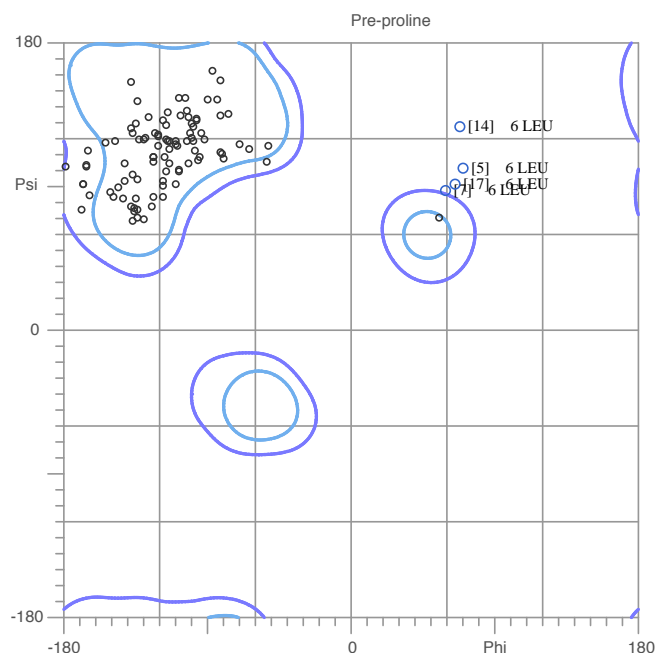
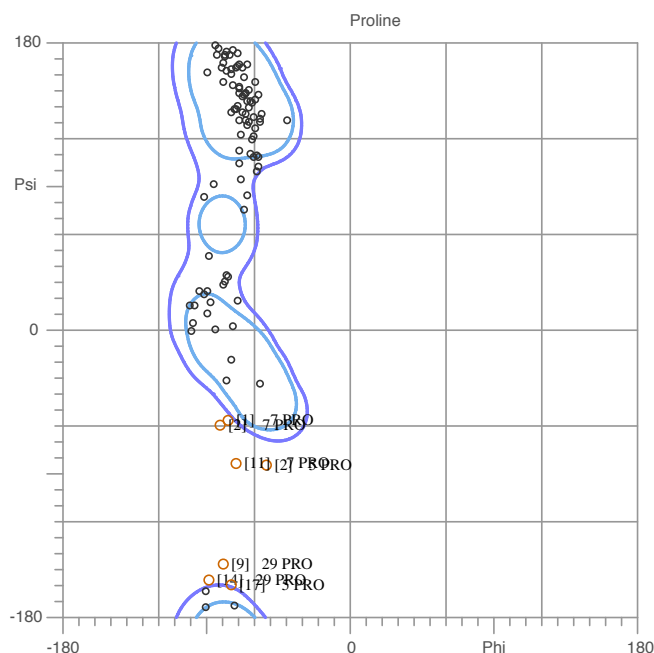
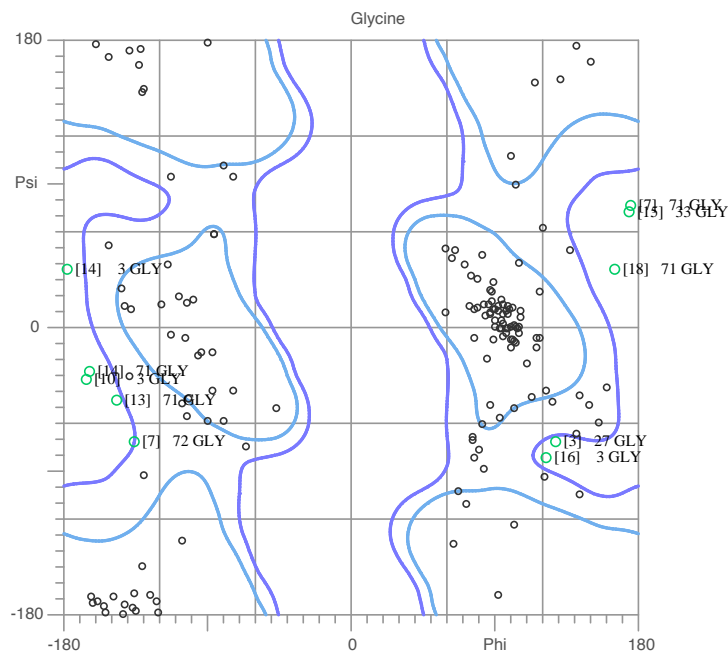
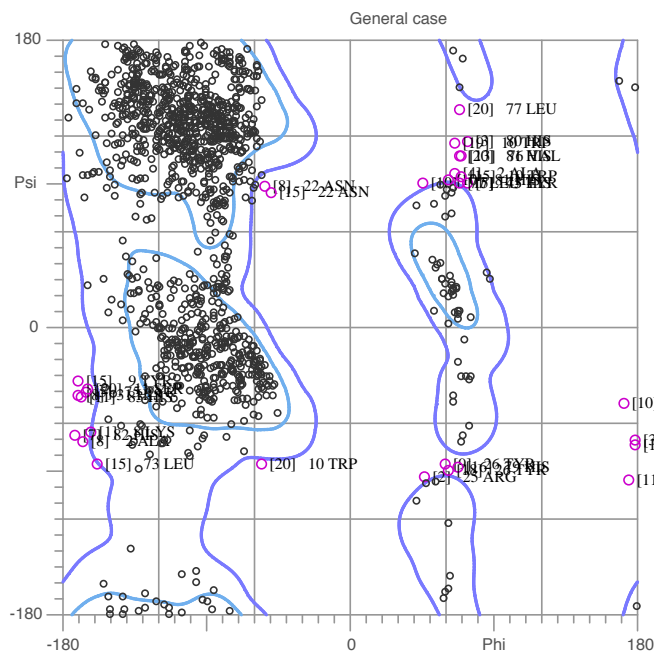


MolProbity Ramachandran analysis

2HEQ_NMR.pdb, all models



85.2% (1398/1640) of all residues were in favored (98%) regions.
96.8% (1588/1640) of all residues were in allowed (>99.8%) regions.

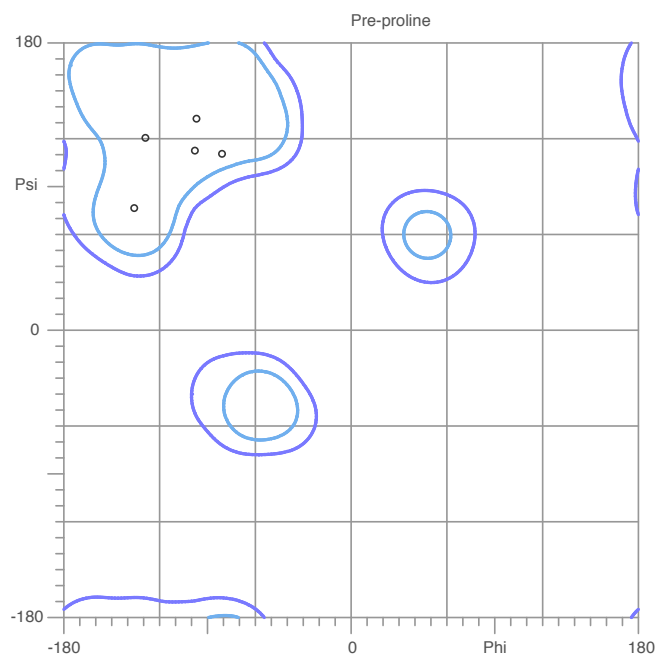
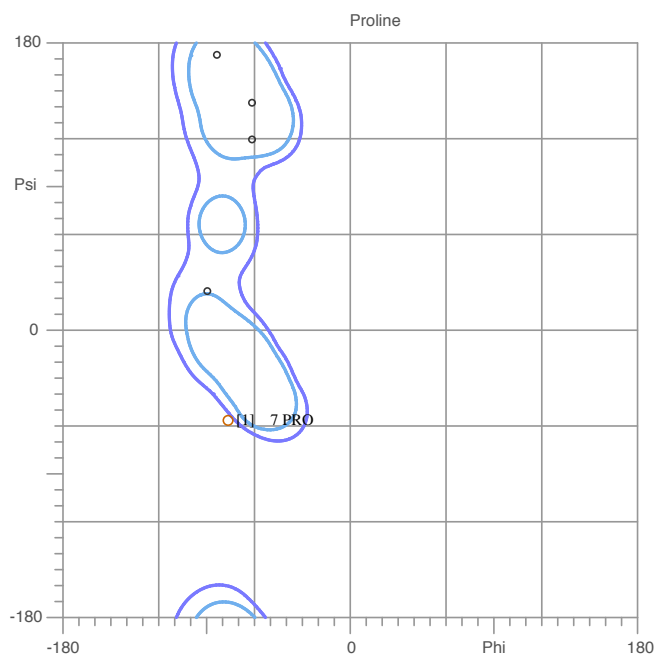
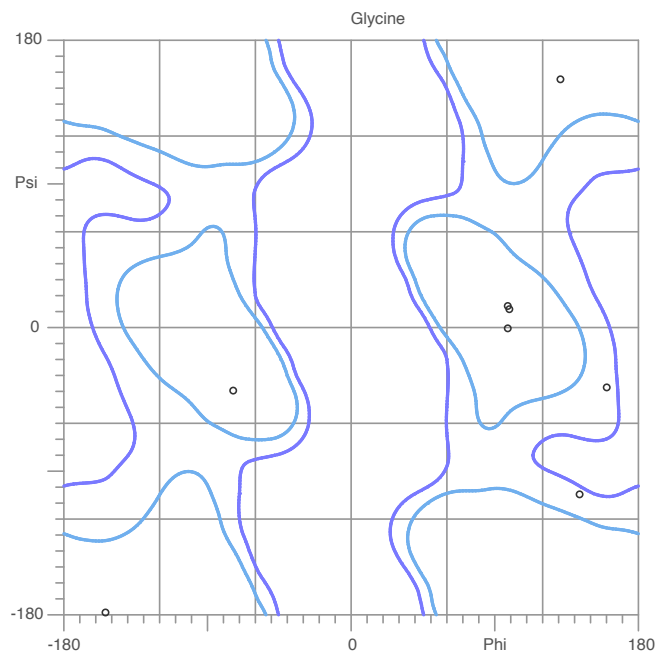
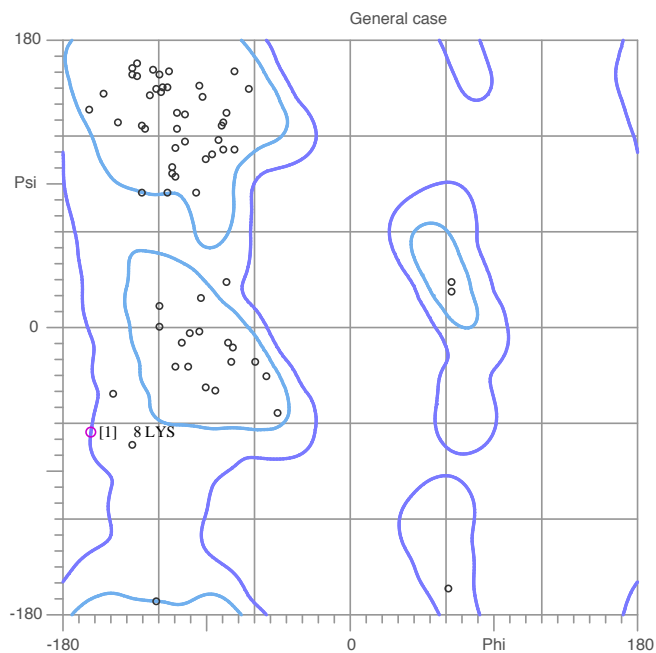
There were 52 outliers (phi, psi):

- [1] 7 PRO (-77.1, -56.0)
- [2] 25 ARG (46.2, -93.9)
- [3] 2 ALA (178.1, -70.9)
- [4] 2 ALA (65.7, 97.7)
- [5] 6 LEU (70.1, 102.5)
- [6] 6 LEU (59.6, 88.4)
- [7] 71 GLY (175.6, 77.1)
- [8] 22 ASN (-54.2, 89.4)
- [9] 31 HIS (-171.6, -42.9)
- [10] 3 GLY (-166.3, -32.9)
- [11] 77 LEU (45.5, 91.2)
- [12] 79 HIS (171.8, -47.6)

- [13] 81 HIS (61.0, 93.4)
- [14] 7 PRO (-72.3, -83.4)
- [15] 8 LYS (174.0, -95.7)
- [16] 83 HIS (-169.1, -43.8)
- [17] 71 GLY (-147.3, -45.5)
- [18] 76 VAL (69.0, 108.5)
- [19] 3 GLY (-178.2, 37.1)
- [20] 6 LEU (68.1, 128.6)
- [21] 29 PRO (-89.1, -156.6)
- [22] 71 GLY (-164.5, -27.3)
- [23] 9 TYR (-171.9, -33.4)
- [24] 10 TRP (69.9, 95.9)
- [25] 22 ASN (-50.7, 85.9)
- [26] 33 GLY (175.0, 74.0)
- [27] 43 HIS (68.1, 92.0)
- [28] 73 LEU (-159.8, -85.4)
- [29] 3 GLY (123.0, -81.7)
- [30] 79 HIS (67.9, -87.8)
- [31] 5 PRO (-75.3, -159.4)
- [32] 6 LEU (65.8, 92.3)
- [33] 26 TYR (61.3, -89.1)
- [34] 71 GLY (165.3, 37.6)
- [35] 73 LEU (178.0, -73.9)
- [36] 10 TRP (65.9, 116.5)
- [37] 10 TRP (-56.8, -85.6)
- [38] 11 SER (-165.3, -38.4)
- [39] 77 LEU (68.2, 137.9)
- [40] 81 HIS (68.2, 108.3)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 1



89.0% (73/82) of all residues were in favored (98%) regions.
97.6% (80/82) of all residues were in allowed (>99.8%) regions.

