National Aeronautics and
Space Administration

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

Revising the global precipitation climatology in light of the most advanced observations from space

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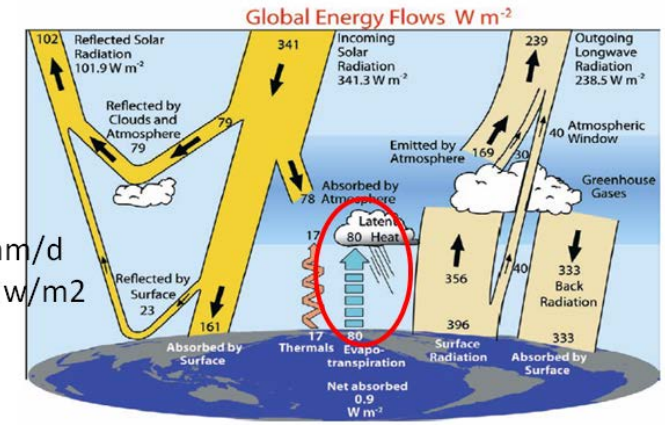
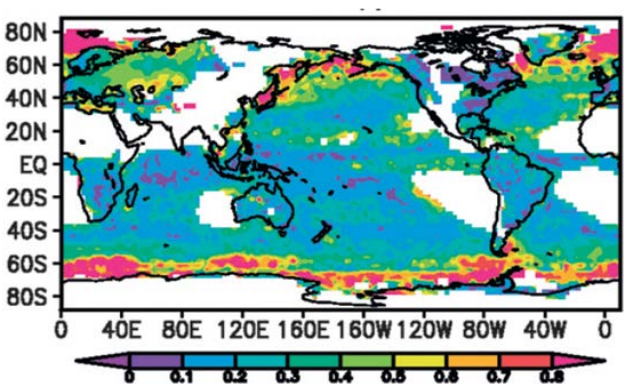
Universities Space Research Association
Columbia, MD, March 9-10, 2016

Introduction : The challenge

1mm/d
29 w/m2

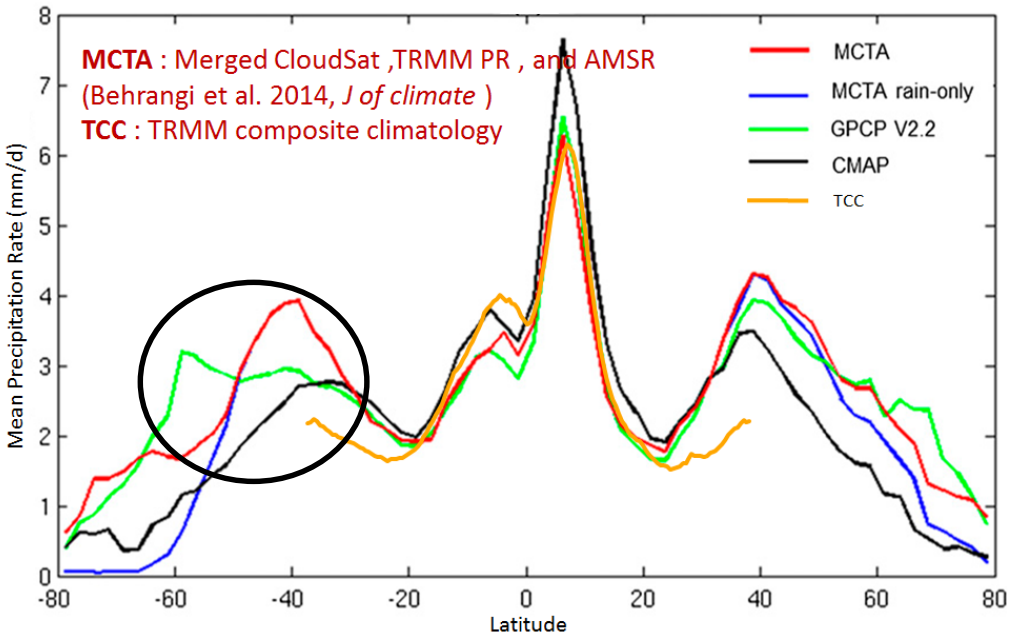


Estimated relative bias error

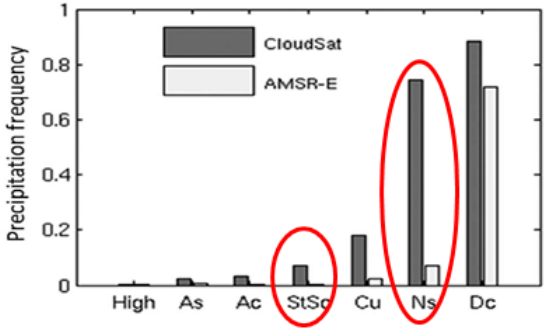


Adler et al. (2012).

