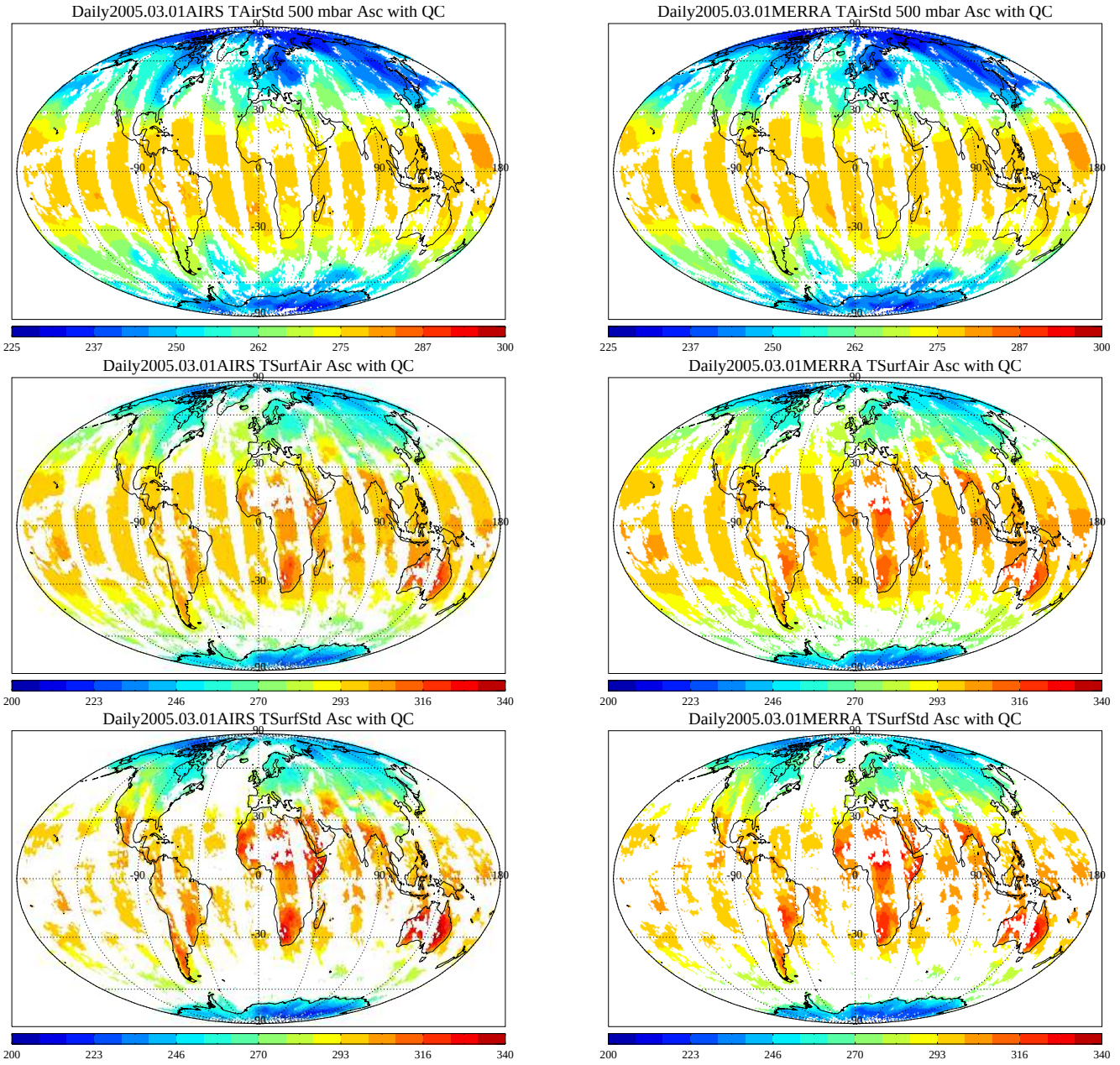
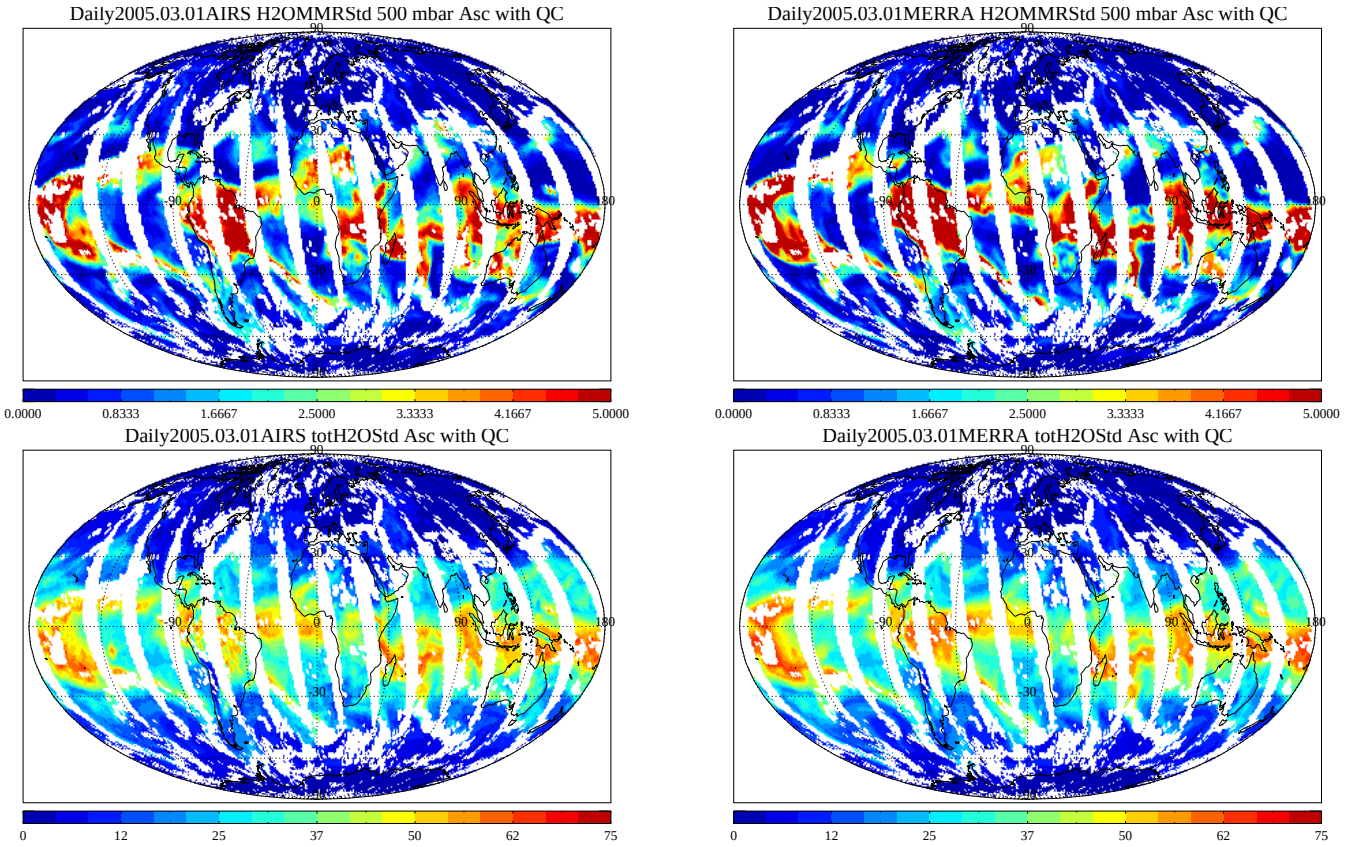
Comparisons between AIRS and MERRA

