:553:ALA:N	2.49	0.45
3:0I:564:ALA:O	3:0I:568:VAL:HG23	2.16	0.45
3:0J:416:PRO:HB3	3:0J:448:ARG:HB2	1.97	0.45
4:0K:85:ALA:O	4:0K:88:GLN:HG3	2.16	0.45
5:0N:236:MET:HE2	5:0N:249:PHE:HA	1.97	0.45
5:0N:316:VAL:HB	5:0N:317:PRO:HD3	1.98	0.45
7:0Q:349:GLY:O	7:0Q:366:GLN:NE2	2.50	0.45
7:0S:31:ILE:HG22	7:0S:300:LEU:HD21	1.98	0.45
12:0X:65:GLU:OE1	12:0X:65:GLU:N	2.38	0.45
12:0Y:9:PHE:CD2	12:0Y:57:GLY:HA3	2.51	0.45
12:1A:90:TYR:HB2	12:1A:242:LEU:HD12	1.98	0.45
13:1B:1581:ILE:HD11	13:1B:1596:CYS:HB3	1.98	0.45
13:1C:1164:ALA:O	13:1C:1167:ALA:N	2.49	0.45
14:1D:443:LEU:HB3	14:1D:444:PRO:HD3	1.98	0.45
14:1D:890:TRP:CZ3	14:1D:912:LEU:HB3	2.51	0.45
14:1E:429:ARG:HG3	14:1E:528:LEU:HD11	1.97	0.45
14:1E:490:LEU:HB3	14:1E:494:LYS:HE2	1.98	0.45
14:1F:910:PHE:HB3	14:1F:927:ALA:HB2	1.97	0.45
14:1G:650:ARG:CB	14:1G:666:LEU:HD13	2.46	0.45
1:0B:438:ASP:OD2	1:0B:445:ARG:NH2	2.49	0.45
1:0B:512:THR:HG22	1:0B:518:VAL:HG22	1.98	0.45
3:0I:246:ARG:HH11	3:0I:263:THR:HG21	1.81	0.45
3:0I:428:PHE:HE2	14:1G:972:GLU:HB3	1.81	0.45
4:0K:134:ARG:O	4:0K:138:LYS:HG2	2.17	0.45
4:0L:93:GLN:O	4:0L:96:GLN:HG3	2.17	0.45
6:0O:36:GLN:NE2	6:0O:49:ASN:O	2.49	0.45
12:0Y:128:ARG:HG3	12:0Y:133:TYR:HE2	1.82	0.45
13:1C:1301:LEU:HD21	13:1C:1306:ARG:HE	1.81	0.45
1:0A:166:VAL:HG13	1:0D:170:LYS:HZ1	1.81	0.45
3:0I:265:LEU:HB3	3:0I:331:ARG:NH2	2.31	0.45
3:0I:434:HIS:HB2	14:1D:1006:ARG:HH22	1.81	0.45
3:0J:225:PHE:CZ	6:0P:166:LYS:HE3	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:0J:440:HIS:CD2	14:1F:508:LEU:HD22	2.52	0.45
7:0Q:463:SER:OG	7:0Q:481:SER:O	2.32	0.45
7:0S:22:ILE:HD11	7:0S:41:LEU:HD11	1.98	0.45
7:0S:72:LEU:HD22	7:0S:107:VAL:HG11	1.98	0.45
12:0Y:138:SER:OG	12:0Y:217:THR:OG1	2.22	0.45
12:1A:7:LYS:HD2	12:1A:7:LYS:N	2.30	0.45
12:1A:134:ARG:HB3	12:1A:221:GLU:CG	2.47	0.45
13:1B:1201:TRP:CZ3	13:1B:1203:LEU:HG	2.52	0.45
13:1C:1615:CYS:SG	13:1C:1731:ILE:HB	2.56	0.45
14:1D:931:PHE:HD1	14:1D:936:GLU:HB2	1.80	0.45
14:1G:1032:ARG:NH1	14:1G:1045:GLU:OE2	2.50	0.45
1:0A:414:TRP:HZ3	2:0H:46:ARG:HG3	1.81	0.45
1:0B:188:GLU:HA	1:0B:191:ILE:HD13	1.98	0.45
1:0D:457:ASP:HB2	1:0D:499:GLY:HA2	1.97	0.45
2:0G:78:PHE:CD1	2:0G:110:PHE:HE2	2.34	0.45
3:0J:250:PRO:HB2	3:0J:344:VAL:HG13	1.97	0.45
4:0L:96:GLN:NE2	4:0L:97:ARG:HG3	2.31	0.45
7:0Q:521:VAL:HG12	7:0Q:527:ILE:HG12	1.98	0.45
13:1B:1130:LEU:HB2	13:1B:1132:LEU:HG	1.97	0.45
14:1E:1048:ALA:O	14:1E:1051:ARG:HG3	2.15	0.45
14:1F:914:ALA:HB1	14:1F:924:TRP:CE2	2.52	0.45
1:0C:396:ASP:HB2	1:0C:403:VAL:HG23	1.99	0.45
2:0E:44:LEU:HB3	2:0E:45:HIS:H	1.52	0.45
3:0I:552:LEU:O	3:0I:556:GLU:HG3	2.17	0.45
3:0J:513:LEU:HA	3:0J:526:CYS:SG	2.56	0.45
7:0S:477:VAL:HG23	7:0S:487:SER:O	2.17	0.45
7:0S:480:ALA:HB3	7:0S:485:THR:O	2.15	0.45
13:1B:1144:THR:CG2	13:1B:1281:LYS:HG2	2.46	0.45
14:1F:595:ARG:HA	14:1F:768:ALA:HB2	1.99	0.45
14:1F:818:MET:C	14:1F:821:PRO:HD2	2.37	0.45
1:0A:159:HIS:CG	1:0D:160:ARG:HG3	2.51	0.45
1:0D:160:ARG:NH2	13:1C:1156:ARG:O	2.50	0.45
3:0I:422:VAL:HG11	3:0I:516:ARG:NH2	2.32	0.45
3:0J:538:ARG:NH1	14:1F:983:ARG:HB3	2.32	0.45
12:0Y:112:GLY:C	12:0Y:115:PRO:HD2	2.37	0.45
12:0Z:65:GLU:OE1	12:0Z:65:GLU:N	2.39	0.45
13:1B:1528:TRP:CZ3	13:1B:1615:CYS:HB3	2.51	0.45
13:1B:1676:ARG:O	13:1B:1680:LEU:HG	2.17	0.45
13:1C:1144:THR:CG2	13:1C:1281:LYS:HG2	2.46	0.45
13:1C:1201:TRP:CZ3	13:1C:1203:LEU:HG	2.52	0.45
14:1D:815:ALA:O	14:1D:819:LEU:HG	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0B:586:PHE:CE2	1:0B:590:GLY:HA2	2.51	0.45
1:0C:156:ARG:HH22	13:1B:1156:ARG:HA	1.82	0.45
3:0J:207:TRP:O	3:0J:211:LEU:HG	2.17	0.45
5:0M:316:VAL:HB	5:0M:317:PRO:HD3	1.99	0.45
7:0S:64:ALA:HB3	7:0S:72:LEU:HB3	1.98	0.45
7:0S:124:ASP:HB3	7:0S:126:LYS:HZ2	1.82	0.45
12:0X:78:SER:HB2	12:0X:83:TYR:HB2	1.99	0.45
12:0X:222:MET:O	12:0X:232:ALA:HA	2.16	0.45
14:1D:1048:ALA:O	14:1D:1051:ARG:HG3	2.16	0.45
1:0C:346:ASP:CB	2:0E:152:ARG:HH12	2.30	0.45
1:0C:350:TRP:CE2	1:0C:364:GLY:HA3	2.51	0.45
1:0D:331:ASN:HD22	1:0D:373:GLY:HA2	1.82	0.45
3:0I:104:MET:O	3:0I:108:MET:HG2	2.17	0.45
3:0I:564:ALA:HA	3:0I:567:ARG:NE	2.32	0.45
3:0J:361:PRO:O	3:0J:363:THR:HG23	2.17	0.45
4:0K:83:LEU:O	4:0K:87:ILE:HG23	2.16	0.45
5:0M:77:VAL:HG22	5:0M:121:LEU:HD11	1.98	0.45
12:0X:253:VAL:HG23	12:0X:257:THR:HB	1.99	0.45
13:1B:1499:VAL:O	13:1B:1735:LEU:HA	2.15	0.45
13:1C:1177:THR:HA	13:1C:1290:VAL:O	2.16	0.45
13:1C:1705:PHE:O	13:1C:1709:MET:HG2	2.16	0.45
14:1E:966:LEU:HD21	14:1E:999:TYR:HE1	1.79	0.45
14:1E:1009:GLN:HB3	14:1E:1013:GLN:HE22	1.82	0.45
14:1F:661:ASP:HB3	14:1F:756:THR:HG23	1.98	0.45
14:1G:905:PHE:O	14:1G:909:VAL:HG13	2.17	0.45
1:0A:181:LYS:HZ1	4:0L:127:LEU:HD12	1.82	0.45
1:0A:411:GLN:HB3	1:0A:430:LEU:HD23	1.99	0.45
1:0B:141:ILE:HA	1:0B:144:ARG:HD2	1.98	0.45
1:0B:208:MET:HE1	1:0C:205:LYS:O	2.16	0.45
1:0B:520:LEU:HD11	1:0B:551:LEU:HD22	1.99	0.45
1:0C:493:HIS:ND1	1:0C:513:ASP:OD2	2.50	0.45
1:0D:350:TRP:CE2	1:0D:364:GLY:HA3	2.51	0.45
1:0D:395:TRP:HA	1:0D:402:CYS:HA	1.97	0.45
3:0I:204:ASP:HA	3:0I:208:THR:HG23	1.99	0.45
4:0L:85:ALA:O	4:0L:88:GLN:HG3	2.17	0.45
7:0Q:464:ARG:HB3	7:0Q:482:GLU:OE1	2.17	0.45
12:0X:146:GLN:HB2	12:0X:148:TYR:CE2	2.52	0.45
12:1A:35:VAL:HG11	12:1A:323:LEU:HD11	1.98	0.45
12:1A:92:GLN:NE2	12:1A:321:GLU:HG3	2.32	0.45
13:1C:1138:HIS:HB3	13:1C:1283:LEU:HD11	1.99	0.45
14:1G:400:ARG:HG3	14:1G:402:LEU:N	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0B:135:LEU:HB3	1:0C:135:LEU:HB3	1.98	0.45
2:0E:81:TYR:CZ	2:0E:145:PHE:HB3	2.52	0.45
3:0I:93:THR:O	3:0I:97:THR:HG23	2.16	0.45
7:0Q:112:ASP:OD2	7:0Q:164:TYR:OH	2.28	0.45
13:1C:1607:GLN:OE1	13:1C:1609:PHE:HB3	2.16	0.45
14:1D:593:CYS:HB2	14:1D:604:ALA:HB2	1.98	0.45
14:1F:862:THR:O	14:1F:866:ILE:HG12	2.17	0.45
1:0A:135:LEU:HB3	1:0D:135:LEU:HB3	1.99	0.44
1:0A:139:LYS:HZ2	1:0D:135:LEU:HD23	1.82	0.44
1:0A:342:VAL:HG11	1:0A:383:LEU:HD21	1.98	0.44
1:0B:209:SER:HA	1:0C:208:MET:CE	2.48	0.44
1:0B:394:ILE:O	1:0B:403:VAL:N	2.46	0.44
1:0C:473:ASP:OD1	1:0C:475:THR:OG1	2.27	0.44
1:0D:330:ALA:N	1:0D:344:ALA:O	2.44	0.44
2:0E:119:PRO:HB2	2:0E:121:ASP:OD1	2.17	0.44
3:0J:503:ALA:HB2	14:1F:541:PRO:HA	1.98	0.44
13:1B:1317:GLU:OE1	13:1B:1750:TYR:OH	2.26	0.44
13:1B:1479:LEU:HD21	13:1B:1498:LEU:HD13	1.97	0.44
13:1C:1495:ASP:HB2	13:1C:1515:VAL:HG23	1.98	0.44
14:1D:1000:ARG:HH21	14:1D:1012:LEU:HD21	1.81	0.44
1:0A:181:LYS:NZ	4:0L:127:LEU:HD12	2.32	0.44
1:0A:394:ILE:O	1:0A:403:VAL:N	2.45	0.44
1:0B:335:HIS:HE2	1:0B:380:GLY:HA3	1.82	0.44
1:0B:346:ASP:CG	2:0F:46:ARG:HH12	2.19	0.44
1:0C:354:HIS:HB2	1:0C:361:ILE:HD11	1.98	0.44
3:0J:205:GLU:HB2	3:0J:217:ARG:HH21	1.83	0.44
3:0J:550:GLU:O	3:0J:554:GLU:HG3	2.17	0.44
7:0Q:124:ASP:HB3	7:0Q:126:LYS:HZ2	1.83	0.44
12:0Y:211:ARG:HB3	12:0Y:260:GLU:OE1	2.16	0.44
12:1A:112:GLY:C	12:1A:115:PRO:HD2	2.38	0.44
14:1D:546:ASP:OD1	14:1D:547:LYS:N	2.50	0.44
14:1D:983:ARG:HG2	14:1G:497:LYS:NZ	2.31	0.44
14:1D:1032:ARG:HH11	14:1D:1038:ARG:HD2	1.83	0.44
14:1E:955:PRO:CB	14:1E:986:LEU:H	2.31	0.44
14:1F:941:ASP:HB2	14:1F:964:VAL:HG11	1.99	0.44
14:1G:757:LEU:HD13	14:1G:779:HIS:HA	1.99	0.44
14:1G:941:ASP:HB2	14:1G:964:VAL:HG11	2.00	0.44
1:0B:319:ASN:HB2	1:0B:606:SER:H	1.82	0.44
1:0B:342:VAL:HG11	1:0B:383:LEU:HD21	2.00	0.44
1:0C:346:ASP:HB2	2:0E:152:ARG:NH1	2.32	0.44
1:0C:370:TRP:CZ3	1:0C:372:ALA:HB2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0D:156:ARG:HH22	13:1C:1156:ARG:HA	1.82	0.44
1:0D:172:LYS:HE2	1:0D:172:LYS:HB3	1.77	0.44
1:0D:426:ALA:HB3	1:0D:458:LEU:HD21	1.99	0.44
12:0X:338:ASP:O	12:0X:339:LEU:HD23	2.17	0.44
12:0Y:22:LEU:HD12	12:0Y:22:LEU:HA	1.76	0.44
12:0Y:85:GLY:O	12:0Y:237:LEU:HD12	2.17	0.44
12:0Y:134:ARG:HB3	12:0Y:221:GLU:HG2	2.00	0.44
13:1B:1272:PRO:HB2	13:1B:1284:ARG:NH1	2.27	0.44
13:1B:1698:ILE:HD12	13:1B:1701:LEU:HD12	1.98	0.44
13:1B:1738:ARG:NH1	13:1B:1752:PRO:HG3	2.32	0.44
13:1C:1609:PHE:O	13:1C:1736:ARG:HA	2.18	0.44
14:1D:966:LEU:HD21	14:1D:999:TYR:HE1	1.81	0.44
14:1G:796:ALA:O	14:1G:799:GLU:HG3	2.17	0.44
1:0C:74:VAL:HG13	1:0C:77:ASP:H	1.82	0.44
1:0D:319:ASN:HB2	1:0D:604:LEU:HB3	1.99	0.44
3:0I:455:TRP:CH2	3:0I:495:VAL:HG21	2.52	0.44
6:0O:28:ASP:O	6:0O:32:LYS:HG2	2.16	0.44
12:0Y:97:LYS:NZ	12:0Y:242:LEU:O	2.50	0.44
13:1B:1615:CYS:SG	13:1B:1731:ILE:HB	2.57	0.44
13:1C:1533:LEU:HD12	13:1C:1575:LEU:HD22	1.99	0.44
14:1E:593:CYS:HB2	14:1E:604:ALA:HB2	1.98	0.44
14:1E:1032:ARG:HD3	14:1E:1032:ARG:HA	1.79	0.44
1:0A:121:ASN:HD21	1:0D:117:VAL:HG23	1.82	0.44
1:0A:198:TYR:O	1:0A:201:LEU:HG	2.16	0.44
1:0B:438:ASP:HB3	1:0B:441:ALA:HB3	1.99	0.44
1:0D:370:TRP:CZ3	1:0D:372:ALA:HB2	2.52	0.44
3:0I:512:GLU:HG2	3:0I:528:THR:HB	1.99	0.44
4:0L:133:VAL:O	4:0L:137:LYS:HG2	2.17	0.44
5:0M:163:VAL:O	5:0M:169:THR:OG1	2.20	0.44
7:0Q:200:TYR:HE1	7:0Q:222:VAL:HG21	1.83	0.44
7:0S:62:ALA:HB1	7:0S:107:VAL:HG12	2.00	0.44
12:1A:79:LEU:HD22	12:1A:237:LEU:HB2	2.00	0.44
13:1B:1533:LEU:HD12	13:1B:1575:LEU:HD22	2.00	0.44
13:1C:1273:VAL:HG12	13:1C:1274:PHE:N	2.33	0.44
14:1D:778:ARG:O	14:1D:781:PRO:HD2	2.18	0.44
14:1E:427:LYS:O	14:1E:431:ILE:HG12	2.16	0.44
14:1G:544:VAL:HG22	14:1G:547:LYS:NZ	2.32	0.44
14:1G:566:THR:O	14:1G:592:TYR:OH	2.36	0.44
14:1G:1004:GLN:O	14:1G:1008:GLU:HG3	2.18	0.44
1:0A:414:TRP:CZ3	2:0H:50:LYS:HE2	2.52	0.44
5:0M:218:MET:O	5:0M:222:LEU:HG	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:0Q:379:LEU:HD11	7:0Q:398:ARG:HH11	1.82	0.44
12:0Z:359:LYS:HA	12:0Z:362:LYS:HE2	2.00	0.44
13:1B:1297:GLN:HB3	13:1B:1335:LEU:HD12	1.99	0.44
14:1E:1031:ALA:O	14:1E:1035:VAL:HG23	2.17	0.44
14:1F:764:PRO:HA	14:1F:767:ALA:HB3	1.99	0.44
14:1G:955:PRO:HB2	14:1G:986:LEU:H	1.82	0.44
14:1G:1035:VAL:HG12	14:1G:1037:GLN:HG3	1.98	0.44
1:0A:348:LYS:HZ2	1:0A:369:ASP:HA	1.82	0.44
1:0D:313:VAL:HG11	1:0D:550:VAL:HG11	2.00	0.44
3:0I:161:LEU:HD23	3:0I:161:LEU:HA	1.82	0.44
3:0I:554:GLU:HG2	14:1G:606:GLU:CG	2.47	0.44
3:0J:362:ILE:HG22	3:0J:363:THR:N	2.33	0.44
12:0X:88:PHE:HA	12:0X:240:VAL:O	2.17	0.44
12:0X:102:SER:HA	12:0X:112:GLY:HA3	1.99	0.44
12:0Y:102:SER:HB2	12:0Y:191:PHE:HZ	1.81	0.44
12:0Z:110:HIS:O	12:0Z:116:ARG:NH2	2.42	0.44
12:1A:85:GLY:O	12:1A:237:LEU:HD12	2.17	0.44
13:1B:1144:THR:HG21	13:1B:1281:LYS:HG2	2.00	0.44
13:1B:1273:VAL:HG12	13:1B:1274:PHE:N	2.33	0.44
13:1B:1515:VAL:HA	13:1B:1594:LEU:O	2.17	0.44
13:1C:1659:ALA:HB3	13:1C:1660:PRO:HD3	2.00	0.44
14:1D:1005:ARG:HG3	14:1D:1008:GLU:OE2	2.18	0.44
14:1E:1036:ALA:HB1	14:1F:983:ARG:HG2	1.99	0.44
14:1F:544:VAL:HG11	14:1F:548:GLN:H	1.82	0.44
14:1G:577:LEU:HD11	14:1G:586:TRP:CD2	2.53	0.44
14:1G:857:LYS:H	14:1G:857:LYS:HD2	1.82	0.44
1:0C:438:ASP:O	1:0C:442:GLY:N	2.45	0.44
1:0D:461:GLN:OE1	1:0D:466:SER:OG	2.33	0.44
2:0E:146:THR:HG22	2:0E:149:LYS:HE3	2.00	0.44
2:0G:84:ALA:O	2:0G:87:GLN:NE2	2.51	0.44
2:0G:117:ASN:N	2:0G:117:ASN:OD1	2.51	0.44
3:0I:544:GLY:HA2	14:1G:578:LEU:HD11	2.00	0.44
5:0N:142:HIS:CE1	5:0N:144:MET:HB2	2.53	0.44
5:0N:236:MET:CE	5:0N:252:GLY:HA3	2.48	0.44
7:0Q:544:ALA:O	7:0Q:571:ARG:NH1	2.51	0.44
7:0S:500:TRP:NE1	7:0S:535:PRO:HA	2.31	0.44
12:0X:247:ARG:HH21	12:0X:321:GLU:HA	1.83	0.44
12:0Z:222:MET:O	12:0Z:232:ALA:HA	2.17	0.44
12:1A:186:GLU:O	12:1A:190:GLN:OE1	2.35	0.44
13:1C:1203:LEU:HD23	13:1C:1275:LEU:HA	1.99	0.44
14:1D:1032:ARG:NH1	14:1D:1038:ARG:HD2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1E:925:ARG:O	14:1E:929:ARG:HG3	2.18	0.44
14:1E:961:LEU:HD23	14:1E:961:LEU:HA	1.86	0.44
14:1E:966:LEU:HD23	14:1E:966:LEU:HA	1.83	0.44
14:1F:814:ALA:HA	14:1F:817:ALA:HB3	2.00	0.44
1:0C:153:ARG:HA	1:0C:156:ARG:HG2	1.99	0.44
1:0C:191:ILE:H	1:0C:191:ILE:HD12	1.83	0.44
1:0C:546:ARG:NE	1:0C:588:PRO:HA	2.33	0.44
1:0D:396:ASP:HB3	1:0D:399:LYS:HG3	2.00	0.44
2:0G:70:ASN:ND2	2:0G:93:ASN:OD1	2.51	0.44
3:0I:250:PRO:CD	16:1M:102:UNK:HA	2.48	0.44
3:0I:538:ARG:HH22	14:1G:983:ARG:CB	2.30	0.44
3:0J:153:LYS:HA	3:0J:156:GLU:OE1	2.18	0.44
3:0J:537:VAL:HG21	14:1F:953:GLU:HG2	2.00	0.44
7:0Q:129:VAL:HB	7:0Q:138:VAL:HG12	1.99	0.44
7:0S:3:LEU:HD22	7:0S:615:TRP:HB3	2.00	0.44
7:0S:609:ASP:OD1	7:0S:610:GLY:N	2.51	0.44
12:0X:87:ILE:HB	12:0X:239:LEU:HD13	1.99	0.44
12:0Z:7:LYS:O	12:0Z:307:VAL:HG13	2.17	0.44
13:1B:1344:LEU:HD23	13:1B:1389:VAL:HG11	2.00	0.44
13:1B:1609:PHE:O	13:1B:1736:ARG:HA	2.18	0.44
14:1G:761:LEU:HD22	14:1G:798:ALA:HB1	1.99	0.44
1:0A:438:ASP:OD2	1:0A:445:ARG:NH2	2.50	0.43
1:0D:328:SER:HB2	1:0D:597:GLY:O	2.18	0.43
1:0D:383:LEU:HB2	1:0D:397:PHE:CZ	2.53	0.43
1:0D:546:ARG:NE	1:0D:588:PRO:HA	2.32	0.43
2:0G:29:ASP:OD2	2:0G:31:THR:OG1	2.20	0.43
3:0J:475:PRO:HA	3:0J:476:PRO:HD3	1.92	0.43
13:1C:1276:HIS:HA	13:1C:1282:ARG:HG2	2.00	0.43
14:1D:1032:ARG:HD3	14:1D:1032:ARG:HA	1.72	0.43
14:1E:978:LEU:HD23	14:1E:978:LEU:HA	1.88	0.43
14:1F:1004:GLN:O	14:1F:1008:GLU:HG3	2.18	0.43
1:0A:586:PHE:HE2	1:0A:590:GLY:HA2	1.82	0.43
1:0B:342:VAL:HG11	1:0B:374:VAL:HG11	1.99	0.43
1:0C:327:LEU:HD23	2:0E:152:ARG:NH1	2.28	0.43
7:0S:471:MET:HE1	7:0S:477:VAL:HG12	2.00	0.43
12:0X:232:ALA:HB3	12:0X:349:LEU:HD11	2.00	0.43
12:1A:122:PHE:O	12:1A:125:VAL:HG22	2.18	0.43
14:1E:887:LEU:HA	14:1E:890:TRP:HD1	1.82	0.43
14:1E:999:TYR:CB	14:1E:1008:GLU:HG2	2.47	0.43
14:1G:1048:ALA:HA	14:1G:1051:ARG:HH11	1.83	0.43
1:0A:95:PHE:HB2	1:0D:91:THR:HB	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0B:118:TYR:OH	1:0C:73:GLU:O	2.27	0.43
1:0B:310:ALA:HB2	1:0B:549:GLN:H	1.83	0.43
1:0C:335:HIS:CD2	1:0C:336:PRO:HD2	2.54	0.43
1:0D:191:ILE:H	1:0D:191:ILE:HD12	1.84	0.43
1:0D:411:GLN:HB3	1:0D:430:LEU:HB3	2.00	0.43
1:0D:564:SER:HB2	1:0D:571:GLN:HE21	1.84	0.43
3:0I:362:ILE:HG22	3:0I:363:THR:N	2.33	0.43
3:0J:207:TRP:CE2	3:0J:211:LEU:HD11	2.53	0.43
4:0K:93:GLN:O	4:0K:96:GLN:HG3	2.19	0.43
4:0L:105:LEU:HD23	4:0L:105:LEU:HA	1.83	0.43
5:0N:273:ASP:O	5:0N:284:GLU:HG2	2.18	0.43
7:0Q:212:LEU:HB3	7:0Q:224:VAL:CG2	2.49	0.43
7:0Q:415:HIS:NE2	7:0Q:437:SER:OG	2.38	0.43
7:0Q:526:LYS:HG2	7:0Q:542:VAL:HA	2.00	0.43
12:0Y:224:THR:HB	12:0Y:231:ARG:NH2	2.33	0.43
12:0Z:7:LYS:HB2	12:0Z:307:VAL:HG22	1.99	0.43
12:1A:322:THR:O	12:1A:326:LEU:HD23	2.18	0.43
13:1B:1299:LEU:HD11	13:1B:1327:LEU:HB3	2.01	0.43
13:1C:1242:MET:HG2	13:1C:1245:ARG:HD2	2.00	0.43
14:1G:577:LEU:HD21	14:1G:586:TRP:CZ3	2.52	0.43
14:1G:850:LEU:HB2	14:1G:872:TYR:CE1	2.53	0.43
1:0B:370:TRP:HZ3	1:0B:372:ALA:HB2	1.83	0.43
1:0C:493:HIS:CE1	1:0C:519:LYS:HB2	2.53	0.43
1:0C:576:GLY:O	1:0C:603:ARG:NH1	2.52	0.43
3:0I:549:GLU:HA	3:0I:552:LEU:HD13	2.00	0.43
3:0J:564:ALA:HA	3:0J:567:ARG:NE	2.33	0.43
3:0J:576:ARG:CZ	3:0J:577:ARG:HA	2.48	0.43
3:0J:578:PRO:HA	3:0J:581:HIS:ND1	2.34	0.43
5:0M:362:THR:OG1	5:0M:364:CYS:SG	2.66	0.43
5:0M:367:LEU:HD23	5:0M:367:LEU:HA	1.85	0.43
6:0O:73:ARG:HD3	6:0O:73:ARG:HA	1.77	0.43
7:0Q:60:ILE:HA	7:0Q:74:THR:O	2.18	0.43
7:0Q:446:VAL:HB	7:0Q:456:ALA:HB3	1.99	0.43
12:0Y:56:ASP:HB2	12:0Y:333:ARG:HH22	1.83	0.43
12:0Y:247:ARG:O	12:0Y:248:THR:OG1	2.36	0.43
12:0Z:65:GLU:HG3	12:0Z:116:ARG:NH2	2.27	0.43
12:1A:83:TYR:O	12:1A:235:SER:HA	2.19	0.43
12:1A:134:ARG:HB3	12:1A:221:GLU:HG2	2.00	0.43
13:1C:1272:PRO:HB2	13:1C:1284:ARG:NH1	2.32	0.43
14:1E:398:PRO:HG2	14:1E:400:ARG:NH2	2.33	0.43
14:1E:546:ASP:OD1	14:1E:547:LYS:N	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1F:400:ARG:HH22	14:1F:404:GLU:HB3	1.82	0.43
14:1G:773:LEU:O	14:1G:777:LEU:HG	2.18	0.43
7:0Q:458:MET:CE	7:0Q:489:TRP:HB3	2.48	0.43
7:0S:553:ALA:O	7:0S:561:PHE:HB2	2.17	0.43
12:0Y:139:TYR:HB3	12:0Y:151:LEU:HD13	2.00	0.43
12:0Z:8:VAL:HG11	12:0Z:329:ALA:HB1	2.01	0.43
12:1A:147:LEU:HD11	12:1A:163:VAL:HG13	2.01	0.43
13:1B:1151:ARG:HH22	13:1B:1279:ASP:HA	1.84	0.43
13:1C:1306:ARG:HB3	13:1C:1306:ARG:NH1	2.34	0.43
14:1F:818:MET:HG2	14:1F:858:ALA:HA	2.01	0.43
1:0A:574:LEU:HB3	1:0A:605:TRP:CZ3	2.53	0.43
1:0B:524:ARG:HG3	1:0B:525:MET:SD	2.59	0.43
1:0B:604:LEU:HD23	1:0B:605:TRP:N	2.33	0.43
1:0D:538:PRO:HD2	1:0D:556:ASP:HB2	1.99	0.43
1:0D:560:VAL:HG22	1:0D:581:VAL:HG11	2.01	0.43
2:0H:55:LEU:HD11	2:0H:80:ARG:HB3	2.01	0.43
3:0I:135:MET:HB3	3:0I:142:ARG:HH22	1.84	0.43
3:0J:453:VAL:HB	3:0J:516:ARG:CG	2.48	0.43
7:0S:141:HIS:CE1	7:0S:188:GLY:H	2.35	0.43
7:0S:212:LEU:HB3	7:0S:224:VAL:CG2	2.48	0.43
12:0Z:195:GLU:O	12:0Z:198:ARG:HG2	2.18	0.43
13:1C:1303:PRO:HA	13:1C:1306:ARG:HG3	1.99	0.43
14:1D:925:ARG:O	14:1D:929:ARG:HG3	2.19	0.43
14:1F:504:ASN:O	14:1F:508:LEU:HG	2.18	0.43
14:1G:592:TYR:HA	14:1G:595:ARG:HD2	2.00	0.43
14:1G:601:ARG:HH22	14:1G:634:ARG:CB	2.31	0.43
1:0A:377:HIS:HB3	1:0A:382:CYS:H	1.83	0.43
1:0B:139:LYS:NZ	1:0C:135:LEU:HD23	2.34	0.43
1:0D:542:SER:HB3	1:0D:553:VAL:HG12	2.00	0.43
7:0S:224:VAL:HG12	7:0S:231:VAL:HG22	1.99	0.43
7:0S:354:TRP:CD1	7:0S:361:LEU:HA	2.53	0.43
12:0Y:115:PRO:HB3	12:0Y:188:LEU:HD11	2.01	0.43
13:1B:1687:HIS:ND1	13:1B:1688:GLN:HG3	2.33	0.43
13:1C:1122:PRO:HD2	13:1C:1125:LEU:HD23	2.01	0.43
14:1D:910:PHE:HB3	14:1D:927:ALA:HB2	2.01	0.43
14:1F:566:THR:O	14:1F:592:TYR:OH	2.35	0.43
1:0B:426:ALA:HB3	1:0B:458:LEU:HD21	2.01	0.43
1:0B:574:LEU:HB3	1:0B:605:TRP:CZ3	2.54	0.43
1:0C:545:ASP:HB3	1:0C:548:GLY:HA3	2.01	0.43
1:0D:576:GLY:O	1:0D:603:ARG:NH1	2.52	0.43
3:0I:537:VAL:HG21	14:1G:953:GLU:HG2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:0Q:72:LEU:HG	7:0Q:84:ILE:O	2.18	0.43
7:0Q:354:TRP:CD1	7:0Q:361:LEU:HA	2.54	0.43
7:0S:506:PHE:HD1	7:0S:522:THR:HG22	1.83	0.43
7:0S:521:VAL:HG12	7:0S:527:ILE:HG12	2.00	0.43
12:0Z:87:ILE:HB	12:0Z:239:LEU:HD13	2.01	0.43
13:1B:1313:VAL:O	13:1B:1410:PHE:HB2	2.19	0.43
13:1C:1721:ARG:HH11	13:1C:1723:PRO:HA	1.83	0.43
14:1E:815:ALA:O	14:1E:819:LEU:HG	2.19	0.43
14:1E:891:LEU:O	14:1E:895:GLU:HG2	2.18	0.43
1:0B:191:ILE:H	1:0B:191:ILE:HD12	1.84	0.43
2:0E:45:HIS:HE1	2:0E:47:ASP:OD2	2.01	0.43
2:0E:74:VAL:HG12	2:0E:107:LEU:HD21	2.01	0.43
2:0H:104:TRP:CD1	2:0H:127:VAL:HG12	2.54	0.43
3:0J:100:ARG:O	3:0J:104:MET:HG2	2.19	0.43
3:0J:440:HIS:HD2	14:1F:508:LEU:HD22	1.83	0.43
5:0M:380:VAL:HB	5:0M:383:ILE:HD11	2.00	0.43
5:0N:272:CYS:SG	5:0N:288:ARG:HD3	2.58	0.43
5:0N:380:VAL:HB	5:0N:383:ILE:HD11	1.99	0.43
6:0O:21:ARG:HB3	6:0O:25:ARG:HH22	1.84	0.43
12:0Y:186:GLU:O	12:0Y:190:GLN:OE1	2.37	0.43
12:0Z:100:THR:O	12:0Z:113:LEU:HB2	2.19	0.43
12:0Z:123:ARG:NH1	12:0Z:126:ASP:OD2	2.50	0.43
12:0Z:354:TYR:HA	12:0Z:357:GLN:HB2	2.00	0.43
13:1B:1234:ILE:HG12	13:1B:1239:LEU:HD12	2.01	0.43
13:1B:1315:LEU:HD23	13:1B:1381:PRO:HG2	2.01	0.43
14:1E:907:ALA:HB1	14:1E:931:PHE:CE1	2.54	0.43
14:1F:1006:ARG:HD3	14:1F:1006:ARG:HA	1.85	0.43
16:1M:40:UNK:O	16:1M:42:UNK:N	2.52	0.43
1:0A:341:LEU:HB3	1:0A:355:MET:CE	2.48	0.43
1:0D:82:PHE:O	1:0D:86:MET:HG2	2.18	0.43
1:0D:188:GLU:HG2	1:0D:189:PRO:HD3	2.00	0.43
1:0D:324:GLY:HA3	1:0D:353:TRP:CH2	2.53	0.43
2:0E:68:VAL:HG12	2:0E:126:CYS:SG	2.59	0.43
3:0J:225:PHE:HZ	6:0P:162:ASP:HB3	1.84	0.43
5:0N:71:ARG:NH1	5:0N:75:ASP:OD2	2.52	0.43
7:0S:126:LYS:HE2	7:0S:128:TYR:HE2	1.83	0.43
7:0S:210:ALA:HA	7:0S:226:VAL:HB	1.99	0.43
12:1A:23:LYS:HA	12:1A:32:SER:O	2.18	0.43
13:1C:1445:ASP:OD1	13:1C:1445:ASP:N	2.51	0.43
14:1E:818:MET:O	14:1E:821:PRO:HD2	2.18	0.43
14:1G:966:LEU:HG	14:1G:974:ALA:HB1	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1G:1019:LEU:HB3	14:1G:1022:GLU:CD	2.38	0.43
16:1L:40:UNK:O	16:1L:42:UNK:N	2.52	0.43
1:0D:561:LYS:HG2	1:0D:573:GLU:HG3	2.01	0.42
2:0H:128:GLN:HA	2:0H:128:GLN:OE1	2.19	0.42
3:0J:453:VAL:HB	3:0J:516:ARG:HG2	2.00	0.42
7:0Q:516:VAL:HG21	7:0Q:533:ARG:HH21	1.84	0.42
12:1A:247:ARG:O	12:1A:248:THR:OG1	2.37	0.42
13:1B:1536:PRO:HA	13:1B:1537:PRO:HD3	1.90	0.42
14:1D:518:LEU:HD12	14:1D:522:HIS:HE1	1.83	0.42
1:0B:166:VAL:HG13	1:0C:170:LYS:HZ1	1.83	0.42
2:0G:97:SER:HA	2:0G:100:LYS:HE2	2.02	0.42
3:0J:424:PHE:HD1	3:0J:445:LEU:HB3	1.84	0.42
7:0Q:476:HIS:O	7:0Q:488:LEU:HD12	2.19	0.42
7:0S:102:VAL:HG11	7:0S:122:PHE:HB2	2.00	0.42
7:0S:520:THR:OG1	7:0S:528:GLN:HB2	2.19	0.42
12:0Y:13:ARG:NH2	19:0Y:801:ADP:H1'	2.34	0.42
12:0Y:86:THR:HG22	12:0Y:238:ASN:HB2	2.00	0.42
12:1A:102:SER:HB2	12:1A:191:PHE:HZ	1.83	0.42
13:1B:1473:TRP:NE1	13:1B:1498:LEU:HB3	2.34	0.42
13:1C:1223:PRO:HG3	13:1C:1232:ASP:OD2	2.19	0.42
14:1D:1029:LEU:HB2	14:1D:1045:GLU:HB3	2.01	0.42
1:0B:375:ASP:OD2	1:0B:418:PHE:N	2.44	0.42
1:0C:317:SER:HA	1:0C:605:TRP:HA	2.01	0.42
1:0D:127:ASP:O	1:0D:131:LEU:HB2	2.19	0.42
1:0D:414:TRP:CZ3	2:0G:50:LYS:HE3	2.54	0.42
1:0D:518:VAL:HG21	1:0D:553:VAL:HG11	2.02	0.42
1:0D:522:ASP:HB3	1:0D:525:MET:HB3	2.00	0.42
2:0G:109:ALA:O	2:0G:113:ARG:HG3	2.19	0.42
3:0I:178:PRO:O	3:0I:182:THR:HG23	2.20	0.42
3:0I:512:GLU:HA	3:0I:529:LEU:N	2.32	0.42
3:0I:578:PRO:HA	3:0I:581:HIS:ND1	2.35	0.42
5:0N:633:PRO:HA	5:0N:638:TYR:CG	2.54	0.42
7:0Q:144:GLU:HG3	7:0Q:147:LYS:HB2	2.01	0.42
7:0S:338:GLN:NE2	7:0S:381:ARG:HE	2.17	0.42
12:0Y:59:LEU:HD21	12:0Y:70:THR:HG21	2.01	0.42
12:0Y:68:TYR:OH	12:0Y:117:ALA:HA	2.19	0.42
12:0Z:5:ALA:HA	12:0Z:336:THR:HG23	2.02	0.42
13:1C:1473:TRP:CH2	13:1C:1736:ARG:HB3	2.54	0.42
14:1D:433:ARG:HA	14:1D:433:ARG:HD2	1.89	0.42
1:0A:191:ILE:H	1:0A:191:ILE:HD12	1.84	0.42
1:0B:584:VAL:HG23	1:0B:593:LEU:HD21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:0I:553:ALA:HA	3:0I:556:GLU:CD	2.40	0.42
5:0N:70:ASP:OD2	5:0N:128:ARG:NH2	2.39	0.42
5:0N:391:VAL:HA	5:0N:394:VAL:HG22	2.00	0.42
7:0Q:62:ALA:HB1	7:0Q:107:VAL:HG12	2.00	0.42
7:0Q:445:ARG:HA	7:0Q:456:ALA:O	2.20	0.42
13:1B:1120:GLY:HA2	13:1B:1614:ARG:NH2	2.33	0.42
13:1B:1445:ASP:OD1	13:1B:1445:ASP:N	2.51	0.42
14:1D:427:LYS:O	14:1D:431:ILE:HG12	2.19	0.42
14:1G:818:MET:HE3	14:1G:821:PRO:HB2	2.01	0.42
1:0B:355:MET:SD	1:0B:604:LEU:HD12	2.59	0.42
1:0C:127:ASP:O	1:0C:131:LEU:HB2	2.19	0.42
1:0C:393:LYS:HB3	1:0C:402:CYS:SG	2.60	0.42
2:0G:44:LEU:HB3	2:0G:45:HIS:H	1.56	0.42
3:0I:517:PRO:HB2	3:0I:518:PRO:HD3	1.99	0.42
3:0I:568:VAL:O	3:0I:571:ASP:HB2	2.19	0.42
3:0J:104:MET:O	3:0J:108:MET:HG2	2.20	0.42
6:0P:16:LEU:HD23	6:0P:16:LEU:H	1.84	0.42
7:0Q:57:ASP:OD2	7:0Q:80:ASN:ND2	2.53	0.42
7:0S:22:ILE:HD12	7:0S:29:TYR:O	2.20	0.42
12:0Z:14:PRO:HD2	19:0Z:801:ADP:C6	2.55	0.42
13:1C:1265:VAL:O	13:1C:1291:THR:OG1	2.29	0.42
13:1C:1297:GLN:HB3	13:1C:1335:LEU:HD12	2.01	0.42
14:1E:594:LEU:HB3	14:1E:768:ALA:HB3	2.00	0.42
2:0H:123:VAL:O	2:0H:127:VAL:HG13	2.20	0.42
3:0I:503:ALA:HB2	14:1G:541:PRO:HA	2.00	0.42
3:0I:576:ARG:CZ	3:0I:577:ARG:HA	2.50	0.42
12:0X:5:ALA:HA	12:0X:336:THR:HG23	2.02	0.42
12:0X:14:PRO:HD2	19:0X:801:ADP:C6	2.55	0.42
12:0X:139:TYR:HD1	12:0X:150:LEU:HD13	1.84	0.42
12:0Y:98:THR:O	12:0Y:103:GLY:HA2	2.19	0.42
13:1B:1202:GLN:O	13:1B:1276:HIS:HB3	2.20	0.42
13:1C:1175:PHE:HB2	13:1C:1289:ALA:HB2	2.00	0.42
13:1C:1244:PRO:HD2	13:1C:1257:VAL:HG13	2.01	0.42
14:1E:983:ARG:HG2	14:1F:497:LYS:NZ	2.34	0.42
14:1E:988:ASP:O	14:1E:1018:LYS:NZ	2.52	0.42
1:0A:327:LEU:HD12	1:0A:327:LEU:HA	1.78	0.42
1:0B:129:ALA:HA	1:0B:132:ARG:HG2	2.02	0.42
1:0D:329:VAL:HB	1:0D:596:CYS:HB2	2.01	0.42
2:0H:55:LEU:HD23	2:0H:77:ILE:HG12	2.02	0.42
3:0J:419:GLY:HA2	13:1B:1352:TRP:NE1	2.35	0.42
5:0M:63:ALA:HB2	5:0M:128:ARG:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:0S:353:VAL:HB	7:0S:363:CYS:SG	2.60	0.42
12:0X:260:GLU:O	12:0X:264:ILE:HG12	2.20	0.42
12:0X:276:ASN:HB3	12:0X:280:ARG:HH21	1.84	0.42
13:1B:1448:ALA:HA	13:1B:1451:LEU:HD13	2.01	0.42
13:1B:1751:VAL:HG13	13:1B:1756:ARG:HG2	2.01	0.42
14:1D:1023:SER:C	14:1D:1027:ARG:HH21	2.23	0.42
14:1F:1035:VAL:HG12	14:1F:1037:GLN:HG3	2.01	0.42
14:1F:1048:ALA:HA	14:1F:1051:ARG:NH1	2.34	0.42
1:0A:507:THR:HG23	1:0A:524:ARG:HH22	1.84	0.42
1:0B:377:HIS:HB3	1:0B:382:CYS:H	1.85	0.42
1:0D:493:HIS:CE1	1:0D:519:LYS:HB2	2.55	0.42
2:0F:62:LYS:N	2:0F:67:ASP:OD2	2.53	0.42
3:0J:270:LEU:HD13	3:0J:319:LEU:HG	2.01	0.42
4:0L:109:VAL:O	4:0L:113:LEU:HG	2.20	0.42
4:0L:121:ALA:O	4:0L:124:GLU:HG3	2.19	0.42
5:0M:640:PRO:O	5:0M:644:THR:HG23	2.19	0.42
5:0N:193:VAL:HB	5:0N:196:LEU:HD12	2.02	0.42
6:0O:194:LYS:HA	6:0O:194:LYS:HD3	1.86	0.42
7:0Q:100:HIS:ND1	7:0Q:120:SER:HB2	2.34	0.42
7:0Q:102:VAL:HG11	7:0Q:122:PHE:HD2	1.84	0.42
7:0Q:506:PHE:CD1	7:0Q:522:THR:HG22	2.55	0.42
12:0X:12:THR:OG1	12:0X:60:GLU:O	2.37	0.42
12:0Z:88:PHE:HA	12:0Z:240:VAL:O	2.19	0.42
12:1A:68:TYR:OH	12:1A:117:ALA:HA	2.20	0.42
13:1B:1140:ARG:HD3	13:1B:1477:ARG:NH1	2.35	0.42
13:1B:1515:VAL:HG12	13:1B:1595:VAL:HG22	2.02	0.42
13:1B:1701:LEU:HD23	13:1B:1701:LEU:HA	1.88	0.42
14:1D:849:ARG:NE	14:1D:868:PHE:HA	2.35	0.42
14:1F:761:LEU:O	14:1F:764:PRO:HD2	2.20	0.42
14:1G:814:ALA:HA	14:1G:817:ALA:HB3	2.02	0.42
1:0B:129:ALA:HB1	1:0B:133:ARG:CZ	2.49	0.42
1:0C:133:ARG:HG3	1:0C:134:GLU:N	2.35	0.42
1:0C:396:ASP:HB2	1:0C:403:VAL:CG2	2.49	0.42
1:0D:205:LYS:HE2	1:0D:205:LYS:HB3	1.91	0.42
2:0G:146:THR:HG22	2:0G:149:LYS:HE3	2.02	0.42
3:0J:467:HIS:CD2	14:1F:915:SER:HB2	2.54	0.42
4:0K:84:THR:HA	4:0K:87:ILE:HG12	2.01	0.42
4:0L:79:ASP:O	4:0L:83:LEU:HG	2.20	0.42
7:0Q:224:VAL:HG12	7:0Q:231:VAL:HG22	2.01	0.42
7:0Q:609:ASP:OD1	7:0Q:610:GLY:N	2.52	0.42
7:0S:283:VAL:HG12	7:0S:318:LEU:HD11	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:0Z:138:SER:OG	12:0Z:217:THR:OG1	2.36	0.42
12:1A:8:VAL:HG11	12:1A:329:ALA:HB1	2.00	0.42
13:1C:1390:GLU:HG2	13:1C:1402:VAL:HG22	2.01	0.42
13:1C:1690:MET:HE2	13:1C:1705:PHE:HB2	2.02	0.42
14:1D:965:ALA:HB1	14:1D:970:ARG:HG3	2.02	0.42
14:1F:1020:MET:HB2	14:1F:1021:PRO:HD3	2.02	0.42
1:0A:332:LEU:HB3	1:0A:341:LEU:HD11	2.02	0.42
1:0D:582:GLN:N	1:0D:597:GLY:HA2	2.28	0.42
3:0I:451:ALA:HA	13:1C:1382:LEU:O	2.19	0.42
5:0M:628:ILE:HD12	5:0M:628:ILE:H	1.85	0.42
5:0N:412:LEU:HD12	5:0N:412:LEU:HA	1.89	0.42
6:0P:194:LYS:HA	6:0P:194:LYS:HD3	1.88	0.42
12:0X:7:LYS:HB2	12:0X:307:VAL:HG22	2.02	0.42
12:0Z:221:GLU:HB3	12:0Z:233:VAL:HG22	2.00	0.42
12:1A:139:TYR:HD1	12:1A:216:PHE:CD1	2.38	0.42
13:1B:1170:PRO:HG3	13:1B:1284:ARG:HD2	2.01	0.42
13:1C:1202:GLN:O	13:1C:1276:HIS:HB3	2.20	0.42
13:1C:1769:TRP:HB2	14:1D:522:HIS:CD2	2.54	0.42
14:1D:851:LEU:HA	14:1D:854:GLN:OE1	2.20	0.42
14:1D:966:LEU:HD12	14:1D:995:ILE:HD13	2.02	0.42
14:1D:1016:ALA:HB2	14:1D:1028:LEU:HD11	2.01	0.42
14:1E:972:GLU:HB3	14:1E:976:LYS:NZ	2.35	0.42
14:1F:400:ARG:NH1	14:1F:403:LEU:O	2.53	0.42
14:1G:1022:GLU:OE1	14:1G:1022:GLU:N	2.53	0.42
1:0A:418:PHE:HE1	1:0A:439:LEU:HD11	1.85	0.41
1:0A:433:THR:HG21	1:0A:449:ARG:HH11	1.85	0.41
1:0A:582:GLN:HG2	1:0A:597:GLY:HA2	2.02	0.41
1:0B:344:ALA:HB2	1:0B:374:VAL:HG23	2.02	0.41
1:0C:324:GLY:HA3	1:0C:353:TRP:CH2	2.55	0.41
1:0D:214:LYS:HD3	1:0D:214:LYS:HA	1.89	0.41
2:0G:74:VAL:HG13	2:0G:141:LEU:HD11	2.01	0.41
3:0I:453:VAL:CG2	3:0I:516:ARG:HD3	2.49	0.41
3:0J:93:THR:O	3:0J:97:THR:HG23	2.20	0.41
3:0J:192:ARG:HA	3:0J:192:ARG:HD3	1.83	0.41
5:0N:218:MET:O	5:0N:222:LEU:HG	2.20	0.41
6:0P:135:ARG:HG2	6:0P:135:ARG:NH1	2.35	0.41
7:0S:464:ARG:HB3	7:0S:482:GLU:OE1	2.20	0.41
12:0Y:322:THR:O	12:0Y:326:LEU:HD23	2.19	0.41
13:1C:1239:LEU:O	13:1C:1261:PHE:HA	2.20	0.41
1:0B:101:GLU:O	1:0B:105:THR:HG23	2.20	0.41
1:0D:396:ASP:HB2	1:0D:403:VAL:CG2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:0J:265:LEU:HD21	3:0J:330:LEU:HD22	2.03	0.41
3:0J:311:ARG:O	3:0J:311:ARG:HG2	2.20	0.41
3:0J:552:LEU:O	3:0J:556:GLU:HG3	2.20	0.41
4:0K:150:PHE:HA	4:0K:153:ILE:HG22	2.02	0.41
5:0M:176:ALA:HB1	5:0M:713:GLN:NE2	2.35	0.41
5:0M:292:ASN:HA	5:0M:296:SER:HB3	2.02	0.41
5:0N:334:SER:HA	5:0N:424:HIS:HD1	1.84	0.41
6:0P:32:LYS:HE3	6:0P:48:GLU:HG3	2.02	0.41
7:0S:60:ILE:HA	7:0S:74:THR:O	2.20	0.41
7:0S:72:LEU:HD13	7:0S:116:LEU:HD11	2.01	0.41
7:0S:524:ASP:HB3	7:0S:526:LYS:HE2	2.02	0.41
12:0Y:258:LEU:O	12:0Y:262:GLN:HG2	2.20	0.41
12:0Y:319:ASN:O	12:0Y:323:LEU:HD23	2.19	0.41
13:1B:1136:ASN:ND2	13:1B:1478:GLY:HA3	2.35	0.41
14:1D:1009:GLN:O	14:1D:1010:ARG:C	2.57	0.41
14:1G:544:VAL:HG22	14:1G:547:LYS:HZ3	1.85	0.41
1:0A:586:PHE:CE2	1:0A:590:GLY:HA2	2.55	0.41
1:0B:339:PRO:HB2	1:0B:356:PRO:HD3	2.03	0.41
1:0C:396:ASP:HB3	1:0C:399:LYS:HG3	2.03	0.41
1:0D:352:MET:HG2	1:0D:361:ILE:HB	2.02	0.41
1:0D:413:ILE:HD13	1:0D:429:SER:HB2	2.01	0.41
2:0F:78:PHE:CD1	2:0F:110:PHE:HE2	2.38	0.41
3:0I:177:GLY:N	3:0I:178:PRO:HD2	2.35	0.41
3:0I:181:ARG:NE	3:0I:185:GLU:OE2	2.53	0.41
5:0N:229:LEU:HD21	5:0N:286:VAL:HA	2.02	0.41
7:0Q:72:LEU:HD12	7:0Q:85:VAL:HG22	2.02	0.41
7:0Q:584:ALA:HB3	7:0Q:615:TRP:CZ3	2.54	0.41
7:0S:72:LEU:HD12	7:0S:85:VAL:HG22	2.02	0.41
13:1B:1698:ILE:HG22	13:1B:1700:PRO:HD2	2.01	0.41
13:1C:1313:VAL:O	13:1C:1410:PHE:HB2	2.20	0.41
13:1C:1536:PRO:HA	13:1C:1537:PRO:HD3	1.92	0.41
14:1E:502:SER:O	14:1E:506:MET:HG2	2.19	0.41
14:1G:605:GLU:O	14:1G:608:PHE:HB2	2.20	0.41
14:1G:654:VAL:O	14:1G:657:ARG:N	2.52	0.41
14:1G:861:ALA:O	14:1G:864:GLU:HG3	2.21	0.41
1:0B:457:ASP:CB	1:0B:499:GLY:HA2	2.49	0.41
1:0C:542:SER:HB3	1:0C:553:VAL:HG12	2.03	0.41
1:0D:396:ASP:HB2	1:0D:403:VAL:HG23	2.02	0.41
2:0F:143:GLU:OE2	2:0F:151:PRO:HD3	2.20	0.41
2:0G:70:ASN:ND2	2:0G:93:ASN:HA	2.31	0.41
3:0J:226:SER:HA	6:0P:169:ARG:HH12	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1G:415:PRO:HA	14:1G:416:PRO:HD3	1.89	0.41
1:0A:156:ARG:HG3	1:0D:155:GLU:HB3	2.02	0.41
1:0B:409:HIS:CE1	1:0B:435:ARG:HG3	2.55	0.41
1:0B:418:PHE:HE1	1:0B:439:LEU:HD11	1.85	0.41
1:0C:328:SER:HB2	1:0C:598:SER:HA	2.02	0.41
2:0E:117:ASN:OD1	2:0E:117:ASN:N	2.51	0.41
3:0I:434:HIS:HB2	14:1D:1006:ARG:HH12	1.86	0.41
3:0J:428:PHE:HE2	14:1F:972:GLU:HB3	1.84	0.41
3:0J:431:LEU:HD23	3:0J:431:LEU:HA	1.86	0.41
5:0M:747:LEU:HD23	5:0M:747:LEU:HA	1.92	0.41
7:0S:76:GLN:HG2	7:0S:103:GLU:HB3	2.03	0.41
12:0X:7:LYS:O	12:0X:307:VAL:HG13	2.20	0.41
12:0X:88:PHE:CE1	12:0X:308:MET:HG3	2.55	0.41
12:0X:354:TYR:OH	12:0Y:351:LEU:O	2.39	0.41
12:0Y:327:ARG:HB3	12:0Y:331:ARG:NH2	2.35	0.41
13:1B:1690:MET:SD	13:1B:1701:LEU:HD13	2.60	0.41
13:1C:1694:VAL:HG22	13:1C:1697:ARG:HH21	1.86	0.41
14:1D:518:LEU:HD12	14:1D:522:HIS:CE1	2.56	0.41
14:1F:600:LYS:HE3	14:1F:603:ARG:HD2	2.02	0.41
1:0A:192:LEU:O	1:0A:196:LYS:HG3	2.20	0.41
1:0D:187:TYR:HD1	4:0L:109:VAL:HG22	1.86	0.41
3:0I:452:ALA:HB3	13:1C:1315:LEU:HB3	2.02	0.41
7:0S:569:ALA:HA	7:0S:585:ALA:HA	2.02	0.41
12:0X:74:GLU:OE2	12:0X:74:GLU:N	2.49	0.41
12:1A:128:ARG:HG3	12:1A:133:TYR:HE2	1.86	0.41
13:1C:1128:GLN:NE2	13:1C:1470:ASP:O	2.54	0.41
1:0A:512:THR:HG22	1:0A:518:VAL:HG22	2.03	0.41
1:0B:124:LEU:O	1:0B:128:VAL:HG23	2.21	0.41
1:0B:429:SER:OG	1:0B:430:LEU:N	2.52	0.41
1:0C:420:HIS:CE1	1:0C:421:LEU:HG	2.56	0.41
1:0C:511:SER:OG	1:0C:521:TRP:HZ3	2.04	0.41
1:0D:486:CYS:SG	1:0D:489:THR:OG1	2.79	0.41
6:0O:80:ASN:O	6:0O:84:GLN:HG2	2.21	0.41
6:0P:46:GLN:OE1	6:0P:47:PRO:HD2	2.20	0.41
7:0Q:495:ARG:NH1	7:0Q:499:THR:OG1	2.54	0.41
7:0S:179:VAL:HG22	7:0S:186:VAL:HG22	2.03	0.41
12:0Y:68:TYR:CB	12:0Y:116:ARG:HE	2.29	0.41
13:1B:1191:ILE:HD12	13:1B:1257:VAL:HG21	2.02	0.41
13:1C:1120:GLY:HA2	13:1C:1614:ARG:NH2	2.34	0.41
13:1C:1515:VAL:HA	13:1C:1594:LEU:O	2.21	0.41
13:1C:1777:PHE:HB2	14:1G:430:VAL:HG12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1D:419:THR:HG22	14:1D:421:VAL:N	2.35	0.41
1:0A:171:ASN:O	1:0A:175:THR:HG23	2.19	0.41
1:0B:192:LEU:O	1:0B:196:LYS:HG3	2.21	0.41
1:0B:383:LEU:HB2	1:0B:397:PHE:CZ	2.56	0.41
3:0J:207:TRP:NE1	3:0J:211:LEU:HD21	2.36	0.41
3:0J:554:GLU:HB3	14:1F:606:GLU:OE1	2.20	0.41
5:0M:247:GLU:HA	5:0M:250:ILE:HG22	2.03	0.41
7:0Q:102:VAL:HG12	7:0Q:103:GLU:N	2.36	0.41
12:1A:84:ASN:ND2	12:1A:298:ASP:OD1	2.53	0.41
12:1A:147:LEU:HD21	12:1A:291:LYS:HB3	2.03	0.41
12:1A:166:ASP:HA	12:1A:170:ASN:O	2.21	0.41
13:1B:1127:TRP:HA	13:1B:1132:LEU:HD12	2.03	0.41
13:1C:1340:ASP:HB2	13:1C:1392:PRO:HG2	2.03	0.41
14:1E:431:ILE:HG23	14:1E:479:MET:SD	2.60	0.41
14:1E:1005:ARG:HG3	14:1E:1008:GLU:OE2	2.21	0.41
1:0A:457:ASP:CB	1:0A:499:GLY:HA2	2.50	0.41
1:0B:409:HIS:CE1	1:0B:429:SER:HB3	2.56	0.41
1:0C:462:PRO:HG2	1:0C:503:ASN:O	2.20	0.41
1:0D:335:HIS:CE1	1:0D:337:THR:HB	2.56	0.41
1:0D:545:ASP:HB3	1:0D:548:GLY:HA3	2.03	0.41
2:0G:96:SER:O	2:0G:100:LYS:HG3	2.21	0.41
3:0I:505:GLY:HA3	14:1G:949:VAL:HG22	2.02	0.41
3:0J:177:GLY:N	3:0J:178:PRO:HD2	2.36	0.41
3:0J:554:GLU:O	3:0J:558:ARG:HG3	2.21	0.41
4:0K:216:ASP:OD1	4:0K:217:ILE:N	2.51	0.41
4:0L:158:GLN:HB3	4:0L:162:ASP:OD2	2.20	0.41
5:0M:387:GLN:O	5:0M:391:VAL:HG23	2.21	0.41
5:0N:367:LEU:HD23	5:0N:367:LEU:HA	1.86	0.41
7:0S:66:SER:OG	7:0S:70:SER:HB2	2.21	0.41
7:0S:101:ASP:OD1	7:0S:101:ASP:N	2.53	0.41
7:0S:394:ARG:HG2	7:0S:410:MET:HG3	2.02	0.41
12:0X:101:MET:O	12:0X:102:SER:OG	2.38	0.41
12:0X:132:MET:CE	12:0X:223:ARG:HD2	2.51	0.41
12:0X:178:LEU:HD11	12:0X:219:HIS:CD2	2.53	0.41
12:0Y:83:TYR:O	12:0Y:235:SER:HA	2.21	0.41
12:0Y:181:VAL:HG21	12:0Y:187:ALA:HB2	2.02	0.41
12:0Z:102:SER:H	12:0Z:113:LEU:H	1.68	0.41
12:0Z:260:GLU:O	12:0Z:264:ILE:HG12	2.21	0.41
12:1A:109:ALA:O	12:1A:110:HIS:CG	2.74	0.41
13:1B:1243:ARG:HB2	13:1B:1244:PRO:HD3	2.02	0.41
13:1C:1317:GLU:OE1	13:1C:1750:TYR:OH	2.27	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:1C:1337:TRP:CD1	13:1C:1367:ILE:HG13	2.56	0.41
13:1C:1473:TRP:HA	13:1C:1476:TRP:CD2	2.56	0.41
13:1C:1708:THR:HB	13:1C:1712:ARG:NH1	2.35	0.41
13:1C:1751:VAL:HG13	13:1C:1756:ARG:HG2	2.03	0.41
14:1D:423:GLU:O	14:1D:427:LYS:HG2	2.21	0.41
14:1D:504:ASN:OD1	14:1D:505:GLU:HG3	2.20	0.41
14:1E:463:HIS:O	14:1E:467:ILE:HG13	2.20	0.41
14:1F:821:PRO:HA	14:1F:825:VAL:HB	2.02	0.41
1:0A:129:ALA:HA	1:0A:132:ARG:HG2	2.03	0.41
1:0A:129:ALA:HB1	1:0A:133:ARG:CZ	2.50	0.41
1:0A:457:ASP:HB2	1:0A:499:GLY:HA2	2.03	0.41
1:0B:128:VAL:HG22	1:0C:128:VAL:HG23	2.02	0.41
1:0B:331:ASN:HD22	1:0B:374:VAL:H	1.67	0.41
1:0C:522:ASP:O	1:0C:526:THR:N	2.53	0.41
1:0C:554:ALA:HB1	1:0C:581:VAL:HB	2.03	0.41
2:0E:120:GLY:O	2:0E:124:GLU:HG2	2.21	0.41
3:0I:96:HIS:CG	3:0I:100:ARG:HH21	2.39	0.41
3:0I:431:LEU:HD23	3:0I:431:LEU:HA	1.87	0.41
3:0J:173:ALA:HA	3:0J:176:ARG:HH21	1.85	0.41
7:0Q:498:THR:OG1	7:0Q:499:THR:N	2.52	0.41
7:0S:563:THR:HB	7:0S:573:TRP:HE1	1.86	0.41
12:0Y:109:ALA:O	12:0Y:110:HIS:CG	2.74	0.41
12:0Y:187:ALA:HA	12:0Y:190:GLN:NE2	2.35	0.41
12:0Z:203:HIS:CD2	12:0Z:205:LEU:HB2	2.56	0.41
13:1B:1333:ALA:HB1	13:1B:1334:PRO:HD2	2.03	0.41
13:1C:1184:PRO:HB3	13:1C:1262:ARG:HD3	2.03	0.41
13:1C:1376:ASN:HD21	13:1C:1574:PRO:HA	1.85	0.41
14:1D:911:LEU:H	14:1D:911:LEU:HG	1.76	0.41
14:1D:911:LEU:HD12	14:1G:400:ARG:NH2	2.36	0.41
14:1E:504:ASN:OD1	14:1E:505:GLU:HG3	2.21	0.41
14:1E:955:PRO:HB2	14:1E:986:LEU:H	1.86	0.41
1:0A:88:LEU:HD21	1:0D:102:LEU:HD12	2.03	0.40
1:0A:188:GLU:HA	1:0A:191:ILE:HD13	2.03	0.40
1:0A:426:ALA:HB3	1:0A:458:LEU:HD21	2.03	0.40
1:0B:430:LEU:HD12	1:0B:454:SER:HB2	2.03	0.40
1:0C:172:LYS:HE2	1:0C:172:LYS:HB3	1.76	0.40
1:0C:560:VAL:HG22	1:0C:581:VAL:HG11	2.03	0.40
1:0D:466:SER:HA	1:0D:479:TRP:O	2.21	0.40
3:0J:194:GLN:HG2	3:0J:326:TYR:CE1	2.56	0.40
7:0Q:71:MET:N	7:0Q:71:MET:SD	2.94	0.40
7:0Q:77:LYS:NZ	7:0Q:102:VAL:HG13	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:0Q:500:TRP:NE1	7:0Q:535:PRO:HA	2.33	0.40
7:0Q:569:ALA:HA	7:0Q:585:ALA:HA	2.04	0.40
7:0S:144:GLU:HG3	7:0S:147:LYS:HB2	2.03	0.40
12:0X:206:ASN:HB3	12:0X:209:SER:OG	2.20	0.40
12:0Y:9:PHE:O	12:0Y:309:VAL:HA	2.21	0.40
13:1B:1190:GLU:HG3	13:1B:1484:SER:HB3	2.02	0.40
14:1E:944:LEU:HB3	14:1E:961:LEU:HG	2.03	0.40
14:1G:928:GLY:HA3	14:1G:944:LEU:HG	2.02	0.40
16:1M:148:UNK:O	16:1M:150:UNK:N	2.54	0.40
1:0C:528:GLU:OE2	1:0C:531:THR:HB	2.22	0.40
3:0I:457:TRP:HZ3	3:0I:459:ARG:HB2	1.87	0.40
3:0J:178:PRO:O	3:0J:182:THR:HG23	2.22	0.40
3:0J:306:LEU:HD23	3:0J:309:ARG:NH2	2.35	0.40
5:0M:258:ILE:HG22	5:0M:260:VAL:HG23	2.02	0.40
7:0Q:409:TRP:CG	7:0Q:452:ARG:HD3	2.56	0.40
12:0X:295:VAL:HG12	12:0X:296:LEU:HD12	2.03	0.40
12:1A:277:ALA:HB1	12:1A:285:VAL:HG12	2.04	0.40
13:1B:1503:VAL:HG13	13:1B:1738:ARG:HB2	2.04	0.40
13:1B:1717:ALA:O	13:1B:1721:ARG:HG3	2.21	0.40
13:1C:1570:LEU:HD23	13:1C:1570:LEU:HA	1.96	0.40
14:1D:1006:ARG:HG3	14:1D:1010:ARG:NE	2.36	0.40
14:1E:1005:ARG:HB3	14:1E:1035:VAL:HG22	2.03	0.40
14:1F:818:MET:O	14:1F:821:PRO:HD2	2.20	0.40
14:1F:861:ALA:O	14:1F:864:GLU:HG3	2.22	0.40
14:1F:905:PHE:O	14:1F:909:VAL:HG13	2.22	0.40
14:1G:494:LYS:HG3	14:1G:495:TYR:CD2	2.56	0.40
16:1L:148:UNK:O	16:1L:150:UNK:N	2.54	0.40
1:0A:512:THR:HB	1:0A:539:ALA:HB3	2.02	0.40
1:0B:457:ASP:HB2	1:0B:499:GLY:HA2	2.03	0.40
1:0D:197:LYS:HB2	1:0D:197:LYS:HE2	1.75	0.40
2:0F:123:VAL:O	2:0F:127:VAL:HG13	2.22	0.40
2:0H:57:LEU:HD22	2:0H:76:GLU:HB3	2.02	0.40
3:0I:557:LYS:HA	3:0I:557:LYS:HD2	1.84	0.40
3:0J:146:LYS:HE2	3:0J:150:GLN:NE2	2.36	0.40
5:0N:181:THR:O	5:0N:182:PHE:HB2	2.22	0.40
7:0Q:463:SER:HB2	7:0Q:482:GLU:HB2	2.02	0.40
7:0Q:483:ASP:OD2	7:0Q:485:THR:HG22	2.20	0.40
7:0S:6:ARG:NH2	7:0S:356:THR:O	2.54	0.40
7:0S:77:LYS:NZ	7:0S:102:VAL:HG13	2.37	0.40
12:0X:166:ASP:HA	12:0X:170:ASN:O	2.20	0.40
12:0X:195:GLU:HA	12:0X:195:GLU:OE2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:0X:359:LYS:O	12:0X:362:LYS:HG2	2.21	0.40
12:0Y:96:GLY:HA2	19:0Y:801:ADP:H5'2	2.03	0.40
12:0Y:215:VAL:HG22	12:0Y:240:VAL:HG13	2.03	0.40
12:1A:121:VAL:O	12:1A:125:VAL:HG13	2.20	0.40
13:1B:1134:ASP:HB3	13:1B:1171:PHE:HE2	1.87	0.40
13:1C:1333:ALA:HB1	13:1C:1334:PRO:HD2	2.03	0.40
13:1C:1518:ASN:HD21	13:1C:1588:LEU:CB	2.34	0.40
14:1F:586:TRP:HB3	14:1F:611:ALA:HB2	2.02	0.40
14:1F:664:ALA:HB3	14:1F:756:THR:HG21	2.02	0.40
14:1G:487:VAL:HA	14:1G:490:LEU:HD12	2.02	0.40
1:0A:124:LEU:O	1:0A:128:VAL:HG23	2.22	0.40
1:0B:354:HIS:HB2	1:0B:361:ILE:HD11	2.02	0.40
1:0C:429:SER:OG	1:0C:430:LEU:N	2.54	0.40
1:0D:325:HIS:NE2	1:0D:343:THR:OG1	2.44	0.40
1:0D:433:THR:HG22	1:0D:449:ARG:HG2	2.02	0.40
2:0H:78:PHE:HB3	2:0H:86:ILE:HG13	2.04	0.40
3:0I:265:LEU:HD11	3:0I:330:LEU:HD13	2.04	0.40
4:0K:105:LEU:HD23	4:0K:105:LEU:HA	1.84	0.40
4:0K:158:GLN:C	4:0K:160:ALA:H	2.23	0.40
5:0N:339:HIS:NE2	5:0N:417:VAL:O	2.53	0.40
7:0S:124:ASP:HB3	7:0S:126:LYS:NZ	2.36	0.40
7:0S:388:TRP:NE1	7:0S:394:ARG:HD2	2.36	0.40
7:0S:554:SER:HB3	7:0S:575:TRP:HZ2	1.86	0.40
12:0X:102:SER:HB3	12:0X:114:ILE:HB	2.03	0.40
12:0Z:109:ALA:C	12:0Z:110:HIS:ND1	2.75	0.40
13:1B:1473:TRP:CH2	13:1B:1736:ARG:HB3	2.56	0.40
13:1C:1222:ARG:HD2	13:1C:1222:ARG:HA	1.98	0.40
14:1D:398:PRO:HG2	14:1D:400:ARG:NH2	2.37	0.40
14:1D:431:ILE:HG23	14:1D:479:MET:SD	2.62	0.40
14:1F:568:ARG:NH2	14:1F:956:GLU:OE1	2.54	0.40
1:0A:118:TYR:OH	1:0D:73:GLU:O	2.29	0.40
1:0A:332:LEU:HD22	1:0A:341:LEU:HD21	2.03	0.40
1:0B:138:ALA:HA	1:0B:141:ILE:HG22	2.03	0.40
2:0E:78:PHE:CD1	2:0E:110:PHE:HE2	2.40	0.40
2:0F:62:LYS:HA	2:0F:62:LYS:HE2	2.03	0.40
3:0J:464:GLN:HA	14:1F:942:MET:CE	2.51	0.40
7:0Q:76:GLN:HG2	7:0Q:103:GLU:HB3	2.02	0.40
7:0Q:351:ILE:HB	7:0Q:365:VAL:HB	2.03	0.40
7:0S:16:PHE:HE1	7:0S:243:GLY:HA2	1.87	0.40
7:0S:62:ALA:N	7:0S:74:THR:OG1	2.54	0.40
7:0S:584:ALA:HB3	7:0S:615:TRP:CZ3	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:0Y:80:MET:HA	12:0Y:80:MET:HE3	2.02	0.40
12:0Y:84:ASN:ND2	12:0Y:298:ASP:OD1	2.54	0.40
13:1C:1144:THR:HG22	13:1C:1281:LYS:HG2	2.03	0.40
13:1C:1499:VAL:HG13	14:1D:511:ASN:HD21	1.86	0.40