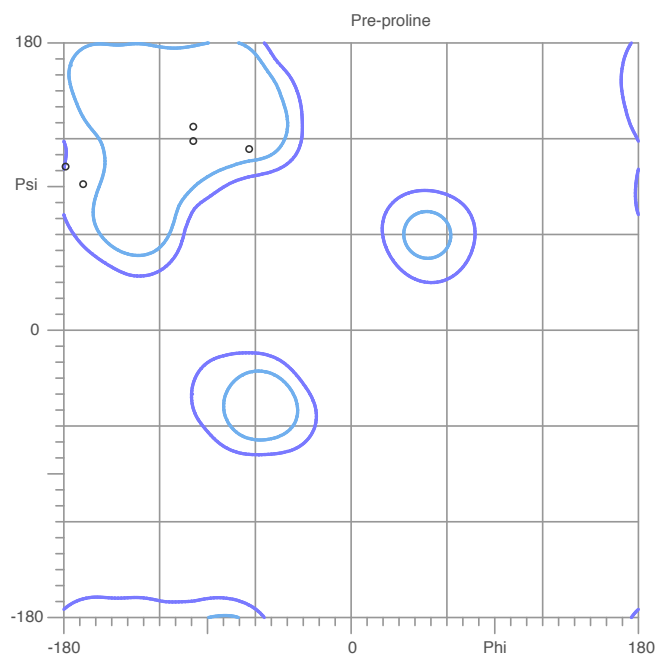
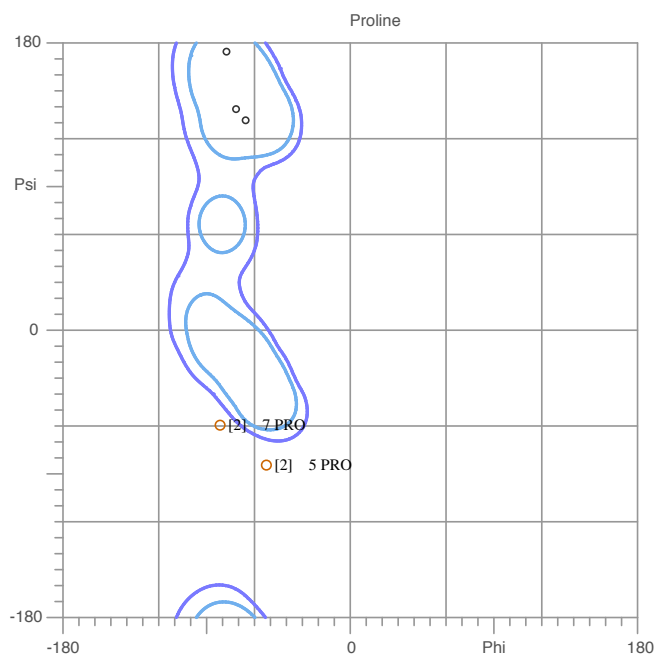
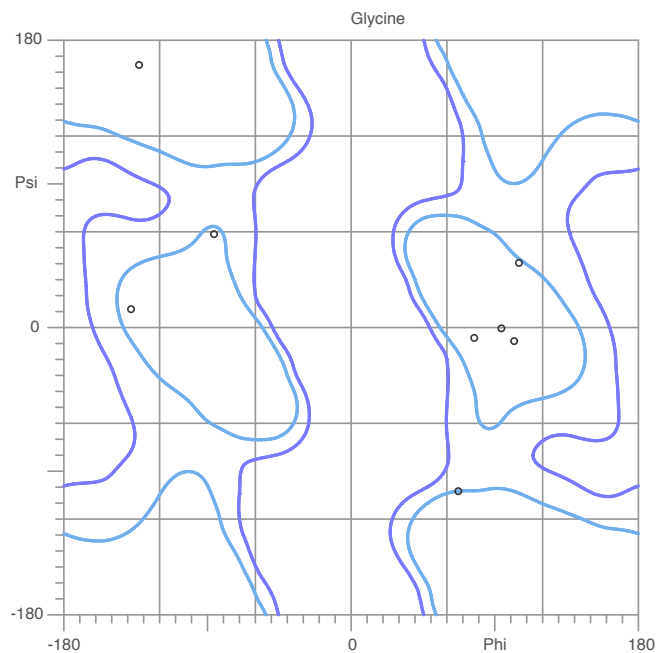
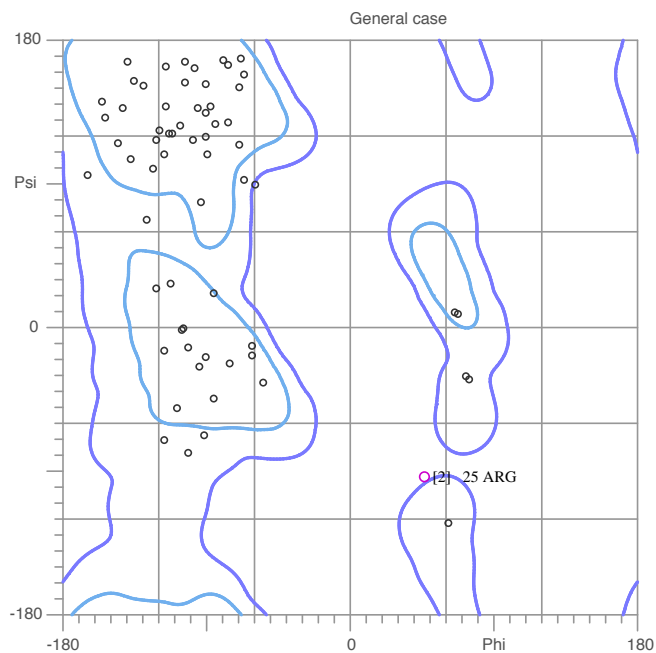
There were 2 outliers (phi, psi):

[1] 7 PRO (-77.1, -56.0)

[1] 8 LYS (-163.1, -65.0)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 2



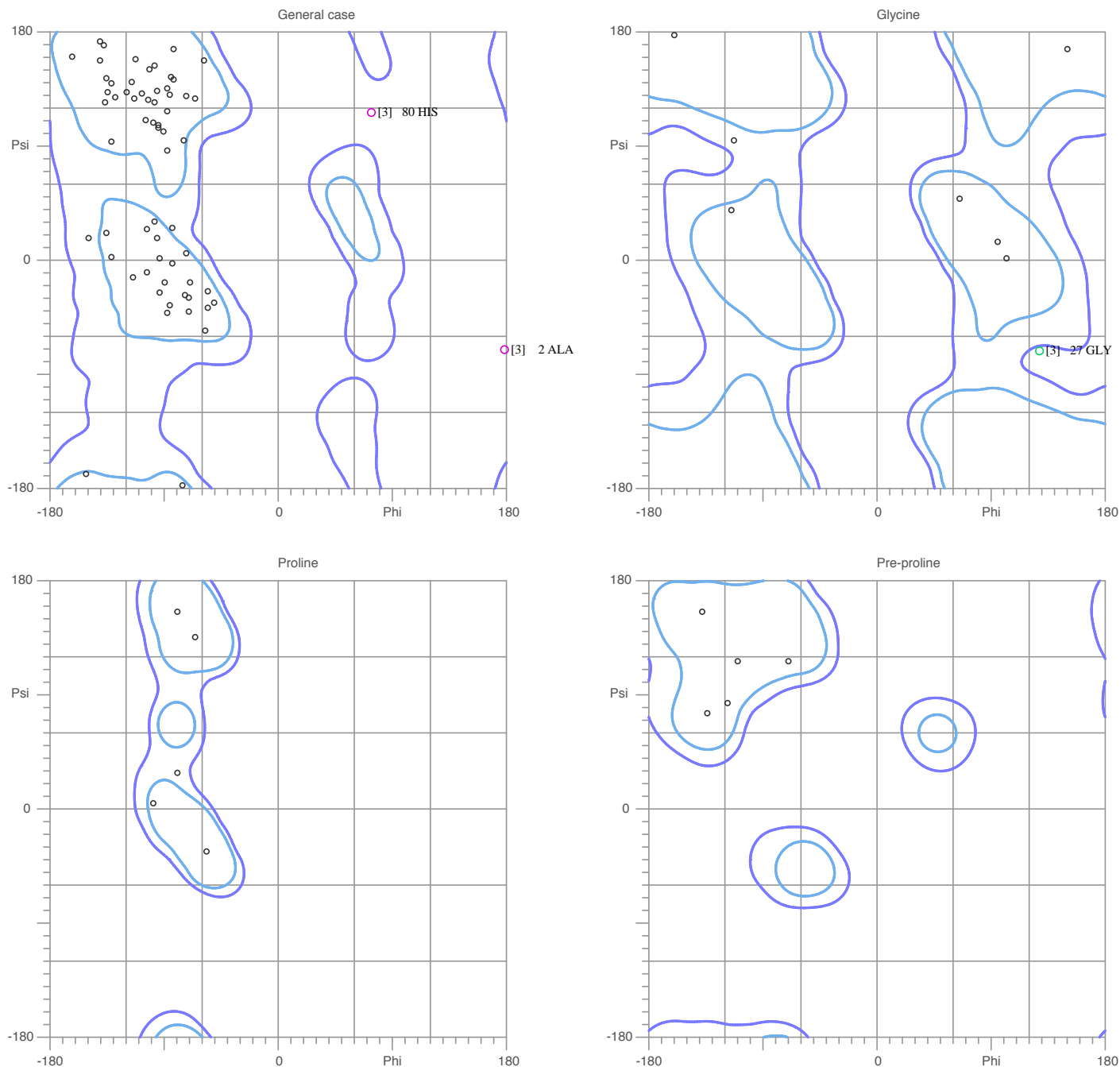
81.7% (67/82) of all residues were in favored (98%) regions.
96.3% (79/82) of all residues were in allowed (>99.8%) regions.

There were 3 outliers (phi, psi):

- [2] 5 PRO (-53.4, -84.9)
- [2] 7 PRO (-82.7, -59.2)
- [2] 25 ARG (46.2, -93.9)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 3



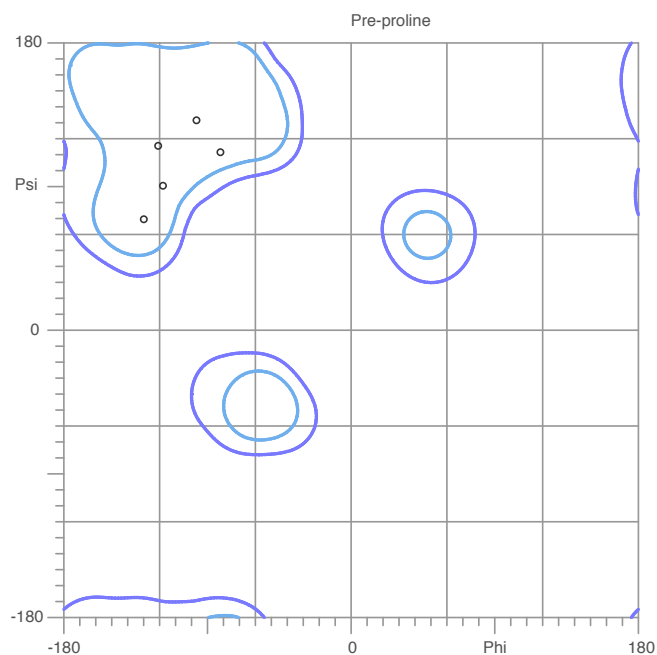
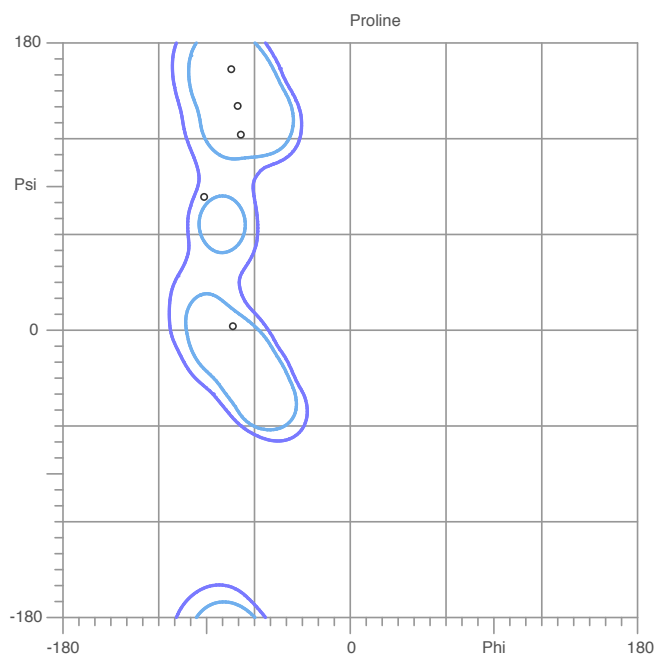
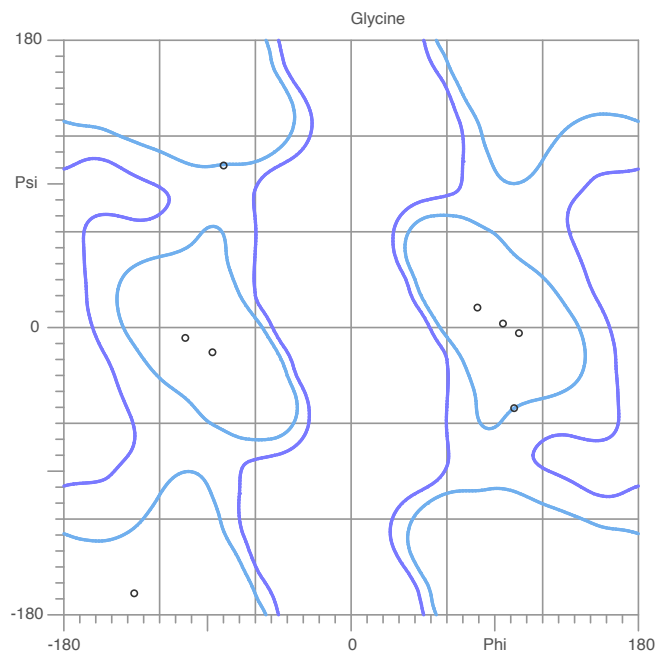
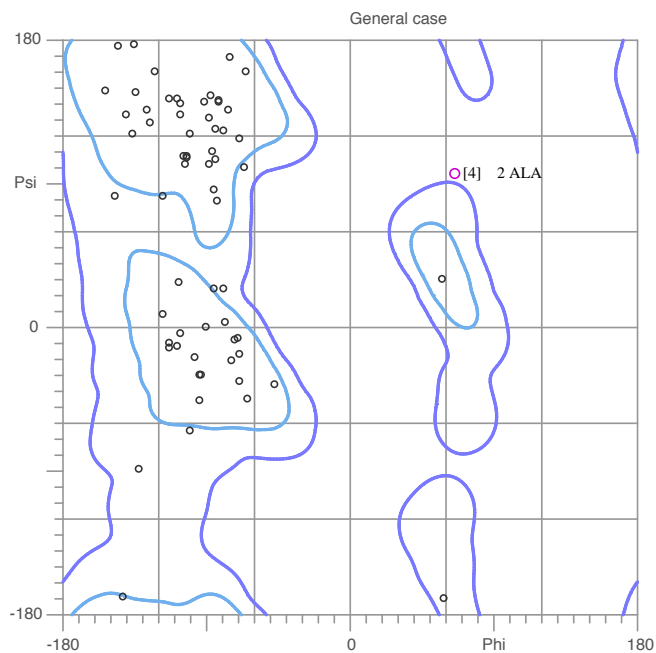
91.5% (75/82) of all residues were in favored (98%) regions.
96.3% (79/82) of all residues were in allowed (>99.8%) regions.

There were 3 outliers (phi, psi):

- [3] 2 ALA (178.1, -70.9)
- [3] 27 GLY (128.5, -71.0)
- [3] 80 HIS (73.6, 117.8)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 4



87.8% (72/82) of all residues were in favored (98%) regions.
98.8% (81/82) of all residues were in allowed (>99.8%) regions.

