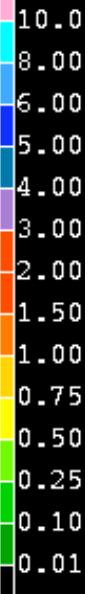


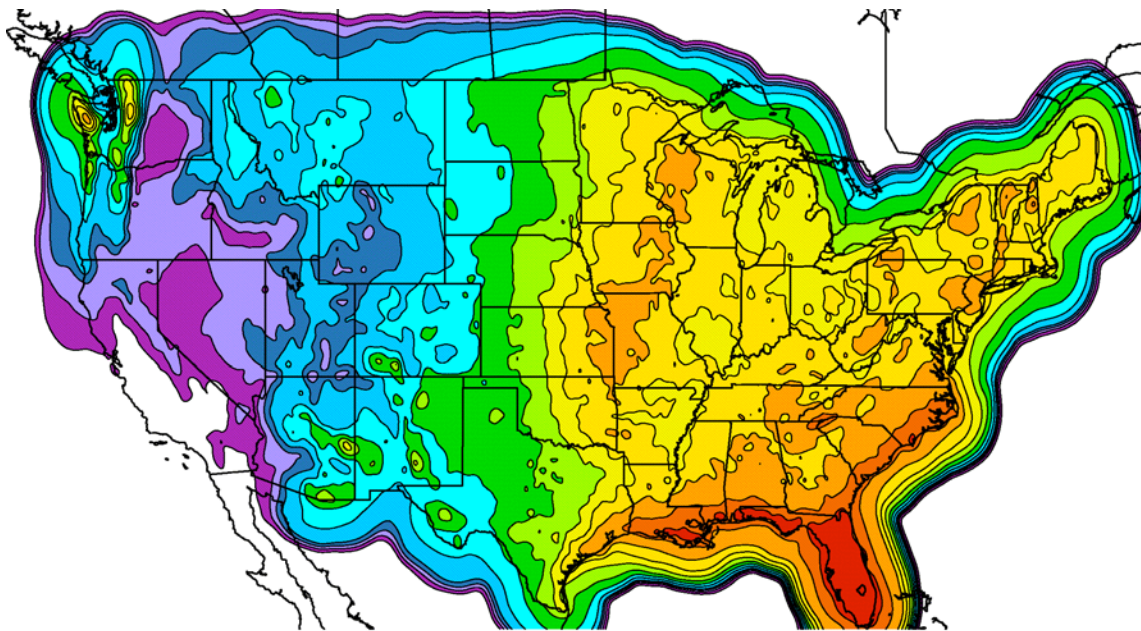
Recurving Eastern North Pacific Tropical Cyclones

Kristen L. Corbosiero (UCLA)

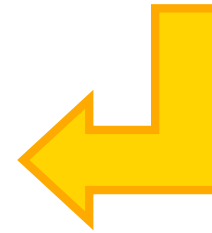
Michael Dickinson (WeatherPredict)

Lance Bosart (SUNY Albany)

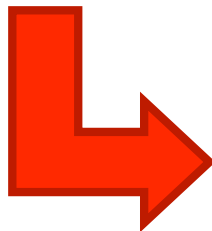
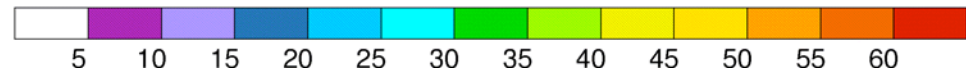
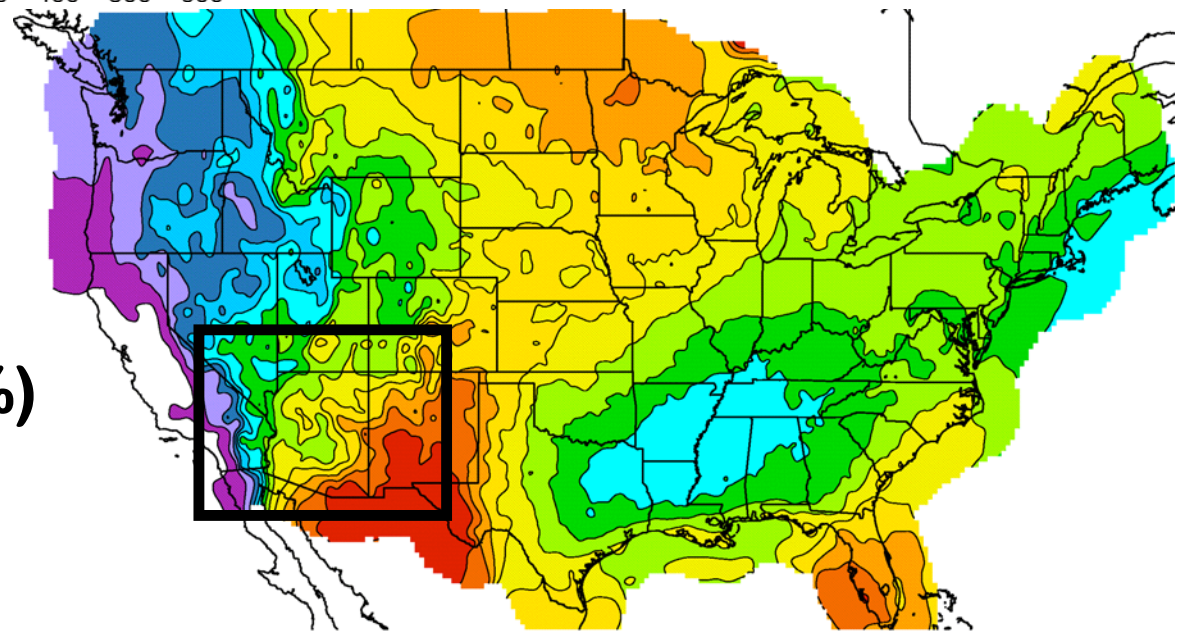


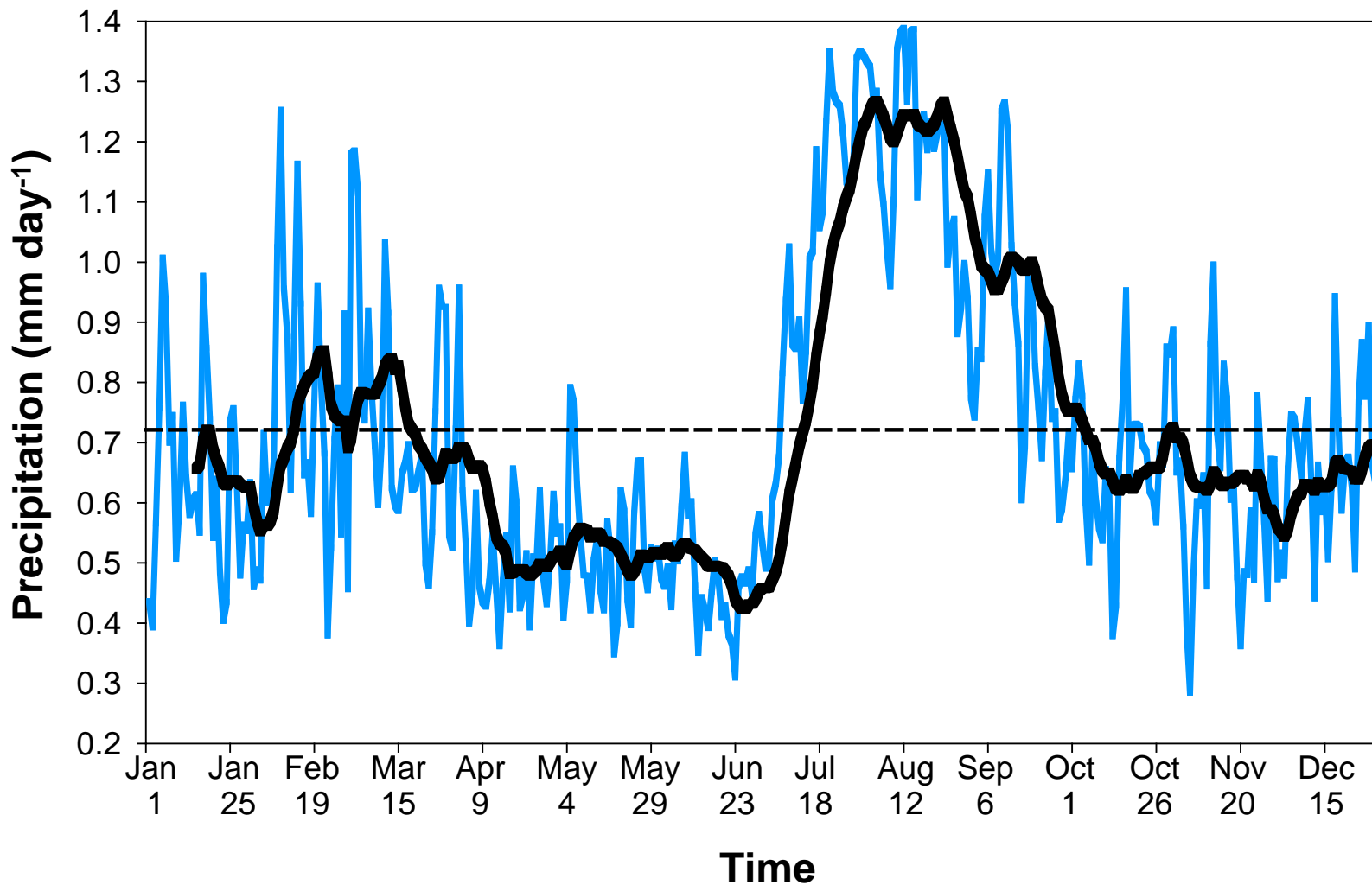


**Average (1958-2003)
warm season
(16 June-15 October)
total precipitation (mm)**



**Average (1958-2003)
warm season
contribution to the
yearly precipitation (%)**





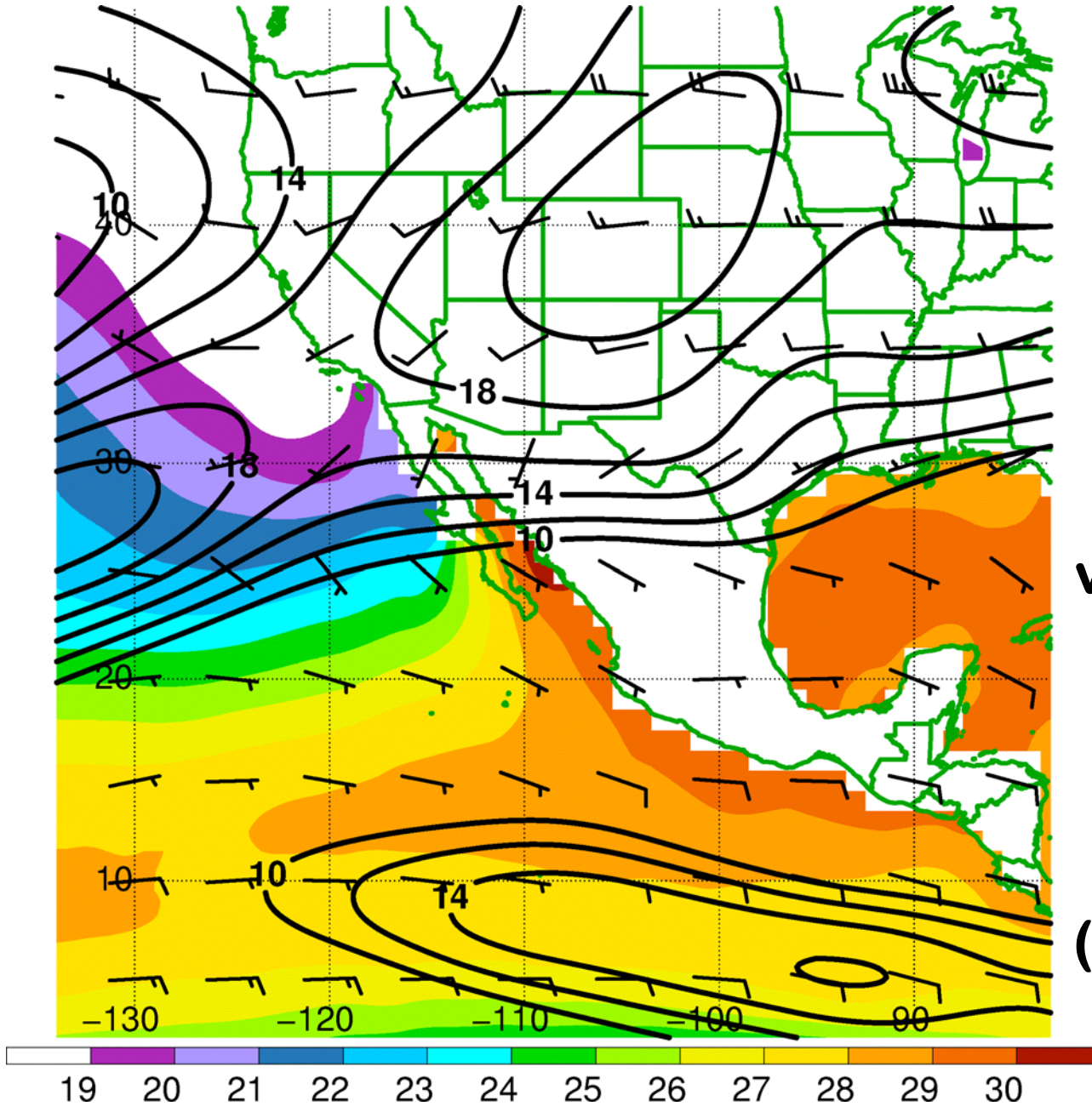
Annual cycle of the average daily (blue) and 15 day running mean (black) precipitation over the southwest United States

**Long term mean
September**

SST (shaded, °C)

**850-200 hPa
vertical wind shear
(contours, m s⁻¹)**

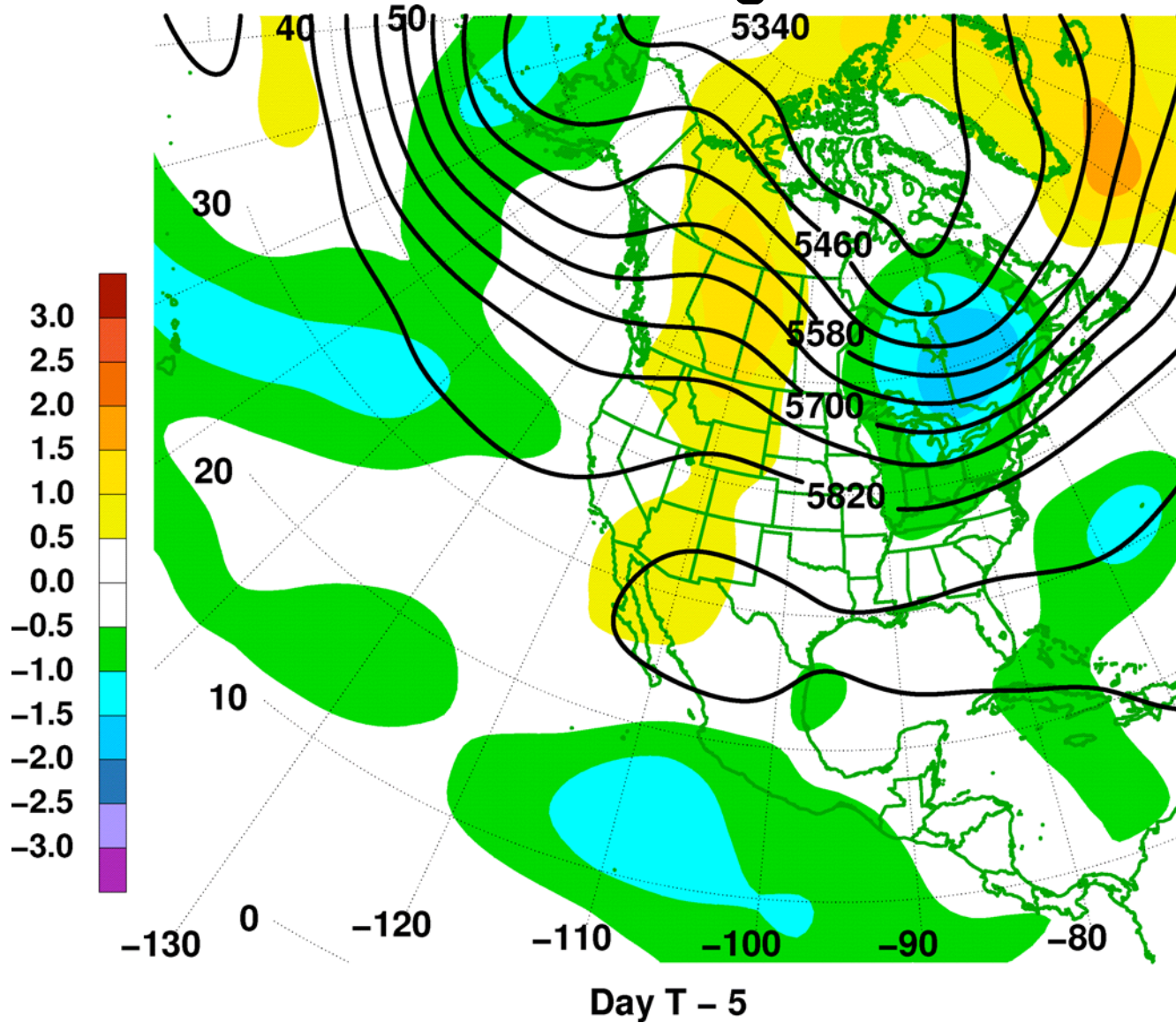
**700-500 hPa
average flow
(barbs, full=5 m s⁻¹)**