Ocean



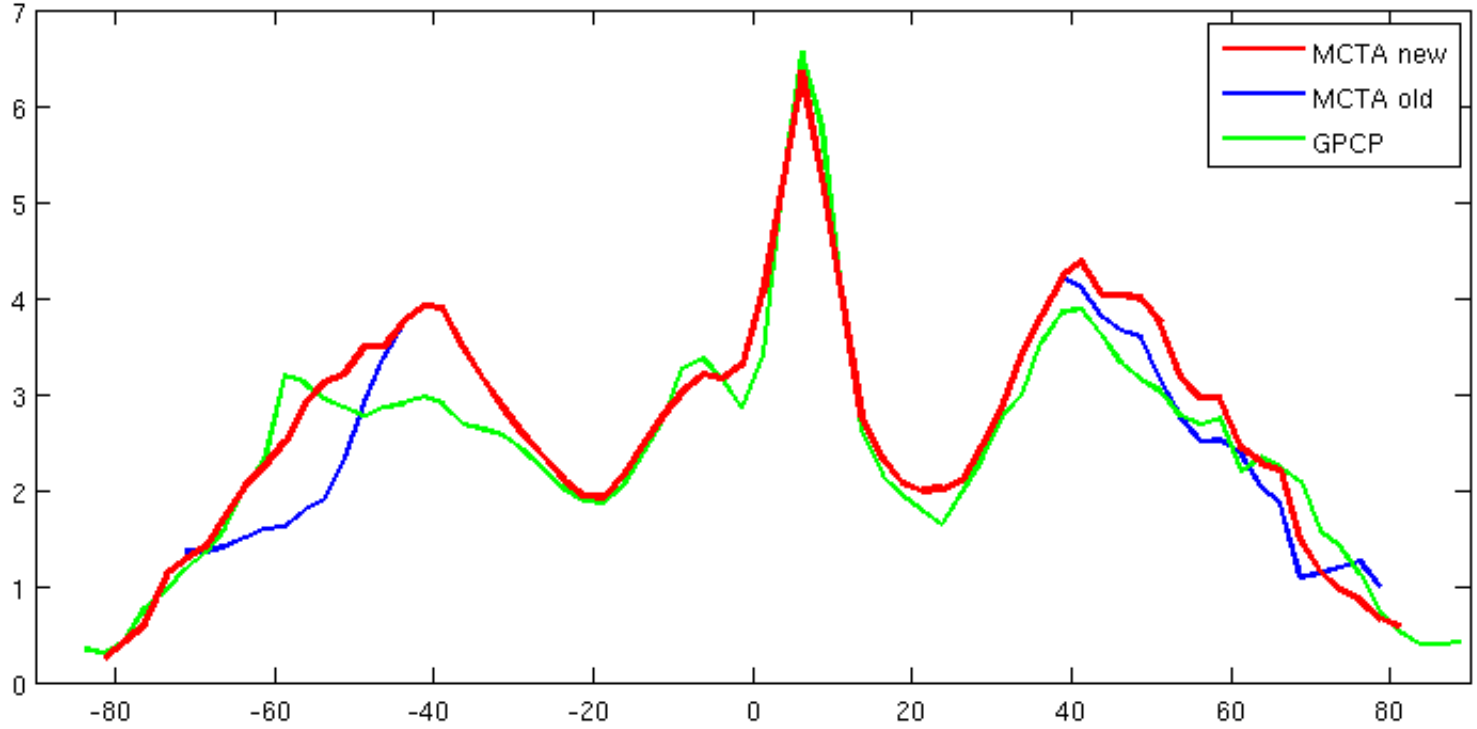
Comparison of precipitation detectability as a function of cloud type



