

Summary of Key Briefing Points
1030-1130am MST WED Feb 17, 2016

Current Conditions as of WED 12Z-15Z February 17

Tropics and Mid-latitudes

Over the Tropical Pacific:

- Convection: Strong convection in the SH, west of 160W
- Upper level S/SE winds in FD,
- Strong cross-equatorial flow, SH anticyclone and Divergent mass outflow

Tropical Outlook

- GFS EC models agree on convection on the southern edge of FD
- Poleward outflow from convection in SH to continue Wed-Fri

Midlatitude Conditions/Outlook

Short Term:

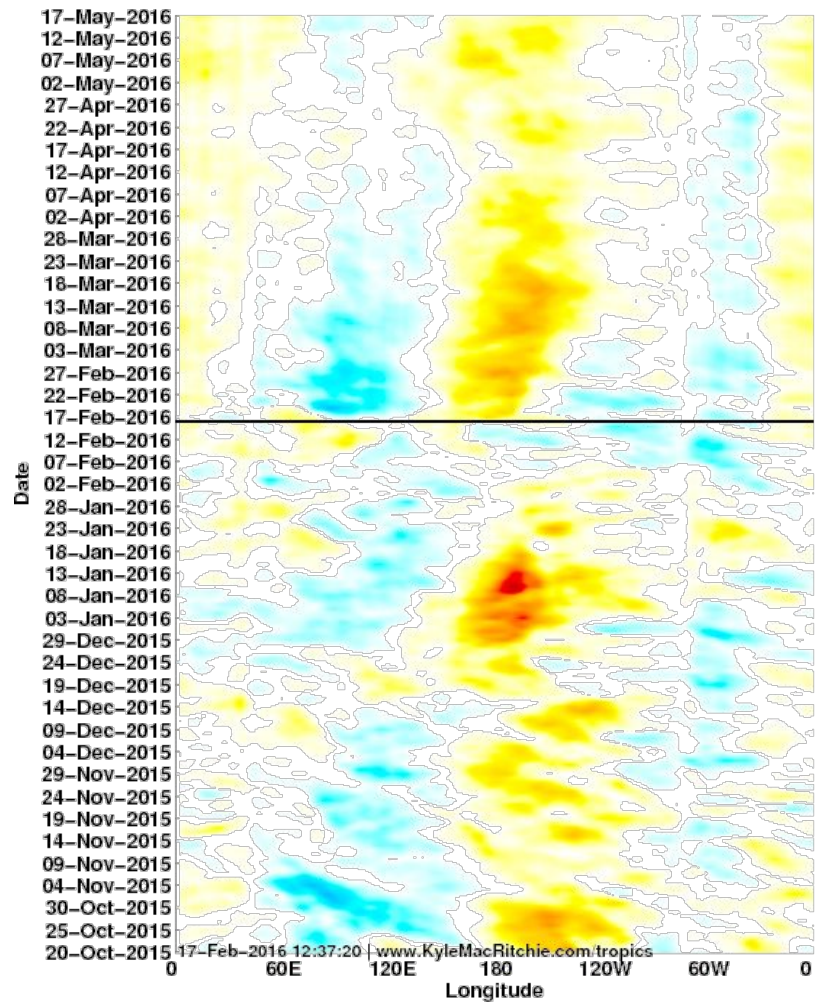
- CA Sierra 2-3 " rain expected Wednesday/Thu

- **Medium - Long Term:**

- Reforecasts suggest only minor rains in Southern CA for the next week -
- WCOAST ridge Fri-early mid next week
- Week 2-3 in EC and GFS indicate major change in the Pacific circulation
 - * Cross-equatorial mass flow from SH, as SPCZ convection intensifies
 - * Westerly jet near 30-35N, intensifies east of Hawaii
 - * Deep sfc low pressure begins to take shape in east NPacific