There are no symmetry-related clashes.

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	0A	463/606 (76%)	447 (96%)	16 (4%)	0	100	100
1	0B	463/606 (76%)	449 (97%)	14 (3%)	0	100	100
1	0C	472/606 (78%)	454 (96%)	18 (4%)	0	100	100
1	0D	472/606 (78%)	458 (97%)	14 (3%)	0	100	100
2	0E	126/222 (57%)	122 (97%)	4 (3%)	0	100	100
2	0F	126/222 (57%)	121 (96%)	5 (4%)	0	100	100
2	0G	126/222 (57%)	122 (97%)	4 (3%)	0	100	100
2	0H	126/222 (57%)	121 (96%)	5 (4%)	0	100	100
3	0I	442/976 (45%)	424 (96%)	17 (4%)	1 (0%)	47	81
3	0J	442/976 (45%)	426 (96%)	15 (3%)	1 (0%)	47	81
4	0K	164/528 (31%)	162 (99%)	2 (1%)	0	100	100
4	0L	164/528 (31%)	161 (98%)	3 (2%)	0	100	100
5	0M	507/758 (67%)	488 (96%)	19 (4%)	0	100	100
5	0N	507/758 (67%)	491 (97%)	16 (3%)	0	100	100
6	0O	184/201 (92%)	180 (98%)	4 (2%)	0	100	100
6	0P	184/201 (92%)	180 (98%)	4 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	0Q	615/618 (100%)	564 (92%)	51 (8%)	0	100	100
7	0S	615/618 (100%)	566 (92%)	49 (8%)	0	100	100
12	0X	418/776 (54%)	390 (93%)	26 (6%)	2 (0%)	29	68
12	0Y	400/776 (52%)	371 (93%)	25 (6%)	4 (1%)	15	54
12	0Z	418/776 (54%)	390 (93%)	26 (6%)	2 (0%)	29	68
12	1A	400/776 (52%)	373 (93%)	24 (6%)	3 (1%)	19	58
13	1B	624/2257 (28%)	595 (95%)	29 (5%)	0	100	100
13	1C	624/2257 (28%)	595 (95%)	29 (5%)	0	100	100
14	1D	617/1074 (57%)	584 (95%)	33 (5%)	0	100	100
14	1E	617/1074 (57%)	584 (95%)	33 (5%)	0	100	100
14	1F	608/1074 (57%)	576 (95%)	32 (5%)	0	100	100
14	1G	608/1074 (57%)	573 (94%)	35 (6%)	0	100	100
17	1a	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	1c	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	1e	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	1g	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	2a	429/443 (97%)	418 (97%)	11 (3%)	0	100	100
17	2c	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	2e	429/443 (97%)	418 (97%)	11 (3%)	0	100	100
17	2g	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	3a	429/443 (97%)	422 (98%)	7 (2%)	0	100	100
17	3c	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	3e	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	3g	429/443 (97%)	422 (98%)	7 (2%)	0	100	100
17	4a	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	4c	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	4e	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	4g	429/443 (97%)	418 (97%)	11 (3%)	0	100	100
17	5a	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	5c	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	5e	429/443 (97%)	418 (97%)	11 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	5g	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	6a	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	6c	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	6e	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	6g	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	7a	429/443 (97%)	418 (97%)	11 (3%)	0	100	100
17	7c	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	7e	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	7g	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	8a	429/443 (97%)	418 (97%)	11 (3%)	0	100	100
17	8c	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	8e	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	8g	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	9a	429/443 (97%)	418 (97%)	11 (3%)	0	100	100
17	9c	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	9e	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	9g	429/443 (97%)	417 (97%)	12 (3%)	0	100	100
17	Aa	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	Ac	429/443 (97%)	422 (98%)	7 (2%)	0	100	100
17	Ae	429/443 (97%)	422 (98%)	7 (2%)	0	100	100
17	Ag	429/443 (97%)	422 (98%)	7 (2%)	0	100	100
17	Ba	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	Bc	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	Be	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	Bg	429/443 (97%)	420 (98%)	9 (2%)	0	100	100
17	Ca	429/443 (97%)	422 (98%)	7 (2%)	0	100	100
17	Cc	429/443 (97%)	418 (97%)	11 (3%)	0	100	100
17	Ce	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	Cg	429/443 (97%)	414 (96%)	15 (4%)	0	100	100
17	Da	429/443 (97%)	421 (98%)	8 (2%)	0	100	100
17	Dc	429/443 (97%)	420 (98%)	9 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	De	429/443 (97%)	419 (98%)	10 (2%)	0	100	100
17	Dg	429/443 (97%)	418 (97%)	11 (3%)	0	100	100
18	1b	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	1d	426/451 (94%)	416 (98%)	10 (2%)	0	100	100
18	1f	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	1h	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
18	2b	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	2d	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
18	2f	426/451 (94%)	411 (96%)	15 (4%)	0	100	100
18	2h	426/451 (94%)	416 (98%)	10 (2%)	0	100	100
18	3b	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
18	3d	426/451 (94%)	413 (97%)	13 (3%)	0	100	100
18	3f	426/451 (94%)	417 (98%)	9 (2%)	0	100	100
18	3h	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
18	4b	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	4d	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	4f	426/451 (94%)	416 (98%)	10 (2%)	0	100	100
18	4h	426/451 (94%)	411 (96%)	15 (4%)	0	100	100
18	5b	426/451 (94%)	416 (98%)	10 (2%)	0	100	100
18	5d	426/451 (94%)	416 (98%)	10 (2%)	0	100	100
18	5f	426/451 (94%)	420 (99%)	6 (1%)	0	100	100
18	5h	426/451 (94%)	411 (96%)	15 (4%)	0	100	100
18	6b	426/451 (94%)	417 (98%)	9 (2%)	0	100	100
18	6d	426/451 (94%)	413 (97%)	13 (3%)	0	100	100
18	6f	426/451 (94%)	416 (98%)	10 (2%)	0	100	100
18	6h	426/451 (94%)	416 (98%)	10 (2%)	0	100	100
18	7b	426/451 (94%)	417 (98%)	9 (2%)	0	100	100
18	7d	426/451 (94%)	417 (98%)	9 (2%)	0	100	100
18	7f	426/451 (94%)	412 (97%)	14 (3%)	0	100	100
18	7h	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
18	8b	426/451 (94%)	416 (98%)	10 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	8d	426/451 (94%)	416 (98%)	10 (2%)	0	100	100
18	8f	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	8h	426/451 (94%)	417 (98%)	9 (2%)	0	100	100
18	9b	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
18	9d	426/451 (94%)	413 (97%)	13 (3%)	0	100	100
18	9f	426/451 (94%)	412 (97%)	14 (3%)	0	100	100
18	9h	426/451 (94%)	411 (96%)	15 (4%)	0	100	100
18	Ab	426/451 (94%)	417 (98%)	9 (2%)	0	100	100
18	Ad	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
18	Af	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	Ah	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
18	Bb	426/451 (94%)	419 (98%)	7 (2%)	0	100	100
18	Bd	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	Bf	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
18	Bh	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	Cb	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	Cd	426/451 (94%)	418 (98%)	8 (2%)	0	100	100
18	Cf	426/451 (94%)	418 (98%)	8 (2%)	0	100	100
18	Ch	426/451 (94%)	412 (97%)	14 (3%)	0	100	100
18	Db	426/451 (94%)	419 (98%)	7 (2%)	0	100	100
18	Dd	426/451 (94%)	414 (97%)	12 (3%)	0	100	100
18	Df	426/451 (94%)	416 (98%)	10 (2%)	0	100	100
18	Dh	426/451 (94%)	415 (97%)	11 (3%)	0	100	100
All	All	55992/67876 (82%)	54371 (97%)	1608 (3%)	13 (0%)	100	100

All (13) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
12	0X	233	VAL
12	0X	408	PRO
12	0Y	408	PRO
12	0Z	233	VAL
12	0Z	408	PRO
12	1A	408	PRO

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Mol	Chain	Res	Type
12	0Y	60	GLU
12	0Y	403	GLU
12	1A	403	GLU
12	0Y	26	PRO
3	0I	362	ILE
3	0J	362	ILE
12	1A	26	PRO

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	0A	389/482 (81%)	387 (100%)	2 (0%)	88	94
1	0B	389/482 (81%)	389 (100%)	0	100	100
1	0C	397/482 (82%)	396 (100%)	1 (0%)	92	97
1	0D	397/482 (82%)	396 (100%)	1 (0%)	92	97
2	0E	106/166 (64%)	106 (100%)	0	100	100
2	0F	106/166 (64%)	106 (100%)	0	100	100
2	0G	106/166 (64%)	106 (100%)	0	100	100
2	0H	106/166 (64%)	105 (99%)	1 (1%)	78	90
3	0I	325/697 (47%)	322 (99%)	3 (1%)	78	90
3	0J	325/697 (47%)	325 (100%)	0	100	100
4	0K	113/410 (28%)	113 (100%)	0	100	100
4	0L	113/410 (28%)	113 (100%)	0	100	100
5	0M	426/598 (71%)	426 (100%)	0	100	100
5	0N	426/598 (71%)	426 (100%)	0	100	100
6	0O	152/159 (96%)	152 (100%)	0	100	100
6	0P	152/159 (96%)	152 (100%)	0	100	100
7	0Q	461/462 (100%)	460 (100%)	1 (0%)	93	98
7	0S	461/462 (100%)	460 (100%)	1 (0%)	93	98

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	0X	306/600 (51%)	305 (100%)	1 (0%)	92	97
12	0Y	274/600 (46%)	271 (99%)	3 (1%)	73	88
12	0Z	306/600 (51%)	306 (100%)	0	100	100
12	1A	274/600 (46%)	272 (99%)	2 (1%)	84	93
13	1B	487/1666 (29%)	485 (100%)	2 (0%)	91	96
13	1C	487/1666 (29%)	485 (100%)	2 (0%)	91	96
14	1D	291/753 (39%)	290 (100%)	1 (0%)	92	97
14	1E	291/753 (39%)	291 (100%)	0	100	100
14	1F	373/753 (50%)	373 (100%)	0	100	100
14	1G	373/753 (50%)	372 (100%)	1 (0%)	92	97
17	1a	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	1c	370/379 (98%)	370 (100%)	0	100	100
17	1e	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	1g	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	2a	370/379 (98%)	370 (100%)	0	100	100
17	2c	370/379 (98%)	370 (100%)	0	100	100
17	2e	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	2g	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	3a	370/379 (98%)	368 (100%)	2 (0%)	88	94
17	3c	370/379 (98%)	370 (100%)	0	100	100
17	3e	370/379 (98%)	370 (100%)	0	100	100
17	3g	370/379 (98%)	370 (100%)	0	100	100
17	4a	370/379 (98%)	370 (100%)	0	100	100
17	4c	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	4e	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	4g	370/379 (98%)	370 (100%)	0	100	100
17	5a	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	5c	370/379 (98%)	370 (100%)	0	100	100
17	5e	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	5g	370/379 (98%)	368 (100%)	2 (0%)	88	94
17	6a	370/379 (98%)	370 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	6c	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	6e	370/379 (98%)	370 (100%)	0	100	100
17	6g	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	7a	370/379 (98%)	370 (100%)	0	100	100
17	7c	370/379 (98%)	370 (100%)	0	100	100
17	7e	370/379 (98%)	370 (100%)	0	100	100
17	7g	370/379 (98%)	370 (100%)	0	100	100
17	8a	370/379 (98%)	370 (100%)	0	100	100
17	8c	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	8e	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	8g	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	9a	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	9c	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	9e	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	9g	370/379 (98%)	370 (100%)	0	100	100
17	Aa	370/379 (98%)	370 (100%)	0	100	100
17	Ac	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	Ae	370/379 (98%)	370 (100%)	0	100	100
17	Ag	370/379 (98%)	370 (100%)	0	100	100
17	Ba	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	Bc	370/379 (98%)	370 (100%)	0	100	100
17	Be	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	Bg	370/379 (98%)	370 (100%)	0	100	100
17	Ca	370/379 (98%)	370 (100%)	0	100	100
17	Cc	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	Ce	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	Cg	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	Da	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	Dc	370/379 (98%)	370 (100%)	0	100	100
17	De	370/379 (98%)	369 (100%)	1 (0%)	92	97
17	Dg	370/379 (98%)	369 (100%)	1 (0%)	92	97

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	1b	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	1d	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	1f	361/374 (96%)	359 (99%)	2 (1%)	86	94
18	1h	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	2b	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	2d	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	2f	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	2h	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	3b	361/374 (96%)	359 (99%)	2 (1%)	86	94
18	3d	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	3f	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	3h	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	4b	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	4d	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	4f	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	4h	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	5b	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	5d	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	5f	361/374 (96%)	357 (99%)	4 (1%)	73	88
18	5h	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	6b	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	6d	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	6f	361/374 (96%)	358 (99%)	3 (1%)	81	91
18	6h	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	7b	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	7d	361/374 (96%)	359 (99%)	2 (1%)	86	94
18	7f	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	7h	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	8b	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	8d	361/374 (96%)	359 (99%)	2 (1%)	86	94
18	8f	361/374 (96%)	360 (100%)	1 (0%)	92	97

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	8h	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	9b	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	9d	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	9f	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	9h	361/374 (96%)	359 (99%)	2 (1%)	86	94
18	Ab	361/374 (96%)	359 (99%)	2 (1%)	86	94
18	Ad	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Af	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Ah	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Bb	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Bd	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Bf	361/374 (96%)	359 (99%)	2 (1%)	86	94
18	Bh	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Cb	361/374 (96%)	359 (99%)	2 (1%)	86	94
18	Cd	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Cf	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Ch	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Db	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Dd	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Df	361/374 (96%)	360 (100%)	1 (0%)	92	97
18	Dh	361/374 (96%)	360 (100%)	1 (0%)	92	97
All	All	46424/55144 (84%)	46307 (100%)	117 (0%)	92	97

All (117) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0A	325	HIS
1	0A	524	ARG
1	0C	399	LYS
1	0D	399	LYS
2	0H	152	ARG
3	0I	96	HIS
3	0I	289	ASN
3	0I	438	LYS
7	0Q	576	ARG

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Mol	Chain	Res	Type
7	0S	576	ARG
12	0X	170	ASN
12	0Y	22	LEU
12	0Y	23	LYS
12	0Y	222	MET
12	1A	23	LYS
12	1A	222	MET
13	1B	1169	ARG
13	1B	1338	ARG
13	1C	1169	ARG
13	1C	1338	ARG
14	1D	911	LEU
14	1G	1051	ARG
17	1a	247	ASN
18	1b	308	ARG
18	1d	308	ARG
17	1e	247	ASN
18	1f	50	ASN
18	1f	308	ARG
17	1g	247	ASN
18	1h	308	ARG
18	2b	308	ARG
18	2d	308	ARG
17	2e	247	ASN
18	2f	308	ARG
17	2g	247	ASN
18	2h	308	ARG
17	3a	306	ARG
17	3a	332	ASN
18	3b	308	ARG
18	3b	339	ARG
18	3d	308	ARG
18	3f	308	ARG
18	3h	308	ARG
18	4b	308	ARG
17	4c	247	ASN
18	4d	308	ARG
17	4e	247	ASN
18	4f	308	ARG
18	4h	308	ARG
17	5a	320	ARG
18	5b	308	ARG

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Mol	Chain	Res	Type
18	5d	308	ARG
17	5e	332	ASN
18	5f	221	ARG
18	5f	223	THR
18	5f	224	TYR
18	5f	308	ARG
17	5g	247	ASN
17	5g	332	ASN
18	5h	308	ARG
18	6b	308	ARG
17	6c	247	ASN
18	6d	308	ARG
18	6f	128	ASN
18	6f	308	ARG
18	6f	380	ASN
17	6g	247	ASN
18	6h	308	ARG
18	7b	308	ARG
18	7d	268	MET
18	7d	308	ARG
18	7f	308	ARG
18	7h	308	ARG
18	8b	308	ARG
17	8c	247	ASN
18	8d	308	ARG
18	8d	402	ARG
17	8e	247	ASN
18	8f	308	ARG
17	8g	247	ASN
18	8h	308	ARG
17	9a	247	ASN
18	9b	308	ARG
17	9c	247	ASN
18	9d	308	ARG
17	9e	247	ASN
18	9f	308	ARG
18	9h	50	ASN
18	9h	308	ARG
18	Ab	163	LYS
18	Ab	308	ARG
17	Ac	320	ARG
18	Ad	308	ARG

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Mol	Chain	Res	Type
18	Af	308	ARG
18	Ah	308	ARG
17	Ba	416	ASN
18	Bb	308	ARG
18	Bd	308	ARG
17	Be	247	ASN
18	Bf	50	ASN
18	Bf	308	ARG
18	Bh	308	ARG
18	Cb	308	ARG
18	Cb	380	ASN
17	Cc	247	ASN
18	Cd	308	ARG
17	Ce	247	ASN
18	Cf	308	ARG
17	Cg	247	ASN
18	Ch	308	ARG
17	Da	247	ASN
18	Db	308	ARG
18	Dd	308	ARG
17	De	247	ASN
18	Df	308	ARG
17	Dg	247	ASN
18	Dh	308	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (184) such sidechains are listed below:

Mol	Chain	Res	Type
1	0A	121	ASN
1	0A	295	ASN
1	0A	331	ASN
1	0A	432	HIS
1	0B	295	ASN
1	0C	432	HIS
1	0D	159	HIS
2	0E	45	HIS
2	0E	70	ASN
2	0E	93	ASN
2	0G	70	ASN
2	0G	93	ASN
2	0G	108	GLN
3	0I	520	GLN

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Mol	Chain	Res	Type
6	0P	143	ASN
7	0Q	46	ASN
7	0S	46	ASN
12	0X	92	GLN
12	0X	289	GLN
12	0Y	120	HIS
12	0Z	289	GLN
12	1A	47	GLN
13	1B	1154	GLN
13	1C	1154	GLN
13	1C	1518	ASN
14	1D	1052	GLN
14	1E	1013	GLN
14	1E	1052	GLN
14	1F	526	ASN
14	1G	526	ASN
14	1G	548	GLN
17	1a	256	ASN
18	1b	101	ASN
17	1c	256	ASN
18	1f	28	HIS
18	1f	101	ASN
17	1g	256	ASN
18	1h	101	ASN
17	2a	11	GLN
17	2a	204	ASN
17	2a	256	ASN
18	2b	101	ASN
18	2b	283	HIS
17	2c	134	GLN
17	2c	256	ASN
18	2d	15	GLN
18	2d	101	ASN
17	2e	247	ASN
17	2e	256	ASN
18	2f	61	HIS
18	2f	101	ASN
17	2g	134	GLN
17	2g	256	ASN
18	2h	101	ASN
17	3a	256	ASN
18	3b	101	ASN

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Mol	Chain	Res	Type
17	3c	134	GLN
17	3c	247	ASN
17	3c	256	ASN
18	3d	101	ASN
17	3e	134	GLN
17	3e	256	ASN
18	3f	101	ASN
17	3g	134	GLN
17	3g	245	GLN
17	3g	256	ASN
18	3h	101	ASN
18	3h	283	HIS
18	4b	101	ASN
17	4c	256	ASN
18	4d	61	HIS
18	4d	101	ASN
17	4e	256	ASN
18	4f	101	ASN
18	4f	283	HIS
17	4g	256	ASN
18	4h	61	HIS
17	5a	256	ASN
17	5c	245	GLN
17	5c	332	ASN
18	5f	101	ASN
17	5g	256	ASN
18	5h	101	ASN
18	6b	101	ASN
17	6c	245	GLN
17	6c	256	ASN
18	6d	101	ASN
17	6e	245	GLN
17	6e	256	ASN
18	6f	101	ASN
17	6g	256	ASN
18	6h	266	HIS
17	7a	256	ASN
18	7b	101	ASN
18	7b	283	HIS
17	7c	256	ASN
18	7d	101	ASN
18	7d	266	HIS

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Mol	Chain	Res	Type
17	7e	256	ASN
18	7f	283	HIS
18	7h	101	ASN
17	8a	134	GLN
17	8a	256	ASN
18	8b	101	ASN
17	8c	256	ASN
17	8e	245	GLN
17	8e	247	ASN
18	8f	88	HIS
18	8f	101	ASN
18	8f	283	HIS
17	8g	99	ASN
17	8g	134	GLN
17	8g	247	ASN
17	8g	256	ASN
17	8g	375	GLN
18	8h	88	HIS
18	8h	101	ASN
17	9a	256	ASN
17	9a	334	GLN
17	9a	347	ASN
18	9b	101	ASN
17	9c	256	ASN
18	9d	61	HIS
18	9d	101	ASN
18	9d	197	HIS
17	9e	256	ASN
17	9e	334	GLN
18	9f	101	ASN
18	9f	256	GLN
18	9f	283	HIS
18	9f	329	ASN
17	9g	256	ASN
18	9h	61	HIS
18	9h	101	ASN
18	9h	197	HIS
17	Aa	134	GLN
17	Aa	256	ASN
18	Ab	61	HIS
18	Ab	101	ASN
17	Ac	99	ASN

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Mol	Chain	Res	Type
17	Ac	256	ASN
18	Ad	101	ASN
17	Ae	256	ASN
18	Ah	101	ASN
17	Ba	256	ASN
17	Ba	396	HIS
18	Bb	15	GLN
18	Bb	101	ASN
17	Bc	247	ASN
17	Bc	256	ASN
17	Bc	348	ASN
18	Bd	101	ASN
17	Be	134	GLN
17	Be	256	ASN
18	Bf	15	GLN
18	Bf	101	ASN
18	Bf	393	HIS
17	Bg	94	GLN
17	Bg	247	ASN
17	Bg	256	ASN
17	Bg	348	ASN
17	Bg	396	HIS
18	Bh	101	ASN
17	Ca	256	ASN
18	Cb	101	ASN
17	Cc	256	ASN
18	Cd	101	ASN
17	Ce	256	ASN
18	Cf	101	ASN
17	Cg	94	GLN
17	Cg	256	ASN
18	Ch	101	ASN
18	Ch	393	HIS
17	Da	134	GLN
17	Da	256	ASN
17	Da	332	ASN
18	Db	101	ASN
17	Dc	256	ASN
18	Dd	28	HIS
18	Dd	101	ASN
17	De	256	ASN
18	Dh	28	HIS

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Mol	Chain	Res	Type
18	Dh	61	HIS
18	Dh	101	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 [i](#)

108 ligands are modelled in this entry.

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
21	GTP	Bd	501	-	26,34,34	1.21	2 (7%)	32,54,54	1.61	7 (21%)
20	GDP	Ag	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.35	4 (13%)
21	GTP	3d	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.63	7 (21%)
20	GDP	9a	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.41	4 (13%)
21	GTP	8d	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.63	7 (21%)
21	GTP	Ah	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.61	7 (21%)
20	GDP	Ca	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.37	4 (13%)
20	GDP	4g	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.36	4 (13%)
21	GTP	5d	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.58	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
20	GDP	Bg	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.39	4 (13%)
20	GDP	6g	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.36	4 (13%)
20	GDP	6c	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.36	4 (13%)
21	GTP	3h	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.63	7 (21%)
21	GTP	9b	501	-	26,34,34	1.22	2 (7%)	32,54,54	1.66	7 (21%)
20	GDP	5e	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.32	4 (13%)
21	GTP	3b	501	-	26,34,34	1.20	2 (7%)	32,54,54	1.64	7 (21%)
20	GDP	Ce	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.38	4 (13%)
20	GDP	3g	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
21	GTP	6d	501	-	26,34,34	1.16	2 (7%)	32,54,54	1.58	7 (21%)
20	GDP	4e	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.37	4 (13%)
19	ADP	0X	801	-	24,29,29	0.94	1 (4%)	29,45,45	1.41	4 (13%)
20	GDP	7g	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.36	4 (13%)
20	GDP	5c	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.34	4 (13%)
20	GDP	3a	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.38	4 (13%)
20	GDP	6a	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.37	4 (13%)
20	GDP	9g	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.42	4 (13%)
21	GTP	9f	501	-	26,34,34	1.22	2 (7%)	32,54,54	1.65	7 (21%)
21	GTP	Ad	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.60	7 (21%)
20	GDP	1c	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.40	4 (13%)
21	GTP	5f	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.60	7 (21%)
20	GDP	1a	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.37	4 (13%)
21	GTP	2b	501	-	26,34,34	1.19	2 (7%)	32,54,54	1.61	7 (21%)
20	GDP	2g	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.37	4 (13%)
21	GTP	8b	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.63	6 (18%)
20	GDP	Ac	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.31	4 (13%)
21	GTP	Bb	501	-	26,34,34	1.19	2 (7%)	32,54,54	1.64	7 (21%)
21	GTP	Db	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.62	7 (21%)
21	GTP	1f	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.60	7 (21%)
21	GTP	Cd	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.62	7 (21%)
20	GDP	4a	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.33	4 (13%)
20	GDP	Cc	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.40	4 (13%)
21	GTP	7f	501	-	26,34,34	1.16	2 (7%)	32,54,54	1.61	7 (21%)
21	GTP	Ab	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.60	7 (21%)
20	GDP	Ba	501	-	24,30,30	0.94	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
21	GTP	1d	501	-	26,34,34	1.20	2 (7%)	32,54,54	1.61	7 (21%)
21	GTP	4b	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.61	7 (21%)
20	GDP	Dc	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.38	4 (13%)
20	GDP	8e	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.37	4 (13%)
21	GTP	Af	501	-	26,34,34	1.19	2 (7%)	32,54,54	1.63	7 (21%)
21	GTP	7d	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.60	7 (21%)
20	GDP	2c	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.34	4 (13%)
20	GDP	3e	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.37	4 (13%)
20	GDP	6e	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.33	4 (13%)
21	GTP	6b	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.59	7 (21%)
20	GDP	Ae	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.33	4 (13%)
21	GTP	2d	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.63	7 (21%)
21	GTP	Bh	501	-	26,34,34	1.20	2 (7%)	32,54,54	1.64	7 (21%)
20	GDP	5a	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.36	4 (13%)
20	GDP	9c	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.41	4 (13%)
20	GDP	7a	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.36	4 (13%)
20	GDP	7e	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.37	4 (13%)
21	GTP	8f	501	-	26,34,34	1.16	2 (7%)	32,54,54	1.59	7 (21%)
20	GDP	Cg	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.40	4 (13%)
20	GDP	3c	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.39	4 (13%)
21	GTP	9d	501	-	26,34,34	1.20	2 (7%)	32,54,54	1.63	7 (21%)
20	GDP	8a	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.34	4 (13%)
20	GDP	8c	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.39	4 (13%)
20	GDP	Bc	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.41	4 (13%)
20	GDP	8g	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
21	GTP	Cf	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.62	7 (21%)
21	GTP	4f	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.62	7 (21%)
20	GDP	Be	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.34	4 (13%)
21	GTP	Ch	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.64	7 (21%)
21	GTP	7b	501	-	26,34,34	1.16	2 (7%)	32,54,54	1.59	7 (21%)
21	GTP	8h	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.61	7 (21%)
21	GTP	7h	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.60	7 (21%)
20	GDP	9e	501	-	24,30,30	0.97	1 (4%)	30,47,47	1.43	5 (16%)
21	GTP	Cb	501	-	26,34,34	1.19	2 (7%)	32,54,54	1.61	7 (21%)
21	GTP	Dd	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.61	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
20	GDP	1g	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
20	GDP	7c	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.35	4 (13%)
21	GTP	1b	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.60	7 (21%)
21	GTP	6h	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.59	6 (18%)
19	ADP	0Z	801	-	24,29,29	0.94	1 (4%)	29,45,45	1.40	4 (13%)
19	ADP	1A	801	-	24,29,29	0.94	1 (4%)	29,45,45	1.34	4 (13%)
21	GTP	6f	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.58	6 (18%)
21	GTP	2h	501	-	26,34,34	1.19	2 (7%)	32,54,54	1.60	7 (21%)
21	GTP	Df	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.64	7 (21%)
19	ADP	0Y	801	-	24,29,29	0.94	1 (4%)	29,45,45	1.32	4 (13%)
20	GDP	5g	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.38	4 (13%)
21	GTP	2f	501	-	26,34,34	1.19	2 (7%)	32,54,54	1.61	7 (21%)
20	GDP	Dg	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.38	4 (13%)
20	GDP	2e	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
20	GDP	2a	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.38	4 (13%)
20	GDP	Aa	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.38	4 (13%)
20	GDP	4c	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.35	4 (13%)
21	GTP	Dh	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.64	7 (21%)
21	GTP	4h	501	-	26,34,34	1.16	2 (7%)	32,54,54	1.60	7 (21%)
20	GDP	Da	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.36	4 (13%)
21	GTP	4d	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.63	7 (21%)
21	GTP	9h	501	-	26,34,34	1.21	2 (7%)	32,54,54	1.62	7 (21%)
21	GTP	1h	501	-	26,34,34	1.16	2 (7%)	32,54,54	1.58	6 (18%)
20	GDP	1e	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.40	4 (13%)
21	GTP	Bf	501	-	26,34,34	1.21	2 (7%)	32,54,54	1.61	7 (21%)
21	GTP	3f	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.63	7 (21%)
20	GDP	De	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.36	4 (13%)
21	GTP	5h	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.59	7 (21%)
21	GTP	5b	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.60	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
21	GTP	Bd	501	-	-	2/18/38/38	0/3/3/3
20	GDP	Ag	501	-	-	3/12/32/32	0/3/3/3
21	GTP	3d	501	-	-	3/18/38/38	0/3/3/3
20	GDP	9a	501	-	-	3/12/32/32	0/3/3/3
21	GTP	8d	501	-	-	3/18/38/38	0/3/3/3
21	GTP	Ah	501	-	-	2/18/38/38	0/3/3/3
20	GDP	Ca	501	-	-	3/12/32/32	0/3/3/3
20	GDP	4g	501	-	-	3/12/32/32	0/3/3/3
21	GTP	5d	501	-	-	3/18/38/38	0/3/3/3
20	GDP	Bg	501	-	-	3/12/32/32	0/3/3/3
20	GDP	6g	501	-	-	3/12/32/32	0/3/3/3
20	GDP	6c	501	-	-	3/12/32/32	0/3/3/3
21	GTP	3h	501	-	-	3/18/38/38	0/3/3/3
21	GTP	9b	501	-	-	3/18/38/38	0/3/3/3
20	GDP	5e	501	-	-	3/12/32/32	0/3/3/3
21	GTP	3b	501	-	-	2/18/38/38	0/3/3/3
20	GDP	Ce	501	-	-	3/12/32/32	0/3/3/3
20	GDP	3g	501	-	-	3/12/32/32	0/3/3/3
21	GTP	6d	501	-	-	3/18/38/38	0/3/3/3
20	GDP	4e	501	-	-	3/12/32/32	0/3/3/3
19	ADP	0X	801	-	-	3/12/32/32	0/3/3/3
20	GDP	7g	501	-	-	3/12/32/32	0/3/3/3
20	GDP	5c	501	-	-	3/12/32/32	0/3/3/3
20	GDP	3a	501	-	-	3/12/32/32	0/3/3/3
20	GDP	6a	501	-	-	3/12/32/32	0/3/3/3
20	GDP	9g	501	-	-	3/12/32/32	0/3/3/3
21	GTP	9f	501	-	-	3/18/38/38	0/3/3/3
21	GTP	Ad	501	-	-	3/18/38/38	0/3/3/3
20	GDP	1c	501	-	-	3/12/32/32	0/3/3/3
21	GTP	5f	501	-	-	3/18/38/38	0/3/3/3
20	GDP	1a	501	-	-	3/12/32/32	0/3/3/3
21	GTP	2b	501	-	-	2/18/38/38	0/3/3/3
20	GDP	2g	501	-	-	3/12/32/32	0/3/3/3
21	GTP	8b	501	-	-	3/18/38/38	0/3/3/3
20	GDP	Ac	501	-	-	3/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	GTP	Bb	501	-	-	3/18/38/38	0/3/3/3
21	GTP	Db	501	-	-	3/18/38/38	0/3/3/3
21	GTP	1f	501	-	-	2/18/38/38	0/3/3/3
21	GTP	Cd	501	-	-	2/18/38/38	0/3/3/3
20	GDP	4a	501	-	-	3/12/32/32	0/3/3/3
20	GDP	Cc	501	-	-	3/12/32/32	0/3/3/3
21	GTP	7f	501	-	-	2/18/38/38	0/3/3/3
21	GTP	Ab	501	-	-	3/18/38/38	0/3/3/3
20	GDP	Ba	501	-	-	3/12/32/32	0/3/3/3
21	GTP	1d	501	-	-	2/18/38/38	0/3/3/3
21	GTP	4b	501	-	-	3/18/38/38	0/3/3/3
20	GDP	Dc	501	-	-	3/12/32/32	0/3/3/3
20	GDP	8e	501	-	-	3/12/32/32	0/3/3/3
21	GTP	Af	501	-	-	3/18/38/38	0/3/3/3
21	GTP	7d	501	-	-	3/18/38/38	0/3/3/3
20	GDP	2c	501	-	-	3/12/32/32	0/3/3/3
20	GDP	3e	501	-	-	3/12/32/32	0/3/3/3
20	GDP	6e	501	-	-	3/12/32/32	0/3/3/3
21	GTP	6b	501	-	-	3/18/38/38	0/3/3/3
20	GDP	Ae	501	-	-	3/12/32/32	0/3/3/3
21	GTP	2d	501	-	-	3/18/38/38	0/3/3/3
21	GTP	Bh	501	-	-	3/18/38/38	0/3/3/3
20	GDP	5a	501	-	-	3/12/32/32	0/3/3/3
20	GDP	9c	501	-	-	3/12/32/32	0/3/3/3
20	GDP	7a	501	-	-	3/12/32/32	0/3/3/3
20	GDP	7e	501	-	-	3/12/32/32	0/3/3/3
21	GTP	8f	501	-	-	3/18/38/38	0/3/3/3
20	GDP	Cg	501	-	-	3/12/32/32	0/3/3/3
20	GDP	3c	501	-	-	3/12/32/32	0/3/3/3
21	GTP	9d	501	-	-	3/18/38/38	0/3/3/3
20	GDP	8a	501	-	-	3/12/32/32	0/3/3/3
20	GDP	8c	501	-	-	3/12/32/32	0/3/3/3
20	GDP	Bc	501	-	-	3/12/32/32	0/3/3/3
20	GDP	8g	501	-	-	3/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	GTP	Cf	501	-	-	3/18/38/38	0/3/3/3
21	GTP	4f	501	-	-	3/18/38/38	0/3/3/3
20	GDP	Be	501	-	-	3/12/32/32	0/3/3/3
21	GTP	Ch	501	-	-	3/18/38/38	0/3/3/3
21	GTP	7b	501	-	-	3/18/38/38	0/3/3/3
21	GTP	8h	501	-	-	3/18/38/38	0/3/3/3
21	GTP	7h	501	-	-	3/18/38/38	0/3/3/3
20	GDP	9e	501	-	-	3/12/32/32	0/3/3/3
21	GTP	Cb	501	-	-	3/18/38/38	0/3/3/3
21	GTP	Dd	501	-	-	2/18/38/38	0/3/3/3
20	GDP	1g	501	-	-	3/12/32/32	0/3/3/3
20	GDP	7c	501	-	-	3/12/32/32	0/3/3/3
21	GTP	1b	501	-	-	3/18/38/38	0/3/3/3
21	GTP	6h	501	-	-	3/18/38/38	0/3/3/3
19	ADP	0Z	801	-	-	4/12/32/32	0/3/3/3
19	ADP	1A	801	-	-	4/12/32/32	0/3/3/3
21	GTP	6f	501	-	-	3/18/38/38	0/3/3/3
21	GTP	2h	501	-	-	2/18/38/38	0/3/3/3
21	GTP	Df	501	-	-	3/18/38/38	0/3/3/3
19	ADP	0Y	801	-	-	5/12/32/32	0/3/3/3
20	GDP	5g	501	-	-	3/12/32/32	0/3/3/3
21	GTP	2f	501	-	-	3/18/38/38	0/3/3/3
20	GDP	Dg	501	-	-	3/12/32/32	0/3/3/3
20	GDP	2e	501	-	-	3/12/32/32	0/3/3/3
20	GDP	2a	501	-	-	3/12/32/32	0/3/3/3
20	GDP	Aa	501	-	-	3/12/32/32	0/3/3/3
20	GDP	4c	501	-	-	3/12/32/32	0/3/3/3
21	GTP	Dh	501	-	-	2/18/38/38	0/3/3/3
21	GTP	4h	501	-	-	2/18/38/38	0/3/3/3
20	GDP	Da	501	-	-	3/12/32/32	0/3/3/3
21	GTP	4d	501	-	-	3/18/38/38	0/3/3/3
21	GTP	9h	501	-	-	3/18/38/38	0/3/3/3
21	GTP	1h	501	-	-	2/18/38/38	0/3/3/3
20	GDP	1e	501	-	-	3/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	GTP	Bf	501	-	-	3/18/38/38	0/3/3/3
21	GTP	3f	501	-	-	3/18/38/38	0/3/3/3
20	GDP	De	501	-	-	3/12/32/32	0/3/3/3
21	GTP	5h	501	-	-	3/18/38/38	0/3/3/3
21	GTP	5b	501	-	-	3/18/38/38	0/3/3/3