Land

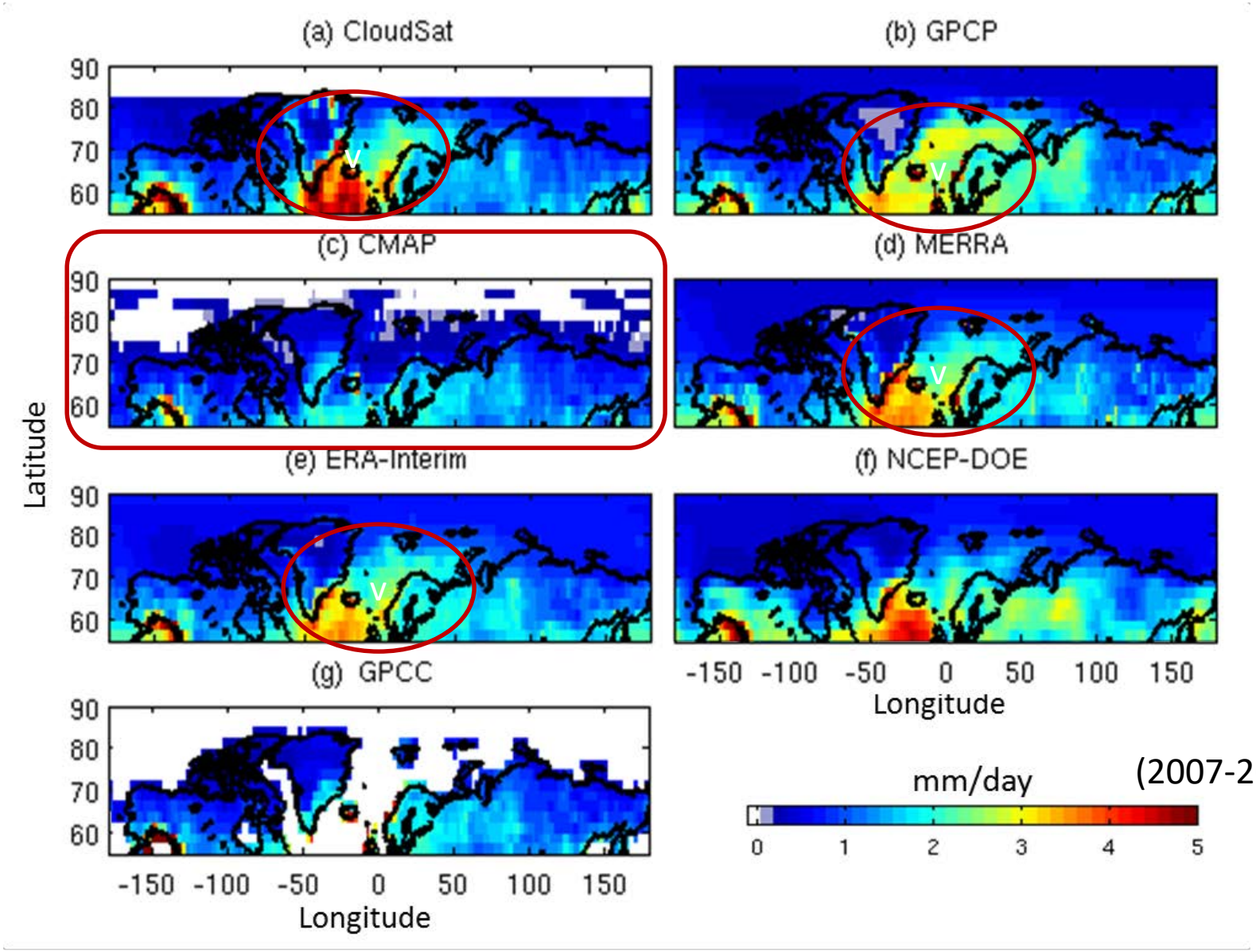
Identifying a missing part in CloudSat total precipitation