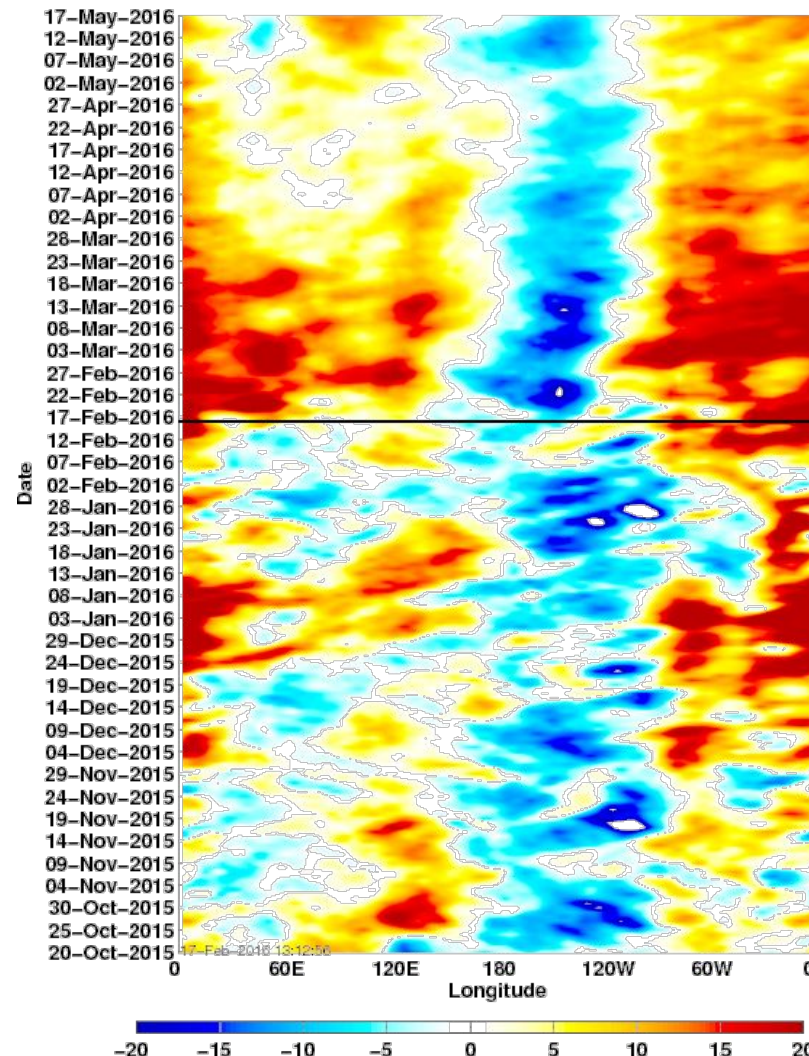
The tropical zonal wind during 2015/16

Real Time CFS 800/850 hPa U-Wind - 7.5S to 7.5N

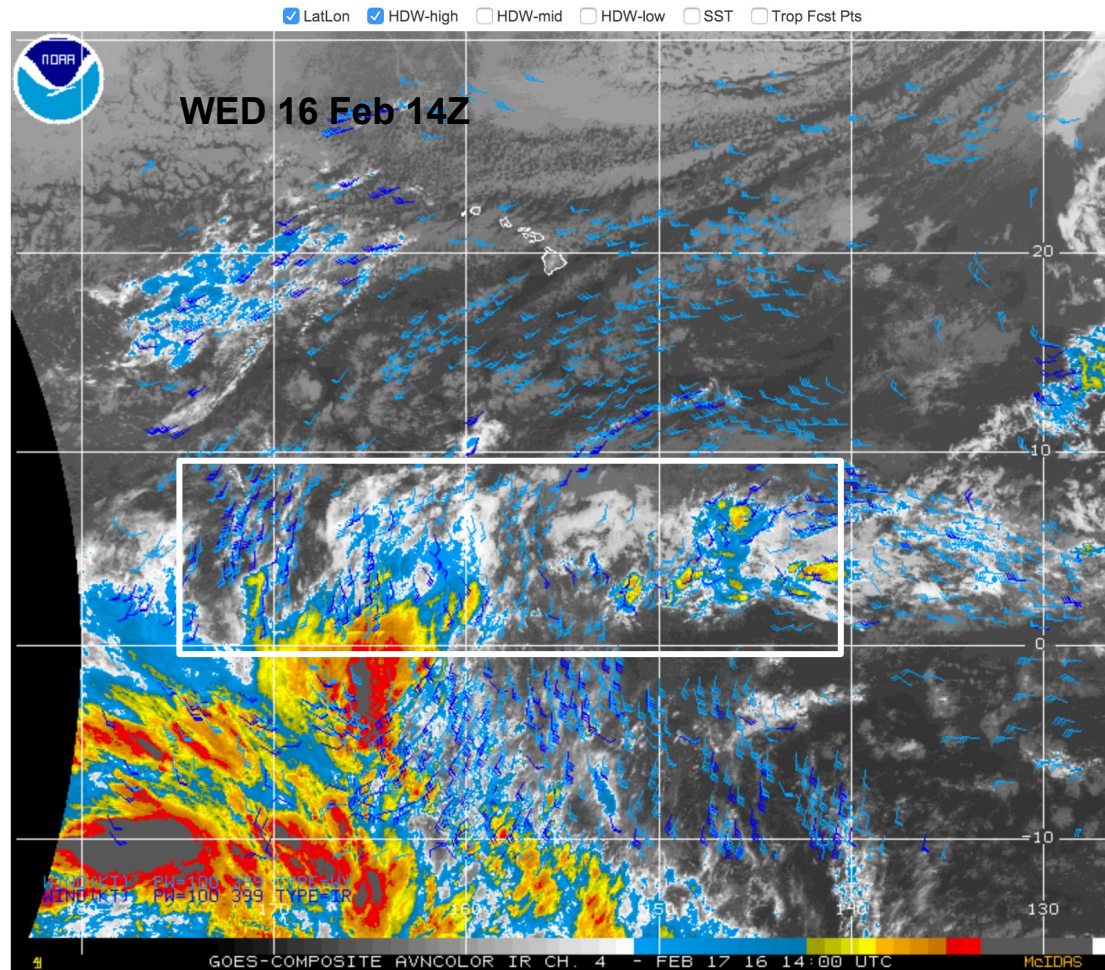


17-Feb-2016 12:37:20 | www.KyleMacRitchie.com/tropics

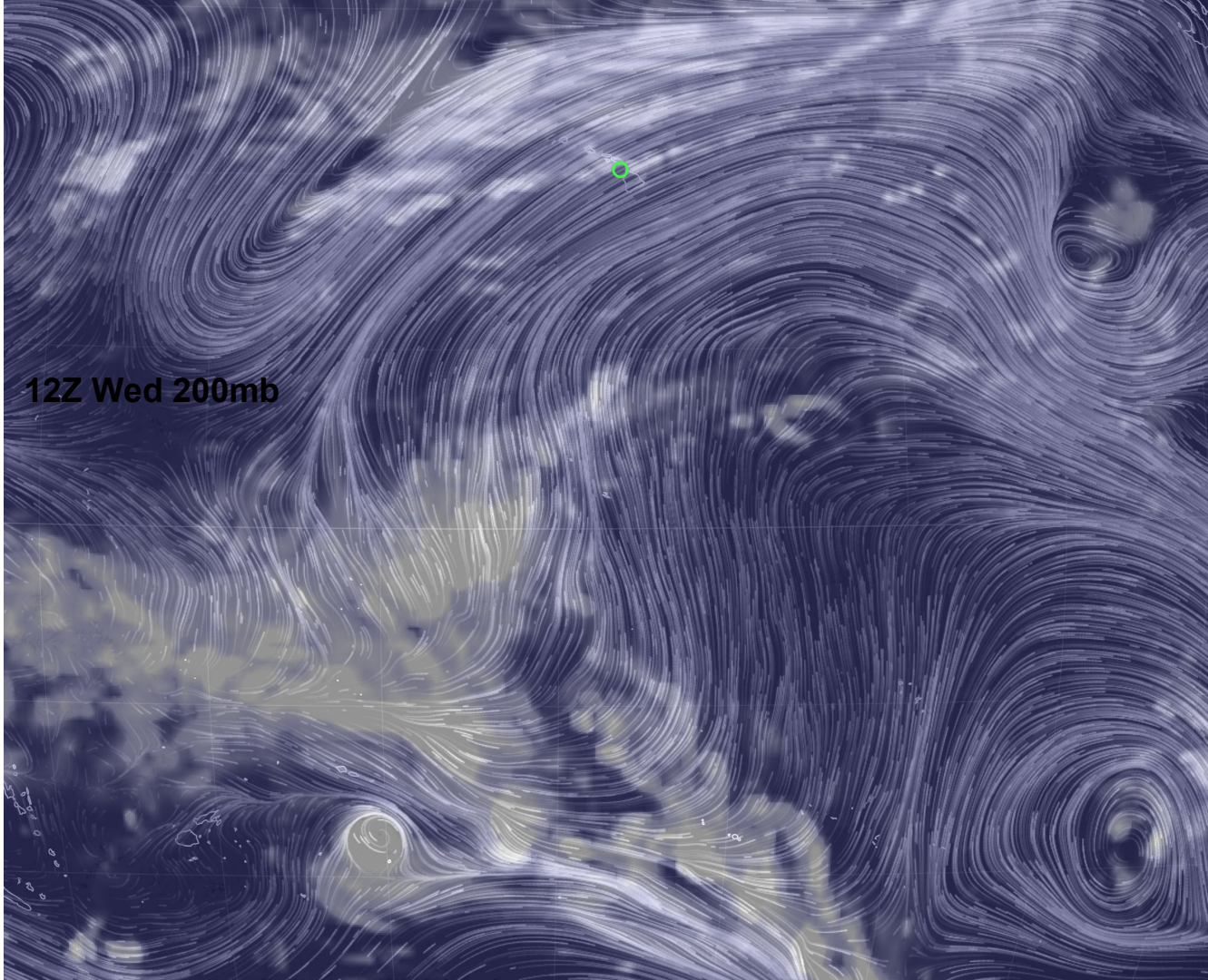
Real Time CFS 200 hPa U-Wind - 7.5S to 7.5N