NCEP/NCAR Reanalysis

Mean and standardized anomalies

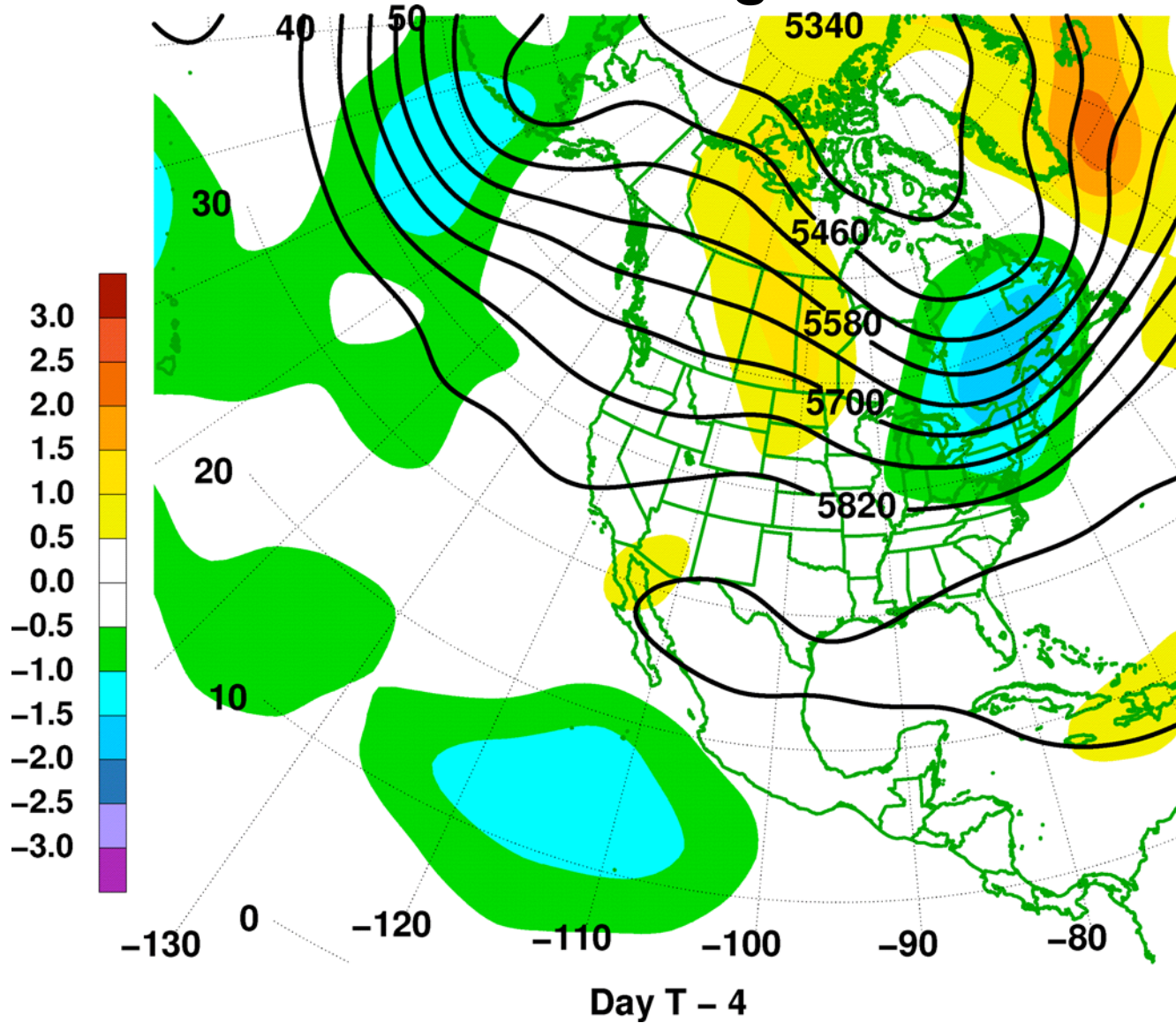
500 hPa heights



NCEP/NCAR Reanalysis

Mean and standardized anomalies

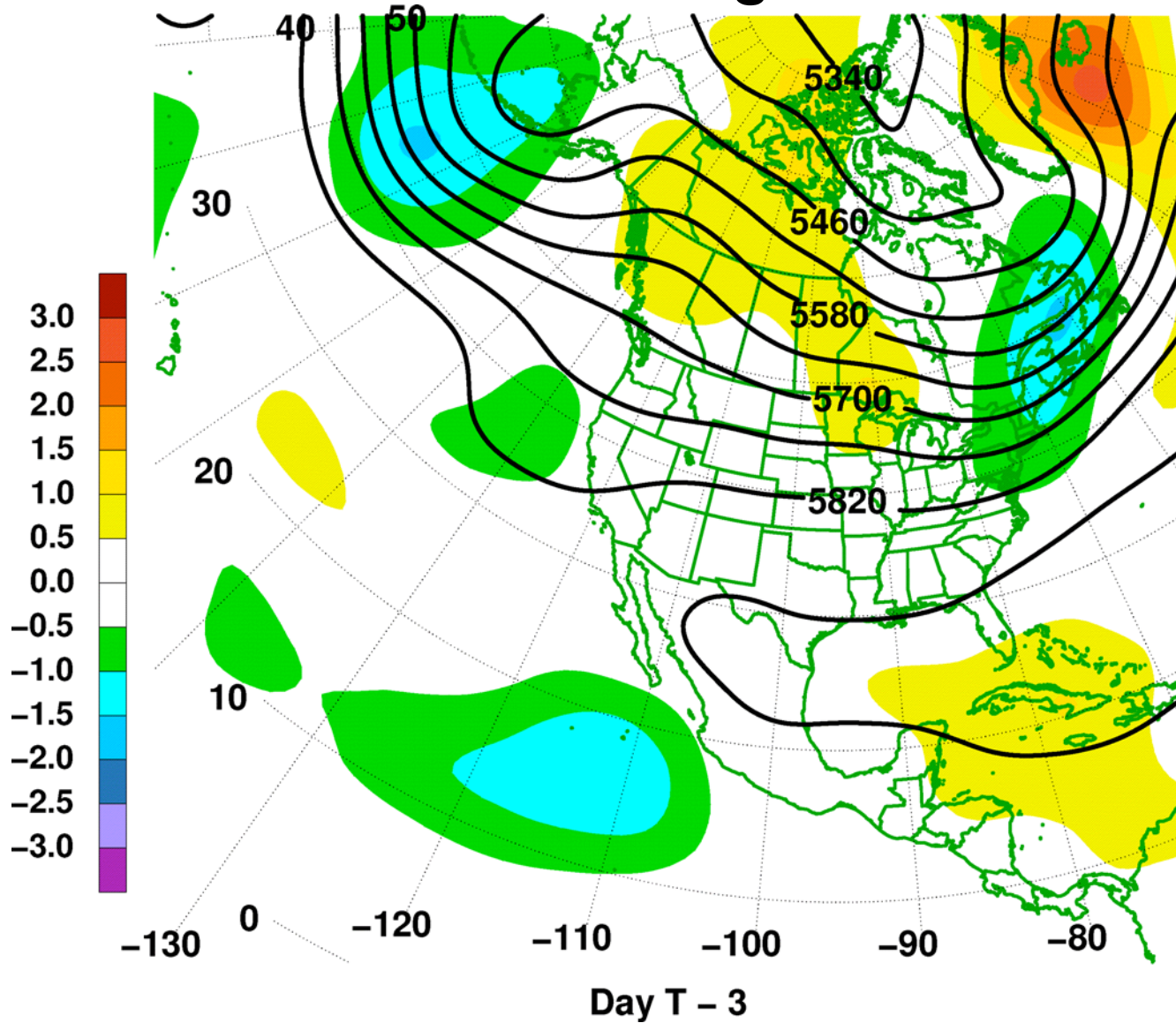
500 hPa heights



NCEP/NCAR Reanalysis

Mean and standardized anomalies

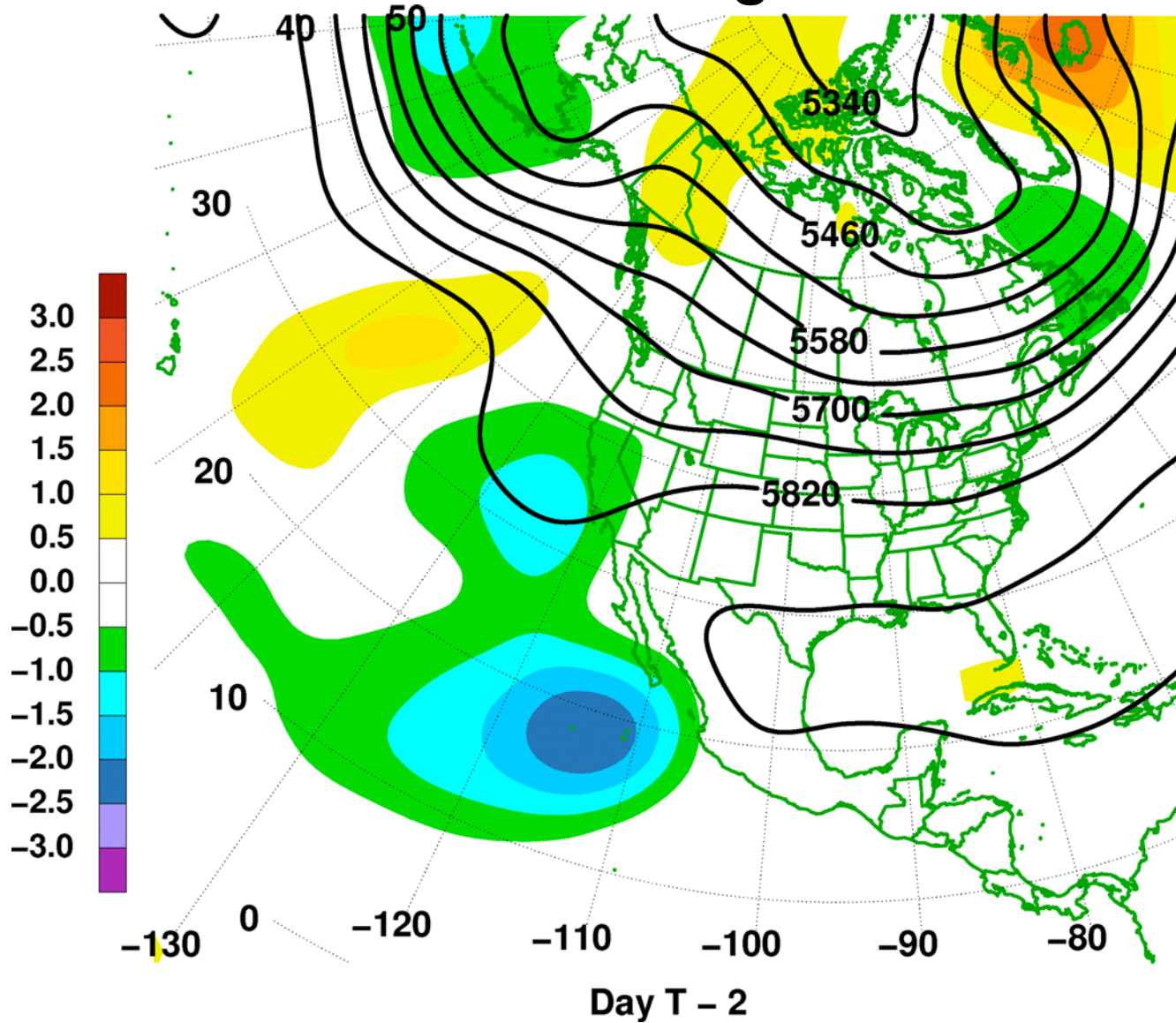
500 hPa heights



NCEP/NCAR Reanalysis

Mean and standardized anomalies

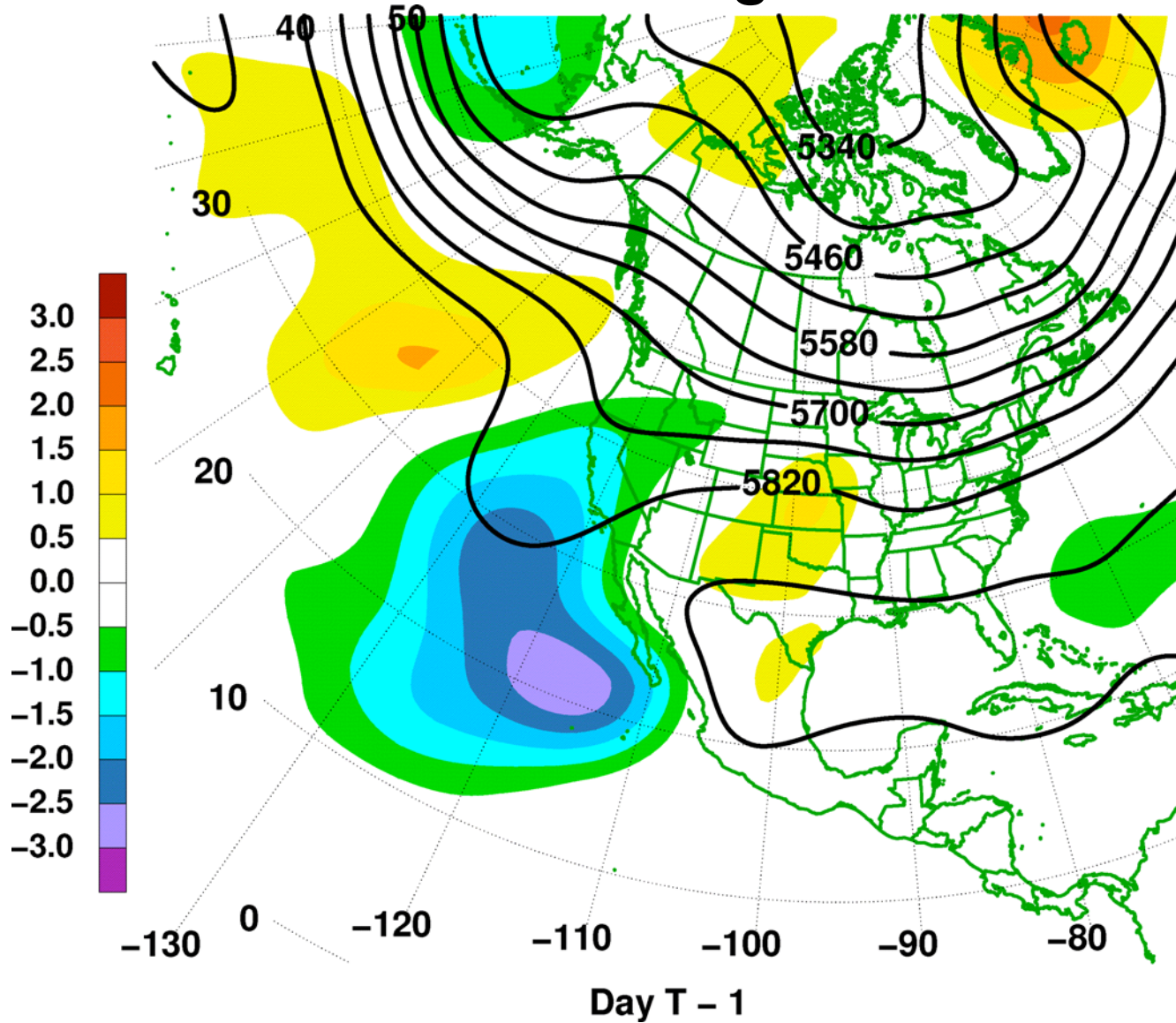
500 hPa heights



NCEP/NCAR Reanalysis

Mean and standardized anomalies

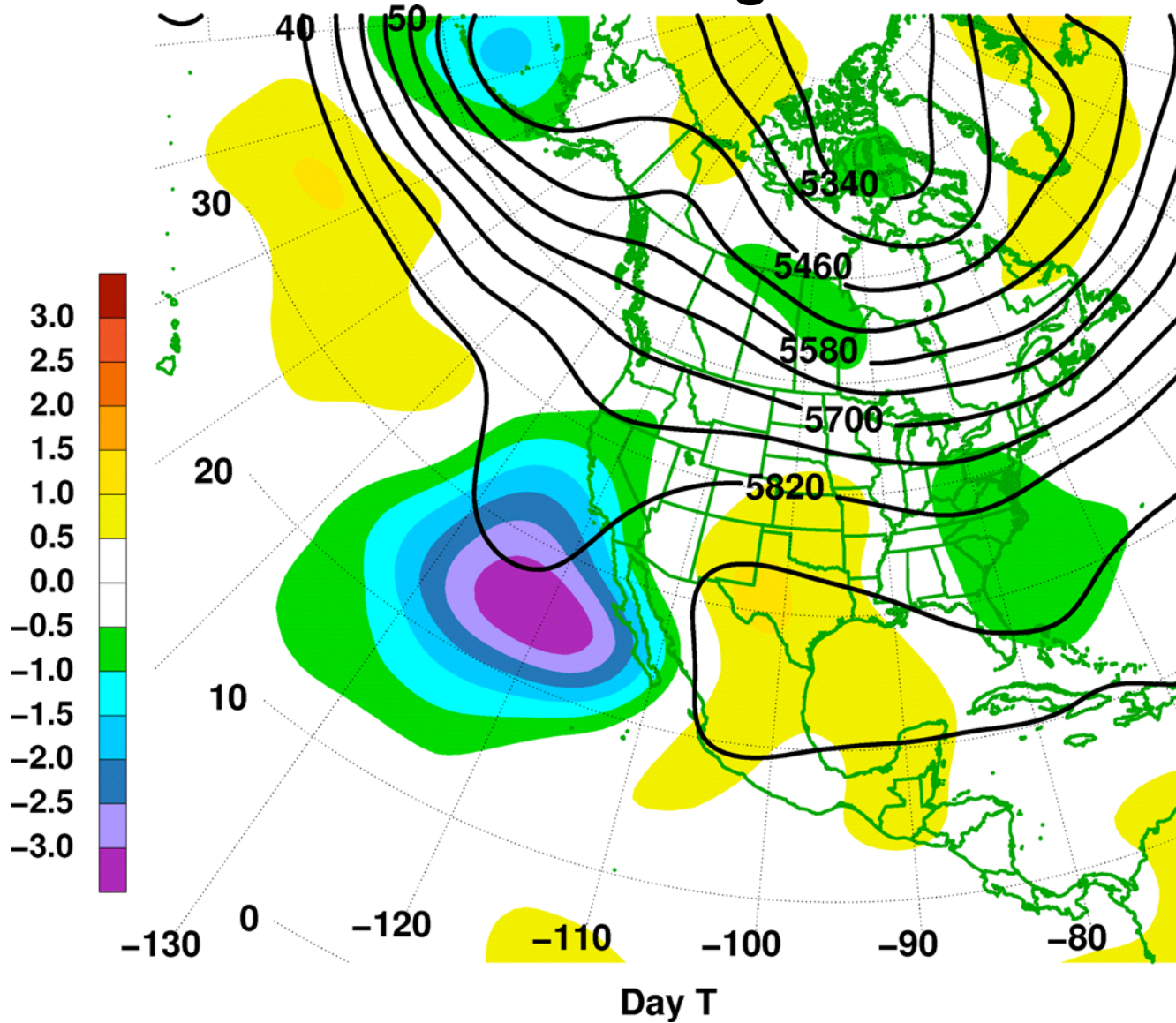
500 hPa heights



NCEP/NCAR Reanalysis

Mean and standardized anomalies

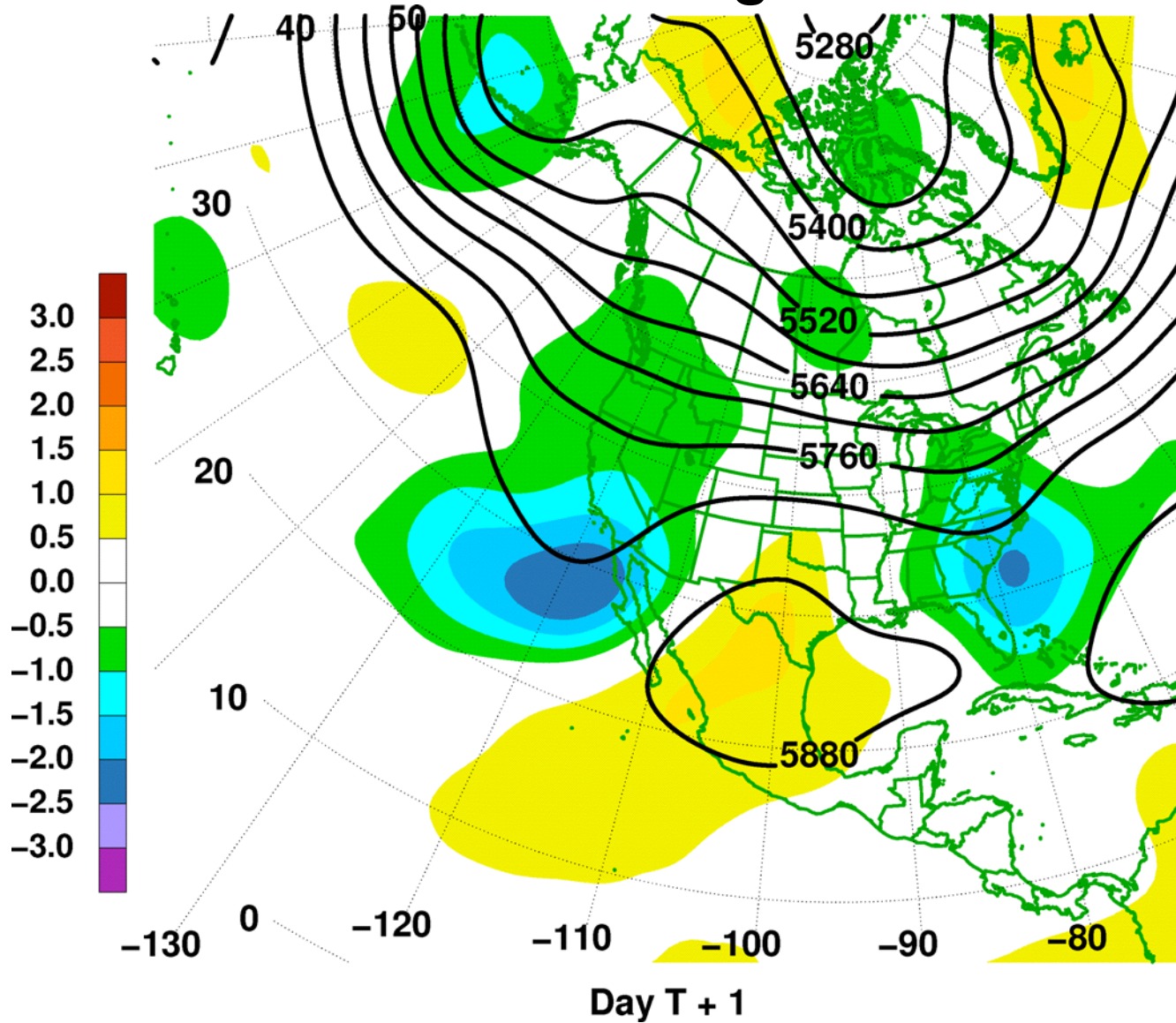
500 hPa heights



NCEP/NCAR Reanalysis

Mean and standardized anomalies

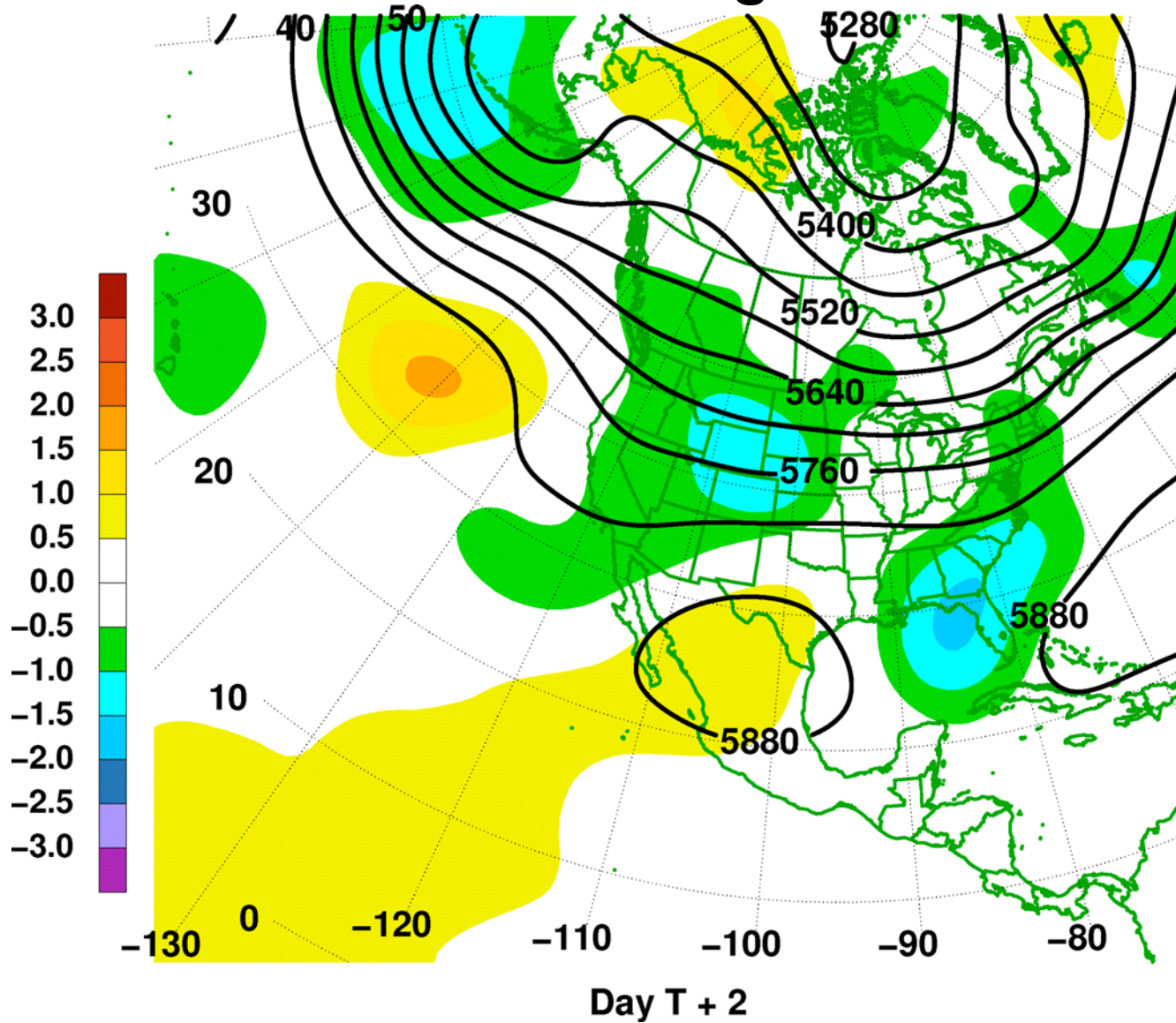
500 hPa heights



NCEP/NCAR Reanalysis

Mean and standardized anomalies

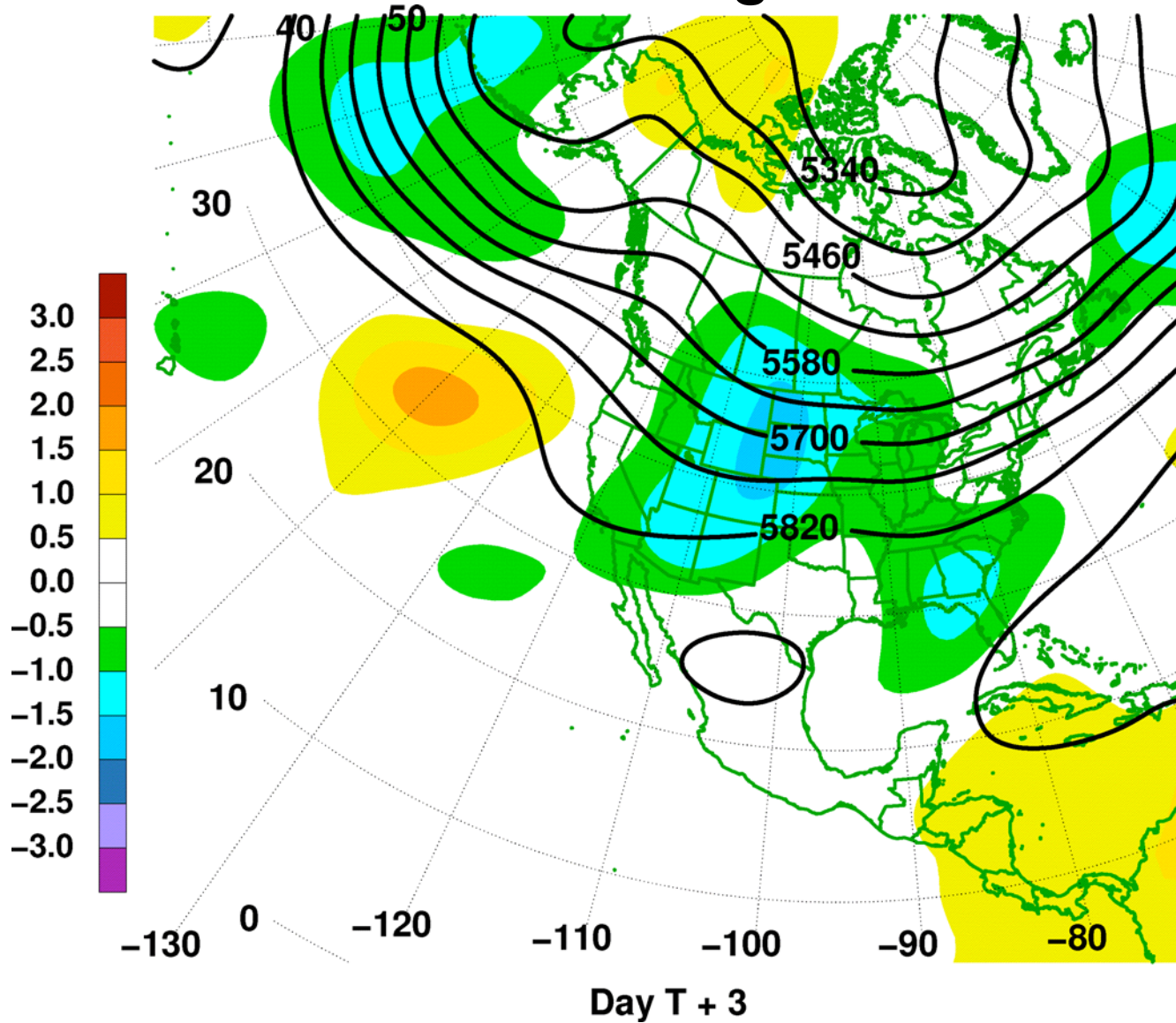
500 hPa heights