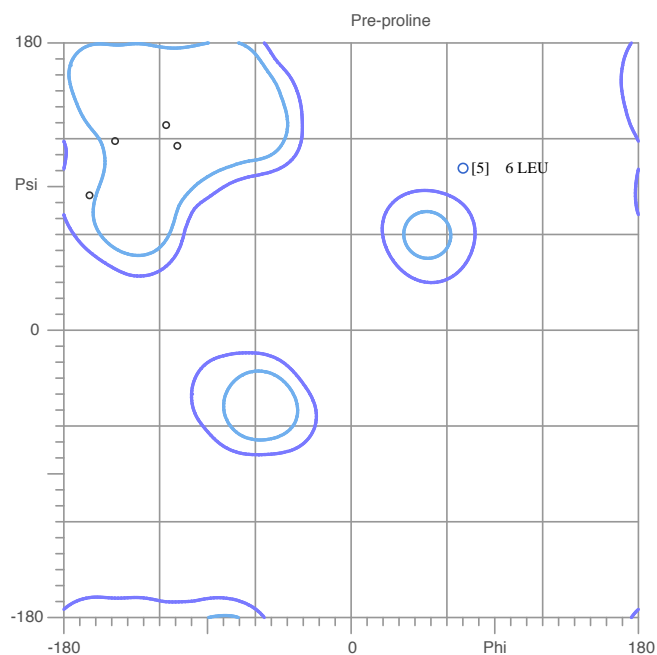
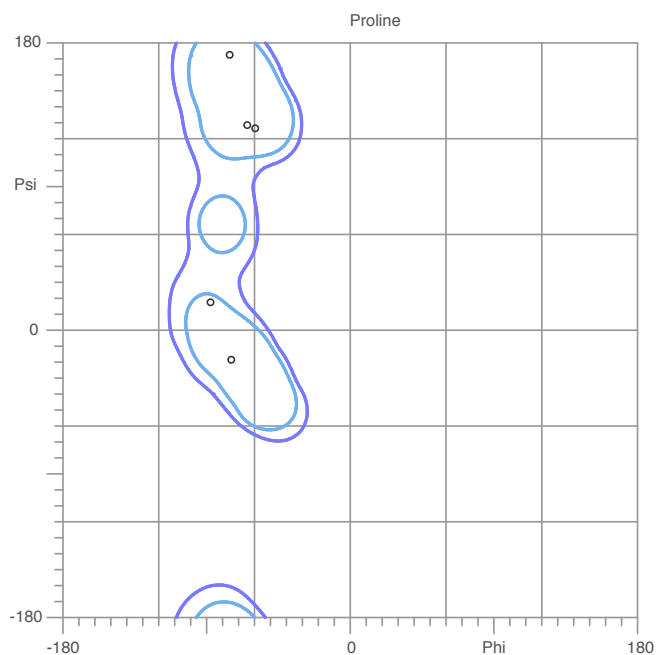
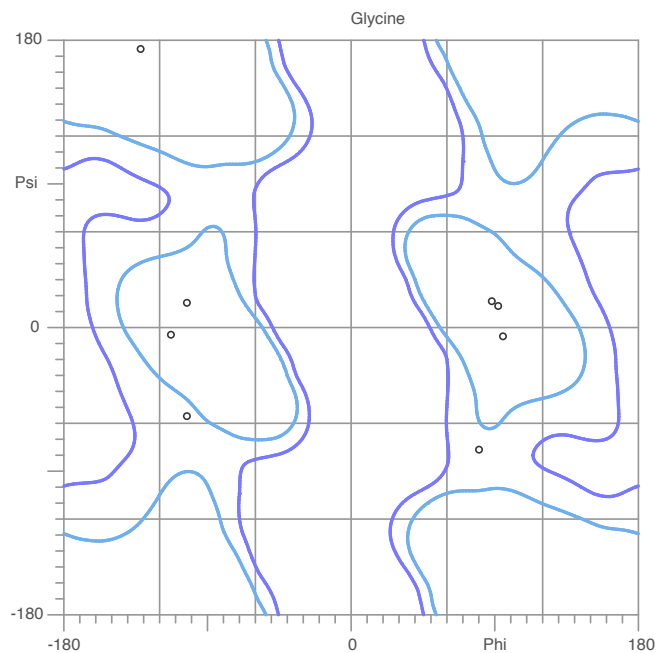
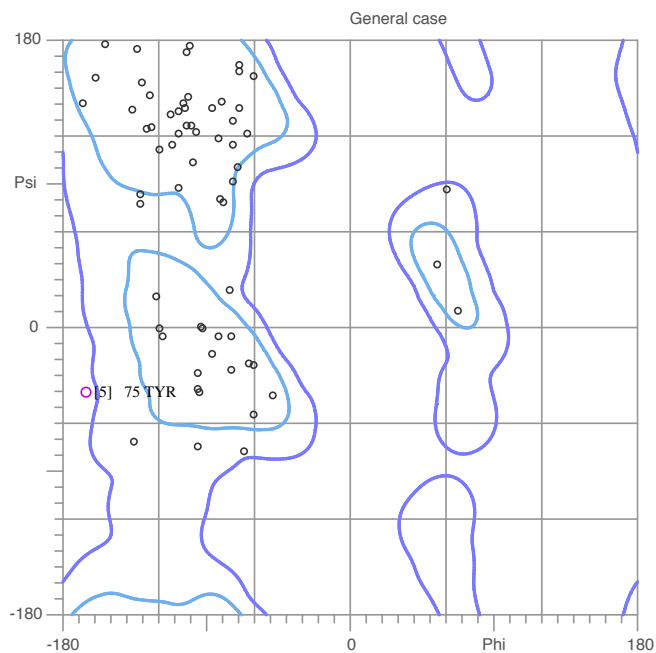
There were 1 outliers (phi, psi):
[4] 2 ALA (65.7, 97.7)

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MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 5



85.4% (70/82) of all residues were in favored (98%) regions.
97.6% (80/82) of all residues were in allowed (>99.8%) regions.

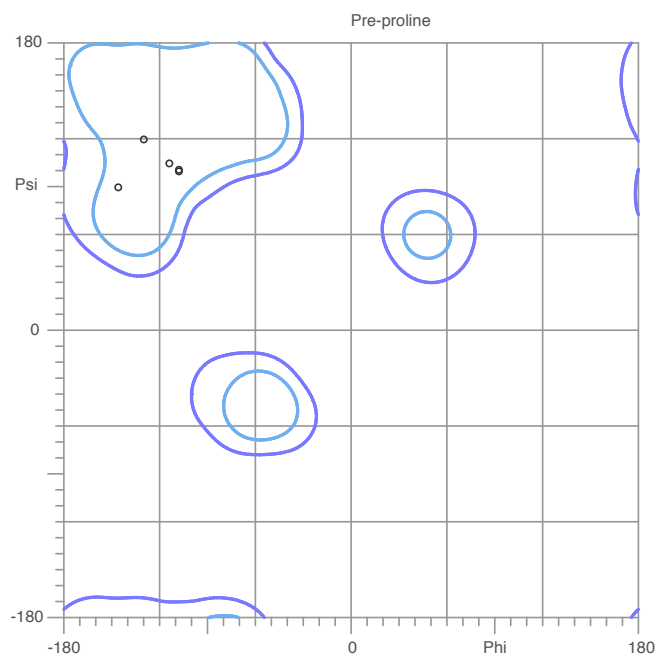
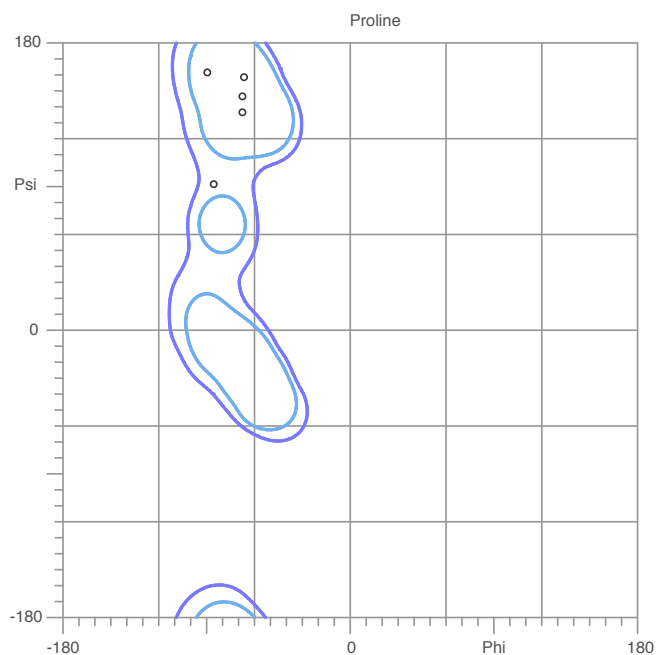
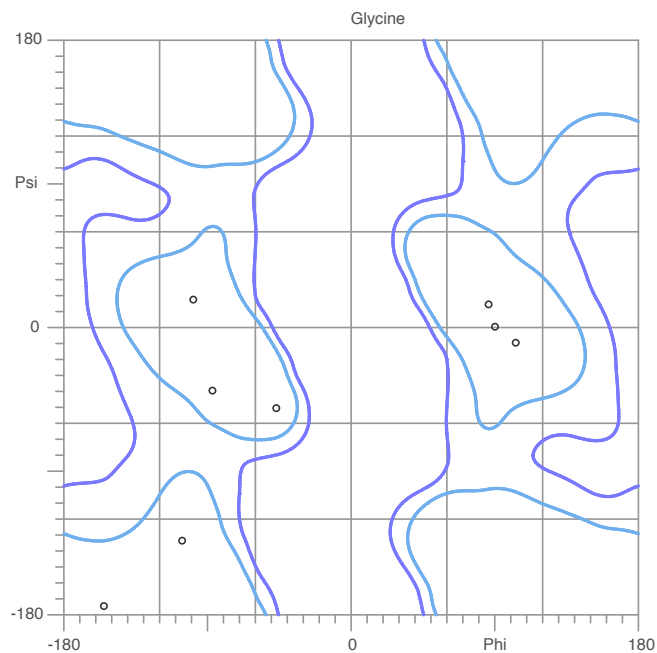
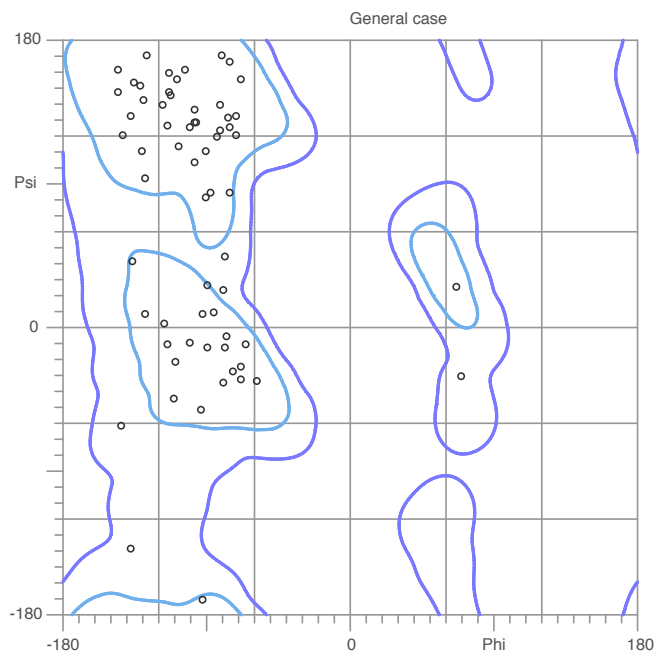
There were 2 outliers (phi, psi):

[5] 6 LEU (70.1, 102.5)

[5] 75 TYR (-166.7, -40.1)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 6



92.7% (76/82) of all residues were in favored (98%) regions.
100.0% (82/82) of all residues were in allowed (>99.8%) regions.

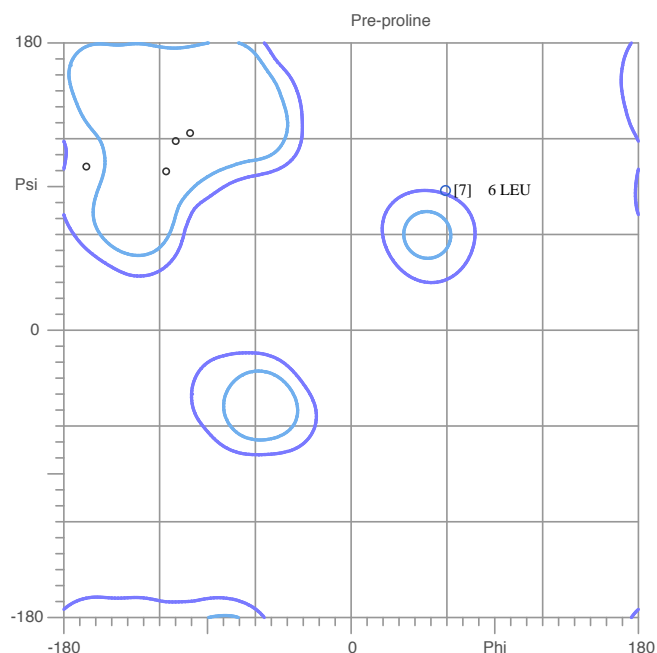
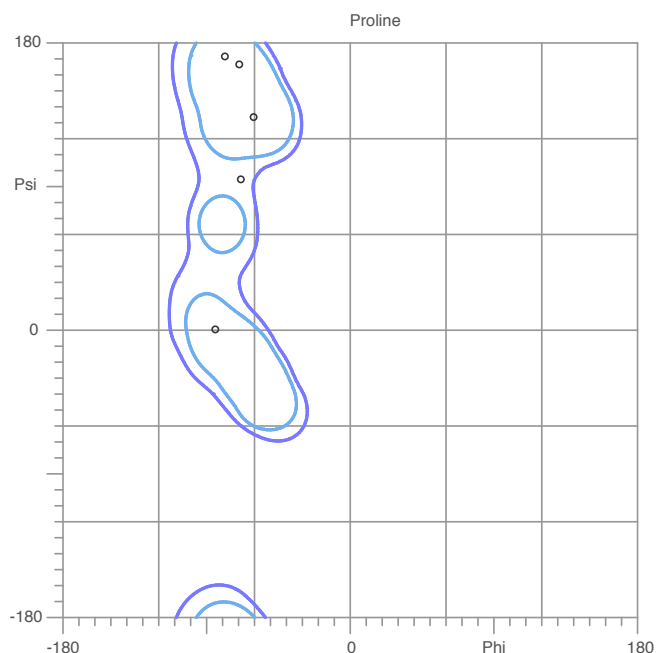
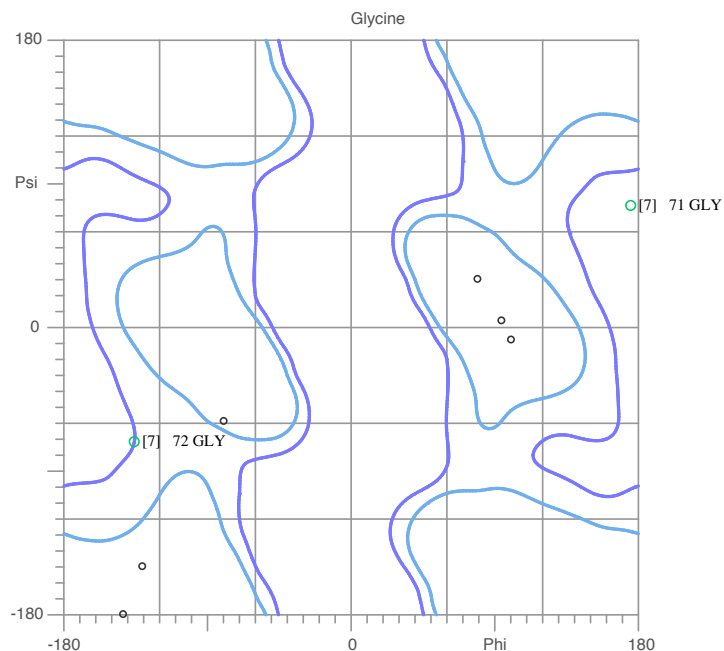
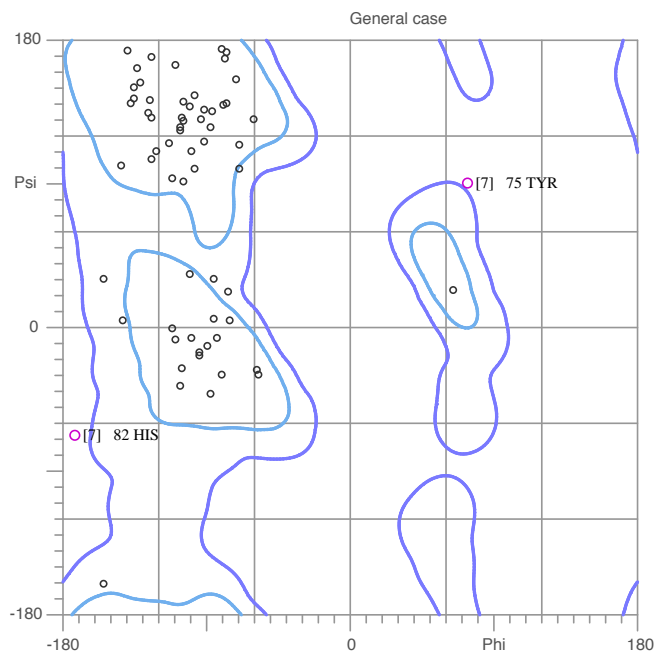
There were no outliers.