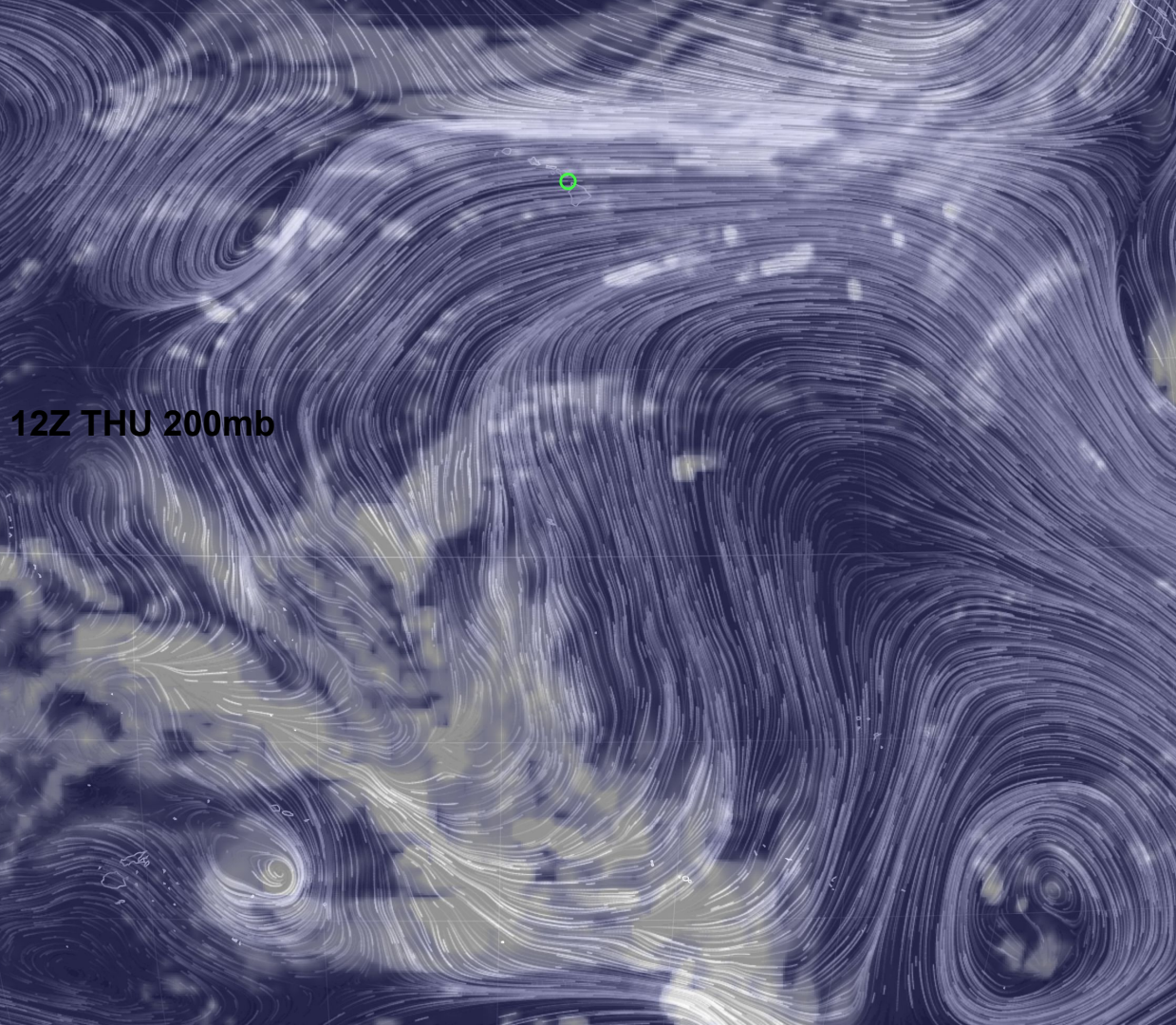


GOES Composite - El Niño Support – AVN Color Infrared Loop



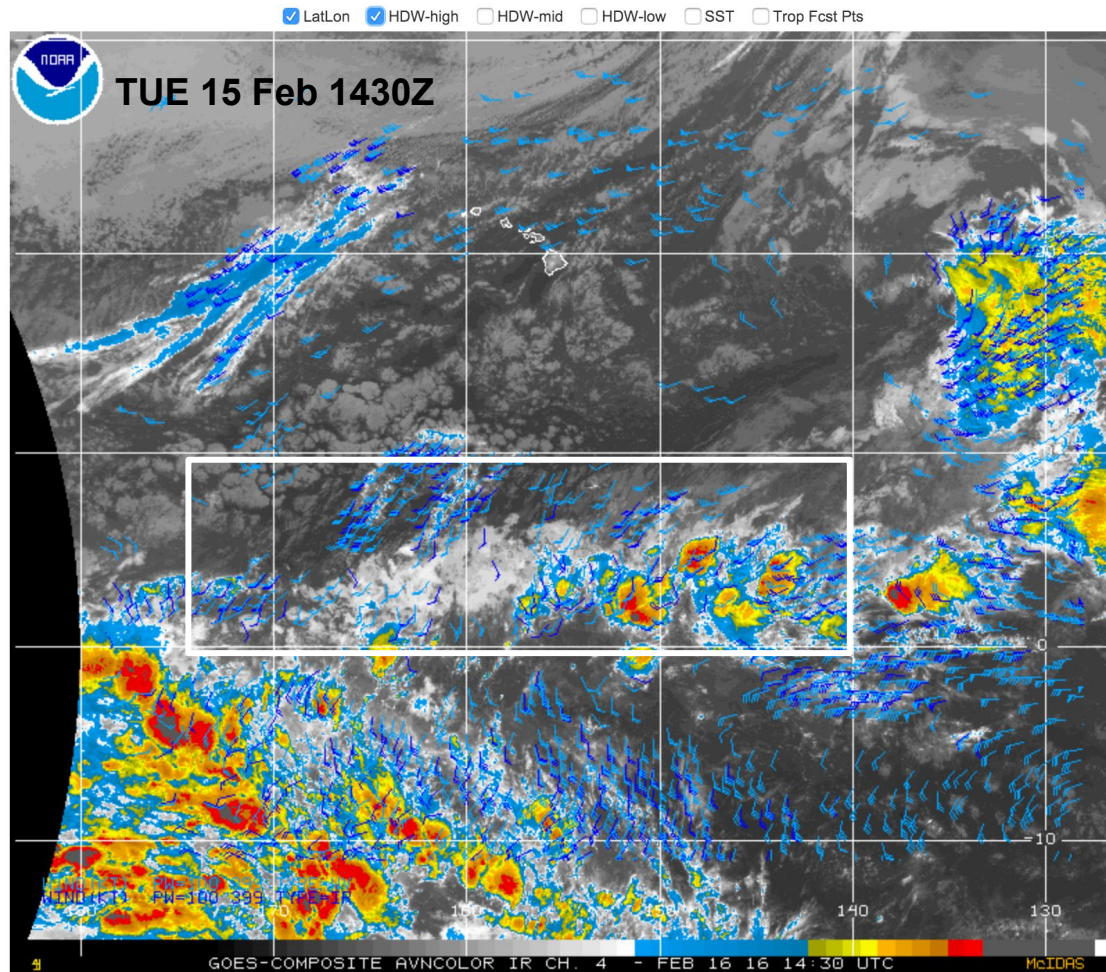
12Z Wed 200mb



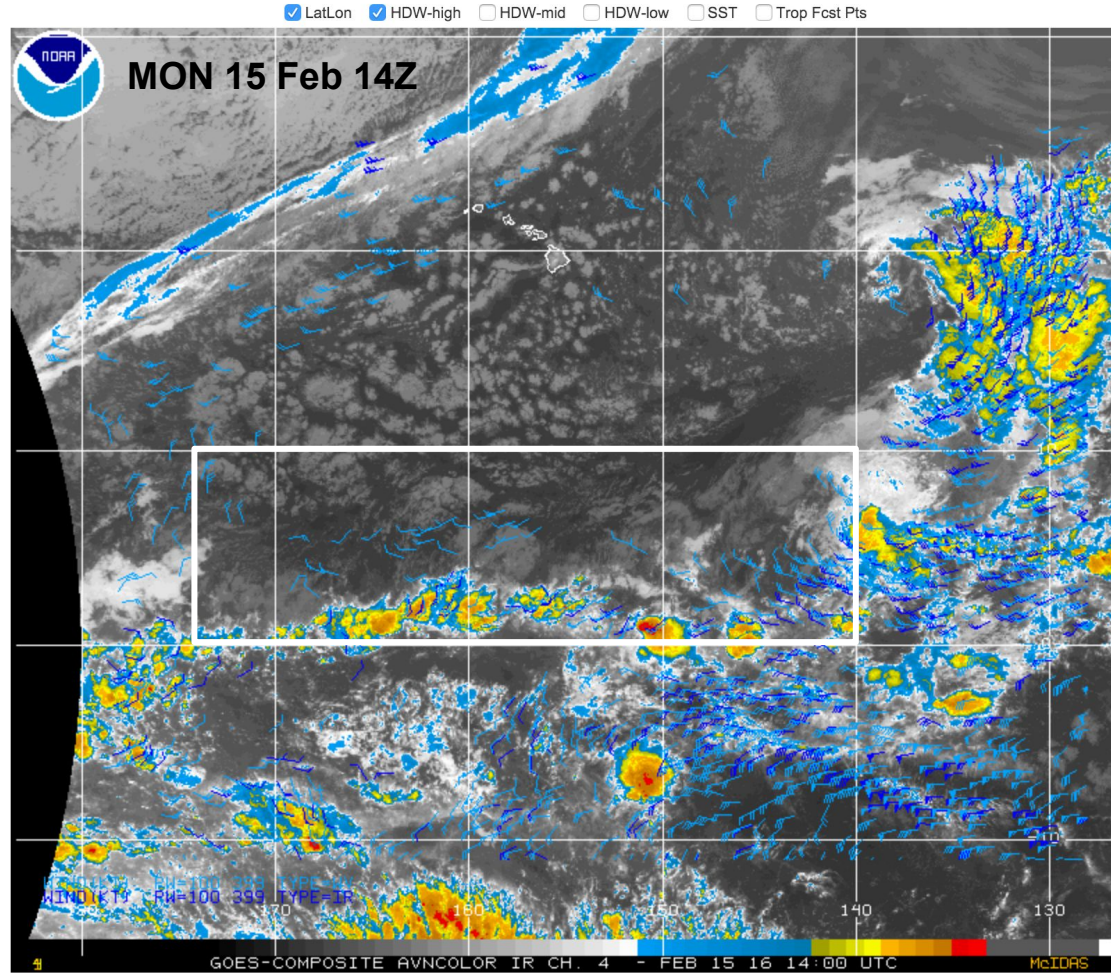


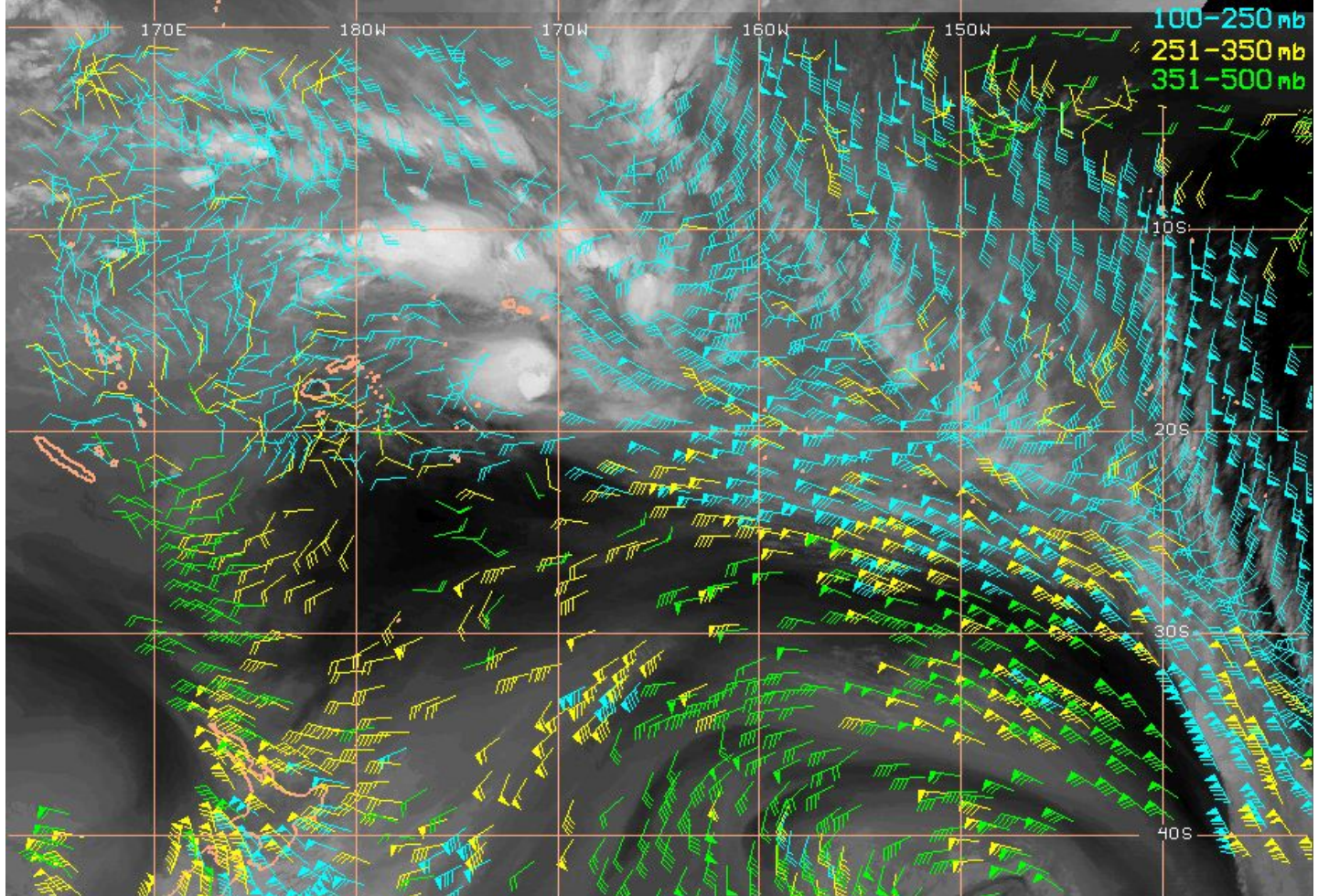
12Z THU 200mb

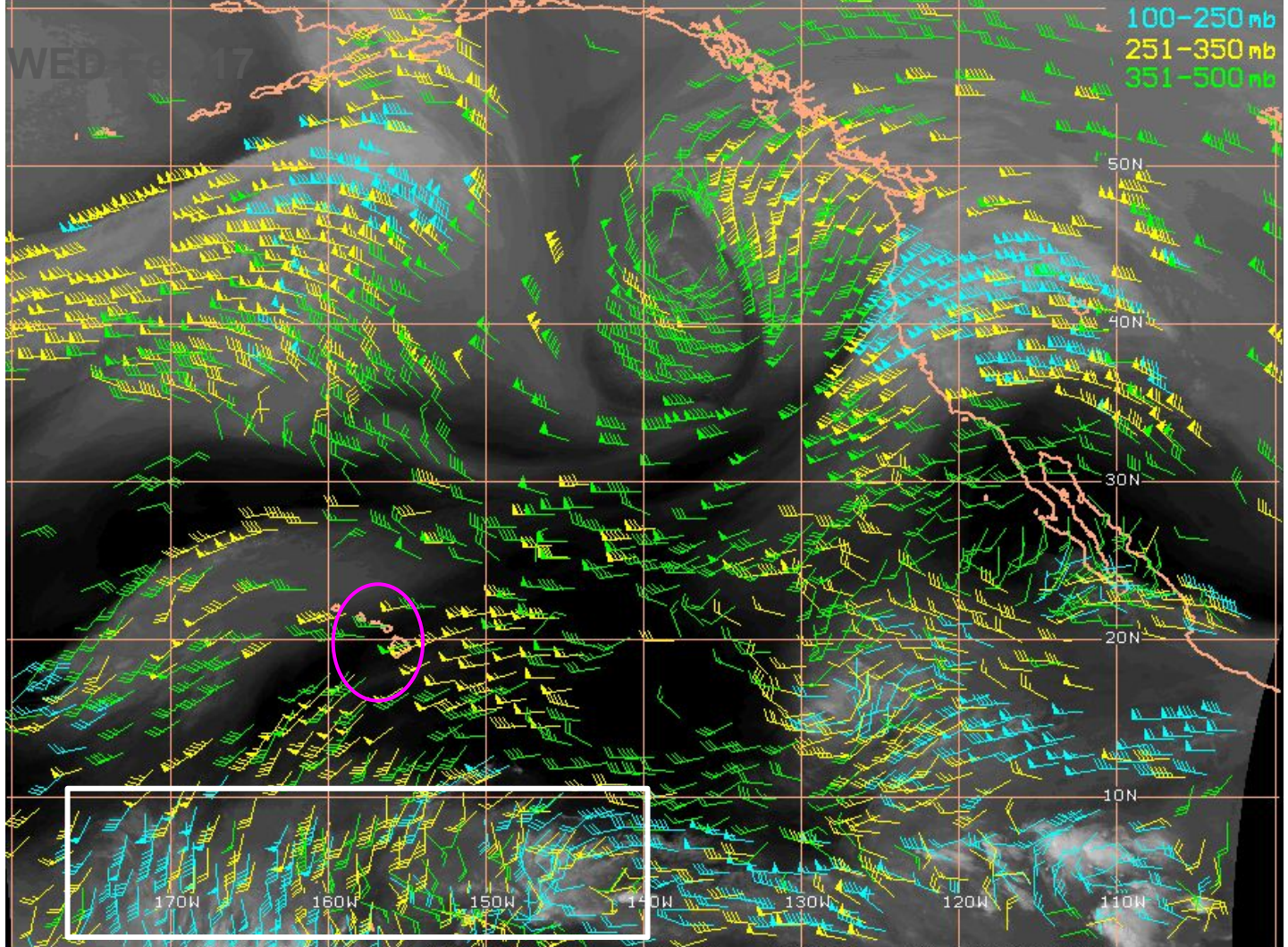
GOES Composite - El Niño Support – AVN Color Infrared Loop