All (160) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	9b	501	GTP	C5-C6	-4.33	1.38	1.47
21	9f	501	GTP	C5-C6	-4.29	1.38	1.47
21	Af	501	GTP	C5-C6	-4.28	1.38	1.47
21	9h	501	GTP	C5-C6	-4.27	1.38	1.47
21	Bf	501	GTP	C5-C6	-4.27	1.38	1.47
21	1d	501	GTP	C5-C6	-4.26	1.38	1.47
21	Bd	501	GTP	C5-C6	-4.25	1.38	1.47
21	Bh	501	GTP	C5-C6	-4.22	1.38	1.47
21	9d	501	GTP	C5-C6	-4.22	1.38	1.47
21	2b	501	GTP	C5-C6	-4.21	1.38	1.47
21	3f	501	GTP	C5-C6	-4.21	1.38	1.47
21	3b	501	GTP	C5-C6	-4.20	1.38	1.47
21	Ab	501	GTP	C5-C6	-4.20	1.38	1.47
21	2f	501	GTP	C5-C6	-4.20	1.38	1.47
21	Ah	501	GTP	C5-C6	-4.20	1.38	1.47
21	2h	501	GTP	C5-C6	-4.19	1.38	1.47
21	Ch	501	GTP	C5-C6	-4.19	1.38	1.47
21	Dh	501	GTP	C5-C6	-4.19	1.38	1.47
21	1f	501	GTP	C5-C6	-4.19	1.38	1.47
21	Bb	501	GTP	C5-C6	-4.18	1.38	1.47
21	2d	501	GTP	C5-C6	-4.18	1.38	1.47
21	4f	501	GTP	C5-C6	-4.18	1.38	1.47
21	3d	501	GTP	C5-C6	-4.17	1.38	1.47
21	3h	501	GTP	C5-C6	-4.17	1.38	1.47
21	5f	501	GTP	C5-C6	-4.17	1.39	1.47
21	5b	501	GTP	C5-C6	-4.16	1.39	1.47
21	7d	501	GTP	C5-C6	-4.16	1.39	1.47
21	Cb	501	GTP	C5-C6	-4.15	1.39	1.47
21	Df	501	GTP	C5-C6	-4.15	1.39	1.47
21	4b	501	GTP	C5-C6	-4.15	1.39	1.47
21	7b	501	GTP	C5-C6	-4.15	1.39	1.47
21	8h	501	GTP	C5-C6	-4.15	1.39	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	Cf	501	GTP	C5-C6	-4.14	1.39	1.47
21	7h	501	GTP	C5-C6	-4.14	1.39	1.47
21	Dd	501	GTP	C5-C6	-4.14	1.39	1.47
21	4d	501	GTP	C5-C6	-4.14	1.39	1.47
21	1b	501	GTP	C5-C6	-4.13	1.39	1.47
21	Cd	501	GTP	C5-C6	-4.13	1.39	1.47
21	Db	501	GTP	C5-C6	-4.13	1.39	1.47
21	Ad	501	GTP	C5-C6	-4.13	1.39	1.47
21	1h	501	GTP	C5-C6	-4.12	1.39	1.47
21	8f	501	GTP	C5-C6	-4.10	1.39	1.47
21	4h	501	GTP	C5-C6	-4.10	1.39	1.47
21	7f	501	GTP	C5-C6	-4.09	1.39	1.47
21	5d	501	GTP	C5-C6	-4.08	1.39	1.47
21	8d	501	GTP	C5-C6	-4.08	1.39	1.47
21	6b	501	GTP	C5-C6	-4.06	1.39	1.47
21	6d	501	GTP	C5-C6	-4.05	1.39	1.47
21	8b	501	GTP	C5-C6	-4.00	1.39	1.47
21	5h	501	GTP	C5-C6	-3.97	1.39	1.47
21	6f	501	GTP	C5-C6	-3.97	1.39	1.47
21	6h	501	GTP	C5-C6	-3.92	1.39	1.47
20	Bg	501	GDP	C6-N1	-2.63	1.33	1.37
20	De	501	GDP	C6-N1	-2.62	1.34	1.37
20	9a	501	GDP	C6-N1	-2.61	1.34	1.37
20	9e	501	GDP	C6-N1	-2.61	1.34	1.37
20	Be	501	GDP	C6-N1	-2.61	1.34	1.37
20	9c	501	GDP	C6-N1	-2.60	1.34	1.37
20	Ce	501	GDP	C6-N1	-2.60	1.34	1.37
20	Da	501	GDP	C6-N1	-2.60	1.34	1.37
20	9g	501	GDP	C6-N1	-2.58	1.34	1.37
20	5a	501	GDP	C6-N1	-2.58	1.34	1.37
20	Cc	501	GDP	C6-N1	-2.58	1.34	1.37
20	Bc	501	GDP	C6-N1	-2.57	1.34	1.37
20	Cg	501	GDP	C6-N1	-2.56	1.34	1.37
20	Ag	501	GDP	C6-N1	-2.55	1.34	1.37
20	1e	501	GDP	C6-N1	-2.55	1.34	1.37
20	1a	501	GDP	C6-N1	-2.55	1.34	1.37
20	1c	501	GDP	C6-N1	-2.53	1.34	1.37
20	Ba	501	GDP	C6-N1	-2.53	1.34	1.37
20	Dg	501	GDP	C6-N1	-2.53	1.34	1.37
20	5c	501	GDP	C6-N1	-2.53	1.34	1.37
20	2g	501	GDP	C6-N1	-2.53	1.34	1.37
20	2a	501	GDP	C6-N1	-2.52	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	Dc	501	GDP	C6-N1	-2.52	1.34	1.37
20	5e	501	GDP	C6-N1	-2.52	1.34	1.37
20	2e	501	GDP	C6-N1	-2.51	1.34	1.37
20	8a	501	GDP	C6-N1	-2.51	1.34	1.37
20	3e	501	GDP	C6-N1	-2.51	1.34	1.37
20	4a	501	GDP	C6-N1	-2.51	1.34	1.37
20	4c	501	GDP	C6-N1	-2.50	1.34	1.37
20	6g	501	GDP	C6-N1	-2.50	1.34	1.37
20	Ae	501	GDP	C6-N1	-2.49	1.34	1.37
20	4g	501	GDP	C6-N1	-2.49	1.34	1.37
20	7c	501	GDP	C6-N1	-2.48	1.34	1.37
20	Aa	501	GDP	C6-N1	-2.48	1.34	1.37
20	3g	501	GDP	C6-N1	-2.47	1.34	1.37
20	Ac	501	GDP	C6-N1	-2.47	1.34	1.37
20	3a	501	GDP	C6-N1	-2.47	1.34	1.37
19	1A	801	ADP	C5-C4	2.46	1.47	1.40
20	1g	501	GDP	C6-N1	-2.46	1.34	1.37
20	6a	501	GDP	C6-N1	-2.46	1.34	1.37
20	4e	501	GDP	C6-N1	-2.45	1.34	1.37
20	Ca	501	GDP	C6-N1	-2.45	1.34	1.37
19	0Y	801	ADP	C5-C4	2.45	1.47	1.40
20	3c	501	GDP	C6-N1	-2.45	1.34	1.37
20	2c	501	GDP	C6-N1	-2.44	1.34	1.37
20	7g	501	GDP	C6-N1	-2.43	1.34	1.37
19	0Z	801	ADP	C5-C4	2.43	1.47	1.40
20	5g	501	GDP	C6-N1	-2.42	1.34	1.37
19	0X	801	ADP	C5-C4	2.42	1.47	1.40
20	8c	501	GDP	C6-N1	-2.41	1.34	1.37
20	8g	501	GDP	C6-N1	-2.40	1.34	1.37
20	6e	501	GDP	C6-N1	-2.39	1.34	1.37
20	7e	501	GDP	C6-N1	-2.39	1.34	1.37
20	8e	501	GDP	C6-N1	-2.39	1.34	1.37
20	7a	501	GDP	C6-N1	-2.39	1.34	1.37
20	6c	501	GDP	C6-N1	-2.34	1.34	1.37
21	6d	501	GTP	C2-N3	2.26	1.38	1.33
21	5h	501	GTP	C2-N3	2.25	1.38	1.33
21	5d	501	GTP	C2-N3	2.23	1.38	1.33
21	Ad	501	GTP	C2-N3	2.22	1.38	1.33
21	6h	501	GTP	C2-N3	2.22	1.38	1.33
21	3b	501	GTP	C2-N3	2.21	1.38	1.33
21	Af	501	GTP	C2-N3	2.21	1.38	1.33
21	5b	501	GTP	C2-N3	2.20	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	Ab	501	GTP	C2-N3	2.19	1.38	1.33
21	4d	501	GTP	C2-N3	2.19	1.38	1.33
21	6f	501	GTP	C2-N3	2.19	1.38	1.33
21	4h	501	GTP	C2-N3	2.18	1.38	1.33
21	Ch	501	GTP	C2-N3	2.18	1.38	1.33
21	7d	501	GTP	C2-N3	2.18	1.38	1.33
21	5f	501	GTP	C2-N3	2.18	1.38	1.33
21	7h	501	GTP	C2-N3	2.18	1.38	1.33
21	Ah	501	GTP	C2-N3	2.17	1.38	1.33
21	6b	501	GTP	C2-N3	2.17	1.38	1.33
21	3f	501	GTP	C2-N3	2.16	1.38	1.33
21	Cd	501	GTP	C2-N3	2.16	1.38	1.33
21	Dh	501	GTP	C2-N3	2.15	1.38	1.33
21	7b	501	GTP	C2-N3	2.15	1.38	1.33
21	4b	501	GTP	C2-N3	2.13	1.38	1.33
21	9d	501	GTP	C2-N3	2.13	1.38	1.33
21	3d	501	GTP	C2-N3	2.13	1.38	1.33
21	1b	501	GTP	C2-N3	2.13	1.38	1.33
21	9h	501	GTP	C2-N3	2.13	1.38	1.33
21	1d	501	GTP	C2-N3	2.12	1.38	1.33
21	4f	501	GTP	C2-N3	2.12	1.38	1.33
21	2f	501	GTP	C2-N3	2.12	1.38	1.33
21	1f	501	GTP	C2-N3	2.12	1.38	1.33
21	2b	501	GTP	C2-N3	2.11	1.38	1.33
21	Bf	501	GTP	C2-N3	2.10	1.38	1.33
21	7f	501	GTP	C2-N3	2.10	1.38	1.33
21	2d	501	GTP	C2-N3	2.09	1.38	1.33
21	Cb	501	GTP	C2-N3	2.09	1.38	1.33
21	3h	501	GTP	C2-N3	2.09	1.38	1.33
21	Bh	501	GTP	C2-N3	2.09	1.38	1.33
21	Dd	501	GTP	C2-N3	2.09	1.38	1.33
21	Df	501	GTP	C2-N3	2.08	1.38	1.33
21	8b	501	GTP	C2-N3	2.08	1.38	1.33
21	9f	501	GTP	C2-N3	2.08	1.38	1.33
21	Db	501	GTP	C2-N3	2.08	1.38	1.33
21	Bd	501	GTP	C2-N3	2.08	1.38	1.33
21	9b	501	GTP	C2-N3	2.07	1.38	1.33
21	2h	501	GTP	C2-N3	2.07	1.38	1.33
21	Bb	501	GTP	C2-N3	2.07	1.38	1.33
21	8h	501	GTP	C2-N3	2.07	1.38	1.33
21	8d	501	GTP	C2-N3	2.06	1.38	1.33
21	8f	501	GTP	C2-N3	2.05	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	1h	501	GTP	C2-N3	2.02	1.38	1.33
21	Cf	501	GTP	C2-N3	2.01	1.38	1.33

All (585) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	9a	501	GDP	PA-O3A-PB	-4.71	116.66	132.83
20	9g	501	GDP	PA-O3A-PB	-4.70	116.69	132.83
20	9c	501	GDP	PA-O3A-PB	-4.63	116.95	132.83
20	9e	501	GDP	PA-O3A-PB	-4.60	117.05	132.83
20	Cc	501	GDP	PA-O3A-PB	-4.58	117.10	132.83
20	1c	501	GDP	PA-O3A-PB	-4.50	117.40	132.83
20	8c	501	GDP	PA-O3A-PB	-4.48	117.45	132.83
20	Cg	501	GDP	PA-O3A-PB	-4.48	117.45	132.83
20	Bc	501	GDP	PA-O3A-PB	-4.42	117.65	132.83
20	1e	501	GDP	PA-O3A-PB	-4.42	117.66	132.83
20	4e	501	GDP	PA-O3A-PB	-4.42	117.67	132.83
20	7g	501	GDP	PA-O3A-PB	-4.39	117.75	132.83
20	Bg	501	GDP	PA-O3A-PB	-4.39	117.76	132.83
20	2g	501	GDP	PA-O3A-PB	-4.35	117.92	132.83
20	Dg	501	GDP	PA-O3A-PB	-4.35	117.92	132.83
20	Ca	501	GDP	PA-O3A-PB	-4.33	117.96	132.83
20	7e	501	GDP	PA-O3A-PB	-4.33	117.96	132.83
20	Dc	501	GDP	PA-O3A-PB	-4.32	118.00	132.83
20	3c	501	GDP	PA-O3A-PB	-4.31	118.04	132.83
20	1a	501	GDP	PA-O3A-PB	-4.30	118.05	132.83
20	Aa	501	GDP	PA-O3A-PB	-4.29	118.09	132.83
20	2a	501	GDP	PA-O3A-PB	-4.28	118.13	132.83
20	3a	501	GDP	PA-O3A-PB	-4.27	118.16	132.83
20	Ce	501	GDP	PA-O3A-PB	-4.27	118.16	132.83
20	3e	501	GDP	PA-O3A-PB	-4.27	118.17	132.83
20	6g	501	GDP	PA-O3A-PB	-4.25	118.24	132.83
20	6c	501	GDP	PA-O3A-PB	-4.25	118.25	132.83
20	8e	501	GDP	PA-O3A-PB	-4.24	118.27	132.83
20	5g	501	GDP	PA-O3A-PB	-4.23	118.32	132.83
20	4c	501	GDP	PA-O3A-PB	-4.19	118.44	132.83
20	7c	501	GDP	PA-O3A-PB	-4.19	118.46	132.83
20	2e	501	GDP	PA-O3A-PB	-4.18	118.48	132.83
20	6a	501	GDP	PA-O3A-PB	-4.18	118.49	132.83
20	Da	501	GDP	PA-O3A-PB	-4.17	118.50	132.83
20	7a	501	GDP	PA-O3A-PB	-4.17	118.53	132.83
20	3g	501	GDP	PA-O3A-PB	-4.16	118.53	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	5a	501	GDP	PA-O3A-PB	-4.16	118.54	132.83
20	4g	501	GDP	PA-O3A-PB	-4.16	118.55	132.83
20	Ag	501	GDP	PA-O3A-PB	-4.15	118.59	132.83
20	1g	501	GDP	PA-O3A-PB	-4.12	118.68	132.83
20	Be	501	GDP	PA-O3A-PB	-4.11	118.71	132.83
20	4a	501	GDP	PA-O3A-PB	-4.09	118.78	132.83
20	Ae	501	GDP	PA-O3A-PB	-4.08	118.83	132.83
20	8g	501	GDP	PA-O3A-PB	-4.07	118.87	132.83
20	6e	501	GDP	PA-O3A-PB	-4.06	118.88	132.83
20	8a	501	GDP	PA-O3A-PB	-4.06	118.88	132.83
21	Dh	501	GTP	PA-O3A-PB	-4.06	118.90	132.83
21	7f	501	GTP	PA-O3A-PB	-4.03	118.99	132.83
21	3d	501	GTP	PA-O3A-PB	-4.03	119.00	132.83
20	2c	501	GDP	PA-O3A-PB	-4.03	119.01	132.83
20	De	501	GDP	PA-O3A-PB	-4.02	119.03	132.83
21	Cf	501	GTP	PA-O3A-PB	-4.01	119.06	132.83
21	7d	501	GTP	PA-O3A-PB	-4.00	119.11	132.83
20	5c	501	GDP	PA-O3A-PB	-4.00	119.12	132.83
21	3h	501	GTP	PA-O3A-PB	-3.99	119.13	132.83
21	9f	501	GTP	PB-O3B-PG	-3.99	119.15	132.83
21	9b	501	GTP	PB-O3B-PG	-3.98	119.15	132.83
21	Bh	501	GTP	PA-O3A-PB	-3.97	119.21	132.83
20	5e	501	GDP	PA-O3A-PB	-3.96	119.25	132.83
21	2d	501	GTP	PA-O3A-PB	-3.93	119.34	132.83
21	4b	501	GTP	PA-O3A-PB	-3.92	119.37	132.83
21	Dd	501	GTP	PA-O3A-PB	-3.90	119.43	132.83
21	4f	501	GTP	PA-O3A-PB	-3.89	119.47	132.83
21	1f	501	GTP	PA-O3A-PB	-3.88	119.52	132.83
21	8b	501	GTP	PA-O3A-PB	-3.88	119.53	132.83
21	Bb	501	GTP	PB-O3B-PG	-3.87	119.53	132.83
21	Bb	501	GTP	PA-O3A-PB	-3.87	119.53	132.83
20	Ac	501	GDP	PA-O3A-PB	-3.86	119.57	132.83
21	4d	501	GTP	PA-O3A-PB	-3.86	119.57	132.83
21	4h	501	GTP	PA-O3A-PB	-3.86	119.57	132.83
21	Df	501	GTP	PB-O3B-PG	-3.86	119.59	132.83
21	8h	501	GTP	PA-O3A-PB	-3.85	119.61	132.83
21	5f	501	GTP	PA-O3A-PB	-3.85	119.63	132.83
21	Ah	501	GTP	PA-O3A-PB	-3.84	119.64	132.83
21	6h	501	GTP	PA-O3A-PB	-3.84	119.65	132.83
21	6b	501	GTP	PA-O3A-PB	-3.84	119.66	132.83
21	Df	501	GTP	PA-O3A-PB	-3.84	119.66	132.83
21	2b	501	GTP	PA-O3A-PB	-3.84	119.66	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	1d	501	GTP	PA-O3A-PB	-3.83	119.67	132.83
21	8f	501	GTP	PA-O3A-PB	-3.83	119.68	132.83
21	3f	501	GTP	PA-O3A-PB	-3.83	119.70	132.83
21	Af	501	GTP	PA-O3A-PB	-3.82	119.73	132.83
21	Cb	501	GTP	PA-O3A-PB	-3.81	119.76	132.83
21	9h	501	GTP	PA-O3A-PB	-3.80	119.78	132.83
21	Ch	501	GTP	PA-O3A-PB	-3.80	119.79	132.83
21	5d	501	GTP	PA-O3A-PB	-3.80	119.80	132.83
20	Ba	501	GDP	PA-O3A-PB	-3.79	119.81	132.83
21	5b	501	GTP	PA-O3A-PB	-3.79	119.81	132.83
21	7b	501	GTP	PA-O3A-PB	-3.79	119.81	132.83
21	7h	501	GTP	PA-O3A-PB	-3.79	119.82	132.83
21	Ab	501	GTP	PA-O3A-PB	-3.79	119.82	132.83
21	Db	501	GTP	PB-O3B-PG	-3.77	119.88	132.83
21	1b	501	GTP	PA-O3A-PB	-3.77	119.89	132.83
21	4f	501	GTP	PB-O3B-PG	-3.77	119.89	132.83
21	6f	501	GTP	PA-O3A-PB	-3.77	119.89	132.83
21	9d	501	GTP	PA-O3A-PB	-3.76	119.93	132.83
21	Bf	501	GTP	PB-O3B-PG	-3.76	119.94	132.83
21	3b	501	GTP	PA-O3A-PB	-3.76	119.94	132.83
21	2f	501	GTP	PA-O3A-PB	-3.75	119.97	132.83
21	2h	501	GTP	PA-O3A-PB	-3.75	119.97	132.83
21	8b	501	GTP	PB-O3B-PG	-3.74	119.98	132.83
21	Cd	501	GTP	PA-O3A-PB	-3.73	120.01	132.83
21	8d	501	GTP	PA-O3A-PB	-3.73	120.02	132.83
19	0X	801	ADP	PA-O3A-PB	-3.73	120.03	132.83
21	4d	501	GTP	PB-O3B-PG	-3.71	120.09	132.83
19	0Z	801	ADP	PA-O3A-PB	-3.71	120.10	132.83
21	8d	501	GTP	PB-O3B-PG	-3.69	120.16	132.83
21	Db	501	GTP	PA-O3A-PB	-3.69	120.16	132.83
21	5h	501	GTP	PA-O3A-PB	-3.69	120.17	132.83
21	Bd	501	GTP	PA-O3A-PB	-3.69	120.17	132.83
21	3h	501	GTP	PB-O3B-PG	-3.69	120.17	132.83
21	Ah	501	GTP	PB-O3B-PG	-3.69	120.18	132.83
21	2d	501	GTP	PB-O3B-PG	-3.68	120.19	132.83
21	3f	501	GTP	PB-O3B-PG	-3.66	120.28	132.83
21	Ad	501	GTP	PA-O3A-PB	-3.66	120.28	132.83
21	3b	501	GTP	PB-O3B-PG	-3.65	120.29	132.83
21	Ch	501	GTP	PB-O3B-PG	-3.65	120.31	132.83
21	Bf	501	GTP	PA-O3A-PB	-3.65	120.31	132.83
21	Af	501	GTP	PB-O3B-PG	-3.64	120.33	132.83
21	9b	501	GTP	PA-O3A-PB	-3.64	120.34	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	1h	501	GTP	PA-O3A-PB	-3.62	120.41	132.83
21	3d	501	GTP	PB-O3B-PG	-3.62	120.42	132.83
21	9f	501	GTP	PA-O3A-PB	-3.60	120.47	132.83
21	6d	501	GTP	PA-O3A-PB	-3.59	120.50	132.83
21	Bd	501	GTP	PB-O3B-PG	-3.57	120.58	132.83
21	Cb	501	GTP	PB-O3B-PG	-3.55	120.64	132.83
21	2h	501	GTP	PB-O3B-PG	-3.55	120.66	132.83
21	2f	501	GTP	PB-O3B-PG	-3.53	120.71	132.83
21	Bh	501	GTP	PB-O3B-PG	-3.52	120.74	132.83
21	Ab	501	GTP	PB-O3B-PG	-3.52	120.75	132.83
19	1A	801	ADP	PA-O3A-PB	-3.52	120.75	132.83
21	4h	501	GTP	PB-O3B-PG	-3.51	120.79	132.83
21	9d	501	GTP	PB-O3B-PG	-3.48	120.87	132.83
21	7f	501	GTP	PB-O3B-PG	-3.48	120.89	132.83
21	7b	501	GTP	PB-O3B-PG	-3.47	120.91	132.83
21	1d	501	GTP	PB-O3B-PG	-3.47	120.91	132.83
21	6h	501	GTP	PB-O3B-PG	-3.47	120.92	132.83
21	Cf	501	GTP	PB-O3B-PG	-3.47	120.93	132.83
21	8f	501	GTP	PB-O3B-PG	-3.46	120.96	132.83
21	Dd	501	GTP	PB-O3B-PG	-3.46	120.97	132.83
21	8h	501	GTP	PB-O3B-PG	-3.45	120.98	132.83
21	1b	501	GTP	PB-O3B-PG	-3.45	121.00	132.83
21	Ad	501	GTP	PB-O3B-PG	-3.44	121.00	132.83
21	7h	501	GTP	PB-O3B-PG	-3.44	121.03	132.83
21	Bh	501	GTP	C5-C6-N1	3.43	120.01	113.95
21	6f	501	GTP	PB-O3B-PG	-3.43	121.07	132.83
20	Aa	501	GDP	C3'-C2'-C1'	3.42	106.13	100.98
21	4b	501	GTP	PB-O3B-PG	-3.42	121.08	132.83
21	Cd	501	GTP	PB-O3B-PG	-3.42	121.08	132.83
21	5h	501	GTP	C5-C6-N1	3.42	119.98	113.95
21	9d	501	GTP	C5-C6-N1	3.41	119.97	113.95
21	7d	501	GTP	PB-O3B-PG	-3.40	121.14	132.83
21	Bd	501	GTP	C5-C6-N1	3.39	119.94	113.95
21	9h	501	GTP	C5-C6-N1	3.39	119.94	113.95
21	2b	501	GTP	C5-C6-N1	3.39	119.93	113.95
21	Bb	501	GTP	C5-C6-N1	3.39	119.93	113.95
21	4d	501	GTP	C5-C6-N1	3.39	119.93	113.95
21	3b	501	GTP	C5-C6-N1	3.39	119.93	113.95
21	1h	501	GTP	PB-O3B-PG	-3.38	121.22	132.83
21	5f	501	GTP	C5-C6-N1	3.38	119.92	113.95
21	9h	501	GTP	PB-O3B-PG	-3.37	121.25	132.83
21	Af	501	GTP	C5-C6-N1	3.36	119.88	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	5h	501	GTP	PB-O3B-PG	-3.36	121.31	132.83
21	6d	501	GTP	C5-C6-N1	3.36	119.88	113.95
21	2f	501	GTP	C5-C6-N1	3.35	119.87	113.95
21	6d	501	GTP	PB-O3B-PG	-3.35	121.33	132.83
21	2b	501	GTP	PB-O3B-PG	-3.35	121.33	132.83
21	5b	501	GTP	C5-C6-N1	3.35	119.86	113.95
21	Cd	501	GTP	C5-C6-N1	3.35	119.86	113.95
21	3f	501	GTP	C5-C6-N1	3.35	119.86	113.95
21	Ab	501	GTP	C5-C6-N1	3.35	119.86	113.95
20	Cg	501	GDP	C3'-C2'-C1'	3.35	106.02	100.98
21	4b	501	GTP	C5-C6-N1	3.34	119.85	113.95
21	6b	501	GTP	C5-C6-N1	3.34	119.85	113.95
21	Cb	501	GTP	C5-C6-N1	3.34	119.84	113.95
21	9f	501	GTP	C5-C6-N1	3.33	119.84	113.95
21	7d	501	GTP	C5-C6-N1	3.33	119.83	113.95
21	5b	501	GTP	PB-O3B-PG	-3.33	121.39	132.83
21	8b	501	GTP	C5-C6-N1	3.33	119.83	113.95
21	4h	501	GTP	C5-C6-N1	3.33	119.83	113.95
21	Dh	501	GTP	PB-O3B-PG	-3.33	121.41	132.83
21	1d	501	GTP	C5-C6-N1	3.33	119.83	113.95
21	Ah	501	GTP	C5-C6-N1	3.33	119.83	113.95
21	1f	501	GTP	C5-C6-N1	3.32	119.82	113.95
21	3d	501	GTP	C5-C6-N1	3.32	119.82	113.95
21	5d	501	GTP	PB-O3B-PG	-3.32	121.43	132.83
21	Bf	501	GTP	C5-C6-N1	3.32	119.81	113.95
21	5f	501	GTP	PB-O3B-PG	-3.32	121.44	132.83
21	Db	501	GTP	C5-C6-N1	3.31	119.79	113.95
20	3a	501	GDP	C3'-C2'-C1'	3.31	105.95	100.98
21	5d	501	GTP	C5-C6-N1	3.30	119.78	113.95
21	Cf	501	GTP	C5-C6-N1	3.30	119.78	113.95
21	Dh	501	GTP	C5-C6-N1	3.30	119.78	113.95
21	6b	501	GTP	PB-O3B-PG	-3.30	121.50	132.83
21	8d	501	GTP	C5-C6-N1	3.30	119.77	113.95
21	4f	501	GTP	C5-C6-N1	3.29	119.77	113.95
21	6f	501	GTP	C5-C6-N1	3.29	119.77	113.95
21	Df	501	GTP	C5-C6-N1	3.29	119.76	113.95
21	6h	501	GTP	C5-C6-N1	3.29	119.76	113.95
20	1e	501	GDP	C3'-C2'-C1'	3.29	105.93	100.98
21	Dd	501	GTP	C5-C6-N1	3.28	119.75	113.95
21	Ch	501	GTP	C5-C6-N1	3.28	119.75	113.95
20	Bc	501	GDP	C3'-C2'-C1'	3.28	105.92	100.98
21	9b	501	GTP	C5-C6-N1	3.28	119.74	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	7h	501	GTP	C5-C6-N1	3.28	119.74	113.95
21	8h	501	GTP	C5-C6-N1	3.28	119.73	113.95
19	0Y	801	ADP	PA-O3A-PB	-3.27	121.59	132.83
20	De	501	GDP	C3'-C2'-C1'	3.27	105.91	100.98
21	3h	501	GTP	C5-C6-N1	3.27	119.73	113.95
20	4g	501	GDP	C3'-C2'-C1'	3.27	105.90	100.98
21	Ad	501	GTP	C5-C6-N1	3.27	119.73	113.95
21	1h	501	GTP	C5-C6-N1	3.27	119.72	113.95
21	1b	501	GTP	C5-C6-N1	3.26	119.72	113.95
21	2d	501	GTP	C5-C6-N1	3.26	119.70	113.95
21	7b	501	GTP	C5-C6-N1	3.25	119.70	113.95
21	2h	501	GTP	C5-C6-N1	3.25	119.68	113.95
21	8f	501	GTP	C5-C6-N1	3.24	119.67	113.95
20	Bg	501	GDP	C3'-C2'-C1'	3.23	105.85	100.98
21	7f	501	GTP	C5-C6-N1	3.23	119.65	113.95
20	Ca	501	GDP	C3'-C2'-C1'	3.23	105.83	100.98
20	3e	501	GDP	C3'-C2'-C1'	3.21	105.82	100.98
21	1f	501	GTP	PB-O3B-PG	-3.21	121.80	132.83
20	Da	501	GDP	C3'-C2'-C1'	3.21	105.81	100.98
20	6a	501	GDP	C3'-C2'-C1'	3.20	105.80	100.98
20	2a	501	GDP	C3'-C2'-C1'	3.19	105.78	100.98
20	3c	501	GDP	C3'-C2'-C1'	3.19	105.78	100.98
20	5a	501	GDP	C3'-C2'-C1'	3.18	105.77	100.98
20	Be	501	GDP	C3'-C2'-C1'	3.16	105.74	100.98
20	8a	501	GDP	C3'-C2'-C1'	3.15	105.73	100.98
20	3g	501	GDP	C3'-C2'-C1'	3.14	105.70	100.98
19	0X	801	ADP	N3-C2-N1	-3.14	123.77	128.68
20	7a	501	GDP	C3'-C2'-C1'	3.13	105.69	100.98
20	Ce	501	GDP	C3'-C2'-C1'	3.13	105.69	100.98
20	8g	501	GDP	C3'-C2'-C1'	3.12	105.67	100.98
20	4a	501	GDP	C3'-C2'-C1'	3.12	105.67	100.98
19	0Z	801	ADP	N3-C2-N1	-3.11	123.81	128.68
20	4e	501	GDP	C3'-C2'-C1'	3.11	105.66	100.98
20	8e	501	GDP	C3'-C2'-C1'	3.11	105.65	100.98
20	5c	501	GDP	C3'-C2'-C1'	3.10	105.64	100.98
20	Ag	501	GDP	C3'-C2'-C1'	3.08	105.62	100.98
20	8c	501	GDP	C3'-C2'-C1'	3.08	105.62	100.98
20	5e	501	GDP	C3'-C2'-C1'	3.08	105.61	100.98
21	Ch	501	GTP	C8-N7-C5	3.08	108.85	102.99
21	6f	501	GTP	C8-N7-C5	3.07	108.85	102.99
20	Ba	501	GDP	C3'-C2'-C1'	3.07	105.61	100.98
20	6c	501	GDP	C3'-C2'-C1'	3.07	105.60	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	Bf	501	GTP	C8-N7-C5	3.07	108.84	102.99
21	6h	501	GTP	C8-N7-C5	3.07	108.83	102.99
20	2c	501	GDP	C3'-C2'-C1'	3.06	105.59	100.98
20	4c	501	GDP	C3'-C2'-C1'	3.06	105.59	100.98
21	Dh	501	GTP	C2-N1-C6	-3.06	119.46	125.10
20	1a	501	GDP	C3'-C2'-C1'	3.06	105.59	100.98
21	Ad	501	GTP	C8-N7-C5	3.06	108.82	102.99
21	1h	501	GTP	C8-N7-C5	3.05	108.81	102.99
21	8b	501	GTP	C8-N7-C5	3.05	108.80	102.99
21	5h	501	GTP	C8-N7-C5	3.05	108.80	102.99
21	Bd	501	GTP	C2-N1-C6	-3.05	119.48	125.10
21	Cd	501	GTP	C2-N1-C6	-3.04	119.49	125.10
21	Bb	501	GTP	C8-N7-C5	3.04	108.78	102.99
19	1A	801	ADP	N3-C2-N1	-3.04	123.93	128.68
21	Bh	501	GTP	C8-N7-C5	3.04	108.78	102.99
21	4d	501	GTP	C8-N7-C5	3.04	108.78	102.99
20	5g	501	GDP	C3'-C2'-C1'	3.03	105.54	100.98
21	Db	501	GTP	C8-N7-C5	3.03	108.77	102.99
21	Dd	501	GTP	C8-N7-C5	3.03	108.77	102.99
21	5d	501	GTP	C8-N7-C5	3.03	108.76	102.99
21	2d	501	GTP	C8-N7-C5	3.03	108.76	102.99
21	8f	501	GTP	C8-N7-C5	3.03	108.76	102.99
21	7b	501	GTP	C8-N7-C5	3.03	108.76	102.99
21	5h	501	GTP	C2-N1-C6	-3.03	119.53	125.10
21	5b	501	GTP	C3'-C2'-C1'	3.02	105.53	100.98
21	Bd	501	GTP	C8-N7-C5	3.02	108.75	102.99
21	8d	501	GTP	C8-N7-C5	3.02	108.75	102.99
21	Cd	501	GTP	C8-N7-C5	3.02	108.75	102.99
20	6e	501	GDP	C3'-C2'-C1'	3.02	105.53	100.98
20	Dg	501	GDP	C3'-C2'-C1'	3.02	105.53	100.98
21	3b	501	GTP	C8-N7-C5	3.02	108.74	102.99
21	6d	501	GTP	C8-N7-C5	3.02	108.74	102.99
21	6b	501	GTP	C8-N7-C5	3.02	108.74	102.99
21	9b	501	GTP	C8-N7-C5	3.02	108.74	102.99
21	1f	501	GTP	C2-N1-C6	-3.02	119.55	125.10
21	Ch	501	GTP	C3'-C2'-C1'	3.01	105.52	100.98
21	Cb	501	GTP	C8-N7-C5	3.01	108.73	102.99
20	6g	501	GDP	C3'-C2'-C1'	3.01	105.52	100.98
20	1c	501	GDP	C3'-C2'-C1'	3.01	105.51	100.98
21	4b	501	GTP	C8-N7-C5	3.01	108.72	102.99
21	8h	501	GTP	C8-N7-C5	3.01	108.72	102.99
21	9d	501	GTP	C8-N7-C5	3.01	108.72	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	3b	501	GTP	C2-N1-C6	-3.01	119.56	125.10
21	7f	501	GTP	C8-N7-C5	3.01	108.72	102.99
21	Cd	501	GTP	C3'-C2'-C1'	3.00	105.50	100.98
21	9d	501	GTP	C2-N1-C6	-3.00	119.57	125.10
21	3d	501	GTP	C2-N1-C6	-3.00	119.57	125.10
21	1f	501	GTP	C8-N7-C5	3.00	108.71	102.99
20	2e	501	GDP	C3'-C2'-C1'	3.00	105.49	100.98
21	5b	501	GTP	C8-N7-C5	3.00	108.70	102.99
20	Ae	501	GDP	C3'-C2'-C1'	3.00	105.49	100.98
19	0Y	801	ADP	N3-C2-N1	-3.00	124.00	128.68
21	2f	501	GTP	C8-N7-C5	3.00	108.70	102.99
21	4d	501	GTP	C2-N1-C6	-2.99	119.58	125.10
21	7h	501	GTP	C8-N7-C5	2.99	108.69	102.99
20	1g	501	GDP	C3'-C2'-C1'	2.99	105.48	100.98
21	6b	501	GTP	C2-N1-C6	-2.99	119.59	125.10
21	Dh	501	GTP	C8-N7-C5	2.99	108.68	102.99
21	4f	501	GTP	C8-N7-C5	2.99	108.68	102.99
21	4h	501	GTP	C8-N7-C5	2.99	108.68	102.99
21	Ch	501	GTP	C2-N1-C6	-2.99	119.60	125.10
21	9h	501	GTP	C8-N7-C5	2.99	108.68	102.99
21	2f	501	GTP	C2-N1-C6	-2.99	119.60	125.10
21	1b	501	GTP	C8-N7-C5	2.98	108.67	102.99
21	Bh	501	GTP	C2-N1-C6	-2.98	119.61	125.10
21	2b	501	GTP	C8-N7-C5	2.98	108.67	102.99
21	Cb	501	GTP	C2-N1-C6	-2.98	119.61	125.10
21	Af	501	GTP	C8-N7-C5	2.98	108.67	102.99
21	Ab	501	GTP	C2-N1-C6	-2.98	119.61	125.10
21	Cf	501	GTP	C2-N1-C6	-2.98	119.61	125.10
21	9f	501	GTP	C8-N7-C5	2.97	108.66	102.99
21	Cf	501	GTP	C8-N7-C5	2.97	108.66	102.99
21	3f	501	GTP	C2-N1-C6	-2.97	119.63	125.10
21	5f	501	GTP	C8-N7-C5	2.97	108.64	102.99
21	9f	501	GTP	C2-N1-C6	-2.97	119.63	125.10
21	Df	501	GTP	C2-N1-C6	-2.97	119.63	125.10
21	3d	501	GTP	C8-N7-C5	2.97	108.64	102.99
21	5b	501	GTP	C2-N1-C6	-2.97	119.63	125.10
21	8d	501	GTP	C3'-C2'-C1'	2.97	105.44	100.98
21	3h	501	GTP	C8-N7-C5	2.97	108.64	102.99
21	2b	501	GTP	C2-N1-C6	-2.97	119.64	125.10
21	6d	501	GTP	C2-N1-C6	-2.97	119.64	125.10
21	4h	501	GTP	C2-N1-C6	-2.97	119.64	125.10
21	1d	501	GTP	C2-N1-C6	-2.96	119.64	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	2g	501	GDP	C3'-C2'-C1'	2.96	105.44	100.98
21	5d	501	GTP	C2-N1-C6	-2.96	119.64	125.10
21	9b	501	GTP	C2-N1-C6	-2.96	119.64	125.10
21	2h	501	GTP	C8-N7-C5	2.96	108.63	102.99
21	7d	501	GTP	C8-N7-C5	2.96	108.62	102.99
21	Bb	501	GTP	C2-N1-C6	-2.96	119.65	125.10
21	Ah	501	GTP	C2-N1-C6	-2.95	119.66	125.10
21	Af	501	GTP	C2-N1-C6	-2.95	119.66	125.10
21	3f	501	GTP	C8-N7-C5	2.95	108.61	102.99
21	8h	501	GTP	C3'-C2'-C1'	2.95	105.42	100.98
21	5f	501	GTP	C2-N1-C6	-2.95	119.67	125.10
20	Ac	501	GDP	C3'-C2'-C1'	2.95	105.42	100.98
21	7h	501	GTP	C3'-C2'-C1'	2.95	105.42	100.98
21	Ab	501	GTP	C8-N7-C5	2.95	108.61	102.99
21	6f	501	GTP	C2-N1-C6	-2.95	119.67	125.10
21	3h	501	GTP	C2-N1-C6	-2.94	119.68	125.10
21	4b	501	GTP	C2-N1-C6	-2.94	119.68	125.10
21	Df	501	GTP	C8-N7-C5	2.94	108.60	102.99
21	5d	501	GTP	C3'-C2'-C1'	2.94	105.41	100.98
21	1d	501	GTP	C8-N7-C5	2.94	108.59	102.99
21	7b	501	GTP	C3'-C2'-C1'	2.94	105.40	100.98
21	Dd	501	GTP	C2-N1-C6	-2.94	119.69	125.10
21	9h	501	GTP	C2-N1-C6	-2.94	119.69	125.10
21	Ad	501	GTP	C2-N1-C6	-2.93	119.70	125.10
21	7d	501	GTP	C2-N1-C6	-2.93	119.70	125.10
21	8d	501	GTP	C2-N1-C6	-2.93	119.70	125.10
21	2d	501	GTP	C2-N1-C6	-2.93	119.71	125.10
21	Bf	501	GTP	C2-N1-C6	-2.93	119.71	125.10
21	1b	501	GTP	C3'-C2'-C1'	2.93	105.38	100.98
21	3f	501	GTP	C3'-C2'-C1'	2.92	105.38	100.98
21	8b	501	GTP	C3'-C2'-C1'	2.92	105.37	100.98
20	9a	501	GDP	C3'-C2'-C1'	2.92	105.37	100.98
21	3b	501	GTP	C3'-C2'-C1'	2.92	105.37	100.98
20	7g	501	GDP	C3'-C2'-C1'	2.92	105.37	100.98
21	5f	501	GTP	C3'-C2'-C1'	2.91	105.37	100.98
21	Db	501	GTP	C3'-C2'-C1'	2.91	105.37	100.98
21	7h	501	GTP	C2-N1-C6	-2.91	119.74	125.10
20	Cc	501	GDP	C3'-C2'-C1'	2.91	105.36	100.98
21	4f	501	GTP	C2-N1-C6	-2.91	119.74	125.10
21	6d	501	GTP	C3'-C2'-C1'	2.91	105.36	100.98
21	1b	501	GTP	C2-N1-C6	-2.91	119.75	125.10
21	Db	501	GTP	C2-N1-C6	-2.91	119.75	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	8b	501	GTP	C2-N1-C6	-2.91	119.75	125.10
21	3h	501	GTP	C3'-C2'-C1'	2.91	105.35	100.98
21	Ah	501	GTP	C8-N7-C5	2.90	108.51	102.99
20	7c	501	GDP	C3'-C2'-C1'	2.90	105.34	100.98
21	7b	501	GTP	C2-N1-C6	-2.90	119.77	125.10
20	Dc	501	GDP	C3'-C2'-C1'	2.90	105.34	100.98
21	3d	501	GTP	C3'-C2'-C1'	2.90	105.34	100.98
21	4h	501	GTP	C3'-C2'-C1'	2.89	105.34	100.98
21	8h	501	GTP	C2-N1-C6	-2.89	119.77	125.10
20	9g	501	GDP	C3'-C2'-C1'	2.89	105.33	100.98
21	2f	501	GTP	C3'-C2'-C1'	2.89	105.33	100.98
21	Cf	501	GTP	C3'-C2'-C1'	2.89	105.33	100.98
21	7f	501	GTP	C2-N1-C6	-2.89	119.78	125.10
21	Df	501	GTP	C3'-C2'-C1'	2.88	105.32	100.98
21	5h	501	GTP	C3'-C2'-C1'	2.88	105.31	100.98
21	6h	501	GTP	C2-N1-C6	-2.88	119.80	125.10
21	1h	501	GTP	C2-N1-C6	-2.88	119.80	125.10
21	1f	501	GTP	C3'-C2'-C1'	2.87	105.30	100.98
21	2h	501	GTP	C2-N1-C6	-2.86	119.82	125.10
21	Dh	501	GTP	C3'-C2'-C1'	2.86	105.29	100.98
21	Ad	501	GTP	C3'-C2'-C1'	2.86	105.29	100.98
21	Af	501	GTP	C3'-C2'-C1'	2.86	105.28	100.98
21	8f	501	GTP	C2-N1-C6	-2.85	119.84	125.10
21	1d	501	GTP	C3'-C2'-C1'	2.85	105.27	100.98
21	Bd	501	GTP	C3'-C2'-C1'	2.85	105.27	100.98
20	9c	501	GDP	C3'-C2'-C1'	2.85	105.27	100.98
21	Cb	501	GTP	C3'-C2'-C1'	2.85	105.26	100.98
21	6b	501	GTP	C3'-C2'-C1'	2.84	105.26	100.98
21	9f	501	GTP	C3'-C2'-C1'	2.84	105.25	100.98
21	Ab	501	GTP	C3'-C2'-C1'	2.84	105.25	100.98
21	4b	501	GTP	C3'-C2'-C1'	2.84	105.25	100.98
21	4d	501	GTP	C3'-C2'-C1'	2.83	105.24	100.98
21	7d	501	GTP	C3'-C2'-C1'	2.83	105.24	100.98
21	Ah	501	GTP	C3'-C2'-C1'	2.83	105.24	100.98
21	1h	501	GTP	C3'-C2'-C1'	2.83	105.24	100.98
21	9b	501	GTP	C3'-C2'-C1'	2.83	105.23	100.98
20	7e	501	GDP	C3'-C2'-C1'	2.82	105.22	100.98
21	2b	501	GTP	C3'-C2'-C1'	2.82	105.22	100.98
21	Dd	501	GTP	C3'-C2'-C1'	2.81	105.22	100.98
20	9e	501	GDP	C3'-C2'-C1'	2.81	105.20	100.98
21	2d	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98
21	4f	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	6f	501	GTP	C3'-C2'-C1'	2.79	105.17	100.98
21	Bh	501	GTP	C3'-C2'-C1'	2.78	105.16	100.98
21	7f	501	GTP	C3'-C2'-C1'	2.78	105.16	100.98
21	2h	501	GTP	C3'-C2'-C1'	2.77	105.15	100.98
19	0X	801	ADP	C3'-C2'-C1'	2.76	105.13	100.98
19	0Y	801	ADP	C4-C5-N7	-2.75	106.53	109.40
21	Bf	501	GTP	C3'-C2'-C1'	2.75	105.11	100.98
21	6h	501	GTP	C3'-C2'-C1'	2.75	105.11	100.98
19	0Z	801	ADP	C3'-C2'-C1'	2.74	105.11	100.98
21	9d	501	GTP	C3'-C2'-C1'	2.74	105.11	100.98
21	Bb	501	GTP	C3'-C2'-C1'	2.73	105.09	100.98
21	8f	501	GTP	C3'-C2'-C1'	2.73	105.09	100.98
19	1A	801	ADP	C4-C5-N7	-2.72	106.57	109.40
21	9h	501	GTP	C3'-C2'-C1'	2.71	105.06	100.98
19	0X	801	ADP	C4-C5-N7	-2.51	106.78	109.40
19	0Z	801	ADP	C4-C5-N7	-2.48	106.81	109.40
20	9e	501	GDP	C5-C6-N1	2.47	118.32	113.95
20	9c	501	GDP	C8-N7-C5	2.45	107.65	102.99
20	Cc	501	GDP	C8-N7-C5	2.44	107.63	102.99
20	6g	501	GDP	C8-N7-C5	2.43	107.62	102.99
20	6e	501	GDP	C8-N7-C5	2.43	107.61	102.99
20	5a	501	GDP	C8-N7-C5	2.42	107.61	102.99
20	6a	501	GDP	C8-N7-C5	2.41	107.58	102.99
20	9g	501	GDP	C8-N7-C5	2.40	107.55	102.99
20	5g	501	GDP	C8-N7-C5	2.39	107.55	102.99
20	3c	501	GDP	C5-C6-N1	2.39	118.17	113.95
20	1e	501	GDP	C8-N7-C5	2.38	107.53	102.99
20	3c	501	GDP	C8-N7-C5	2.38	107.52	102.99
20	8e	501	GDP	C8-N7-C5	2.38	107.52	102.99
20	Da	501	GDP	C8-N7-C5	2.38	107.52	102.99
20	Ca	501	GDP	C8-N7-C5	2.37	107.51	102.99
20	7a	501	GDP	C8-N7-C5	2.37	107.51	102.99
20	Ba	501	GDP	C5-C6-N1	2.37	118.14	113.95
20	8c	501	GDP	C8-N7-C5	2.37	107.50	102.99
20	6c	501	GDP	C8-N7-C5	2.37	107.50	102.99
20	Bc	501	GDP	C8-N7-C5	2.37	107.50	102.99
20	Bc	501	GDP	C5-C6-N1	2.37	118.13	113.95
20	Cc	501	GDP	C5-C6-N1	2.37	118.13	113.95
20	5g	501	GDP	C5-C6-N1	2.37	118.13	113.95
20	5c	501	GDP	C5-C6-N1	2.36	118.13	113.95
20	Ag	501	GDP	C8-N7-C5	2.36	107.49	102.99
20	Bg	501	GDP	C8-N7-C5	2.36	107.49	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	6a	501	GDP	C5-C6-N1	2.36	118.12	113.95
20	7c	501	GDP	C8-N7-C5	2.36	107.48	102.99
20	1c	501	GDP	C5-C6-N1	2.36	118.11	113.95
20	2e	501	GDP	C8-N7-C5	2.35	107.47	102.99
20	Ae	501	GDP	C8-N7-C5	2.35	107.47	102.99
20	5e	501	GDP	C8-N7-C5	2.35	107.47	102.99
20	Ac	501	GDP	C8-N7-C5	2.35	107.47	102.99
20	8g	501	GDP	C8-N7-C5	2.35	107.47	102.99
20	Ba	501	GDP	C8-N7-C5	2.35	107.47	102.99
21	Af	501	GTP	O6-C6-C5	-2.35	119.78	124.37
20	4c	501	GDP	C8-N7-C5	2.35	107.47	102.99
20	7e	501	GDP	C8-N7-C5	2.35	107.46	102.99
20	9a	501	GDP	C8-N7-C5	2.35	107.46	102.99
20	1a	501	GDP	C8-N7-C5	2.35	107.46	102.99
20	8a	501	GDP	C8-N7-C5	2.34	107.45	102.99
20	Be	501	GDP	C8-N7-C5	2.34	107.45	102.99
20	6g	501	GDP	C5-C6-N1	2.34	118.09	113.95
21	9b	501	GTP	O6-C6-C5	-2.34	119.80	124.37
20	Bg	501	GDP	C5-C6-N1	2.34	118.08	113.95
20	3e	501	GDP	C8-N7-C5	2.34	107.44	102.99
20	Dg	501	GDP	C8-N7-C5	2.34	107.44	102.99
19	1A	801	ADP	C3'-C2'-C1'	2.34	104.50	100.98
20	5e	501	GDP	C5-C6-N1	2.34	118.08	113.95
20	2c	501	GDP	C5-C6-N1	2.33	118.08	113.95
20	De	501	GDP	C5-C6-N1	2.33	118.08	113.95
20	Ag	501	GDP	C5-C6-N1	2.33	118.07	113.95
20	4a	501	GDP	C8-N7-C5	2.33	107.44	102.99
20	5c	501	GDP	C8-N7-C5	2.33	107.44	102.99
20	2g	501	GDP	C5-C6-N1	2.33	118.07	113.95
20	Dc	501	GDP	C8-N7-C5	2.33	107.43	102.99
19	0Y	801	ADP	C3'-C2'-C1'	2.33	104.49	100.98
20	3a	501	GDP	C8-N7-C5	2.33	107.43	102.99
20	1e	501	GDP	C5-C6-N1	2.33	118.07	113.95
20	4c	501	GDP	C5-C6-N1	2.33	118.06	113.95
20	2c	501	GDP	C8-N7-C5	2.33	107.42	102.99
20	7g	501	GDP	C8-N7-C5	2.33	107.42	102.99
20	4g	501	GDP	C8-N7-C5	2.32	107.42	102.99
20	7e	501	GDP	C5-C6-N1	2.32	118.05	113.95
20	Ce	501	GDP	C8-N7-C5	2.32	107.41	102.99
20	1c	501	GDP	C8-N7-C5	2.32	107.41	102.99
20	2g	501	GDP	C8-N7-C5	2.32	107.41	102.99
20	9g	501	GDP	C5-C6-N1	2.32	118.04	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	De	501	GDP	C8-N7-C5	2.32	107.40	102.99
20	Aa	501	GDP	C8-N7-C5	2.32	107.40	102.99
20	9a	501	GDP	C5-C6-N1	2.32	118.04	113.95
20	Cg	501	GDP	C5-C6-N1	2.31	118.04	113.95
20	Dg	501	GDP	C5-C6-N1	2.31	118.04	113.95
21	9d	501	GTP	O6-C6-C5	-2.31	119.85	124.37
20	Ac	501	GDP	C5-C6-N1	2.31	118.04	113.95
20	9c	501	GDP	C5-C6-N1	2.31	118.03	113.95
20	8a	501	GDP	C5-C6-N1	2.31	118.03	113.95
20	Be	501	GDP	C5-C6-N1	2.31	118.02	113.95
20	6c	501	GDP	C5-C6-N1	2.30	118.02	113.95
20	1g	501	GDP	C8-N7-C5	2.30	107.38	102.99
20	4a	501	GDP	C5-C6-N1	2.30	118.02	113.95
21	3d	501	GTP	O6-C6-C5	-2.30	119.88	124.37
20	4e	501	GDP	C5-C6-N1	2.30	118.01	113.95
21	9h	501	GTP	O6-C6-C5	-2.30	119.88	124.37
20	4g	501	GDP	C5-C6-N1	2.30	118.01	113.95
20	Dc	501	GDP	C5-C6-N1	2.30	118.01	113.95
20	9e	501	GDP	C8-N7-C5	2.30	107.37	102.99
20	6e	501	GDP	C5-C6-N1	2.30	118.01	113.95
20	Ce	501	GDP	C5-C6-N1	2.30	118.01	113.95
20	Ca	501	GDP	C5-C6-N1	2.30	118.01	113.95
20	7a	501	GDP	C5-C6-N1	2.29	118.00	113.95
20	4e	501	GDP	C8-N7-C5	2.29	107.36	102.99
20	2a	501	GDP	C5-C6-N1	2.29	118.00	113.95
20	8g	501	GDP	C5-C6-N1	2.29	117.99	113.95
20	Da	501	GDP	C5-C6-N1	2.29	117.99	113.95
21	9f	501	GTP	O6-C6-C5	-2.29	119.90	124.37
21	2b	501	GTP	O6-C6-C5	-2.29	119.91	124.37
20	3a	501	GDP	C5-C6-N1	2.28	117.98	113.95
20	7c	501	GDP	C5-C6-N1	2.28	117.98	113.95
21	3b	501	GTP	O6-C6-C5	-2.28	119.92	124.37
20	5a	501	GDP	C5-C6-N1	2.28	117.98	113.95
20	3g	501	GDP	C5-C6-N1	2.28	117.98	113.95
21	Ab	501	GTP	O6-C6-C5	-2.28	119.92	124.37
20	Ae	501	GDP	C5-C6-N1	2.28	117.97	113.95
20	3g	501	GDP	C8-N7-C5	2.28	107.33	102.99
20	3e	501	GDP	C5-C6-N1	2.28	117.97	113.95
20	2e	501	GDP	C5-C6-N1	2.28	117.97	113.95
21	3h	501	GTP	O6-C6-C5	-2.27	119.93	124.37
20	Aa	501	GDP	C5-C6-N1	2.27	117.96	113.95
21	Ah	501	GTP	O6-C6-C5	-2.27	119.94	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	1f	501	GTP	O6-C6-C5	-2.27	119.95	124.37
20	Cg	501	GDP	C8-N7-C5	2.26	107.30	102.99
20	8c	501	GDP	C5-C6-N1	2.26	117.94	113.95
20	1a	501	GDP	C5-C6-N1	2.26	117.94	113.95
21	1b	501	GTP	O6-C6-C5	-2.25	119.97	124.37
20	8e	501	GDP	C5-C6-N1	2.24	117.91	113.95
21	3f	501	GTP	O6-C6-C5	-2.24	120.00	124.37
20	2a	501	GDP	C8-N7-C5	2.23	107.24	102.99
20	7g	501	GDP	C5-C6-N1	2.23	117.89	113.95
20	1g	501	GDP	C5-C6-N1	2.22	117.88	113.95
21	Ad	501	GTP	O6-C6-C5	-2.22	120.03	124.37
21	1d	501	GTP	O6-C6-C5	-2.22	120.03	124.37
21	Ch	501	GTP	O6-C6-C5	-2.21	120.06	124.37
21	2h	501	GTP	O6-C6-C5	-2.21	120.06	124.37
21	4h	501	GTP	O6-C6-C5	-2.20	120.08	124.37
21	8h	501	GTP	O6-C6-C5	-2.19	120.10	124.37
21	2f	501	GTP	O6-C6-C5	-2.19	120.10	124.37
21	Dh	501	GTP	O6-C6-C5	-2.18	120.11	124.37
21	2d	501	GTP	O6-C6-C5	-2.18	120.11	124.37
21	Df	501	GTP	O6-C6-C5	-2.18	120.12	124.37
21	4f	501	GTP	O6-C6-C5	-2.17	120.14	124.37
21	Cd	501	GTP	O6-C6-C5	-2.16	120.16	124.37
21	Bf	501	GTP	O6-C6-C5	-2.15	120.17	124.37
21	4d	501	GTP	O6-C6-C5	-2.15	120.17	124.37
21	5f	501	GTP	O6-C6-C5	-2.15	120.17	124.37
21	7h	501	GTP	O6-C6-C5	-2.14	120.19	124.37
21	5h	501	GTP	O6-C6-C5	-2.14	120.19	124.37
21	Bh	501	GTP	O6-C6-C5	-2.13	120.22	124.37
21	5d	501	GTP	O6-C6-C5	-2.13	120.22	124.37
21	4b	501	GTP	O6-C6-C5	-2.12	120.23	124.37
21	7d	501	GTP	O6-C6-C5	-2.11	120.24	124.37
21	8d	501	GTP	O6-C6-C5	-2.11	120.25	124.37
21	Dd	501	GTP	O6-C6-C5	-2.11	120.25	124.37
21	8f	501	GTP	O6-C6-C5	-2.10	120.26	124.37
21	7b	501	GTP	O6-C6-C5	-2.10	120.28	124.37
21	5b	501	GTP	O6-C6-C5	-2.09	120.29	124.37
21	7f	501	GTP	O6-C6-C5	-2.09	120.30	124.37
21	Db	501	GTP	O6-C6-C5	-2.09	120.30	124.37
21	Bd	501	GTP	O6-C6-C5	-2.08	120.30	124.37
20	9e	501	GDP	O6-C6-C5	-2.08	120.31	124.37
21	Cb	501	GTP	O6-C6-C5	-2.08	120.31	124.37
21	Cf	501	GTP	O6-C6-C5	-2.08	120.31	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	6b	501	GTP	O6-C6-C5	-2.08	120.31	124.37
21	6d	501	GTP	O6-C6-C5	-2.07	120.33	124.37
21	Bb	501	GTP	O6-C6-C5	-2.06	120.35	124.37

There are no chirality outliers.