NCEP/NCAR Reanalysis

Mean and standardized anomalies

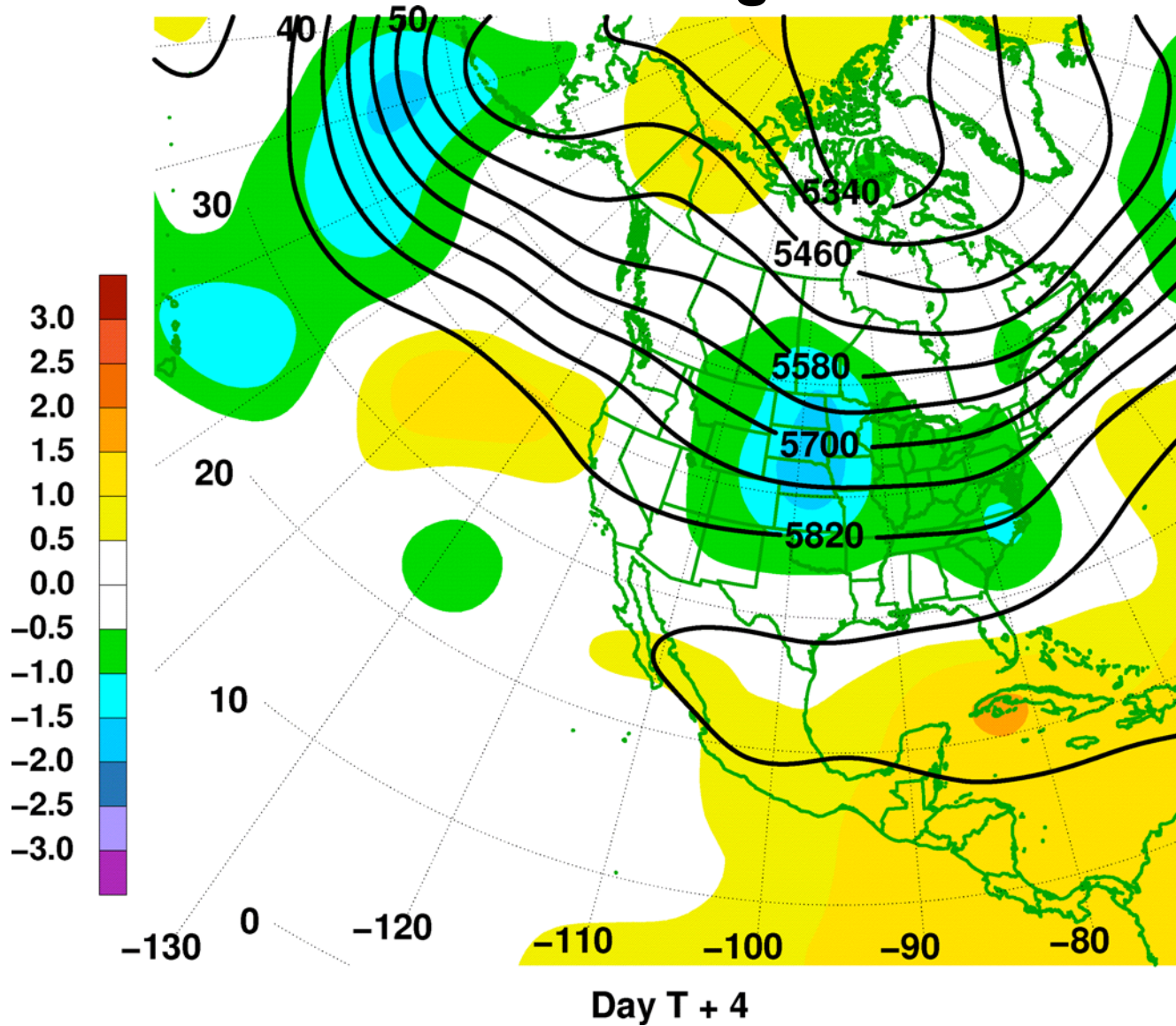
500 hPa heights



NCEP/NCAR Reanalysis

Mean and standardized anomalies

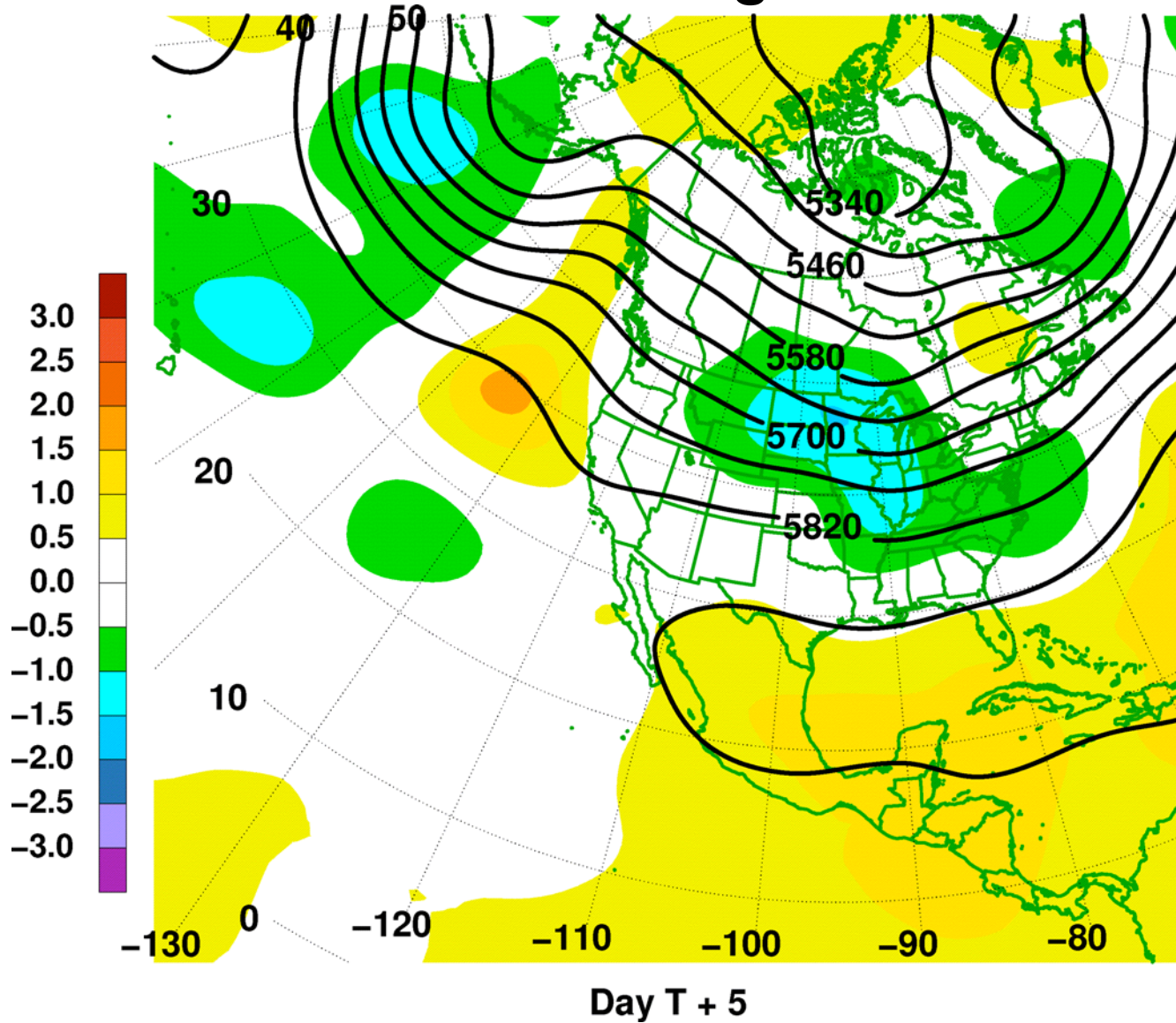
500 hPa heights



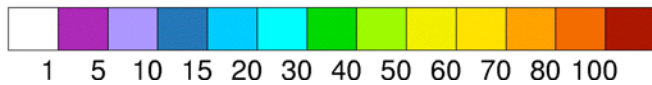
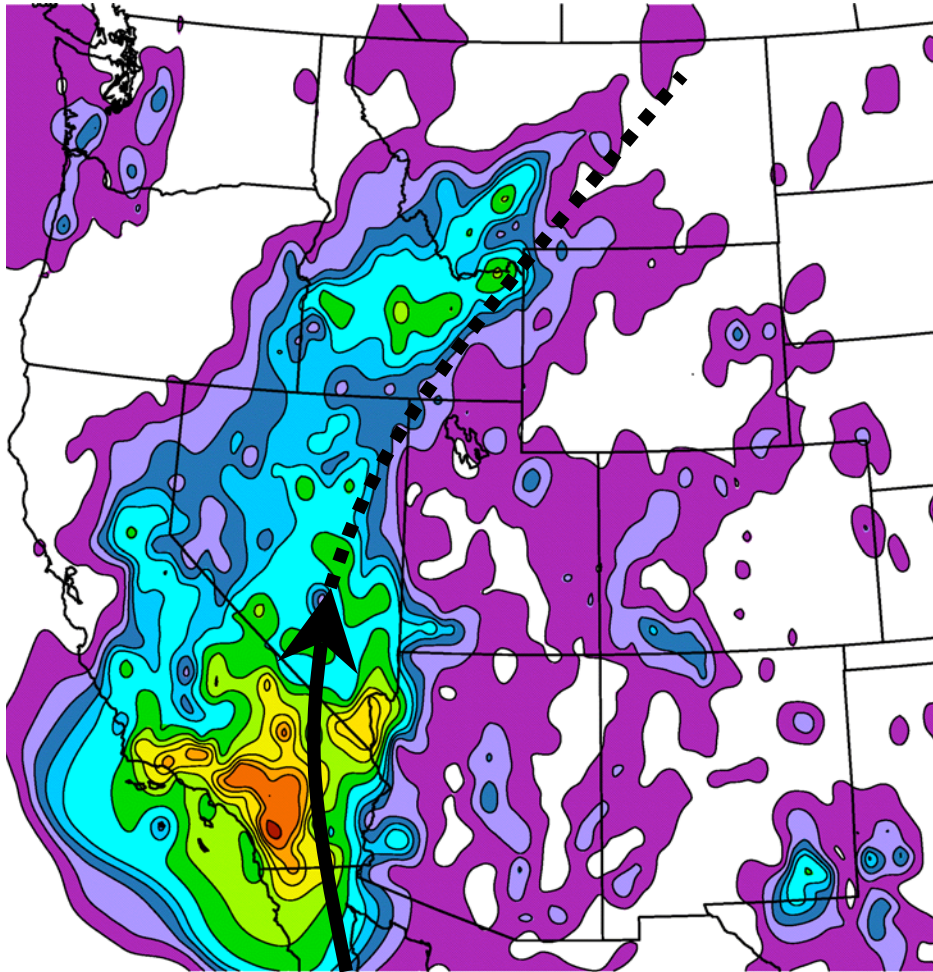
NCEP/NCAR Reanalysis

Mean and standardized anomalies

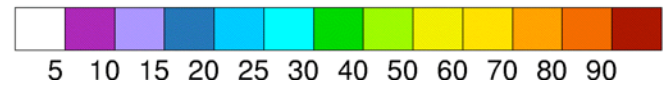
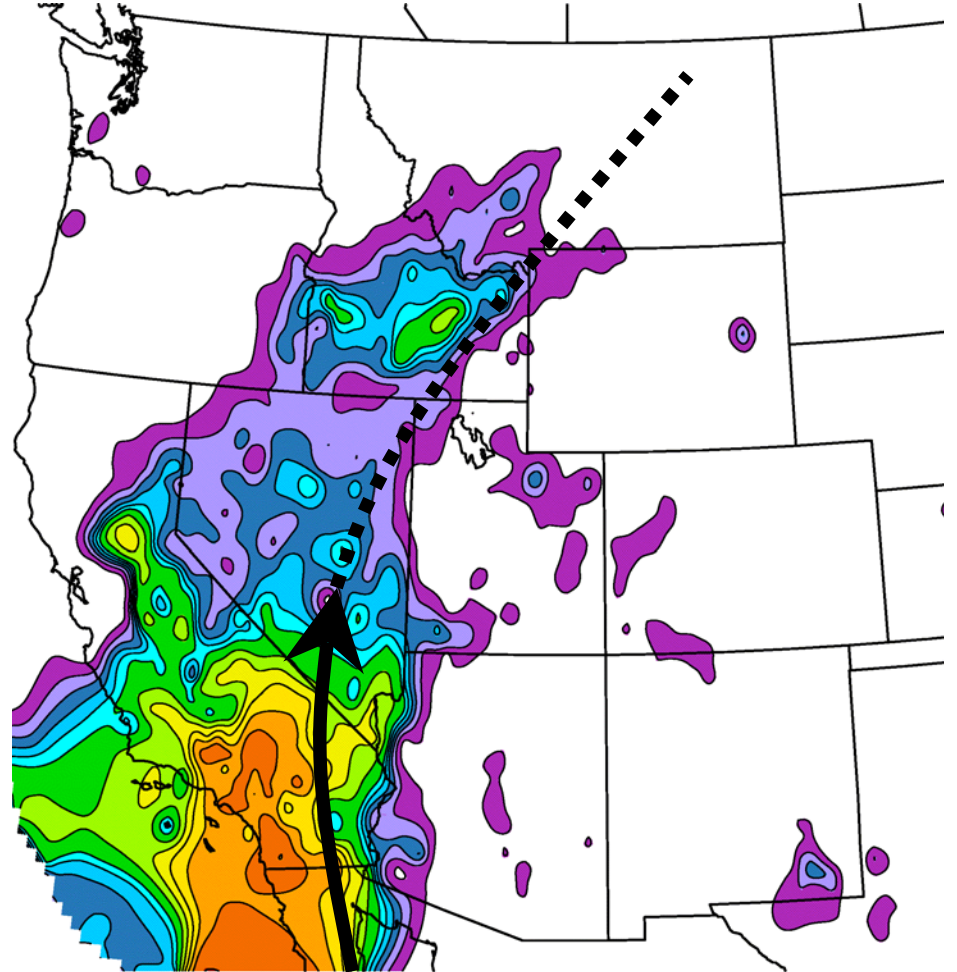
500 hPa heights



Hurricane Kathleen 1976

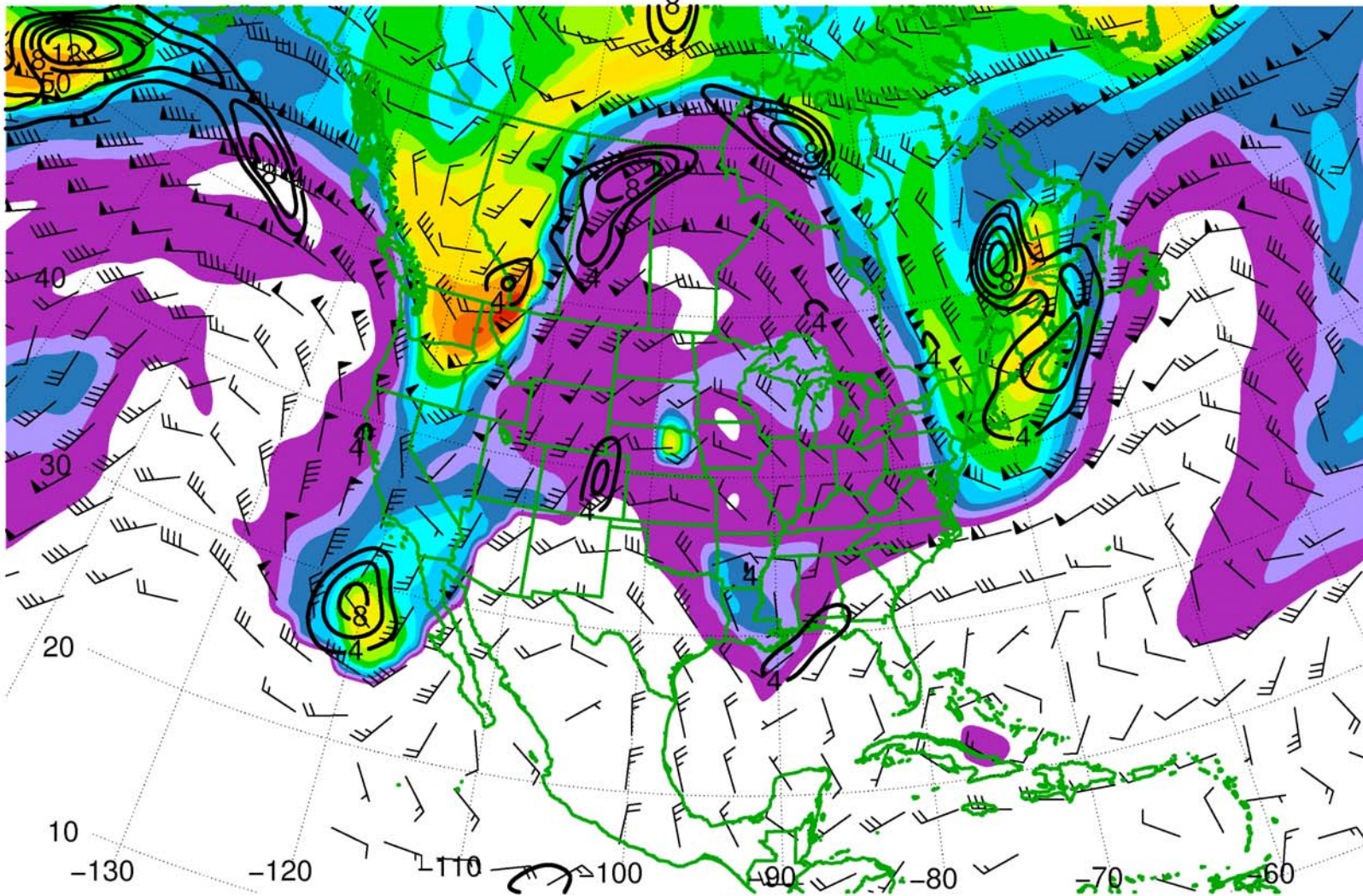


**Storm total
precipitation (mm)**



**Storm contribution to
warm season rainfall (%)**

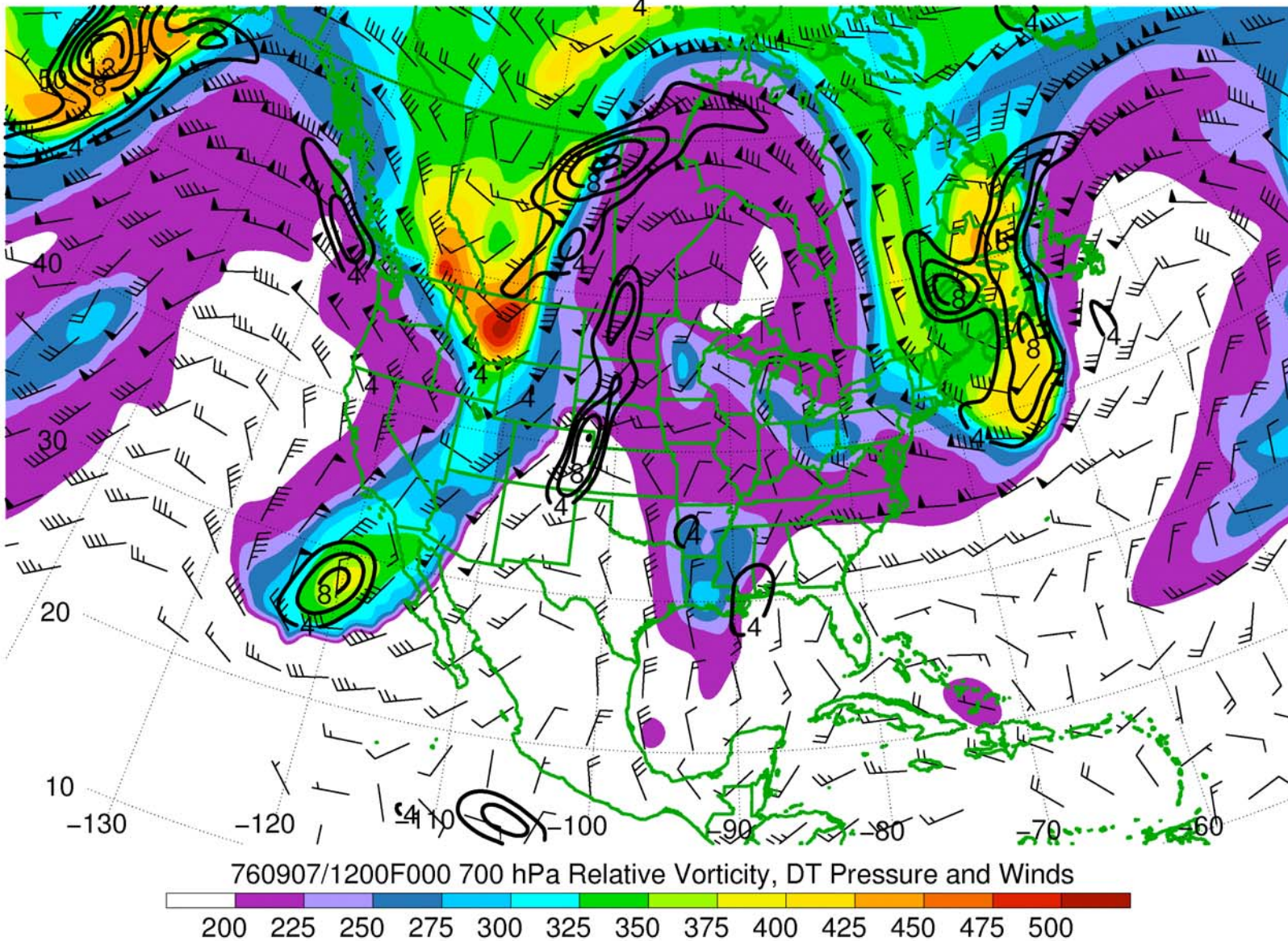
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



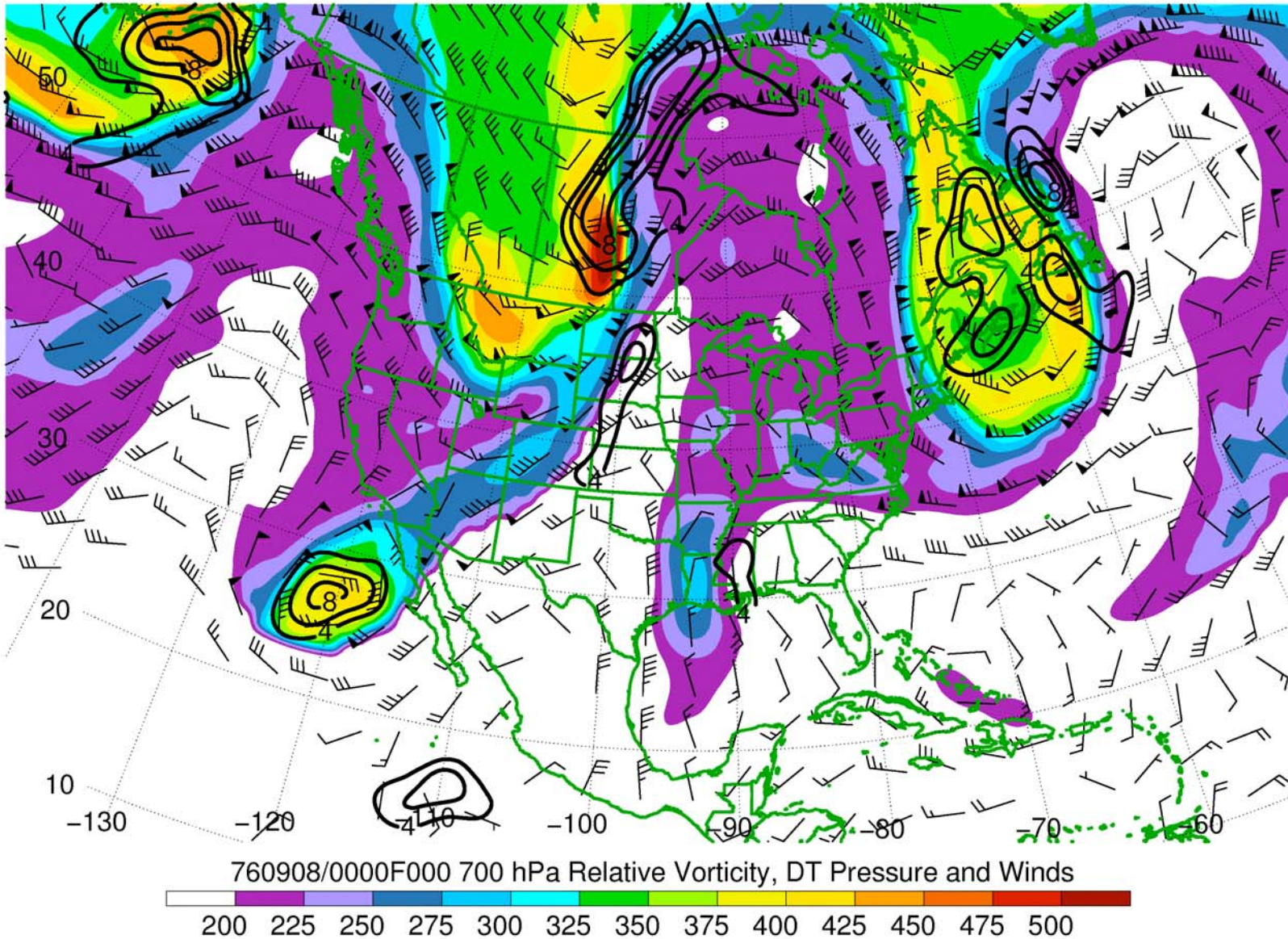
760907/0000F000 700 hPa Relative Vorticity, DT Pressure and Winds



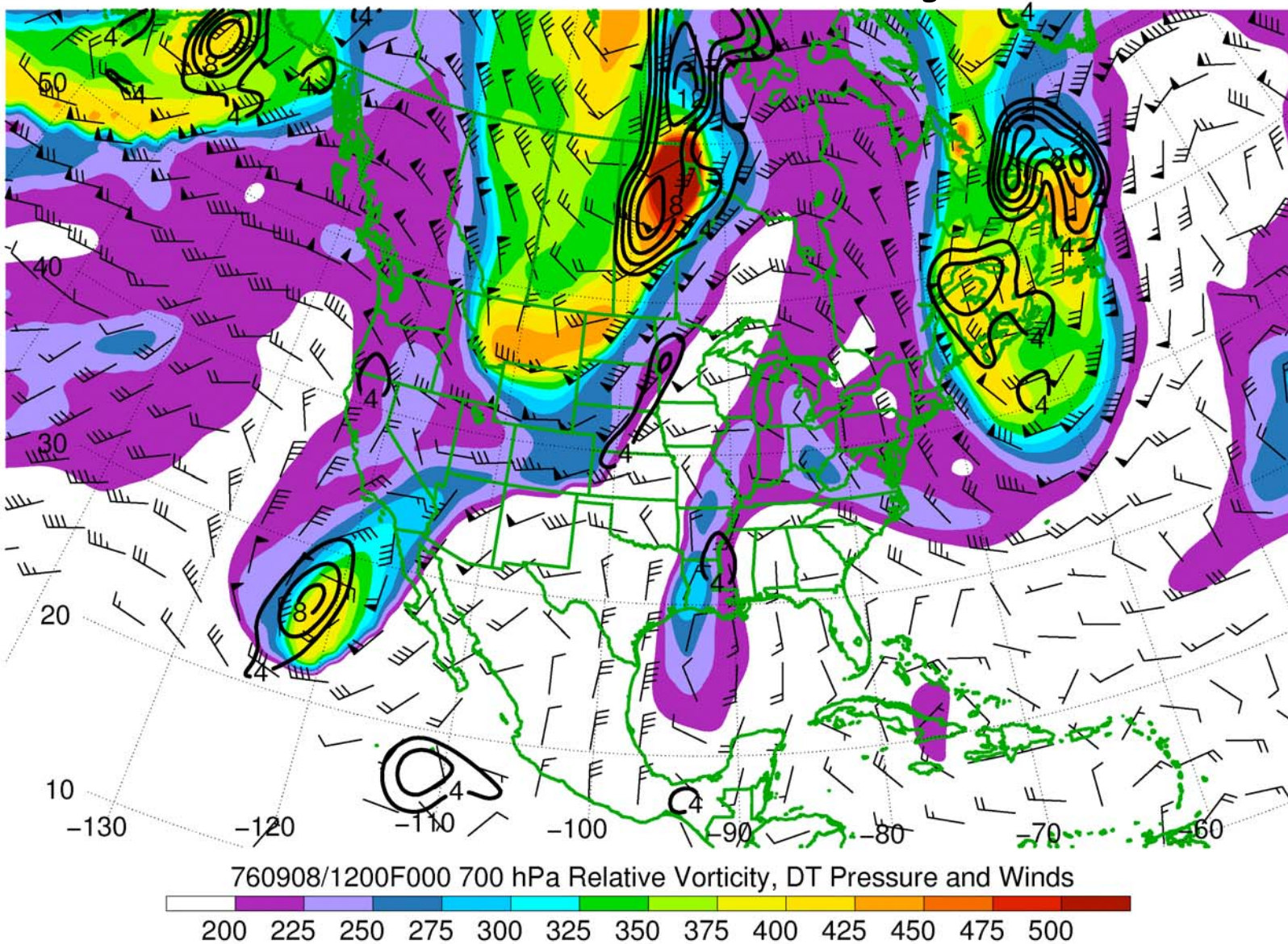
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