GOES Composite - El Niño Support – AVN Color Infrared Loop

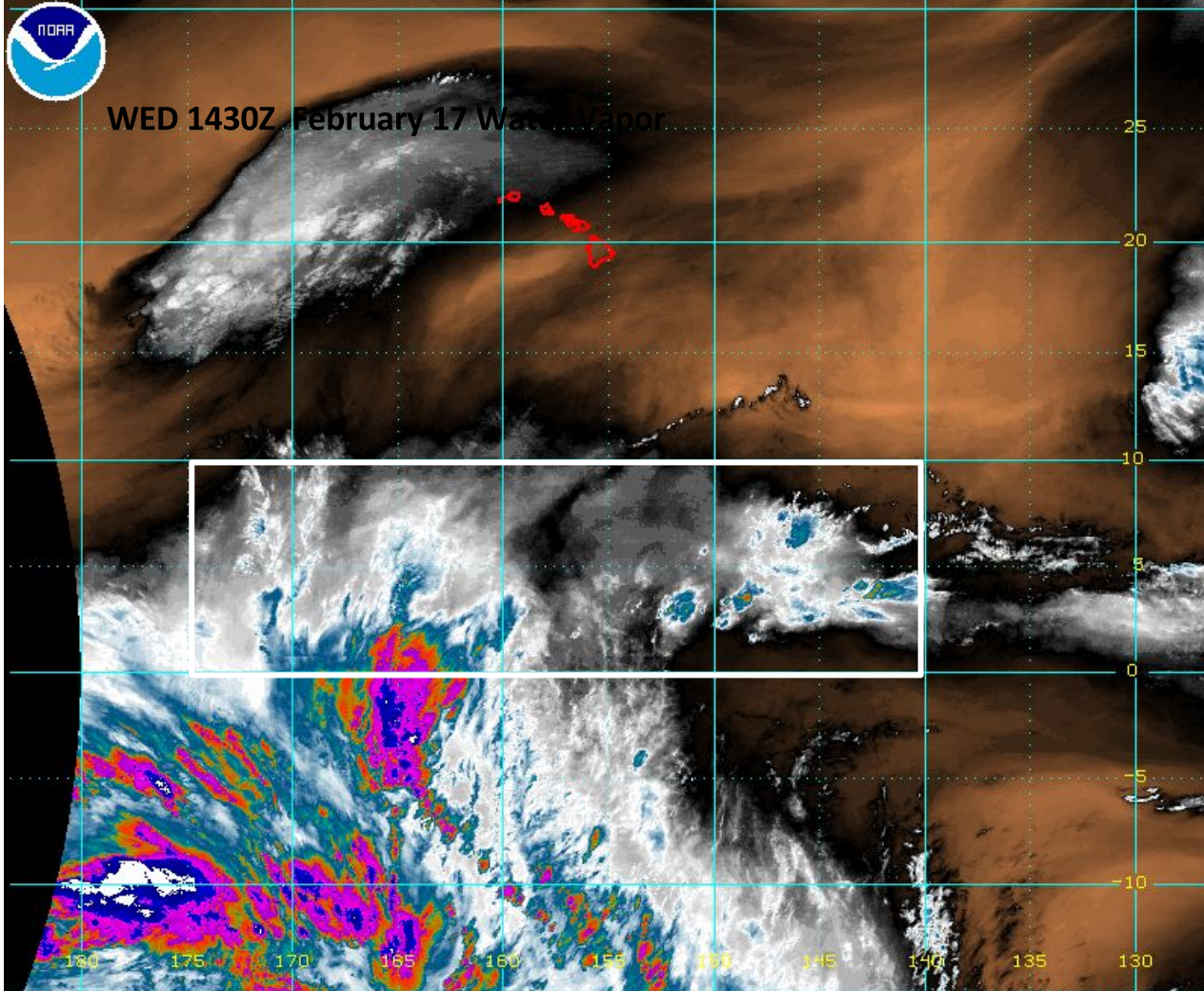






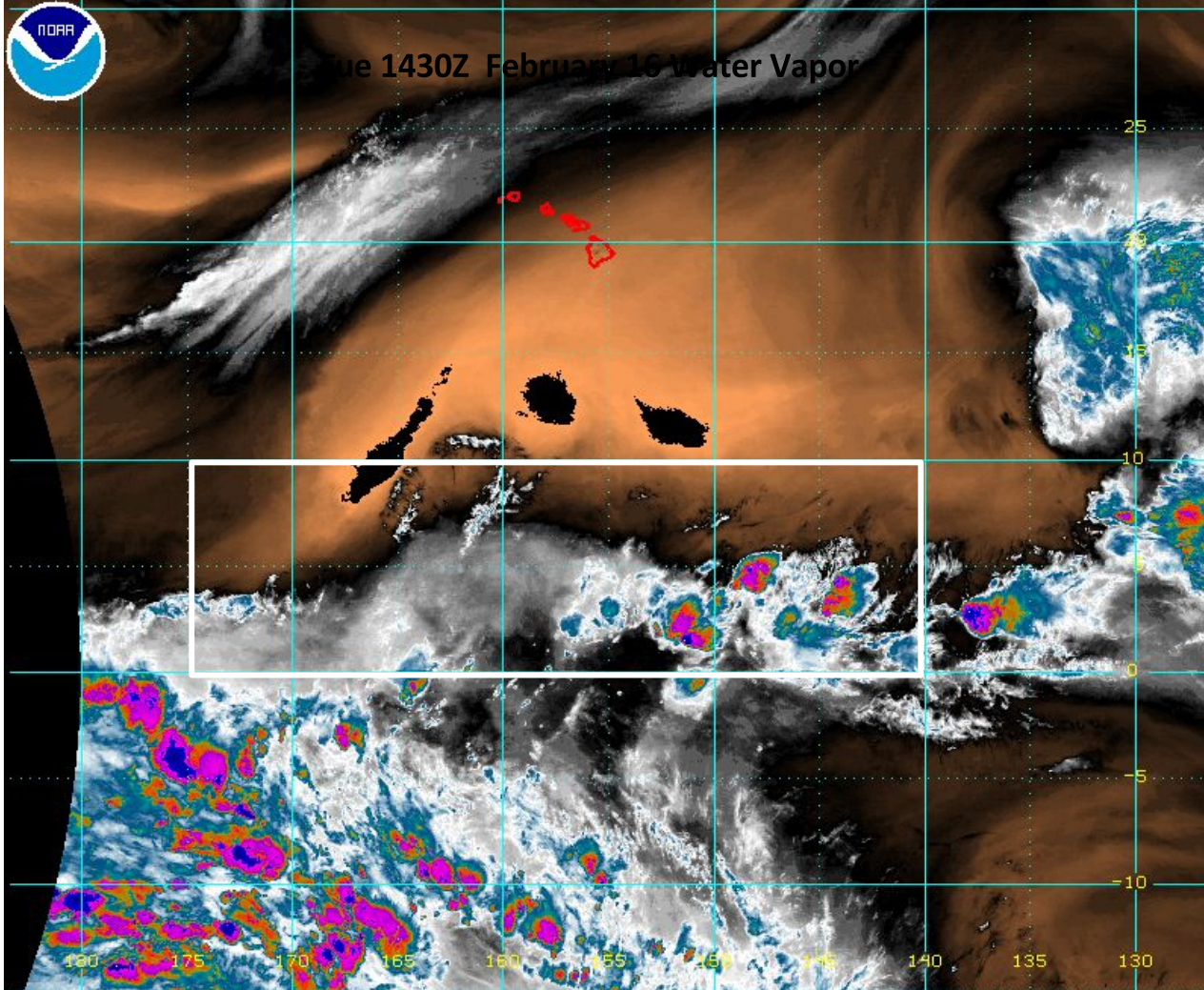


WED 1430Z February 17 Water Vapor



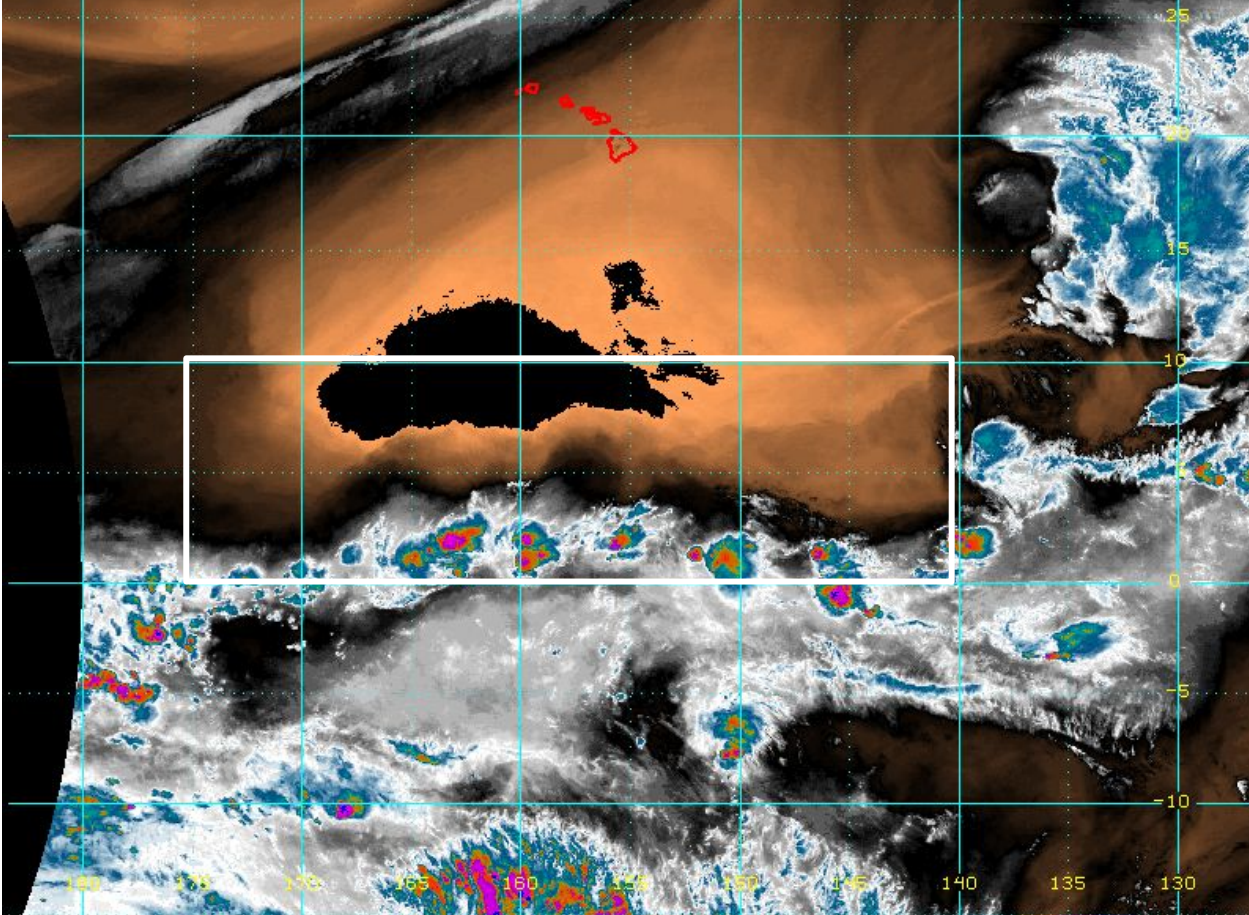


Tue 1430Z February 16 Water Vapor

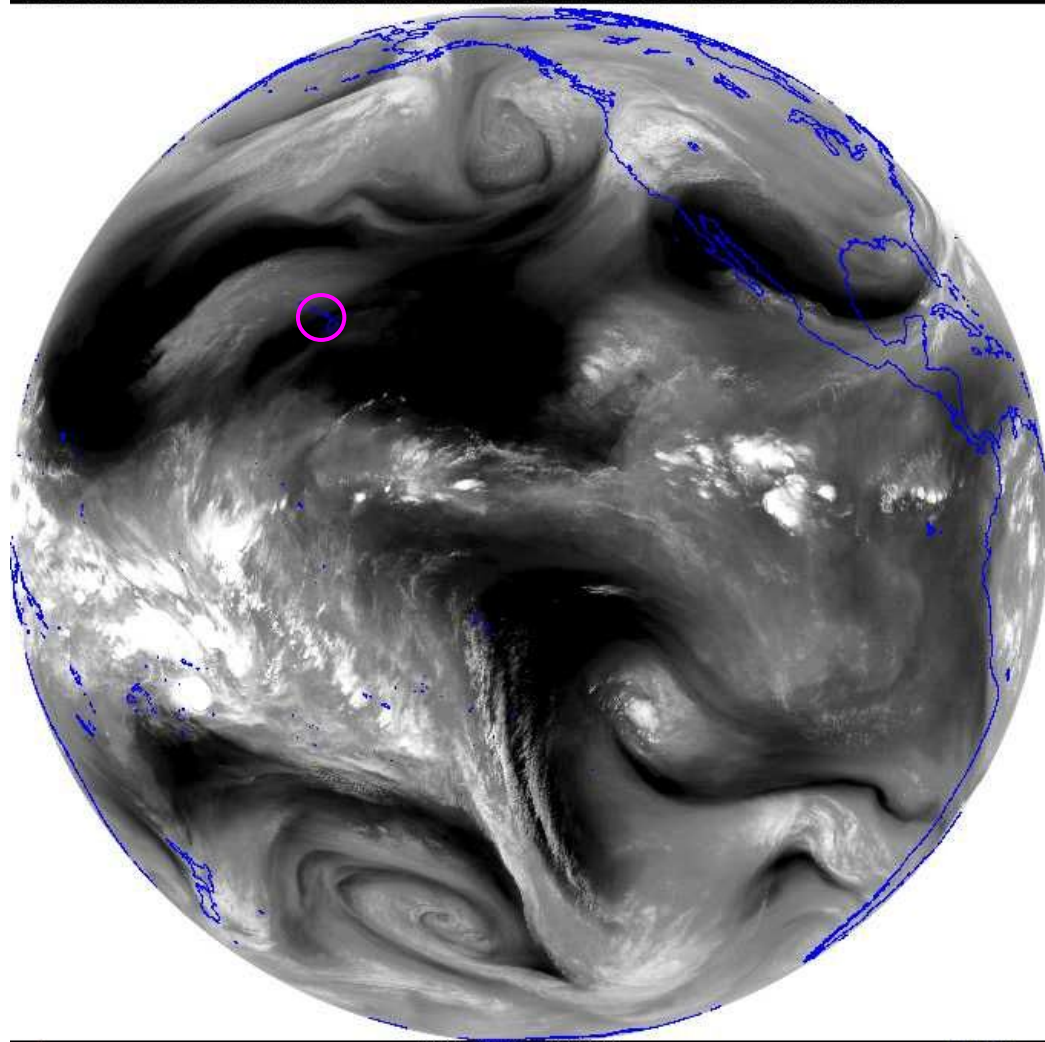




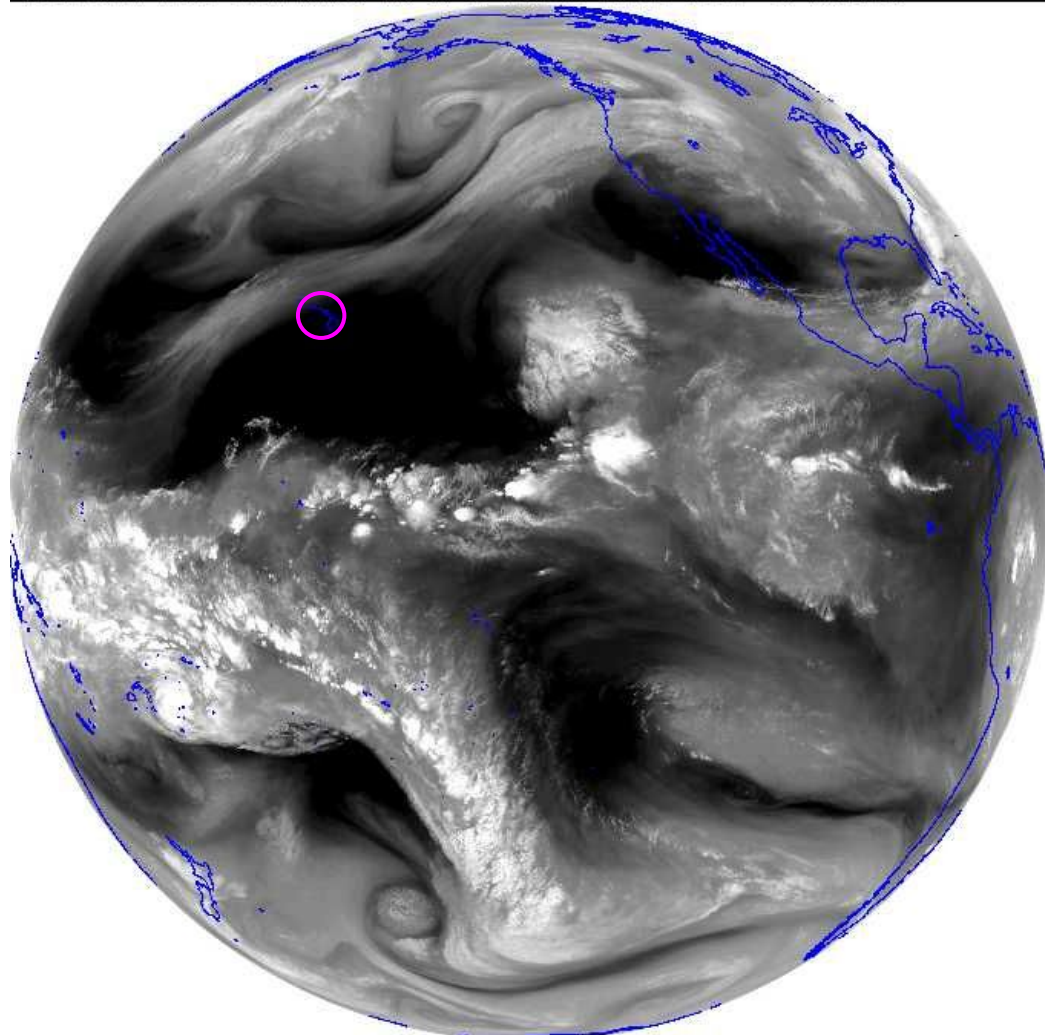
MON 16Z February 15 Water Vapor



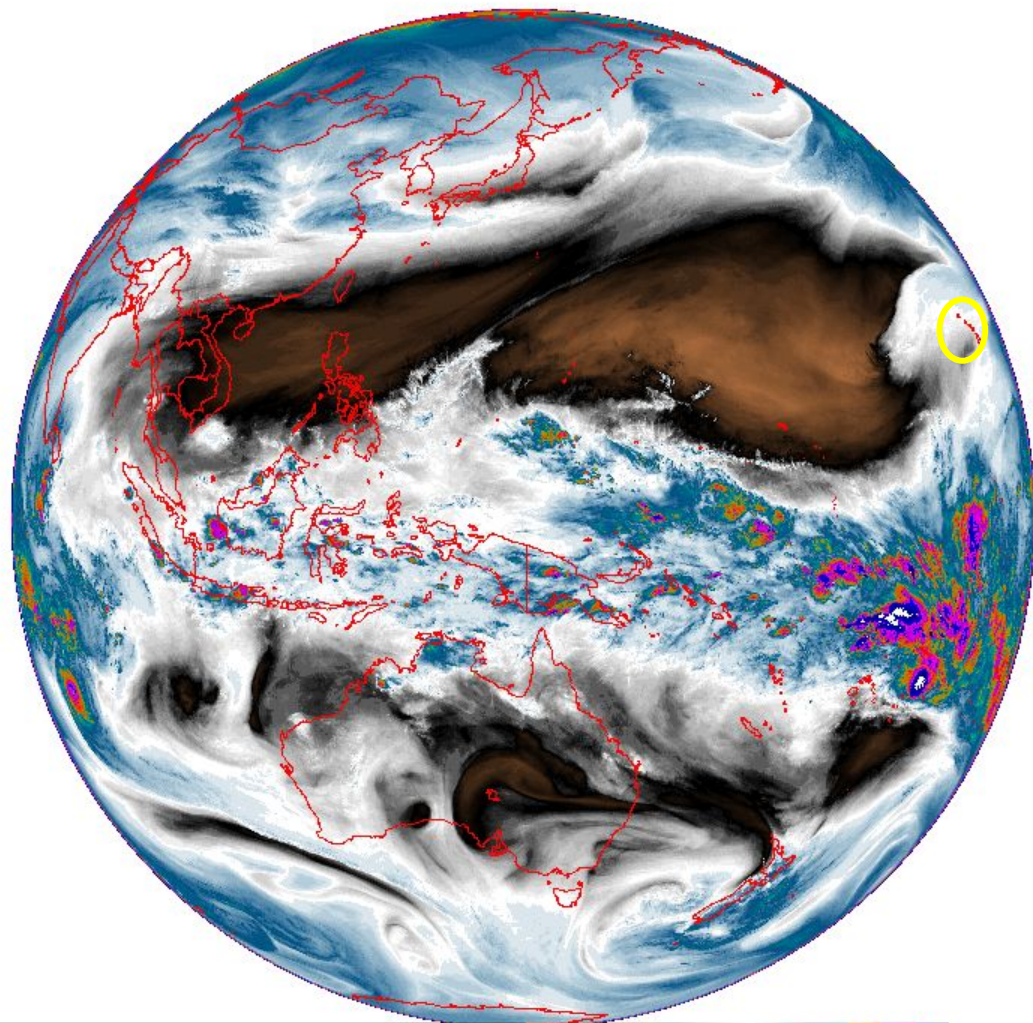
Water Vapor 12Z WED



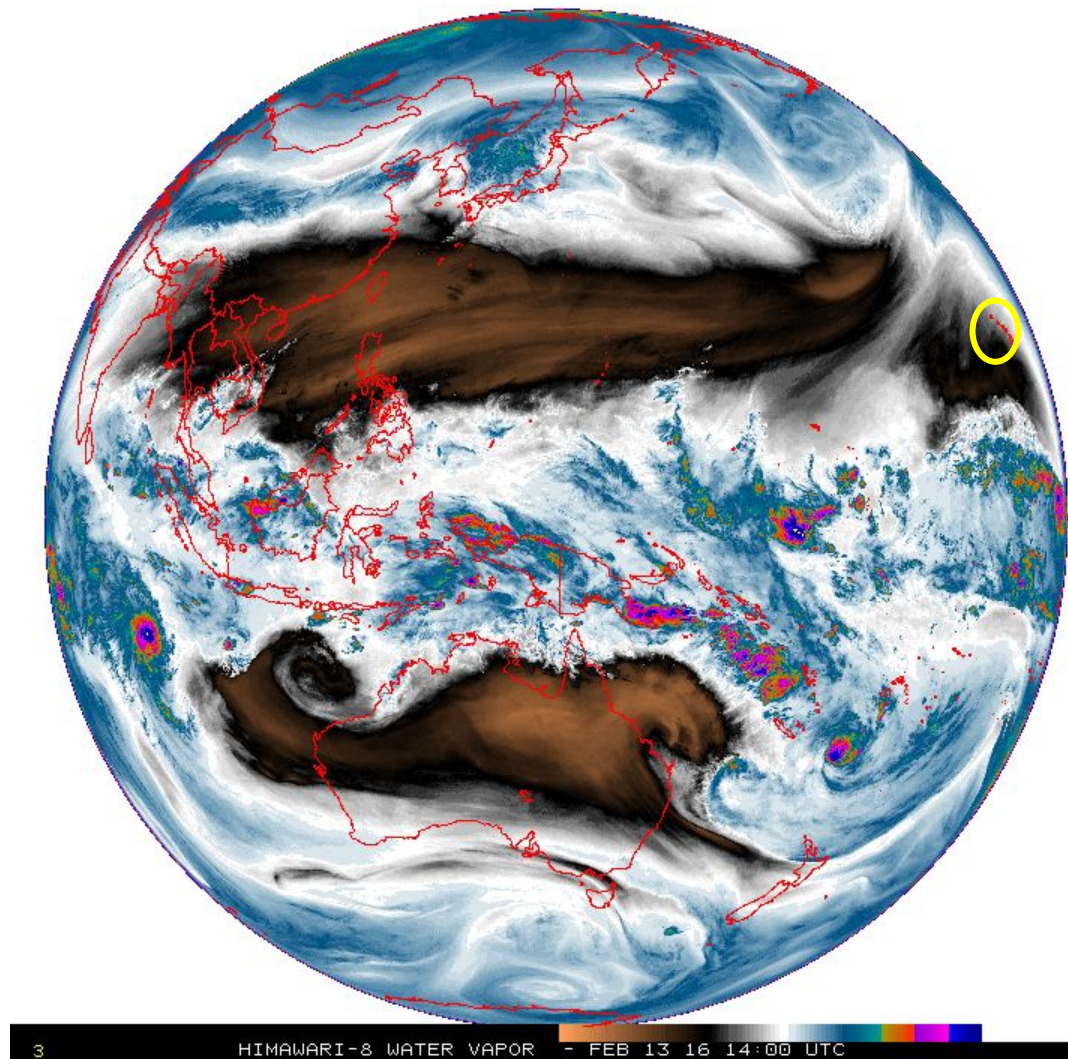
Water Vapor 12Z TUE



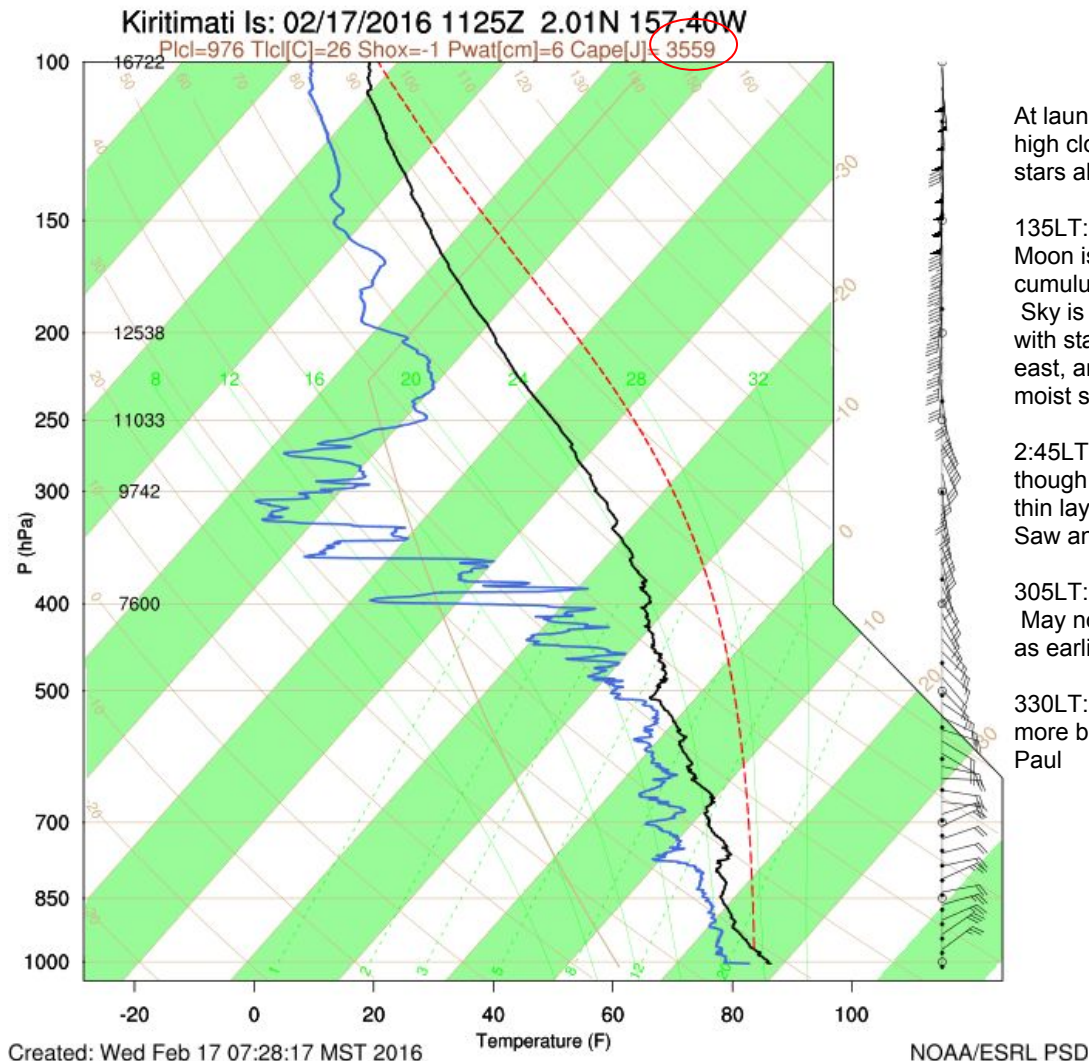