All (315) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
19	0X	801	ADP	C3'-C4'-C5'-O5'
19	0Y	801	ADP	PA-O3A-PB-O2B
19	0Y	801	ADP	PA-O3A-PB-O3B
19	1A	801	ADP	PA-O3A-PB-O2B
20	1a	501	GDP	C5'-O5'-PA-O1A
20	1a	501	GDP	C5'-O5'-PA-O2A
20	1c	501	GDP	C5'-O5'-PA-O1A
20	1c	501	GDP	C5'-O5'-PA-O2A
20	1e	501	GDP	C5'-O5'-PA-O1A
20	1e	501	GDP	C5'-O5'-PA-O2A
20	1g	501	GDP	C5'-O5'-PA-O1A
20	1g	501	GDP	C5'-O5'-PA-O2A
20	2a	501	GDP	C5'-O5'-PA-O1A
20	2a	501	GDP	C5'-O5'-PA-O2A
20	2c	501	GDP	C5'-O5'-PA-O1A
20	2c	501	GDP	C5'-O5'-PA-O2A
20	2e	501	GDP	C5'-O5'-PA-O1A
20	2e	501	GDP	C5'-O5'-PA-O2A
20	2g	501	GDP	C5'-O5'-PA-O1A
20	2g	501	GDP	C5'-O5'-PA-O2A
20	3a	501	GDP	C5'-O5'-PA-O1A
20	3a	501	GDP	C5'-O5'-PA-O2A
20	3c	501	GDP	C5'-O5'-PA-O1A
20	3c	501	GDP	C5'-O5'-PA-O2A
20	3e	501	GDP	C5'-O5'-PA-O1A
20	3e	501	GDP	C5'-O5'-PA-O2A
20	3g	501	GDP	C5'-O5'-PA-O1A
20	3g	501	GDP	C5'-O5'-PA-O2A
20	4a	501	GDP	C5'-O5'-PA-O2A
20	4c	501	GDP	C5'-O5'-PA-O2A
20	4e	501	GDP	C5'-O5'-PA-O1A
20	4e	501	GDP	C5'-O5'-PA-O2A
20	4g	501	GDP	C5'-O5'-PA-O1A
20	4g	501	GDP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
20	5a	501	GDP	C5'-O5'-PA-O2A
20	5c	501	GDP	C5'-O5'-PA-O3A
20	5c	501	GDP	C5'-O5'-PA-O2A
20	5e	501	GDP	C5'-O5'-PA-O3A
20	5e	501	GDP	C5'-O5'-PA-O2A
20	5g	501	GDP	C5'-O5'-PA-O3A
20	6a	501	GDP	C5'-O5'-PA-O3A
20	6a	501	GDP	C5'-O5'-PA-O2A
20	6c	501	GDP	C5'-O5'-PA-O1A
20	6c	501	GDP	C5'-O5'-PA-O2A
20	6e	501	GDP	C5'-O5'-PA-O2A
20	6g	501	GDP	C5'-O5'-PA-O2A
20	7a	501	GDP	C5'-O5'-PA-O3A
20	7a	501	GDP	C5'-O5'-PA-O2A
20	7c	501	GDP	C5'-O5'-PA-O1A
20	7c	501	GDP	C5'-O5'-PA-O2A
20	7e	501	GDP	C5'-O5'-PA-O2A
20	7g	501	GDP	C5'-O5'-PA-O1A
20	7g	501	GDP	C5'-O5'-PA-O2A
20	8a	501	GDP	C5'-O5'-PA-O1A
20	8a	501	GDP	C5'-O5'-PA-O2A
20	8c	501	GDP	C5'-O5'-PA-O1A
20	8c	501	GDP	C5'-O5'-PA-O2A
20	8e	501	GDP	C5'-O5'-PA-O1A
20	8e	501	GDP	C5'-O5'-PA-O2A
20	8g	501	GDP	C5'-O5'-PA-O1A
20	8g	501	GDP	C5'-O5'-PA-O2A
20	9a	501	GDP	C5'-O5'-PA-O3A
20	9c	501	GDP	C5'-O5'-PA-O1A
20	9c	501	GDP	C5'-O5'-PA-O2A
20	9e	501	GDP	C5'-O5'-PA-O3A
20	9e	501	GDP	C5'-O5'-PA-O2A
20	9g	501	GDP	C5'-O5'-PA-O1A
20	9g	501	GDP	C5'-O5'-PA-O2A
20	Aa	501	GDP	C5'-O5'-PA-O1A
20	Aa	501	GDP	C5'-O5'-PA-O2A
20	Ac	501	GDP	C5'-O5'-PA-O3A
20	Ac	501	GDP	C5'-O5'-PA-O2A
20	Ae	501	GDP	C5'-O5'-PA-O2A
20	Ag	501	GDP	C5'-O5'-PA-O1A
20	Ag	501	GDP	C5'-O5'-PA-O2A
20	Ba	501	GDP	C5'-O5'-PA-O1A

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Mol	Chain	Res	Type	Atoms
20	Ba	501	GDP	C5'-O5'-PA-O2A
20	Bc	501	GDP	C5'-O5'-PA-O1A
20	Bc	501	GDP	C5'-O5'-PA-O2A
20	Be	501	GDP	C5'-O5'-PA-O3A
20	Be	501	GDP	C5'-O5'-PA-O1A
20	Be	501	GDP	C5'-O5'-PA-O2A
20	Bg	501	GDP	C5'-O5'-PA-O1A
20	Bg	501	GDP	C5'-O5'-PA-O2A
20	Ca	501	GDP	C5'-O5'-PA-O3A
20	Ca	501	GDP	C5'-O5'-PA-O1A
20	Ca	501	GDP	C5'-O5'-PA-O2A
20	Cc	501	GDP	C5'-O5'-PA-O3A
20	Cc	501	GDP	C5'-O5'-PA-O1A
20	Cc	501	GDP	C5'-O5'-PA-O2A
20	Ce	501	GDP	C5'-O5'-PA-O1A
20	Ce	501	GDP	C5'-O5'-PA-O2A
20	Cg	501	GDP	C5'-O5'-PA-O1A
20	Cg	501	GDP	C5'-O5'-PA-O2A
20	Da	501	GDP	C5'-O5'-PA-O1A
20	Da	501	GDP	C5'-O5'-PA-O2A
20	Dc	501	GDP	C5'-O5'-PA-O1A
20	Dc	501	GDP	C5'-O5'-PA-O2A
20	De	501	GDP	C5'-O5'-PA-O1A
20	De	501	GDP	C5'-O5'-PA-O2A
20	Dg	501	GDP	C5'-O5'-PA-O1A
20	Dg	501	GDP	C5'-O5'-PA-O2A
21	1b	501	GTP	PB-O3B-PG-O2G
21	1b	501	GTP	O4'-C4'-C5'-O5'
21	1b	501	GTP	C3'-C4'-C5'-O5'
21	1d	501	GTP	O4'-C4'-C5'-O5'
21	1d	501	GTP	C3'-C4'-C5'-O5'
21	1f	501	GTP	O4'-C4'-C5'-O5'
21	1f	501	GTP	C3'-C4'-C5'-O5'
21	2b	501	GTP	O4'-C4'-C5'-O5'
21	2b	501	GTP	C3'-C4'-C5'-O5'
21	2d	501	GTP	O4'-C4'-C5'-O5'
21	2d	501	GTP	C3'-C4'-C5'-O5'
21	2f	501	GTP	O4'-C4'-C5'-O5'
21	2f	501	GTP	C3'-C4'-C5'-O5'
21	2h	501	GTP	O4'-C4'-C5'-O5'
21	2h	501	GTP	C3'-C4'-C5'-O5'
21	3b	501	GTP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
21	3b	501	GTP	C3'-C4'-C5'-O5'
21	3d	501	GTP	O4'-C4'-C5'-O5'
21	3d	501	GTP	C3'-C4'-C5'-O5'
21	3f	501	GTP	O4'-C4'-C5'-O5'
21	3f	501	GTP	C3'-C4'-C5'-O5'
21	3h	501	GTP	PB-O3B-PG-O2G
21	3h	501	GTP	O4'-C4'-C5'-O5'
21	3h	501	GTP	C3'-C4'-C5'-O5'
21	4b	501	GTP	O4'-C4'-C5'-O5'
21	4b	501	GTP	C3'-C4'-C5'-O5'
21	4d	501	GTP	O4'-C4'-C5'-O5'
21	4d	501	GTP	C3'-C4'-C5'-O5'
21	4f	501	GTP	O4'-C4'-C5'-O5'
21	4f	501	GTP	C3'-C4'-C5'-O5'
21	4h	501	GTP	O4'-C4'-C5'-O5'
21	4h	501	GTP	C3'-C4'-C5'-O5'
21	5b	501	GTP	PB-O3B-PG-O2G
21	5b	501	GTP	O4'-C4'-C5'-O5'
21	5b	501	GTP	C3'-C4'-C5'-O5'
21	5d	501	GTP	PB-O3B-PG-O2G
21	5d	501	GTP	O4'-C4'-C5'-O5'
21	5d	501	GTP	C3'-C4'-C5'-O5'
21	5f	501	GTP	PB-O3B-PG-O2G
21	5f	501	GTP	O4'-C4'-C5'-O5'
21	5f	501	GTP	C3'-C4'-C5'-O5'
21	5h	501	GTP	PB-O3B-PG-O2G
21	5h	501	GTP	O4'-C4'-C5'-O5'
21	5h	501	GTP	C3'-C4'-C5'-O5'
21	6b	501	GTP	O4'-C4'-C5'-O5'
21	6b	501	GTP	C3'-C4'-C5'-O5'
21	6d	501	GTP	PB-O3B-PG-O2G
21	6d	501	GTP	O4'-C4'-C5'-O5'
21	6d	501	GTP	C3'-C4'-C5'-O5'
21	6f	501	GTP	PB-O3B-PG-O2G
21	6f	501	GTP	O4'-C4'-C5'-O5'
21	6f	501	GTP	C3'-C4'-C5'-O5'
21	6h	501	GTP	PB-O3B-PG-O2G
21	6h	501	GTP	O4'-C4'-C5'-O5'
21	6h	501	GTP	C3'-C4'-C5'-O5'
21	7b	501	GTP	O4'-C4'-C5'-O5'
21	7b	501	GTP	C3'-C4'-C5'-O5'
21	7d	501	GTP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
21	7d	501	GTP	C3'-C4'-C5'-O5'
21	7f	501	GTP	O4'-C4'-C5'-O5'
21	7f	501	GTP	C3'-C4'-C5'-O5'
21	7h	501	GTP	C3'-C4'-C5'-O5'
21	8b	501	GTP	PB-O3B-PG-O2G
21	8b	501	GTP	O4'-C4'-C5'-O5'
21	8b	501	GTP	C3'-C4'-C5'-O5'
21	8d	501	GTP	PB-O3B-PG-O2G
21	8d	501	GTP	O4'-C4'-C5'-O5'
21	8d	501	GTP	C3'-C4'-C5'-O5'
21	8f	501	GTP	PB-O3B-PG-O2G
21	8f	501	GTP	O4'-C4'-C5'-O5'
21	8f	501	GTP	C3'-C4'-C5'-O5'
21	8h	501	GTP	O4'-C4'-C5'-O5'
21	8h	501	GTP	C3'-C4'-C5'-O5'
21	9b	501	GTP	O4'-C4'-C5'-O5'
21	9b	501	GTP	C3'-C4'-C5'-O5'
21	9d	501	GTP	O4'-C4'-C5'-O5'
21	9d	501	GTP	C3'-C4'-C5'-O5'
21	9f	501	GTP	O4'-C4'-C5'-O5'
21	9f	501	GTP	C3'-C4'-C5'-O5'
21	9h	501	GTP	C3'-C4'-C5'-O5'
21	Ab	501	GTP	O4'-C4'-C5'-O5'
21	Ab	501	GTP	C3'-C4'-C5'-O5'
21	Ad	501	GTP	O4'-C4'-C5'-O5'
21	Ad	501	GTP	C3'-C4'-C5'-O5'
21	Af	501	GTP	O4'-C4'-C5'-O5'
21	Af	501	GTP	C3'-C4'-C5'-O5'
21	Ah	501	GTP	O4'-C4'-C5'-O5'
21	Ah	501	GTP	C3'-C4'-C5'-O5'
21	Bb	501	GTP	O4'-C4'-C5'-O5'
21	Bb	501	GTP	C3'-C4'-C5'-O5'
21	Bd	501	GTP	O4'-C4'-C5'-O5'
21	Bd	501	GTP	C3'-C4'-C5'-O5'
21	Bf	501	GTP	PB-O3B-PG-O2G
21	Bf	501	GTP	O4'-C4'-C5'-O5'
21	Bf	501	GTP	C3'-C4'-C5'-O5'
21	Bh	501	GTP	O4'-C4'-C5'-O5'
21	Bh	501	GTP	C3'-C4'-C5'-O5'
21	Cb	501	GTP	O4'-C4'-C5'-O5'
21	Cb	501	GTP	C3'-C4'-C5'-O5'
21	Cd	501	GTP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
21	Cd	501	GTP	C3'-C4'-C5'-O5'
21	Cf	501	GTP	C3'-C4'-C5'-O5'
21	Ch	501	GTP	PB-O3B-PG-O2G
21	Ch	501	GTP	O4'-C4'-C5'-O5'
21	Ch	501	GTP	C3'-C4'-C5'-O5'
21	Db	501	GTP	PB-O3B-PG-O2G
21	Db	501	GTP	O4'-C4'-C5'-O5'
21	Db	501	GTP	C3'-C4'-C5'-O5'
21	Dd	501	GTP	O4'-C4'-C5'-O5'
21	Dd	501	GTP	C3'-C4'-C5'-O5'
21	Df	501	GTP	O4'-C4'-C5'-O5'
21	Df	501	GTP	C3'-C4'-C5'-O5'
21	Dh	501	GTP	C3'-C4'-C5'-O5'
19	0Y	801	ADP	O4'-C4'-C5'-O5'
19	0Y	801	ADP	C3'-C4'-C5'-O5'
19	0Z	801	ADP	C3'-C4'-C5'-O5'
19	1A	801	ADP	O4'-C4'-C5'-O5'
19	1A	801	ADP	C3'-C4'-C5'-O5'
21	1h	501	GTP	O4'-C4'-C5'-O5'
21	1h	501	GTP	C3'-C4'-C5'-O5'
21	7h	501	GTP	O4'-C4'-C5'-O5'
21	9h	501	GTP	O4'-C4'-C5'-O5'
21	Cf	501	GTP	O4'-C4'-C5'-O5'
21	Dh	501	GTP	O4'-C4'-C5'-O5'
19	0X	801	ADP	O4'-C4'-C5'-O5'
19	0Z	801	ADP	O4'-C4'-C5'-O5'
19	1A	801	ADP	PA-O3A-PB-O1B
21	2f	501	GTP	PB-O3B-PG-O2G
21	4d	501	GTP	PB-O3B-PG-O2G
21	6b	501	GTP	PB-O3B-PG-O2G
21	9d	501	GTP	PB-O3B-PG-O2G
21	9f	501	GTP	PB-O3B-PG-O2G
21	9h	501	GTP	PB-O3B-PG-O2G
21	Ab	501	GTP	PB-O3B-PG-O2G
21	Df	501	GTP	PB-O3B-PG-O2G
20	1a	501	GDP	C5'-O5'-PA-O3A
20	1c	501	GDP	C5'-O5'-PA-O3A
20	4a	501	GDP	C5'-O5'-PA-O3A
20	4c	501	GDP	C5'-O5'-PA-O3A
20	5a	501	GDP	C5'-O5'-PA-O3A
20	6e	501	GDP	C5'-O5'-PA-O3A
20	6g	501	GDP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
20	7e	501	GDP	C5'-O5'-PA-O3A
20	Ae	501	GDP	C5'-O5'-PA-O3A
20	Ba	501	GDP	C5'-O5'-PA-O3A
20	4a	501	GDP	C5'-O5'-PA-O1A
20	4c	501	GDP	C5'-O5'-PA-O1A
20	5a	501	GDP	C5'-O5'-PA-O1A
20	5c	501	GDP	C5'-O5'-PA-O1A
20	5e	501	GDP	C5'-O5'-PA-O1A
20	5g	501	GDP	C5'-O5'-PA-O1A
20	6a	501	GDP	C5'-O5'-PA-O1A
20	6e	501	GDP	C5'-O5'-PA-O1A
20	6g	501	GDP	C5'-O5'-PA-O1A
20	7a	501	GDP	C5'-O5'-PA-O1A
20	7e	501	GDP	C5'-O5'-PA-O1A
20	9a	501	GDP	C5'-O5'-PA-O1A
20	9a	501	GDP	C5'-O5'-PA-O2A
20	9e	501	GDP	C5'-O5'-PA-O1A
20	Ac	501	GDP	C5'-O5'-PA-O1A
20	Ae	501	GDP	C5'-O5'-PA-O1A
21	2d	501	GTP	PB-O3B-PG-O2G
21	3d	501	GTP	PB-O3B-PG-O2G
21	3f	501	GTP	PB-O3B-PG-O2G
21	4b	501	GTP	PB-O3B-PG-O2G
21	4f	501	GTP	PB-O3B-PG-O2G
21	7b	501	GTP	PB-O3B-PG-O2G
21	7d	501	GTP	PB-O3B-PG-O2G
21	7h	501	GTP	PB-O3B-PG-O2G
21	8h	501	GTP	PB-O3B-PG-O2G
21	9b	501	GTP	PB-O3B-PG-O2G
21	Ad	501	GTP	PB-O3B-PG-O2G
21	Af	501	GTP	PB-O3B-PG-O2G
21	Bb	501	GTP	PB-O3B-PG-O2G
21	Bh	501	GTP	PB-O3B-PG-O2G
21	Cb	501	GTP	PB-O3B-PG-O2G
21	Cf	501	GTP	PB-O3B-PG-O2G
19	0X	801	ADP	C5'-O5'-PA-O3A
19	0Z	801	ADP	C5'-O5'-PA-O3A
20	1e	501	GDP	C5'-O5'-PA-O3A
20	1g	501	GDP	C5'-O5'-PA-O3A
20	2a	501	GDP	C5'-O5'-PA-O3A
20	2c	501	GDP	C5'-O5'-PA-O3A
20	2e	501	GDP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
20	2g	501	GDP	C5'-O5'-PA-O3A
20	3a	501	GDP	C5'-O5'-PA-O3A
20	3c	501	GDP	C5'-O5'-PA-O3A
20	3e	501	GDP	C5'-O5'-PA-O3A
20	3g	501	GDP	C5'-O5'-PA-O3A
20	4e	501	GDP	C5'-O5'-PA-O3A
20	4g	501	GDP	C5'-O5'-PA-O3A
20	6c	501	GDP	C5'-O5'-PA-O3A
20	7c	501	GDP	C5'-O5'-PA-O3A
20	7g	501	GDP	C5'-O5'-PA-O3A
20	8a	501	GDP	C5'-O5'-PA-O3A
20	8c	501	GDP	C5'-O5'-PA-O3A
20	8e	501	GDP	C5'-O5'-PA-O3A
20	8g	501	GDP	C5'-O5'-PA-O3A
20	9c	501	GDP	C5'-O5'-PA-O3A
20	9g	501	GDP	C5'-O5'-PA-O3A
20	Aa	501	GDP	C5'-O5'-PA-O3A
20	Ag	501	GDP	C5'-O5'-PA-O3A
20	Bc	501	GDP	C5'-O5'-PA-O3A
20	Bg	501	GDP	C5'-O5'-PA-O3A
20	Ce	501	GDP	C5'-O5'-PA-O3A
20	Cg	501	GDP	C5'-O5'-PA-O3A
20	Da	501	GDP	C5'-O5'-PA-O3A
20	Dc	501	GDP	C5'-O5'-PA-O3A
20	De	501	GDP	C5'-O5'-PA-O3A
20	Dg	501	GDP	C5'-O5'-PA-O3A
19	0Y	801	ADP	C5'-O5'-PA-O1A
19	0Z	801	ADP	C5'-O5'-PA-O2A
20	5g	501	GDP	C5'-O5'-PA-O2A

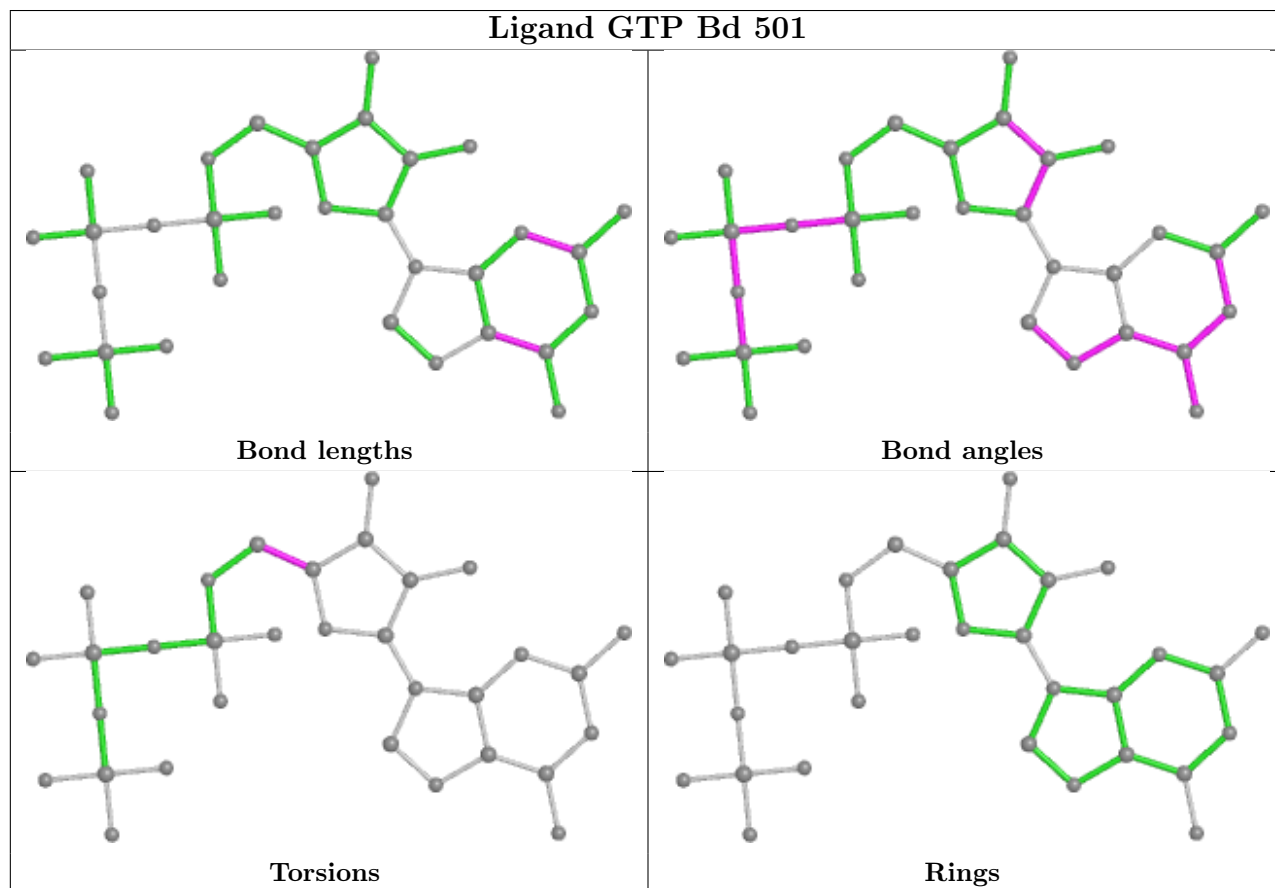
There are no ring outliers.

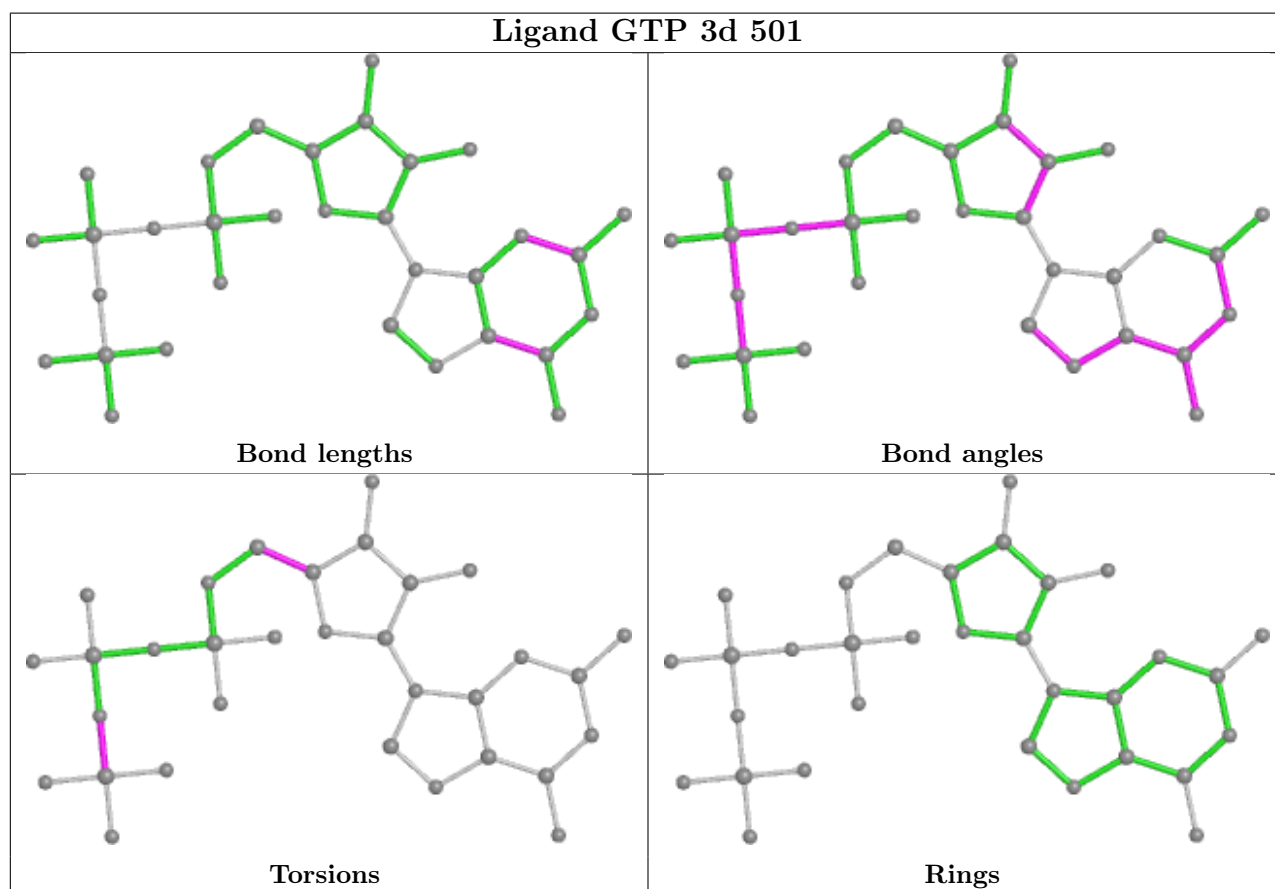
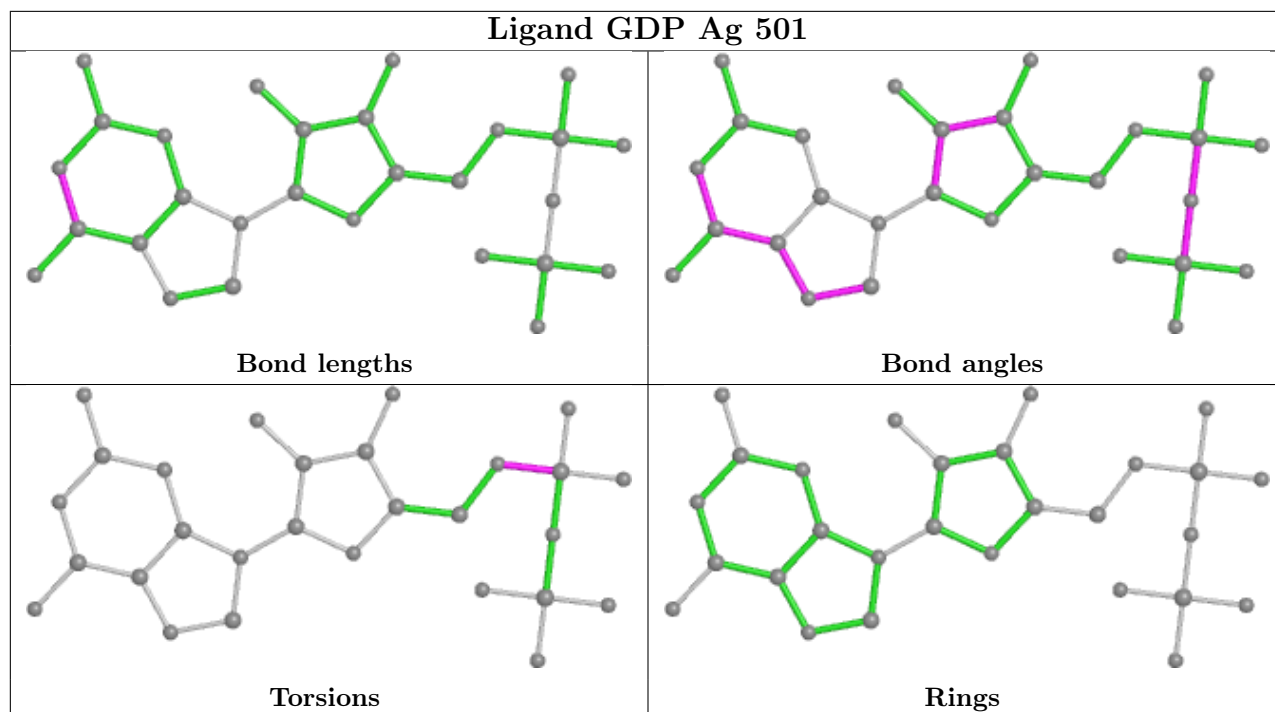
4 monomers are involved in 9 short contacts:

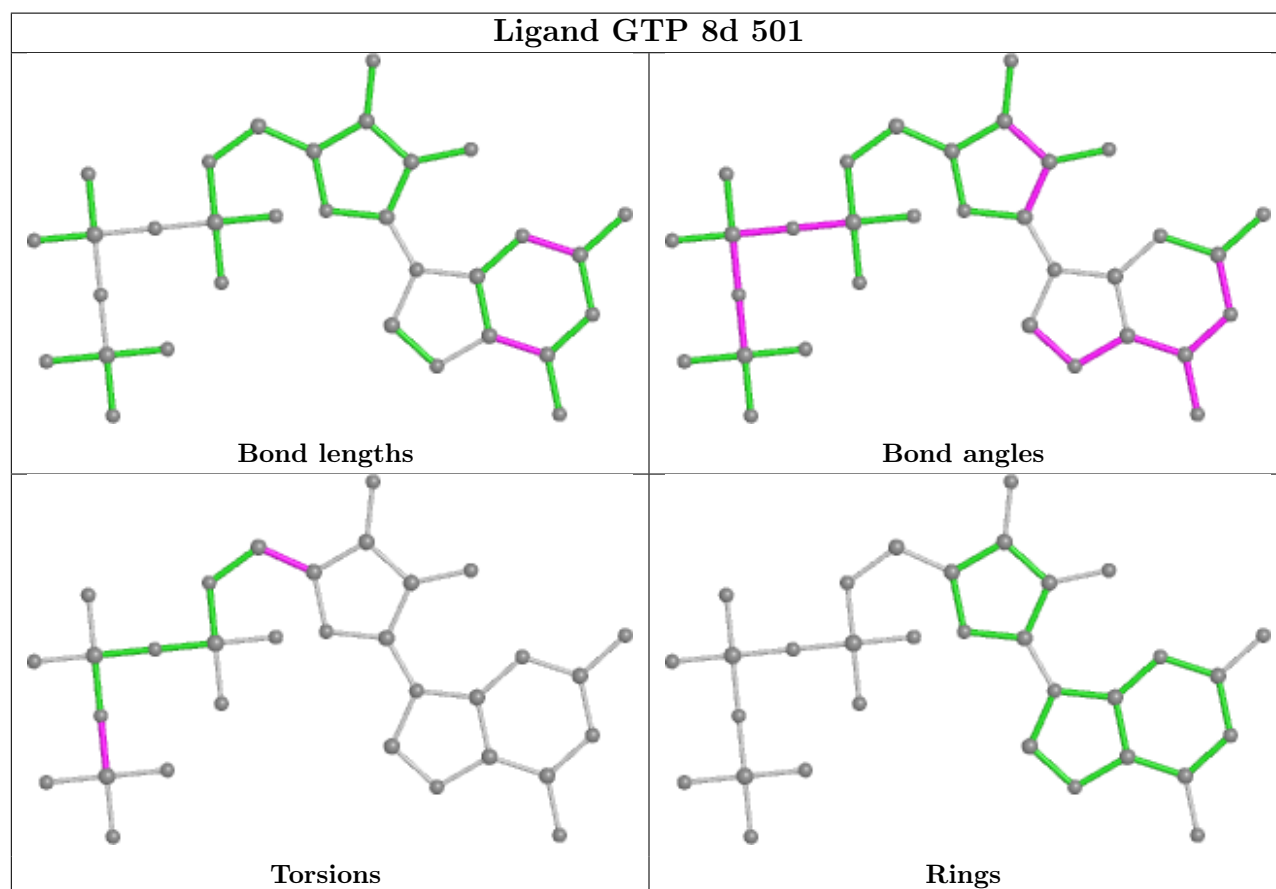
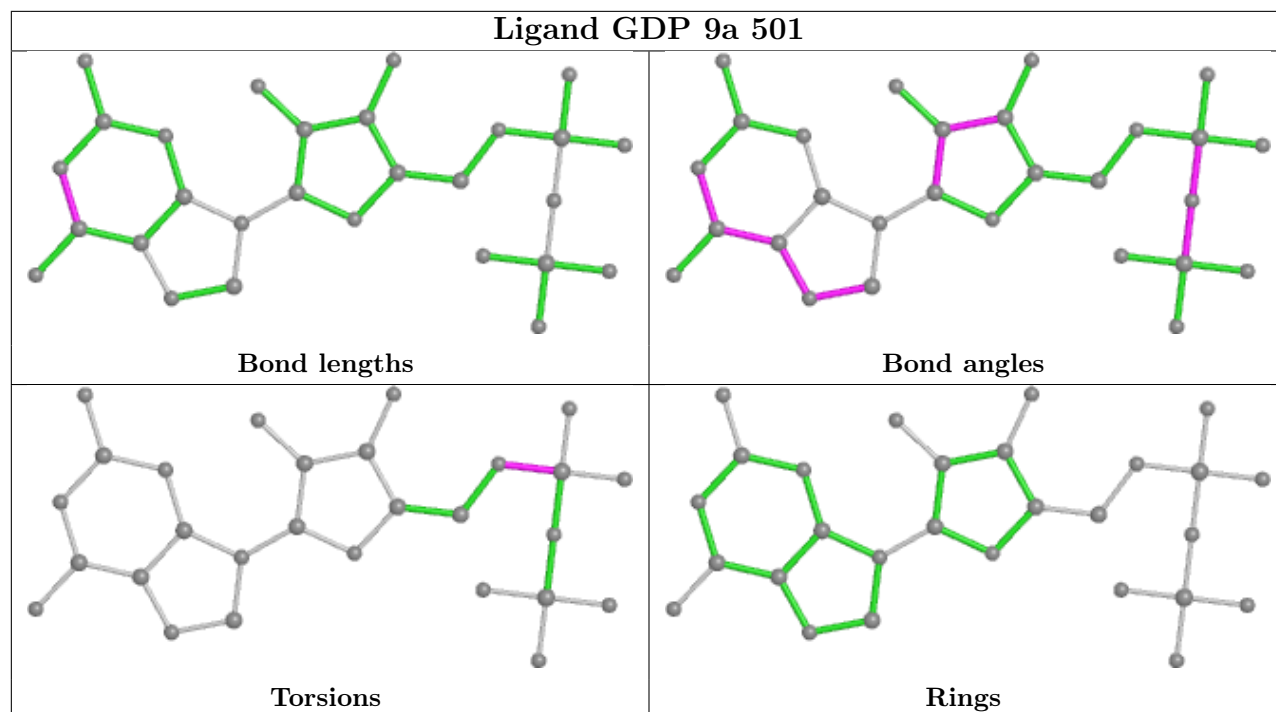
Mol	Chain	Res	Type	Clashes	Symm-Clashes
19	0X	801	ADP	2	0
19	0Z	801	ADP	2	0
19	1A	801	ADP	1	0
19	0Y	801	ADP	4	0

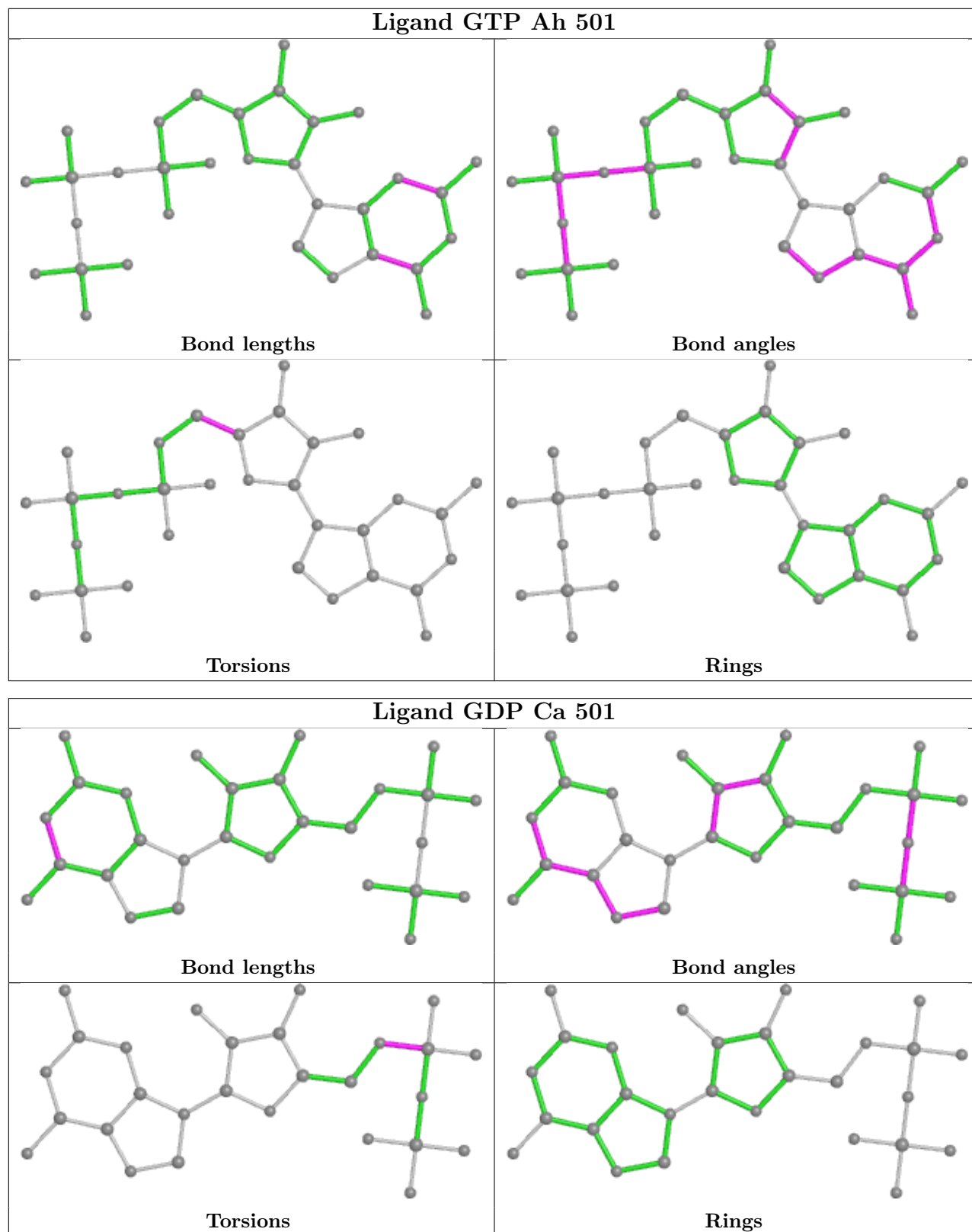
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will

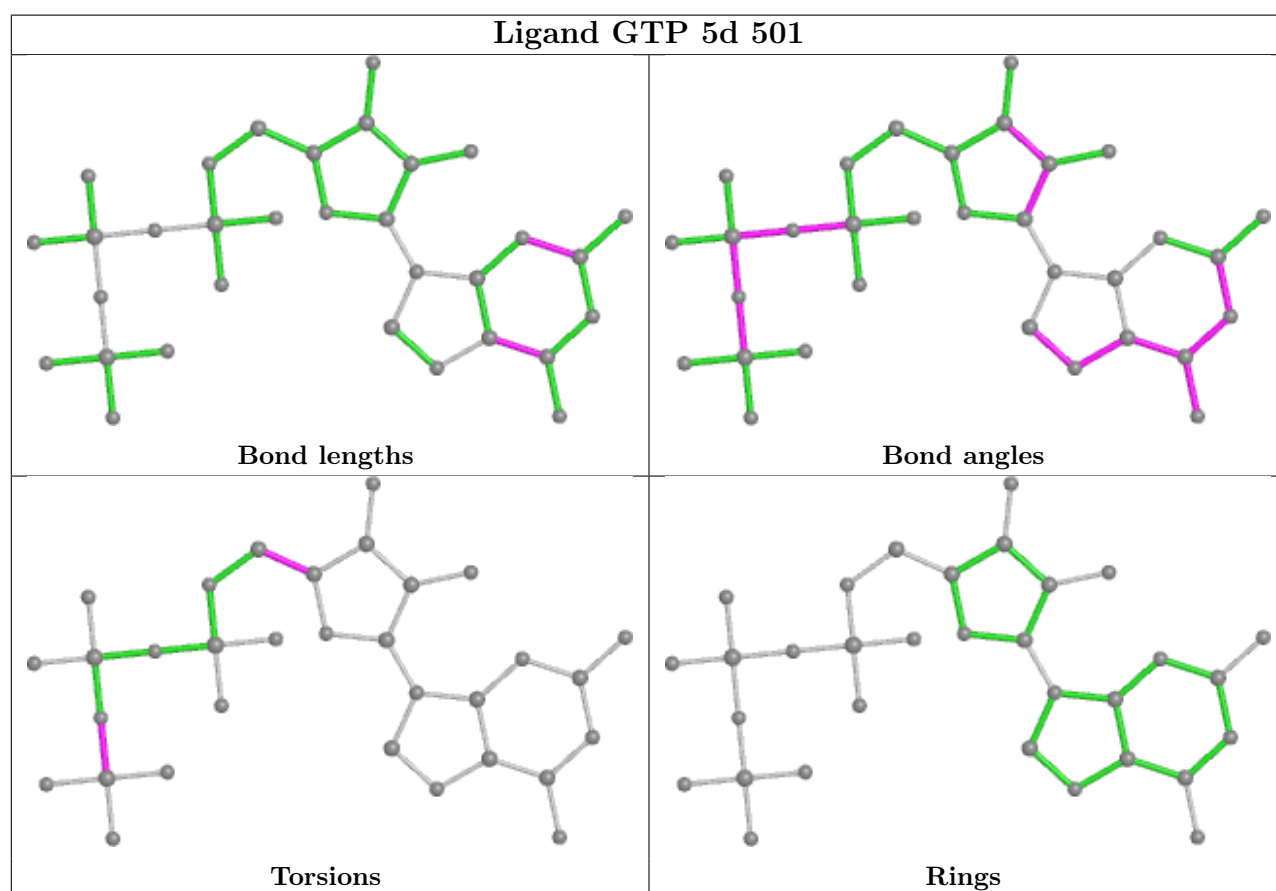
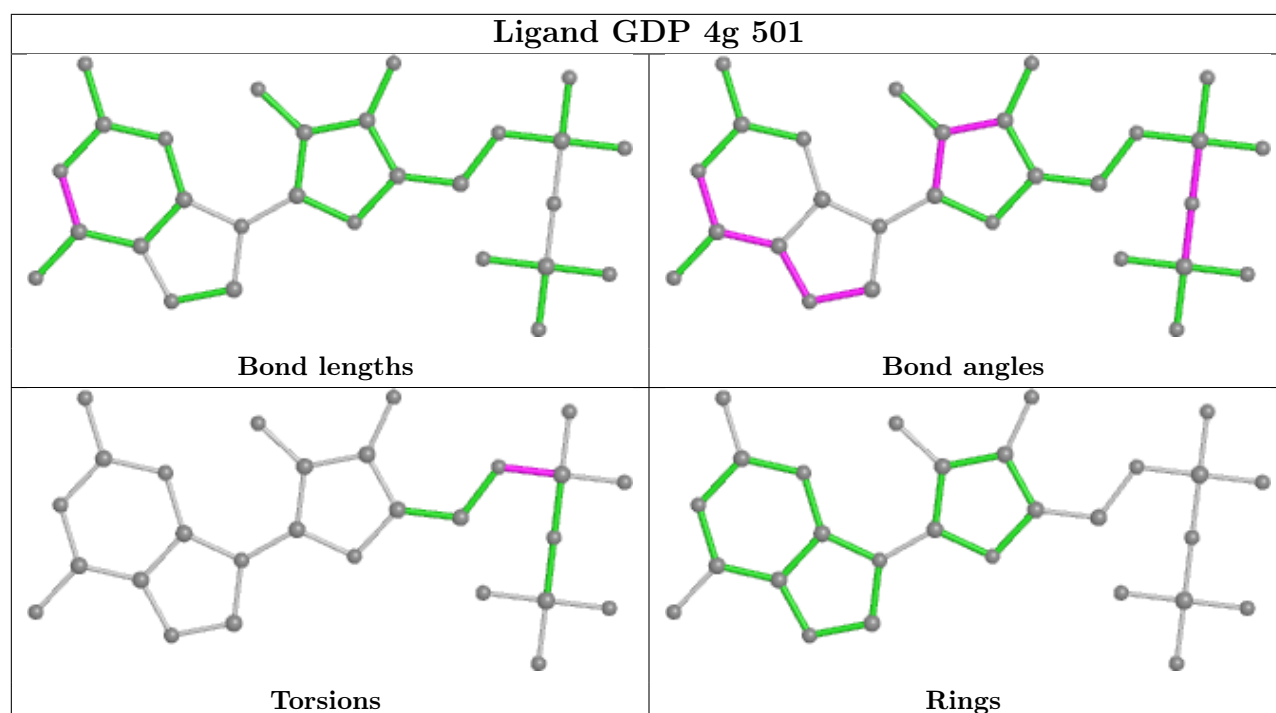
also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted 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.