Including mixed phase precipitation to CloudSat estimate



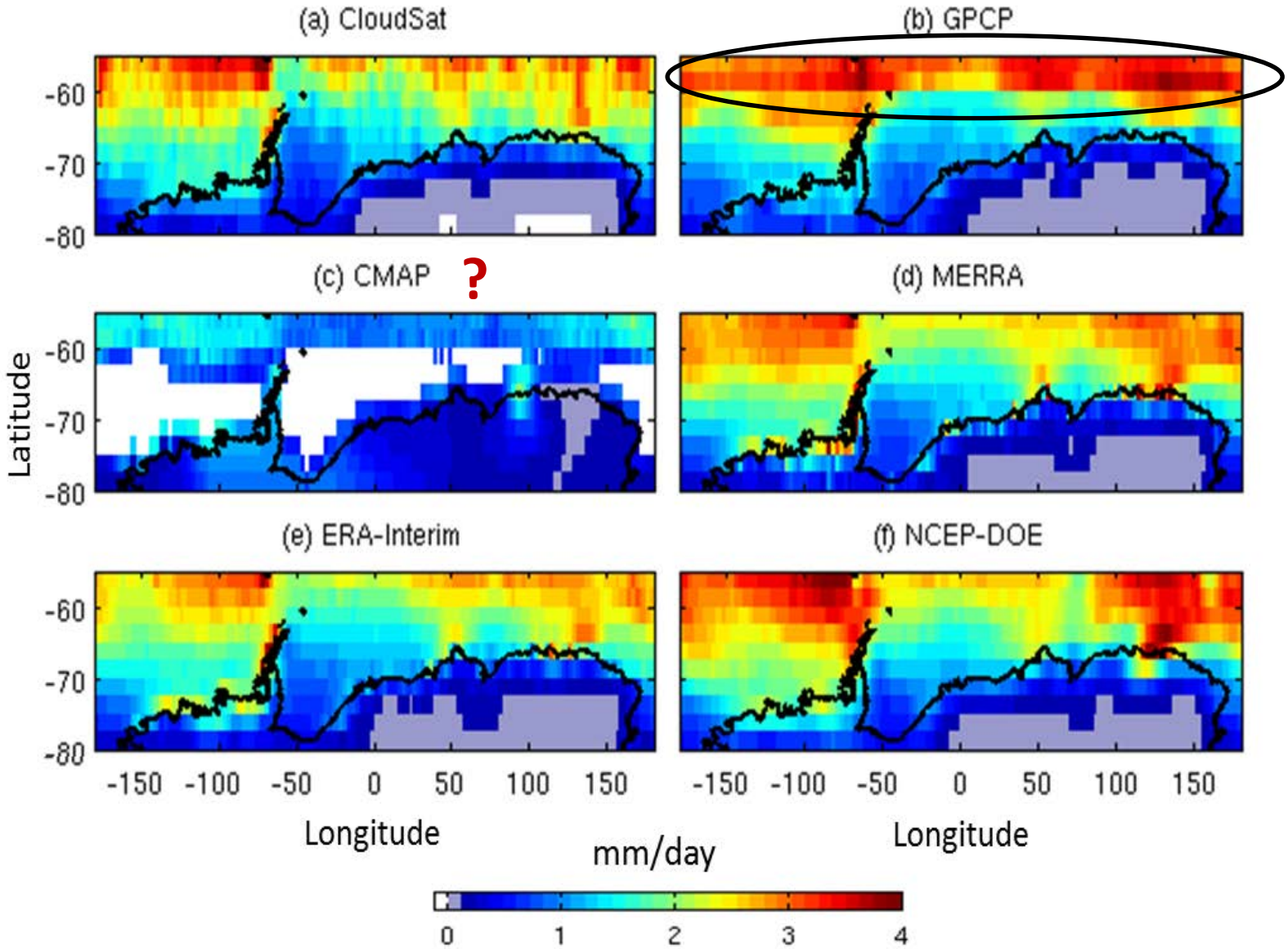
2007-2010

Status of high latitude precipitation in various products



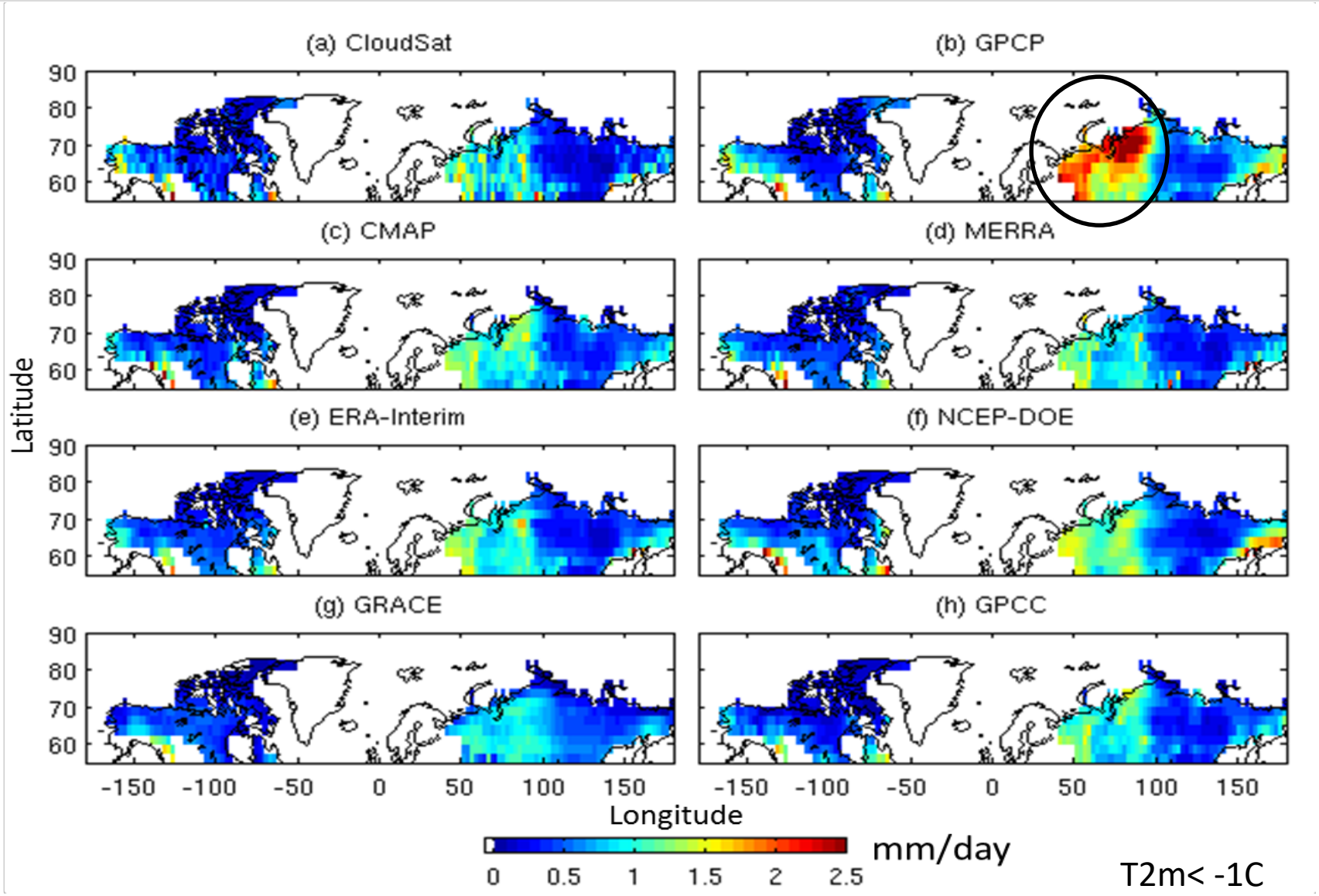
NH