Water Vapor
14Z WED



Water Vapor
14Z SAT



Kiritimati Sonde 1125Z TUE



At launch (1:25LT, 11:25UT), moon behind high clouds to west. Many stars above. Still windy (gusty 7.5 m/s).

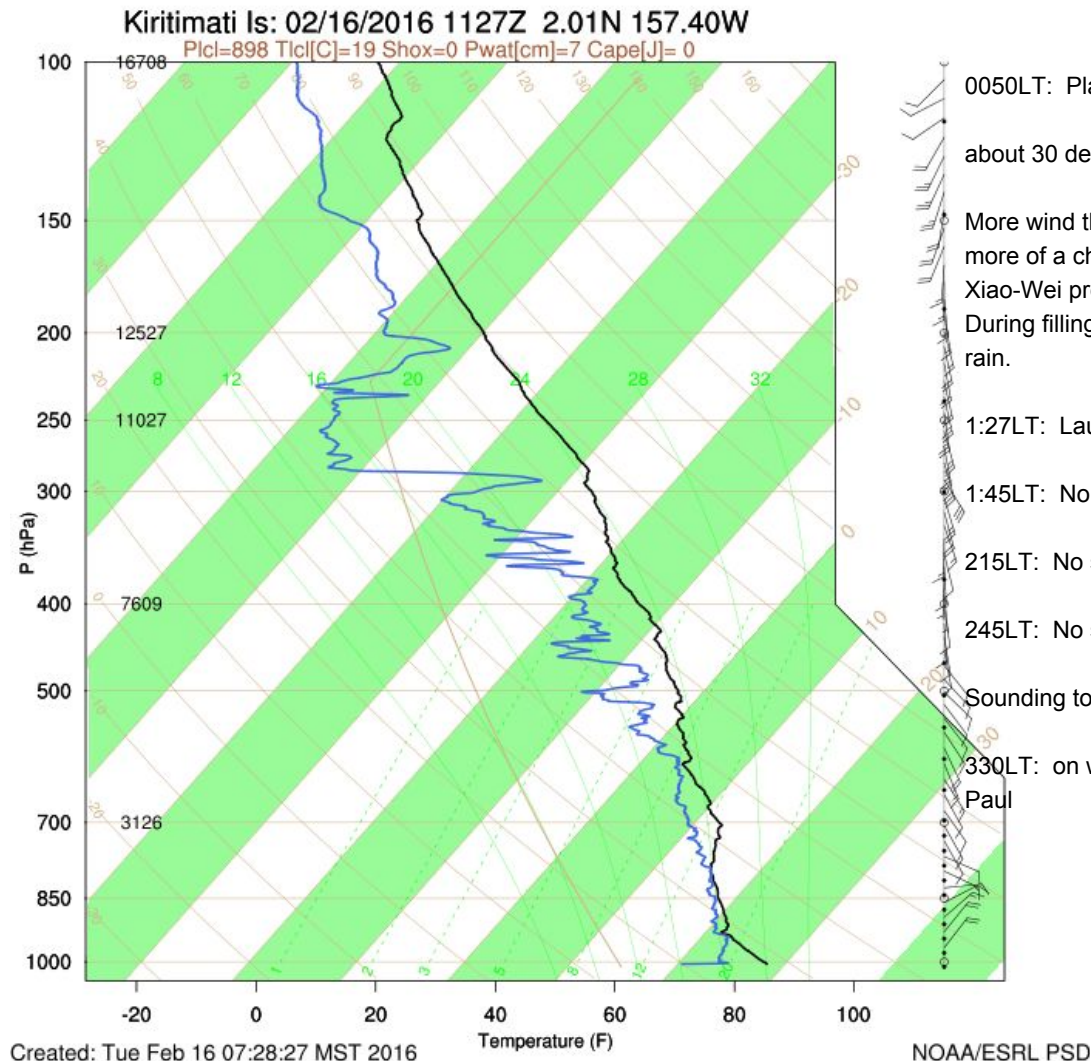
135LT: Better observations:
 Moon is in high cirrus to west, above cumulus clouds low on western horizon. Sky is mainly clear elsewhere, with stars visible overhead and to south, east, and north, down to moist surface layer.

2:45LT: Stars visible in a lot of sky, though there seems to be a thin layer of clouds, stars seem dim. Saw an airplane headed N/NE.