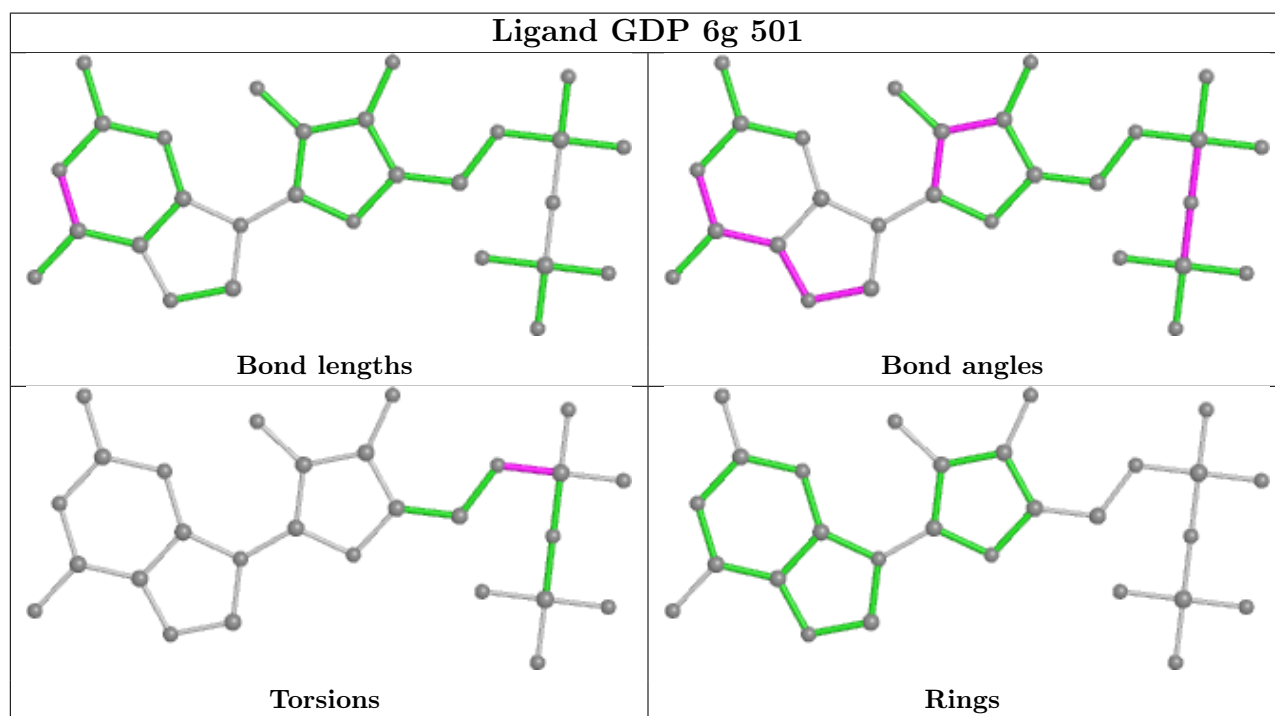
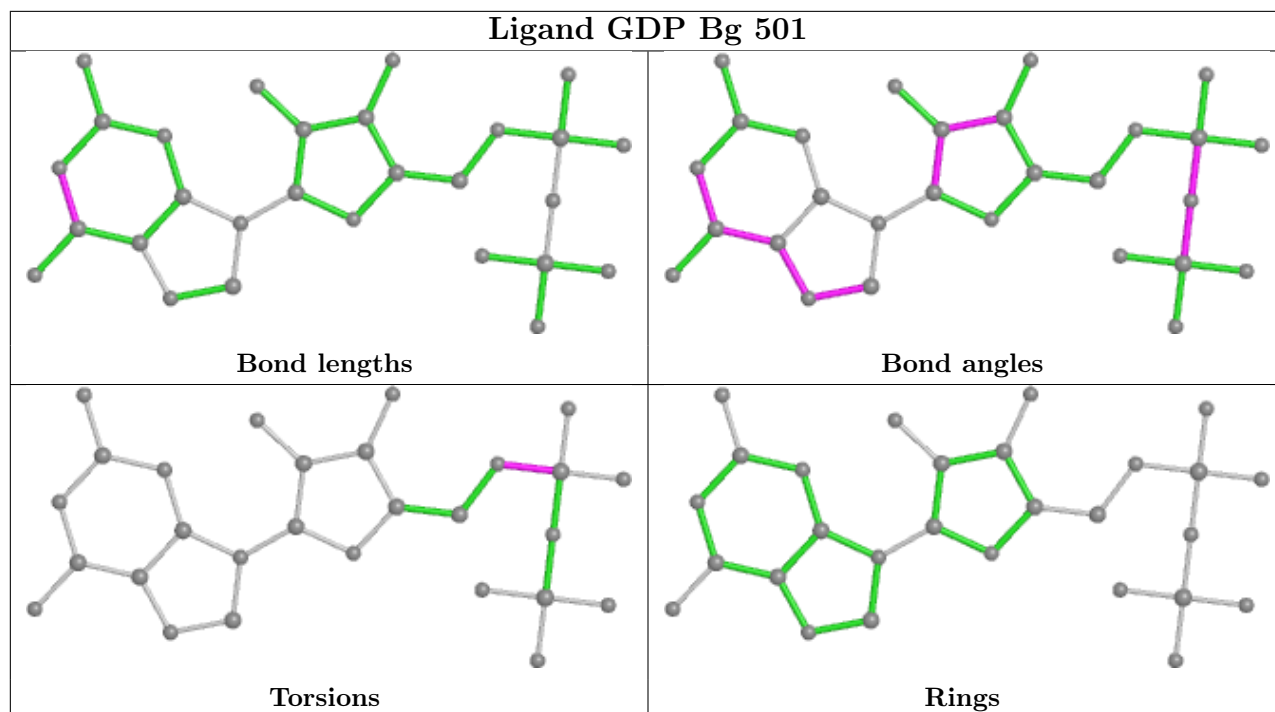


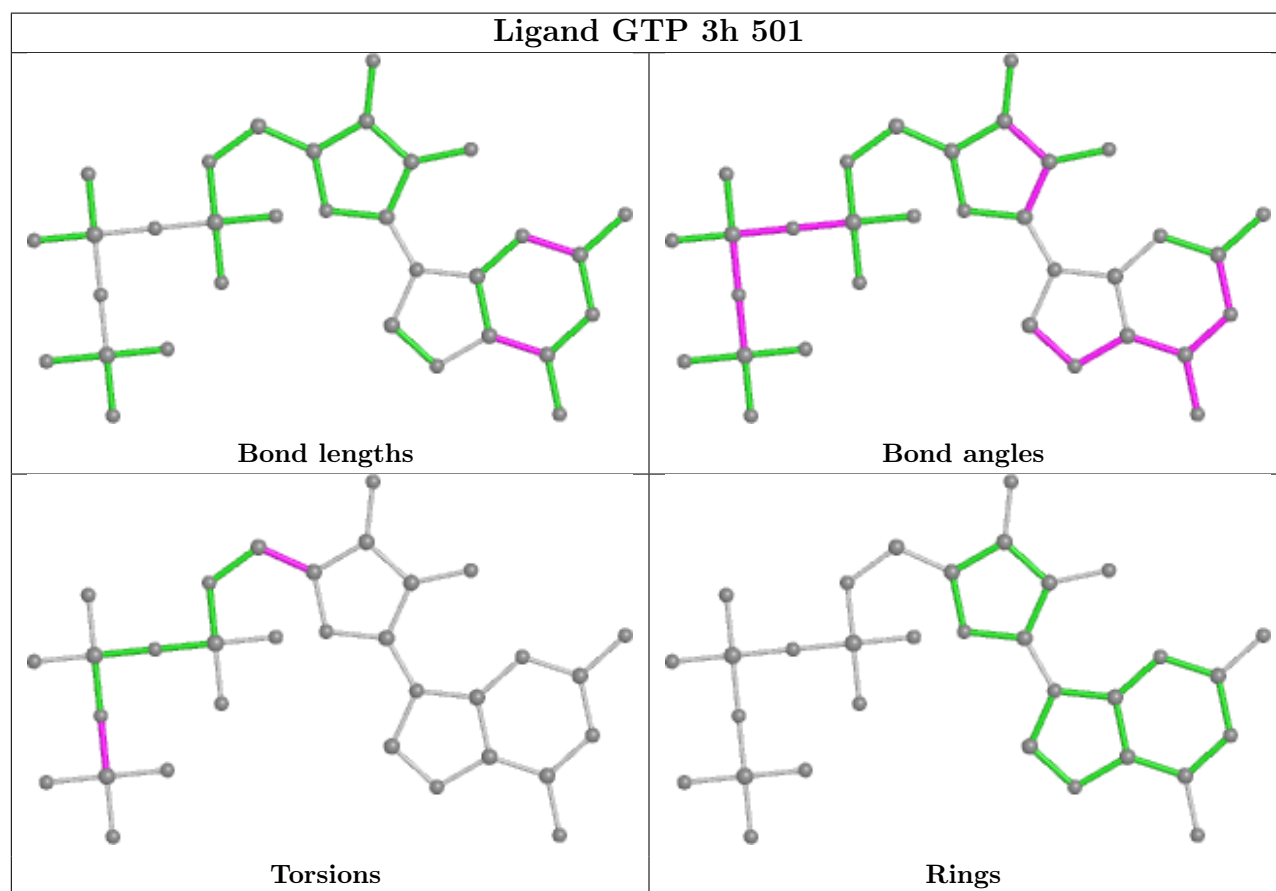
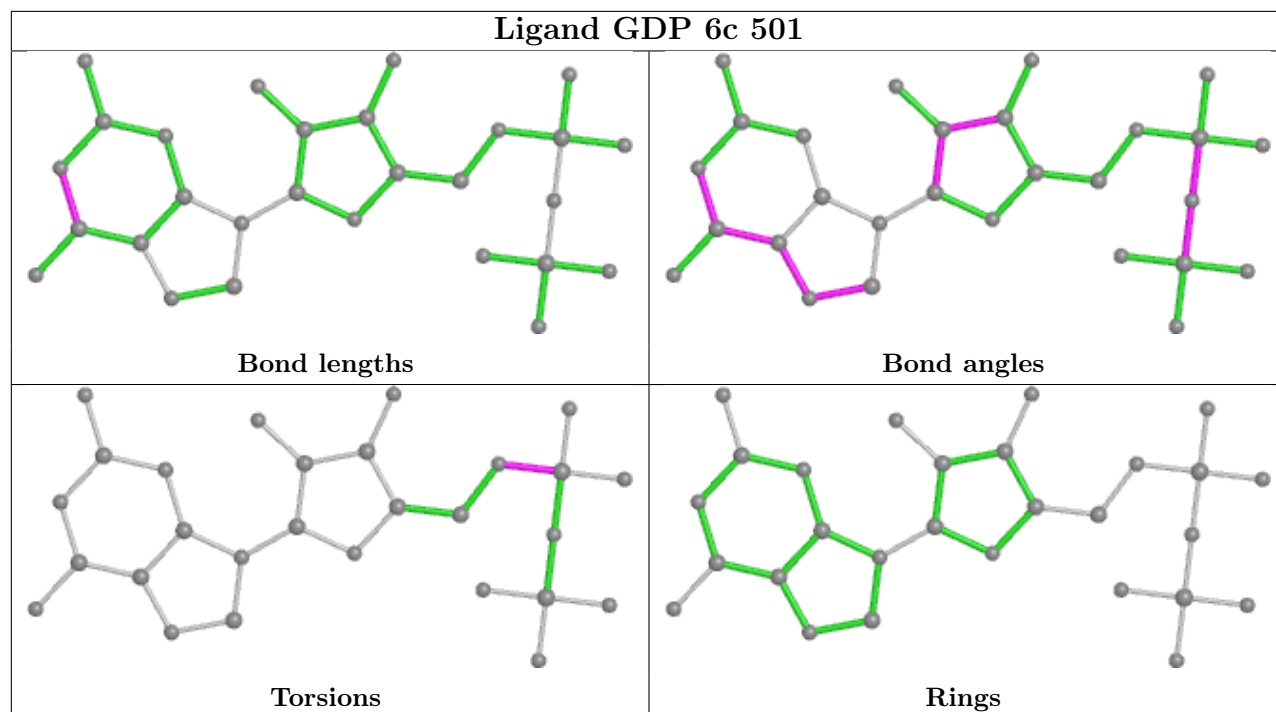


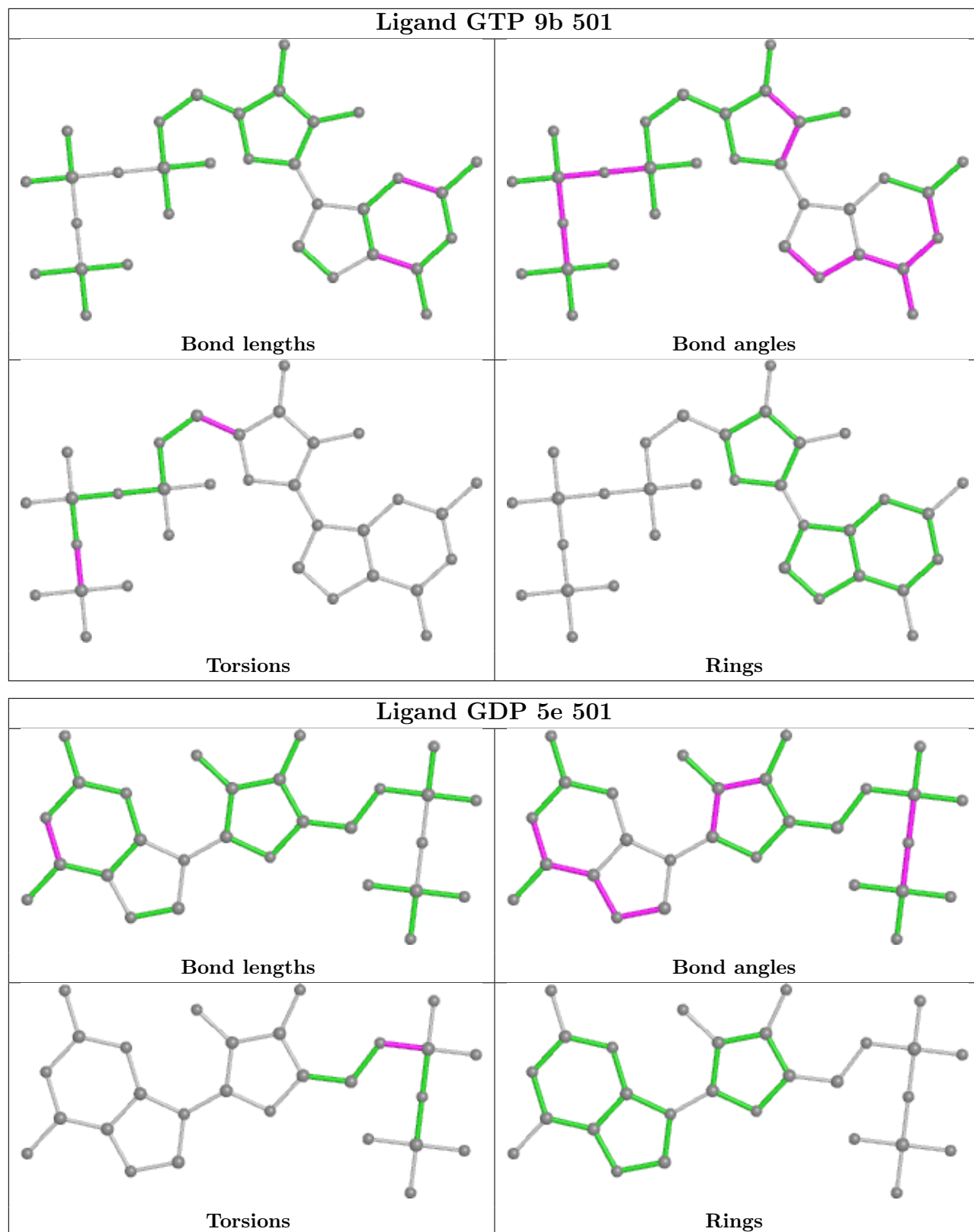


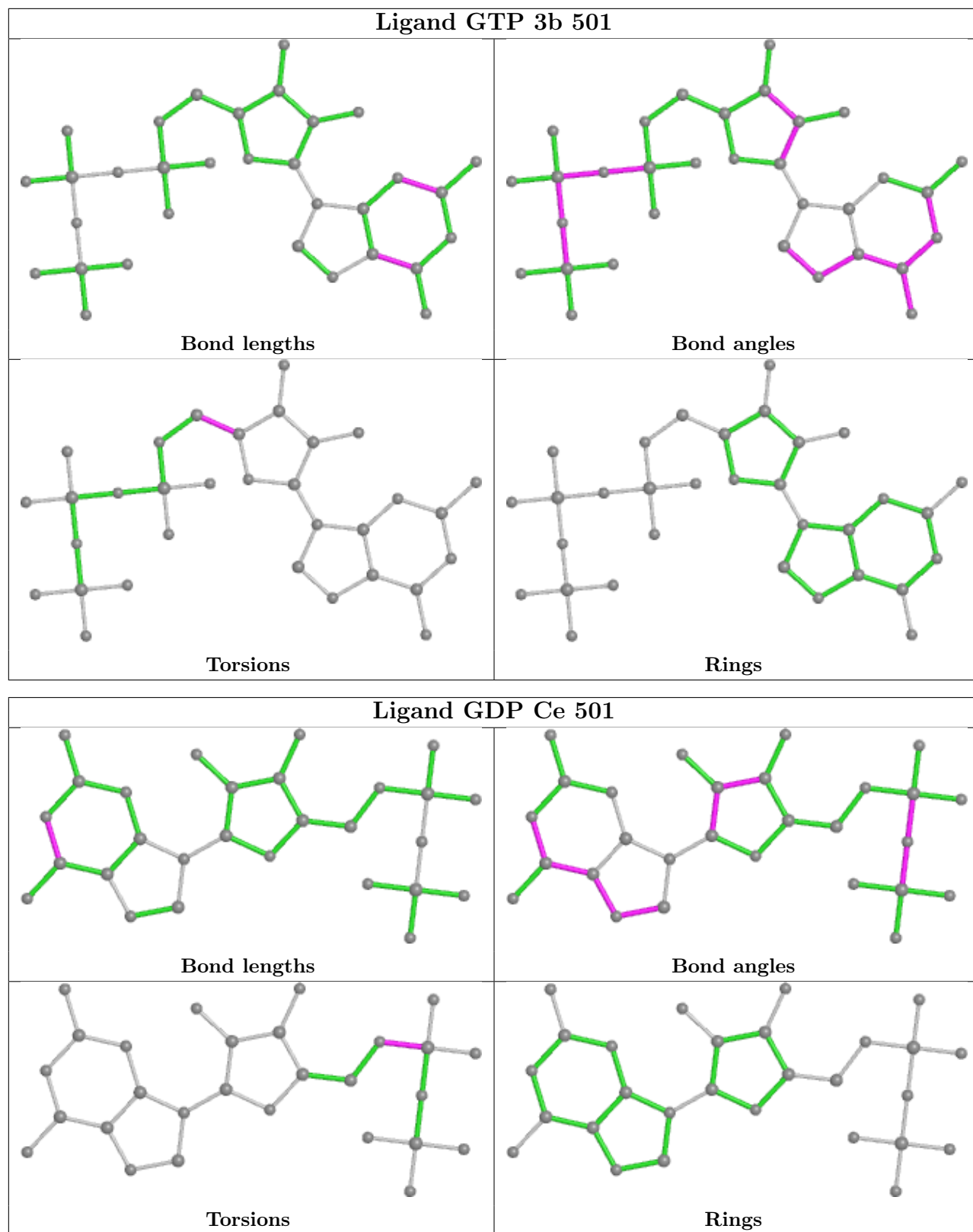


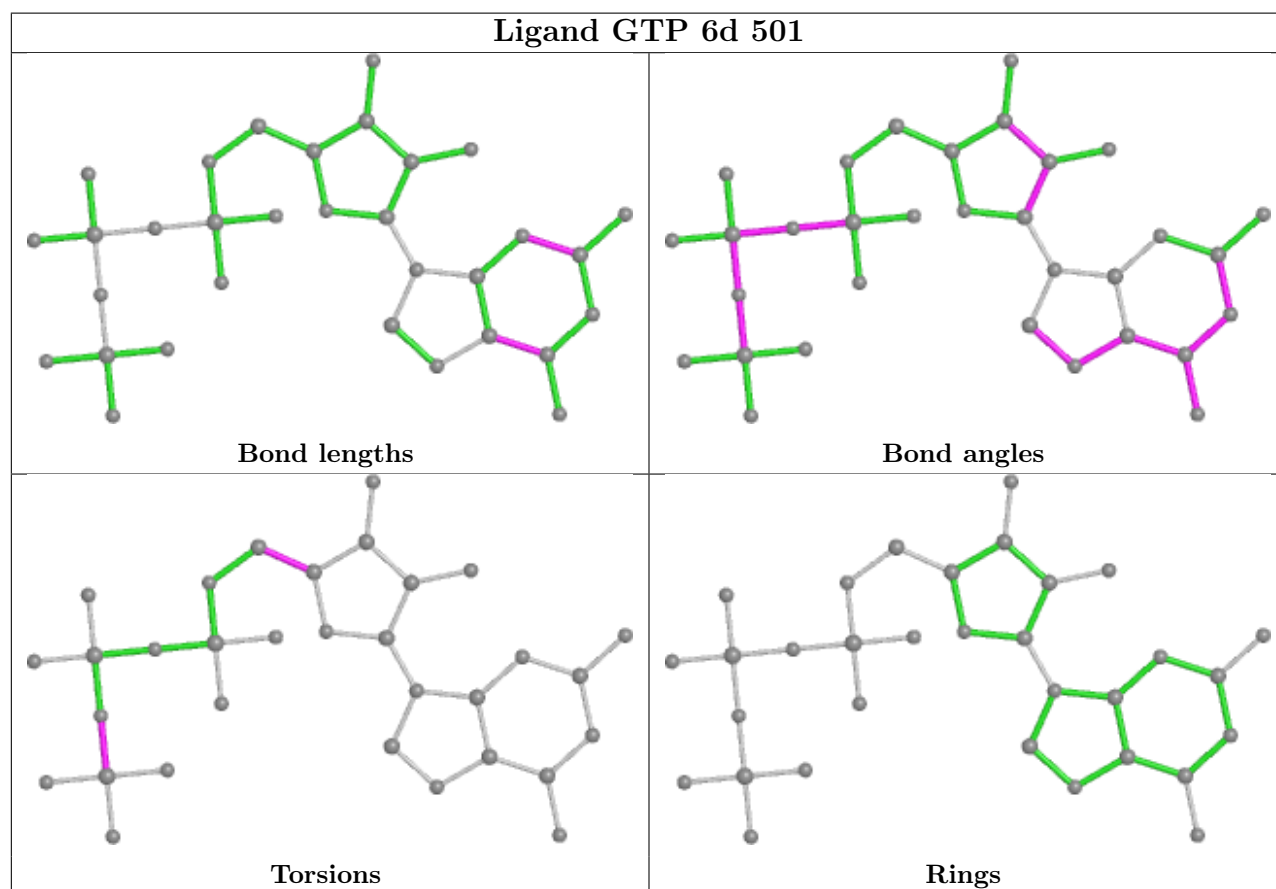
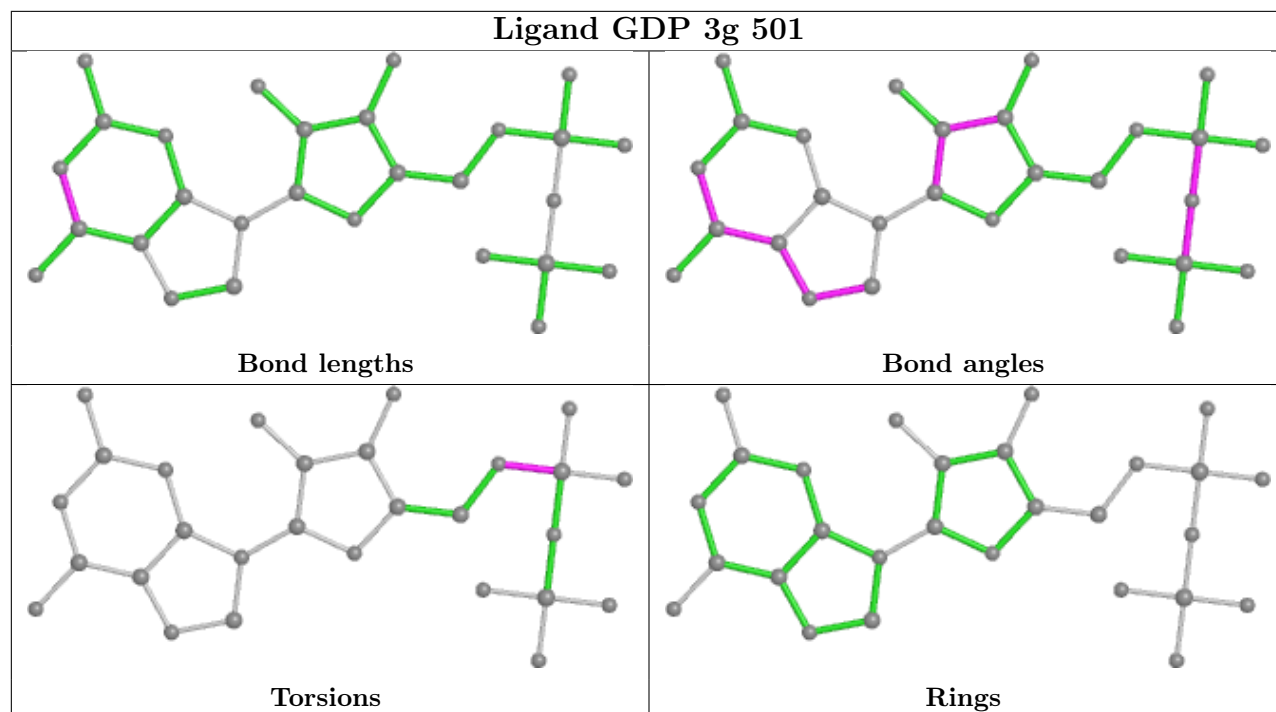


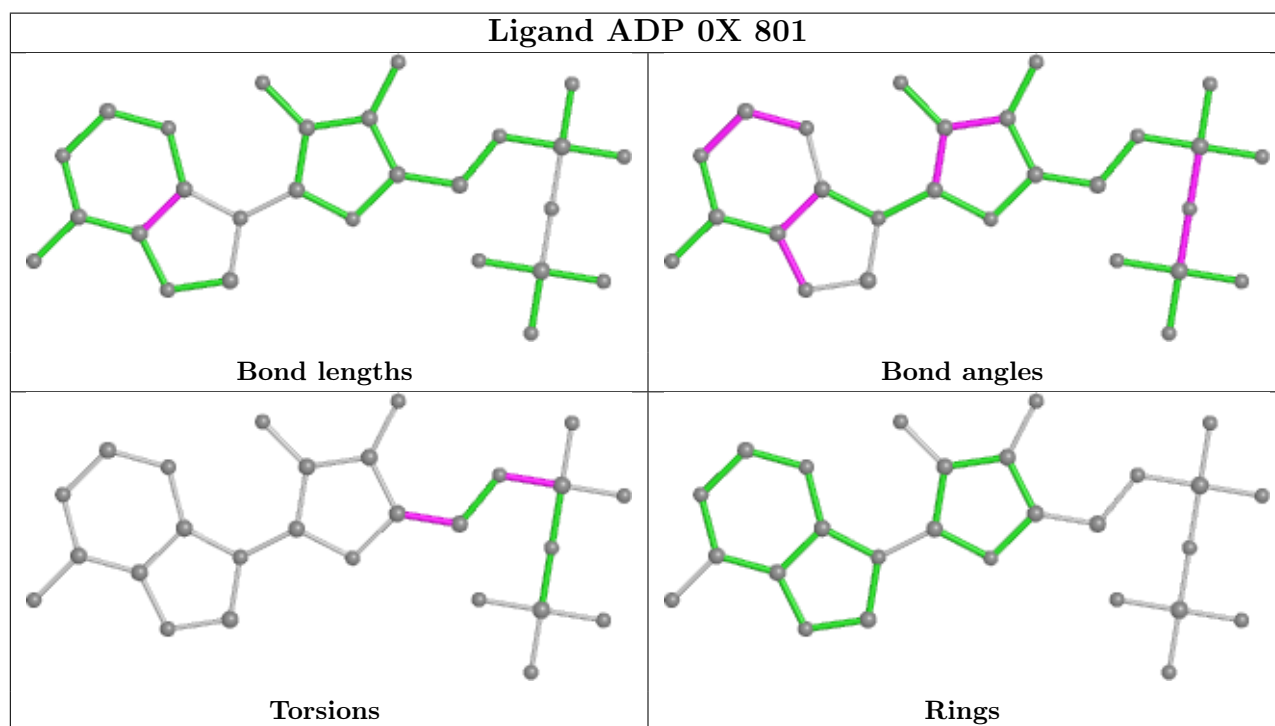
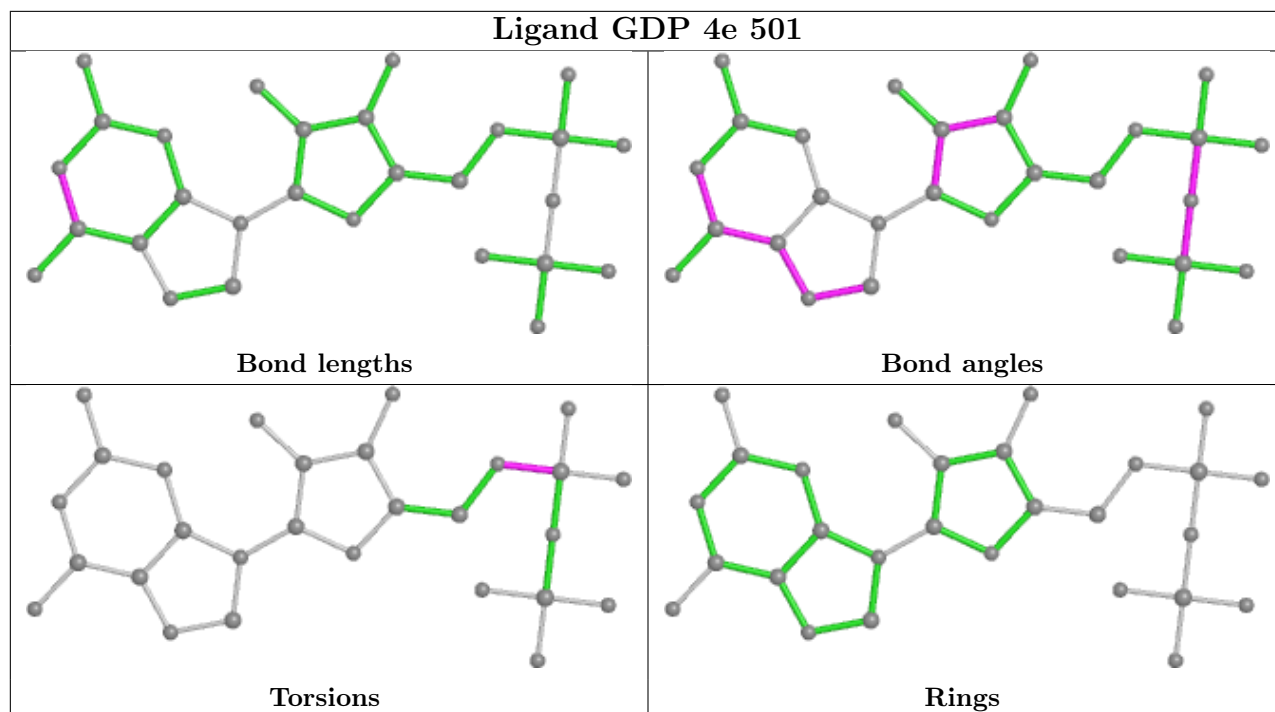


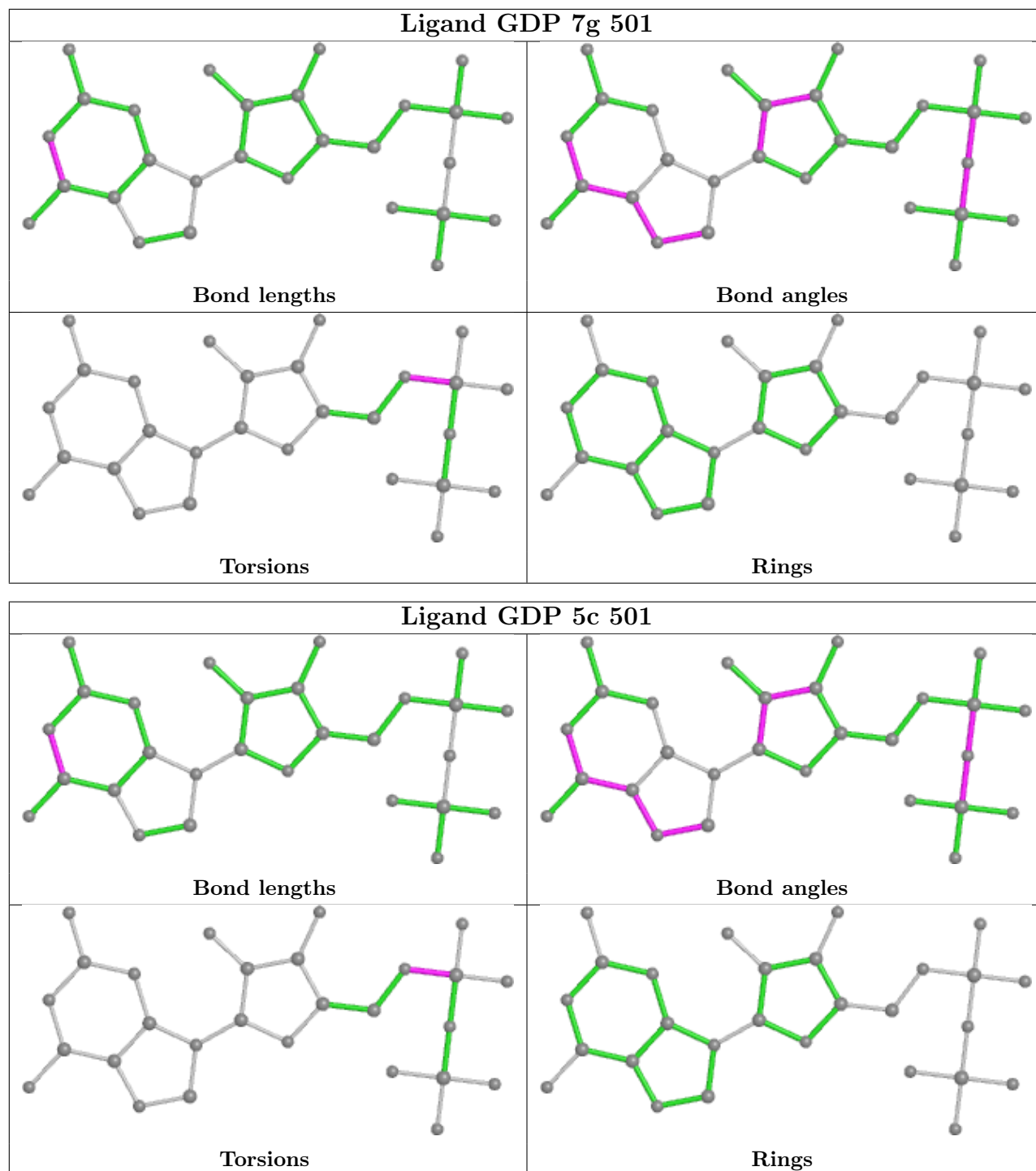


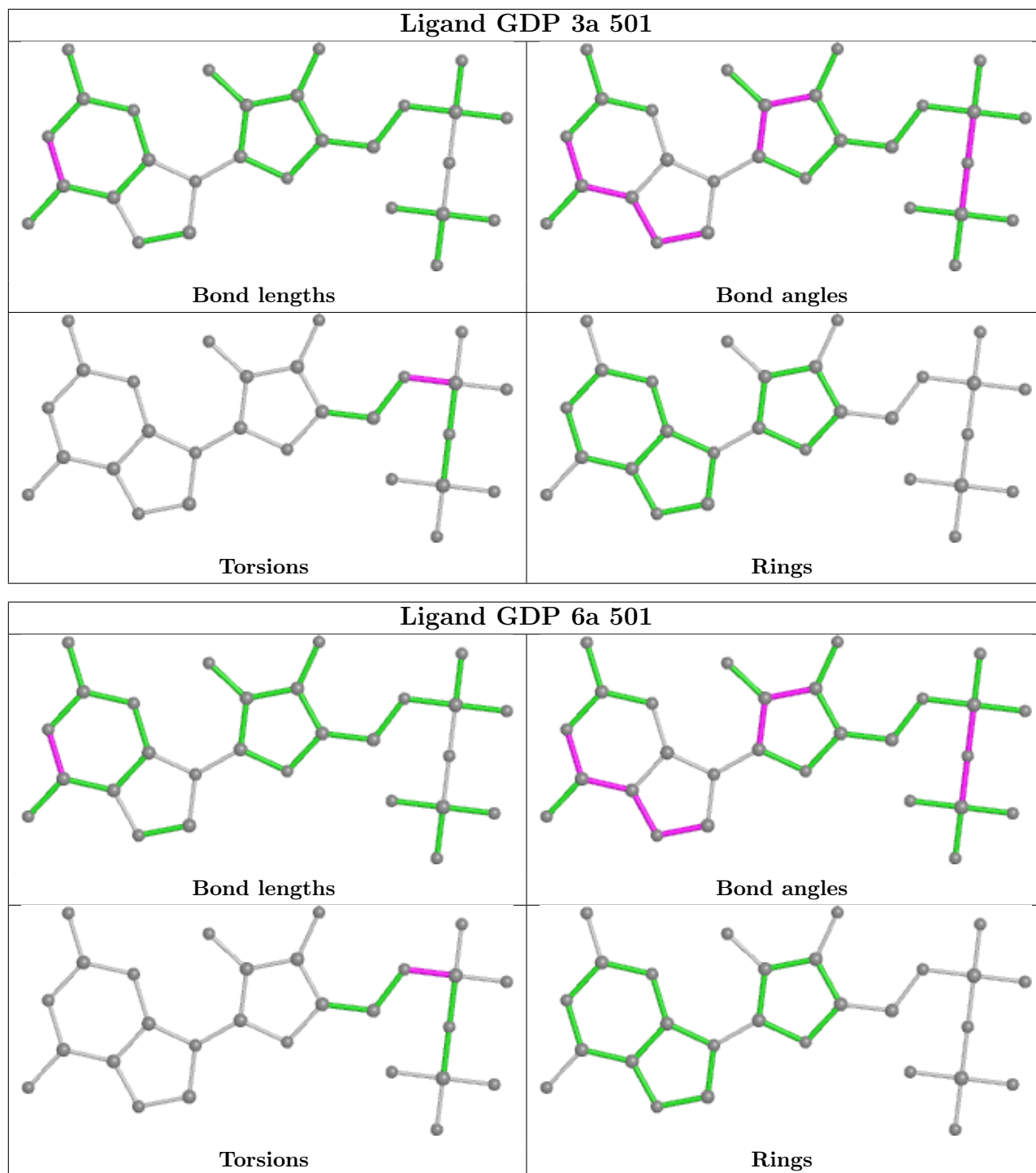


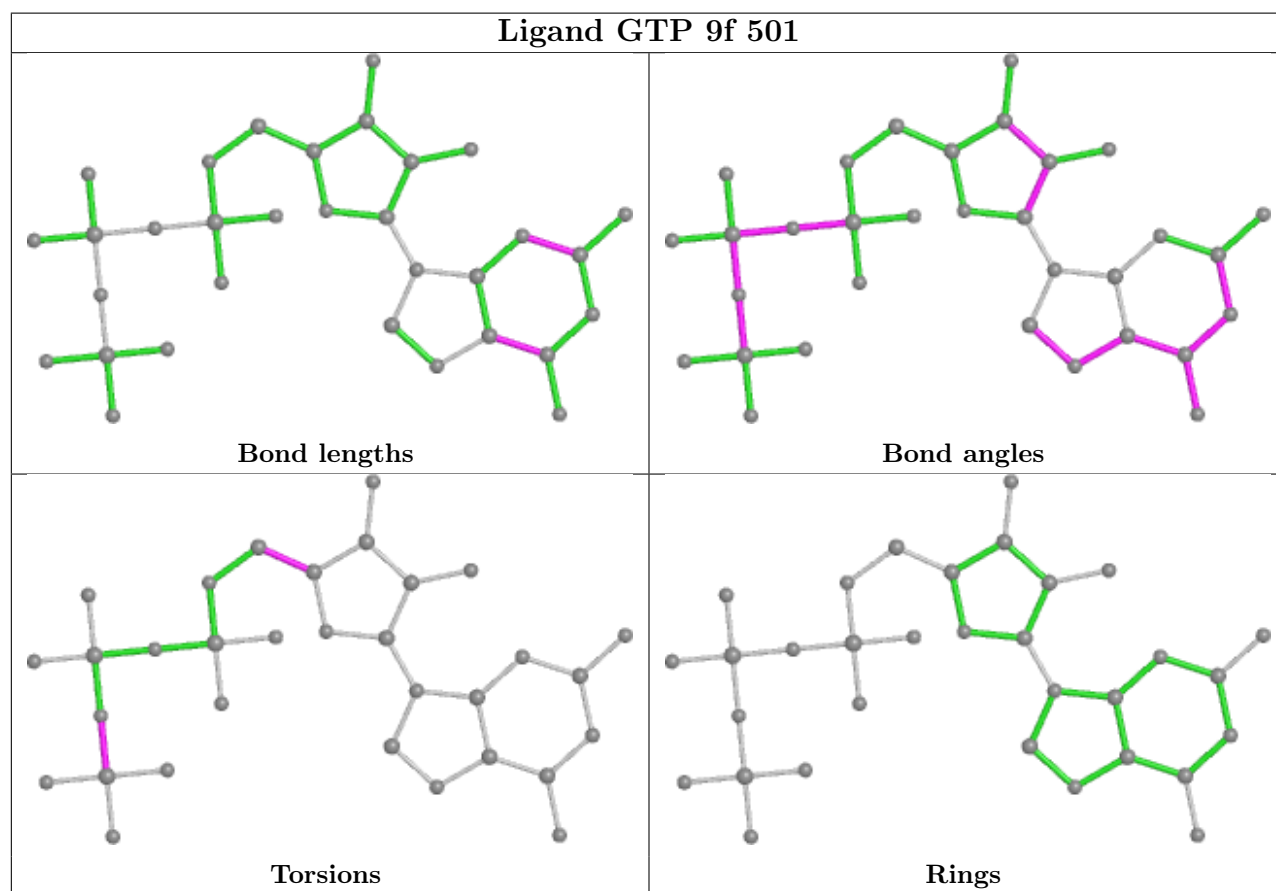
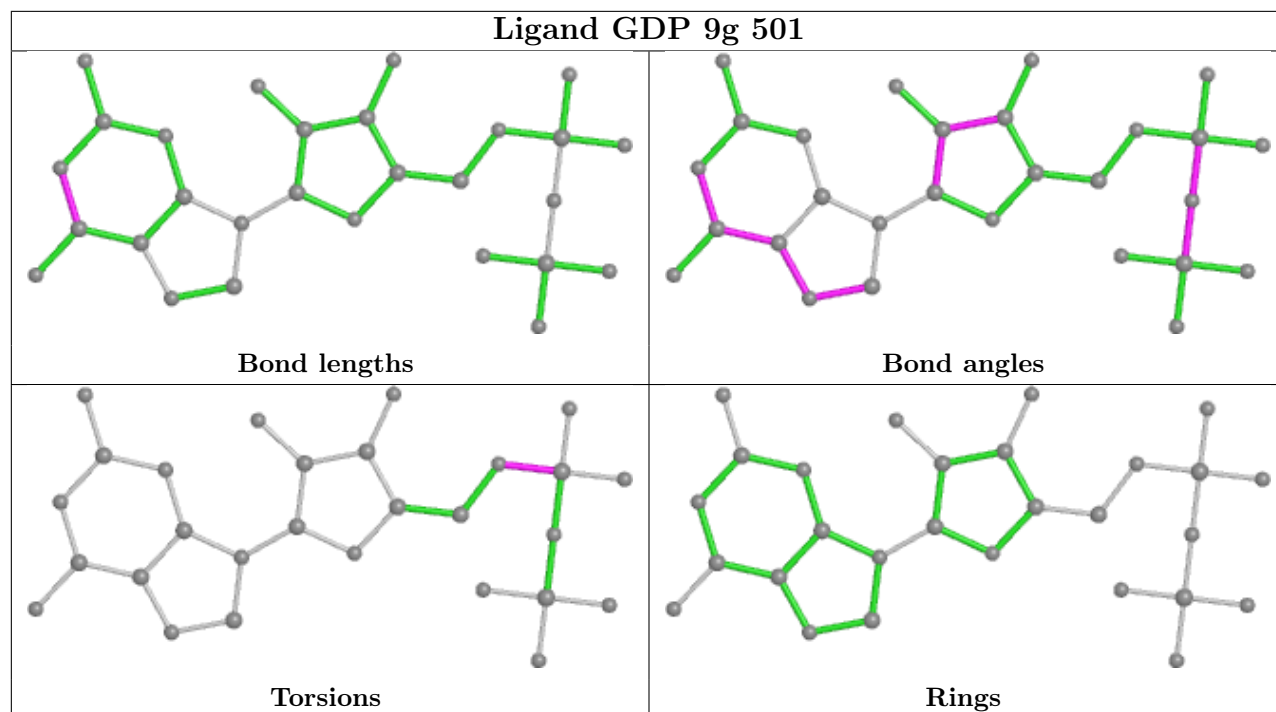


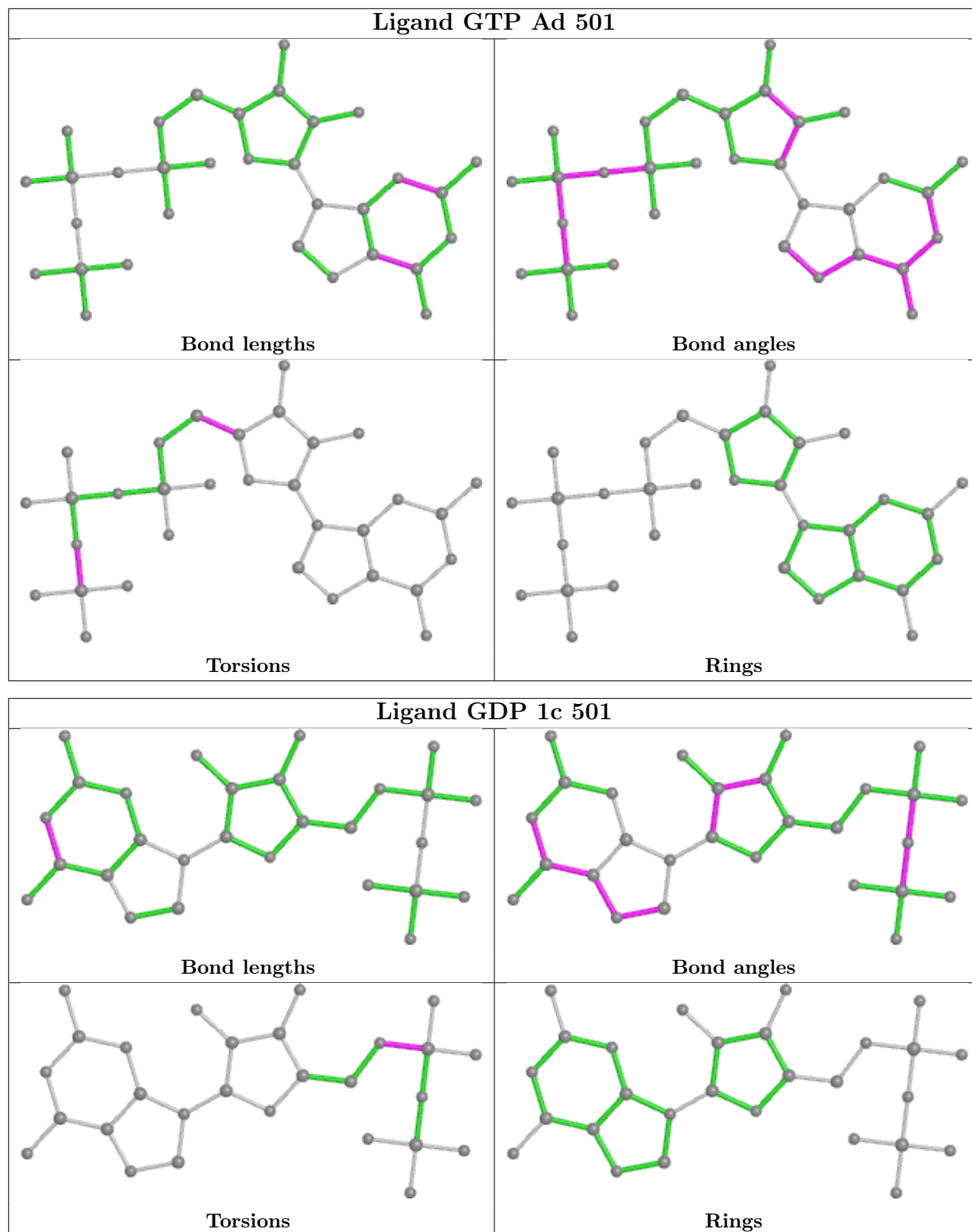


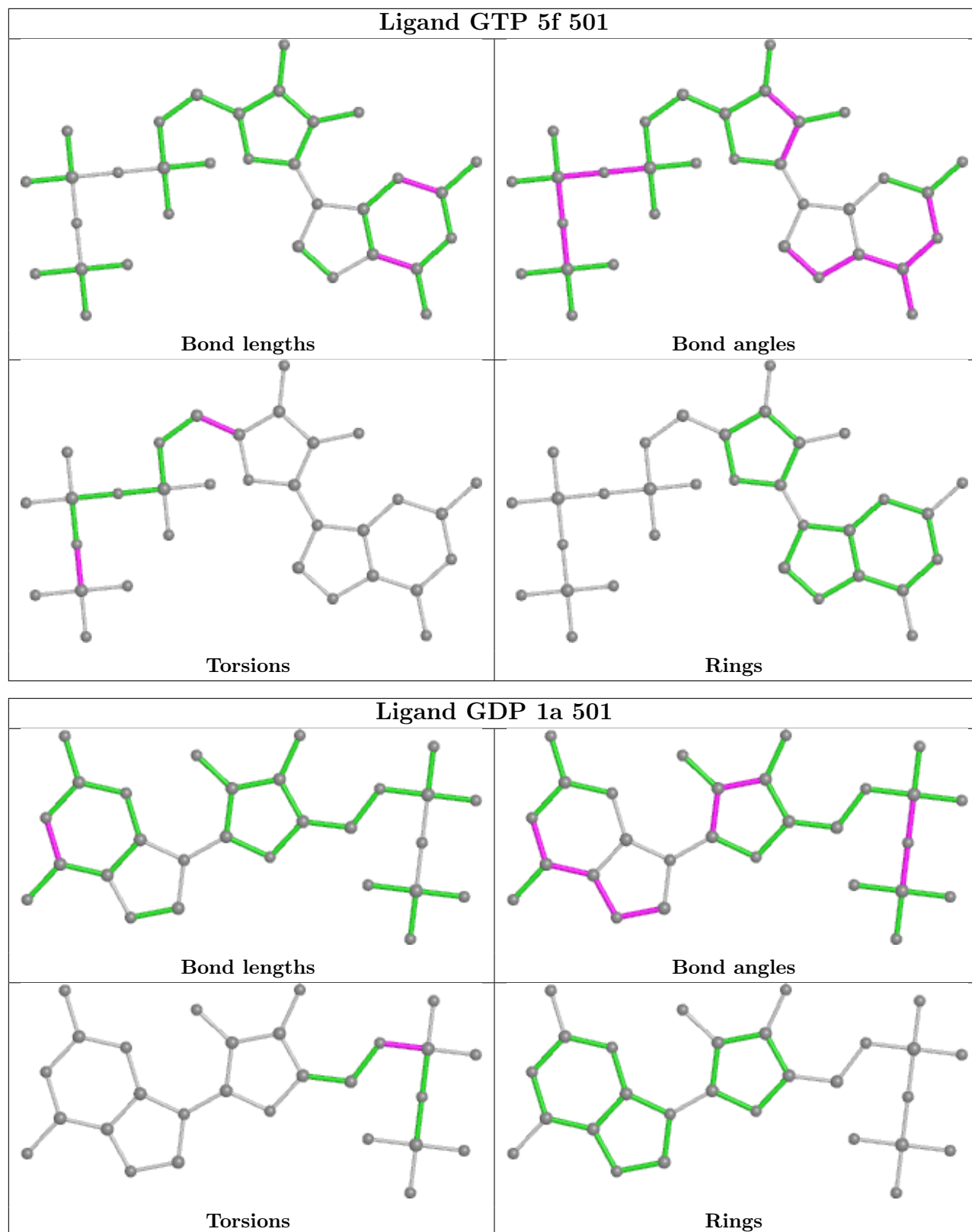


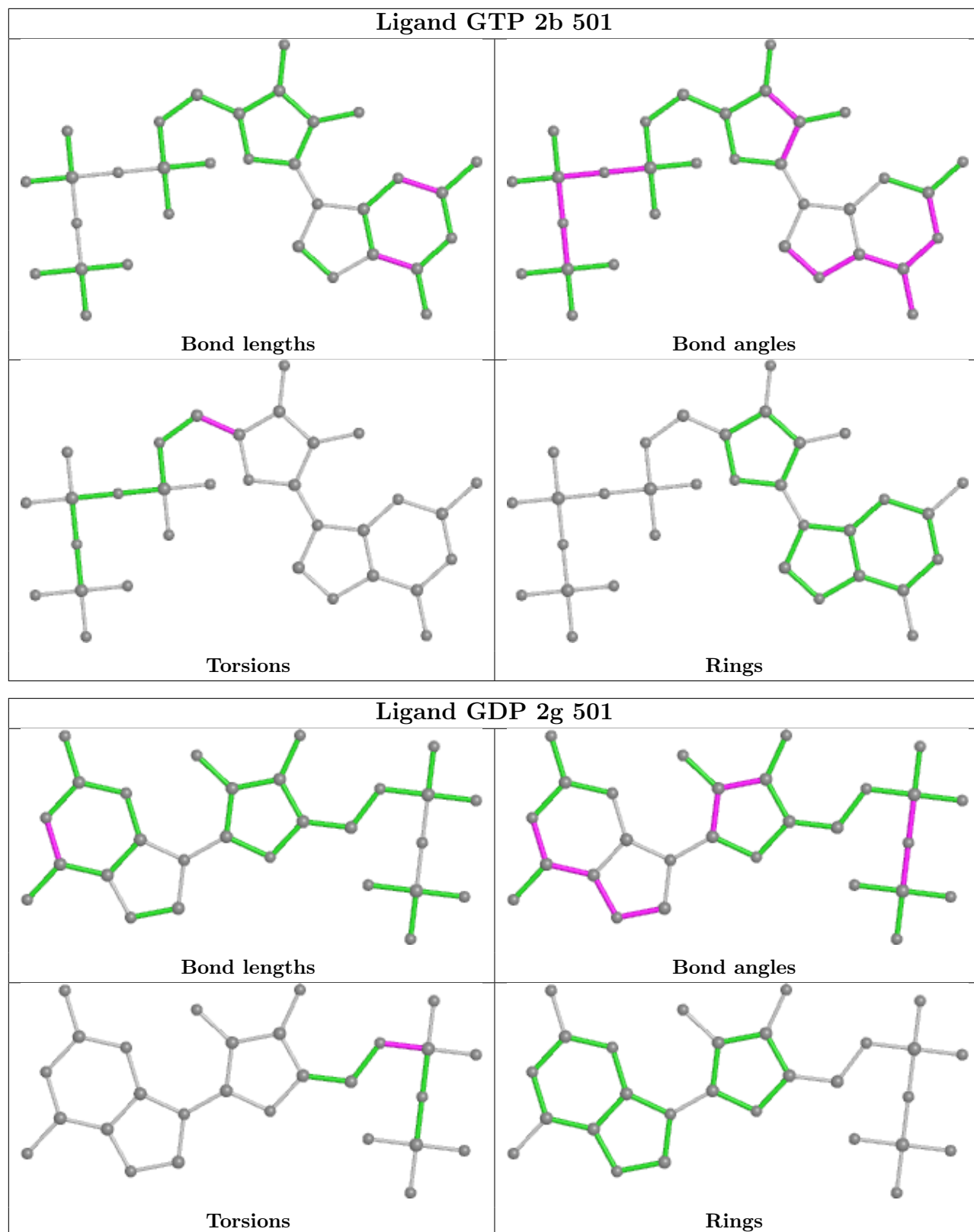


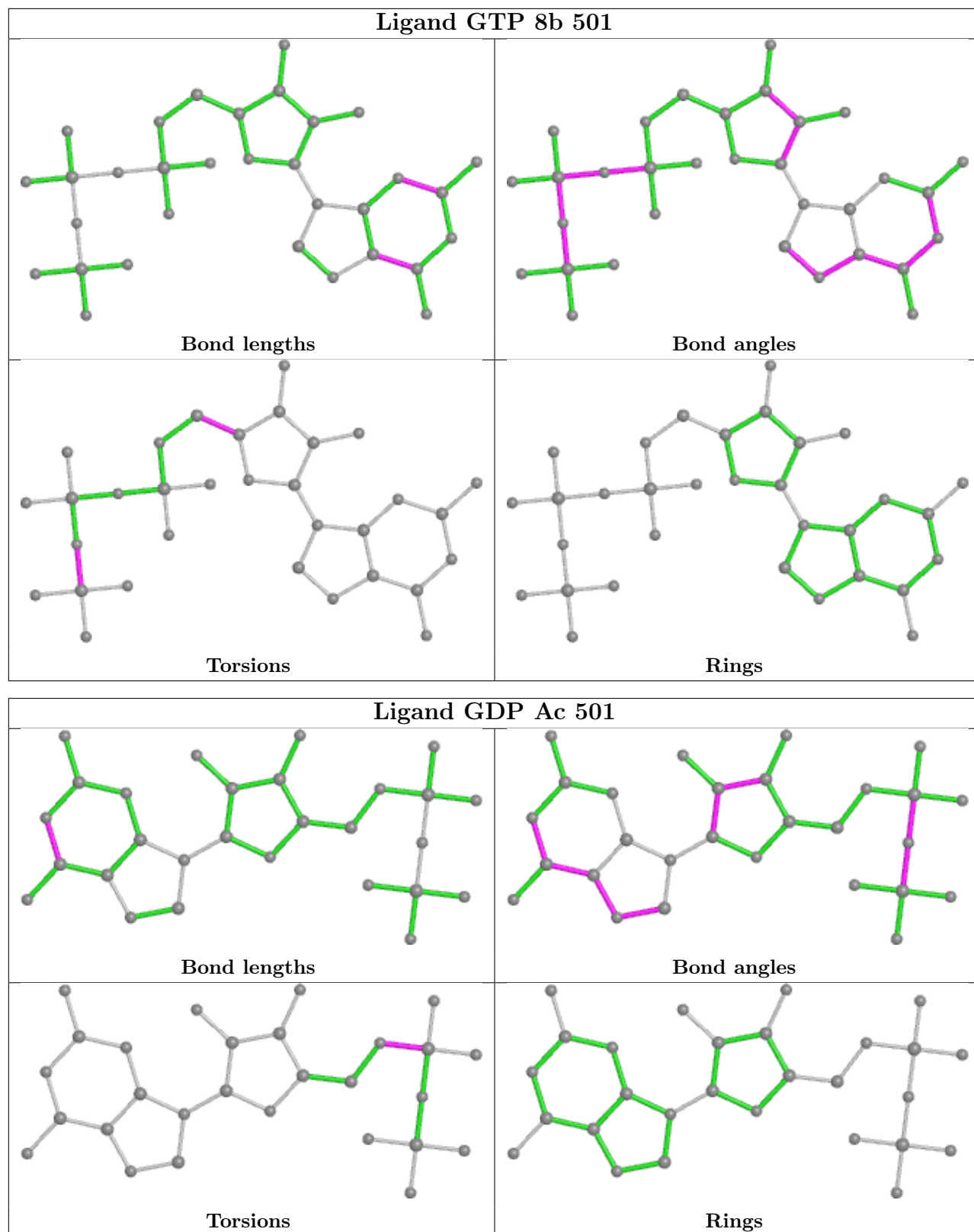


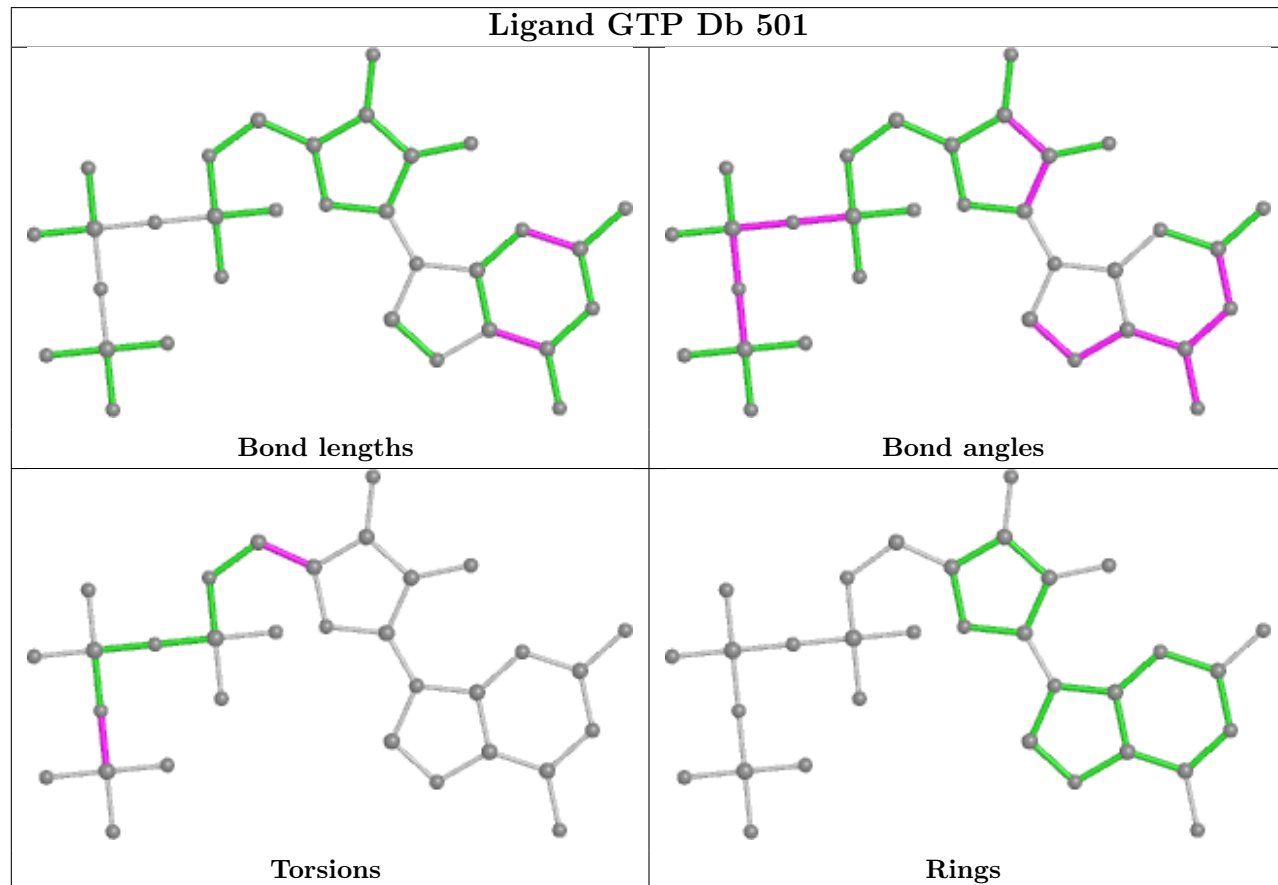
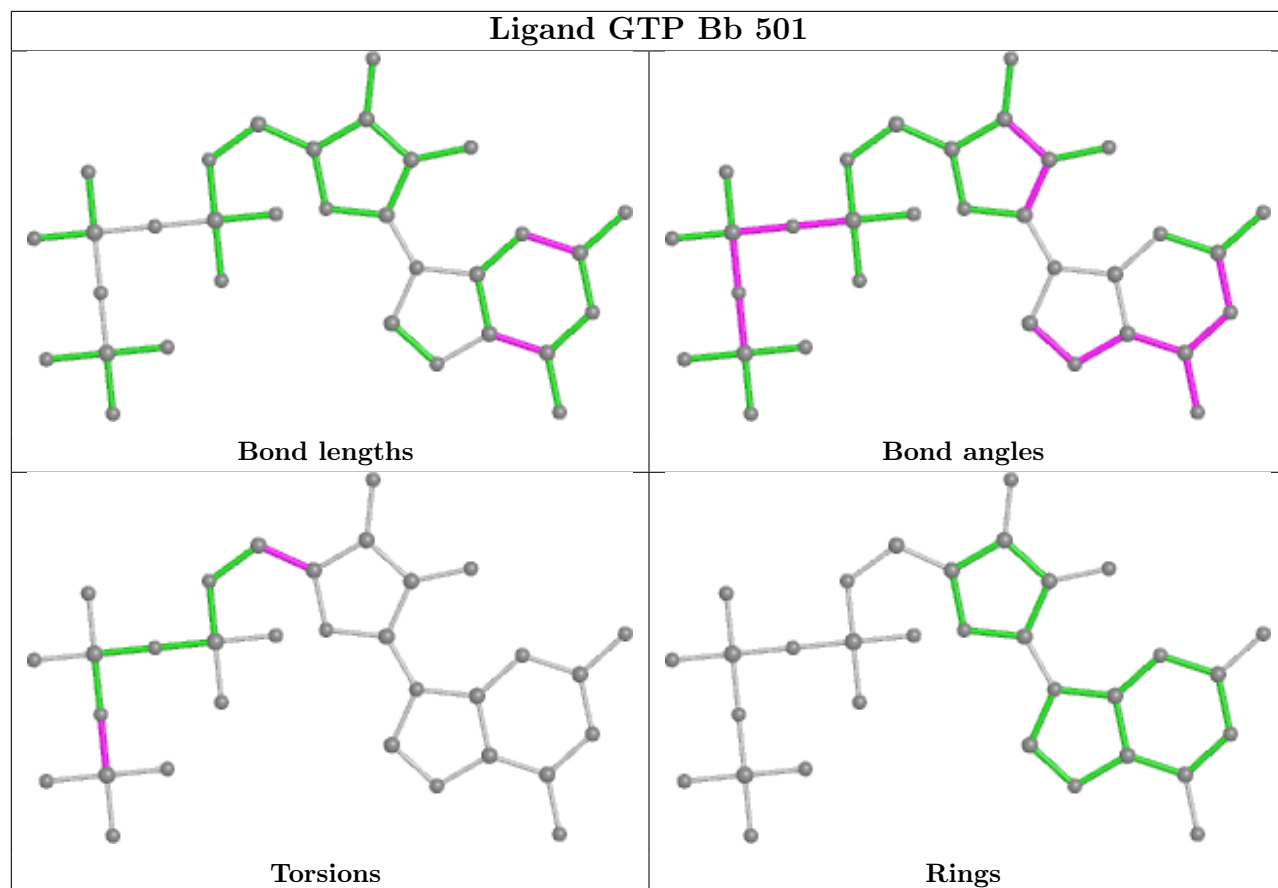