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MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 7



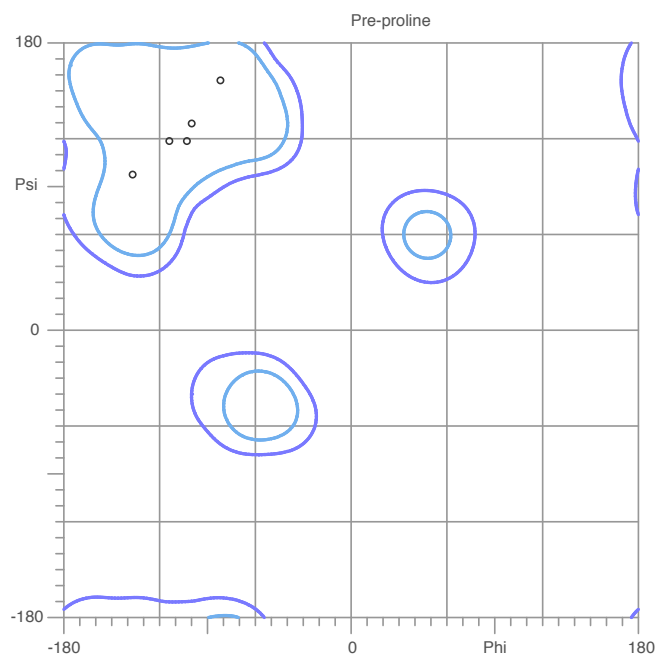
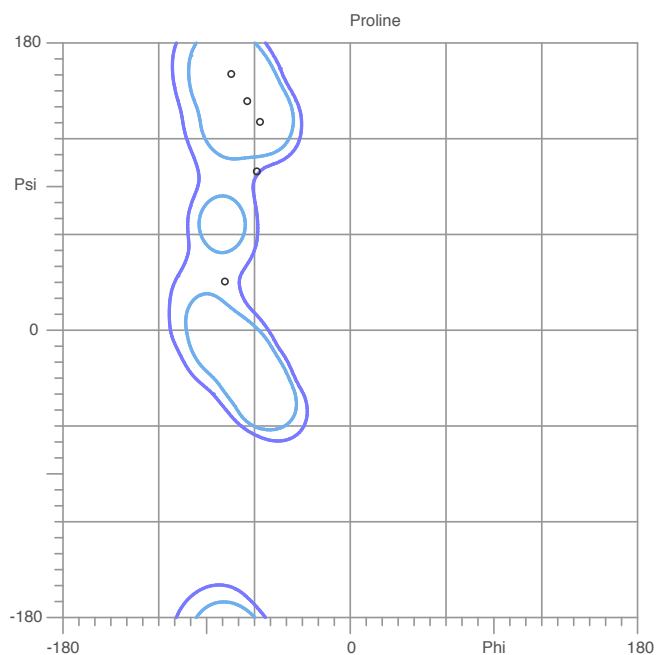
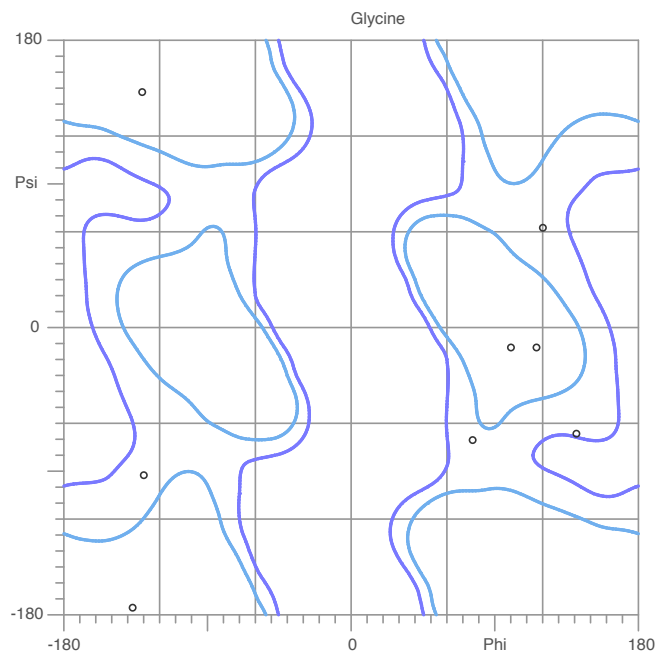
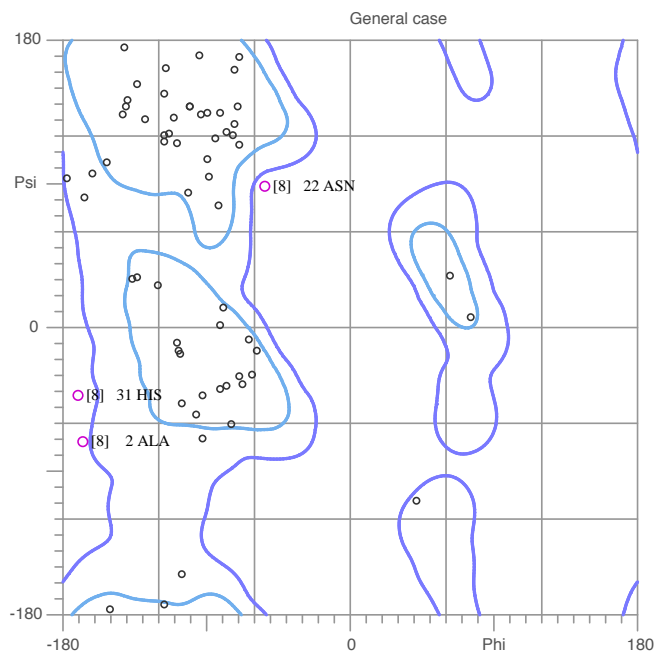
85.4% (70/82) of all residues were in favored (98%) regions.
93.9% (77/82) of all residues were in allowed (>99.8%) regions.

There were 5 outliers (phi, psi):

[7] 6 LEU (59.6, 88.4)
[7] 71 GLY (175.6, 77.1)
[7] 72 GLY (-136.6, -71.1)
[7] 75 TYR (73.9, 91.9)
[7] 82 HIS (-173.8, -67.0)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 8



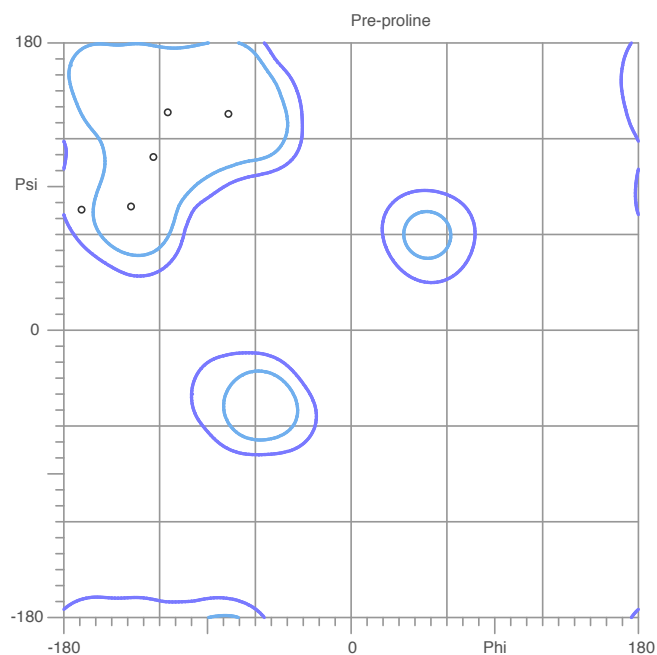
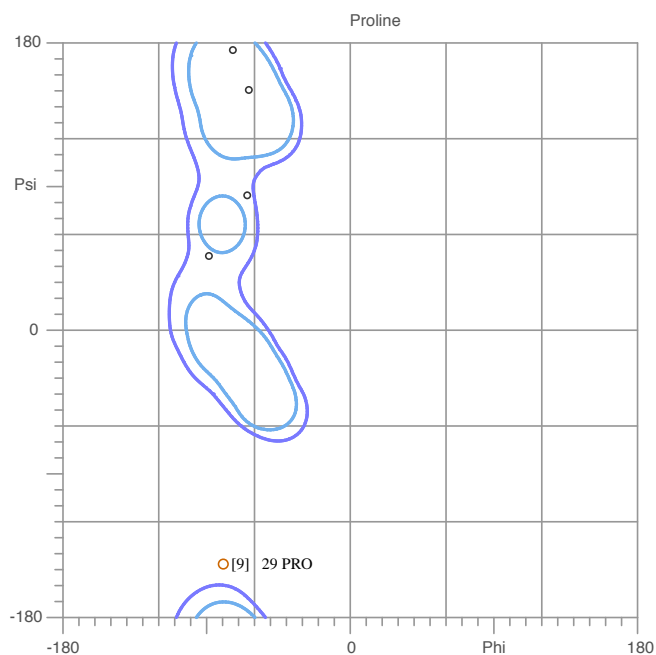
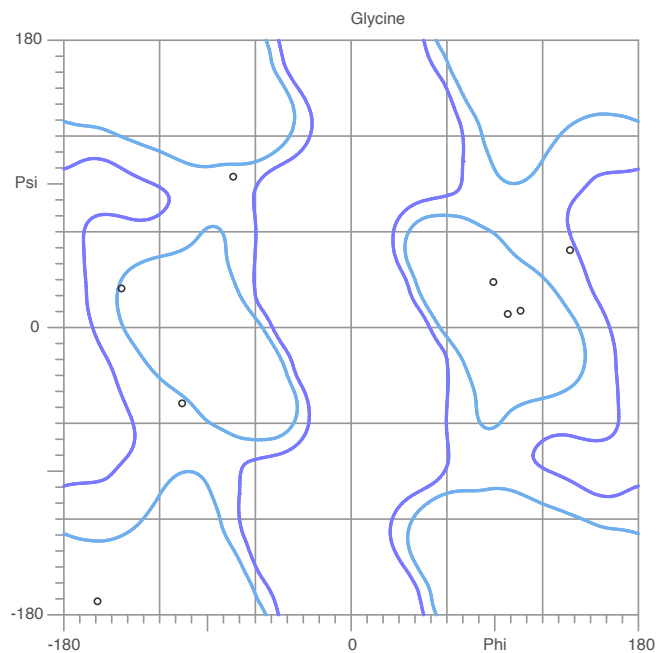
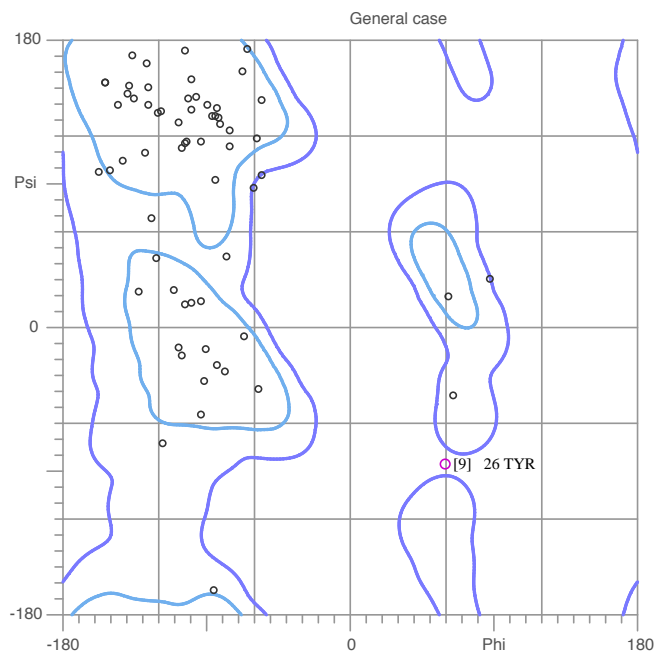
81.7% (67/82) of all residues were in favored (98%) regions.
96.3% (79/82) of all residues were in allowed (>99.8%) regions.

There were 3 outliers (phi, psi):

- [8] 2 ALA (-168.9, -71.1)
- [8] 22 ASN (-54.2, 89.4)
- [8] 31 HIS (-171.6, -42.9)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 9



79.3% (65/82) of all residues were in favored (98%) regions.
97.6% (80/82) of all residues were in allowed (>99.8%) regions.