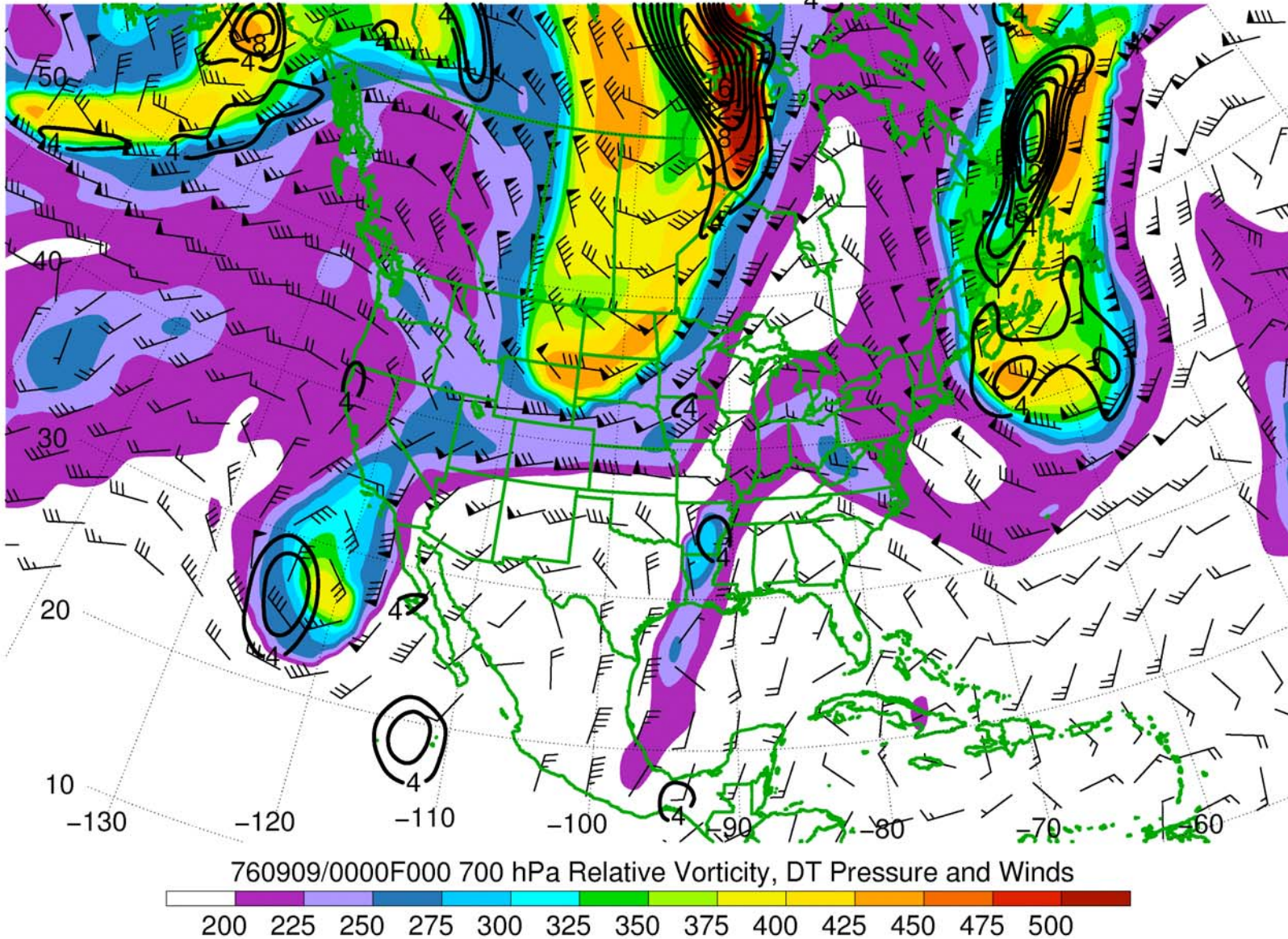
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



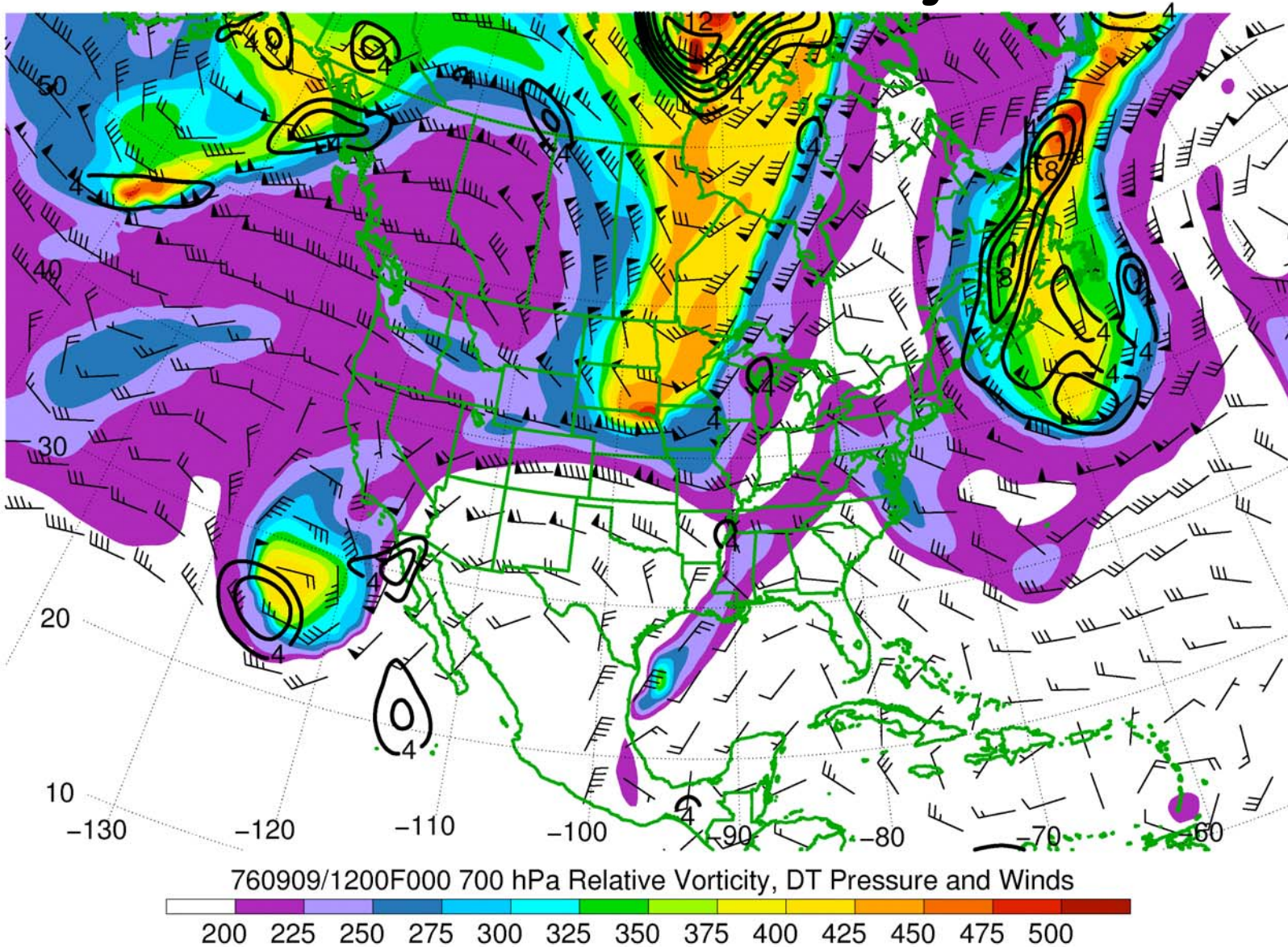
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



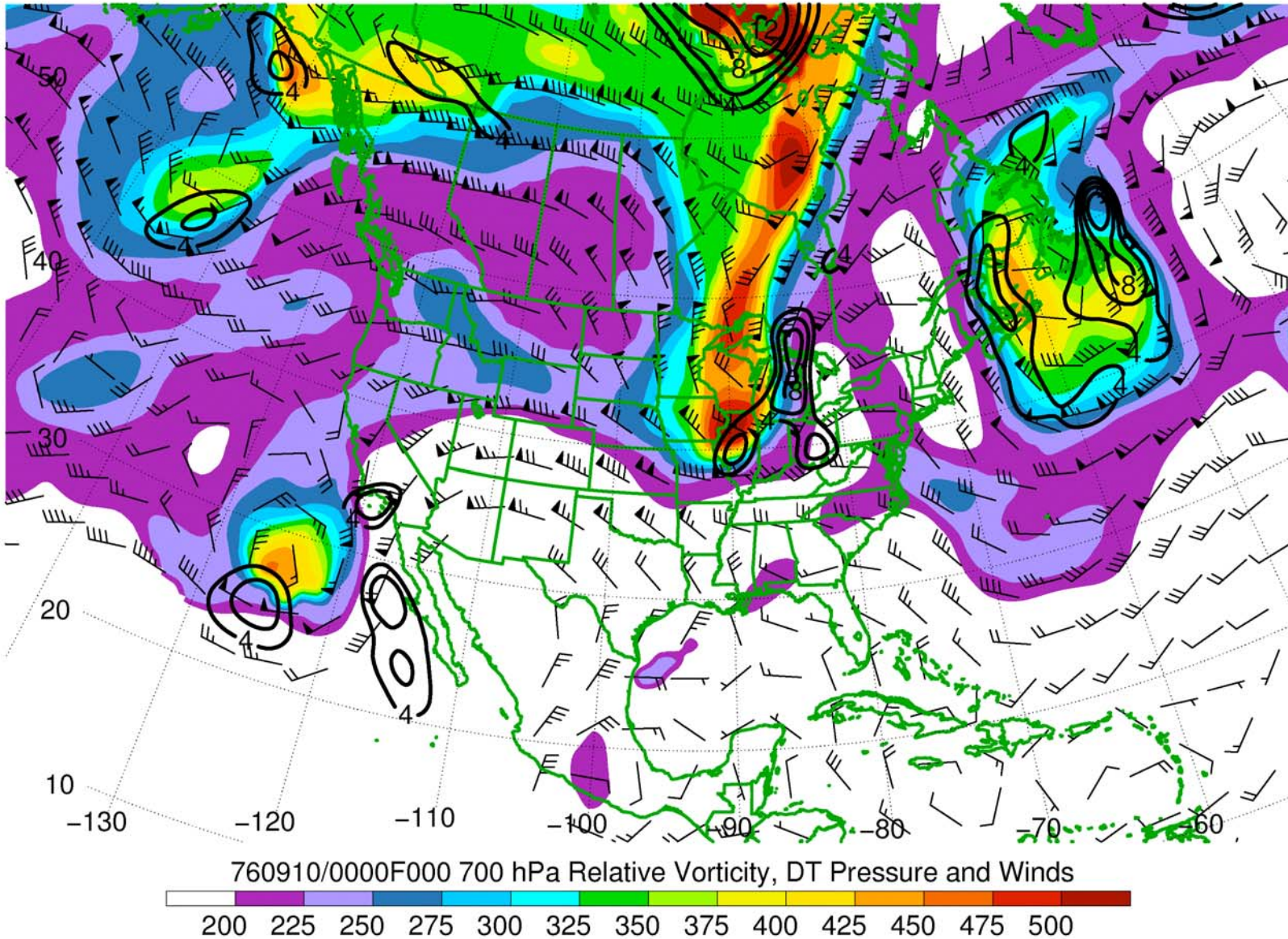
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



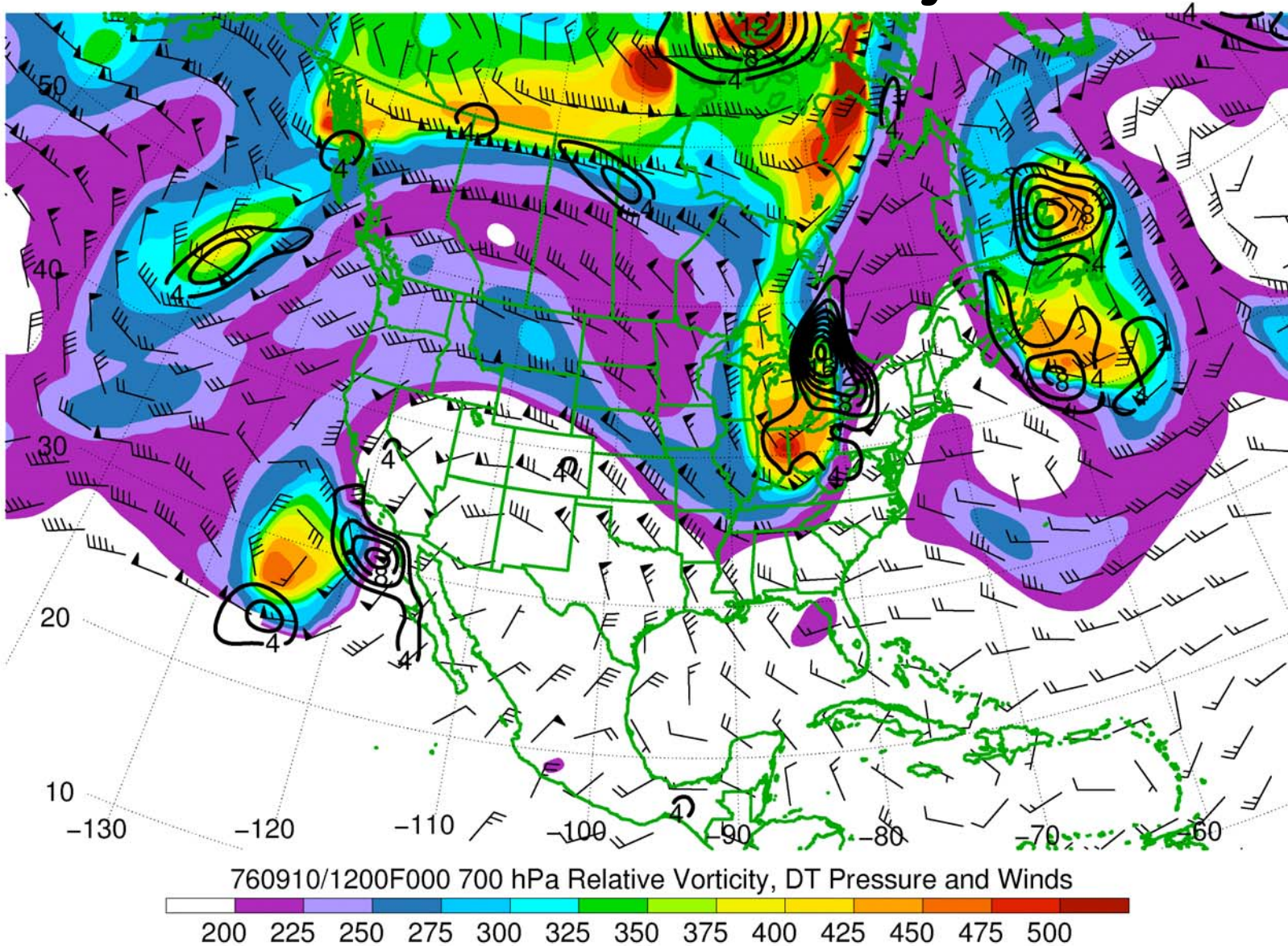
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



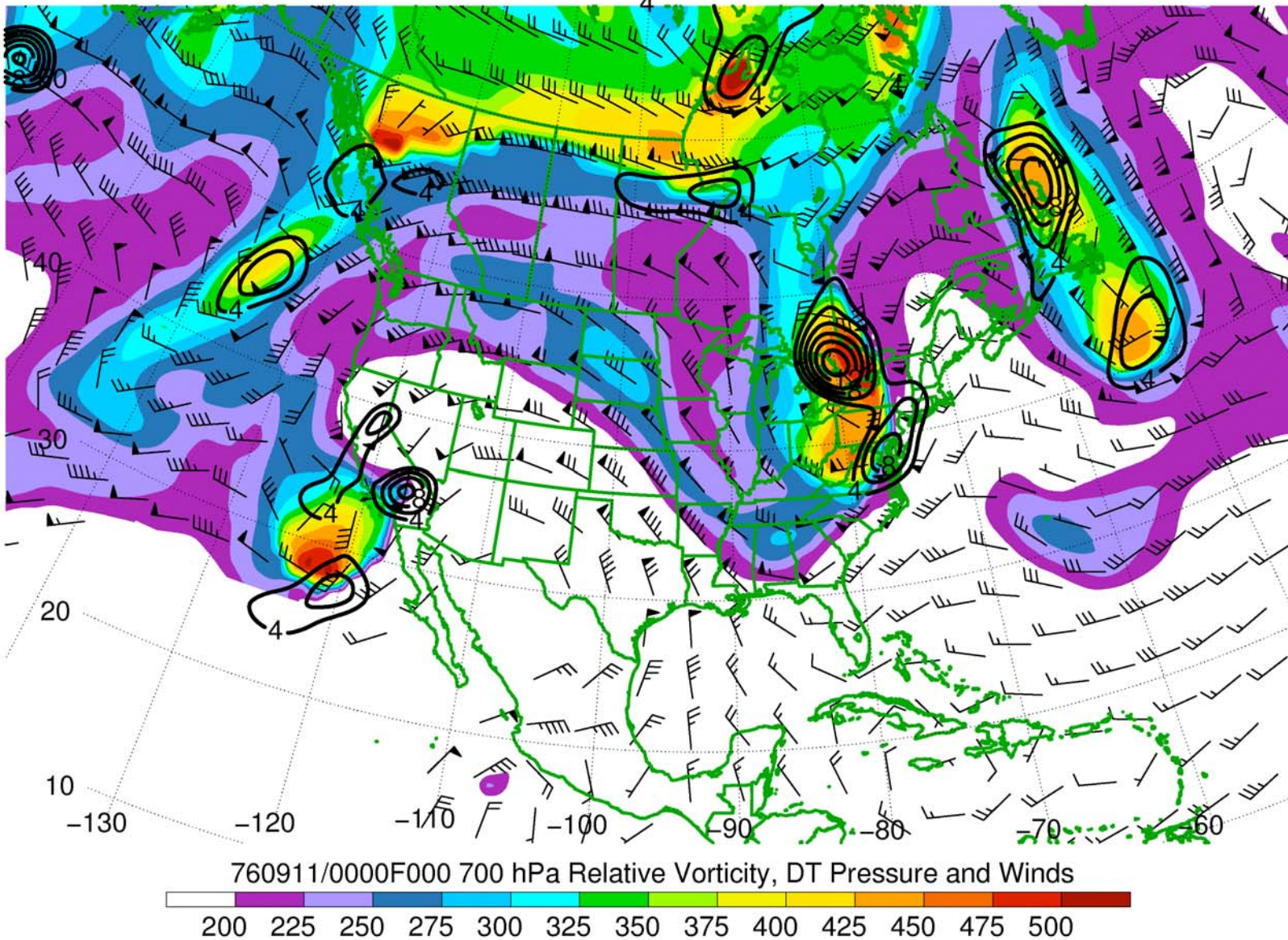
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



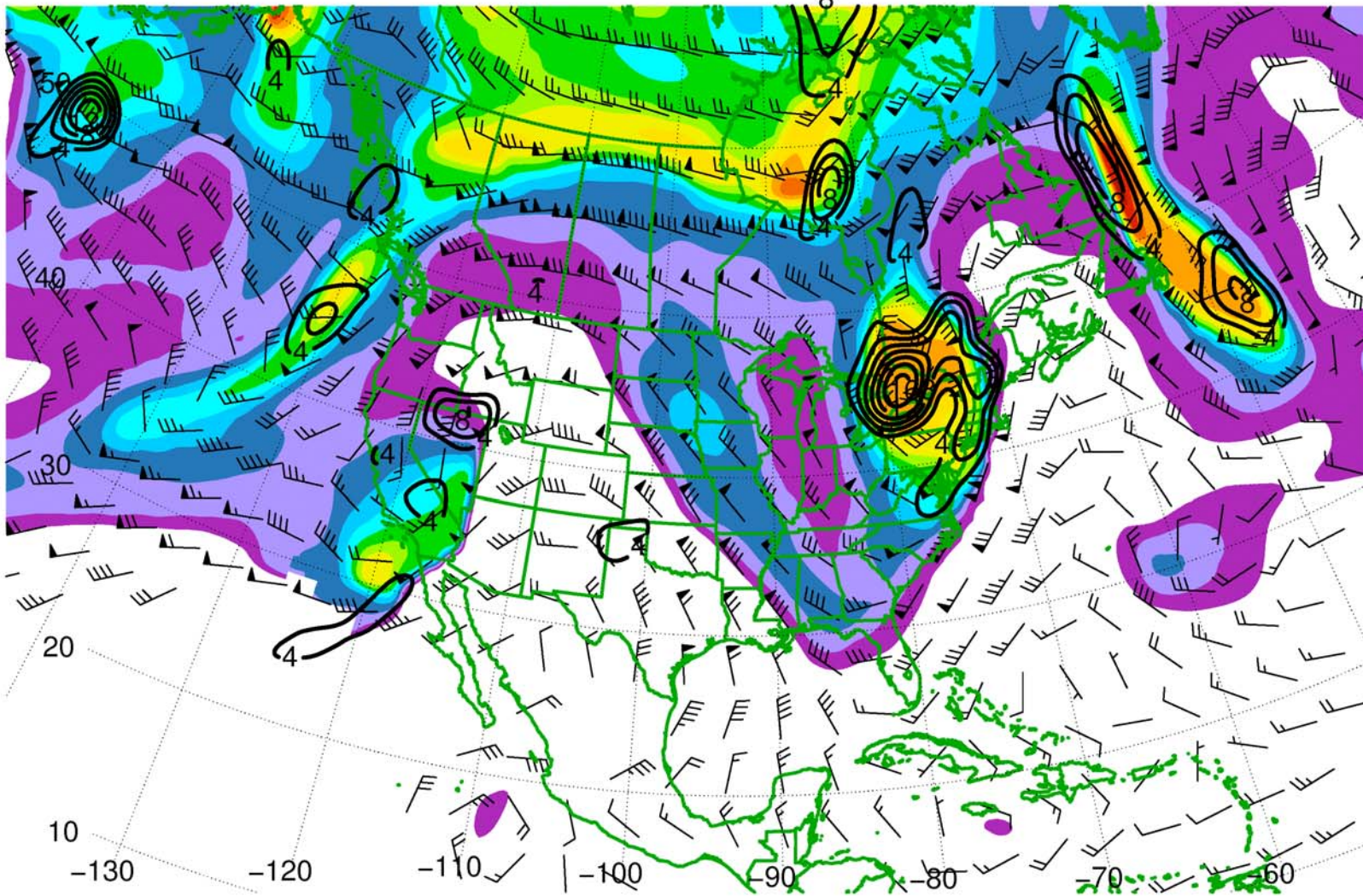
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



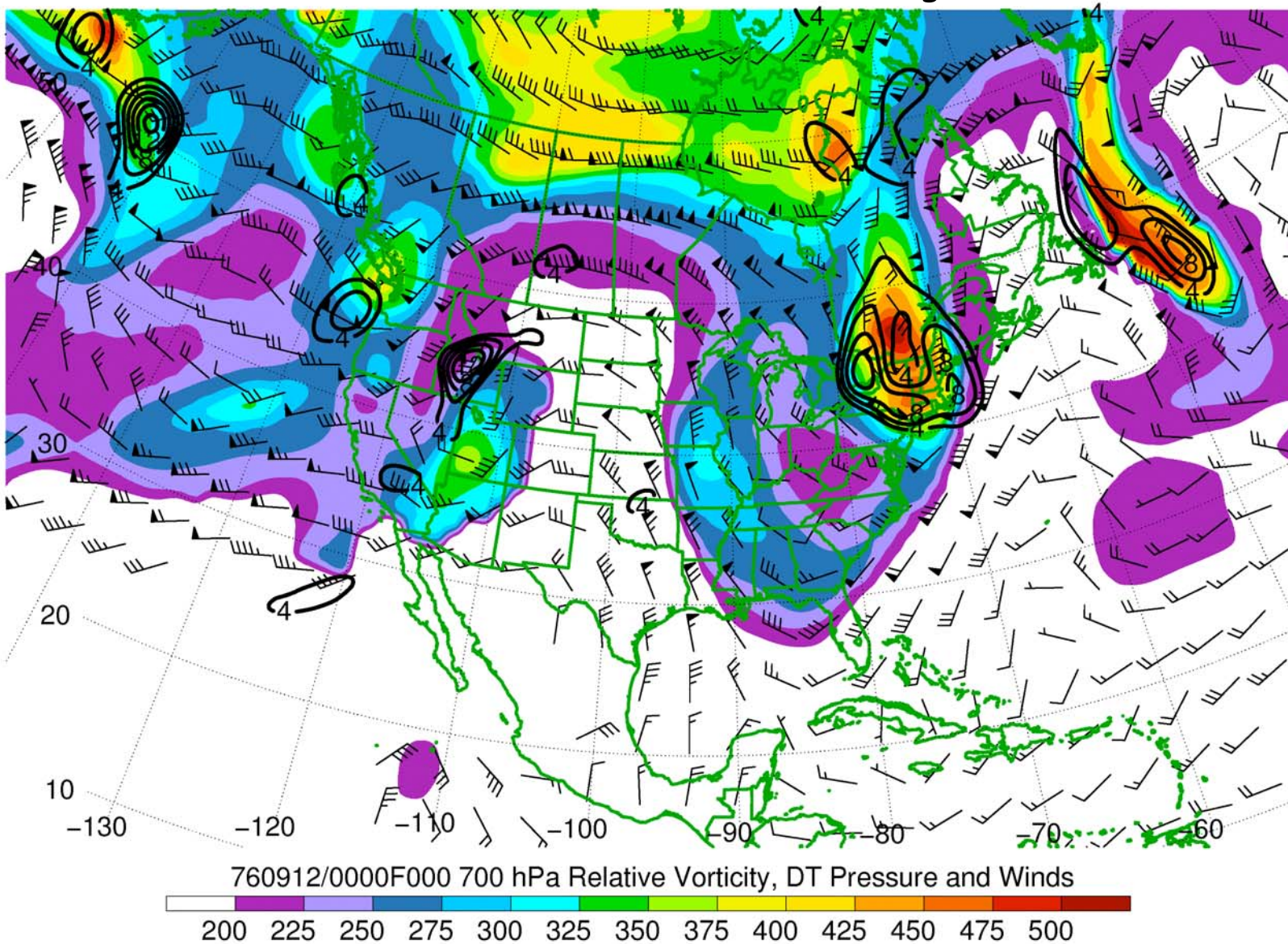
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