Thomas Hearty

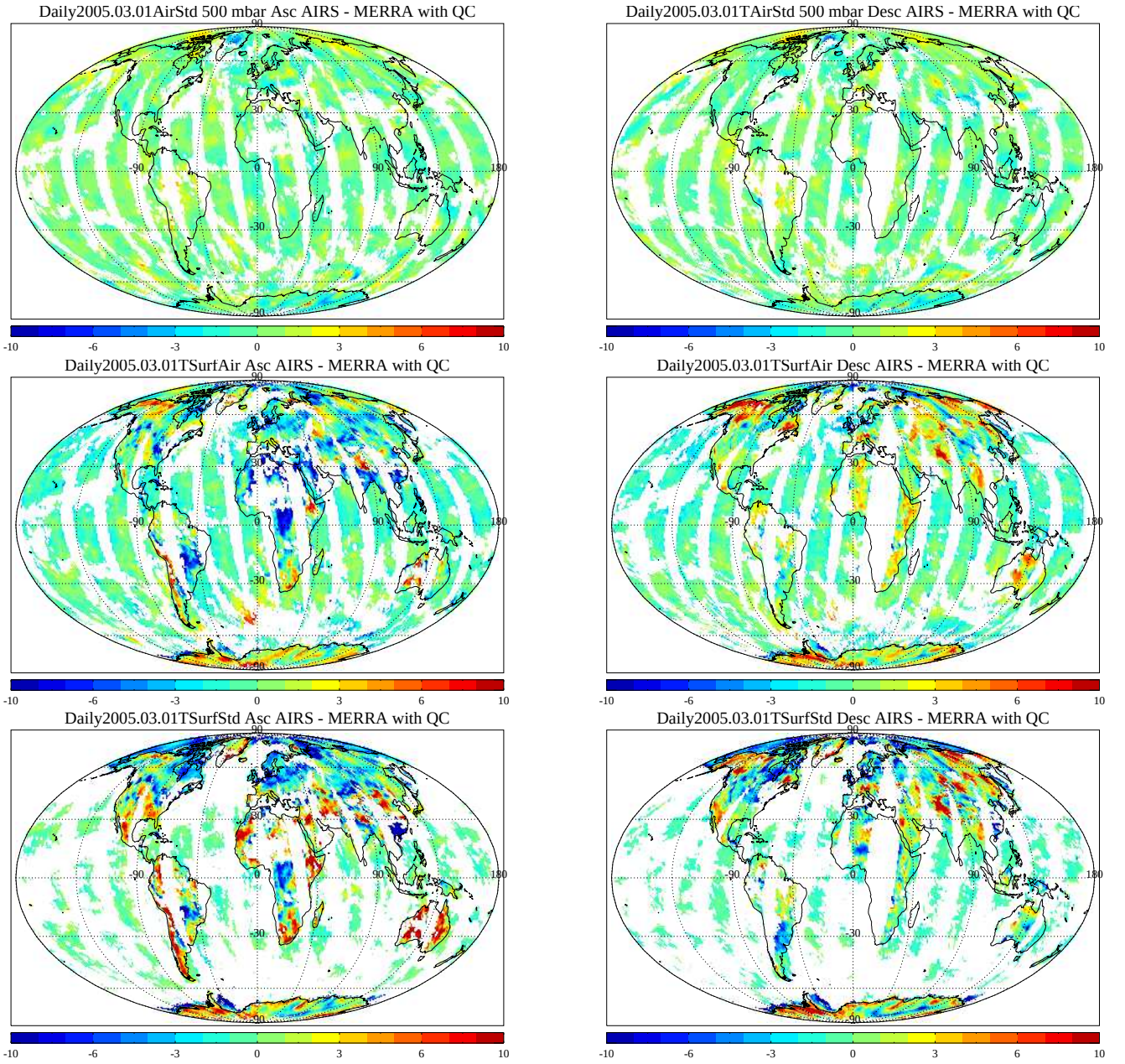
AIRS (left) and MERRA (right) T



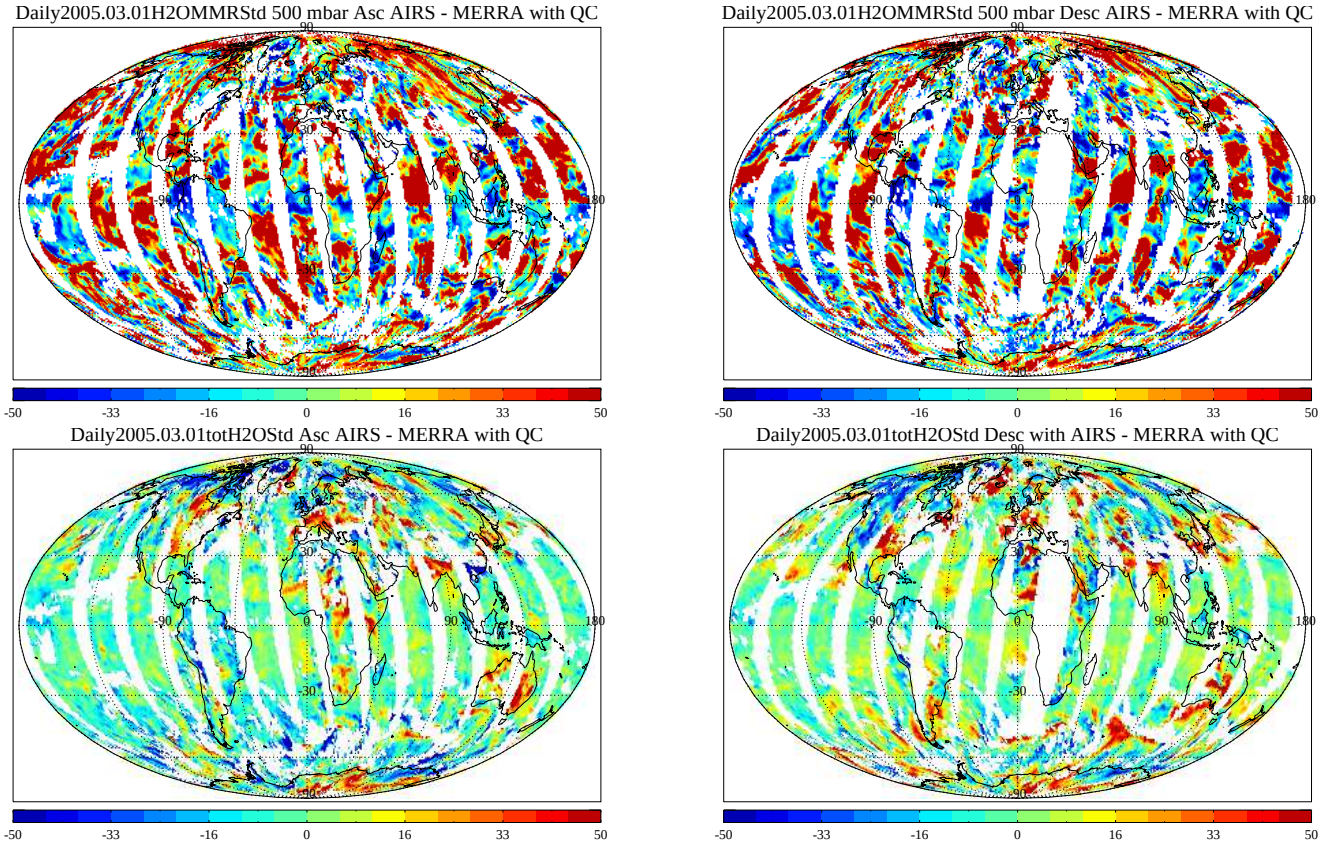
AIRS (left) and MERRA (right) q



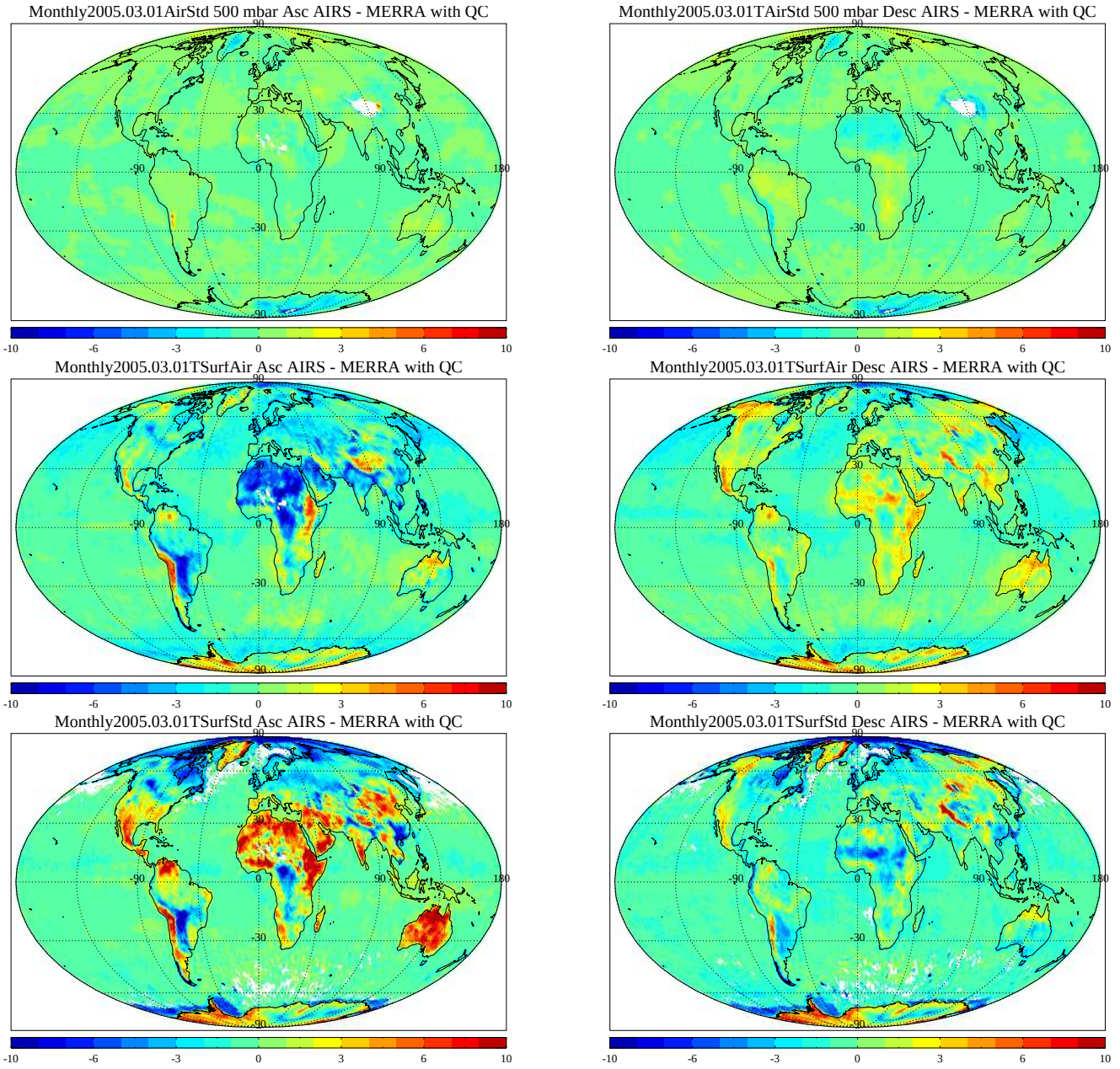
AIRS - MERRA T Daily