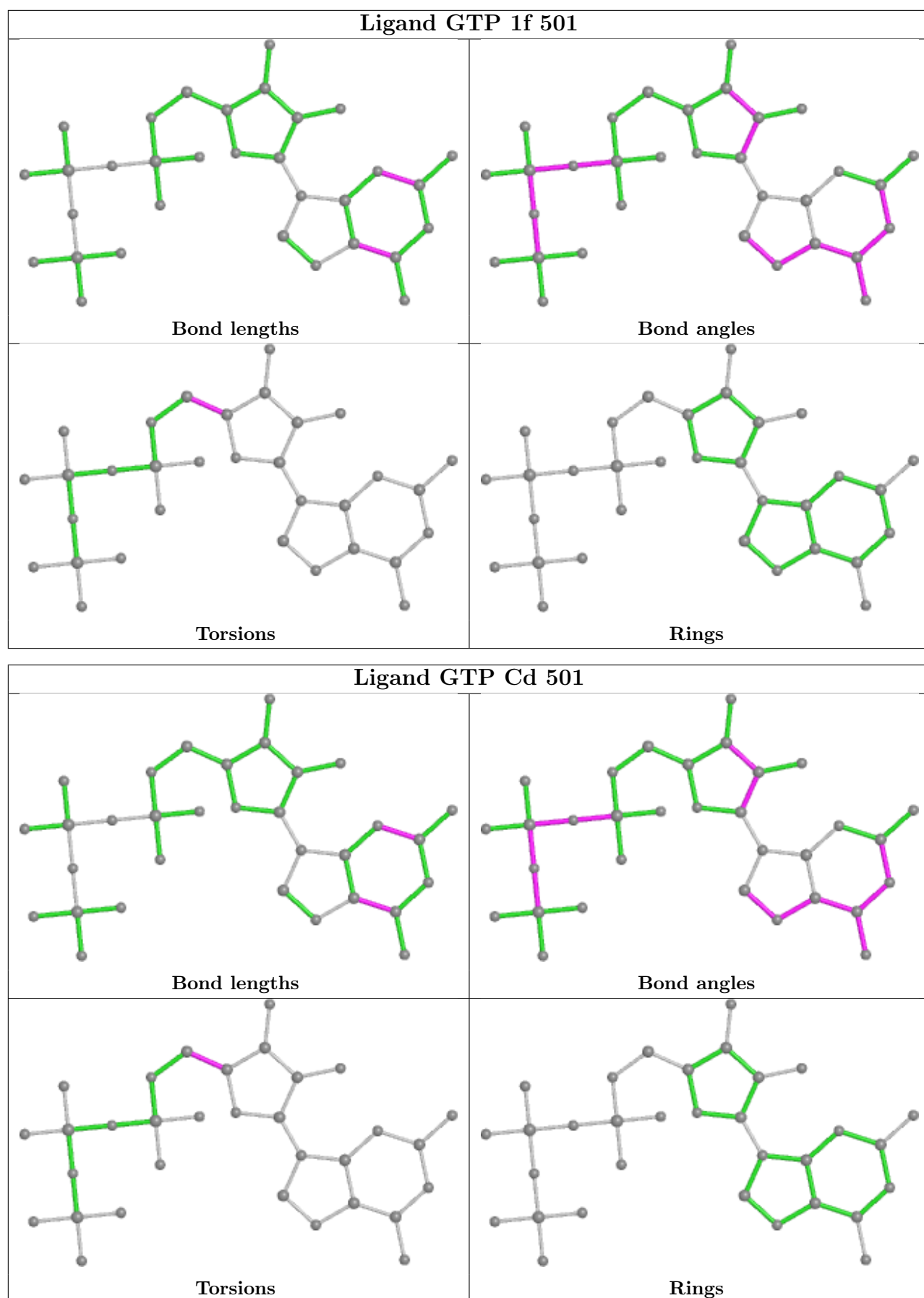


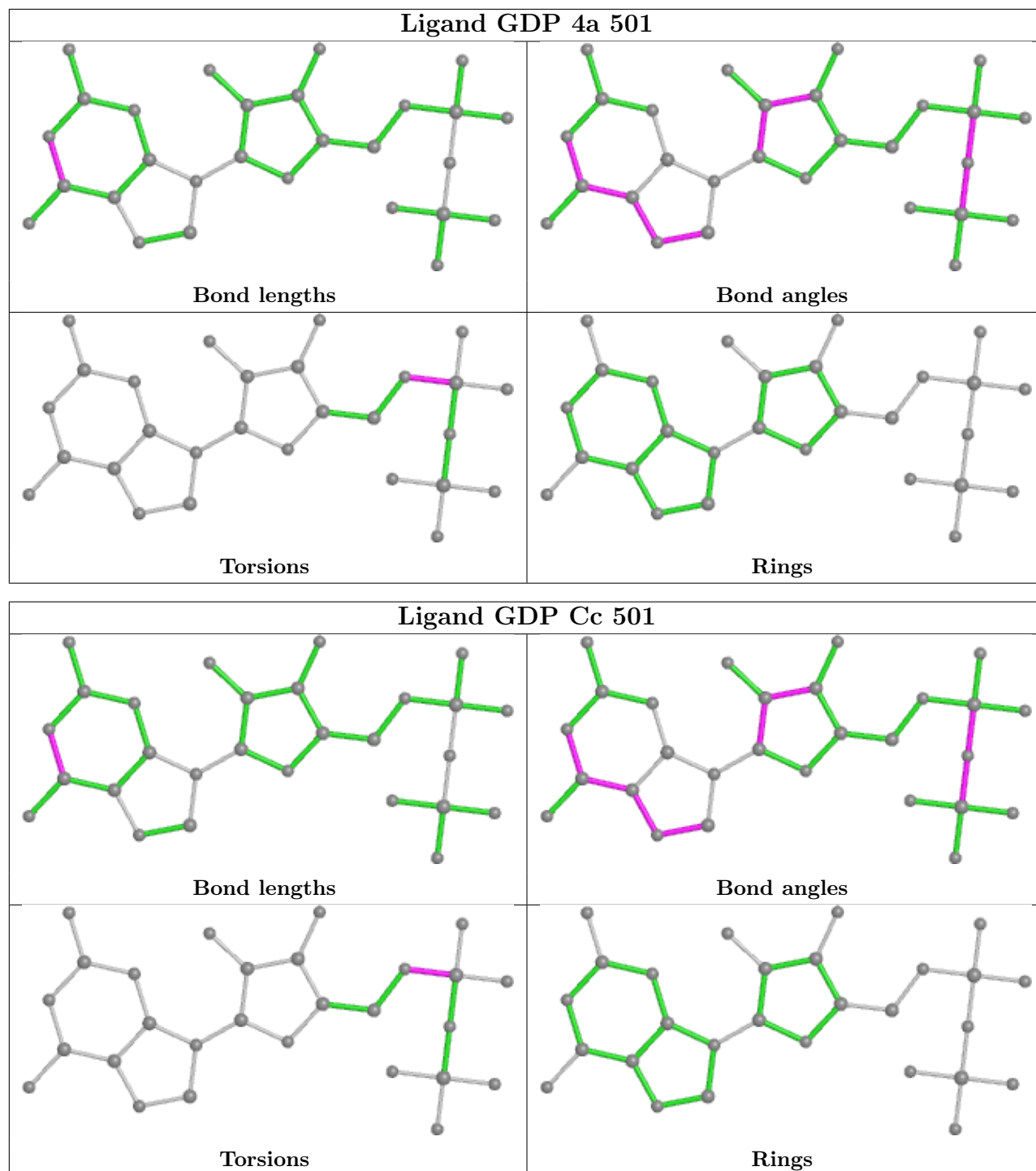


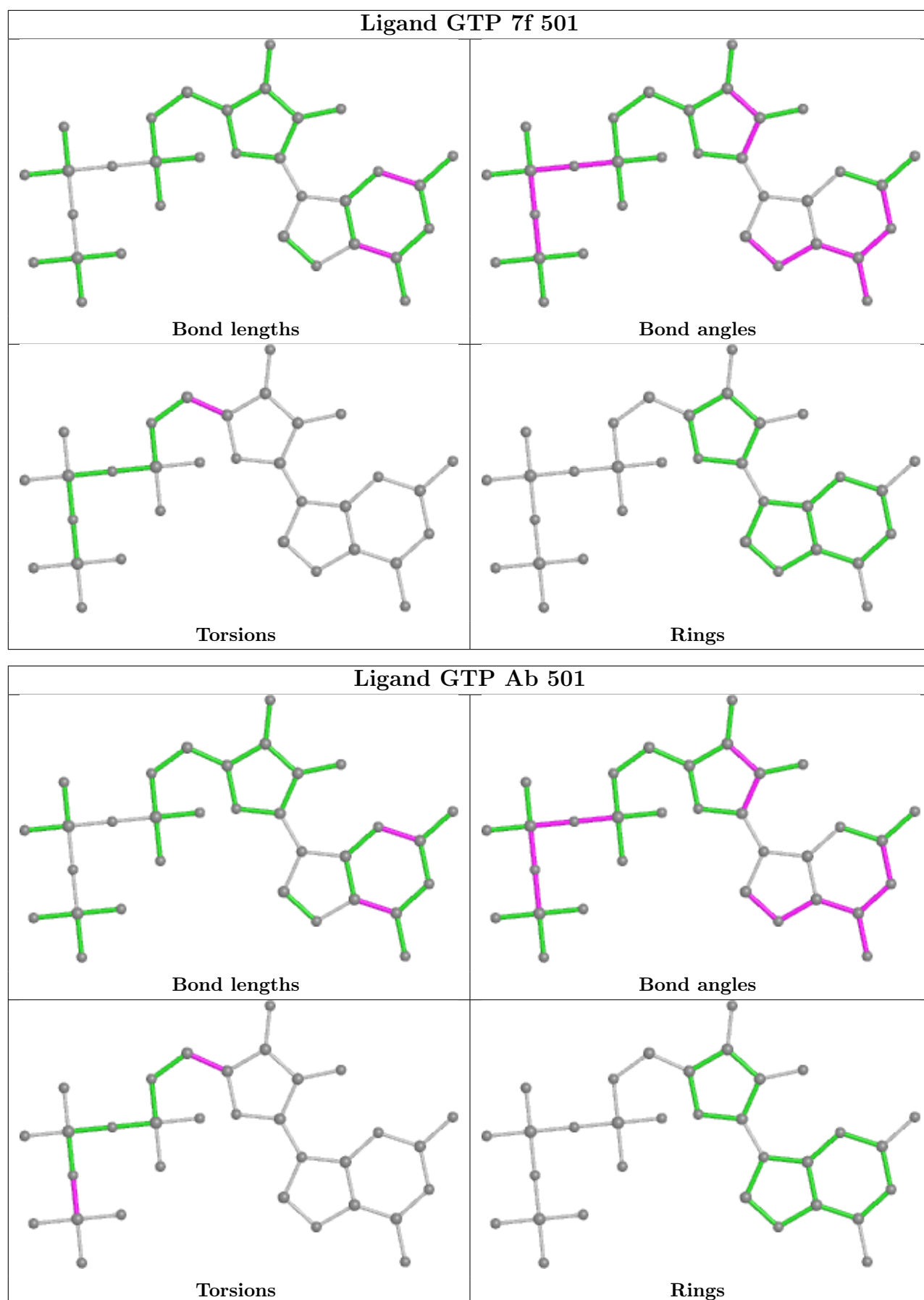


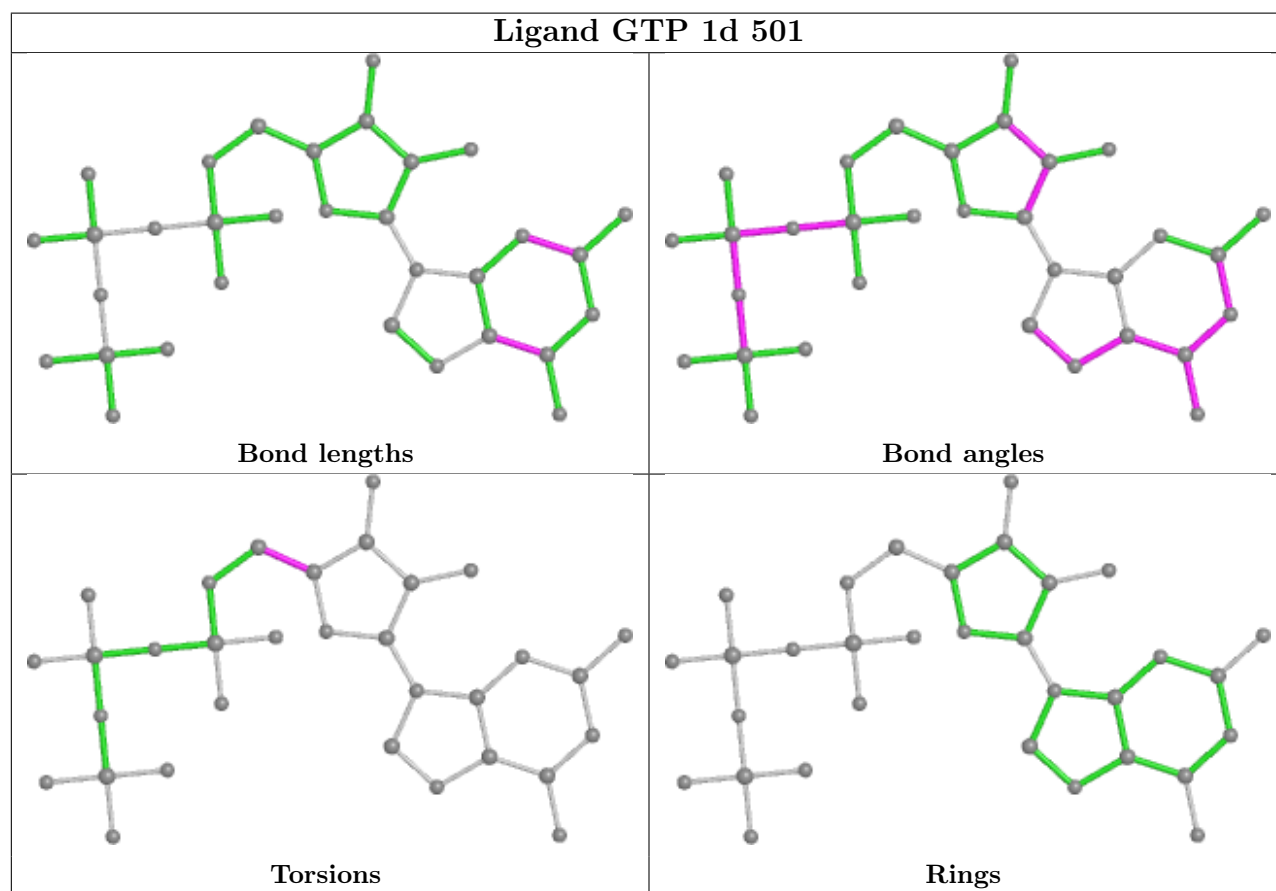
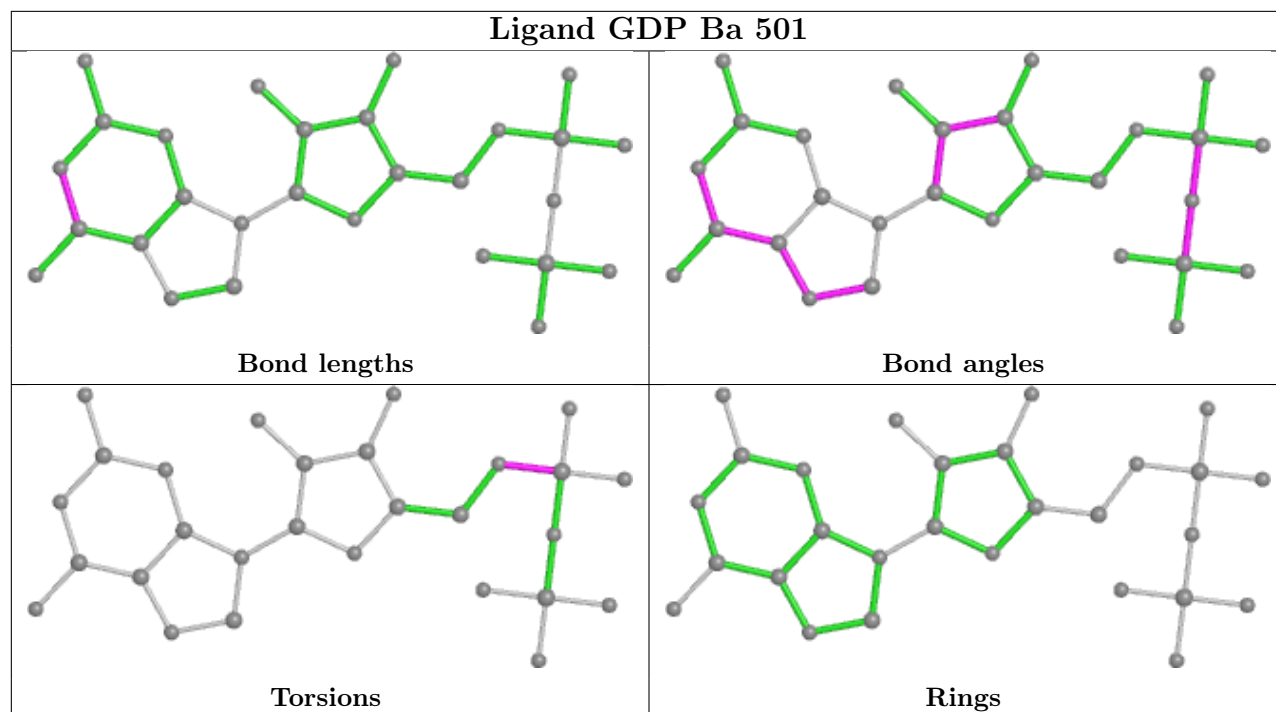


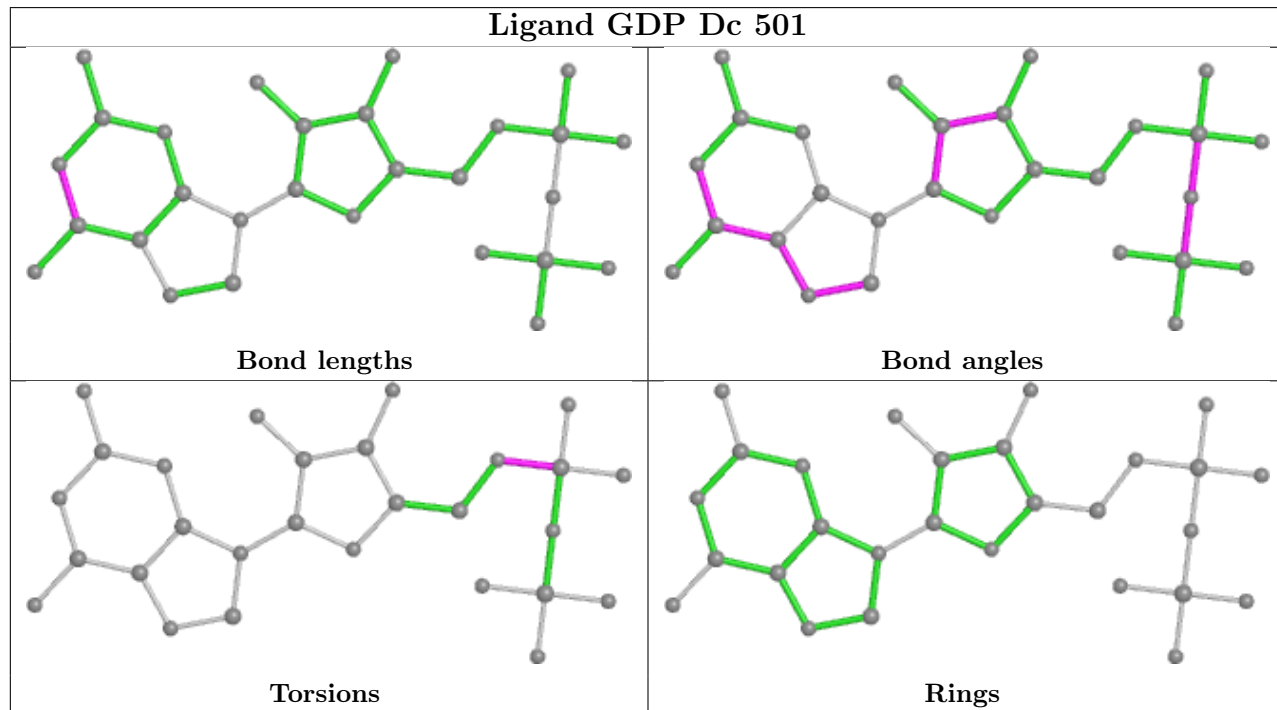
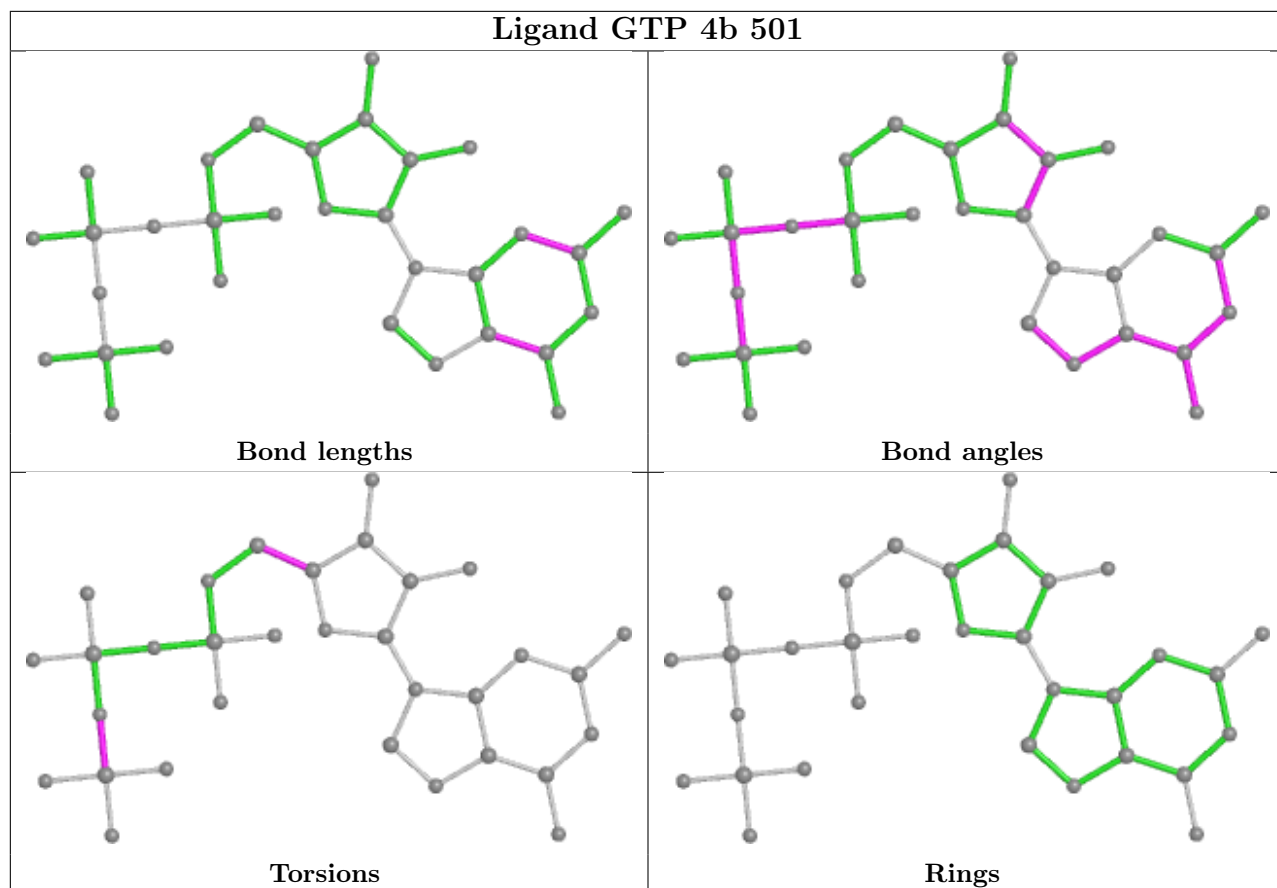


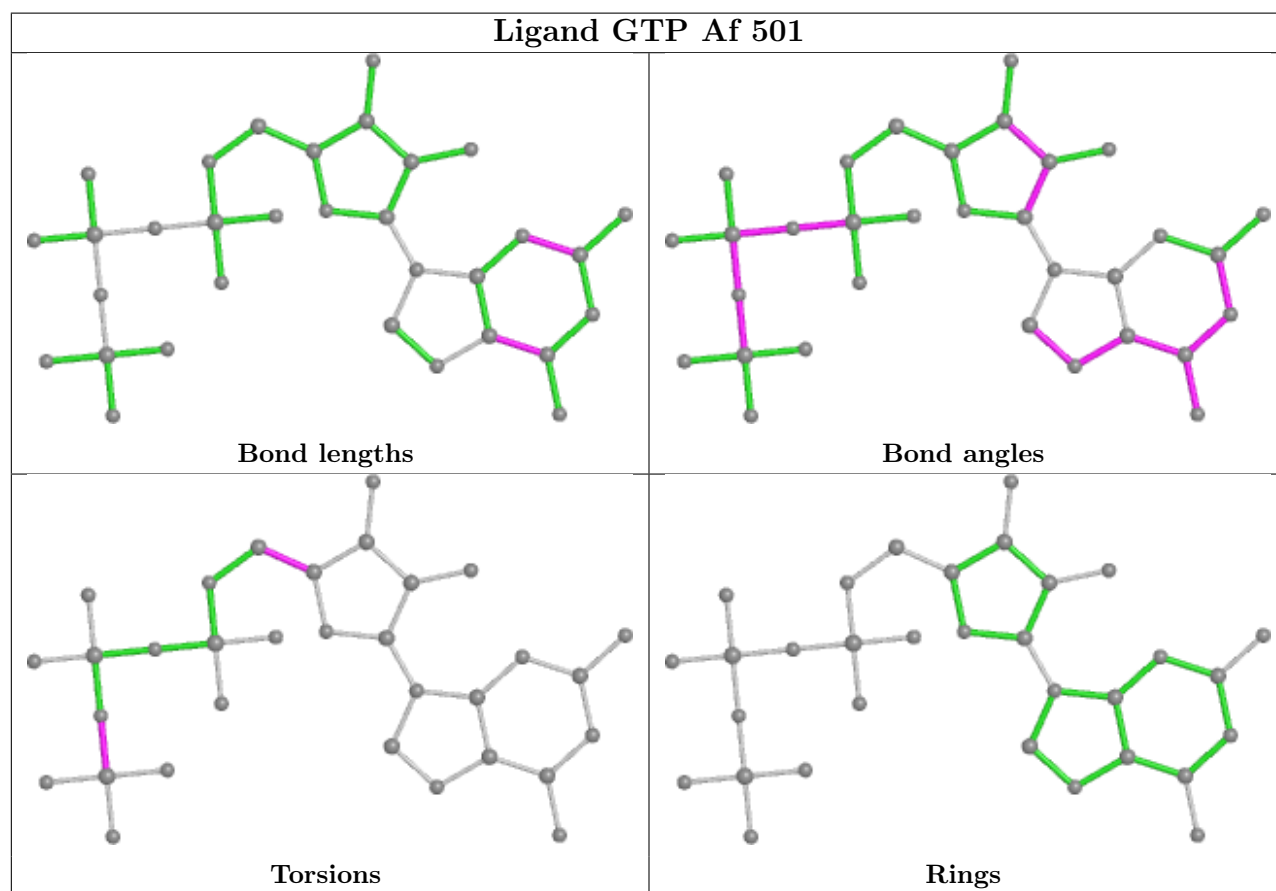
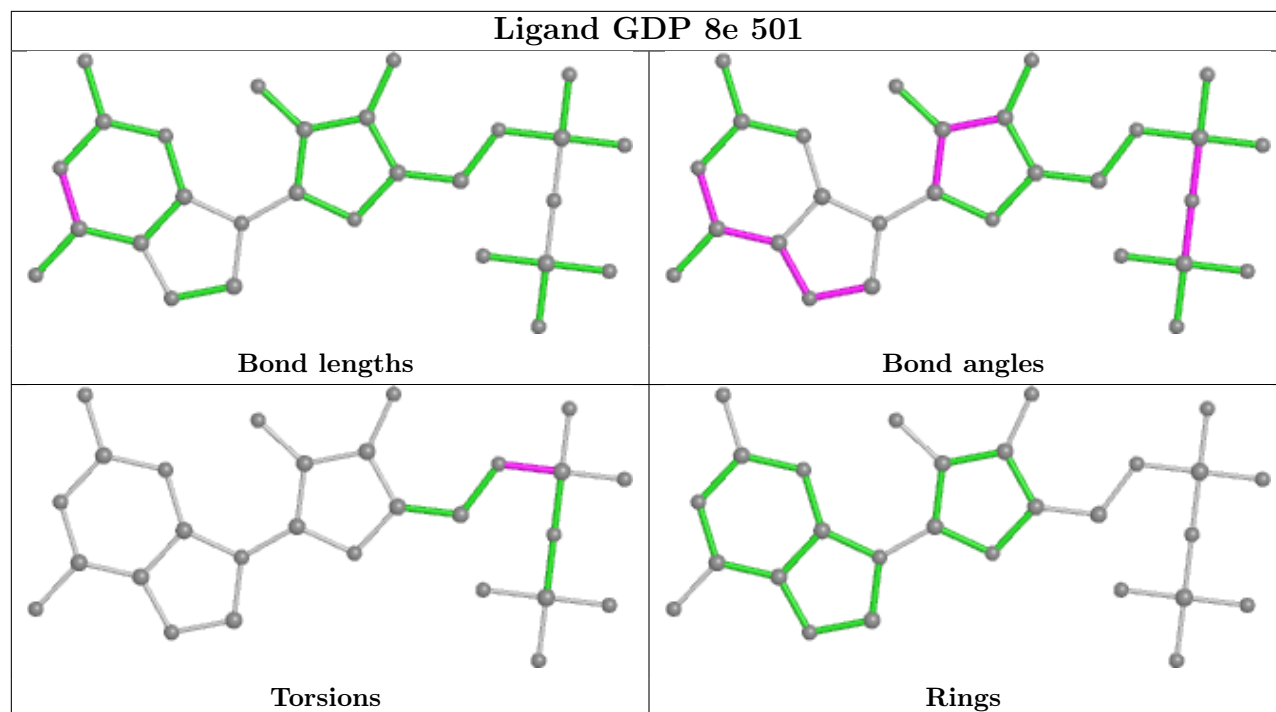