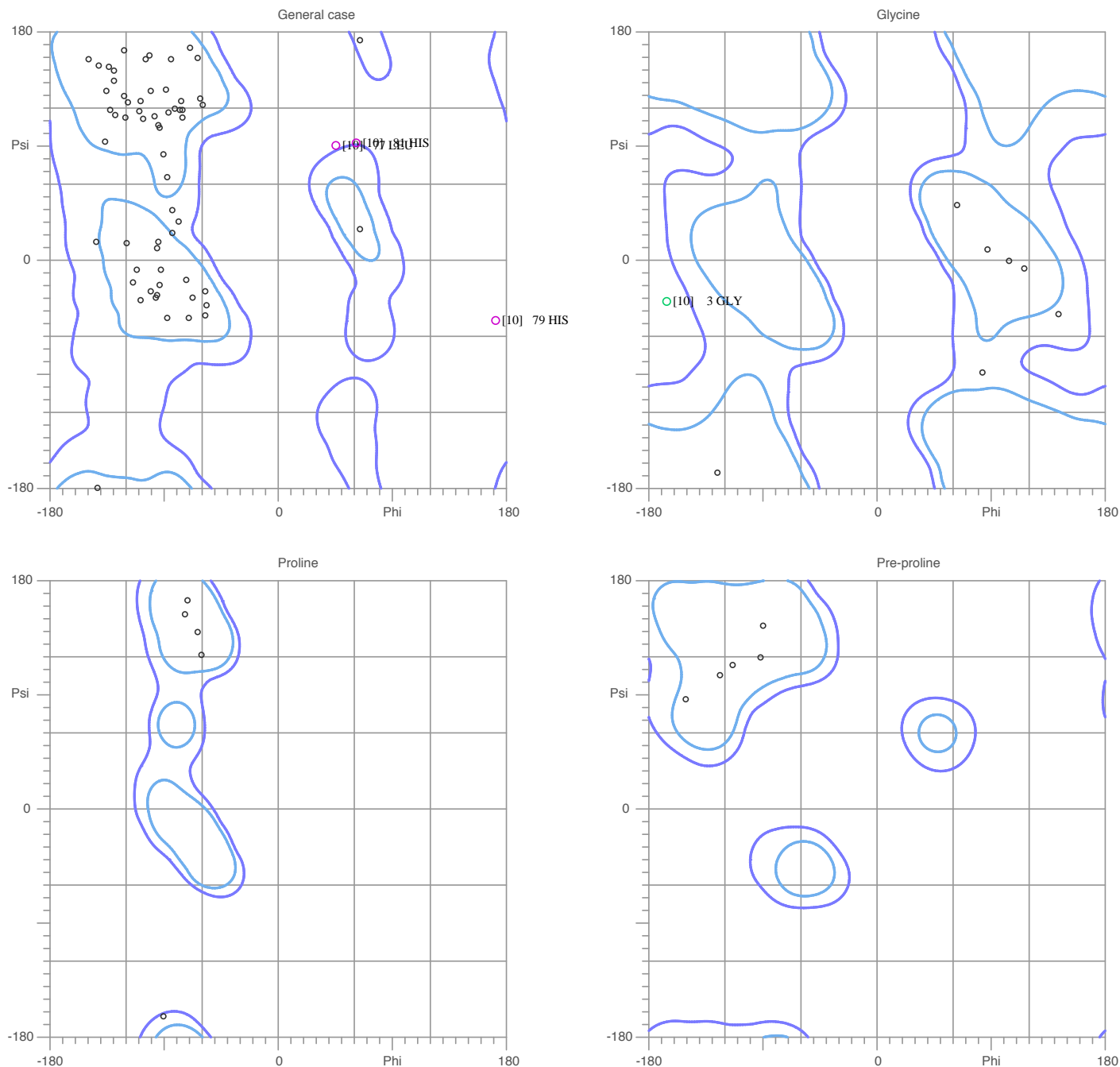
There were 2 outliers (phi, psi):

[9] 26 TYR (59.0, -85.1)

[9] 29 PRO (-80.0, -146.2)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 10



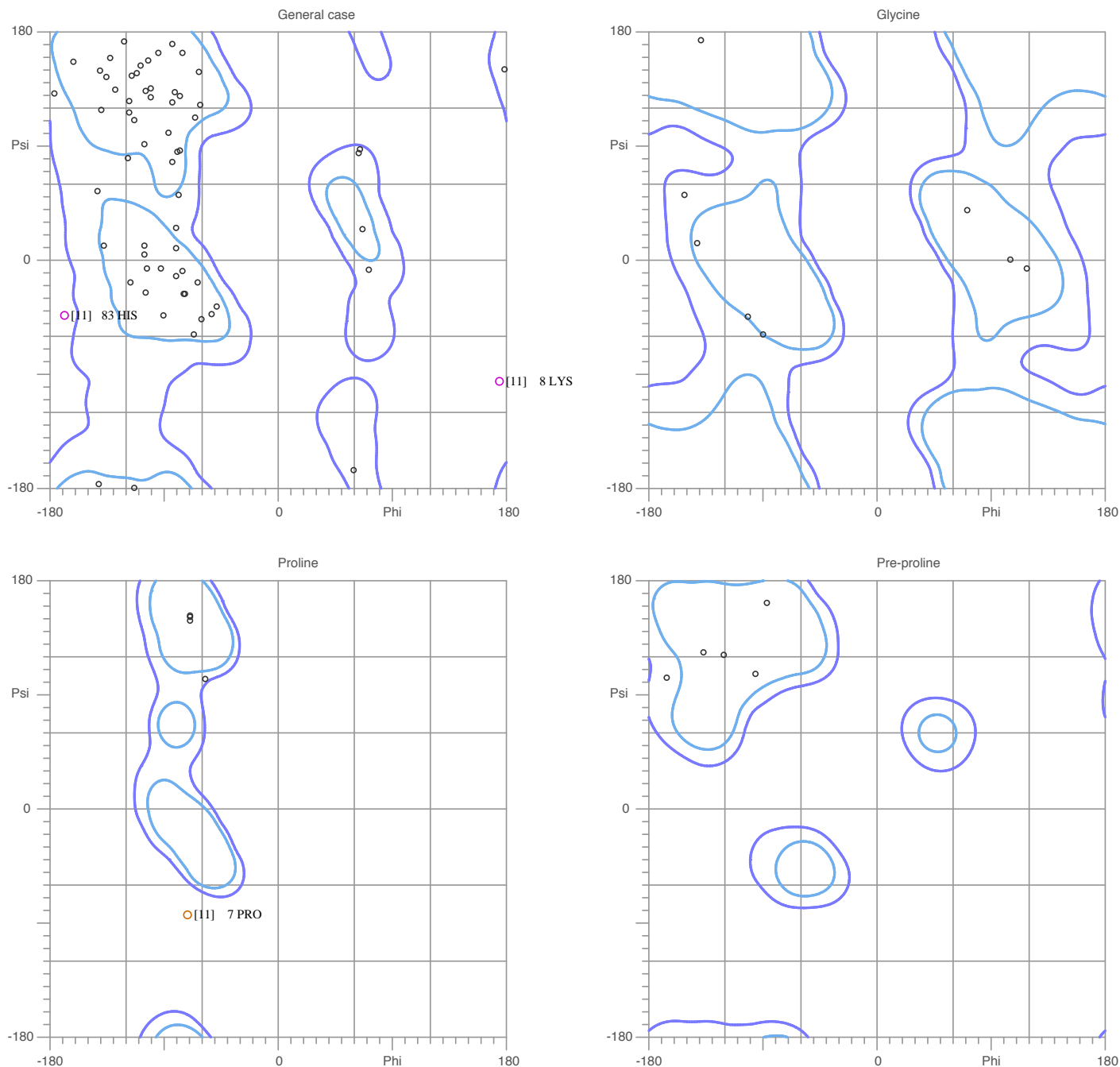
85.4% (70/82) of all residues were in favored (98%) regions.
95.1% (78/82) of all residues were in allowed (>99.8%) regions.

There were 4 outliers (ϕ , ψ):

- [10] 3 GLY (-166.3, -32.9)
- [10] 77 LEU (45.5, 91.2)
- [10] 79 HIS (171.8, -47.6)
- [10] 81 HIS (61.0, 93.4)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 11



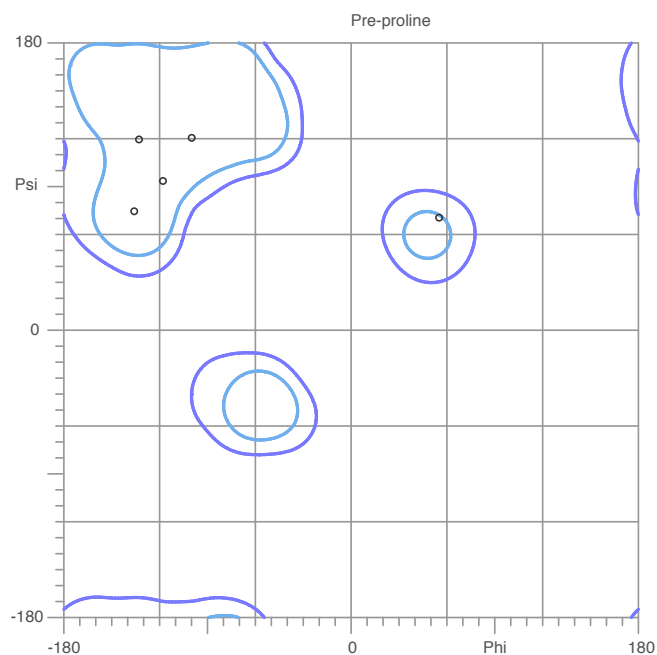
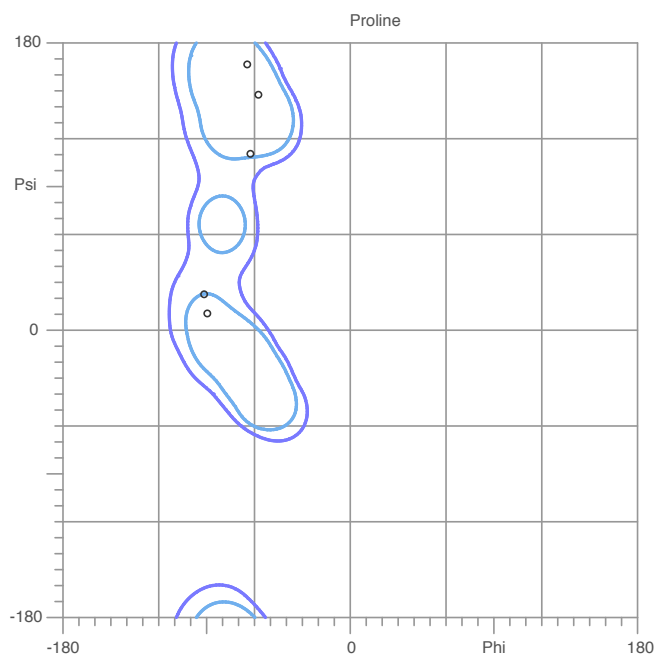
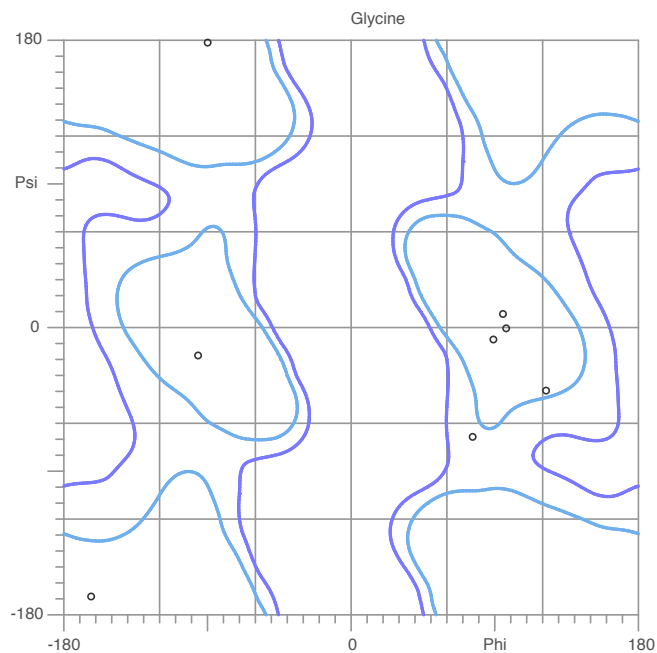
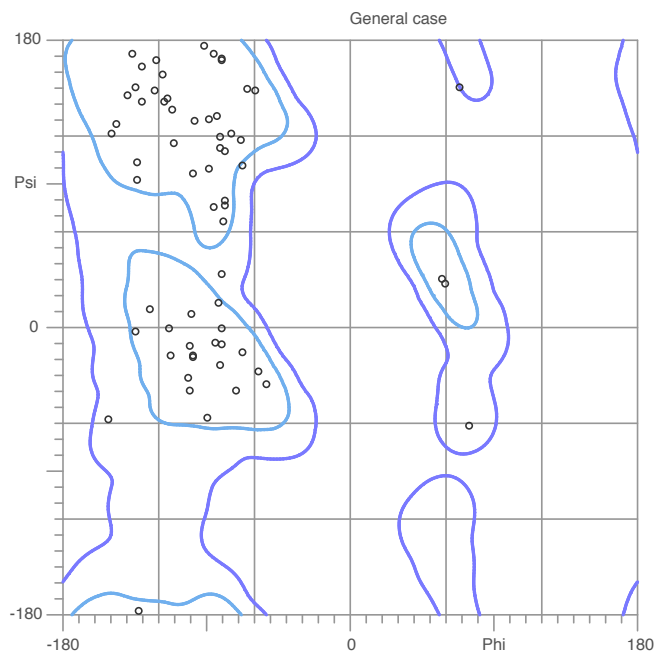
80.5% (66/82) of all residues were in favored (98%) regions.
96.3% (79/82) of all residues were in allowed (>99.8%) regions.

There were 3 outliers (ϕ , ψ):

- [11] 7 PRO (-72.3, -83.4)
- [11] 8 LYS (174.0, -95.7)
- [11] 83 HIS (-169.1, -43.8)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 12



92.7% (76/82) of all residues were in favored (98%) regions.
100.0% (82/82) of all residues were in allowed (>99.8%) regions.