Status of high latitude precipitation in various products

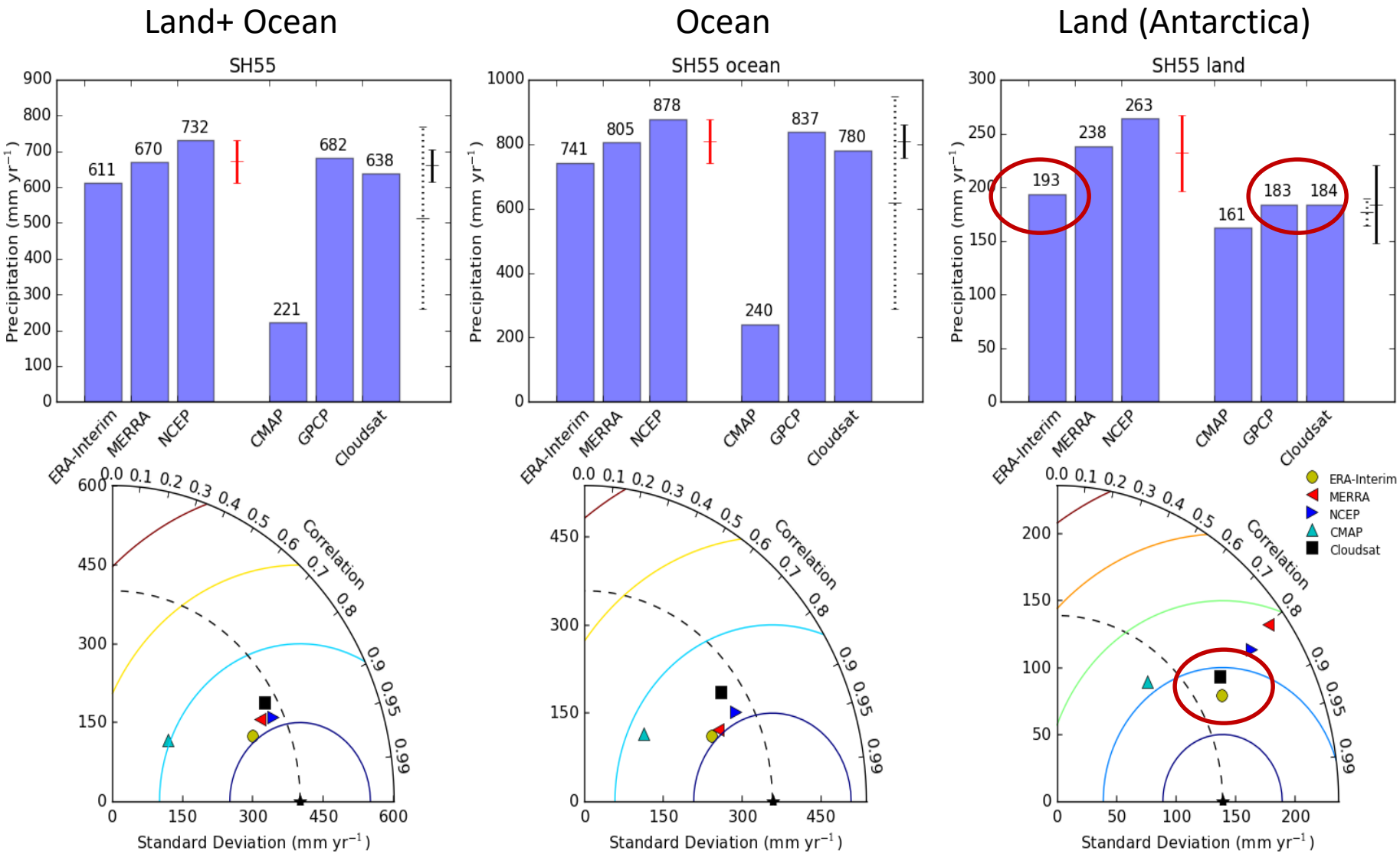


SH

Precipitation estimation in winter time (only snow)



Summary of statistics for high latitude (poleward 50deg S/N)