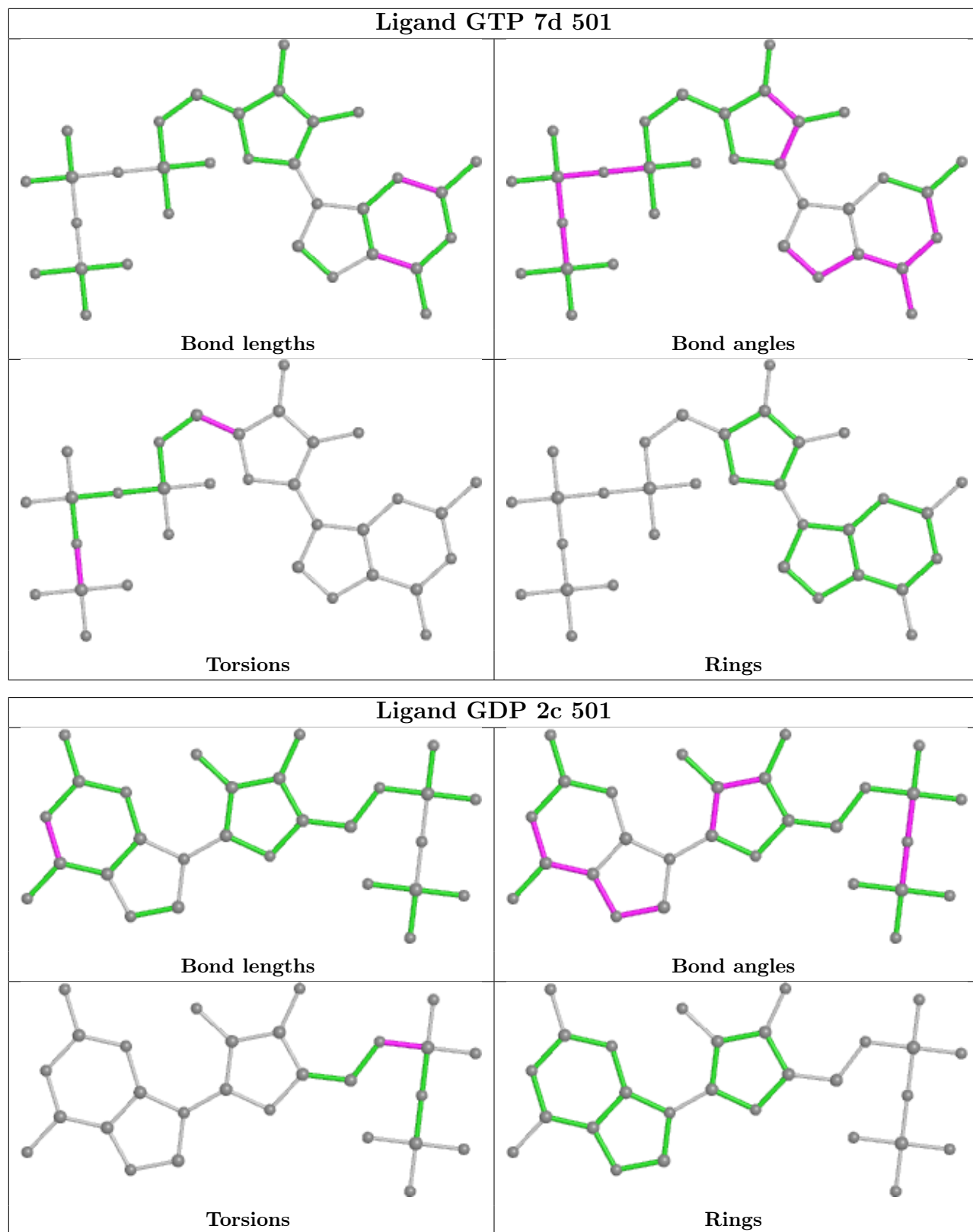


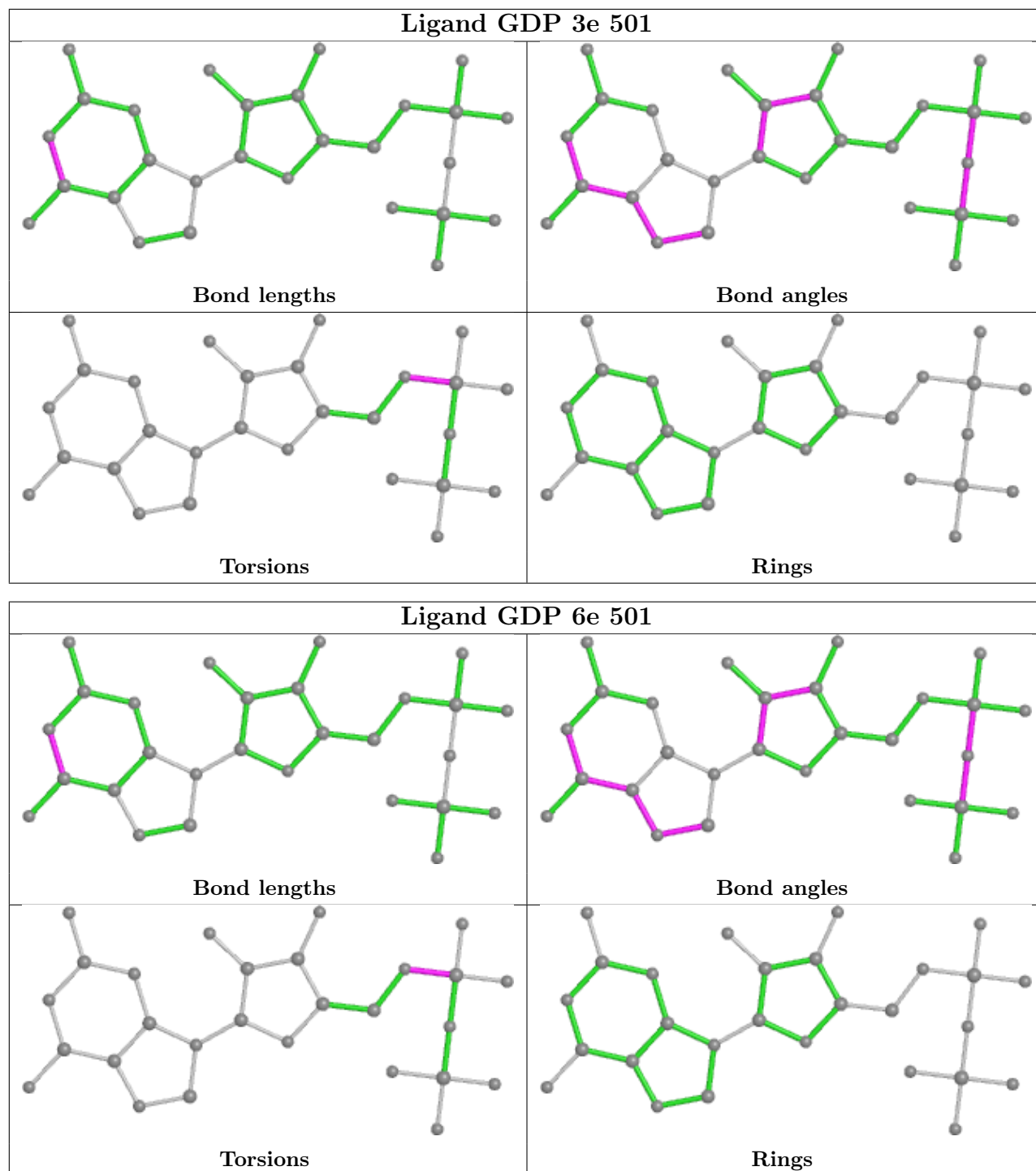


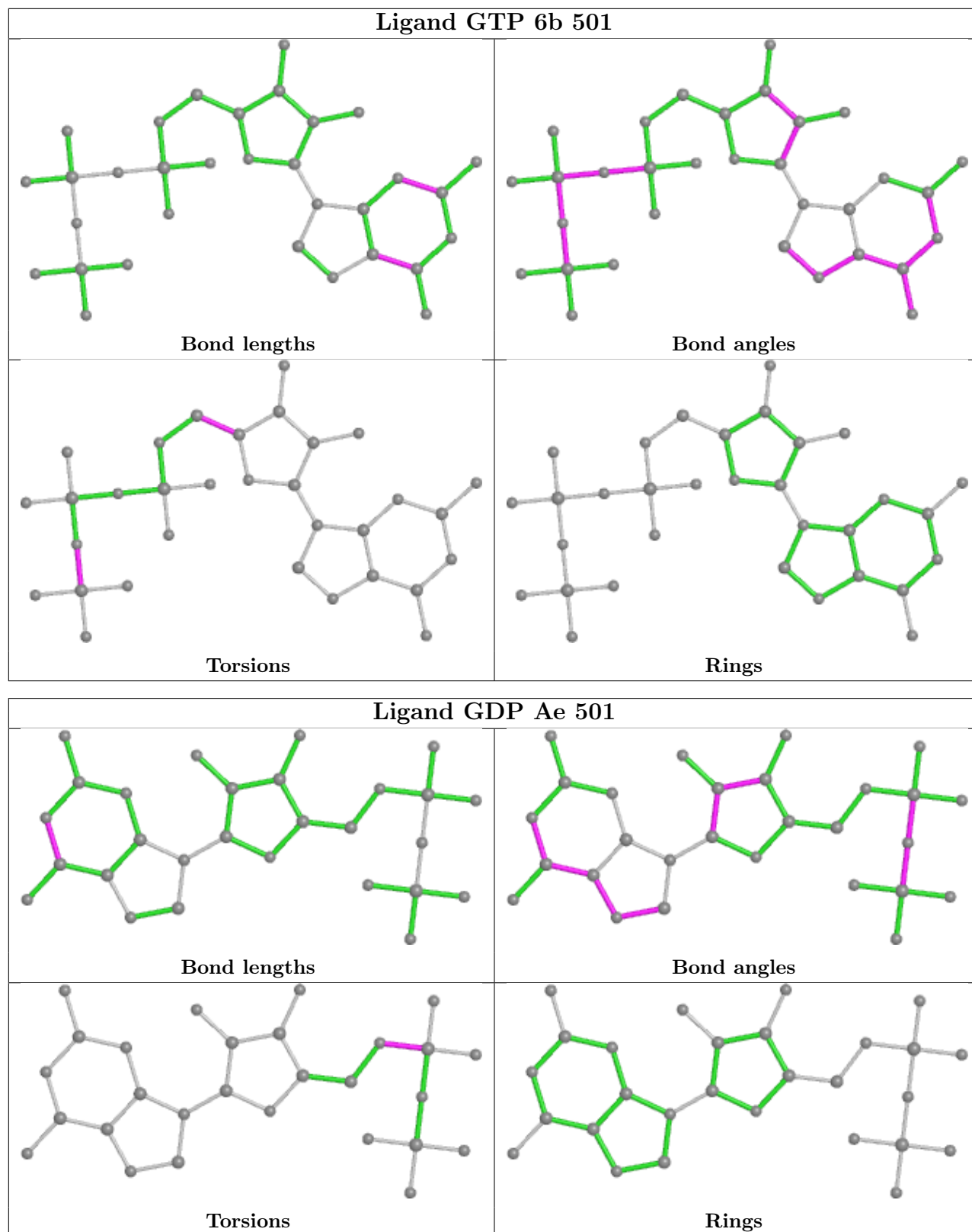


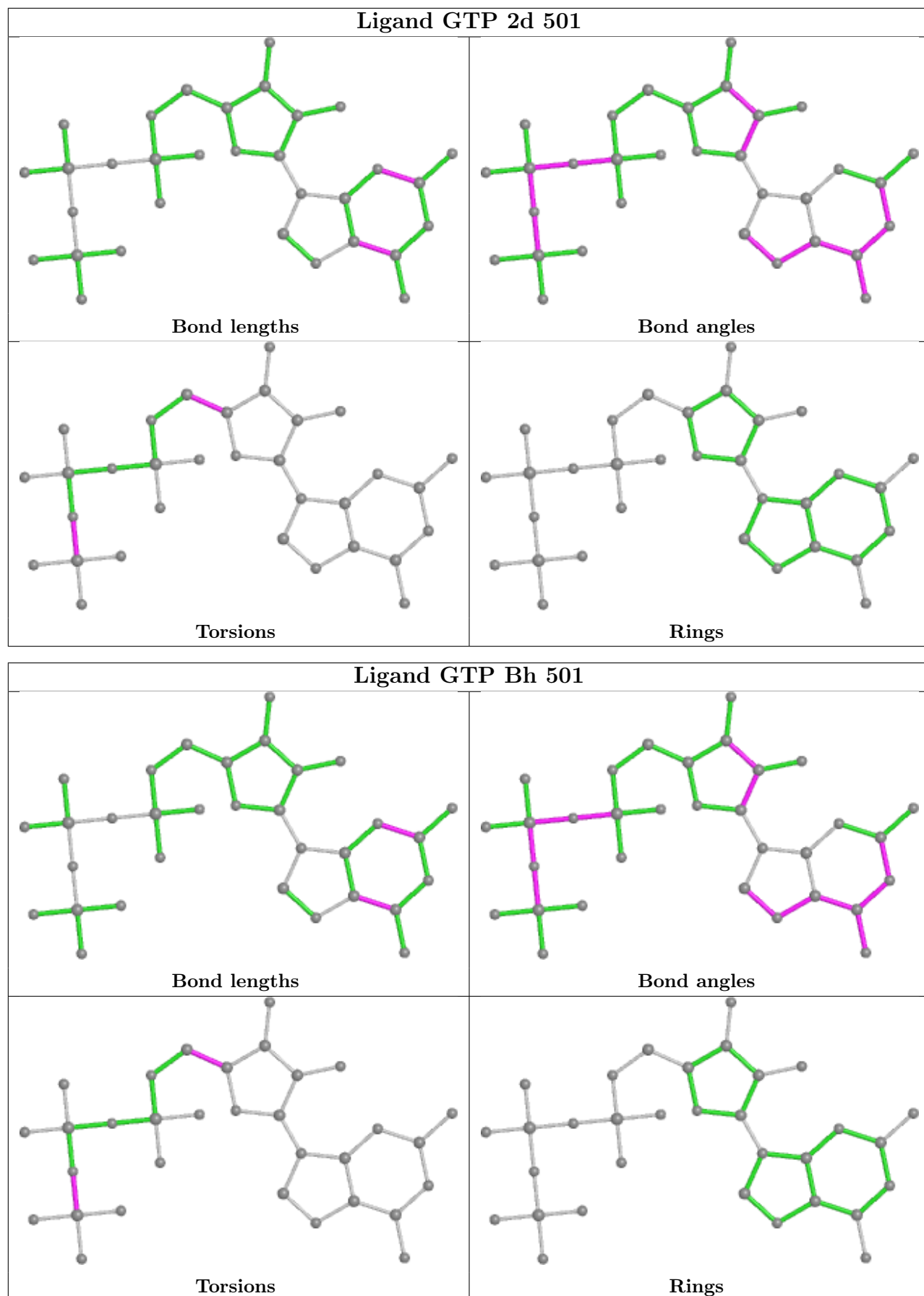


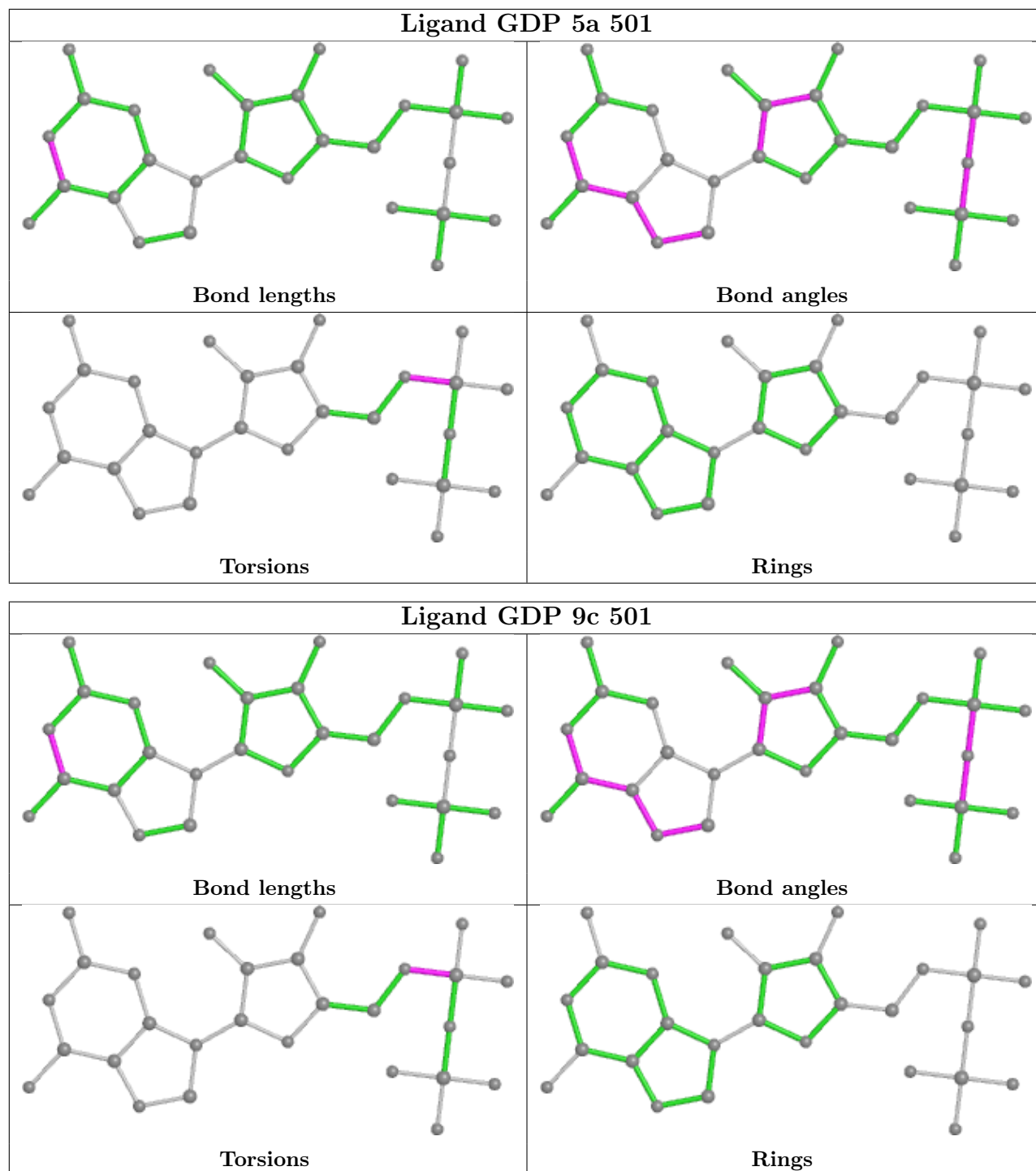


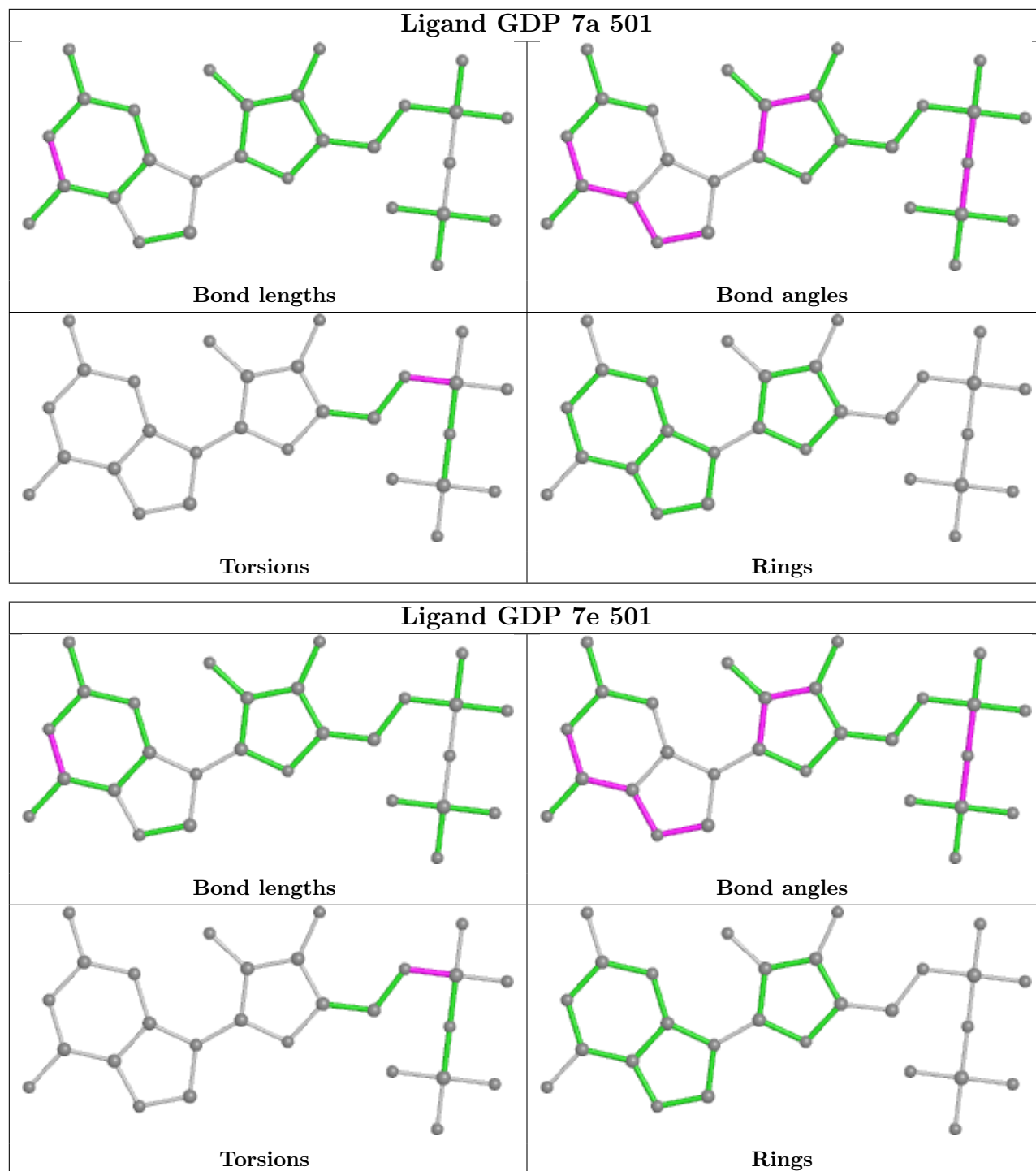


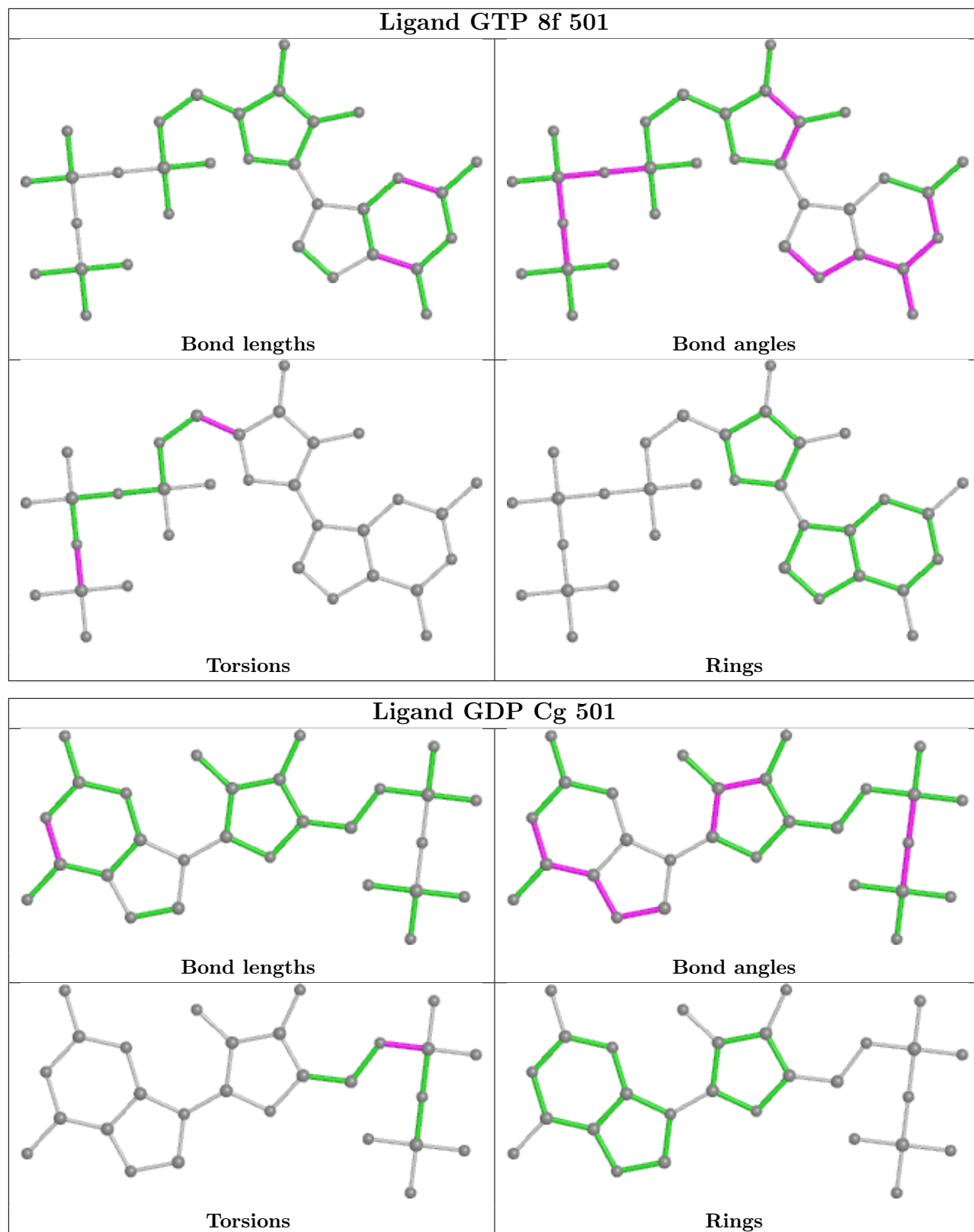


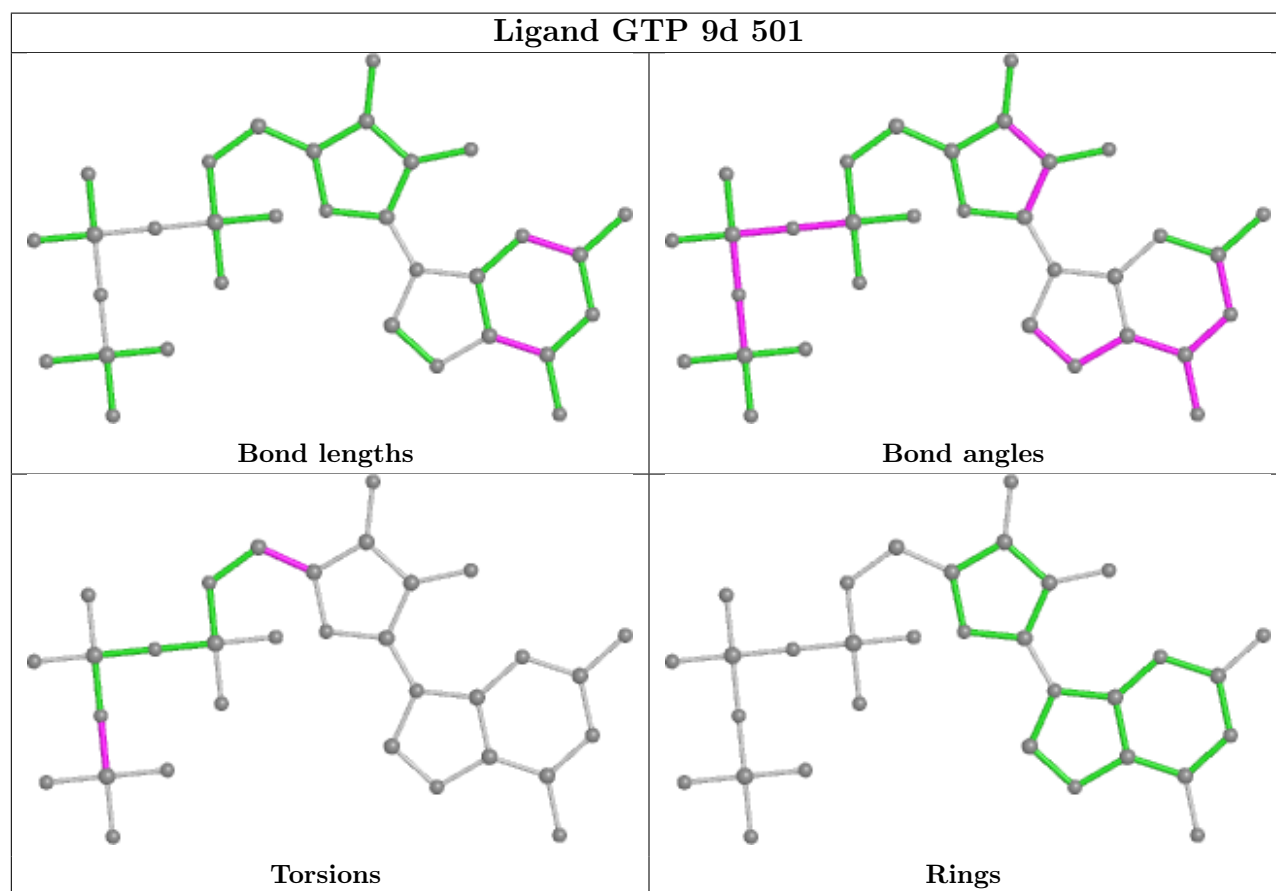
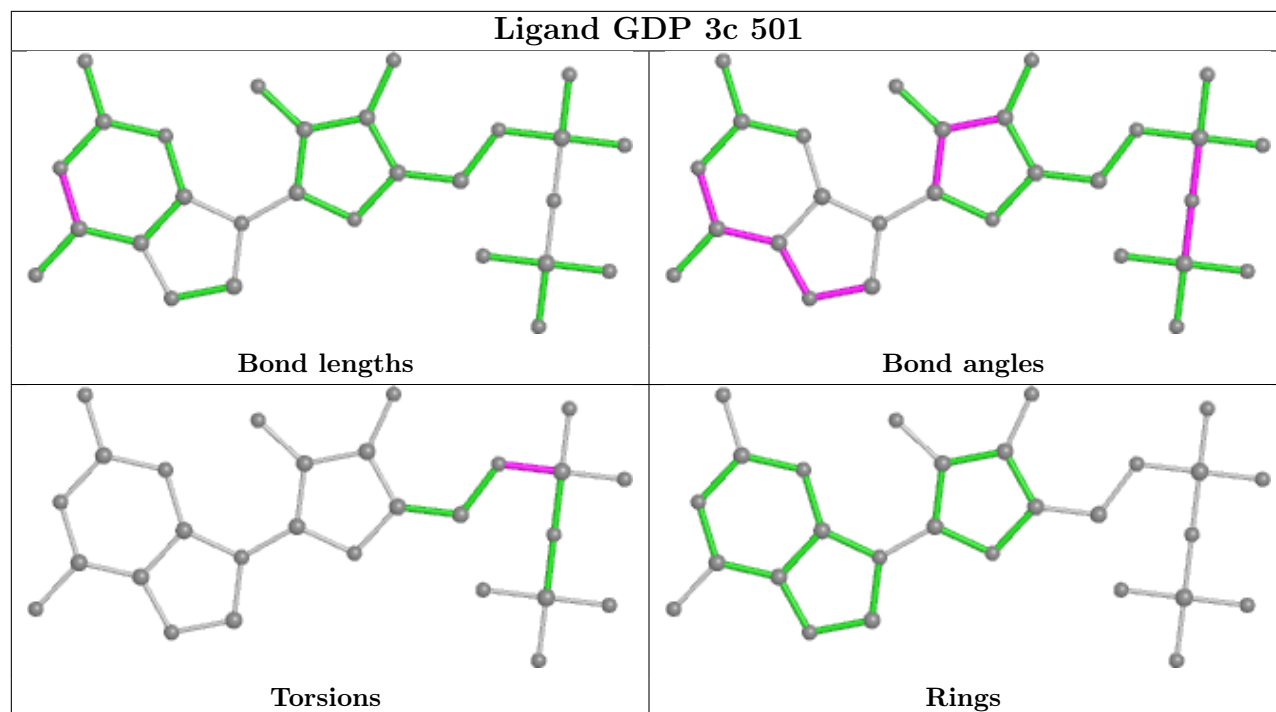


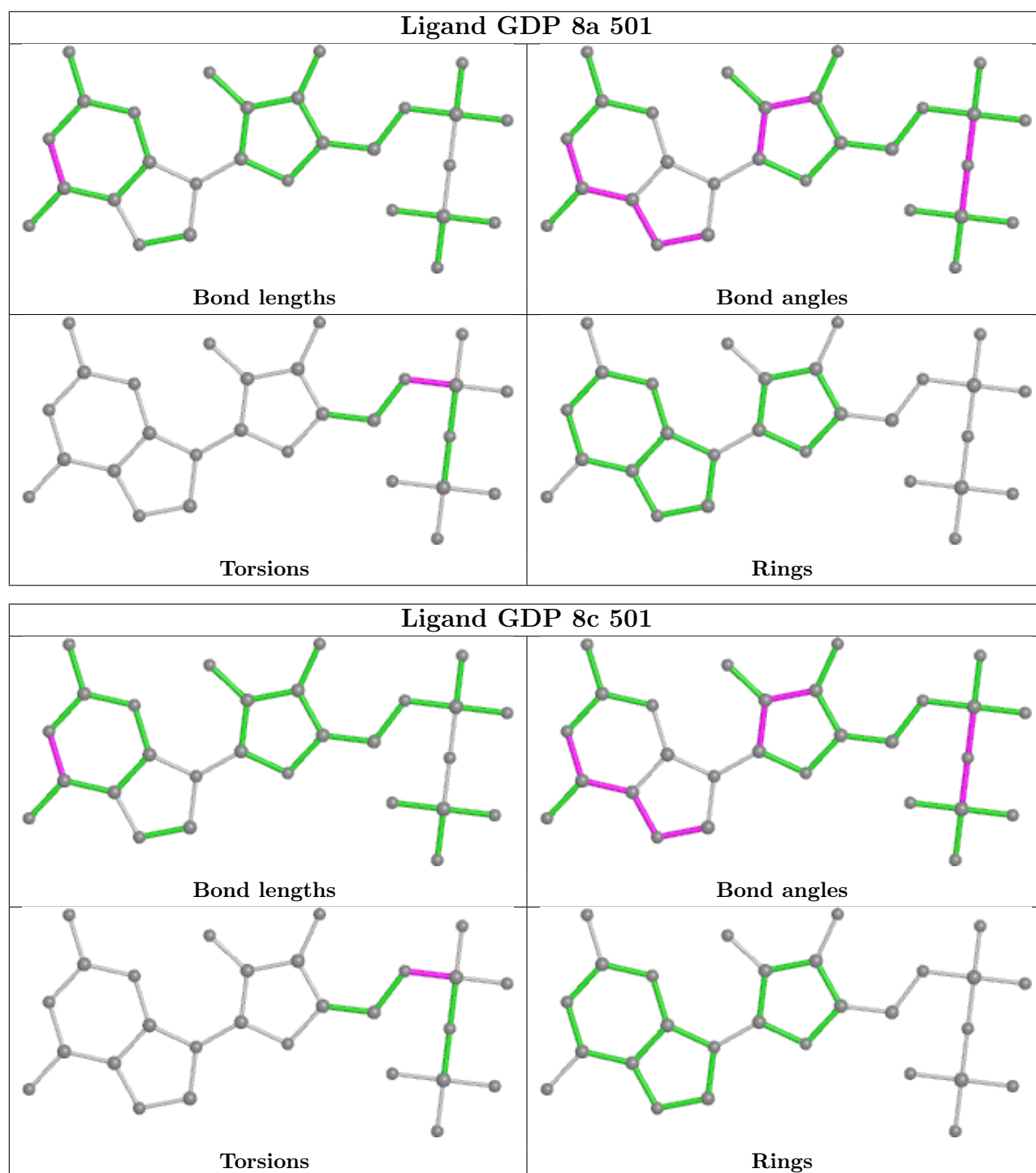


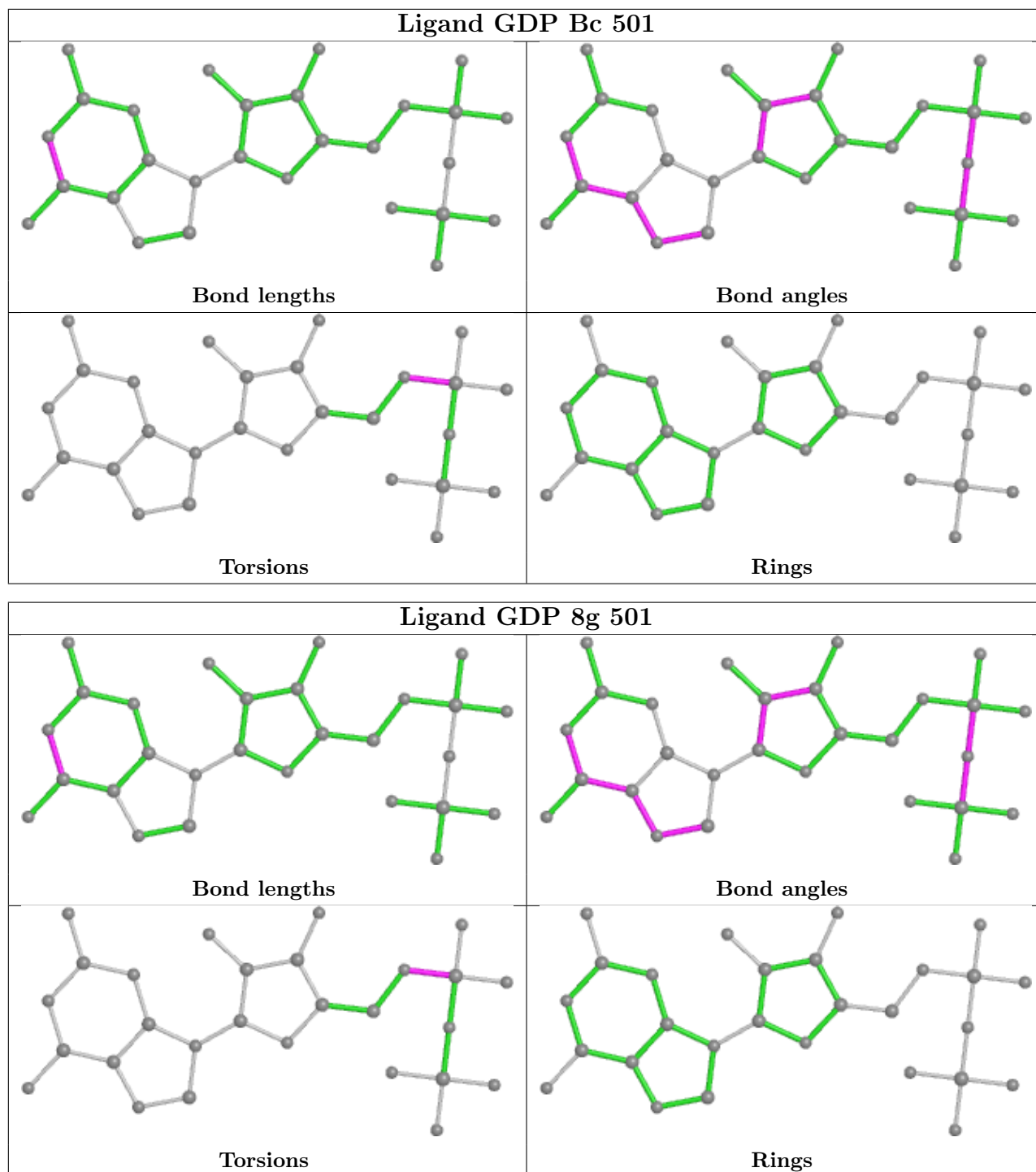


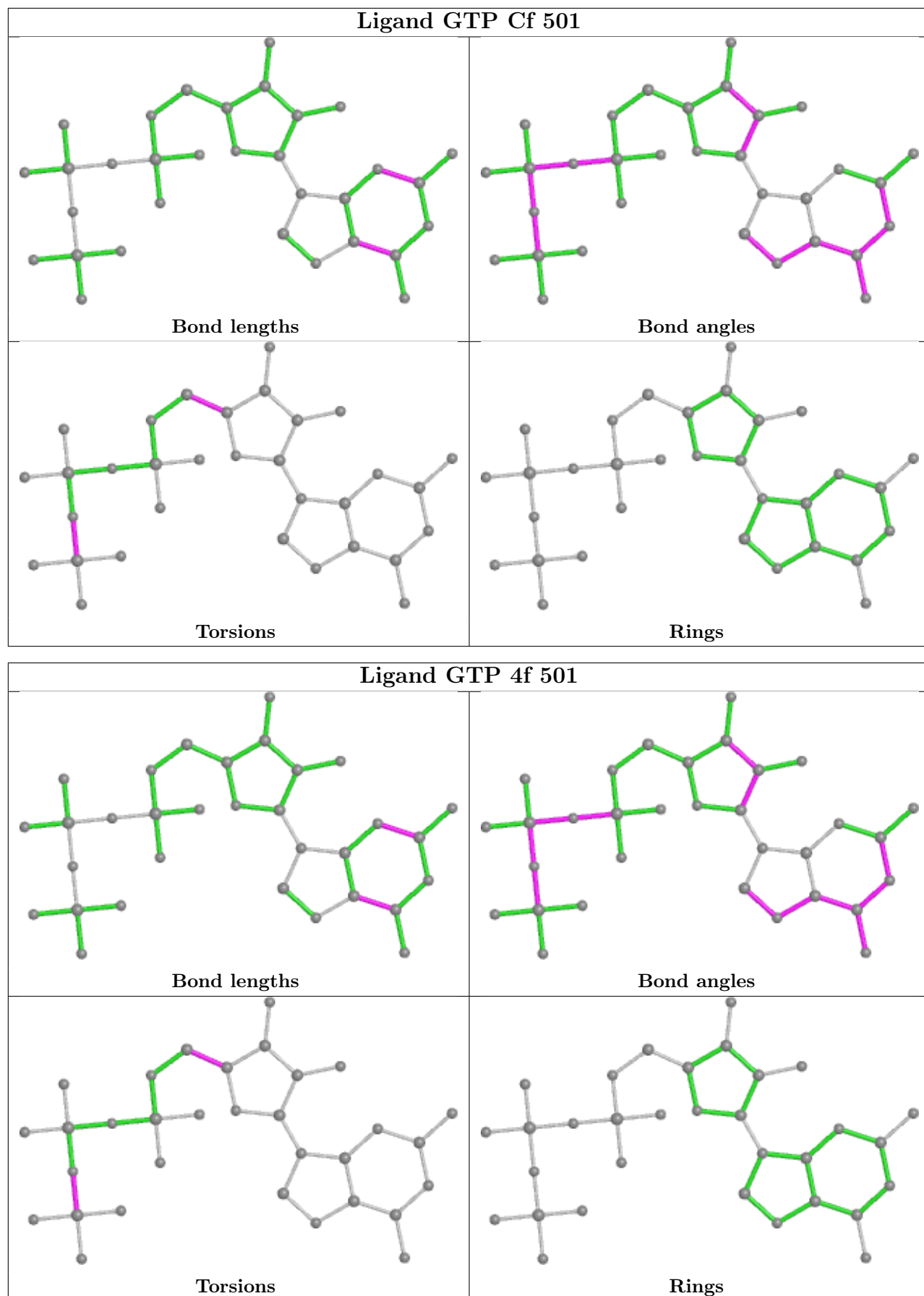


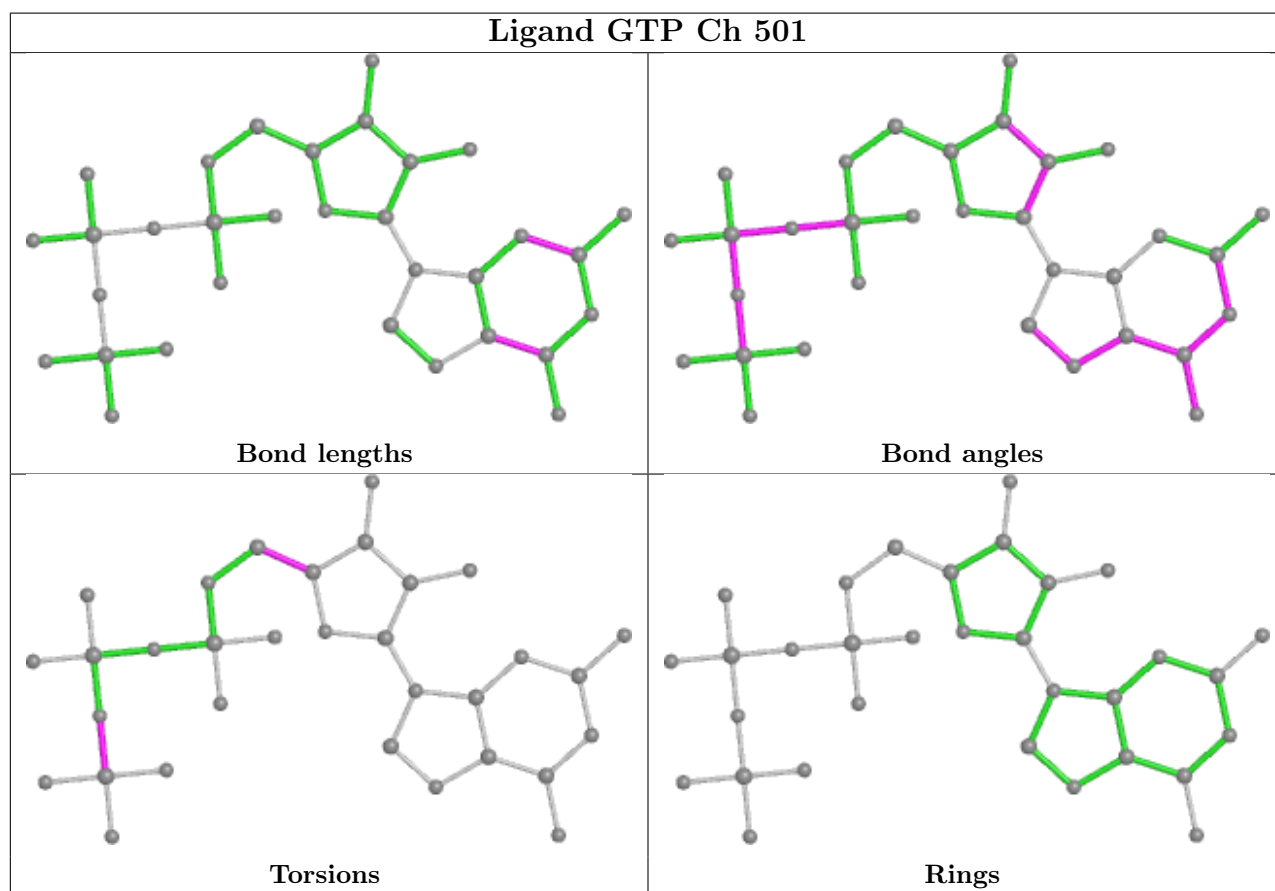
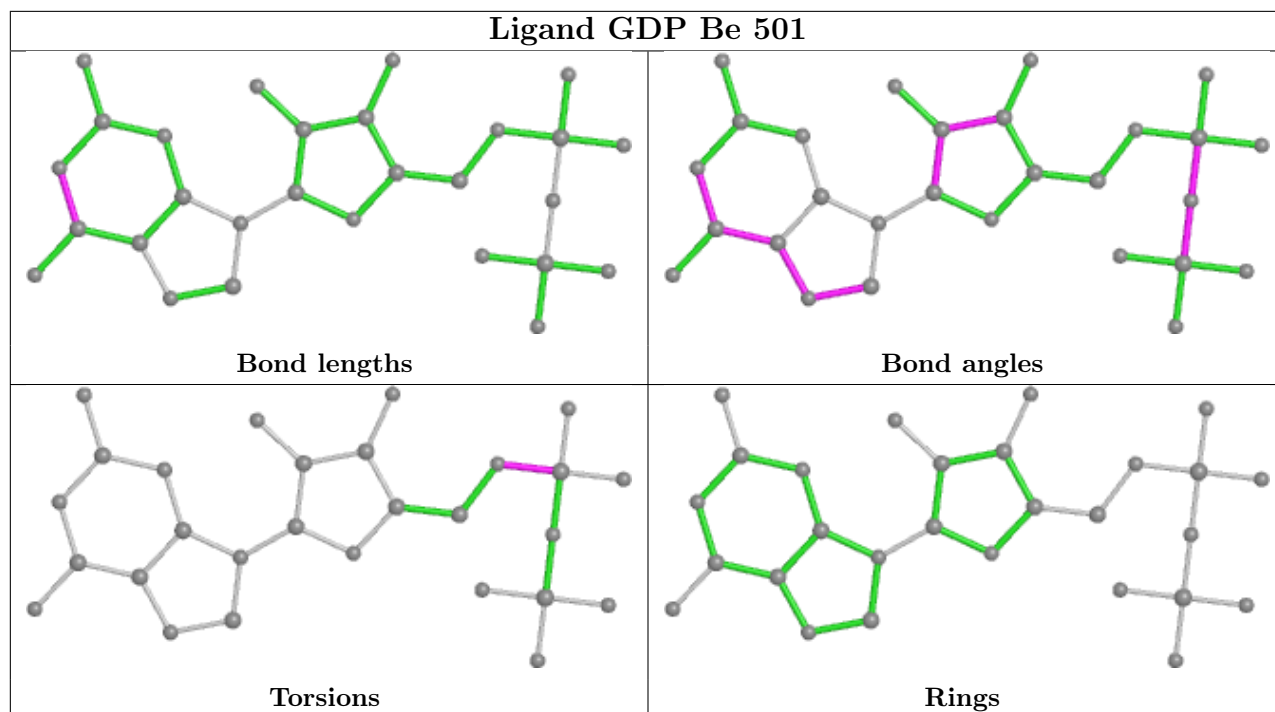


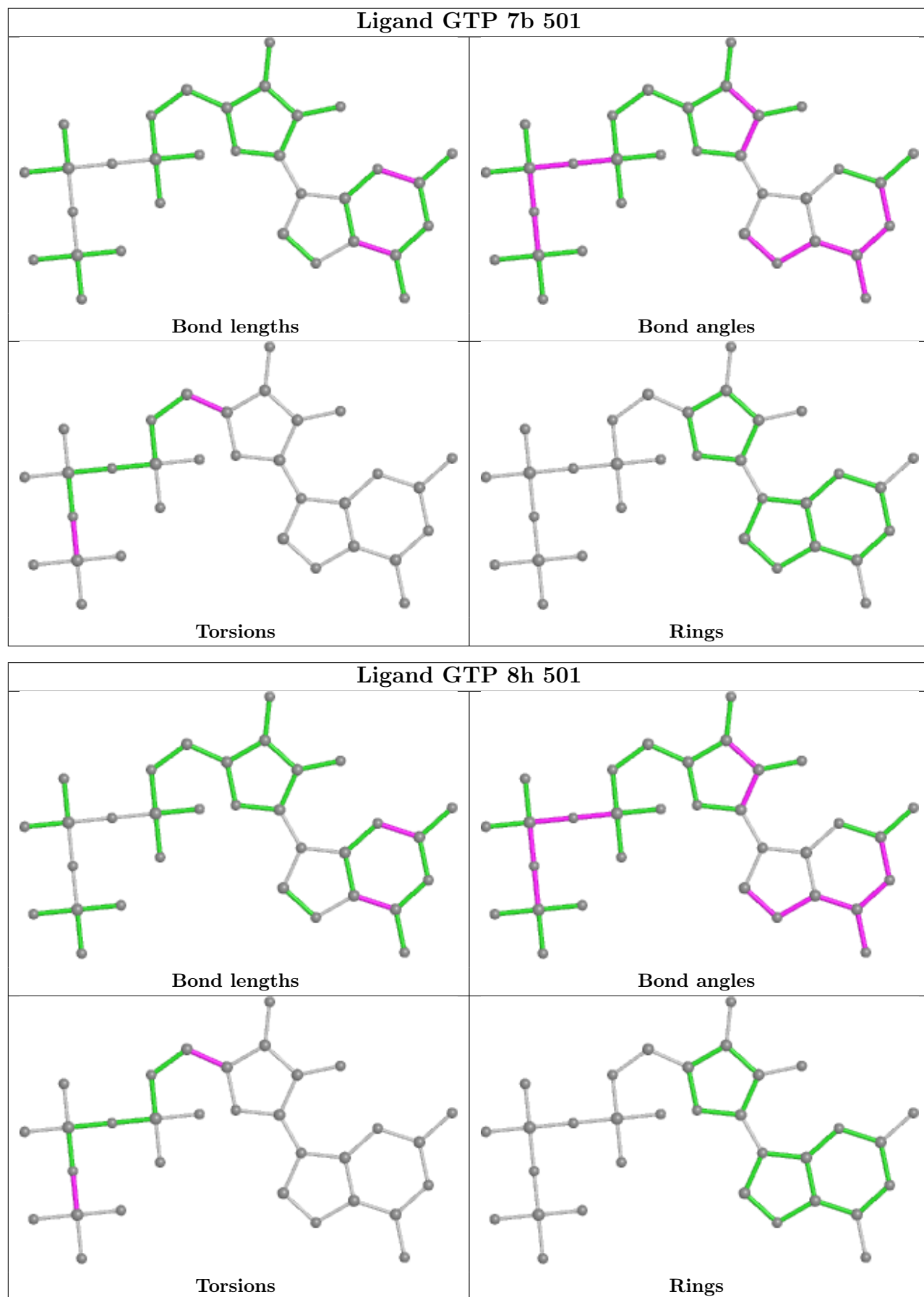


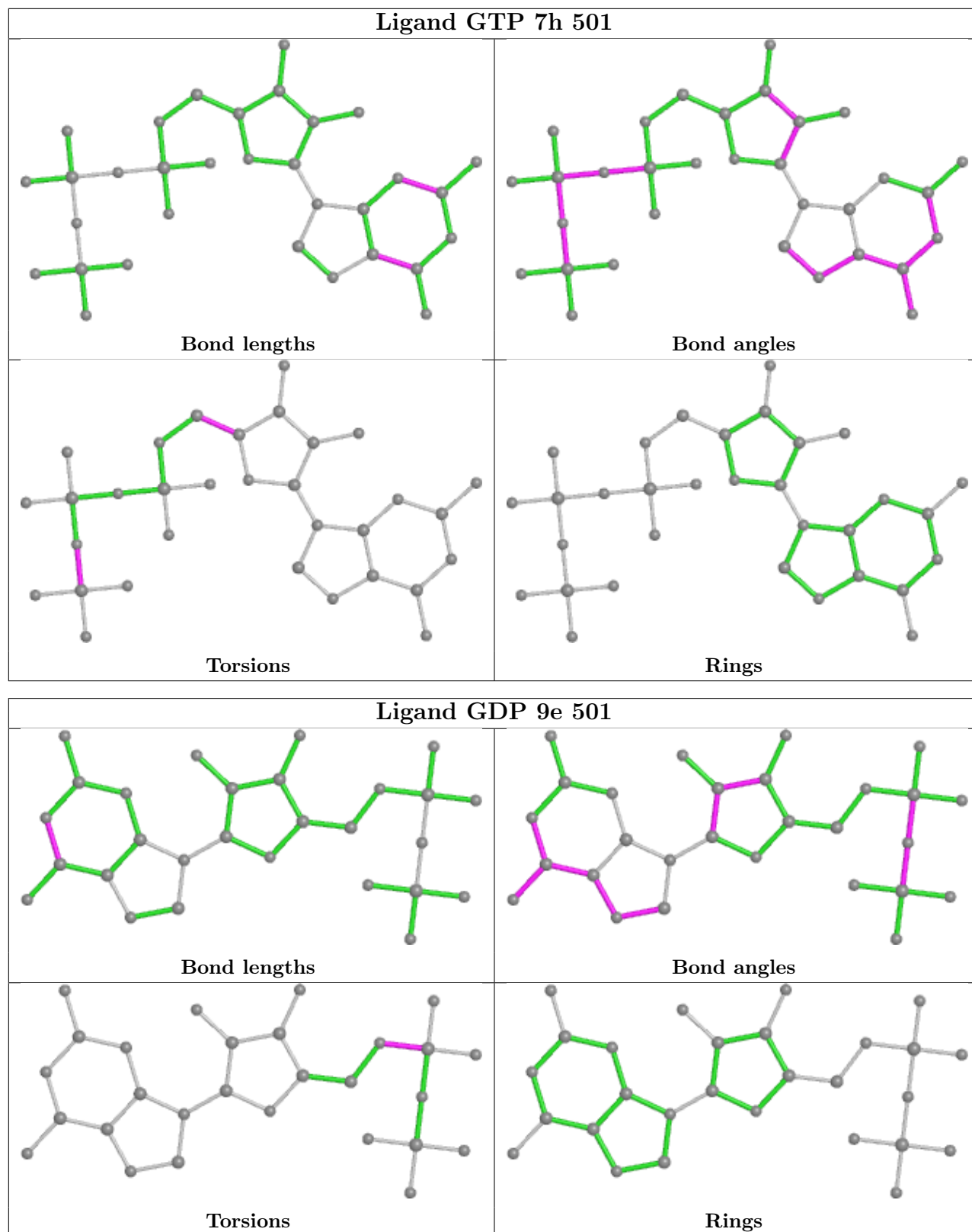


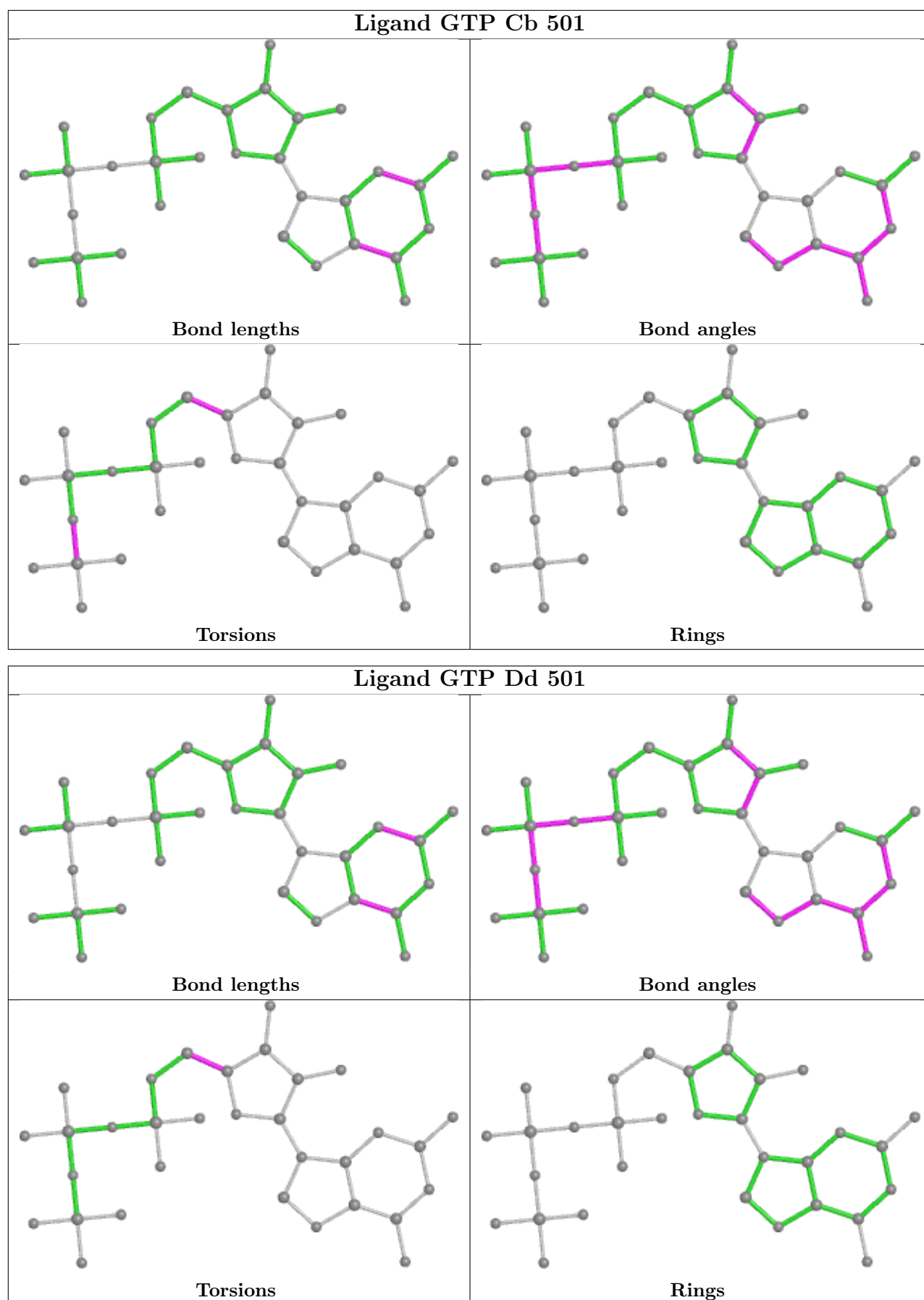


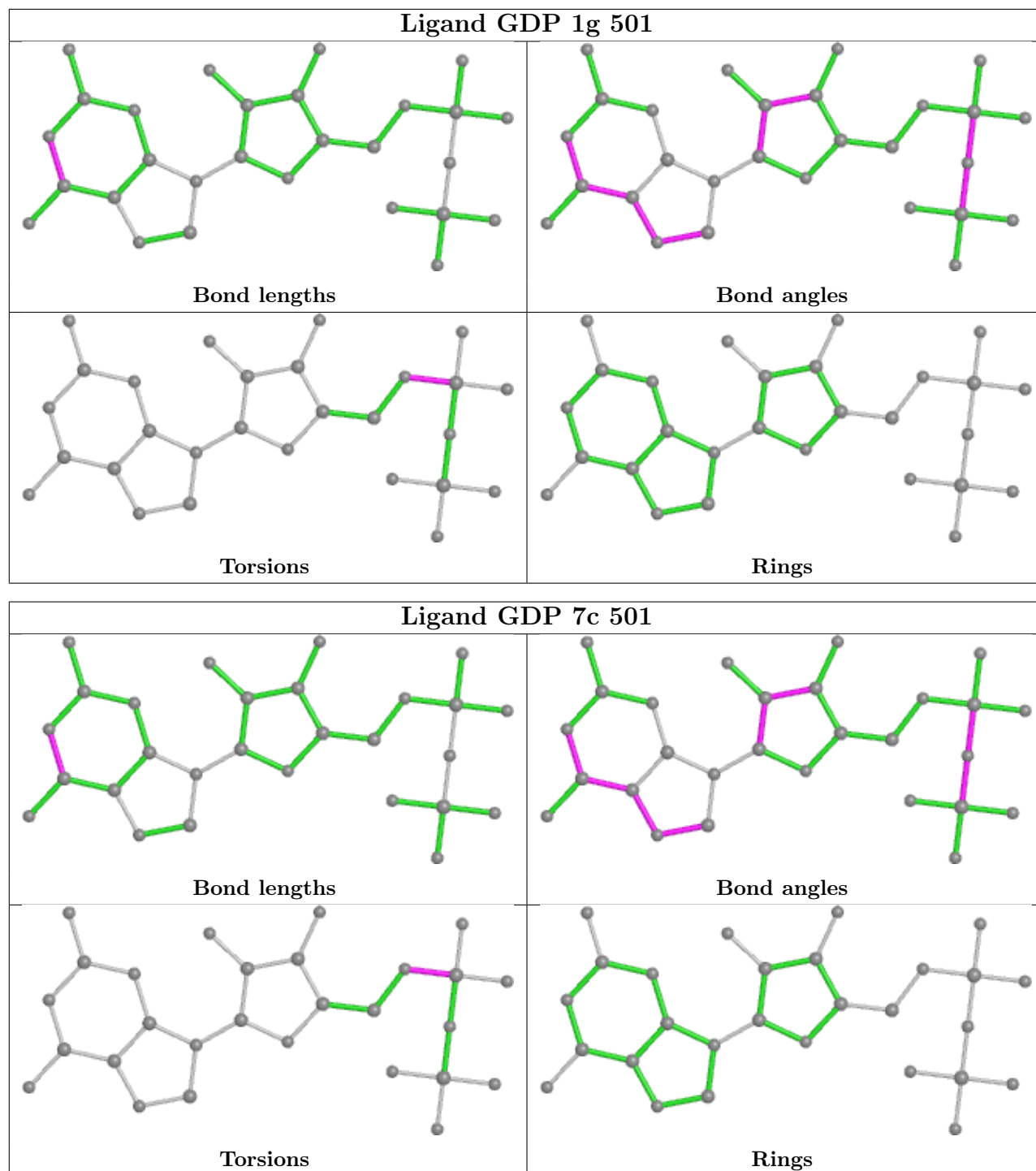


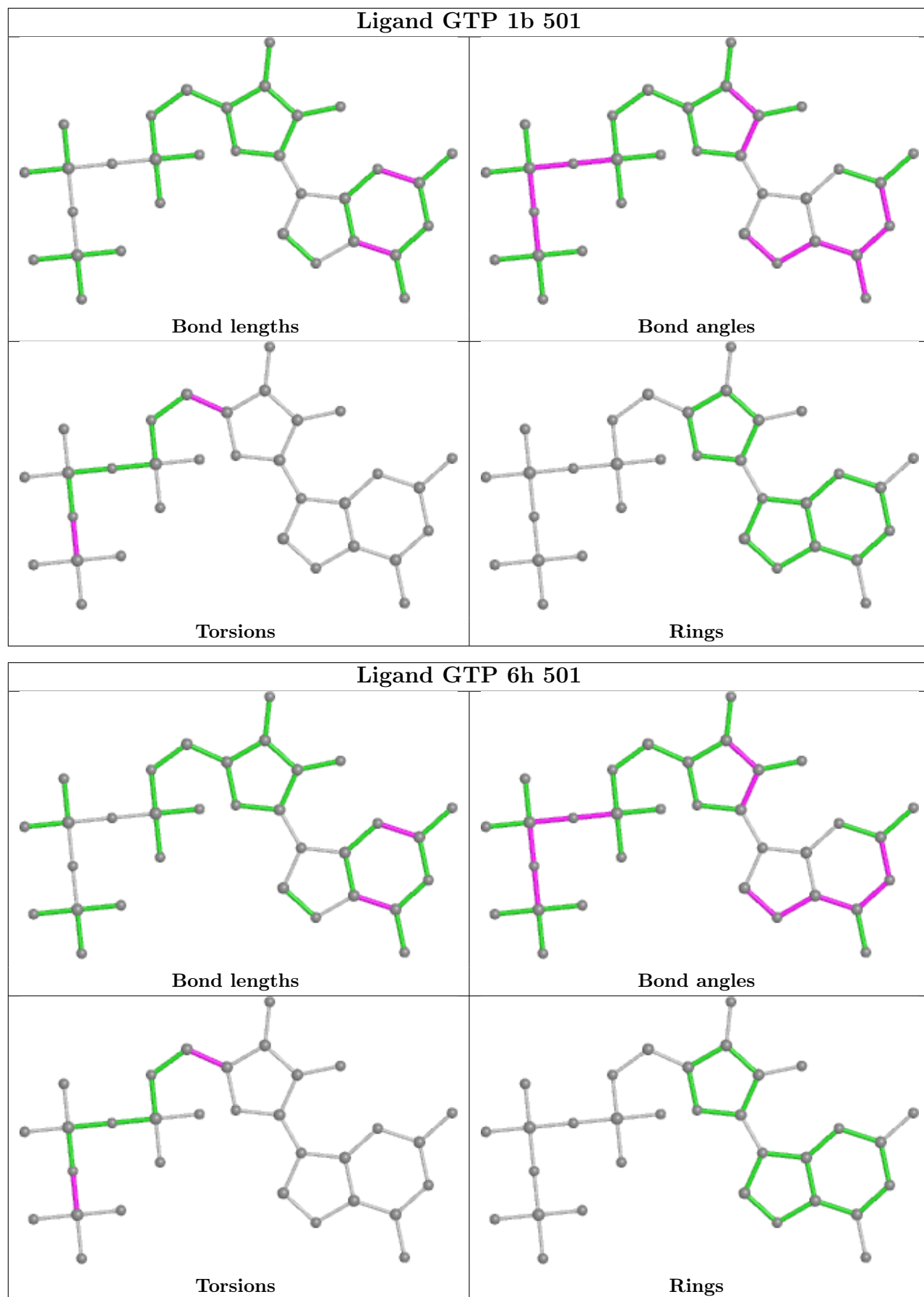


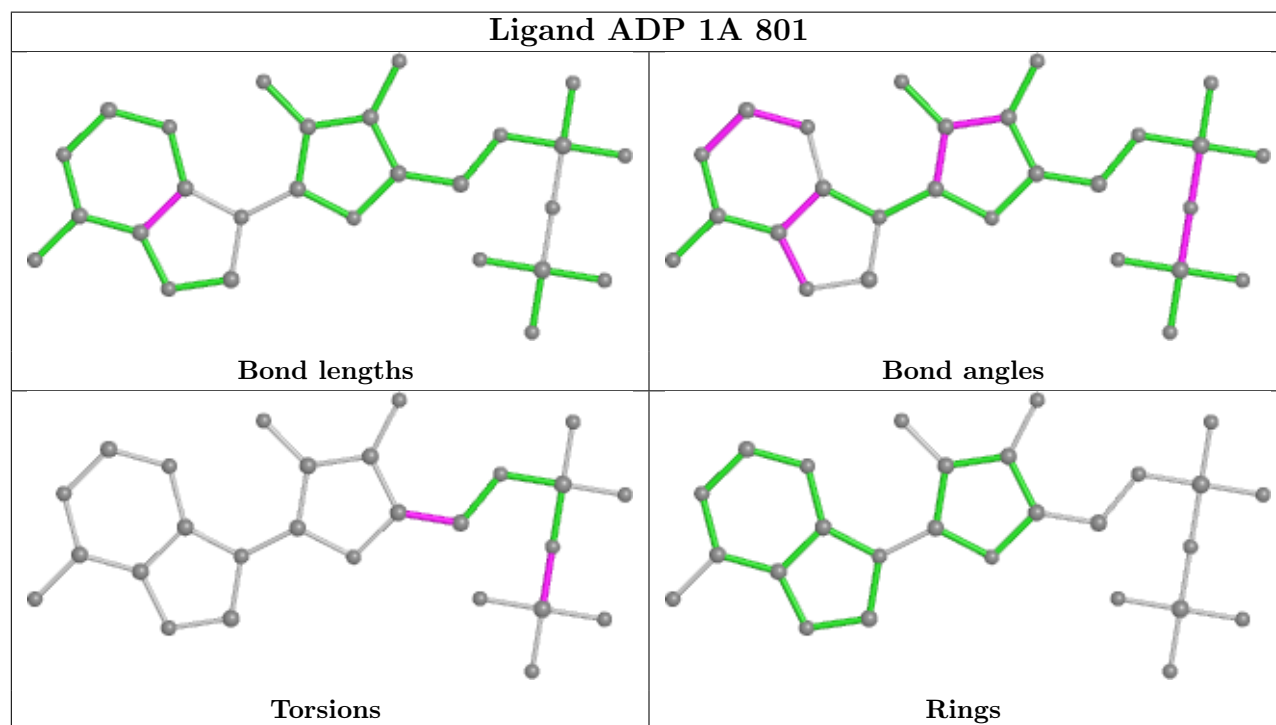
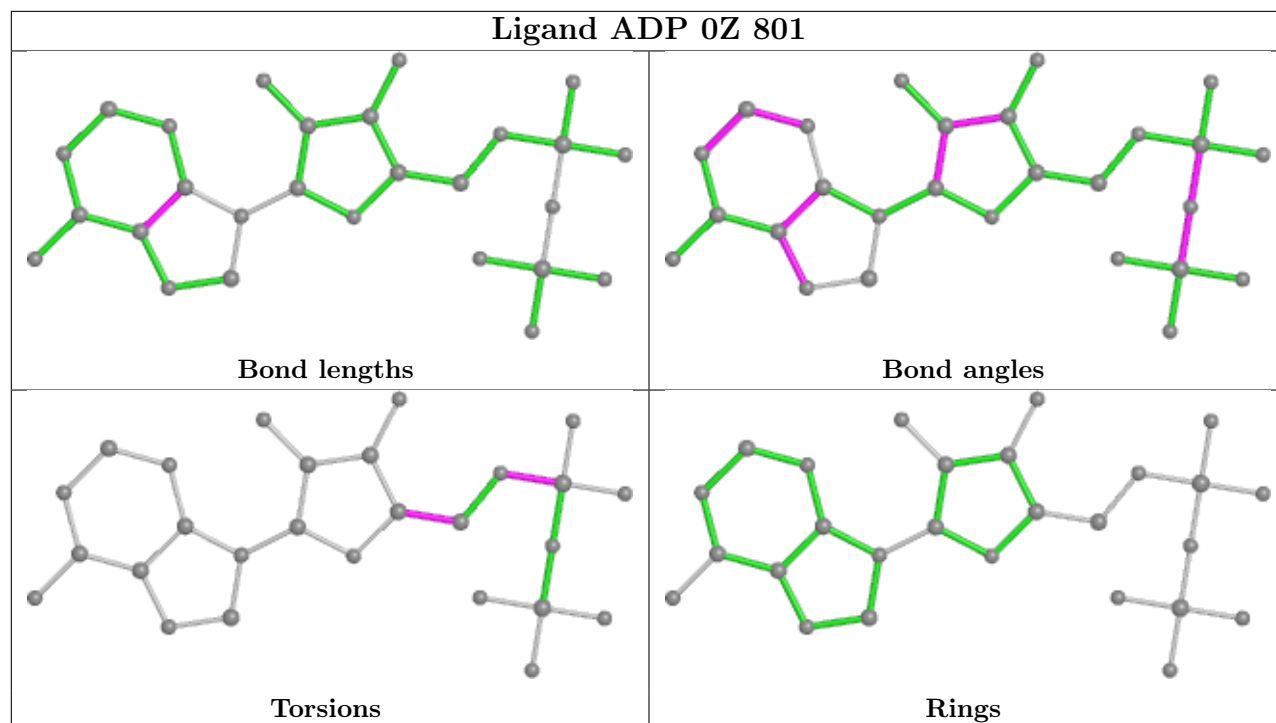