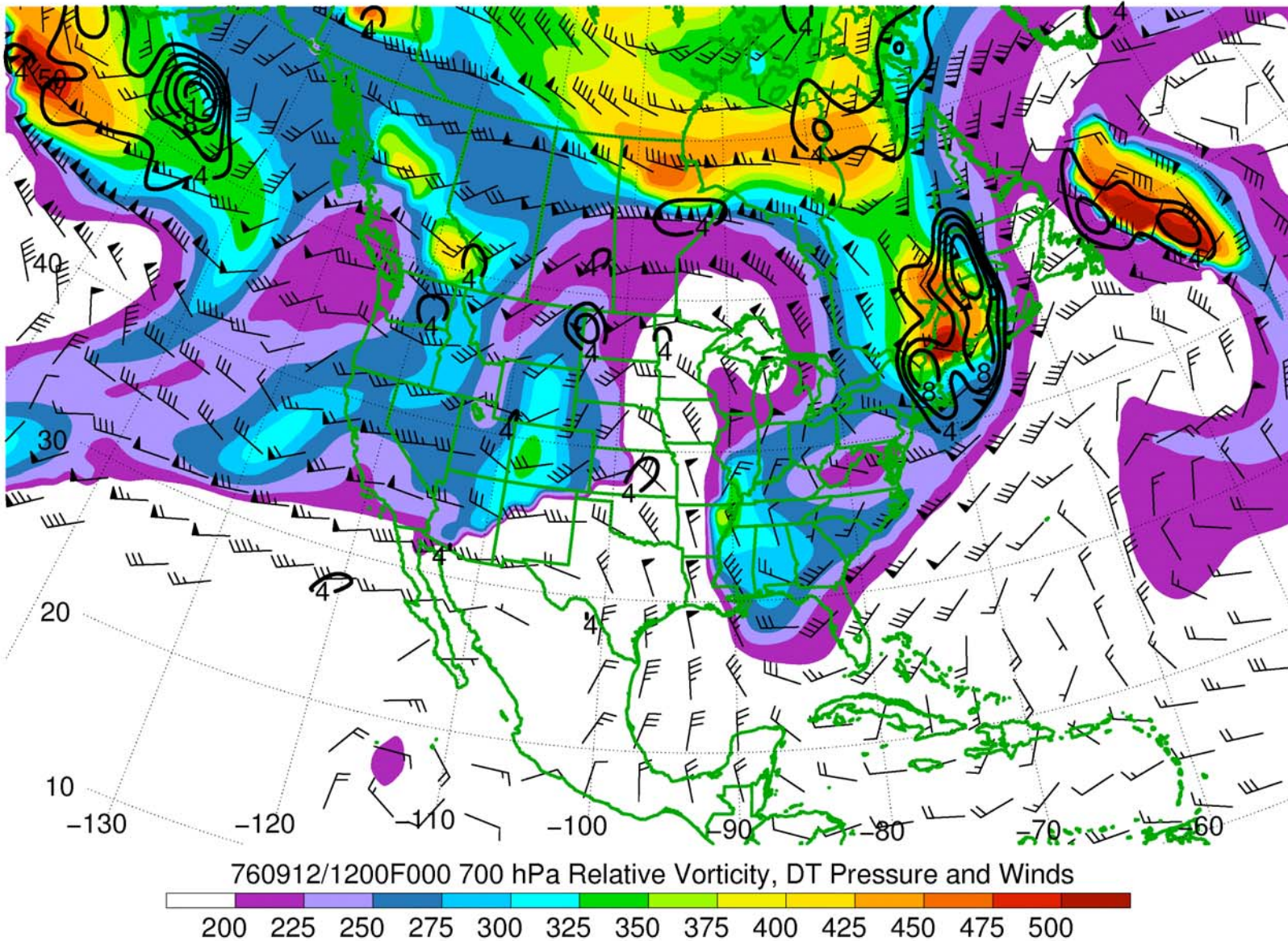
760911/1200F000 700 hPa Relative Vorticity, DT Pressure and Winds



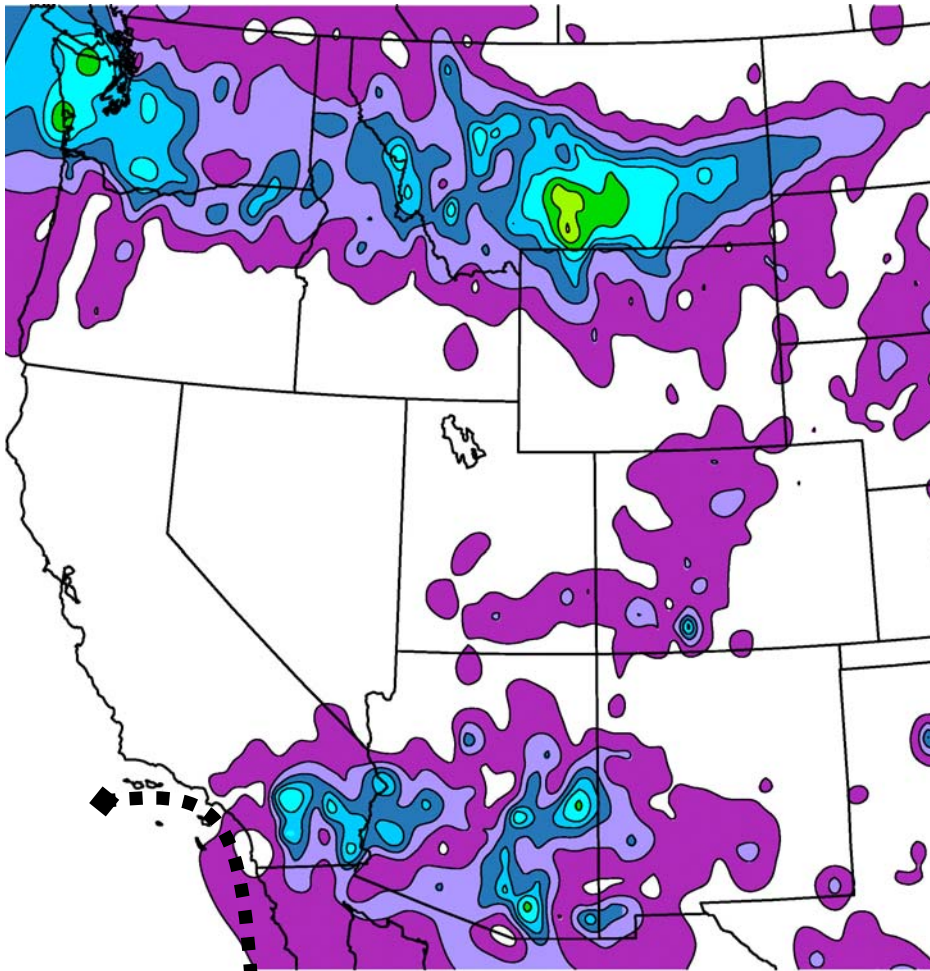
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



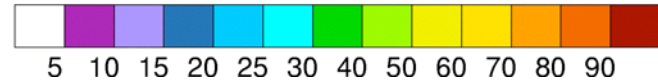
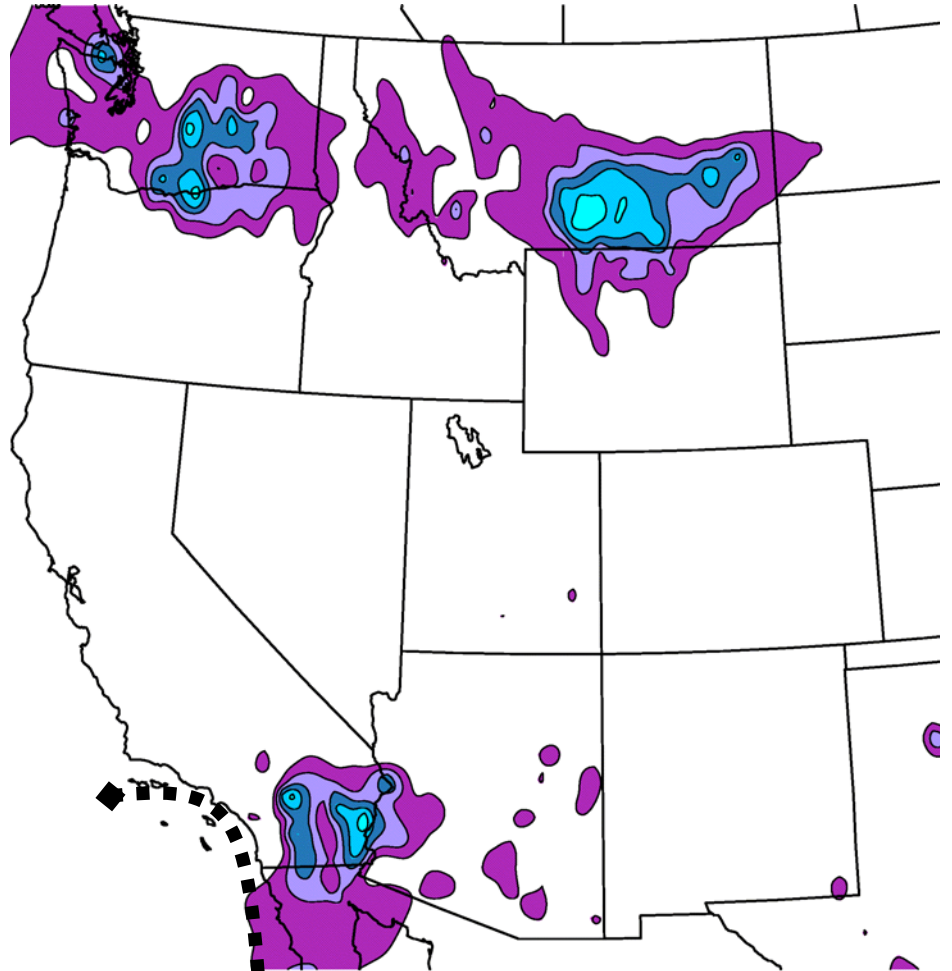
ERA40 Reanalysis DT pressure, DT winds, and 700 hPa relative vorticity



Hurricane Manuel 1983

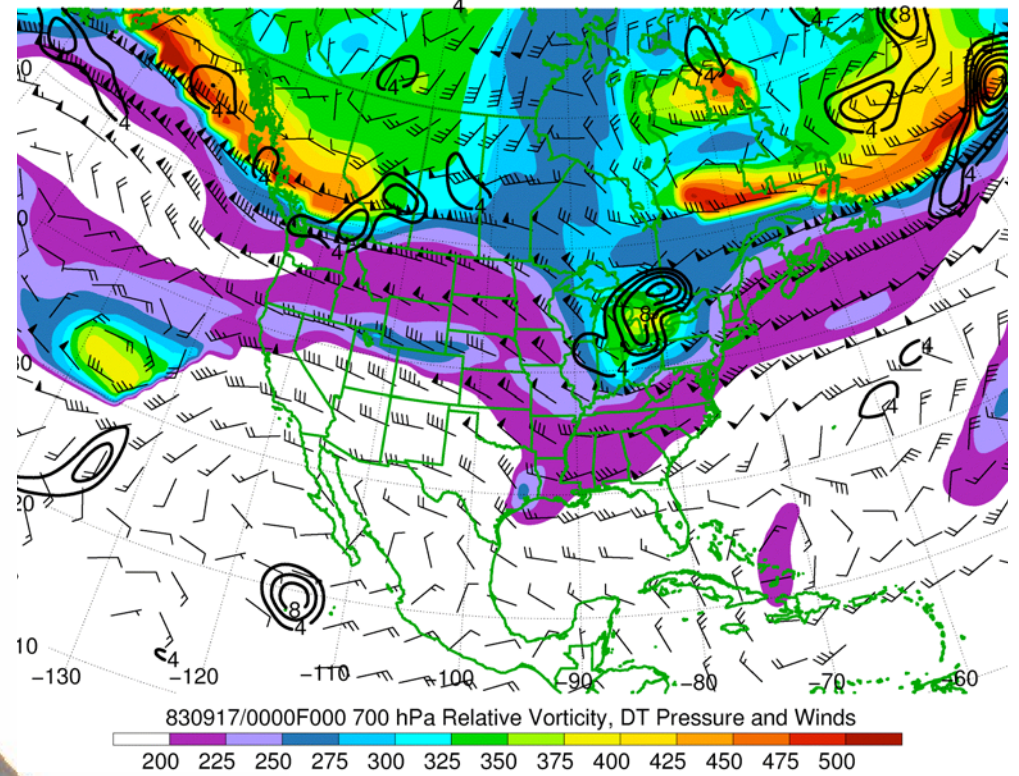
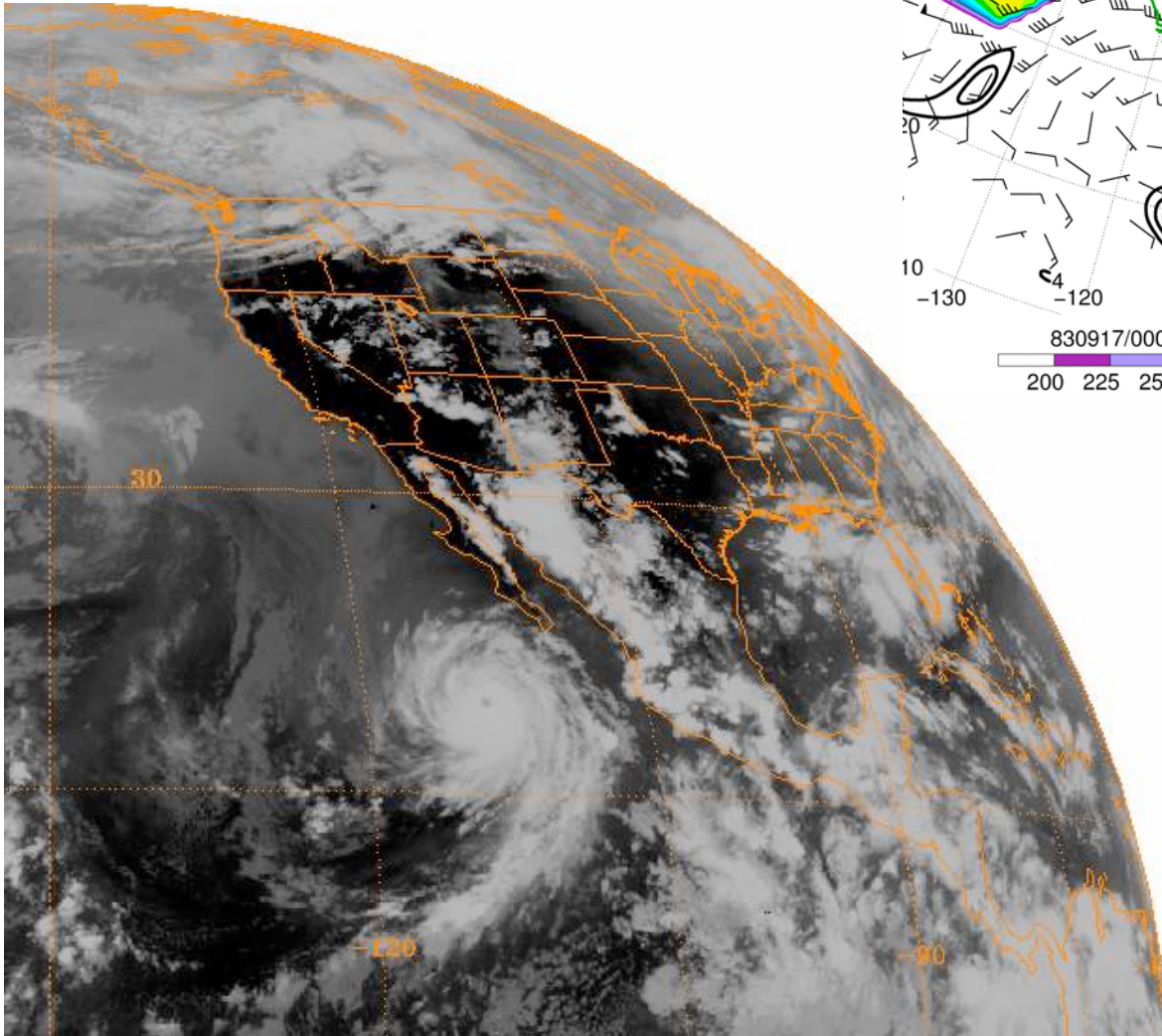


**Storm total
precipitation (mm)**



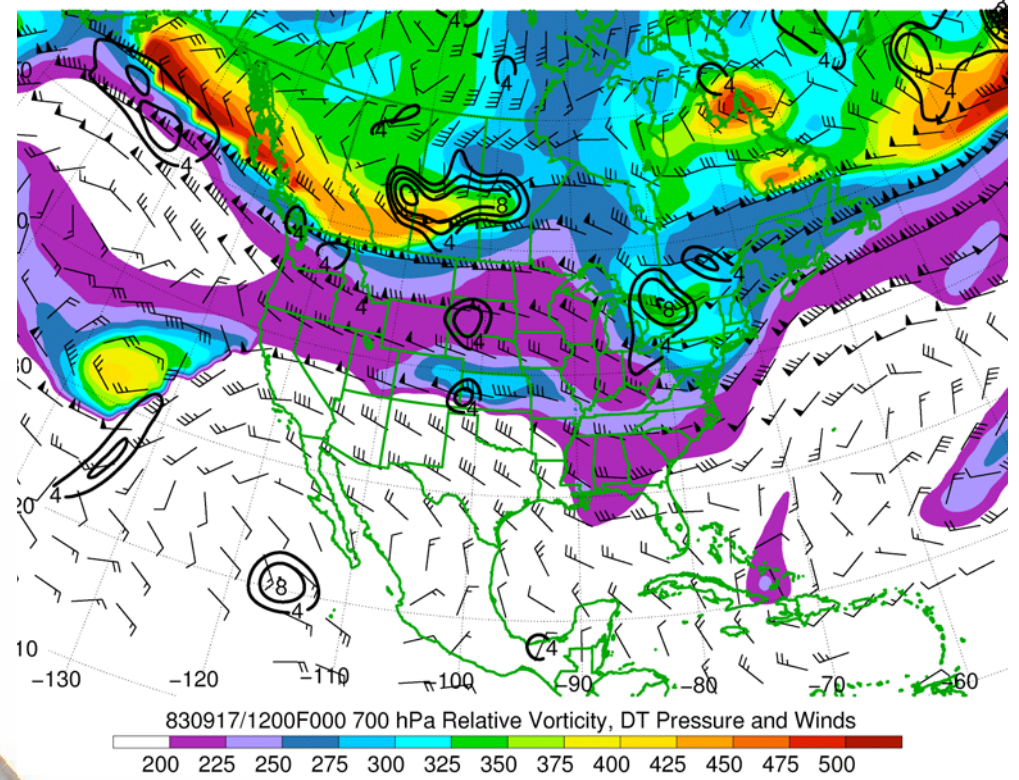
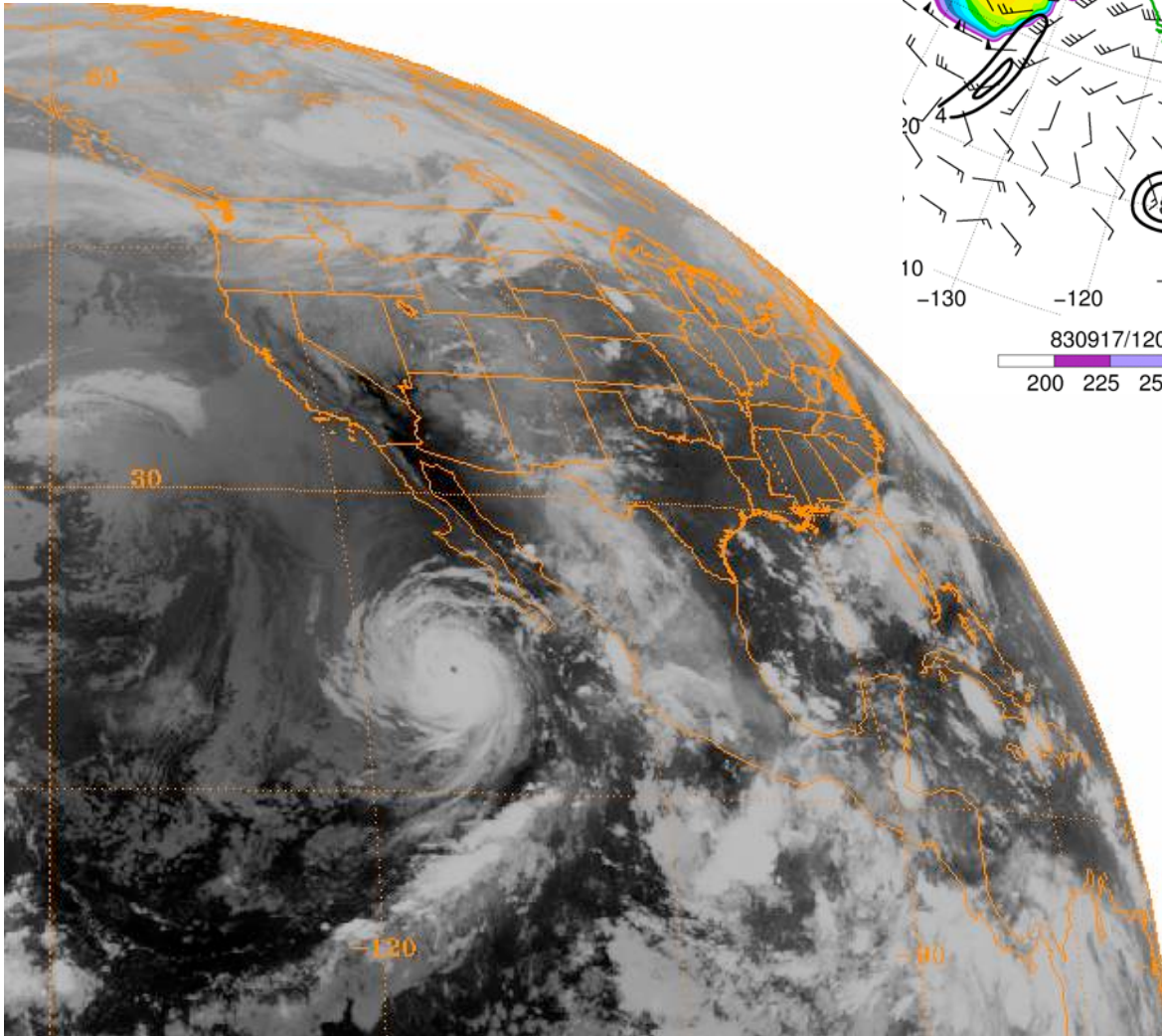
**Storm contribution to
warm season rainfall (%)**