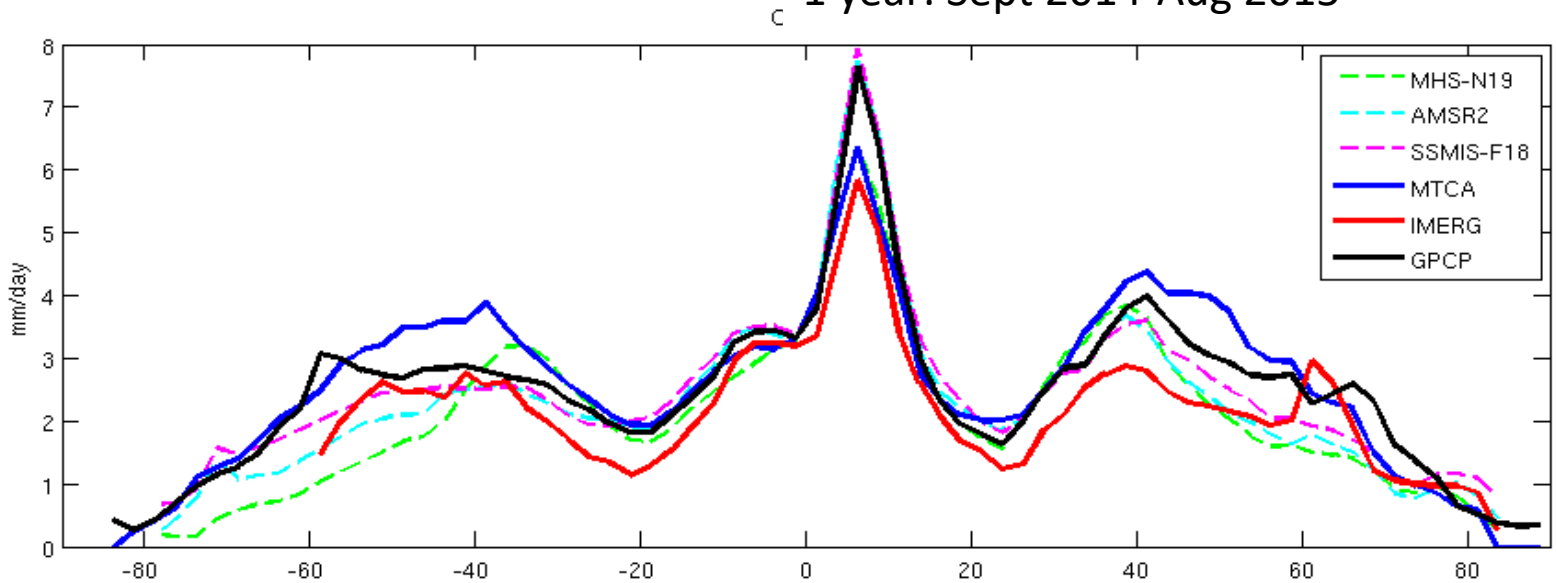


Behrangi et al. 2016 submitted

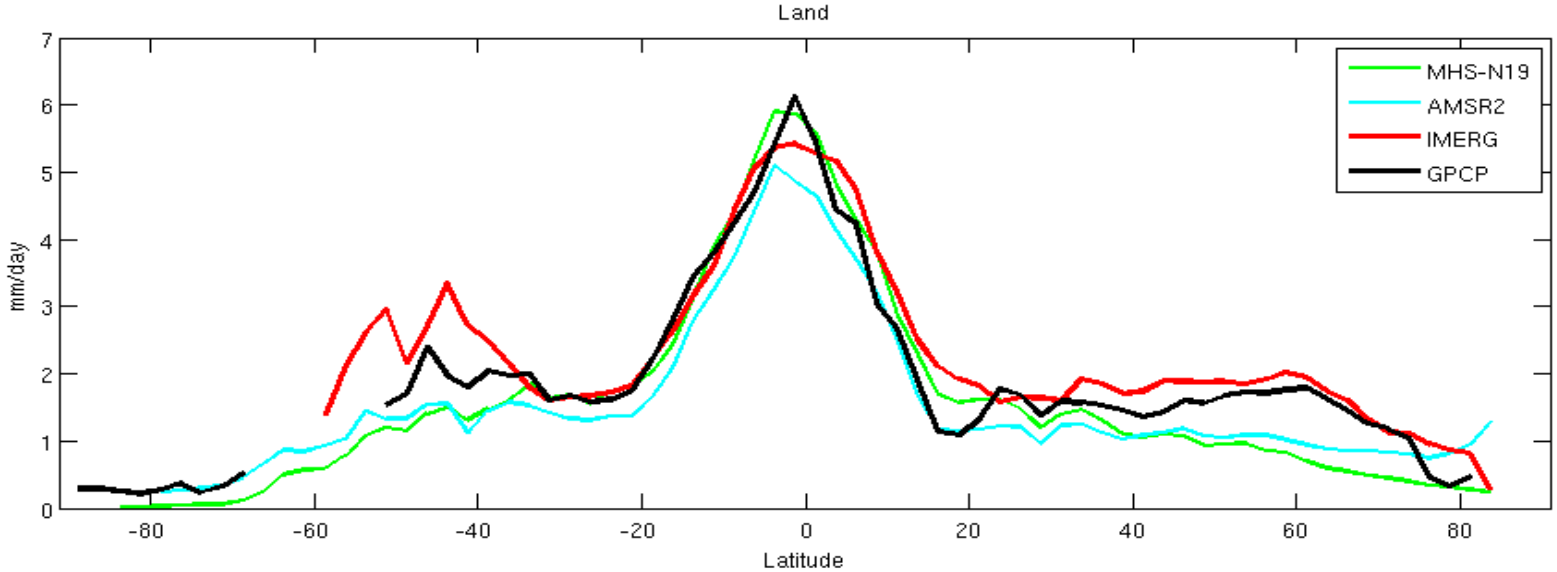
GPM Zonal distribution

1 year: Sept 2014-Aug 2015

Ocean