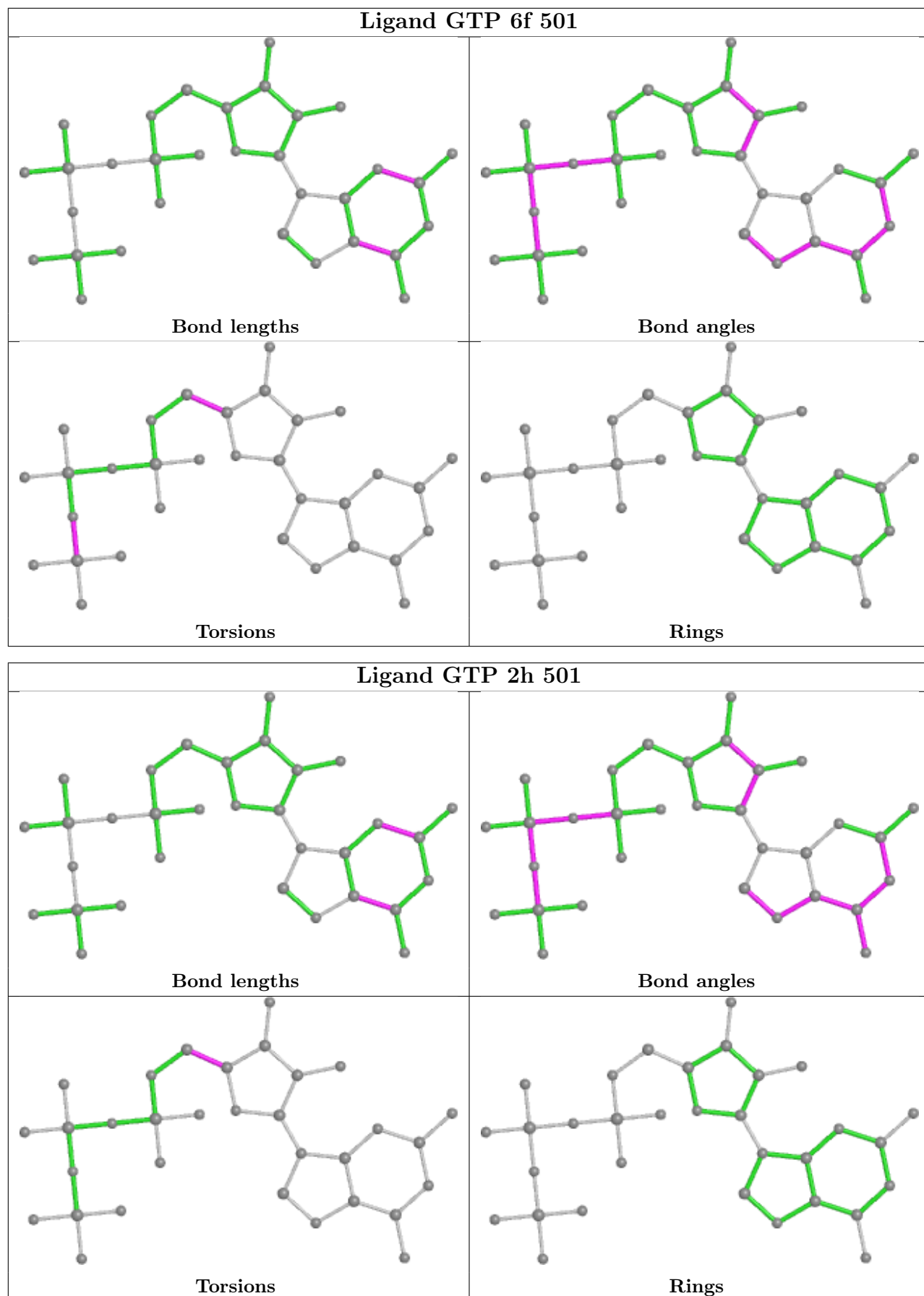


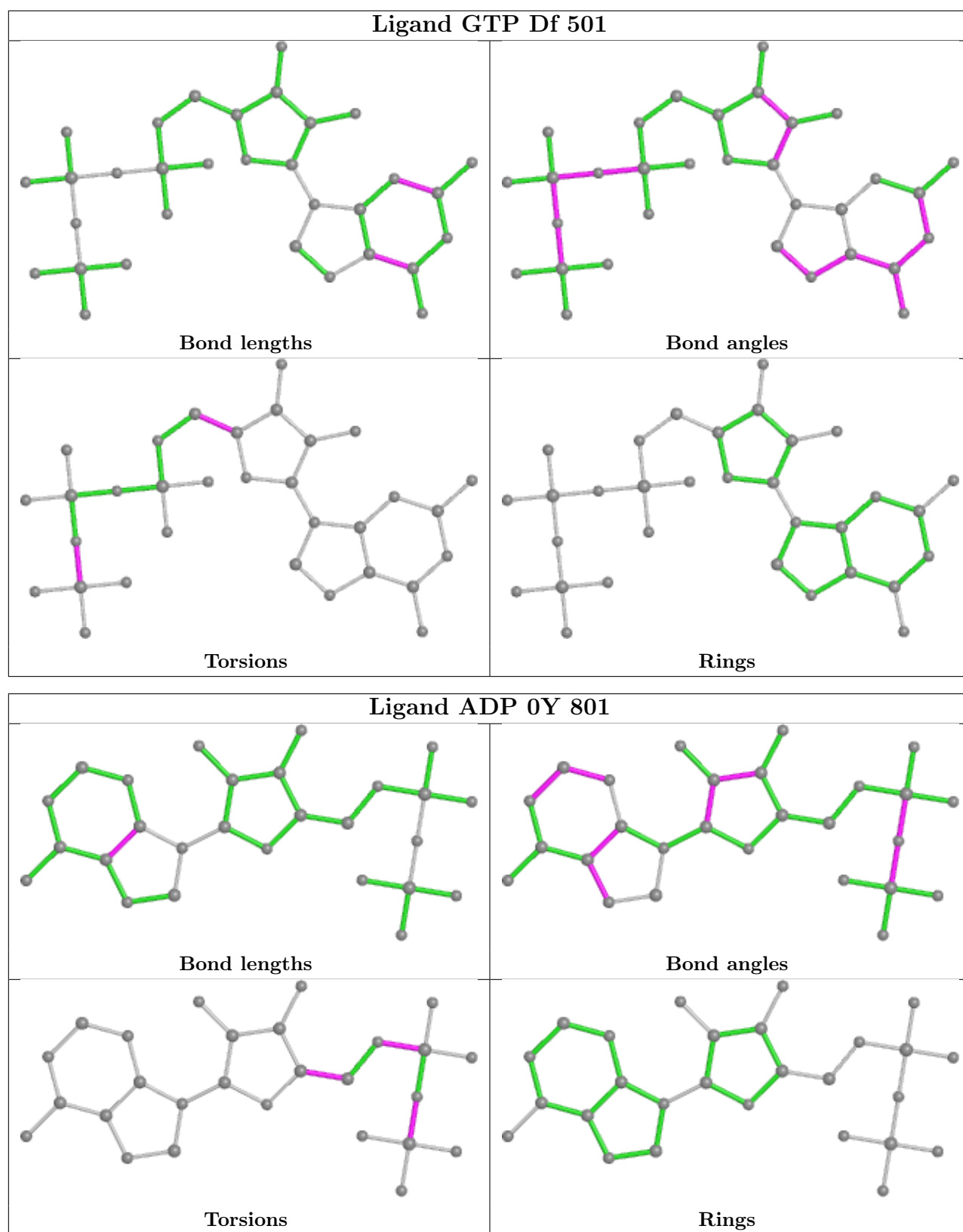


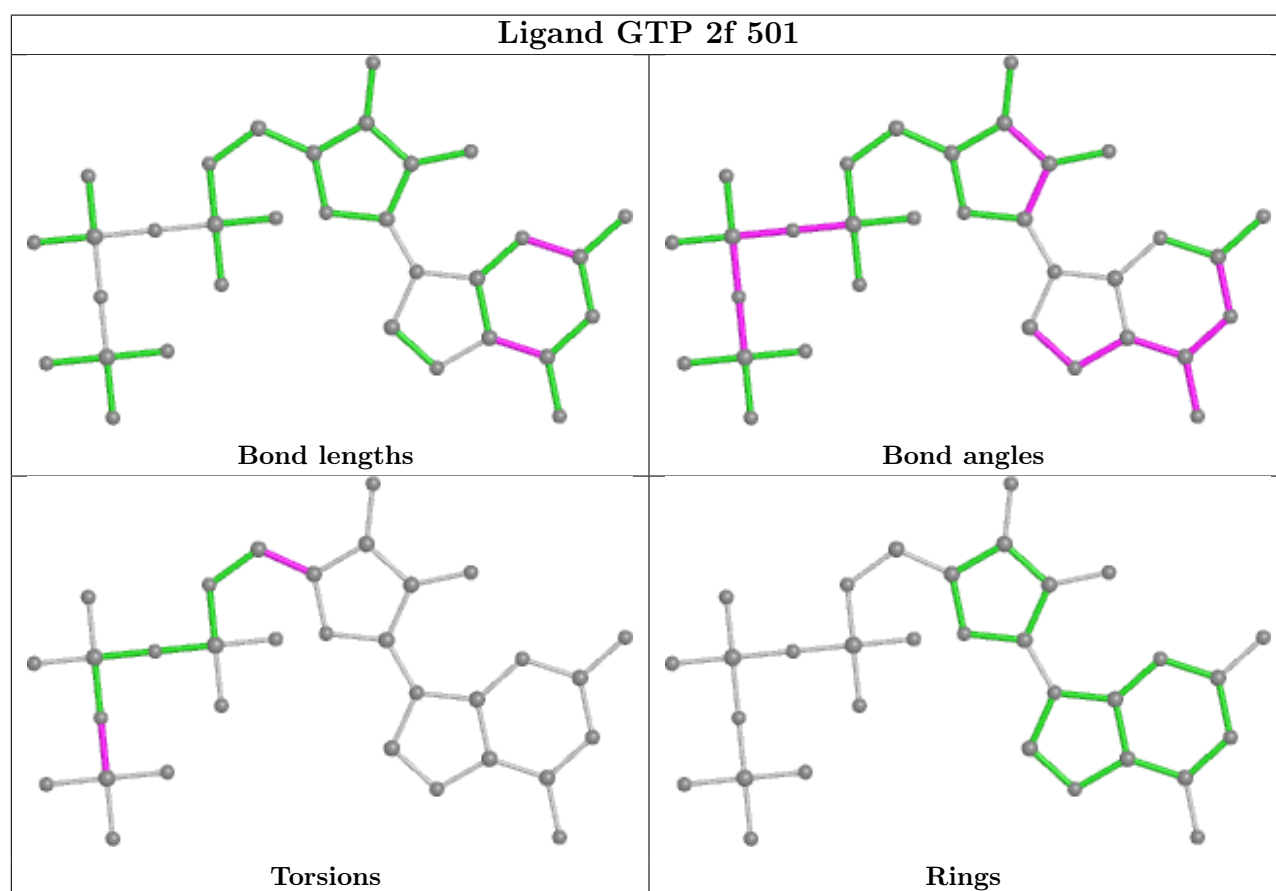
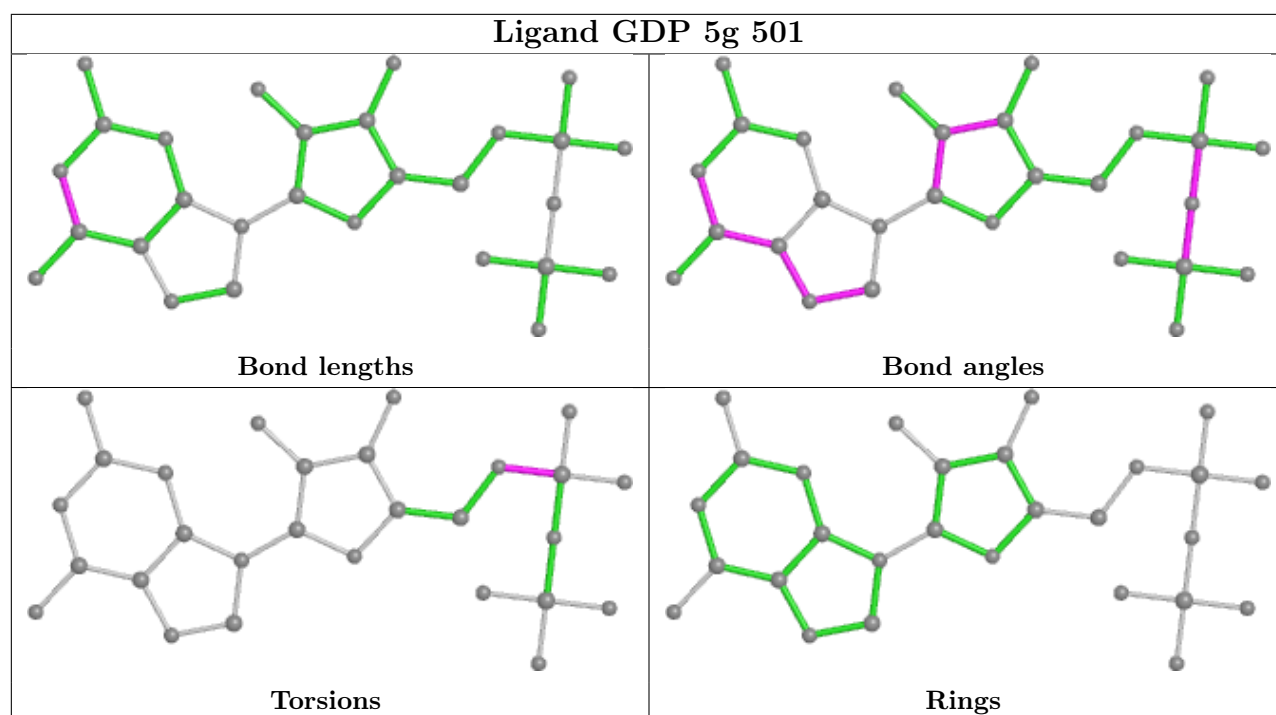


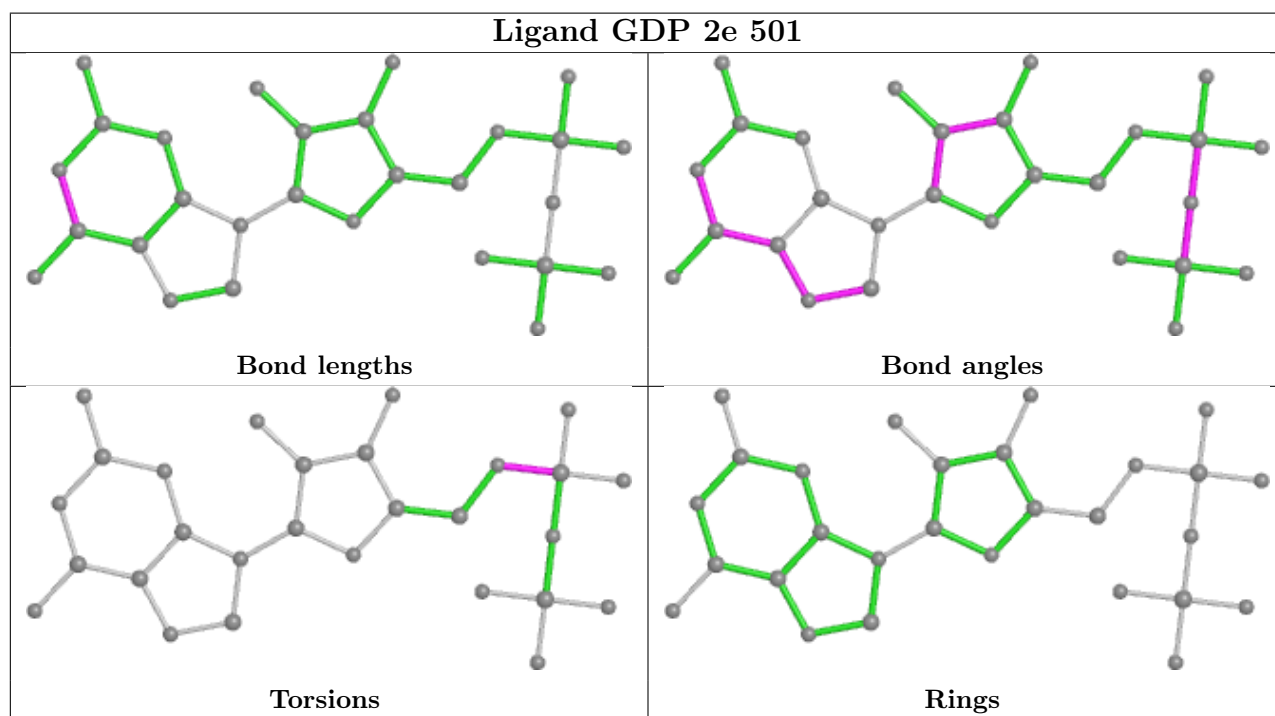
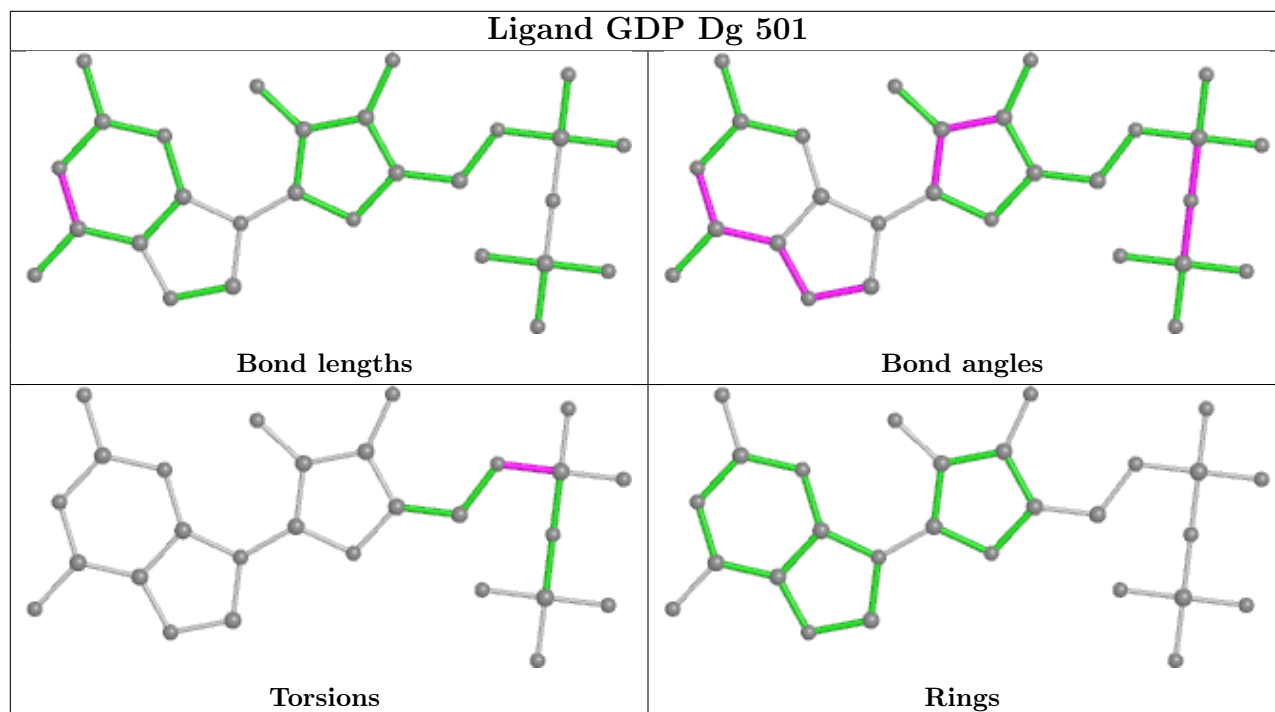


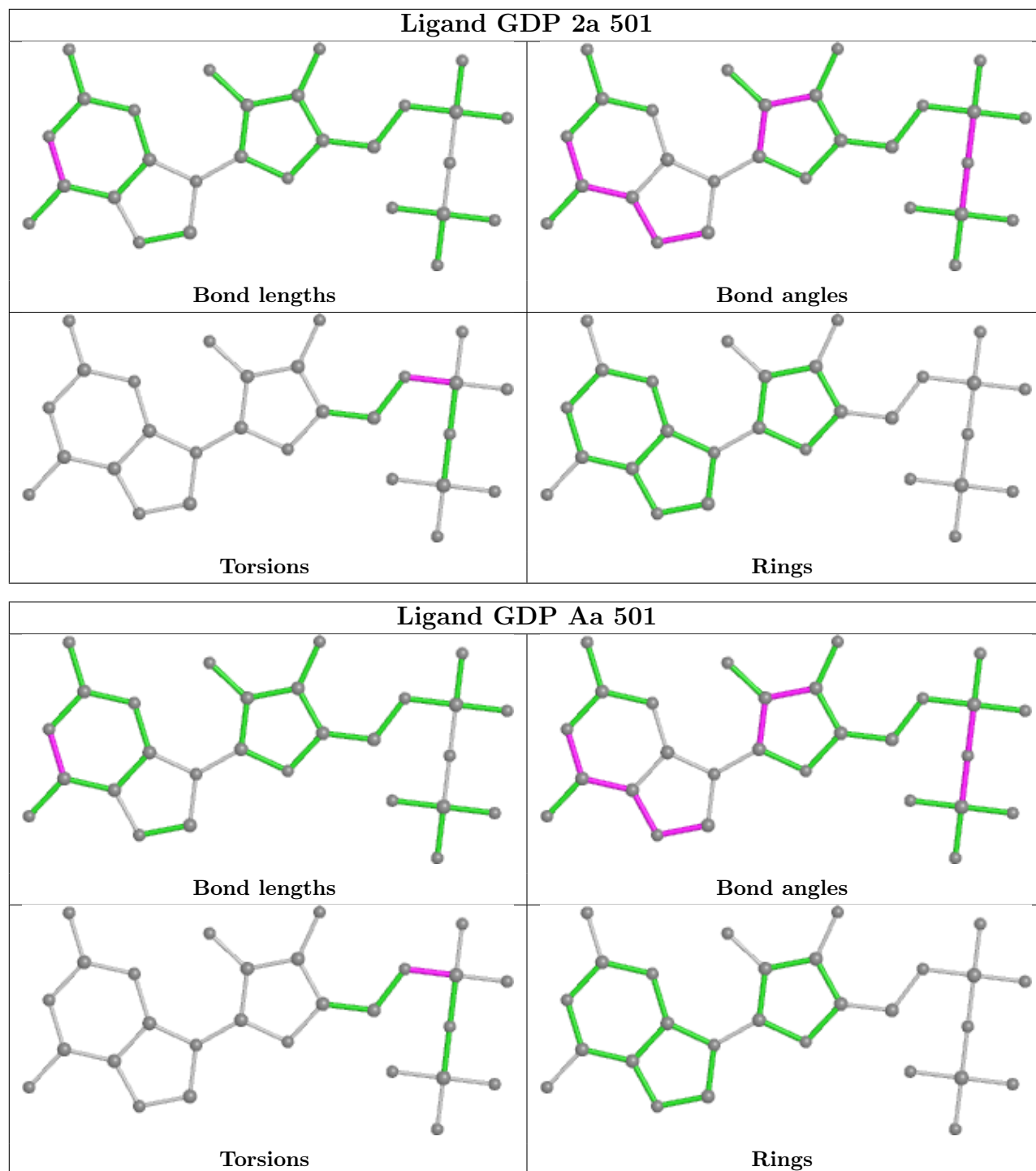


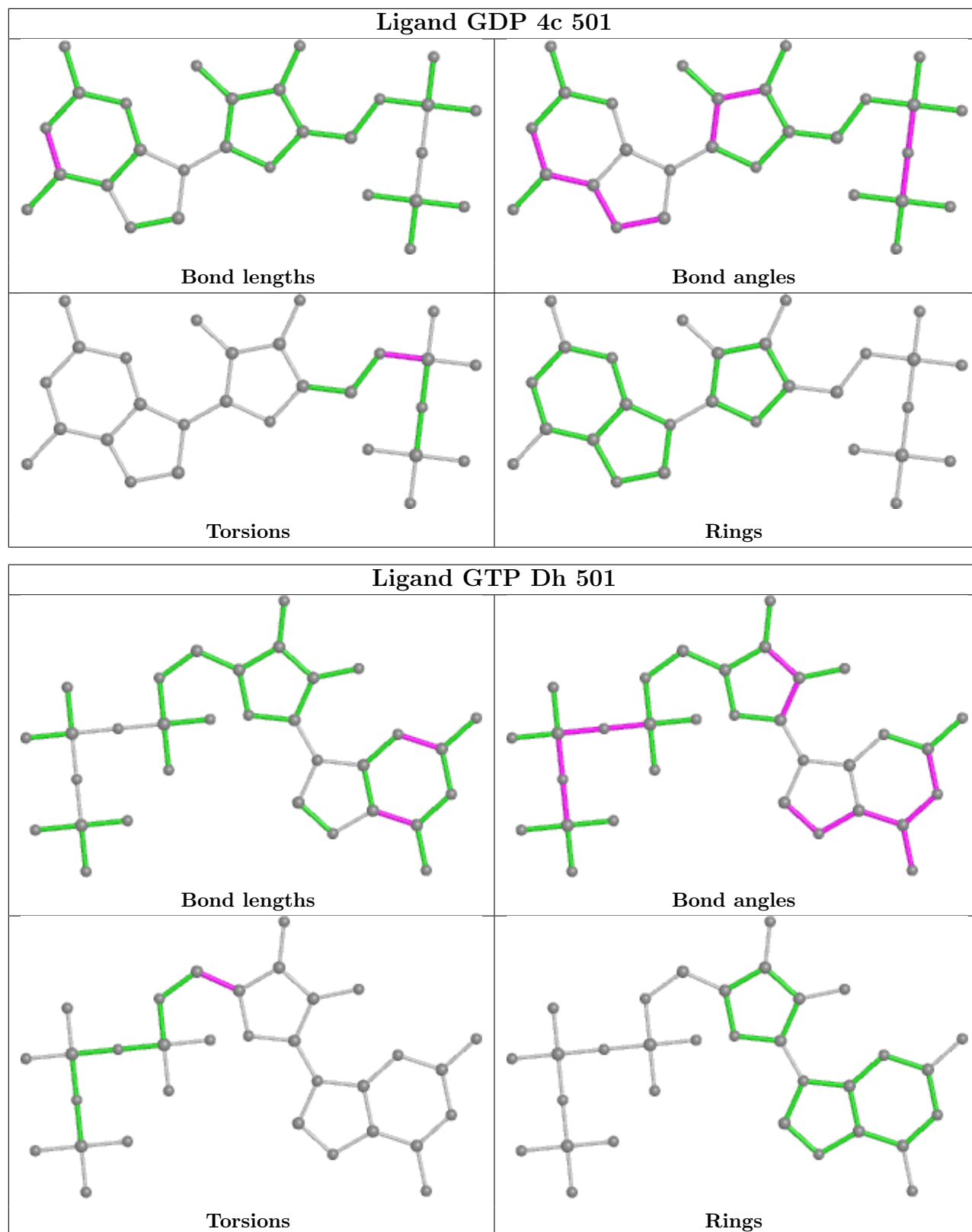


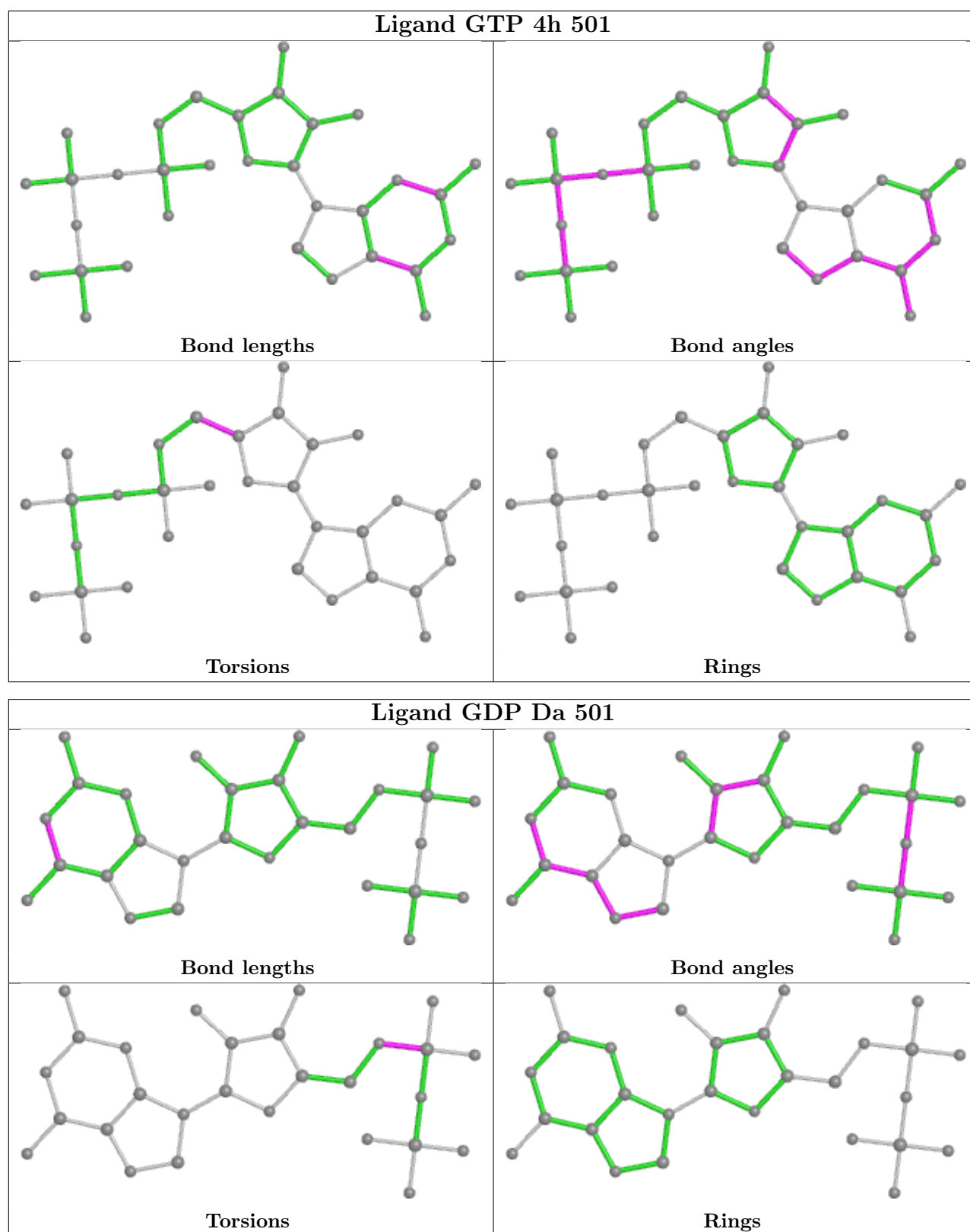


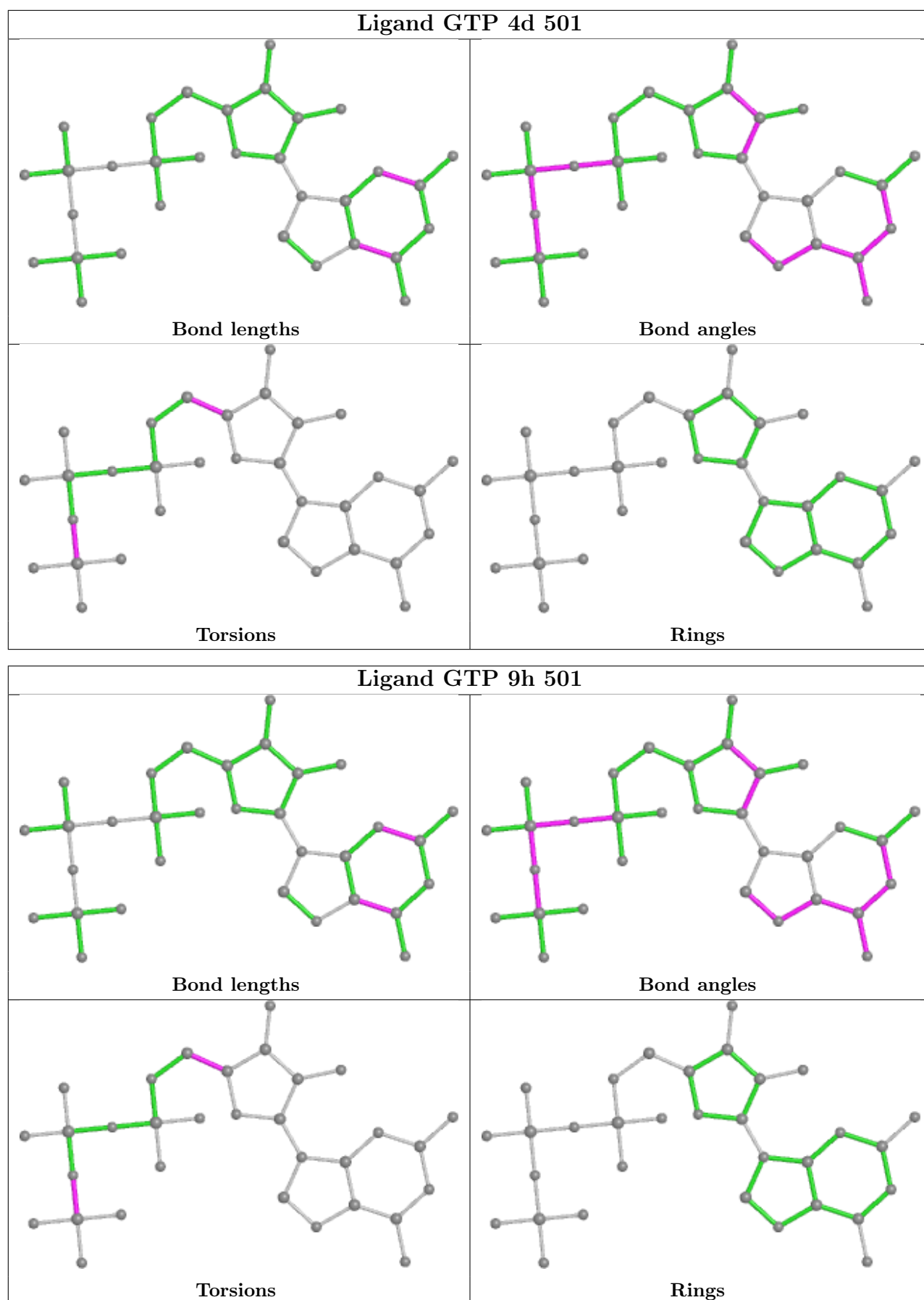


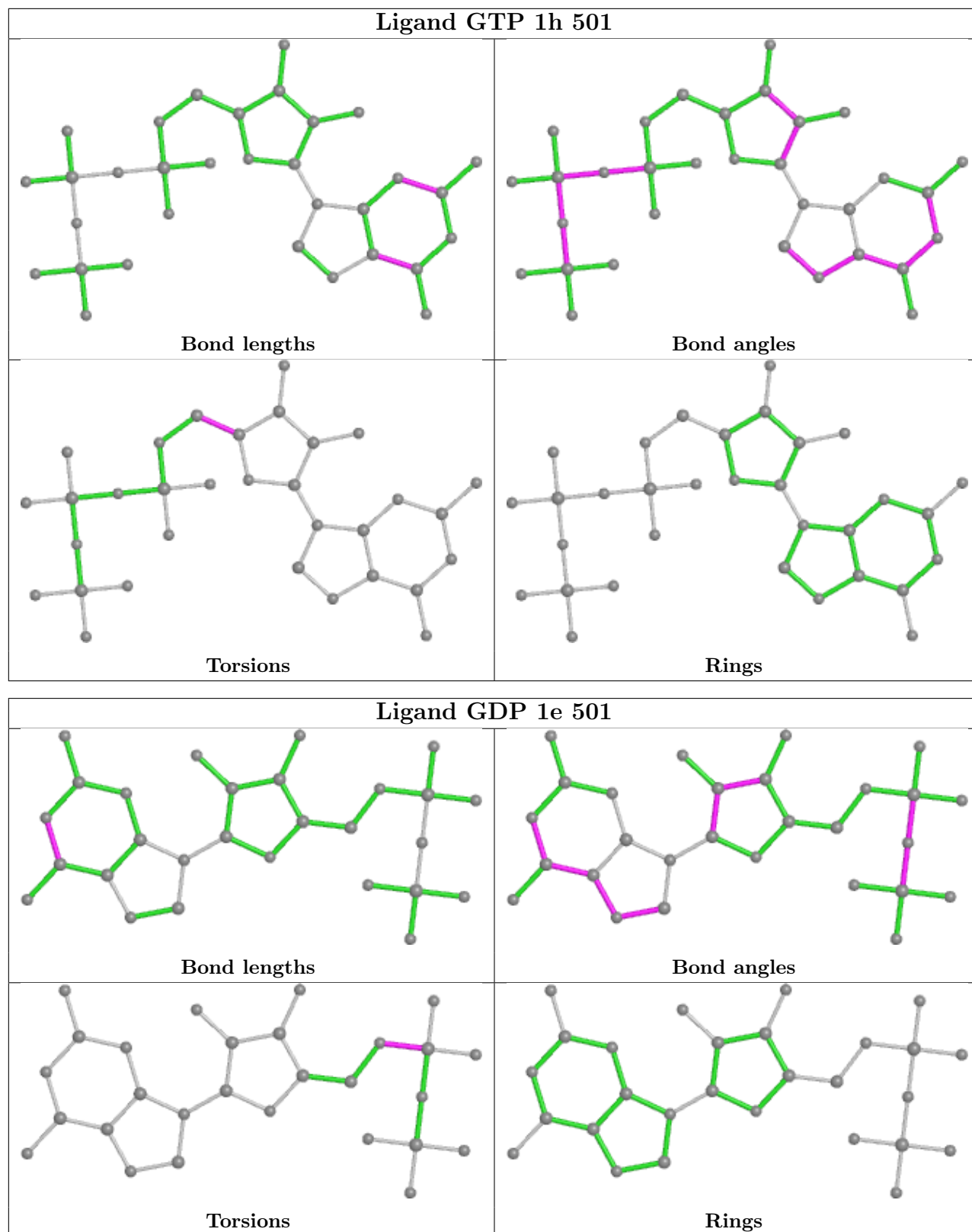


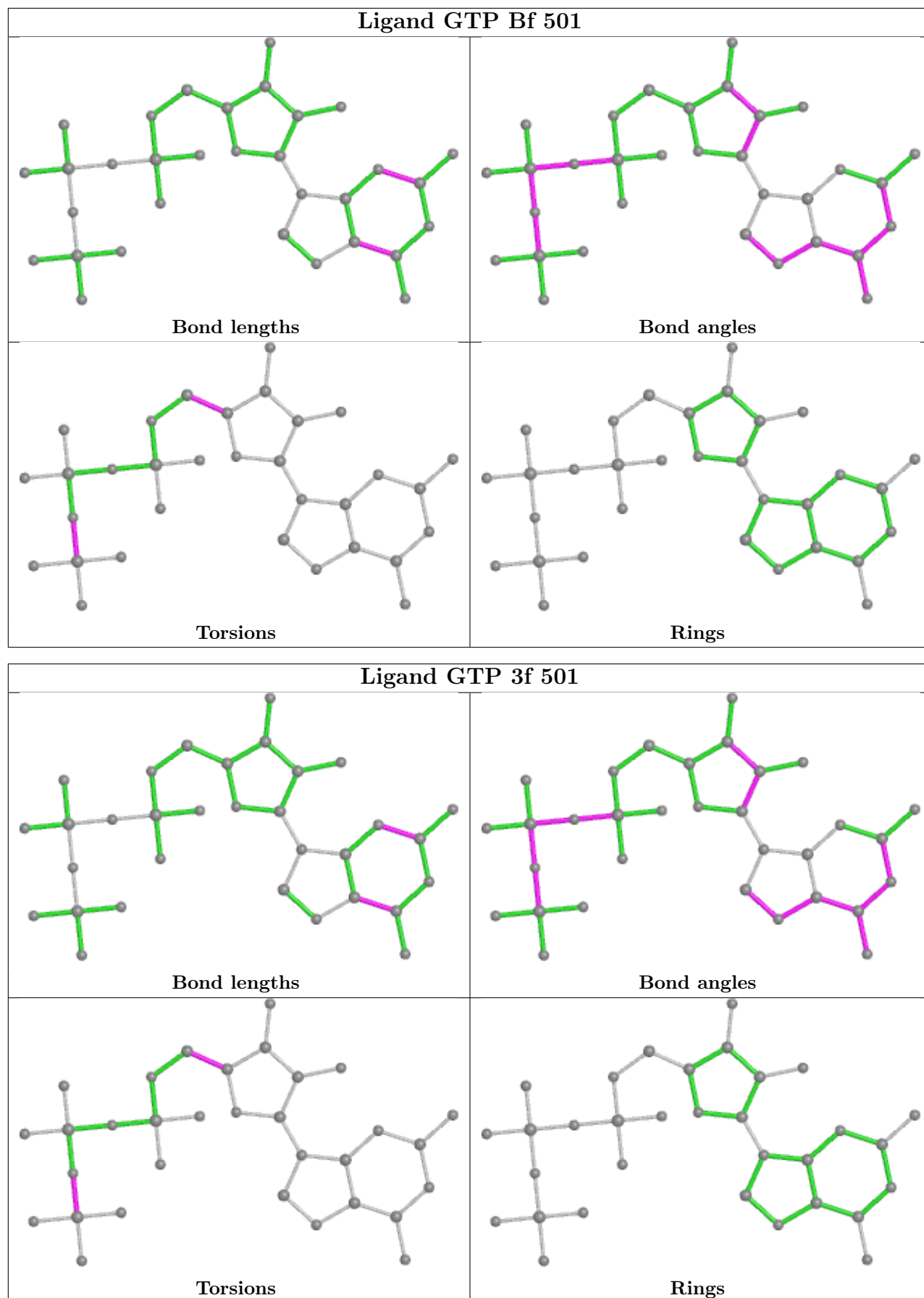


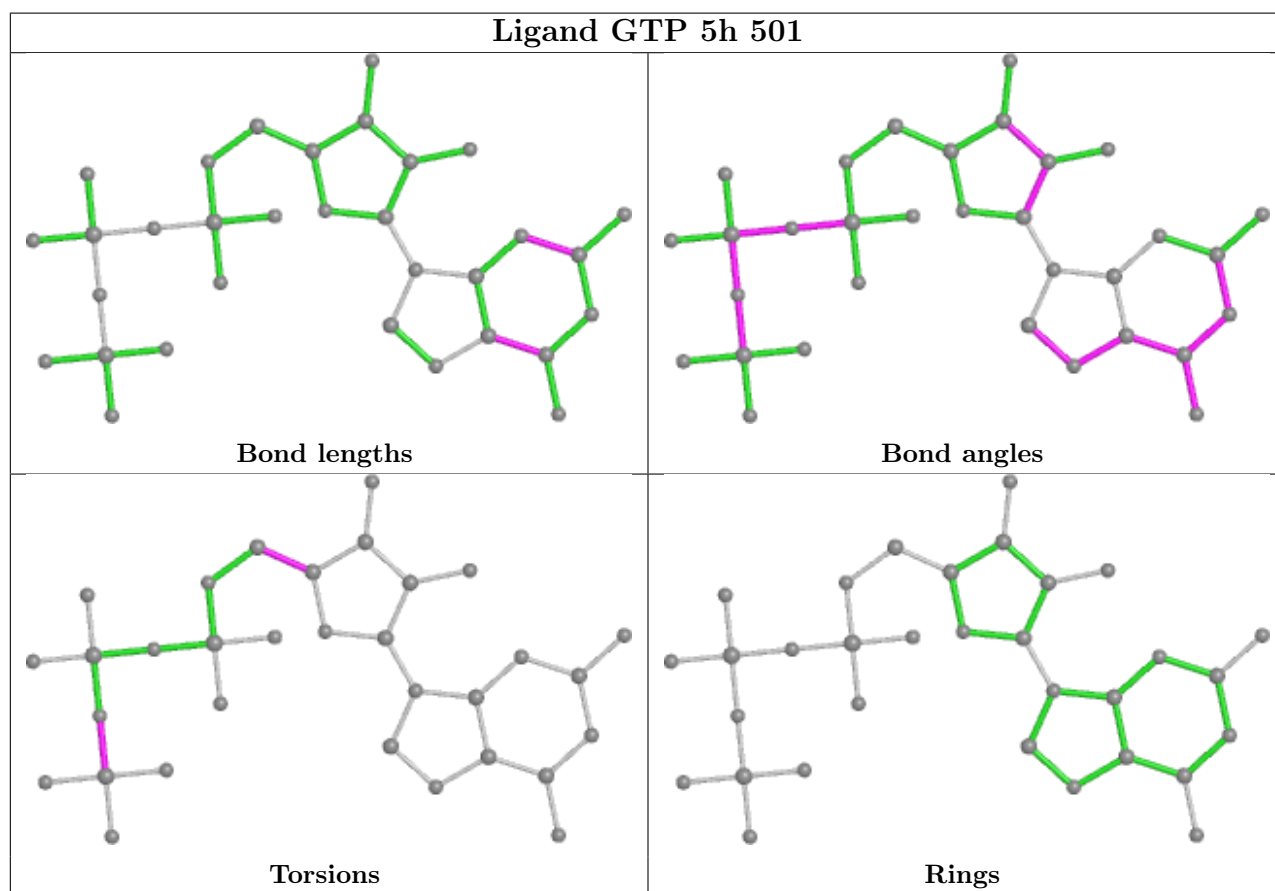
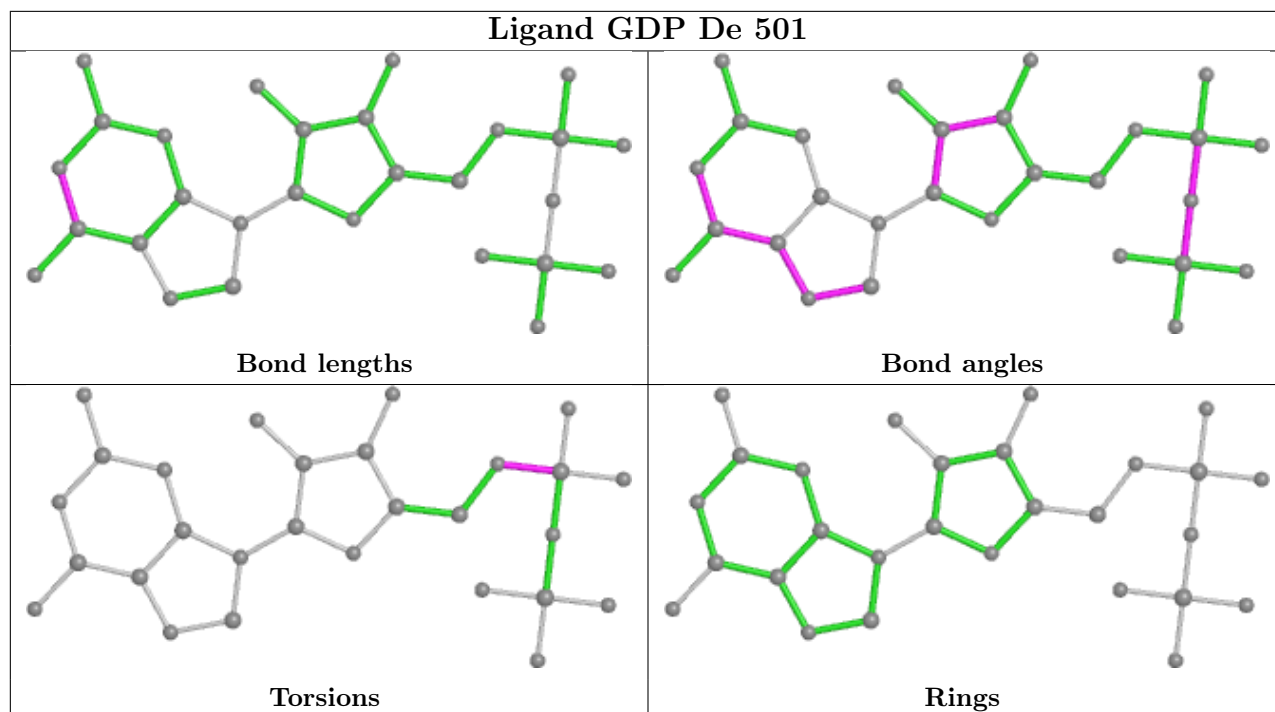


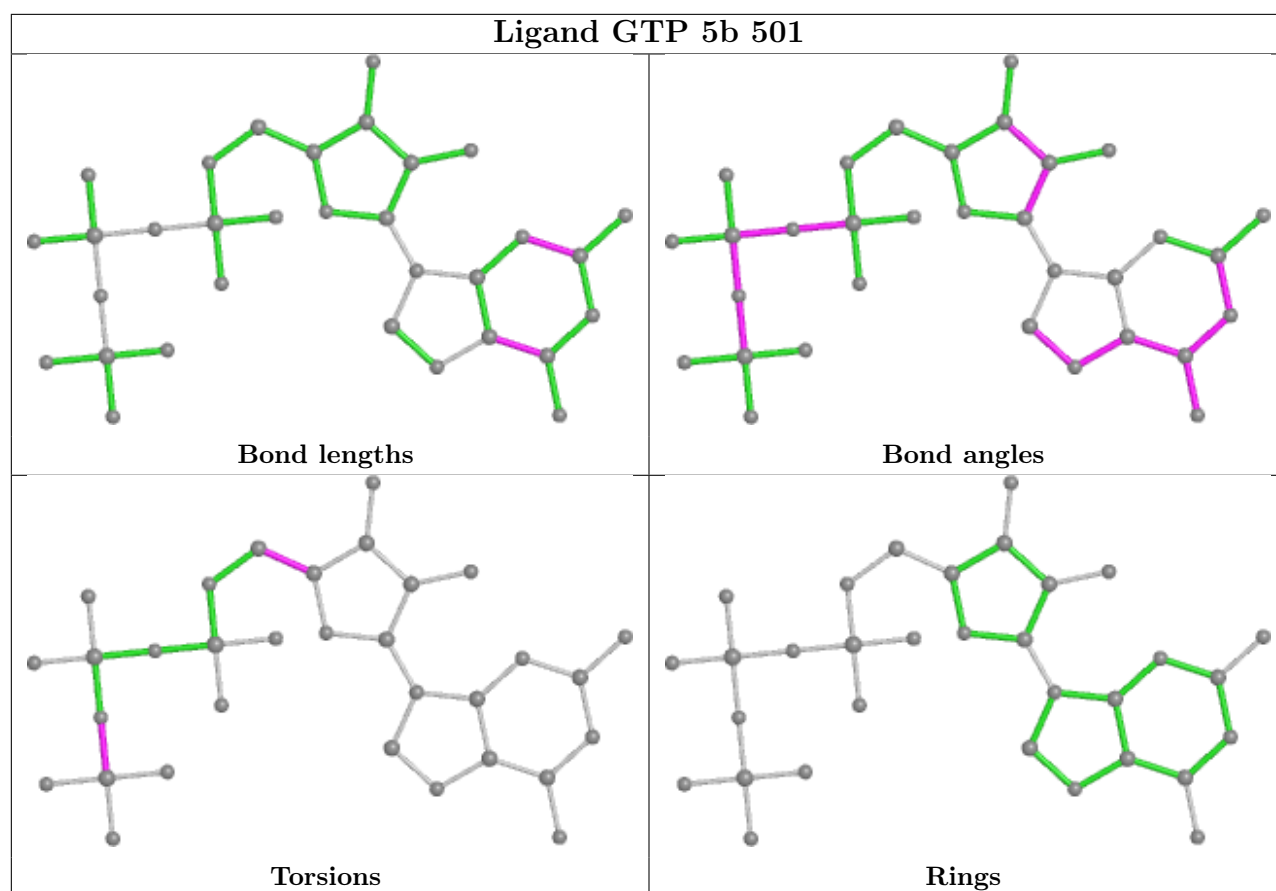












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Map visualisation

This section contains visualisations of the EMDB entry EMD-24191. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

This section was not generated.

6.2 Central slices

This section was not generated.

6.3 Largest variance slices

This section was not generated.

6.4 Orthogonal surface views

This section was not generated.

6.5 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

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

7.1 Map-value distribution

This section was not generated.

7.2 Volume estimate versus contour level

This section was not generated.

7.3 Rotationally averaged power spectrum

This section was not generated. The rotationally averaged power spectrum had issues being displayed.

8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit

This section was not generated.