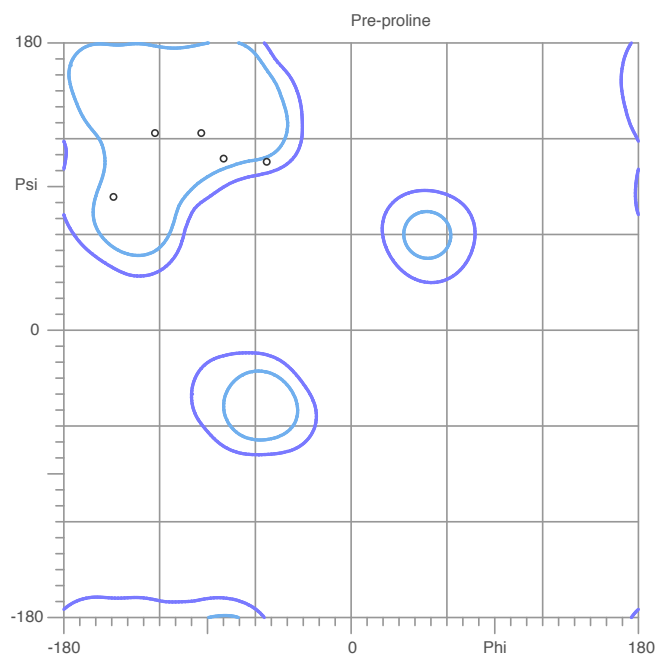
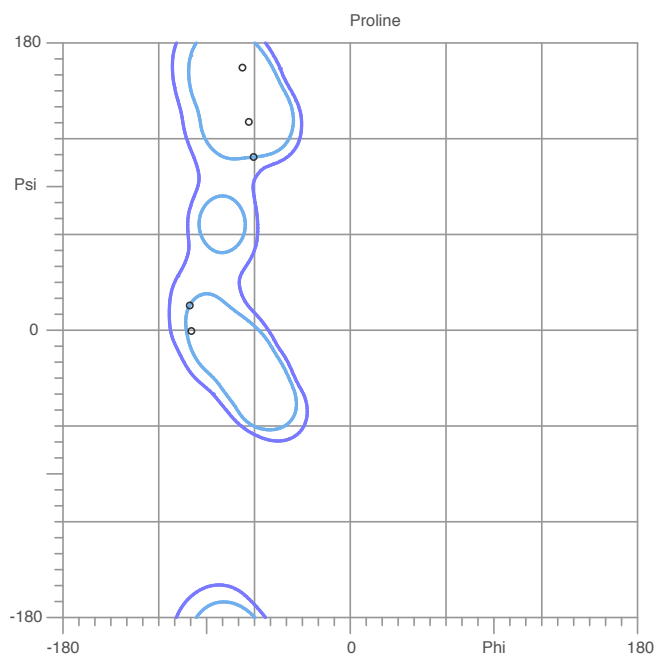
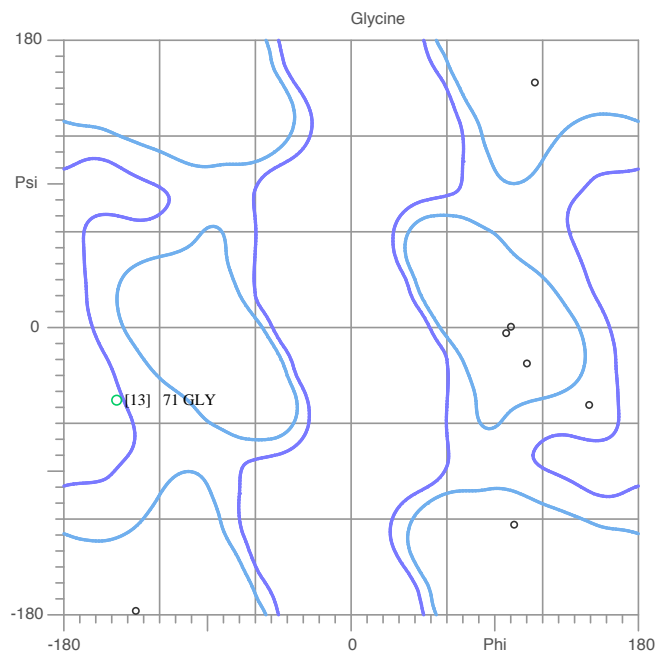
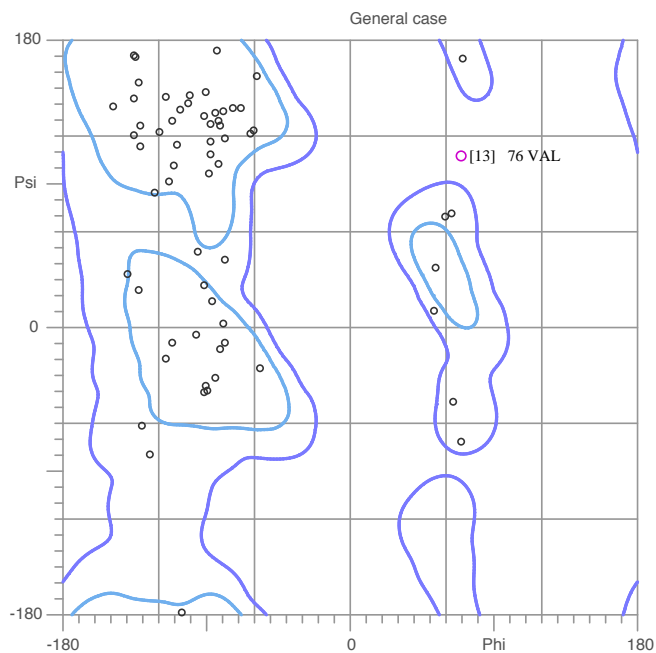
There were no outliers.

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MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 13

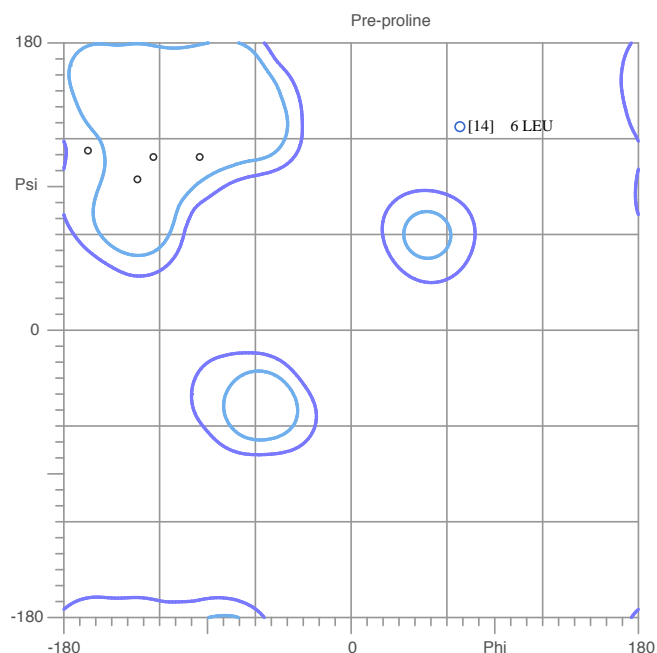
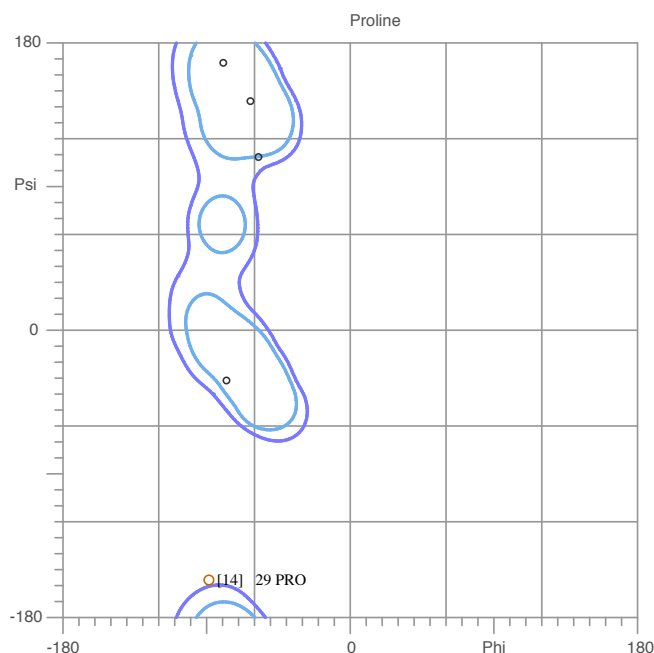
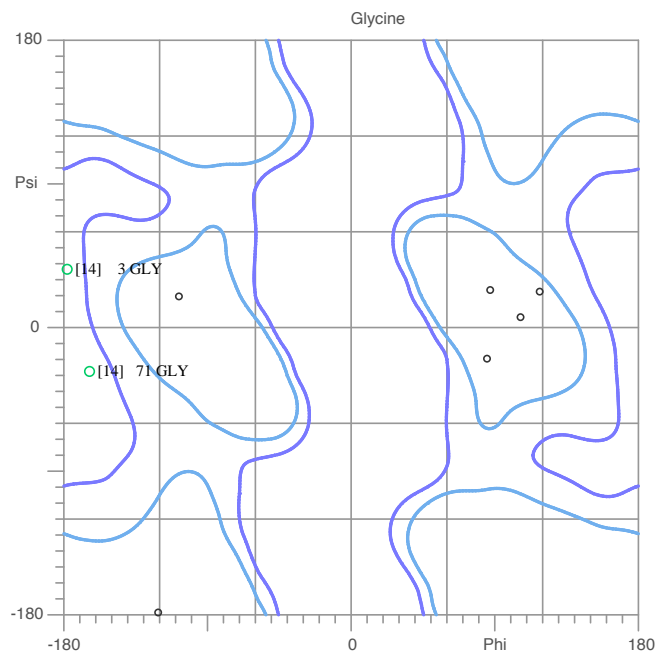
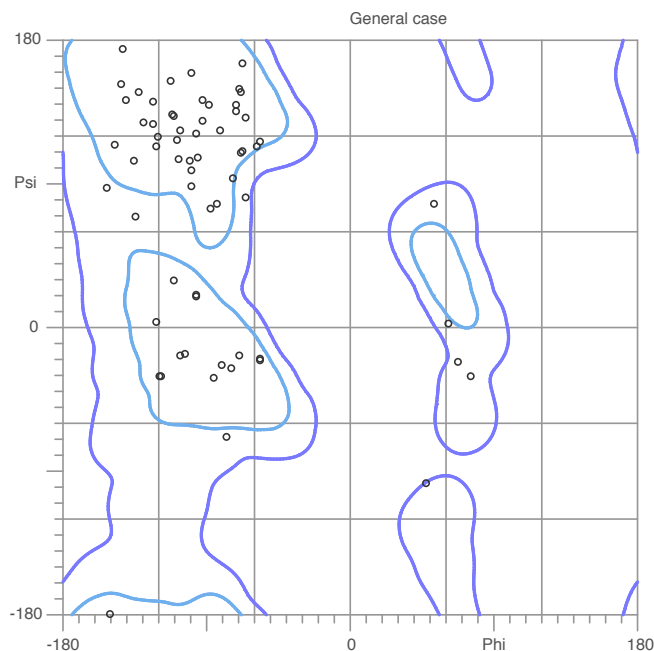


80.5% (66/82) of all residues were in favored (98%) regions.
97.6% (80/82) of all residues were in allowed (>99.8%) regions.

There were 2 outliers (phi, psi):
[13] 71 GLY (-147.3, -45.5)
[13] 76 VAL (69.0, 108.5)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 14



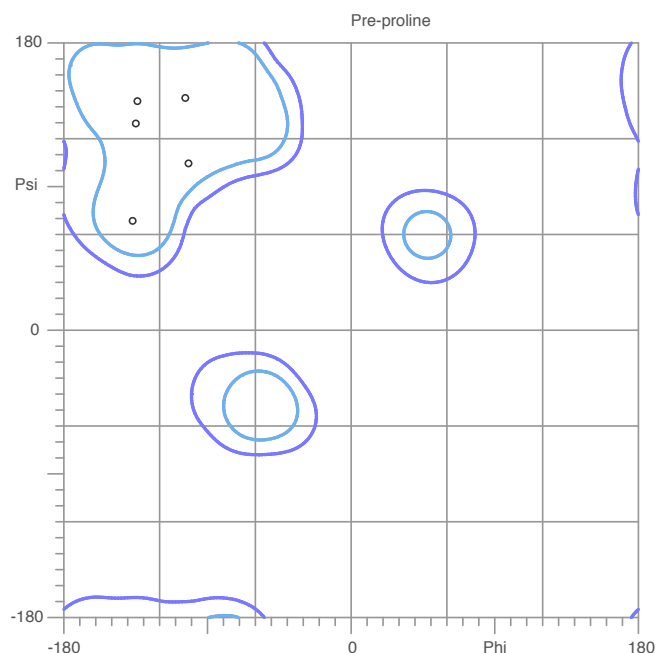
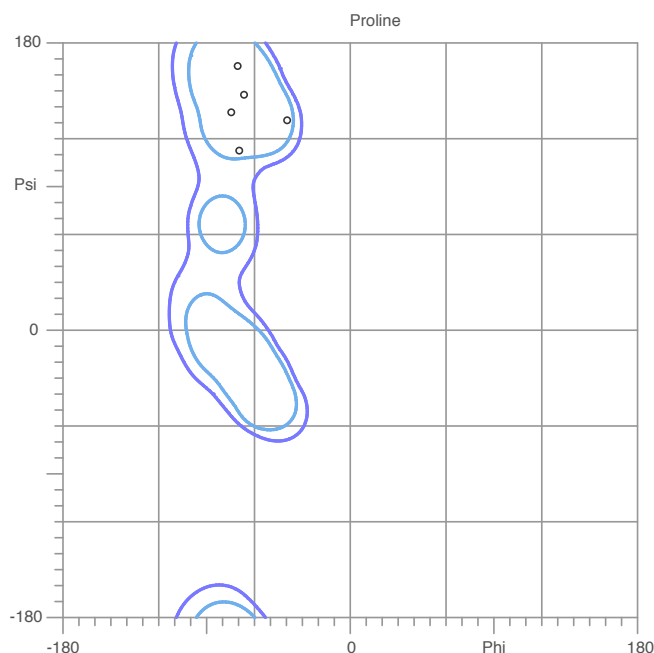
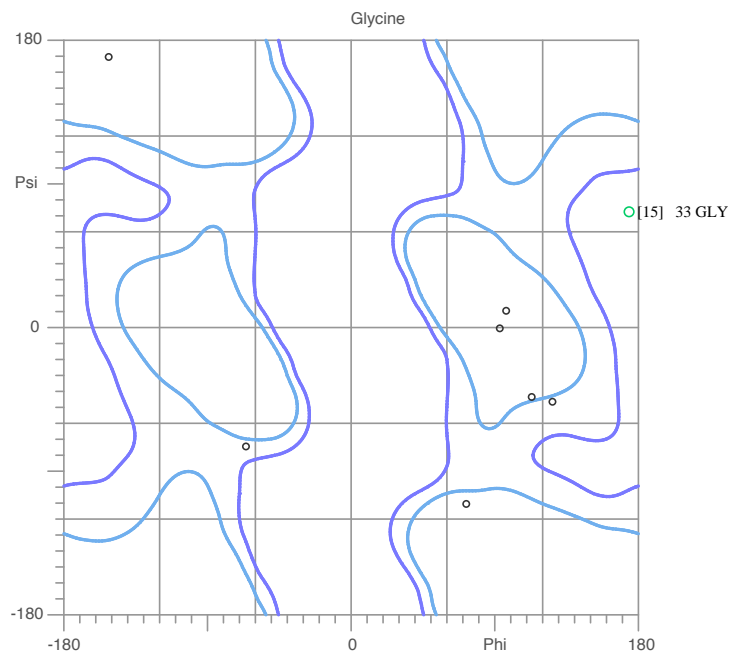
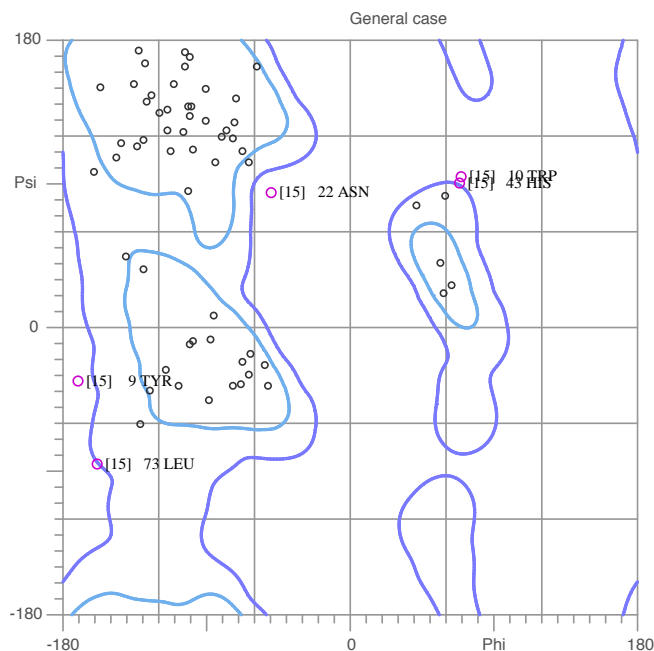
82.9% (68/82) of all residues were in favored (98%) regions.
95.1% (78/82) of all residues were in allowed (>99.8%) regions.

There were 4 outliers (phi, psi):

- [14] 3 GLY (-178.2, 37.1)
- [14] 6 LEU (68.1, 128.6)
- [14] 29 PRO (-89.1, -156.6)
- [14] 71 GLY (-164.5, -27.3)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 15



82.9% (68/82) of all residues were in favored (98%) regions.
92.7% (76/82) of all residues were in allowed (>99.8%) regions.