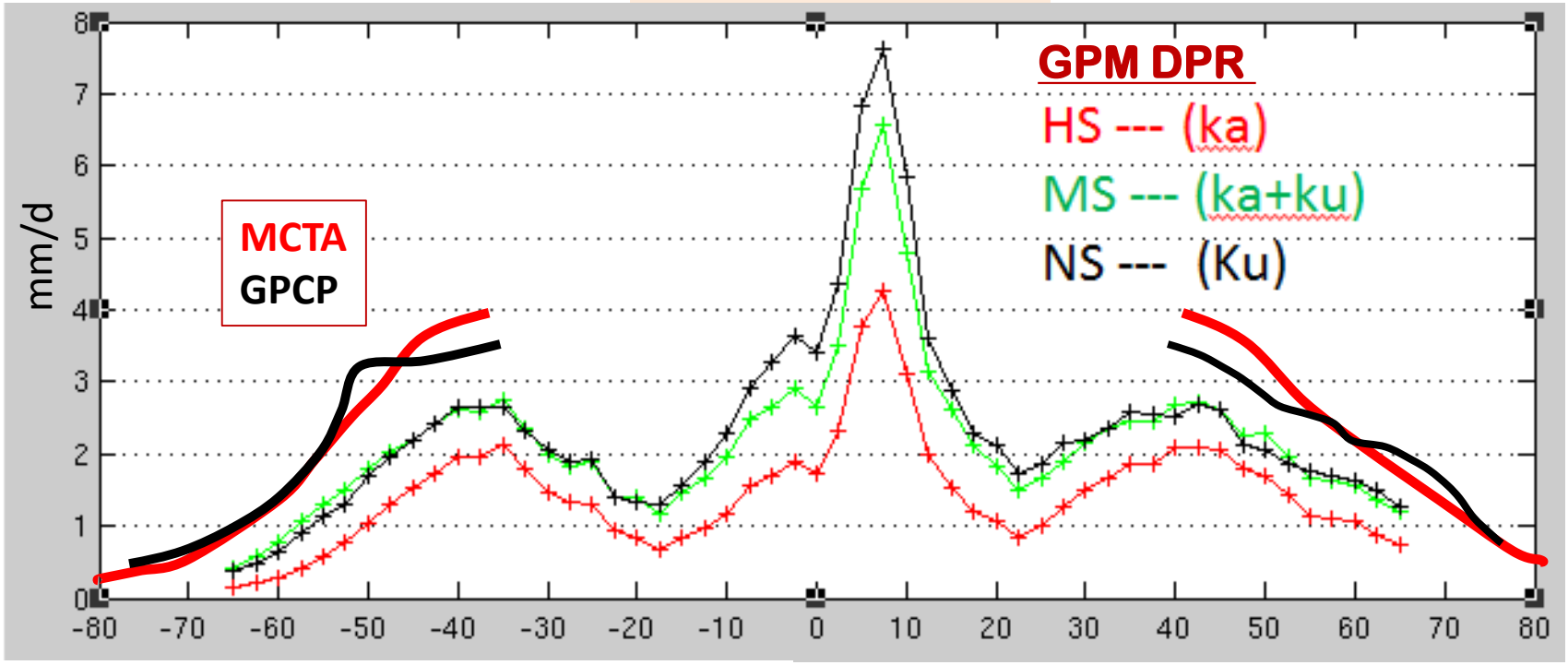


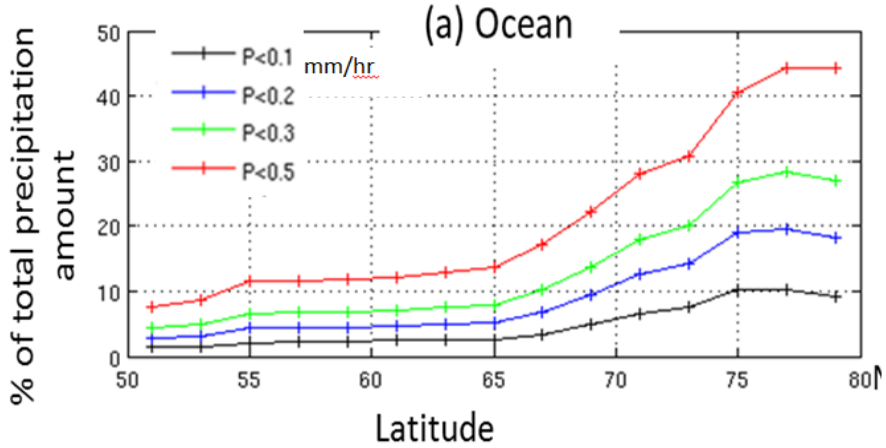
Land



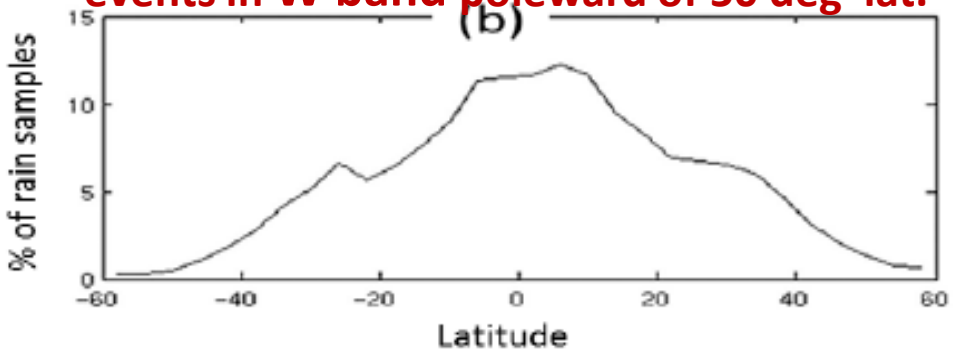
GPM DPR in High latitude