305LT: Stars and broken cirrus overhead. May not be quite as breezy as earlier. Sonde on way down.

330LT: on walk over, decided it is still more breezy than usual
 Paul

Kiritimati Sonde 1127Z TUE



0050LT: Planet visible to west,
about 30 degrees above horizon.

More wind than usual made balloon filling
more of a challenge.
Xiao-Wei prevailed over the wind.
During filling there was light
rain.

1:27LT: Launch with 7.5 m/s winds, no rain.

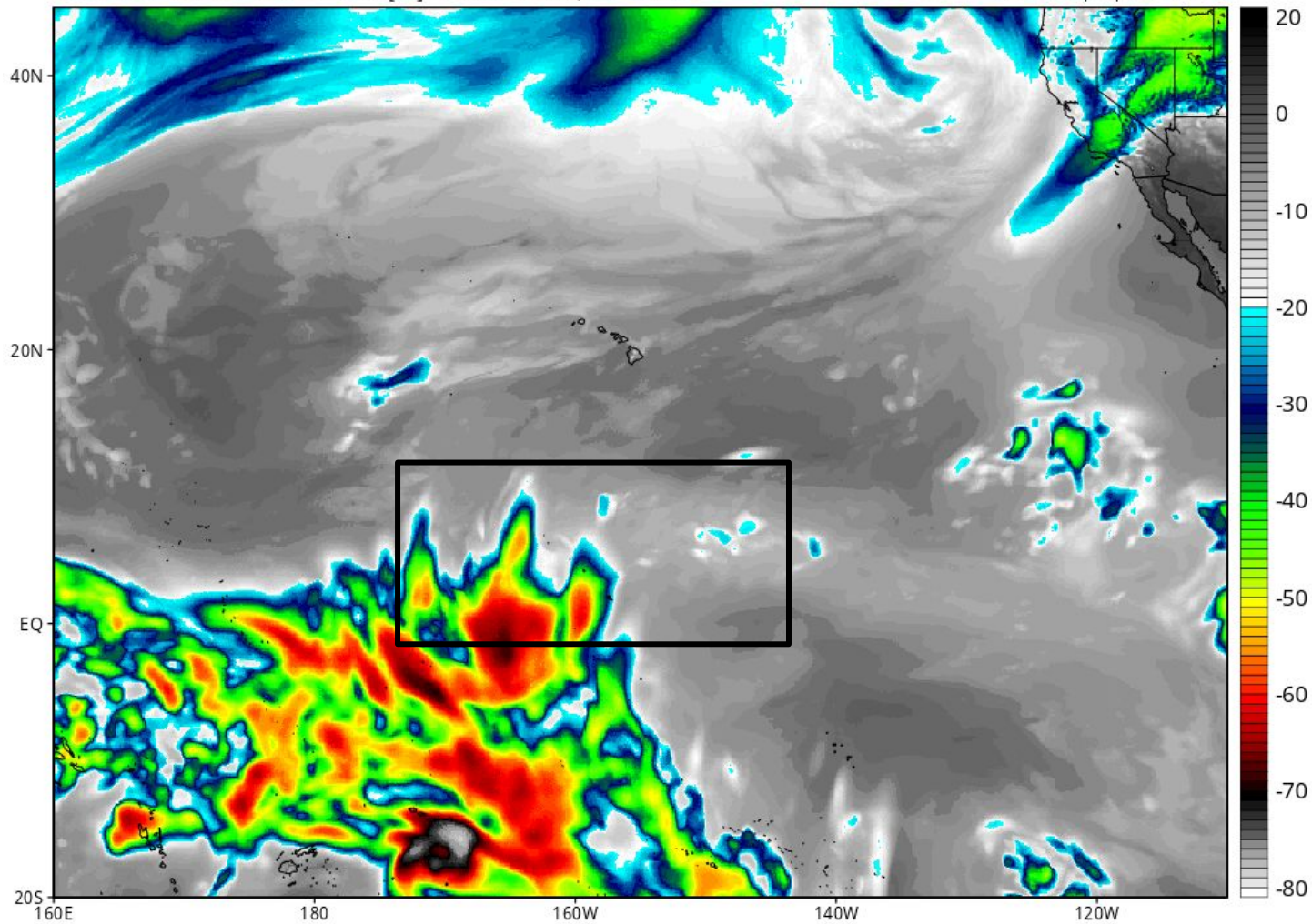
1:45LT: No stars visible, no rain.