**GOES-6
IR
16 September
23:45 UTC**



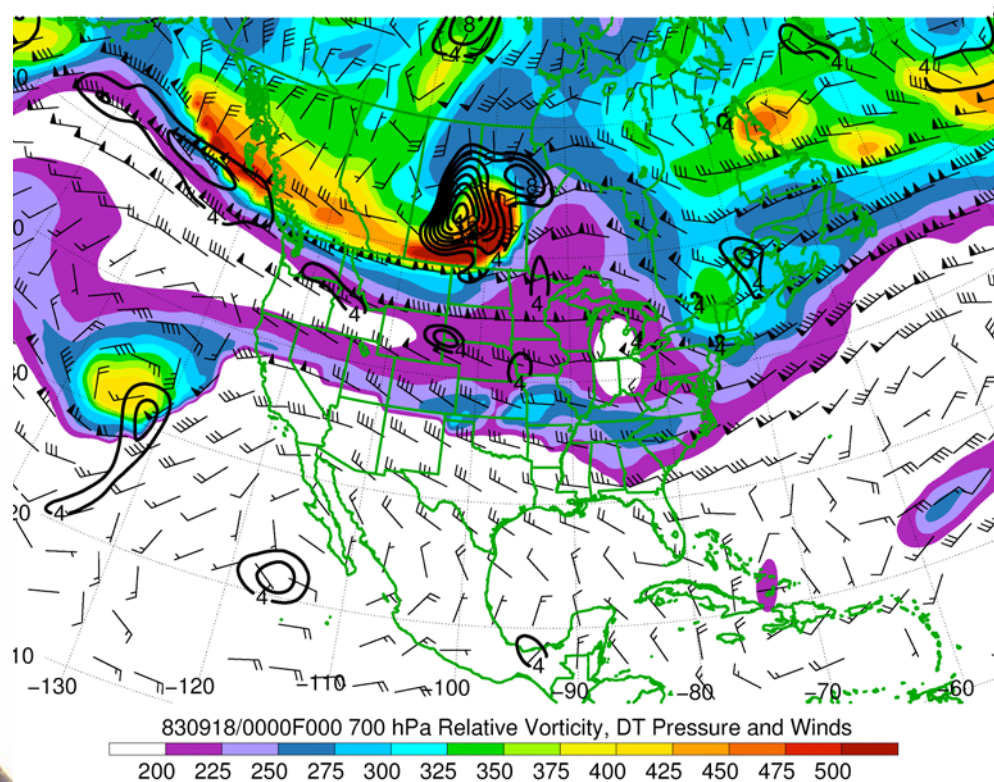
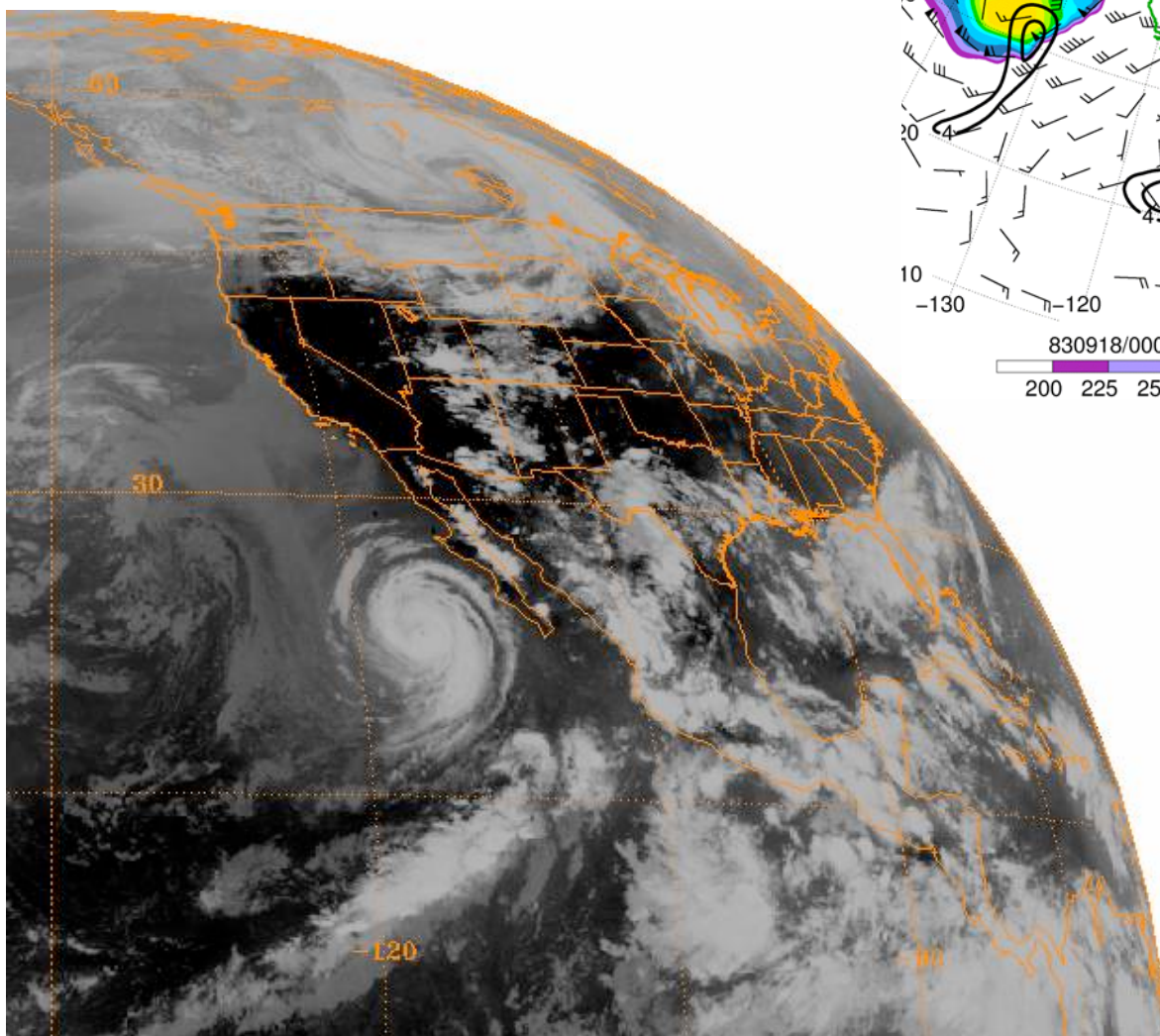
**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**

**GOES-6
IR
17 September
11:45 UTC**



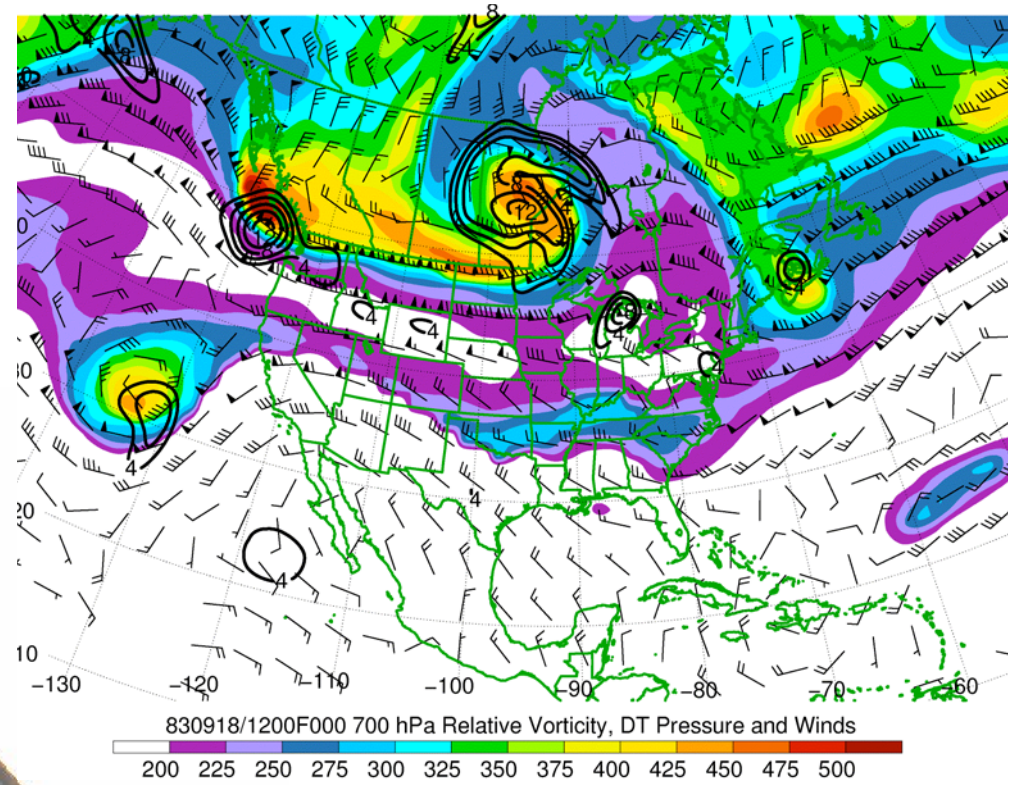
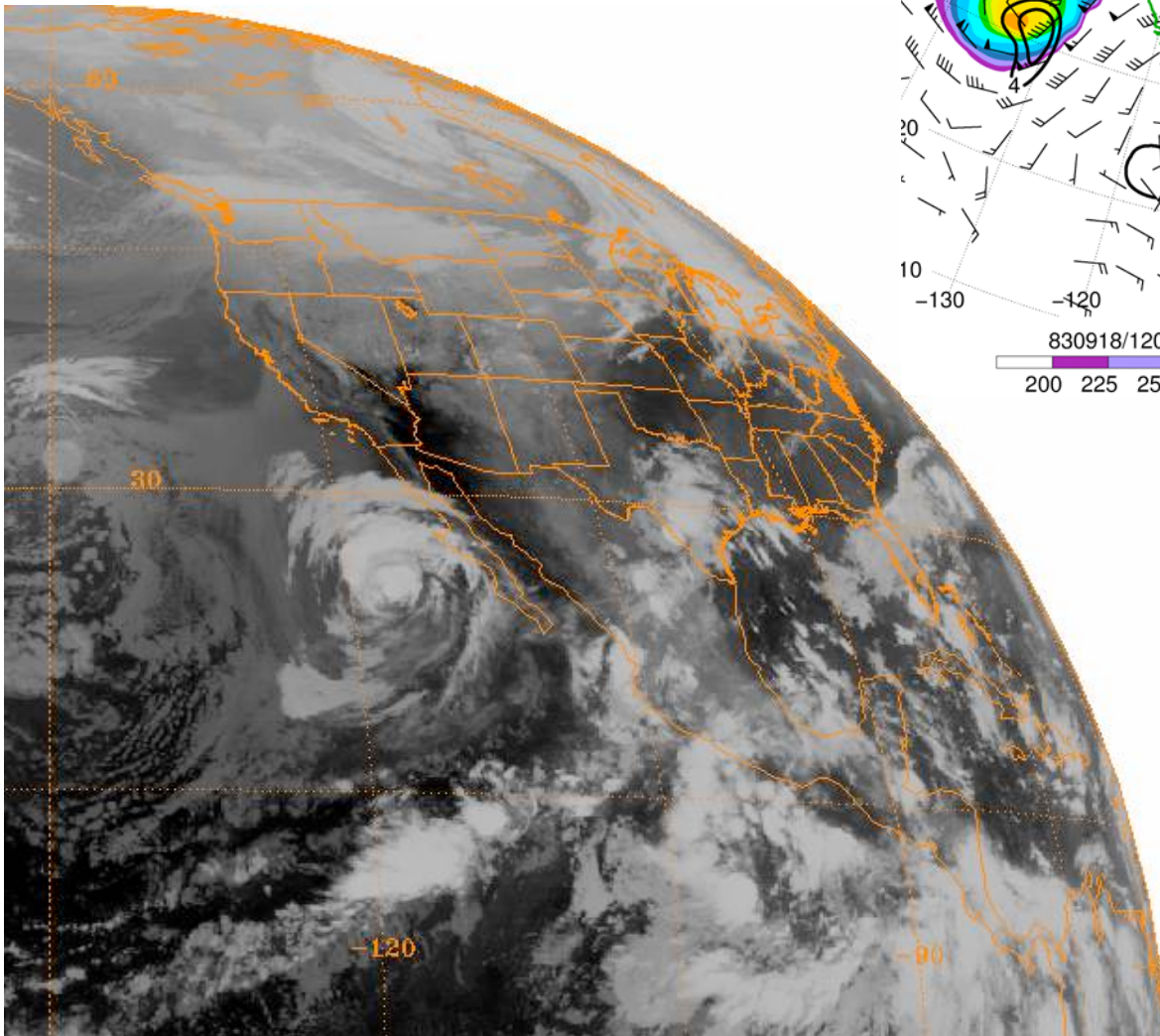
**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**

**GOES-6
IR
17 September
23:45 UTC**



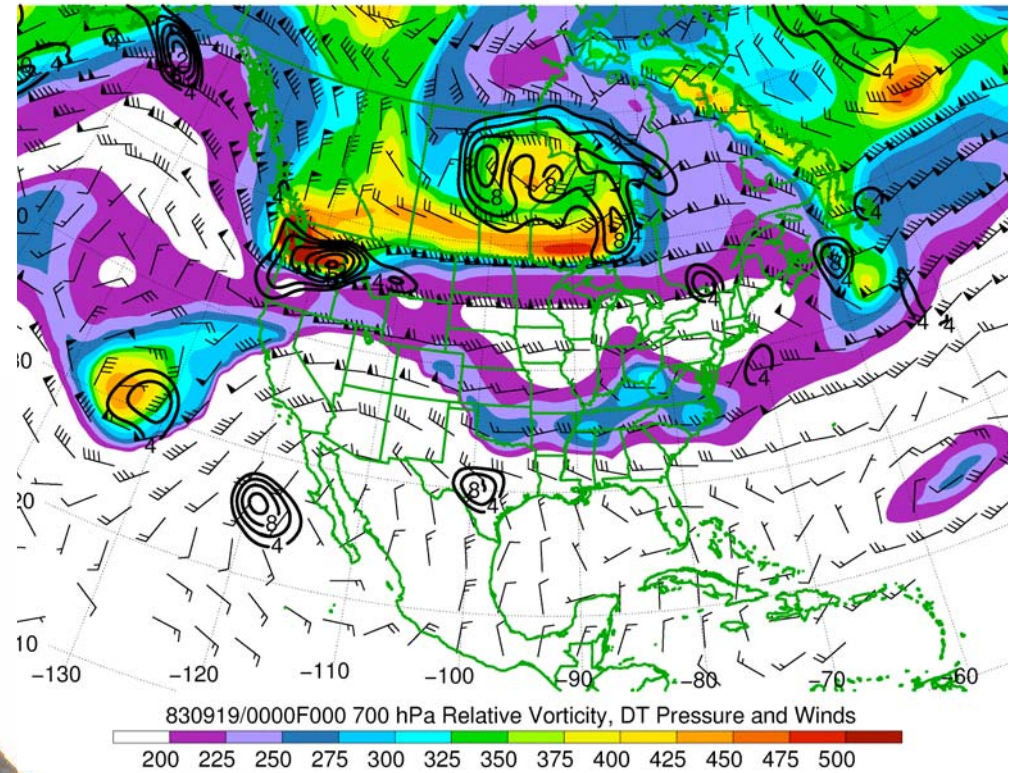
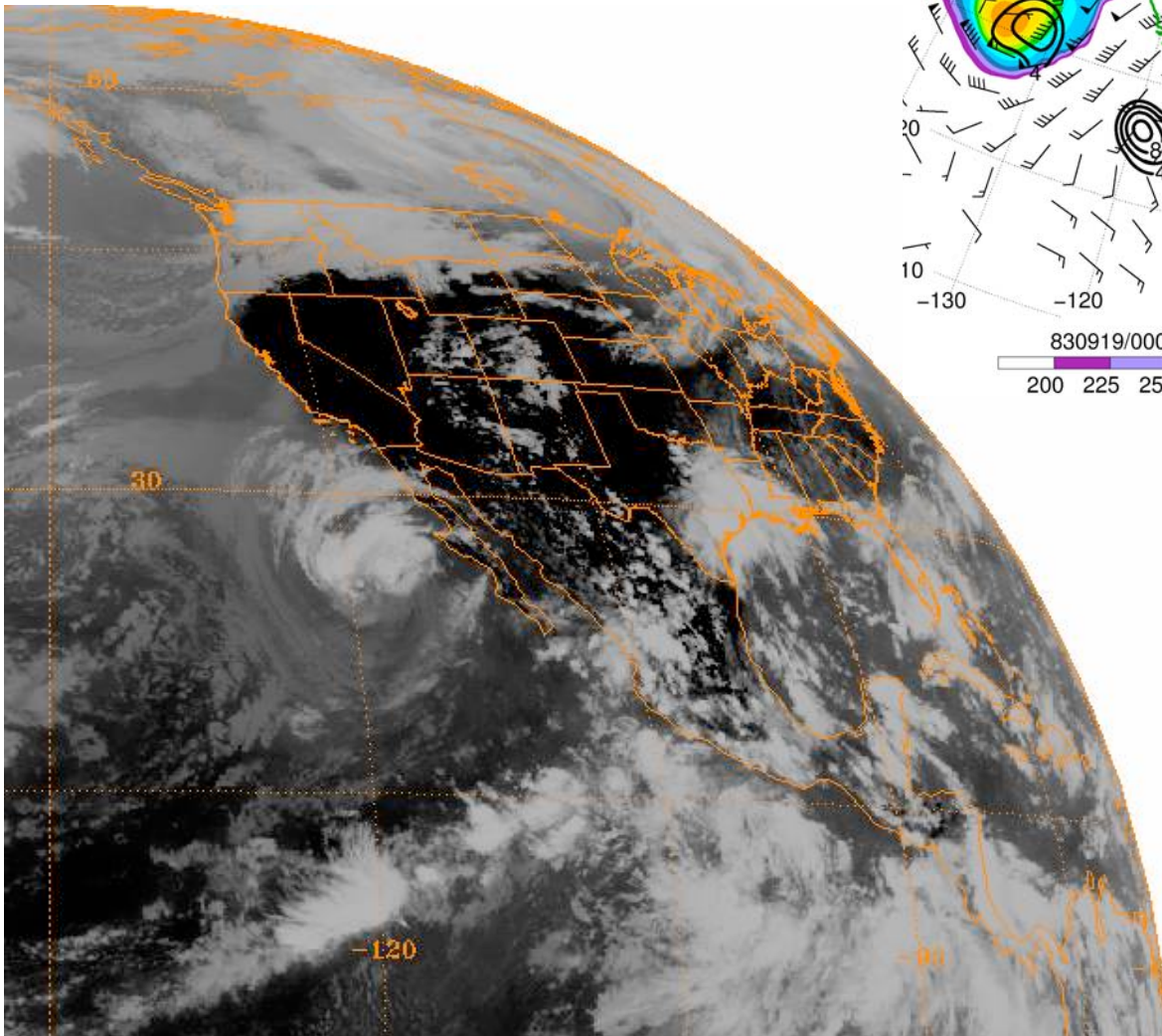
**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**

**GOES-6
IR
18 September
11:45 UTC**



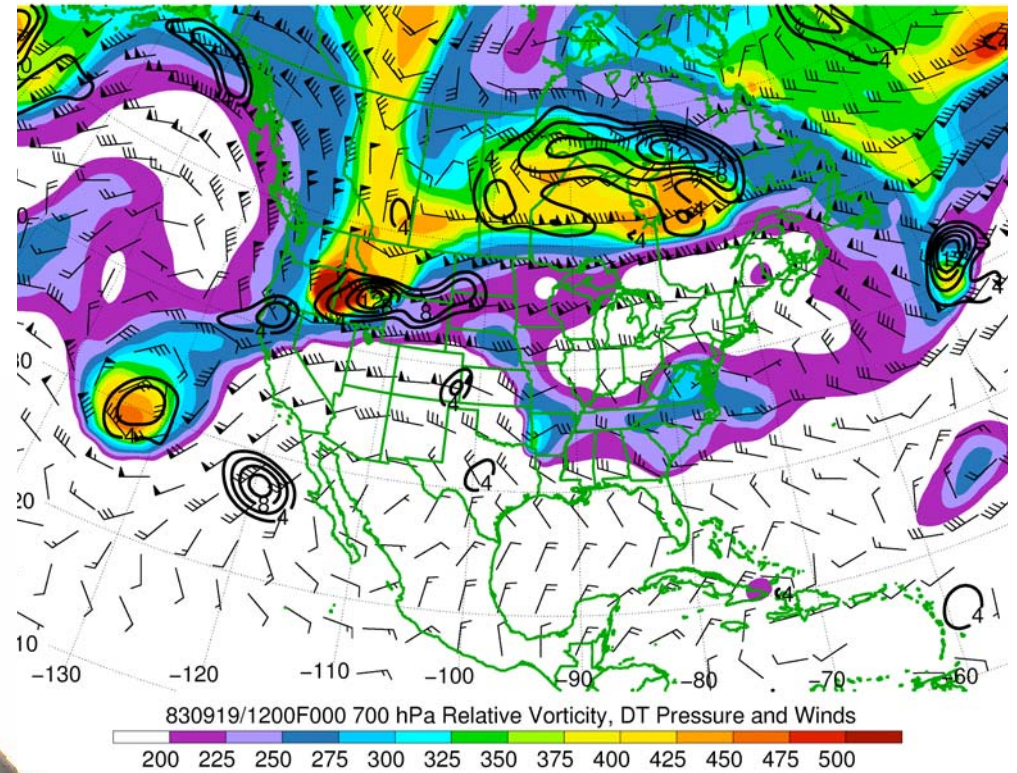
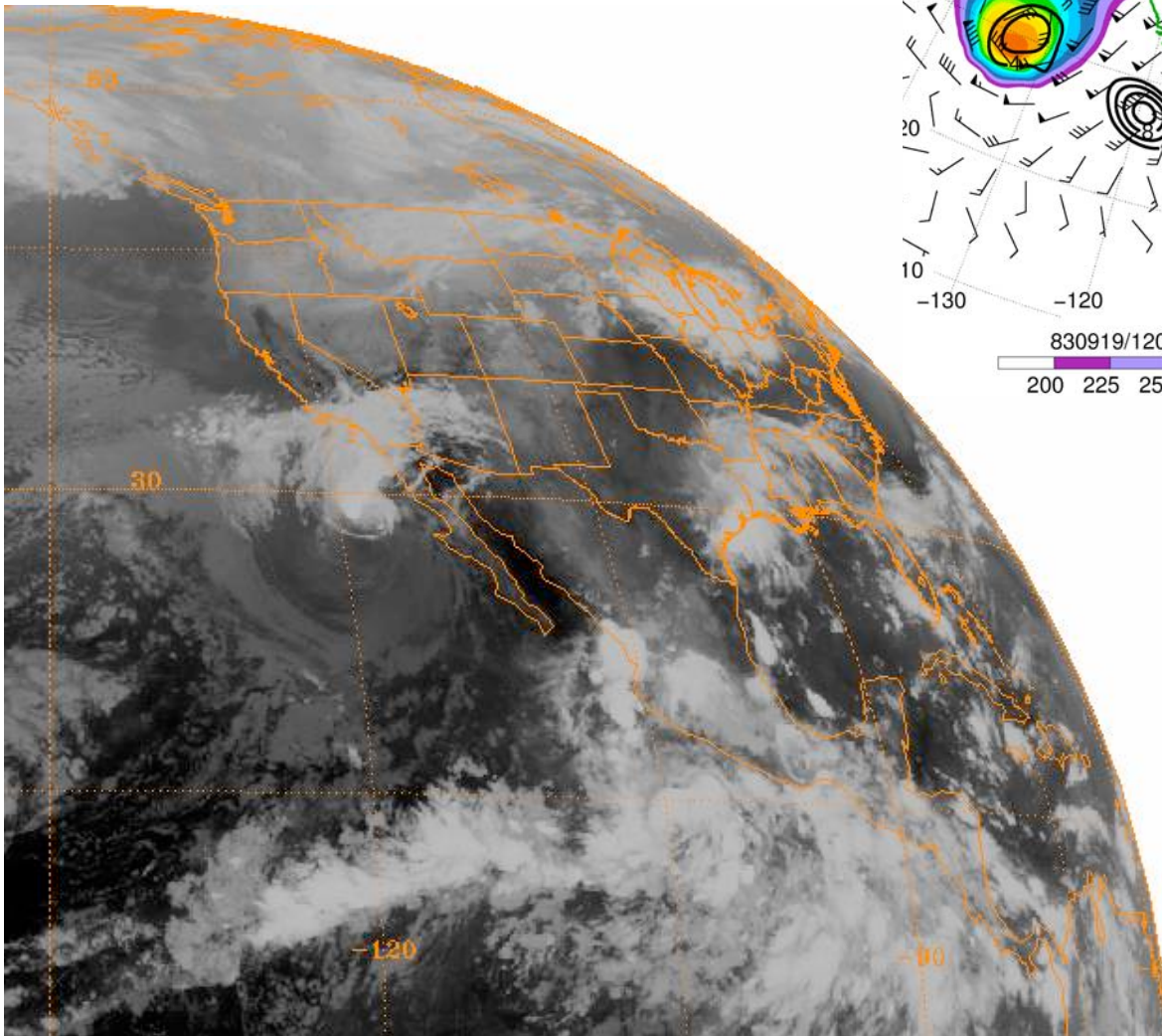
**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**