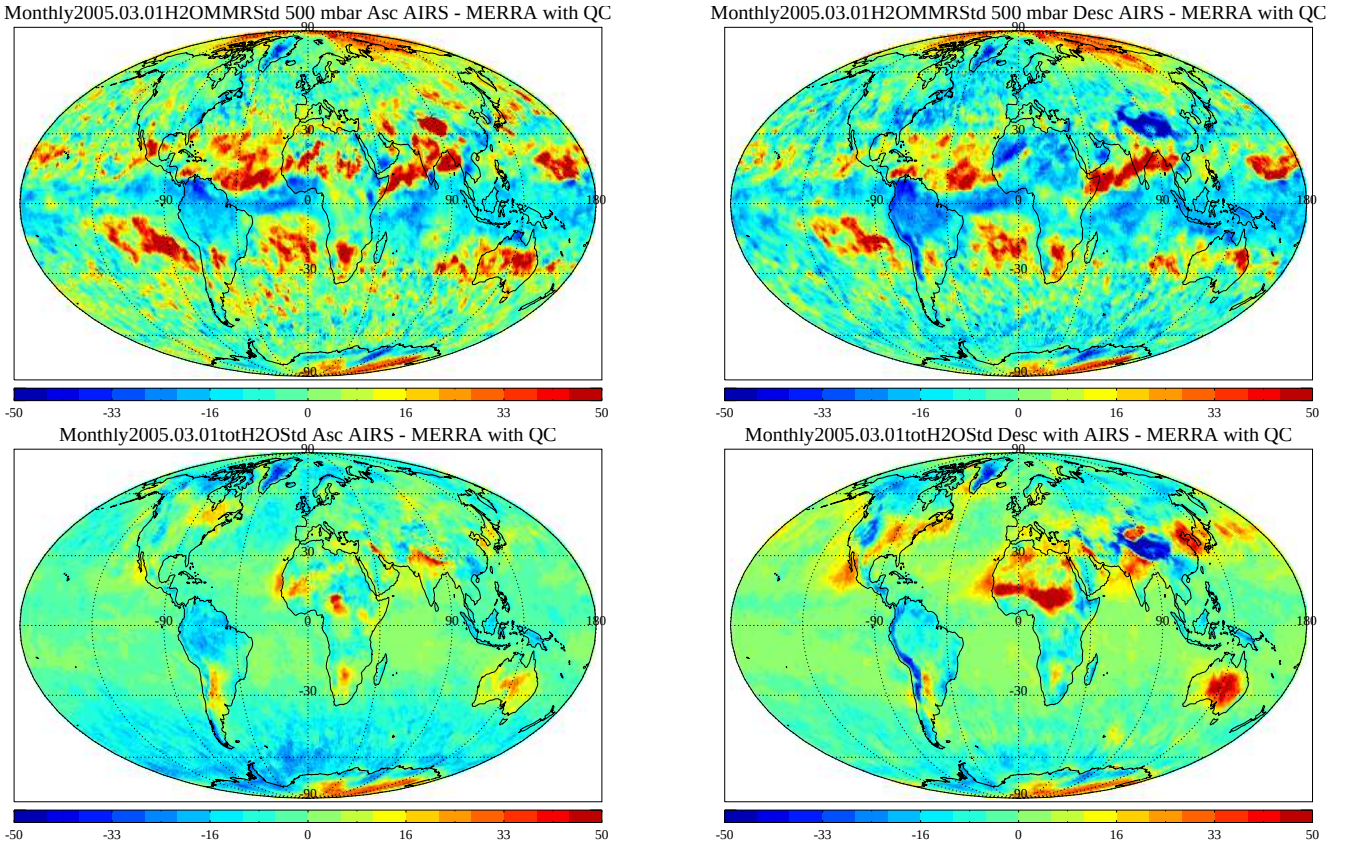
AIRS - MERRA q Daily



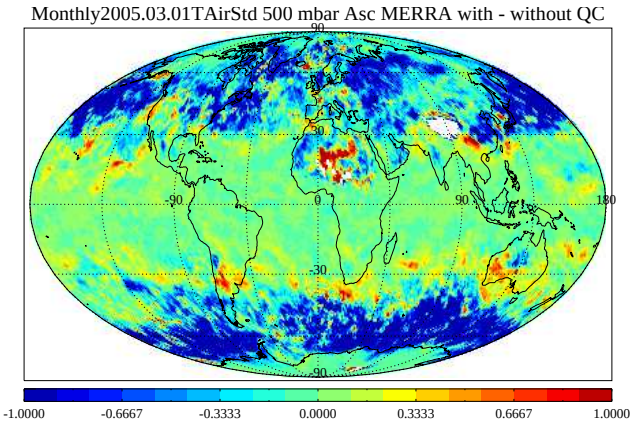
AIRS - MERRA T Monthly

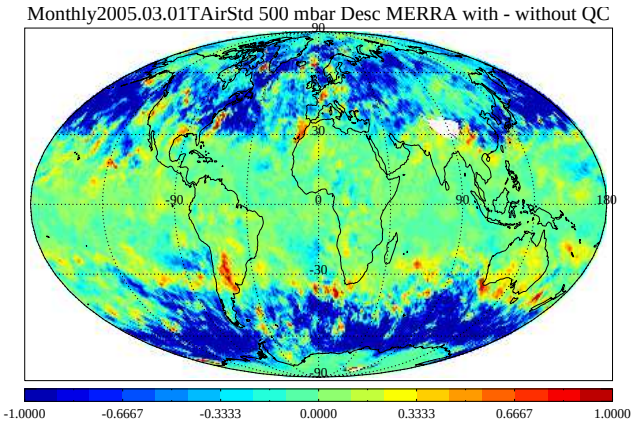


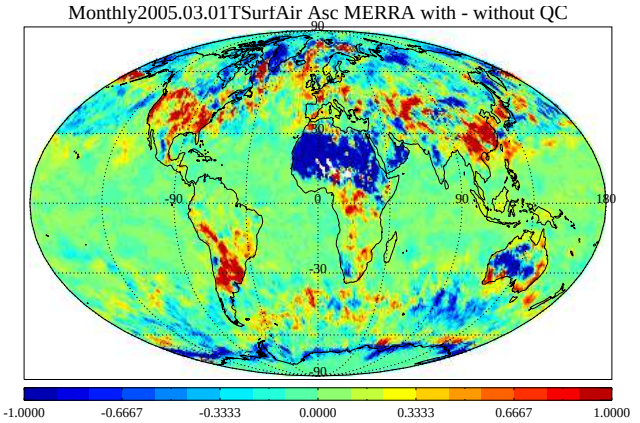