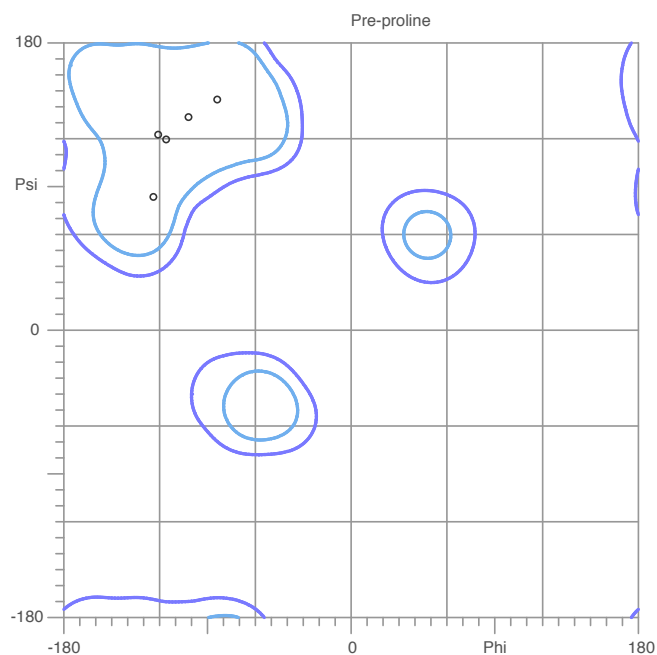
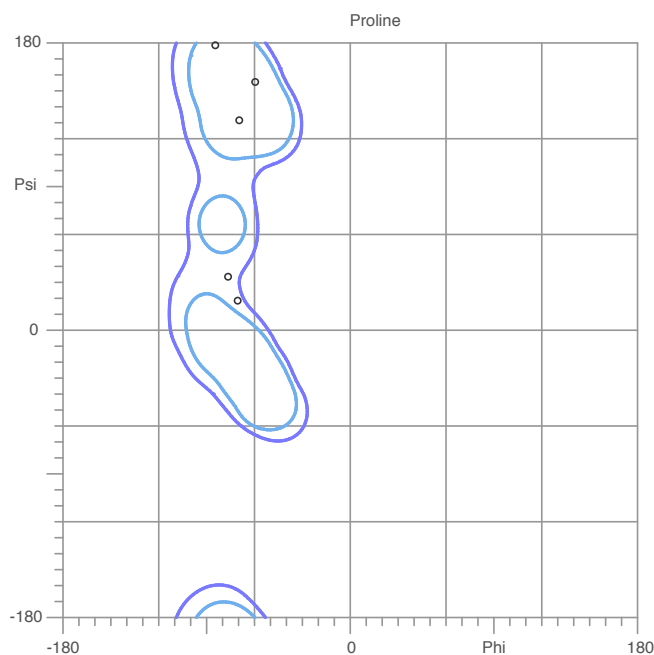
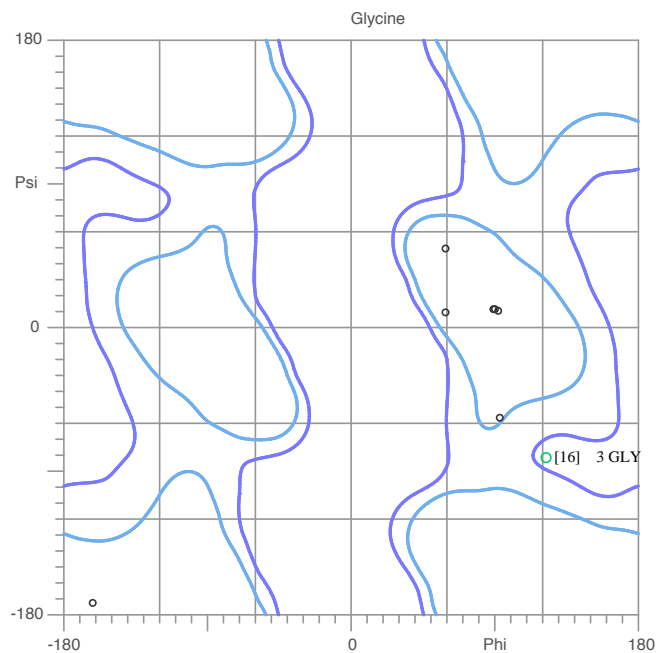
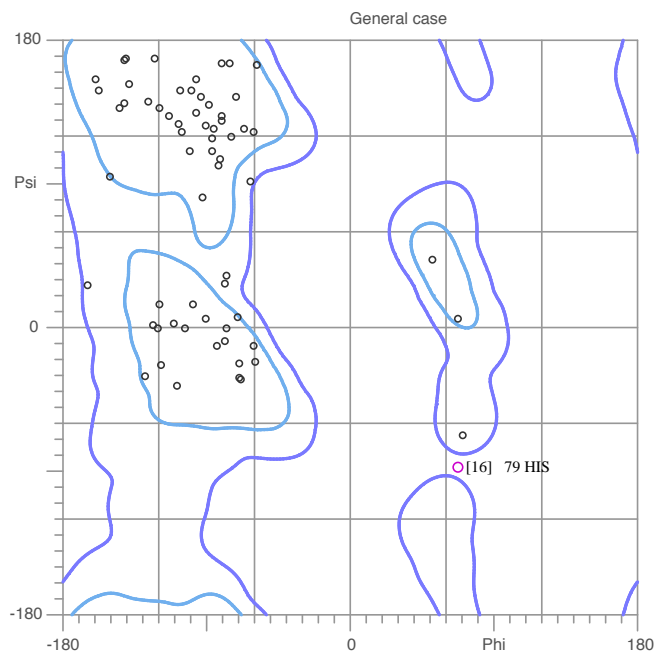
There were 6 outliers (phi, psi):

[15] 9 TYR (-171.9, -33.4)

[15] 10 TRP (69.9, 95.9)
[15] 22 ASN (-50.7, 85.9)
[15] 33 GLY (175.0, 74.0)
[15] 43 HIS (68.1, 92.0)
[15] 73 LEU (-159.8, -85.4)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 16



87.8% (72/82) of all residues were in favored (98%) regions.
97.6% (80/82) of all residues were in allowed (>99.8%) regions.

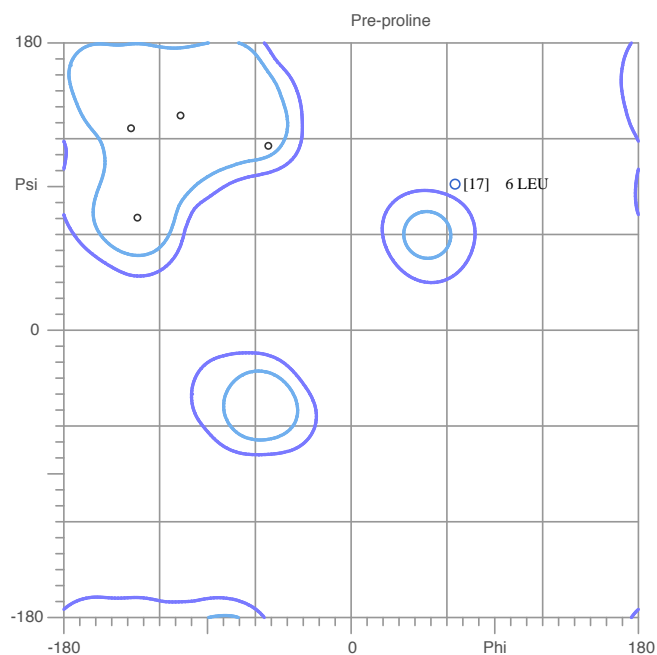
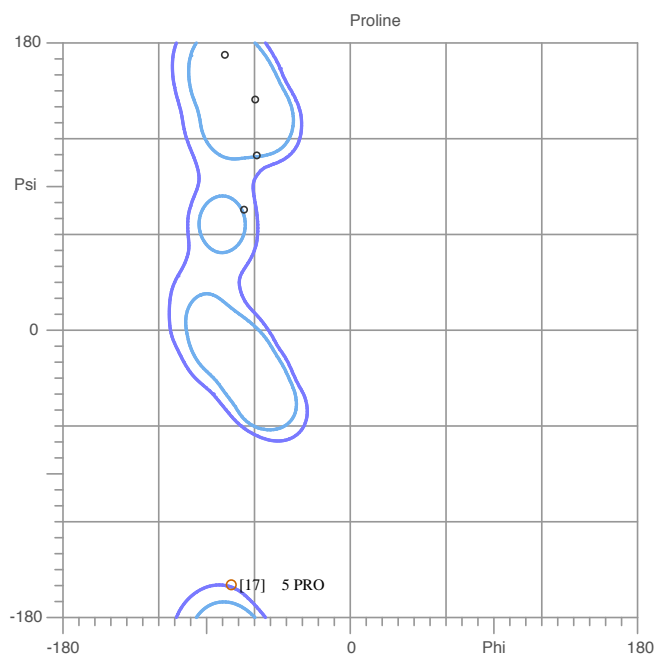
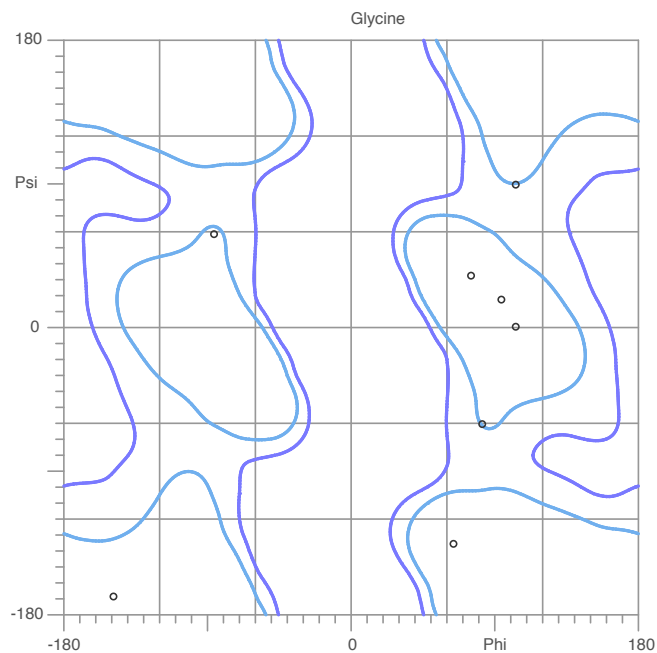
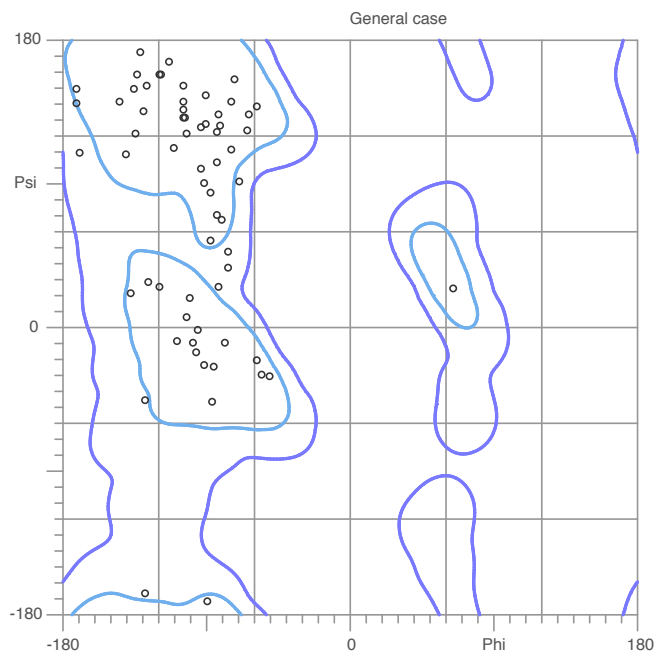
There were 2 outliers (phi, psi):

[16] 3 GLY (123.0, -81.7)

[16] 79 HIS (67.9, -87.8)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 17



86.6% (71/82) of all residues were in favored (98%) regions.
97.6% (80/82) of all residues were in allowed (>99.8%) regions.

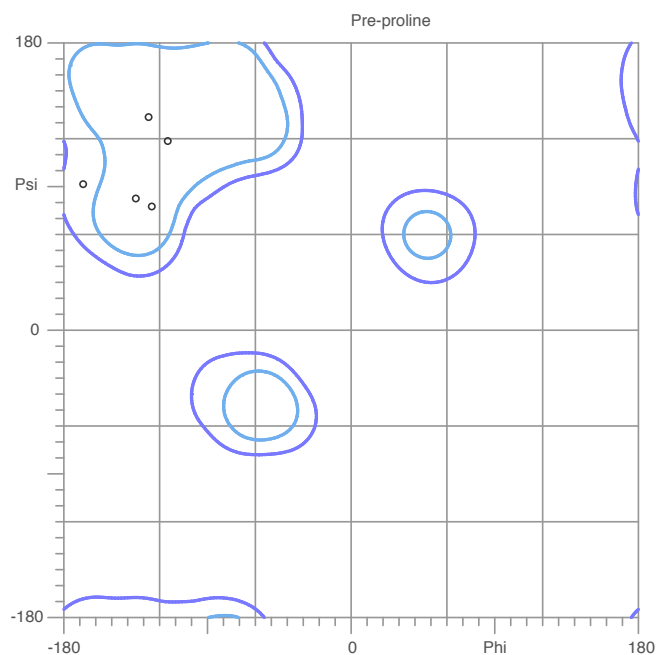
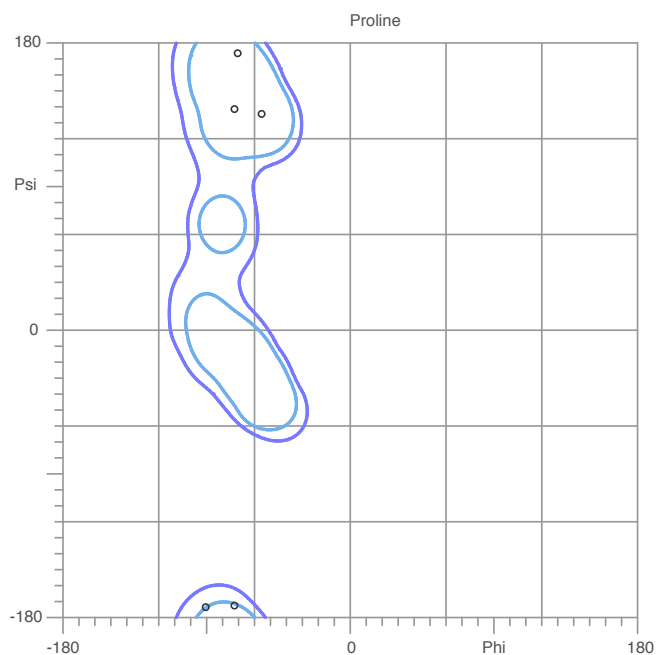
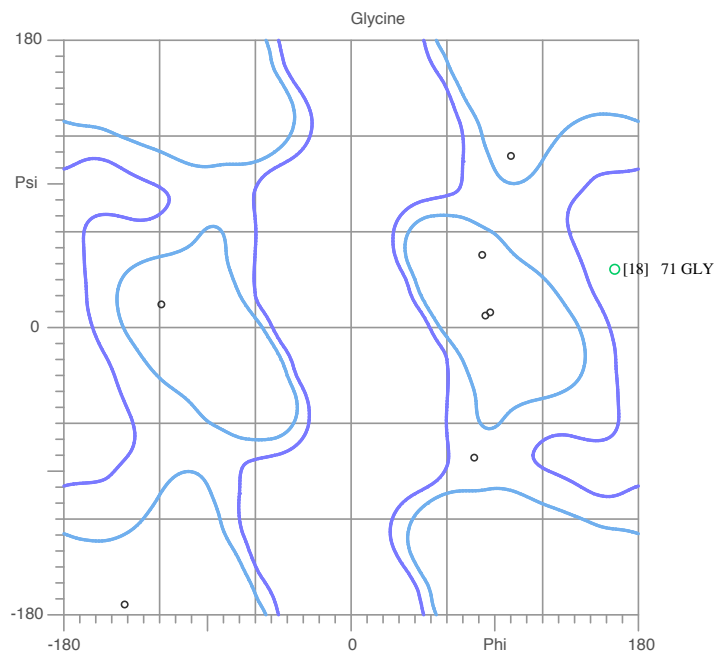
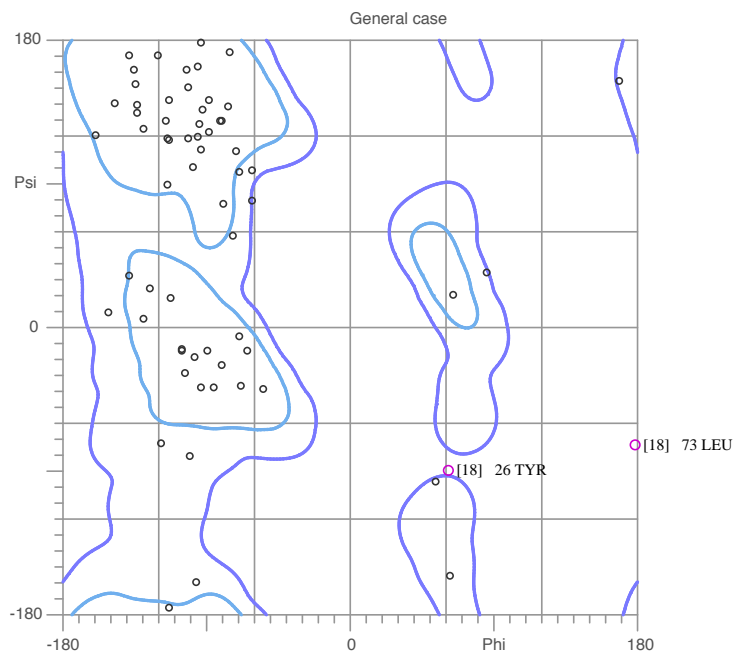
There were 2 outliers (phi, psi):