**GOES-6
IR
18 September
20:45 UTC**



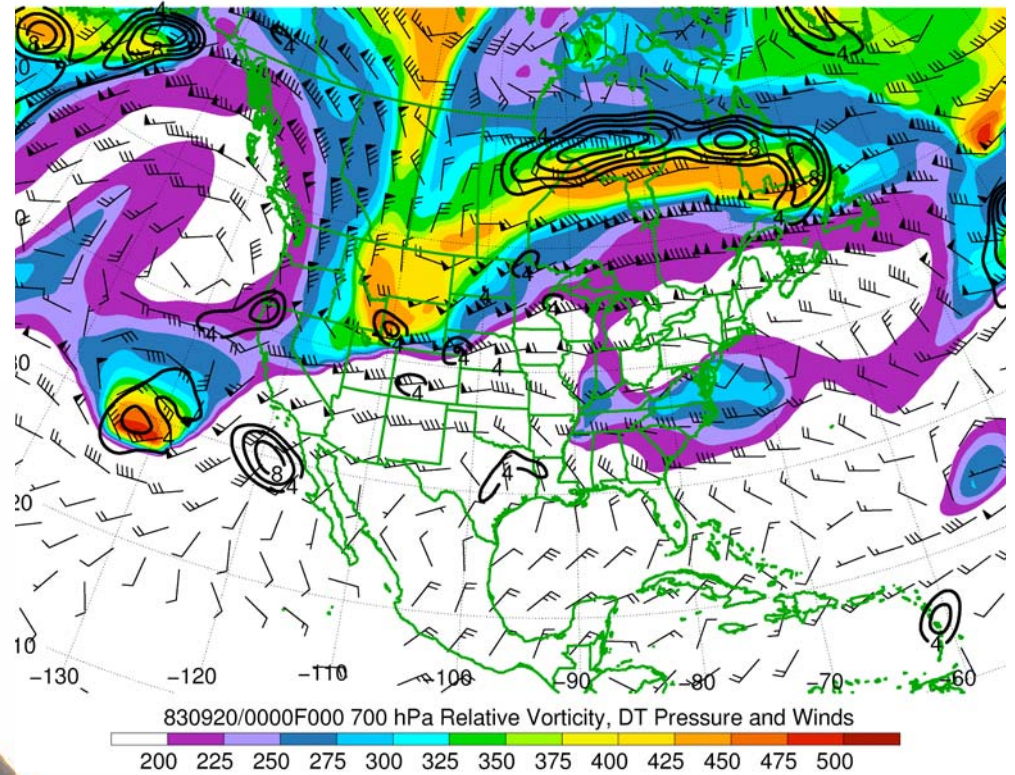
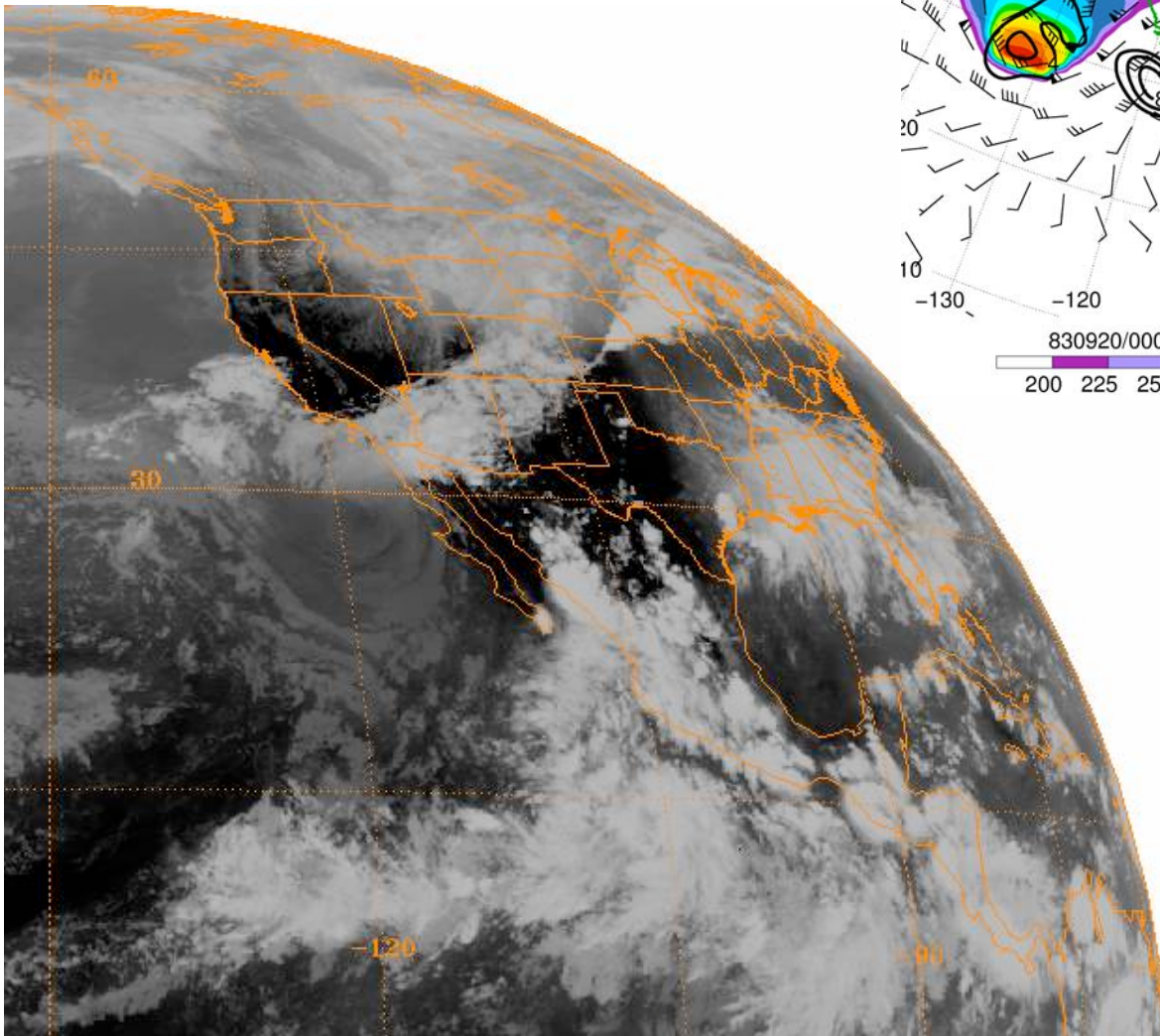
**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**

**GOES-6
IR
19 September
11:45 UTC**



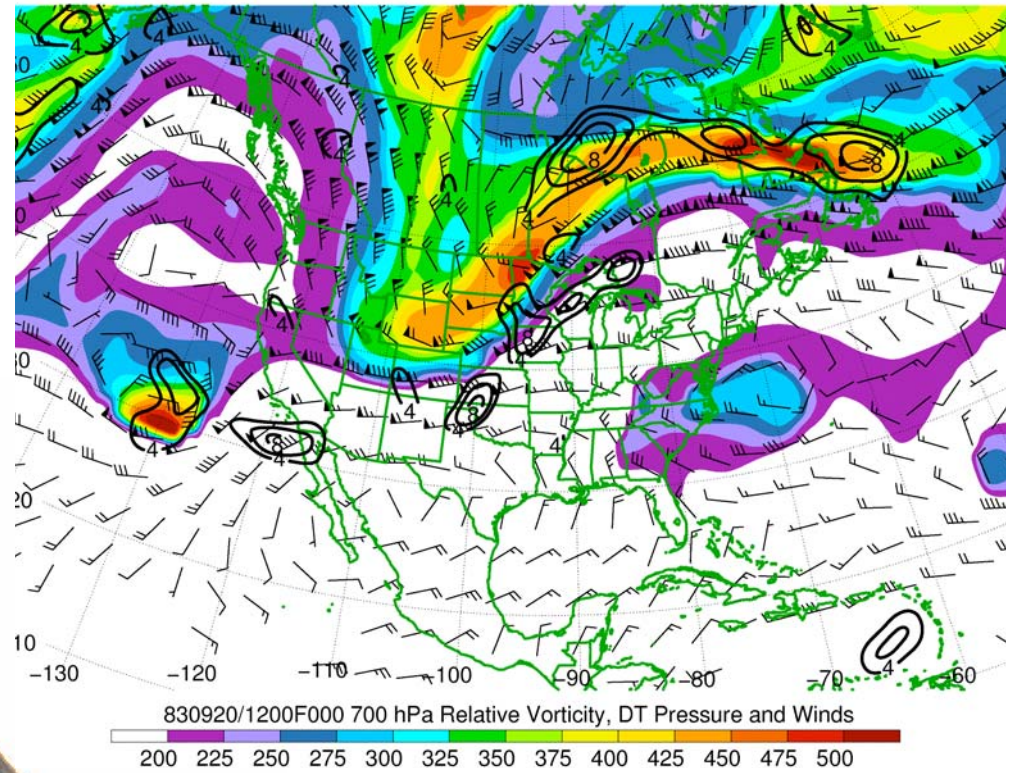
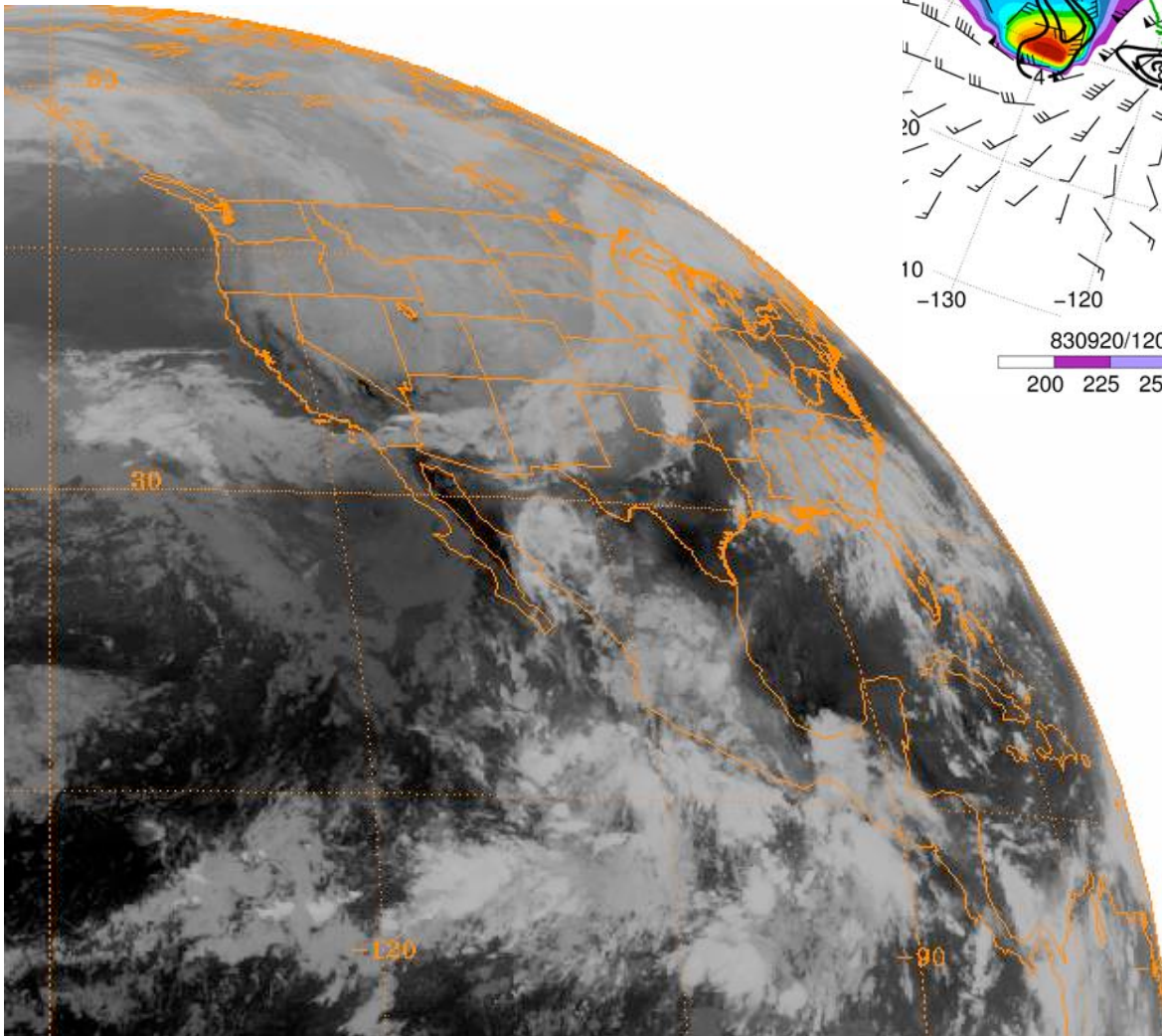
**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**

**GOES-6
IR
19 September
23:45 UTC**



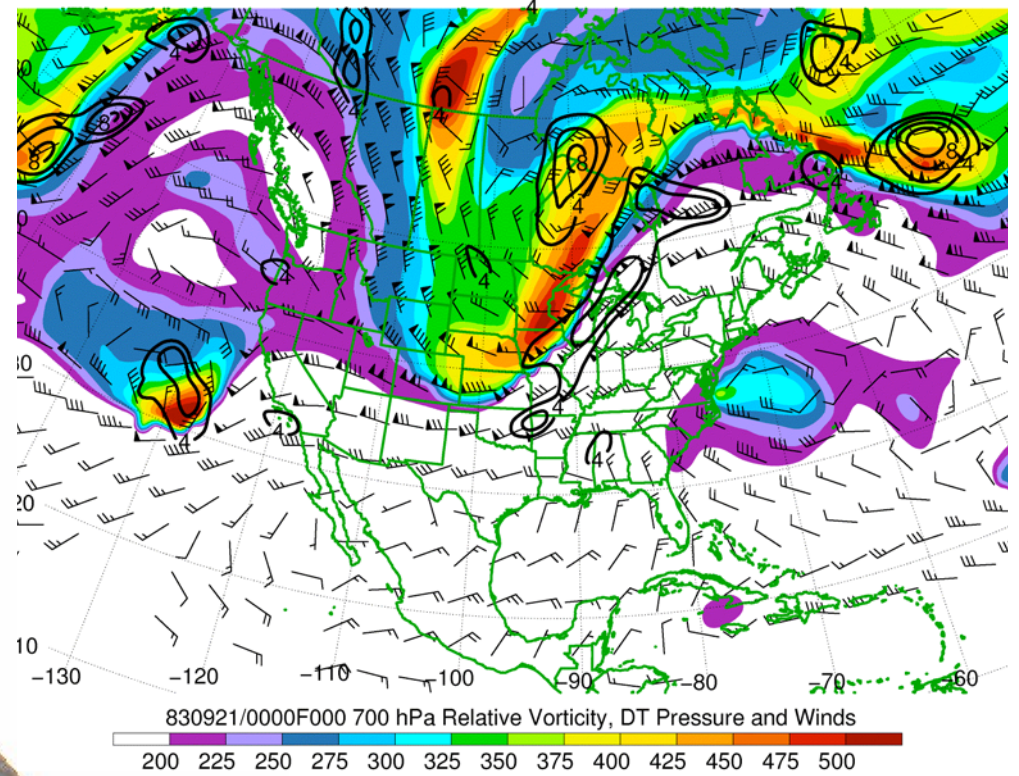
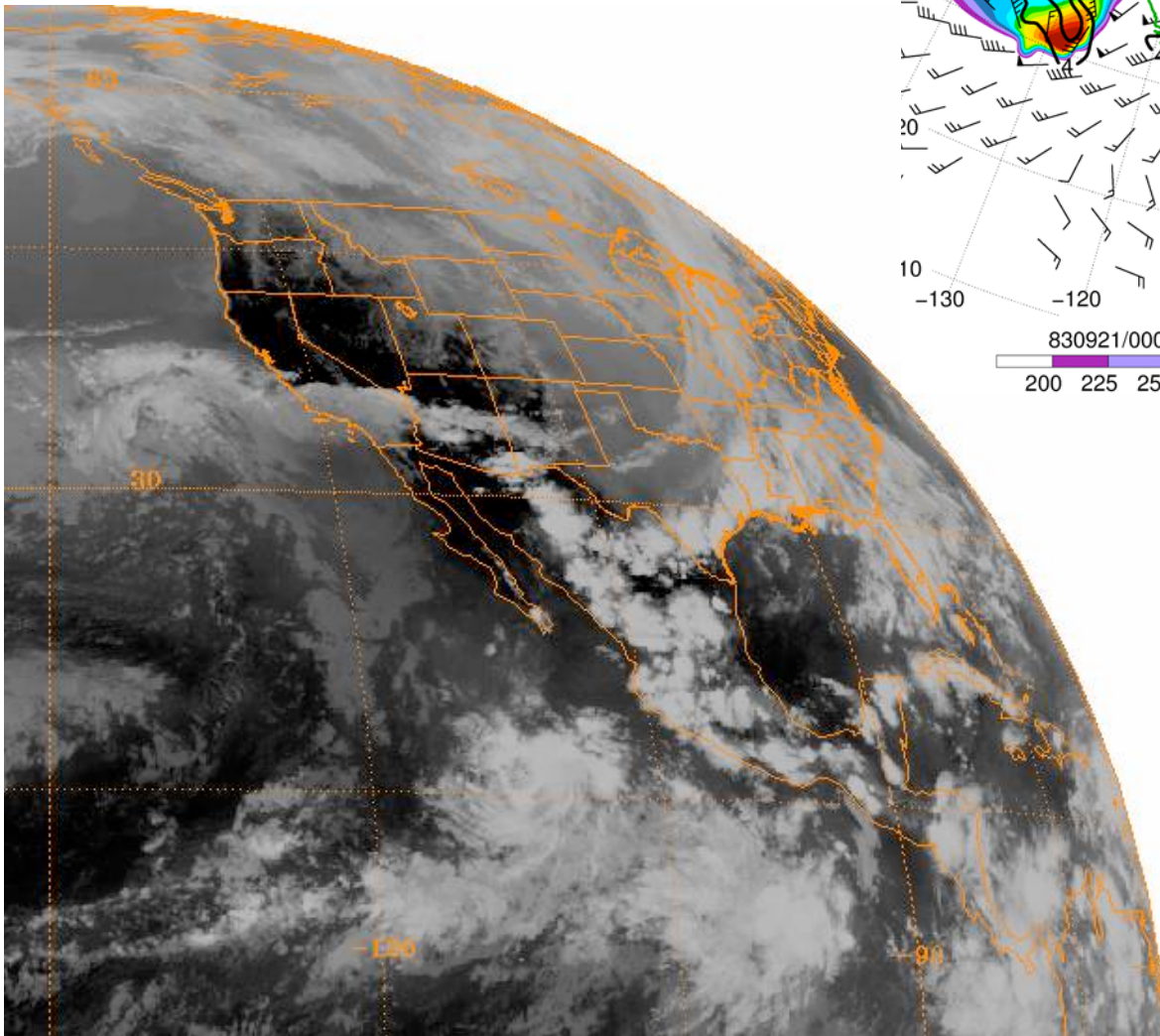
**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**

**GOES-6
IR
20 September
11:45 UTC**



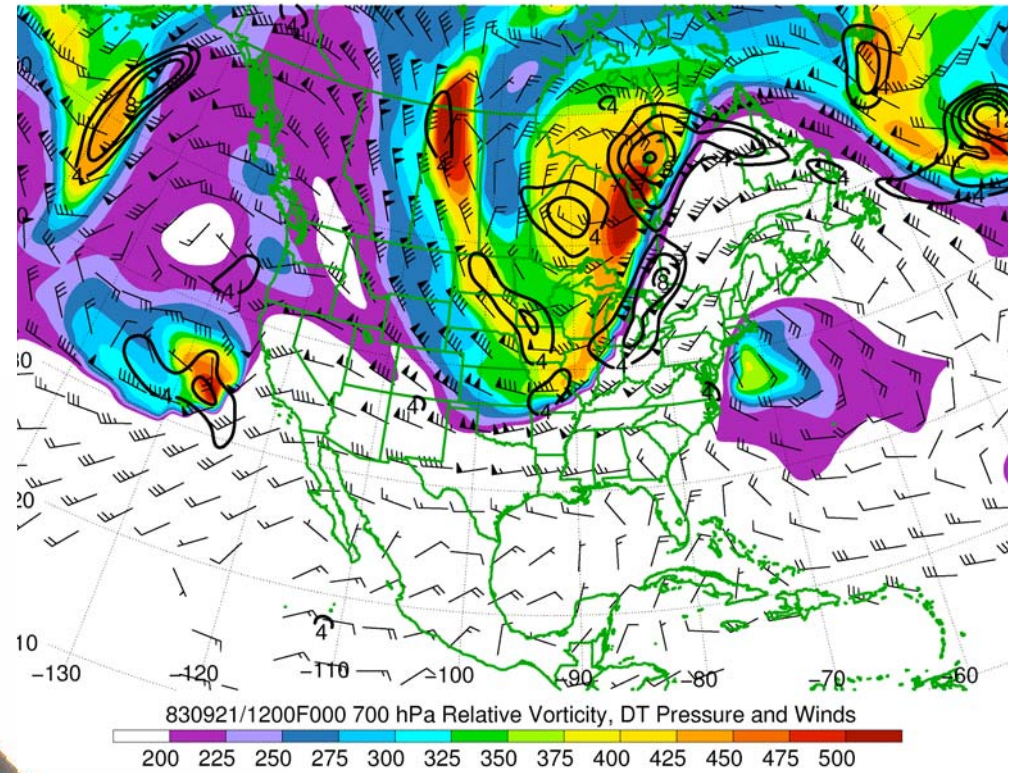
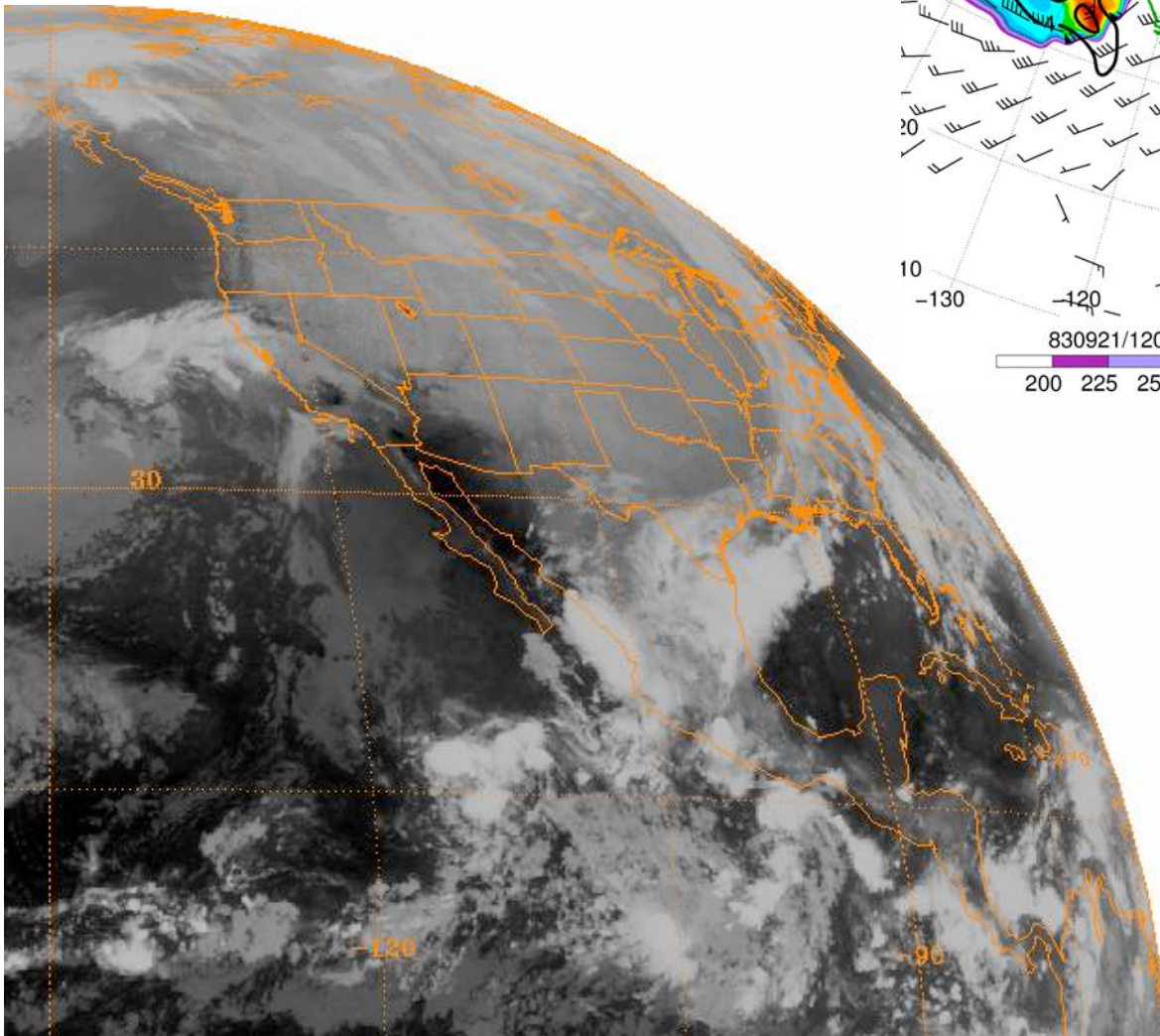
**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**

**GOES-6
IR
20 September
23:45 UTC**



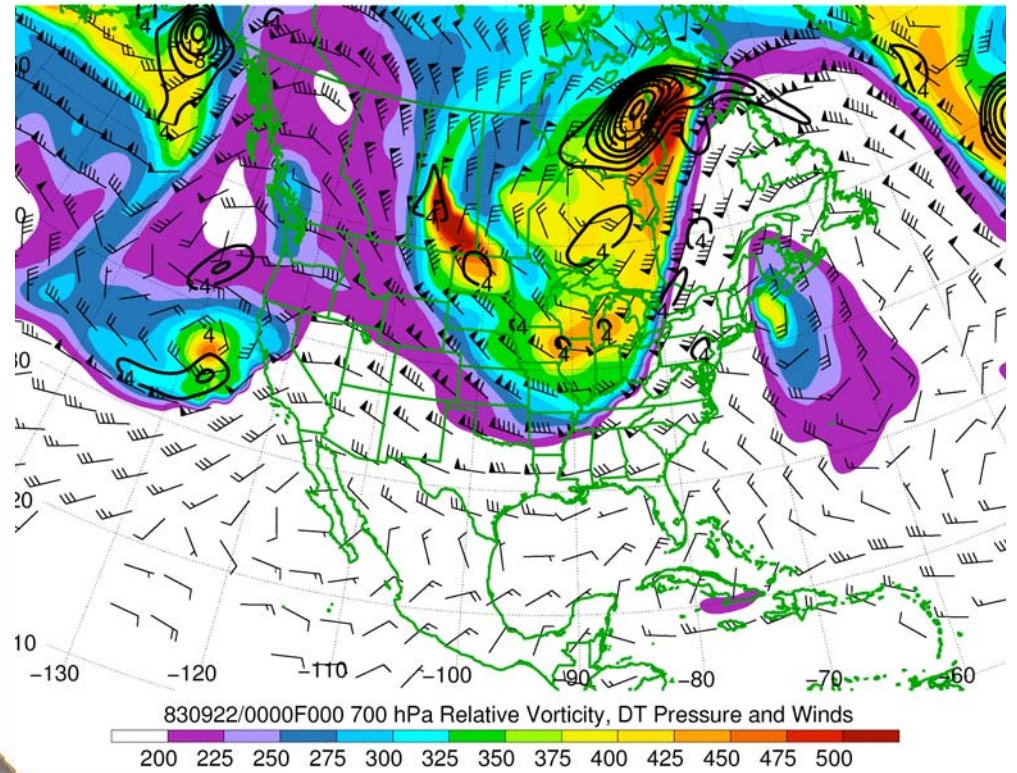
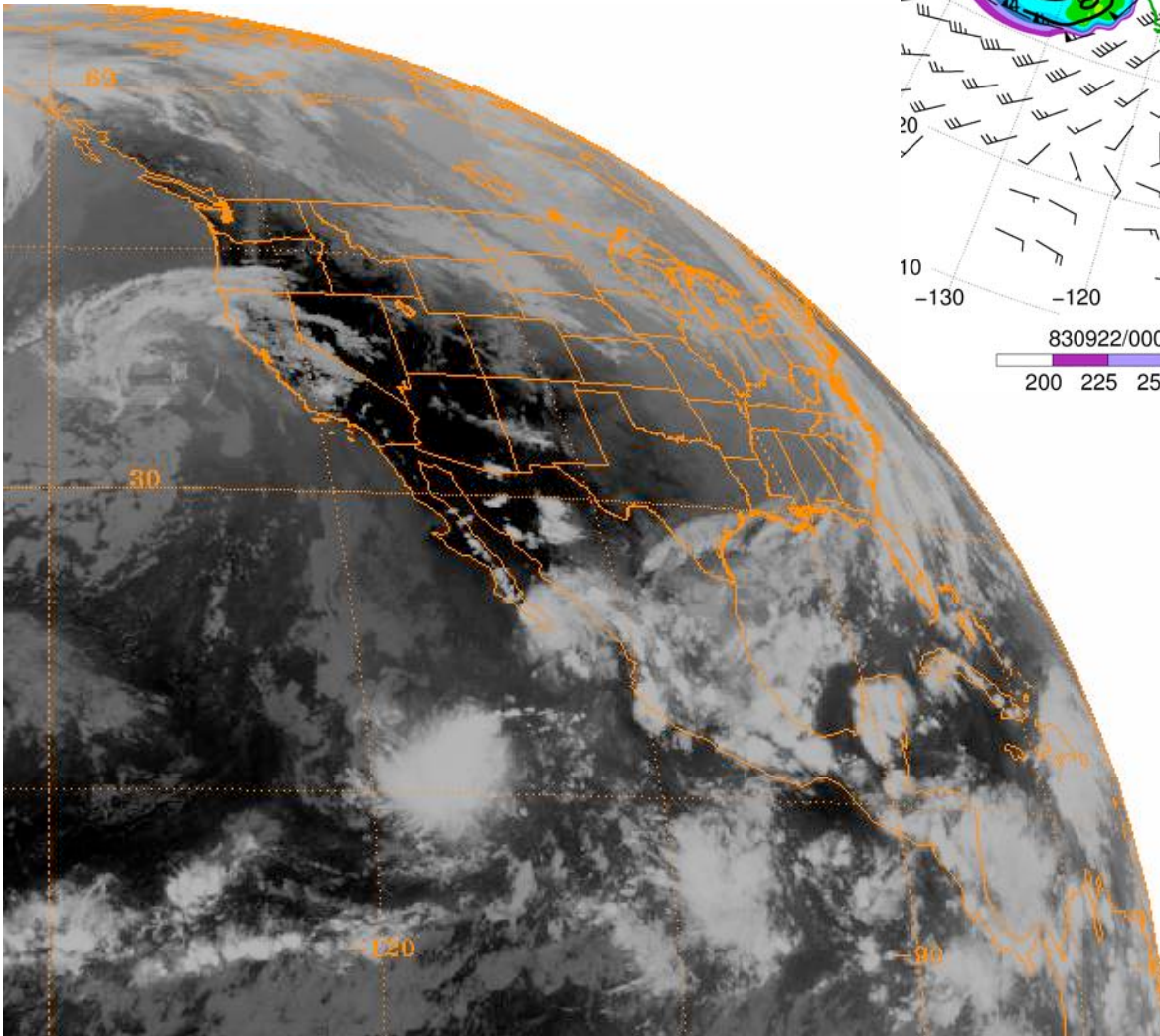
**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**