AIRS - MERRA q Monthly

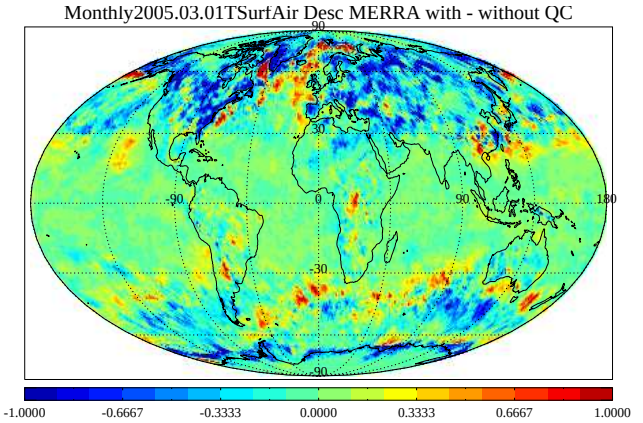


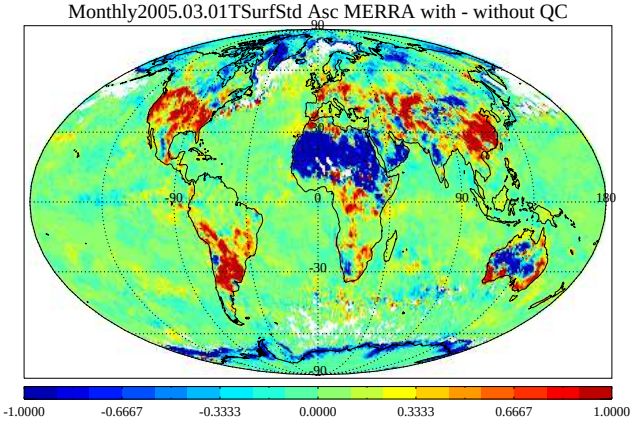
MERRA with QC - no QC T

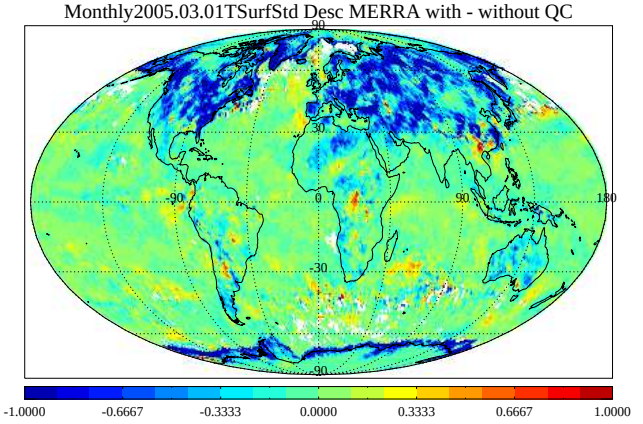




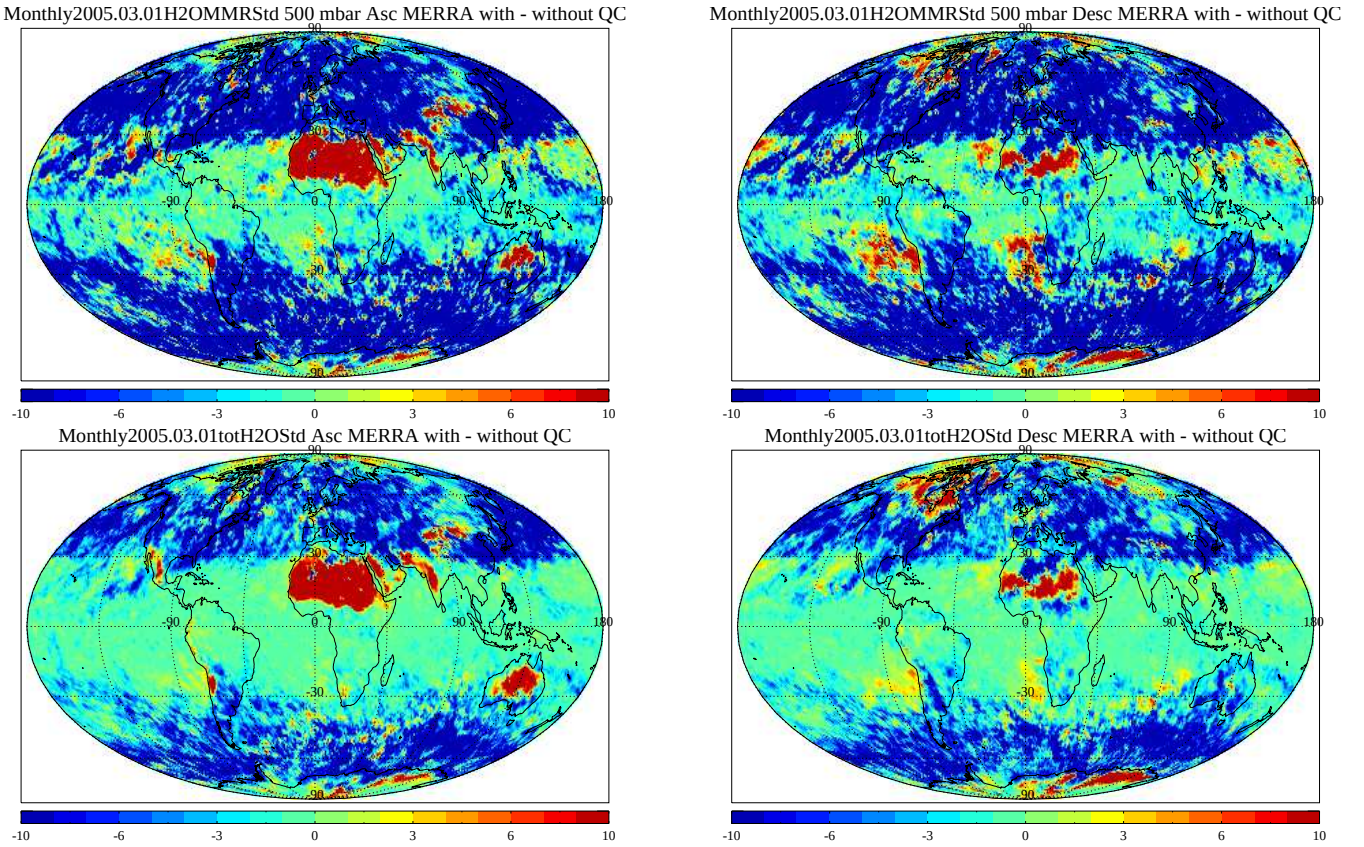