215LT: No stars, still dry and breezy.

245LT: No stars, still strong onshore wind.

Sounding took at totally different trajectory tonight.

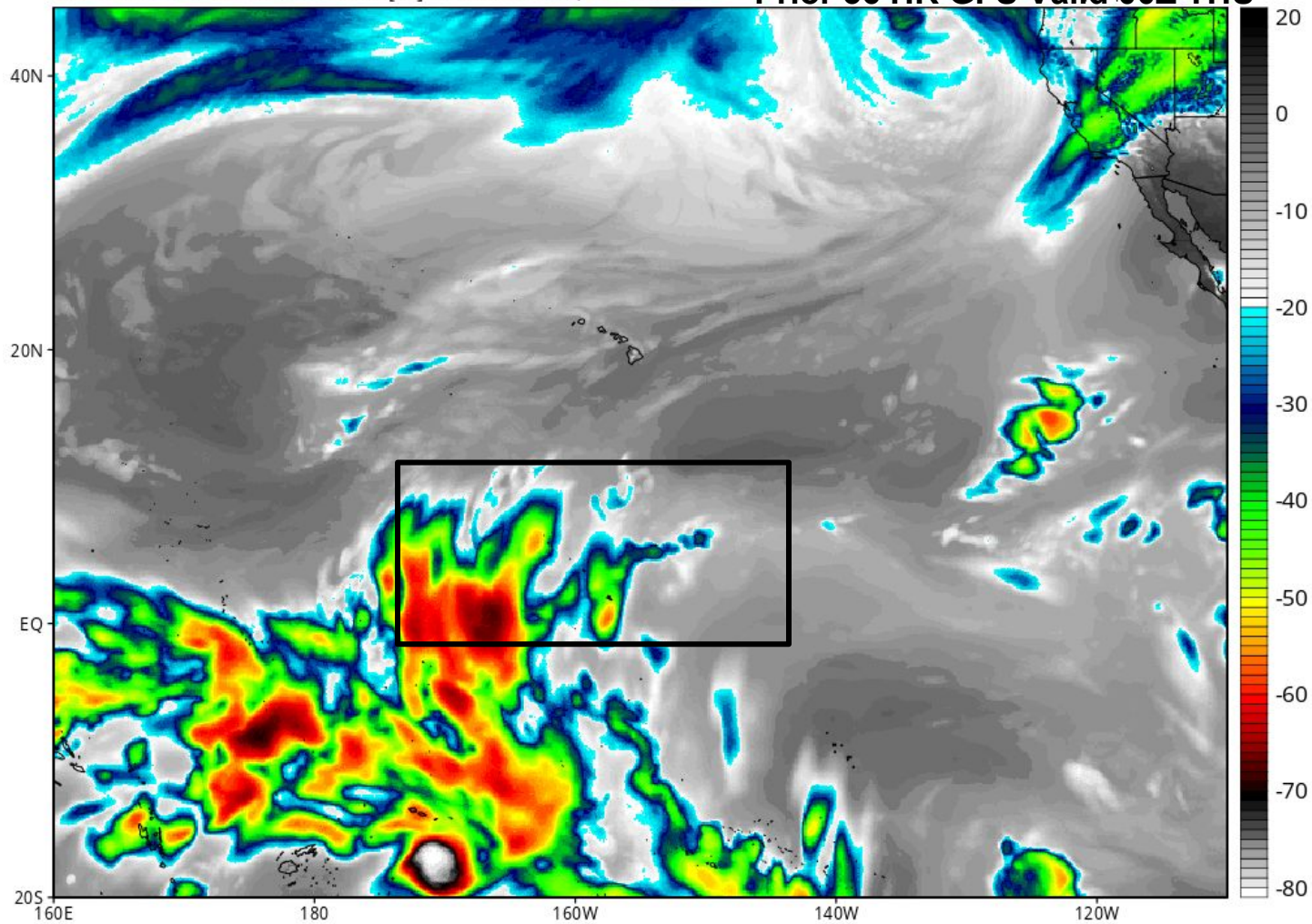
330LT: on walk over, it is starting to mist again
Paul



GFS Simulated IR Brightness Temperature (°C)

Init: 12z Feb 16 2016 Forecast Hour: [36] valid at 00z Thu, Feb 18 2016

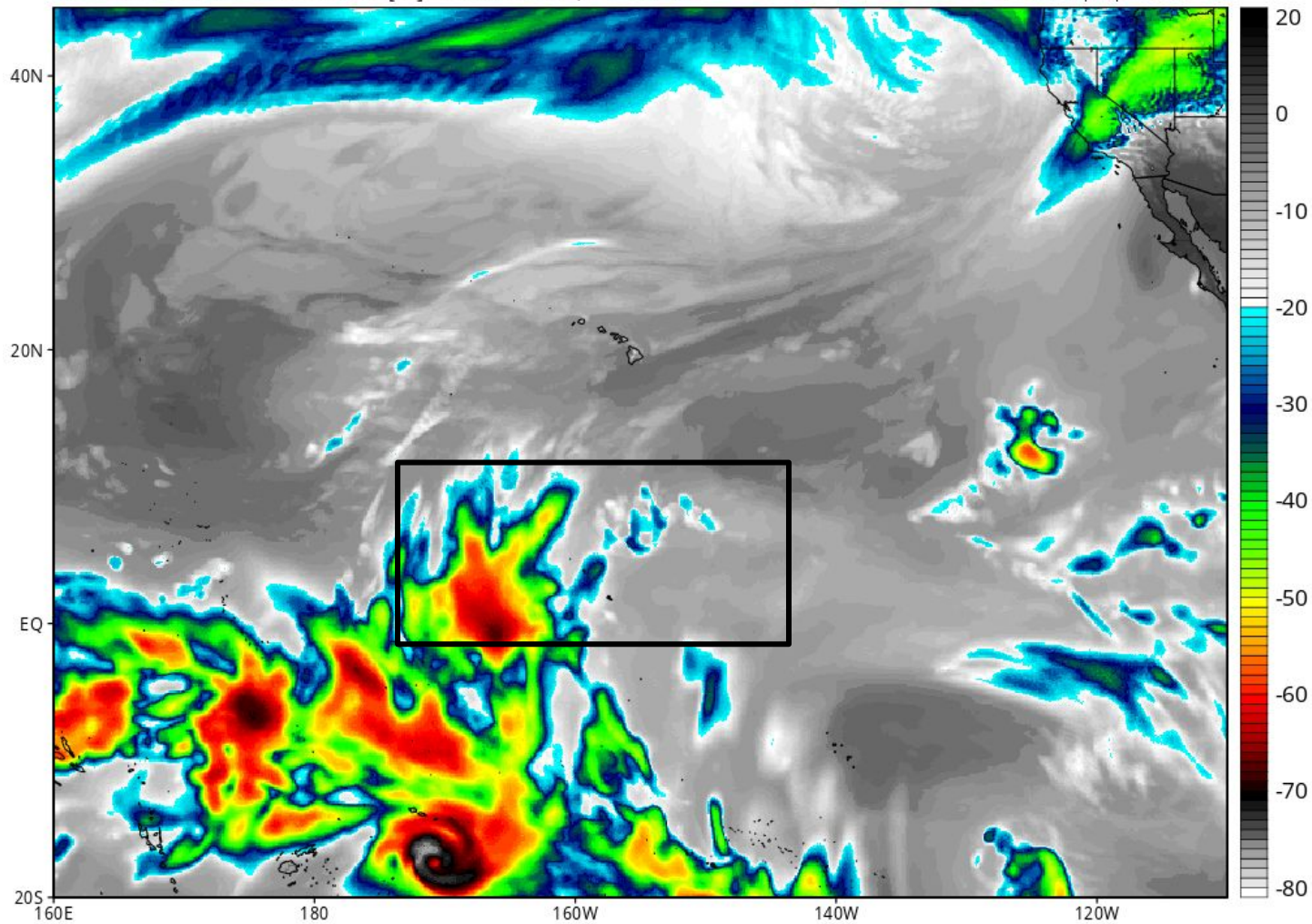
Prior 36 HR GFS Valid 00Z THU



GFS Simulated IR Brightness Temperature (°C)