**GOES-6
IR
21 September
11:45 UTC**

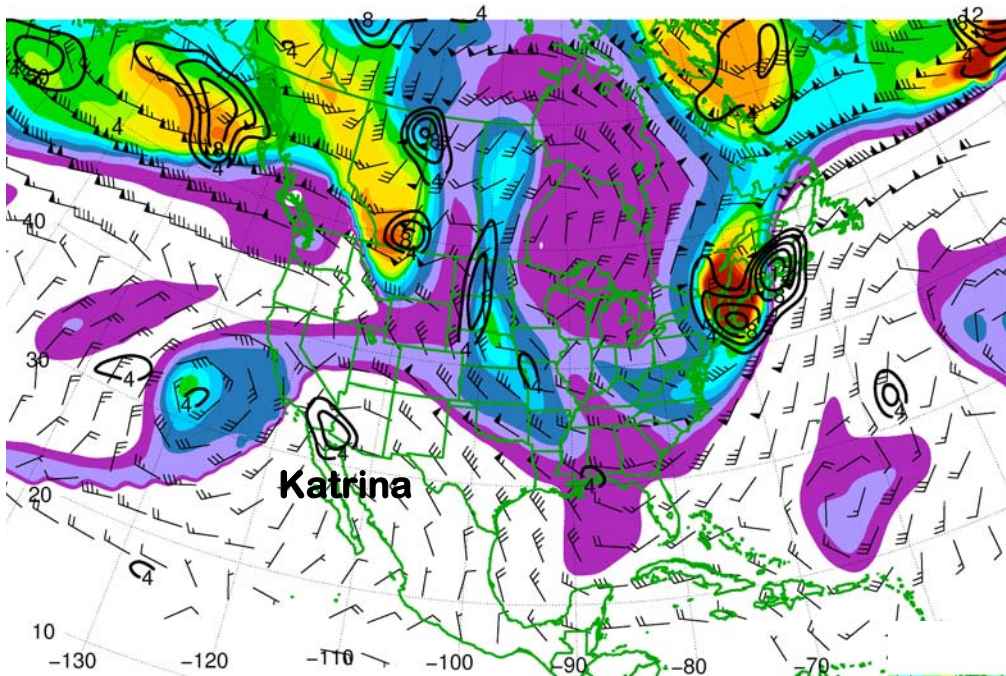


**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**

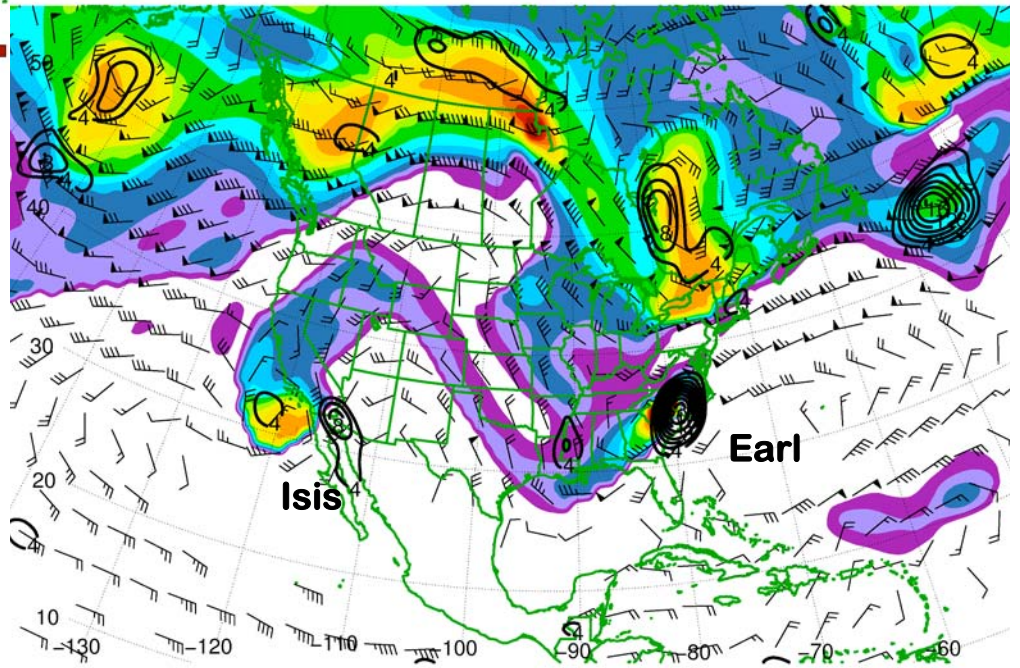
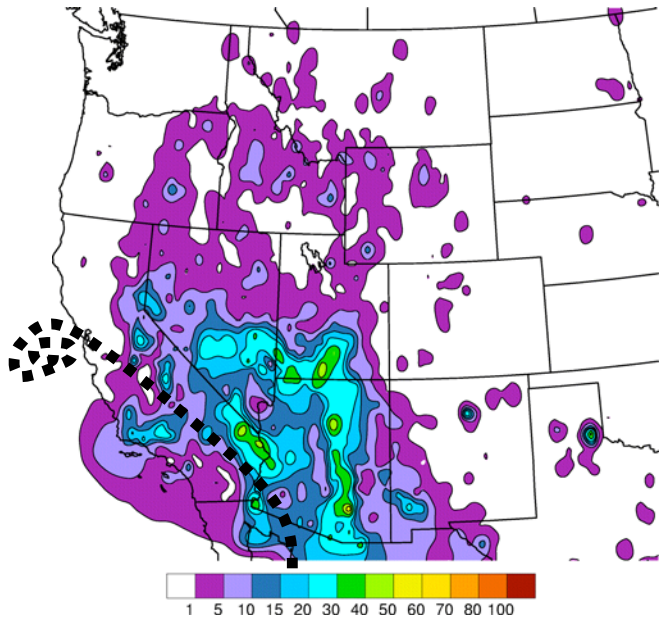
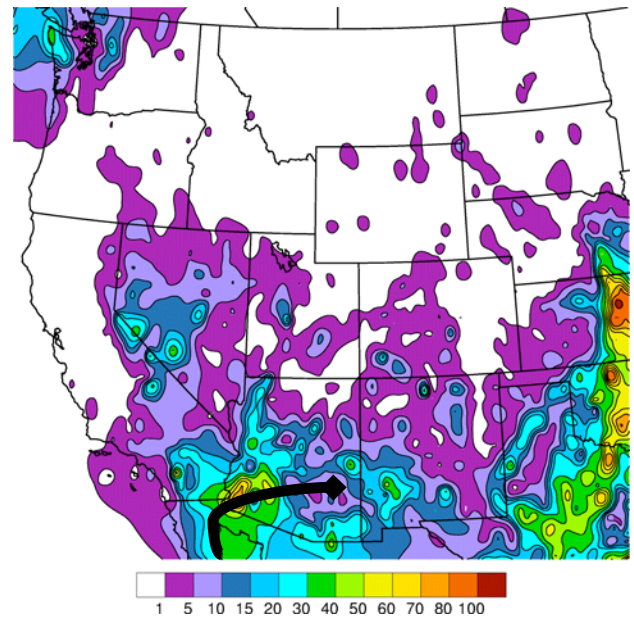
**GOES-6
IR
21 September
23:45 UTC**



**ERA40 Reanalysis
DT pressure,
DT winds, and
700 hPa relative
vorticity**



670902/1800F000 700 hPa Relative Vorticity, DT Pressure and Winds
 200 225 250 275 300 325 350 375 400 425 450 475 500

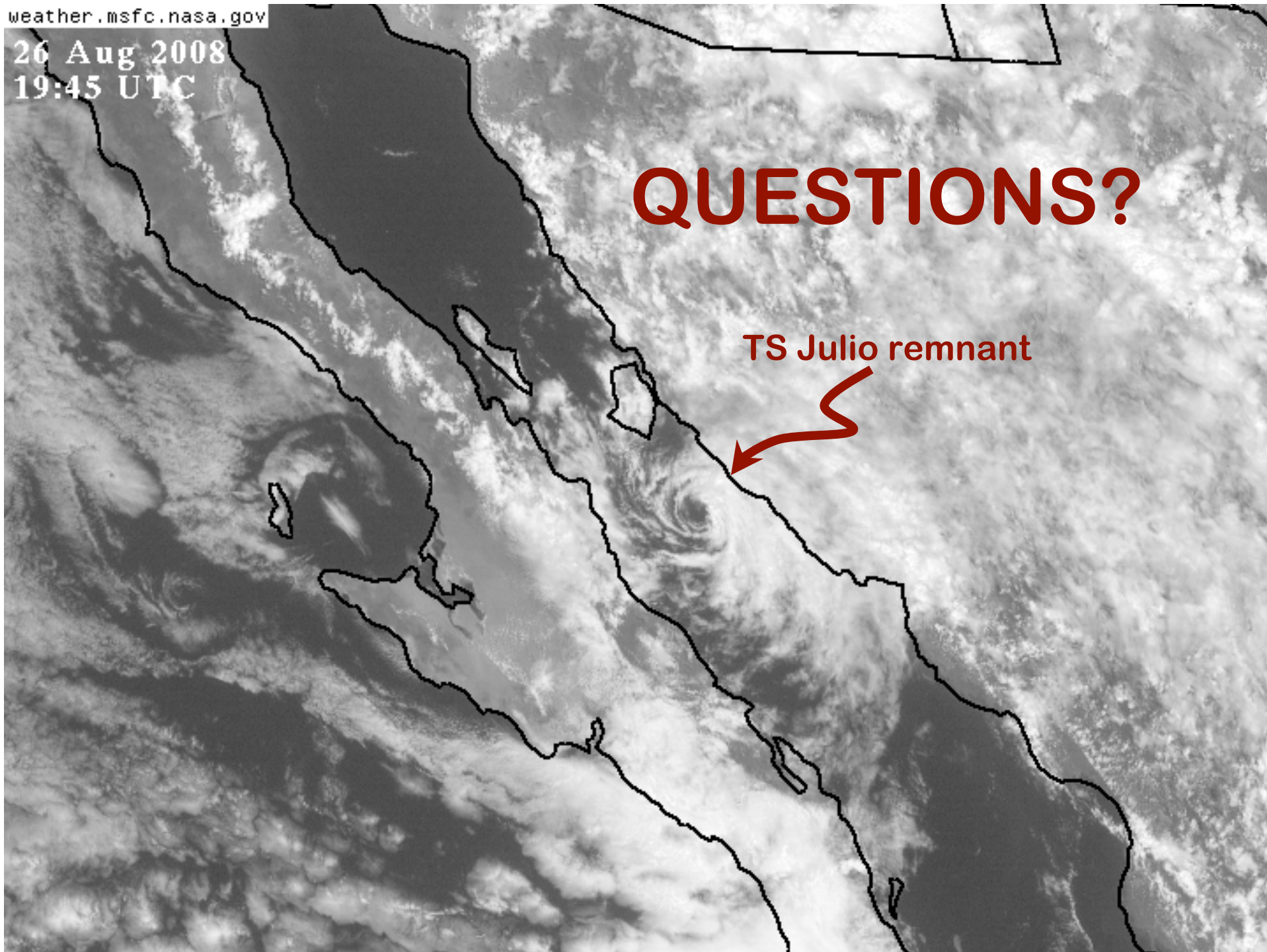


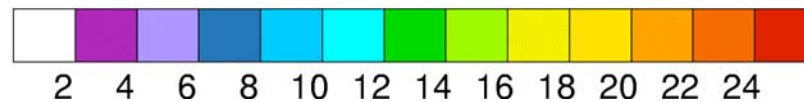
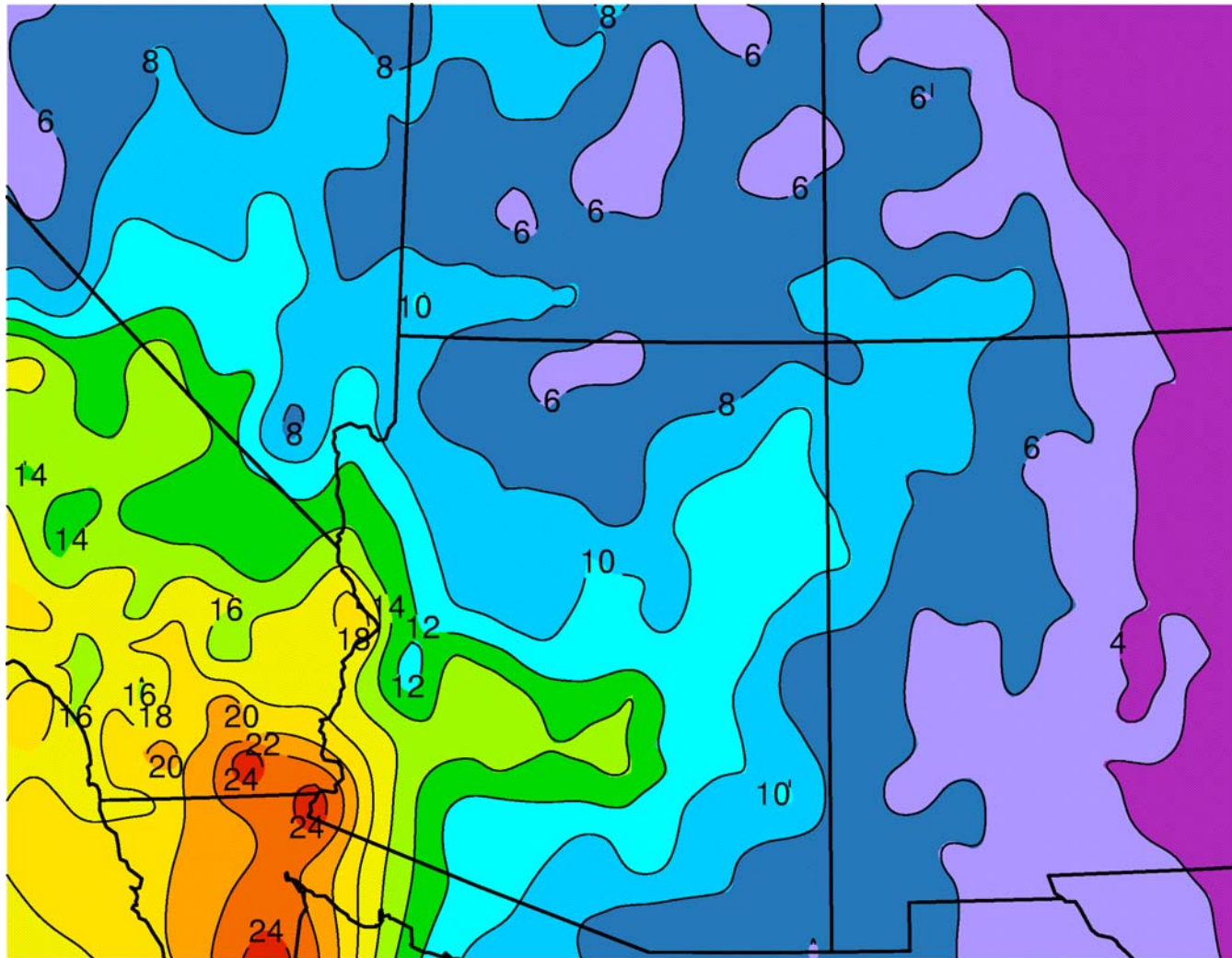
980904/0600F000 700 hPa Relative Vorticity, DT Pressure and Winds
 200 225 250 275 300 325 350 375 400 425 450 475 500

26 Aug 2008
19:45 UTC

QUESTIONS?

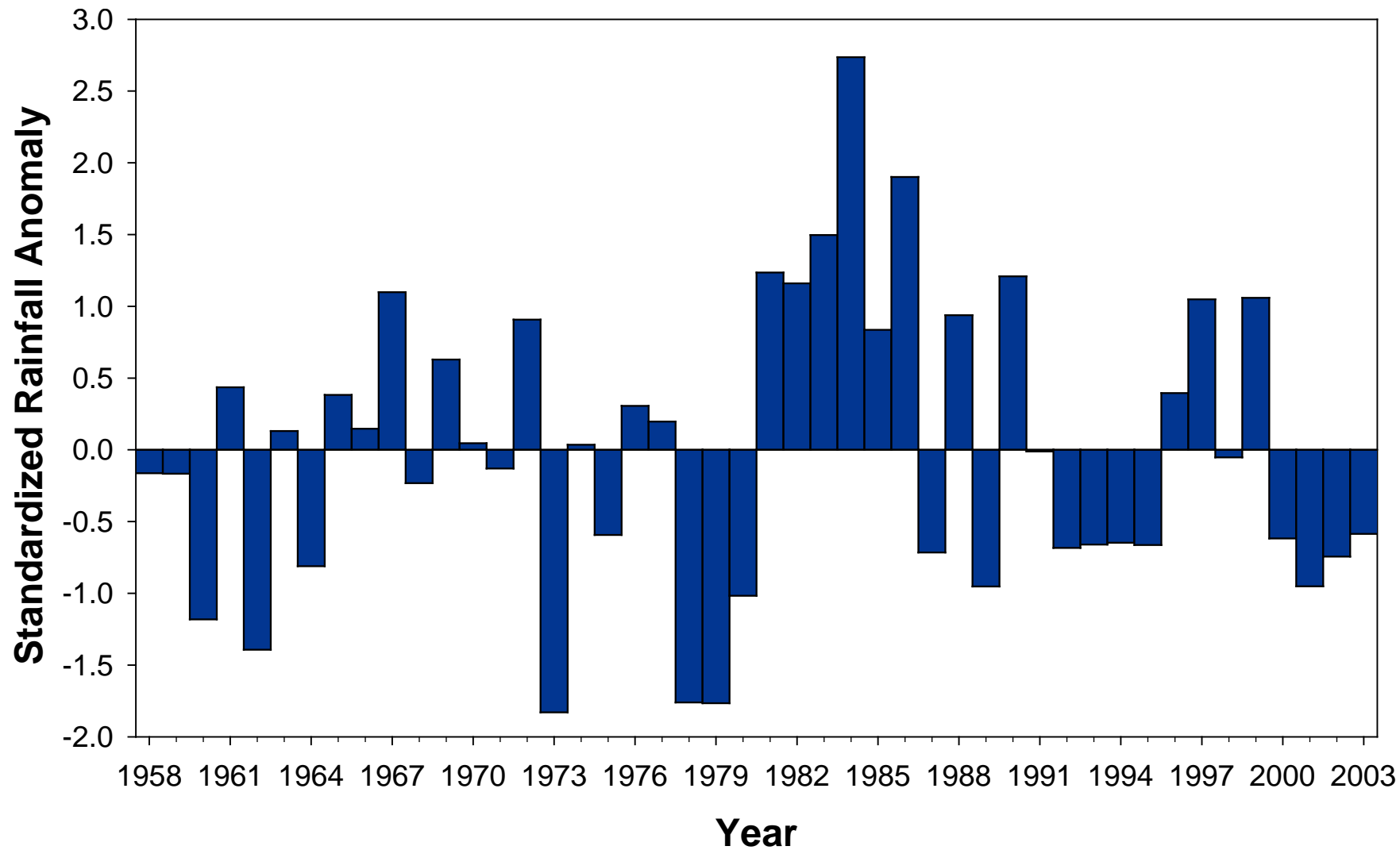
TS Julio remnant





Average percentage of the warm season precipitation associated with east Pacific TCs

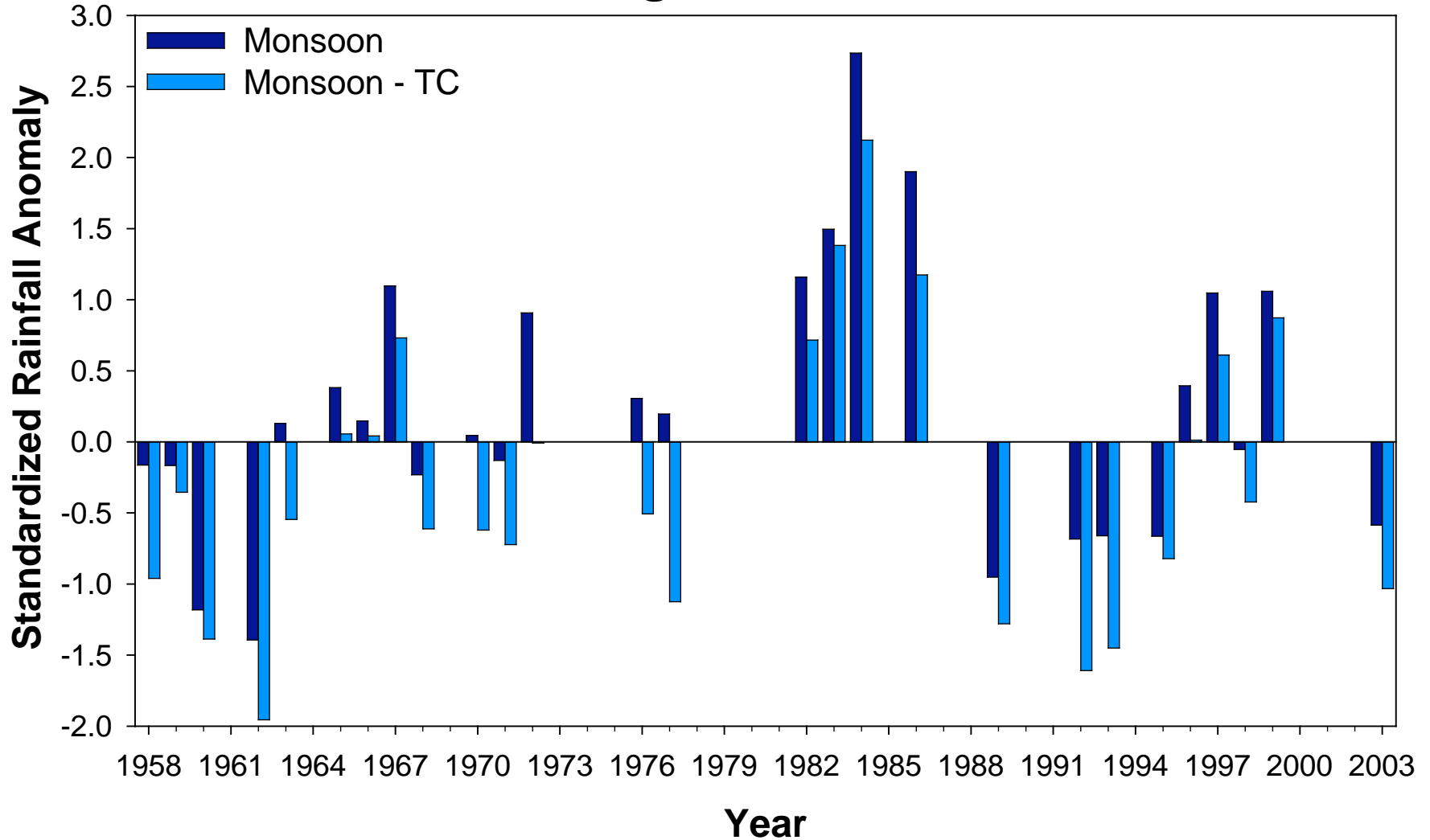
Southwest US Monsoon Rainfall Index



Southwest US Monsoon Rainfall Index

With and Without TC rainfall

-.52 change = ~ 11 mm



Southwest US Monsoon Rainfall Index

With and Without TC rainfall

NINO3 JAS SST anomaly