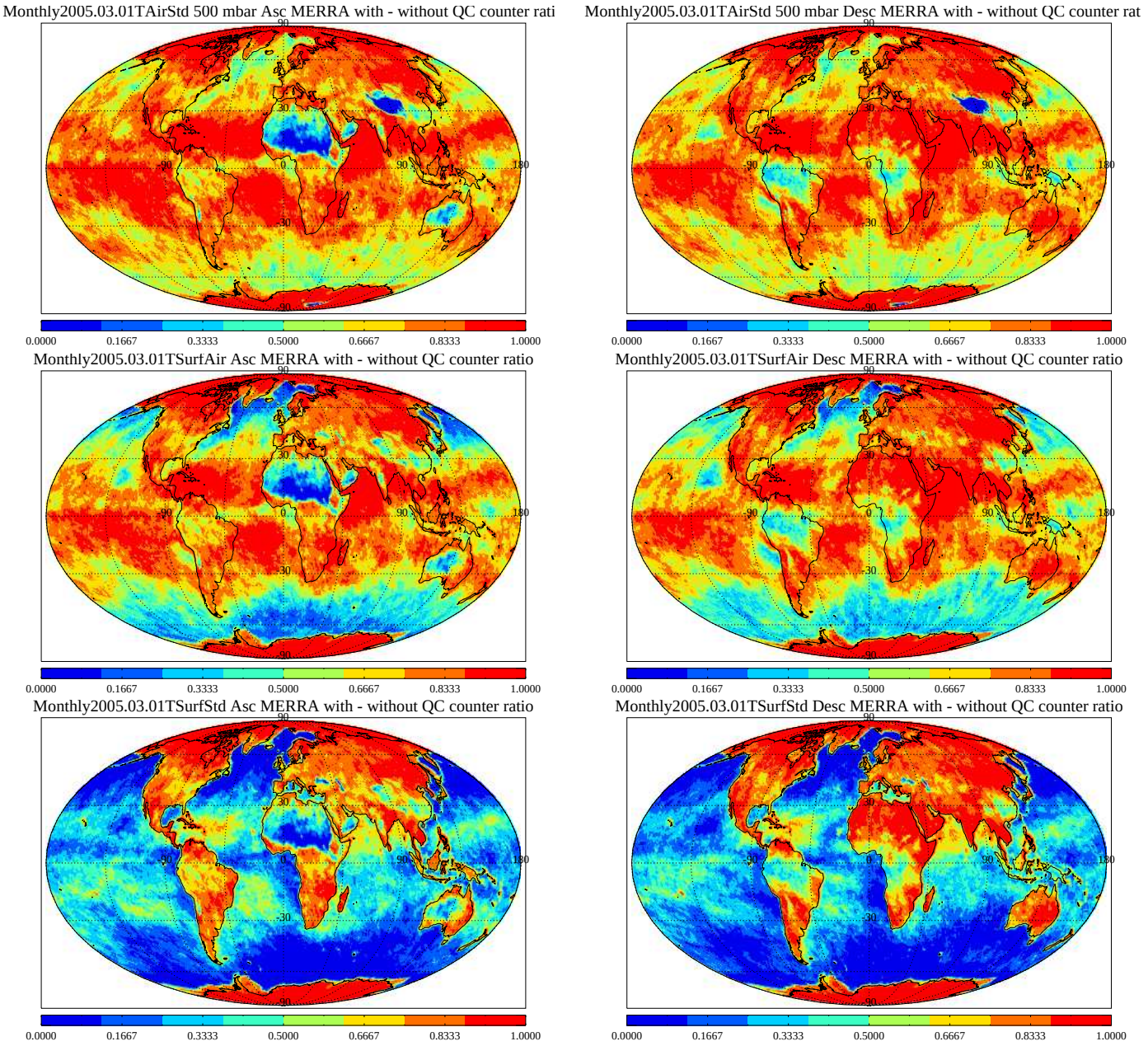




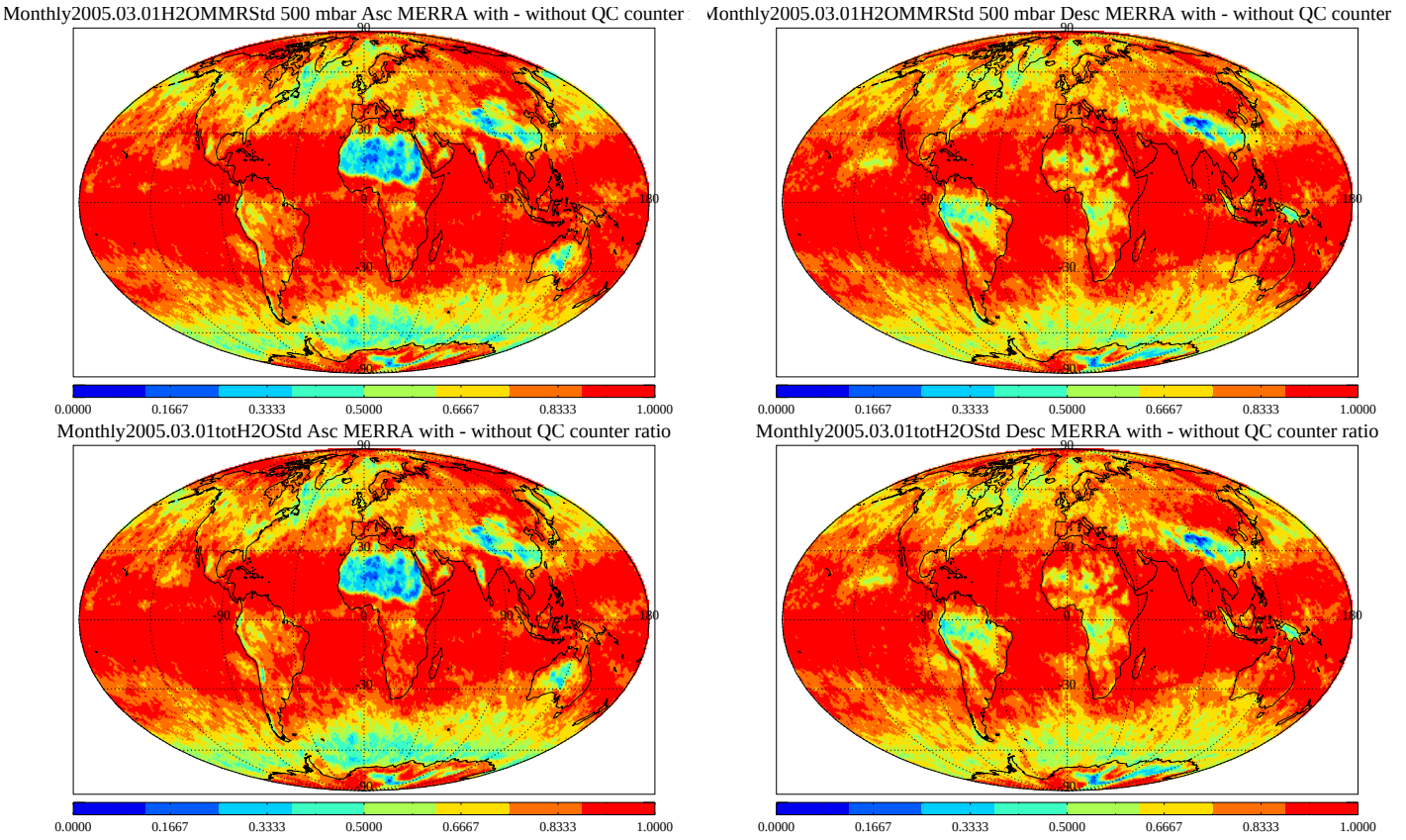
MERRA with QC - no QC q



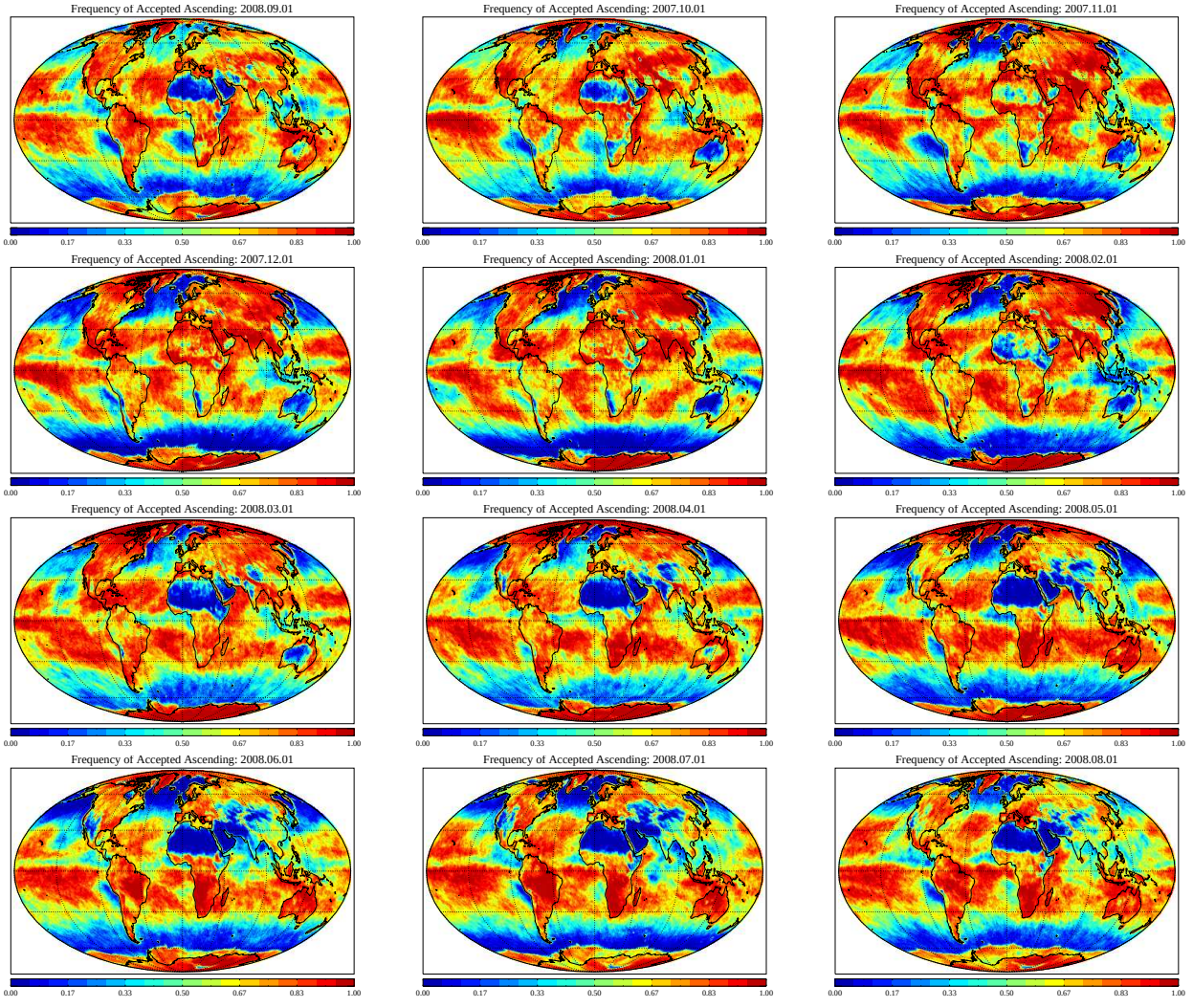
with QC / no QC T



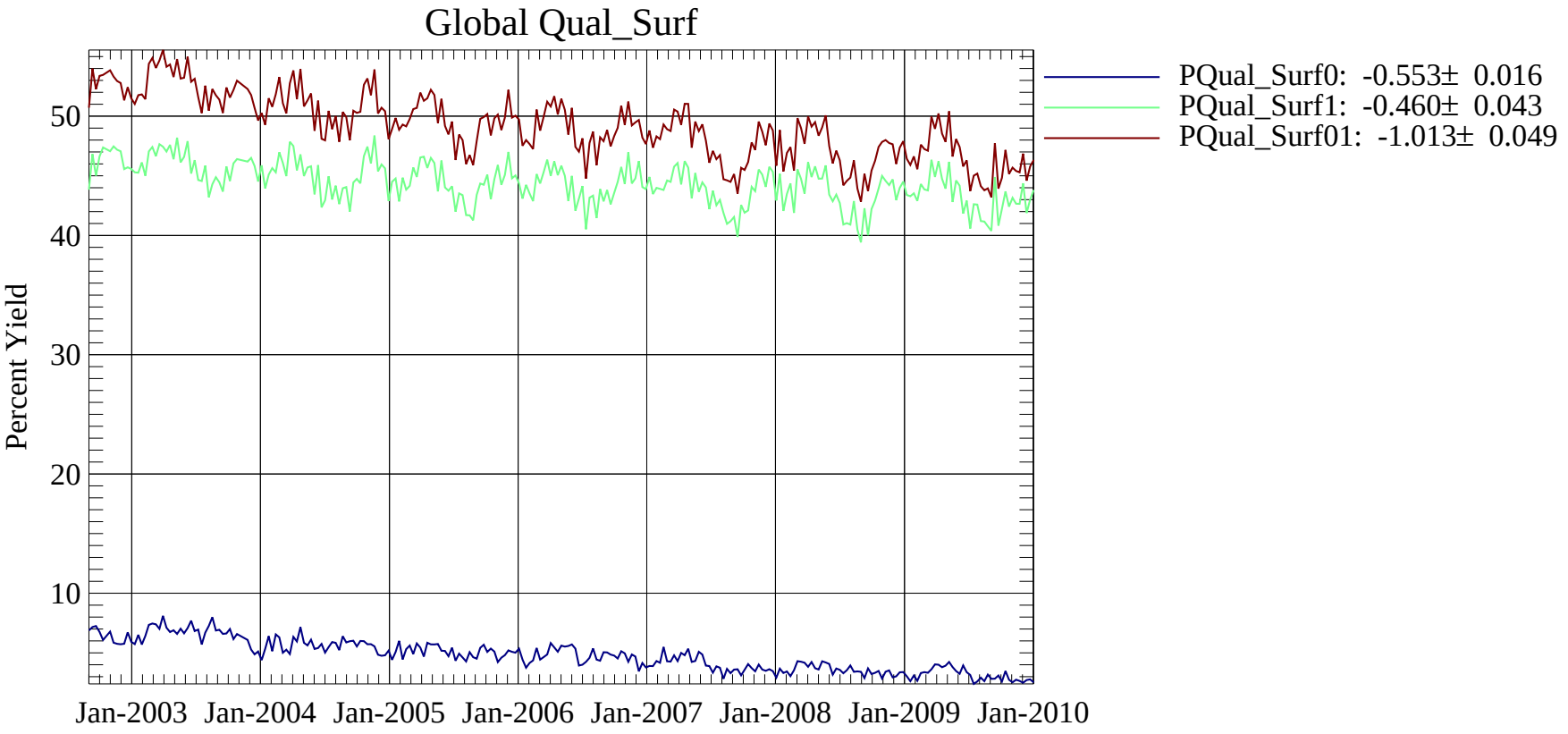