[17] 5 PRO (-75.3, -159.4)

[17] 6 LEU (65.8, 92.3)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 18



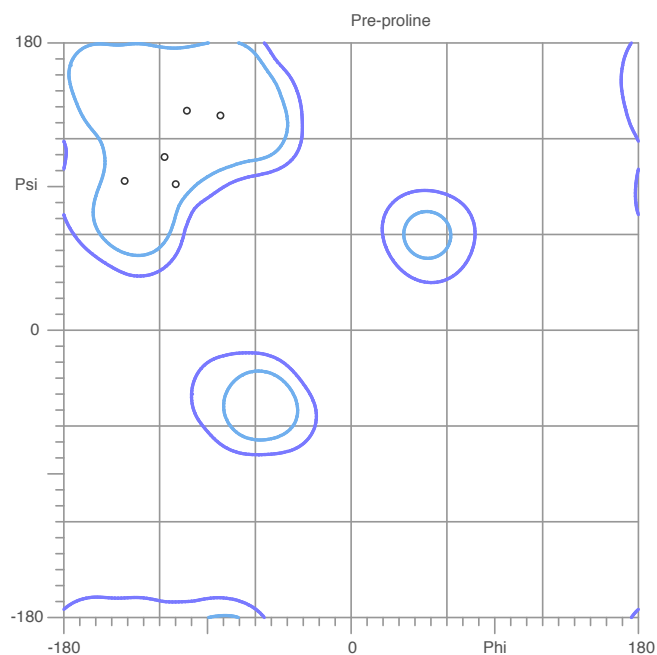
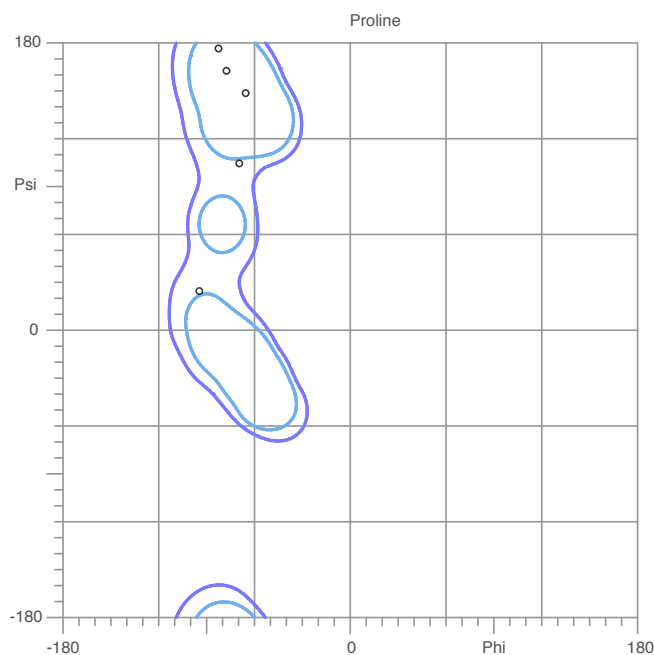
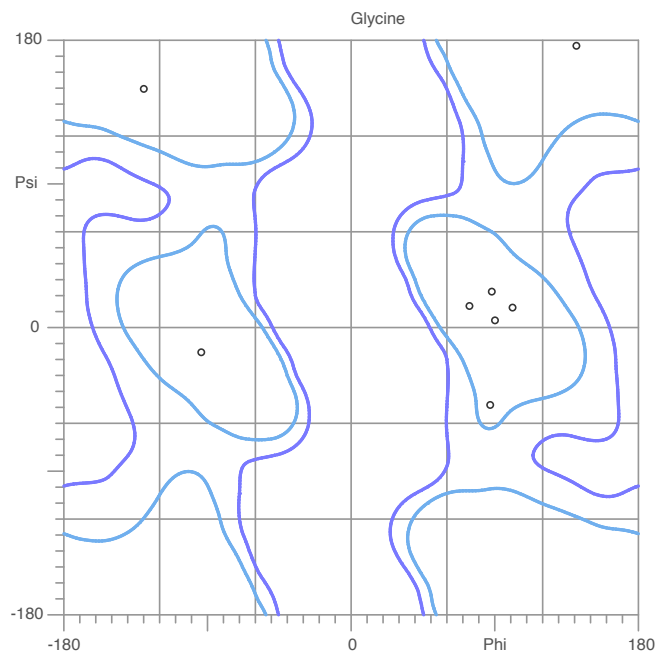
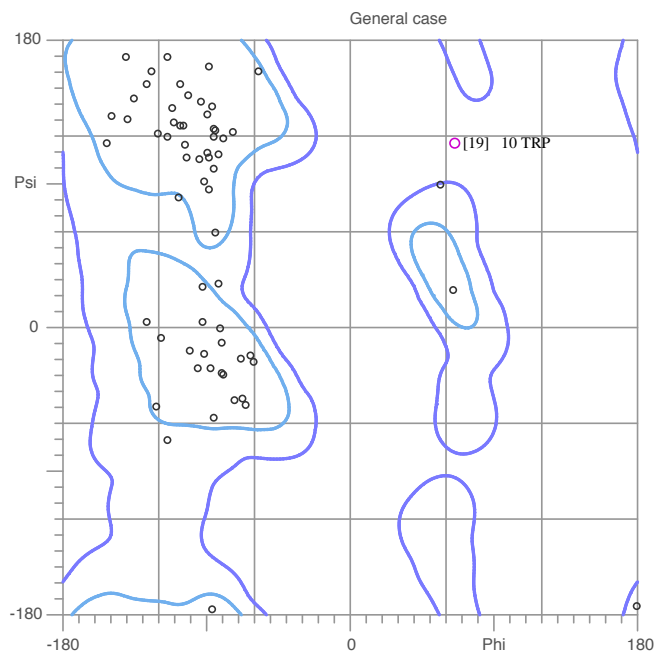
76.8% (63/82) of all residues were in favored (98%) regions.
96.3% (79/82) of all residues were in allowed (>99.8%) regions.

There were 3 outliers (phi, psi):

- [18] 26 TYR (61.3, -89.1)
- [18] 71 GLY (165.3, 37.6)
- [18] 73 LEU (178.0, -73.9)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 19



90.2% (74/82) of all residues were in favored (98%) regions.
98.8% (81/82) of all residues were in allowed (>99.8%) regions.

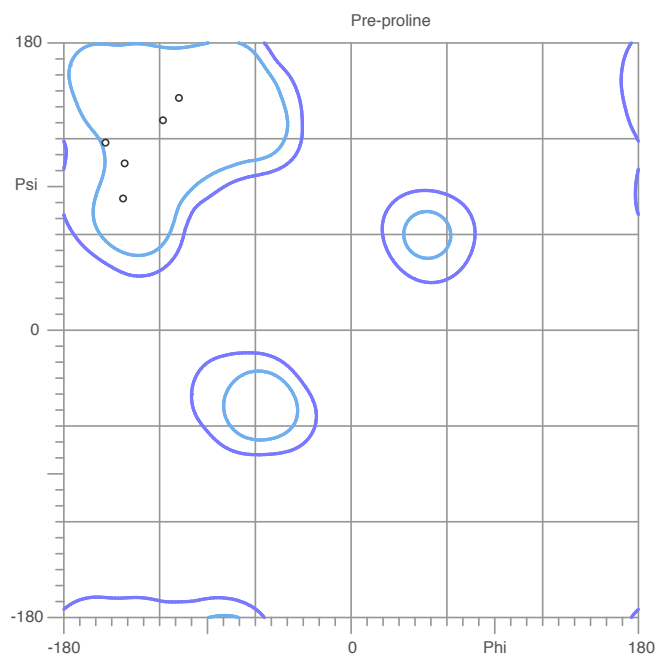
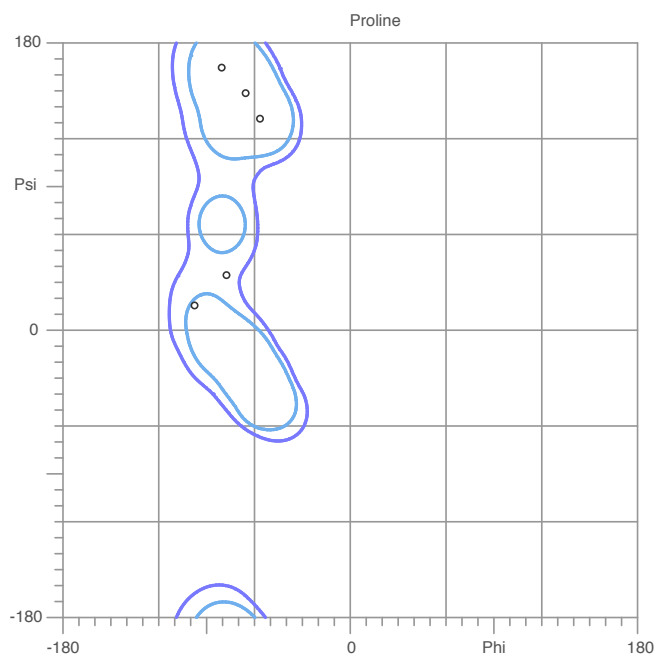
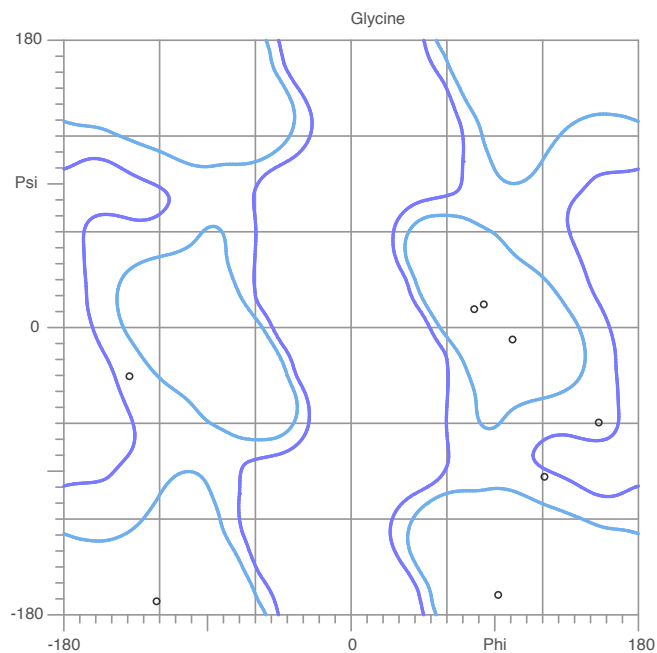
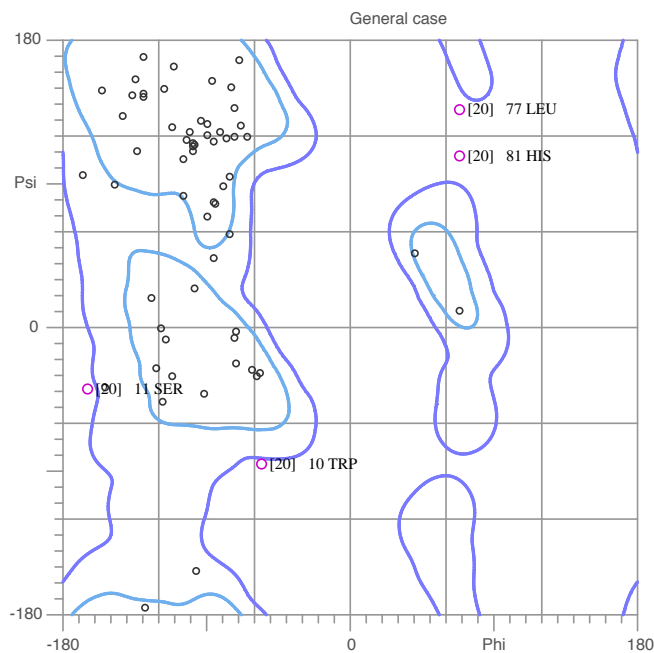
There were 1 outliers (phi, psi):
[19] 10 TRP (65.9, 116.5)

<http://kinemage.biochem.duke.edu>

Lovell, Davis, et al. Proteins 50:437 (2003)

MolProbity Ramachandran analysis

2HEQ_NMR.pdb, model 20



84.1% (69/82) of all residues were in favored (98%) regions.
95.1% (78/82) of all residues were in allowed (>99.8%) regions.

There were 4 outliers (phi, psi):

- [20] 10 TRP (-56.8, -85.6)
- [20] 11 SER (-165.3, -38.4)
- [20] 77 LEU (68.2, 137.9)
- [20] 81 HIS (68.2, 108.3)