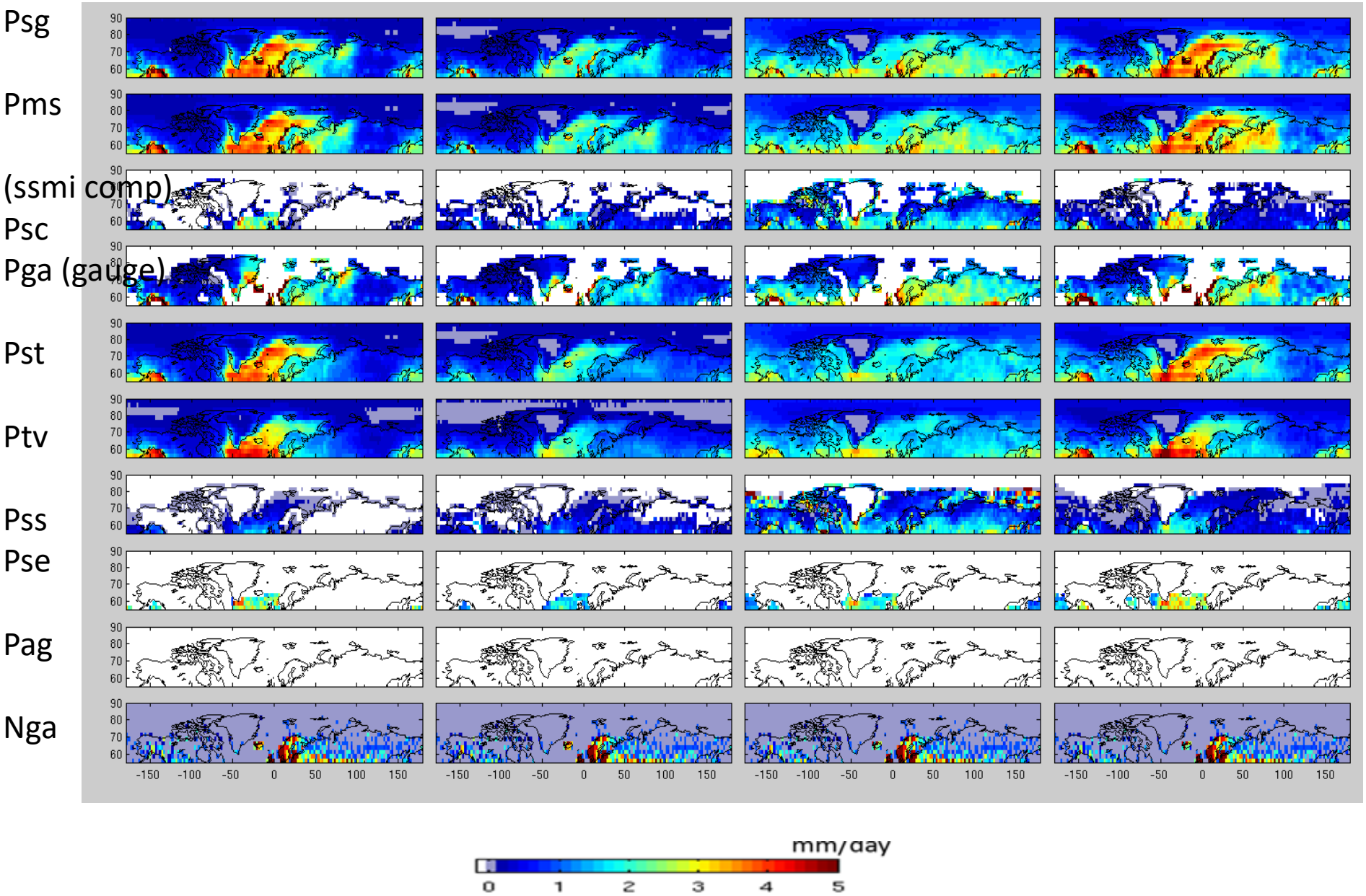
Oct 2014-Feb 2015





SATURATION: <1% of total precipitation events in W band poleward of 50 deg lat.



Backup

Diagnostic analysis of the GPCP components