with QC / no QC q



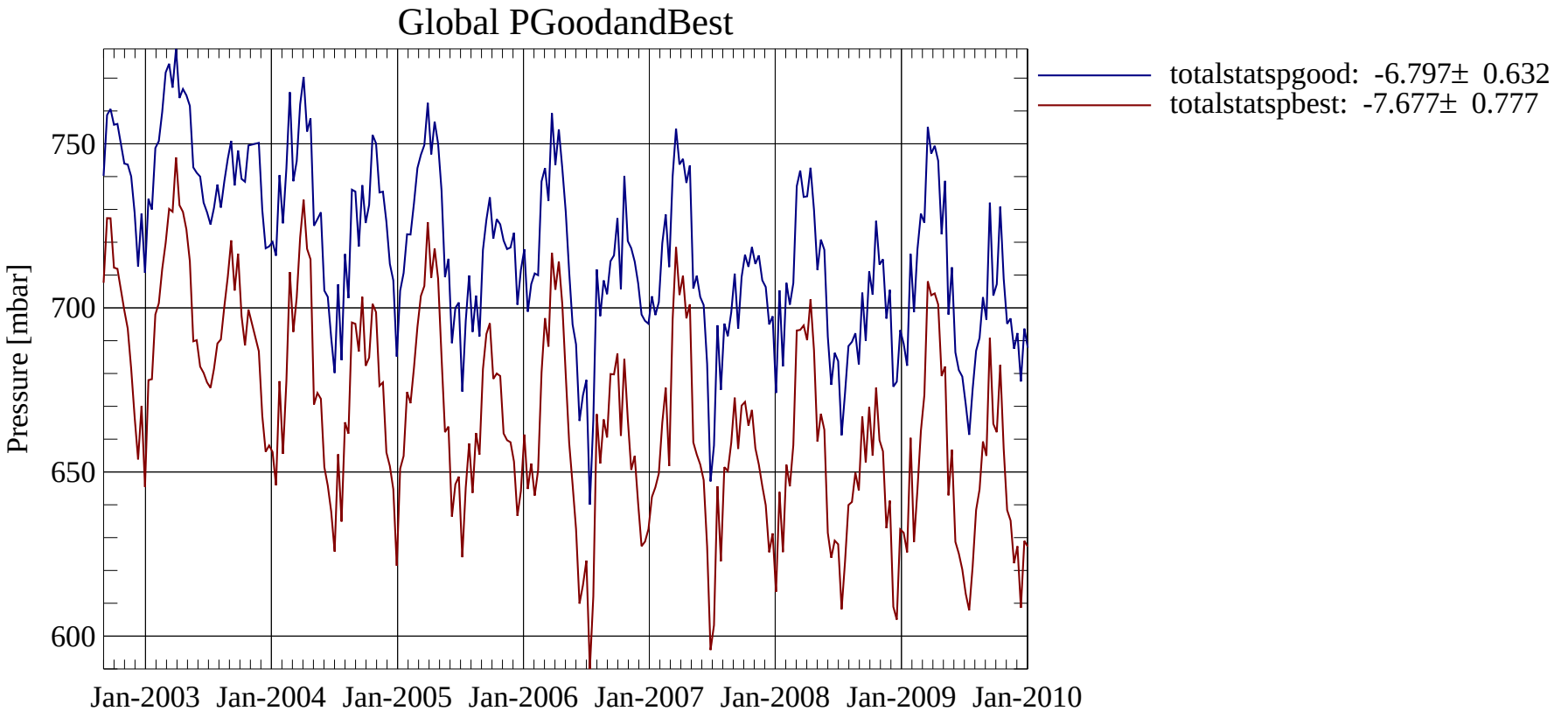
Surface Temp Yield



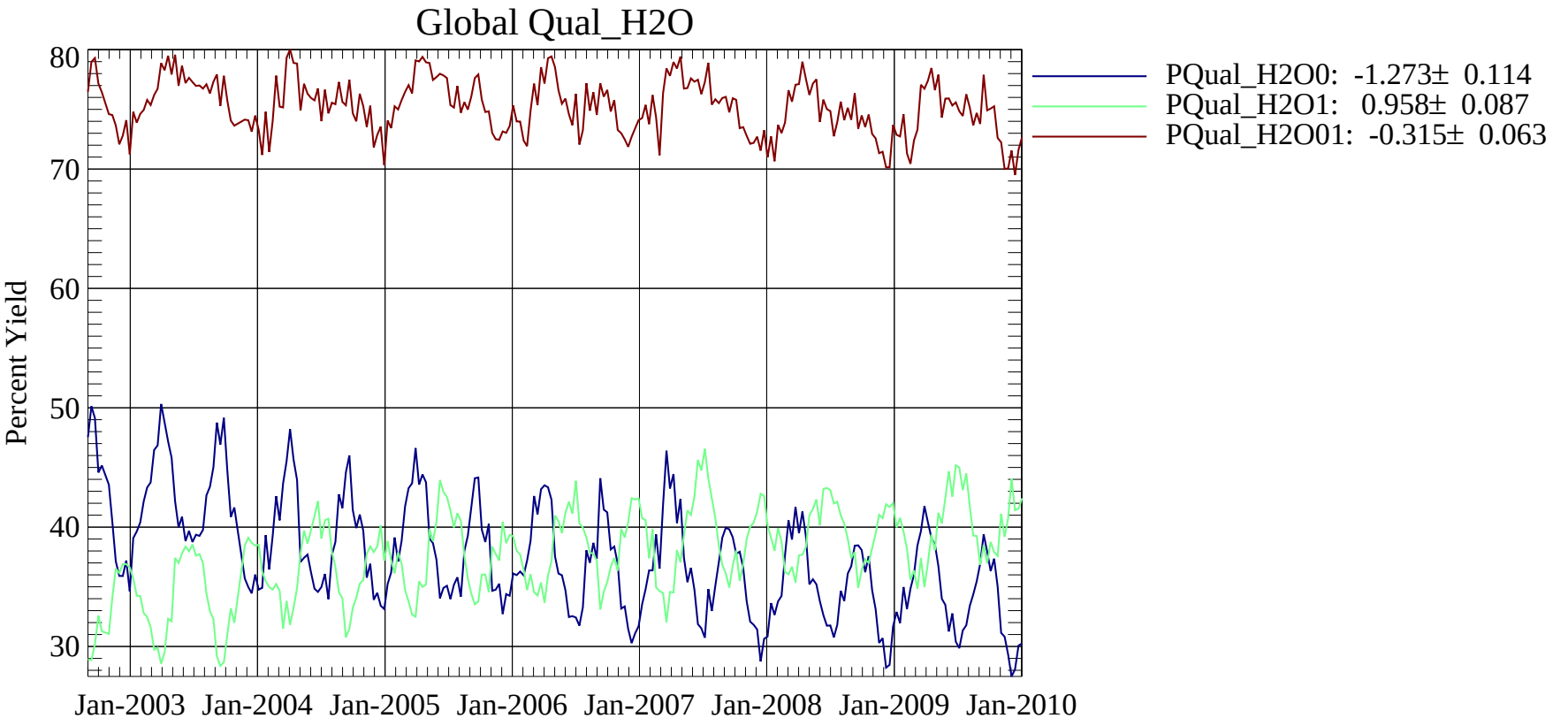
Qual_Surf


Global Qual_Surf
Percent Yield
50
40
30
20
10
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
PQual_Surf0: -0.553± 0.016
PQual_Surf1: -0.460± 0.043
PQual_Surf01: -1.013± 0.049

PGood and PBest



Qual_H2O


Global Qual_H2O
Percent Yield
80
70
60
50
40
30
Jan-2003
Jan-2004
Jan-2005
Jan-2006
Jan-2007
Jan-2008
Jan-2009
Jan-2010
PQual_H2O0: -1.273± 0.114
PQual_H2O1: 0.958± 0.087
PQual_H2O01: -0.315± 0.063

Conclusions

- There are sampling biases in the Level 3.
- Biases vary region to region.
- There may be seasonal effects.