Init: 12z Feb 15 2016 Forecast Hour: [60] valid at 00z Thu, Feb 18 2016

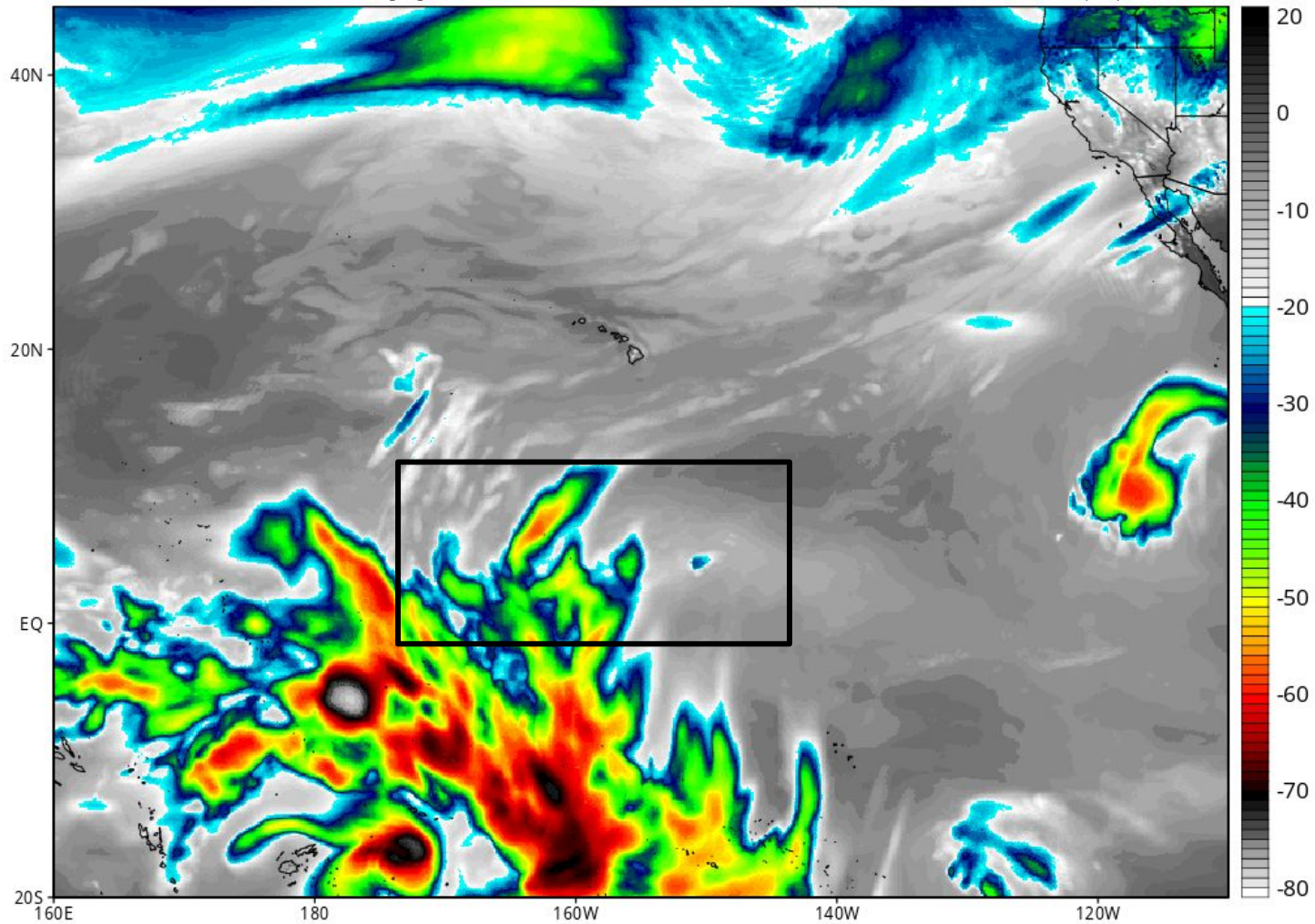
PRIOR 60 HR GFS Valid 00Z THU



GFS Simulated IR Brightness Temperature (°C)

Init: 12z Feb 17 2016 Forecast Hour: [36] valid at 00z Fri, Feb 19 2016

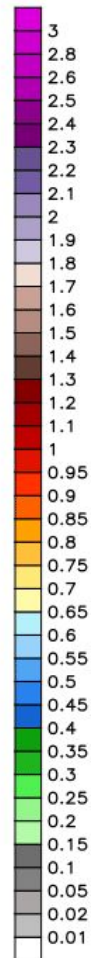
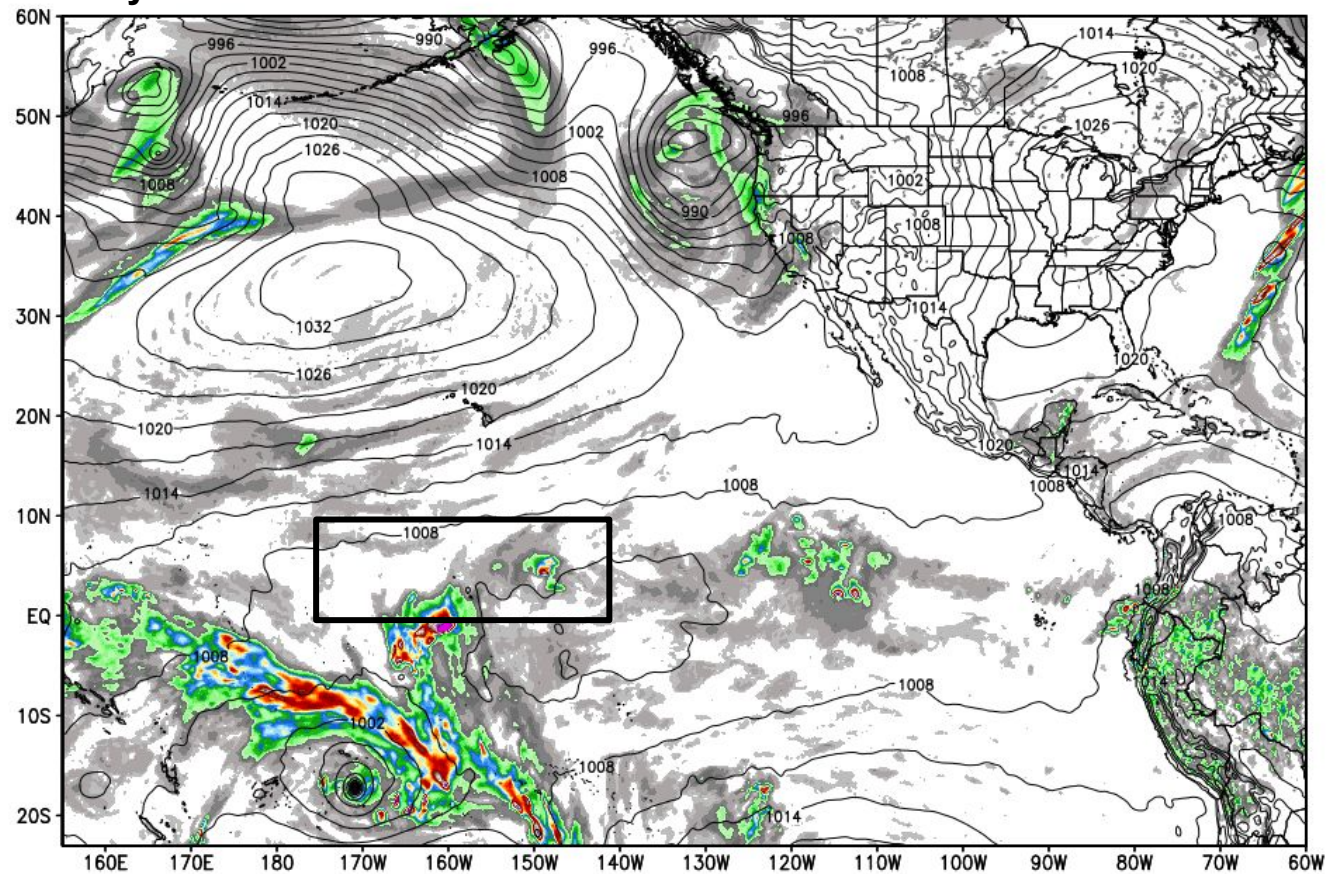
Latest 36 HR GFS Valid 00Z FRI



ECMWF 6-hourly Precipitation [inches] between 18Z17FEB2016 -- 00Z18FEB2016 & MSLP [hPa]
INIT: 00Z17FEB2016 fx: [024] hr --> Thu 00Z18FEB2016

Courtesy WeatherBell

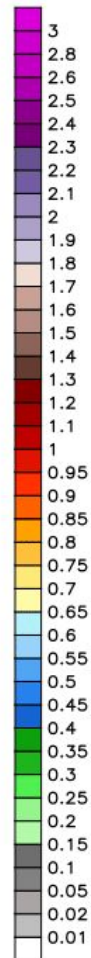
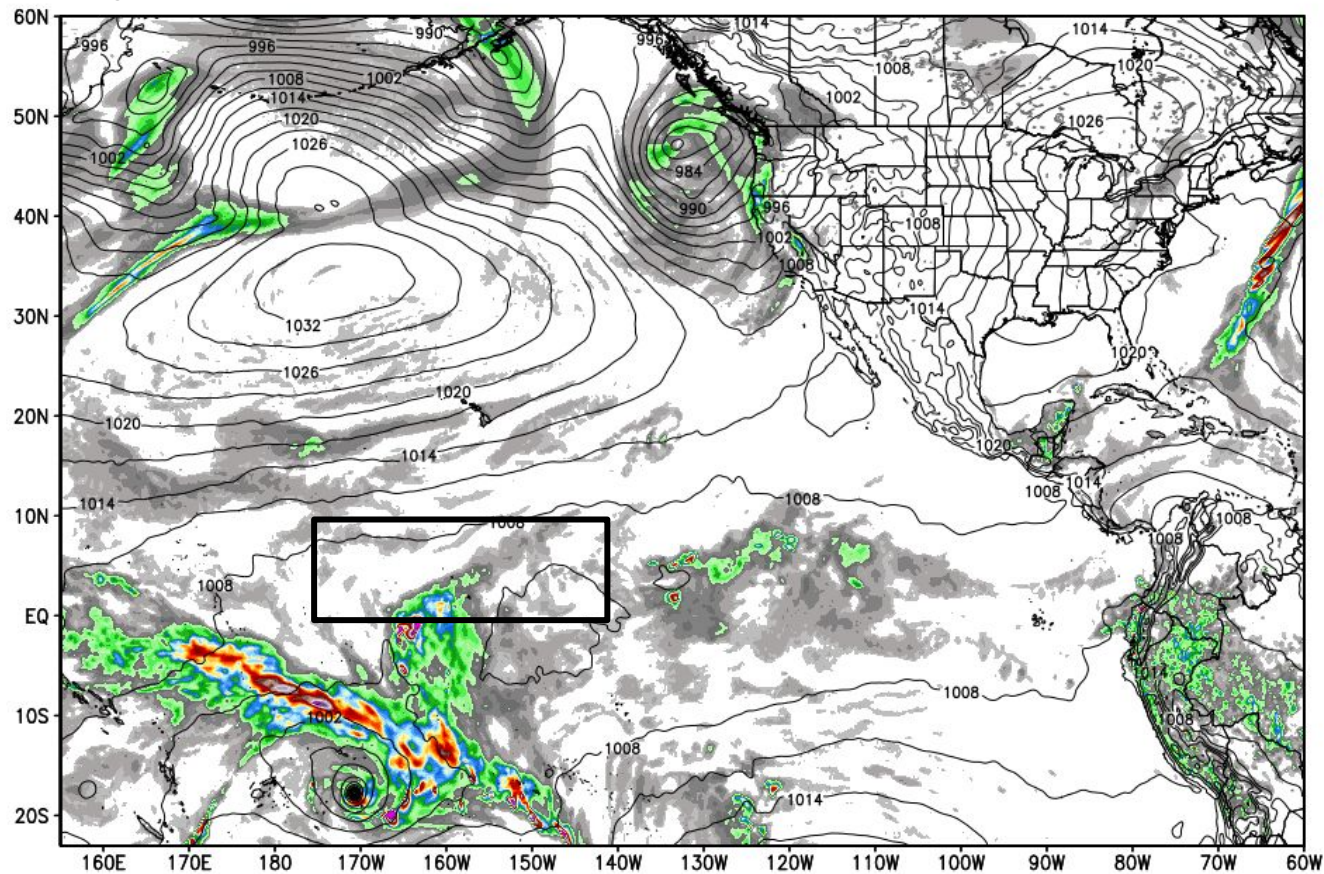
Latest 24 HR ECMWF Valid 00Z THU Feb18



ECMWF 6-hourly Precipitation [inches] between 18Z17FEB2016 -- 00Z18FEB2016 & MSLP [hPa]
INIT: 12Z16FEB2016 fx: [036] hr --> Thu 00Z18FEB2016

Courtesy WeatherBell

Prior 36 HR ECMWF Valid 00Z THU Feb18

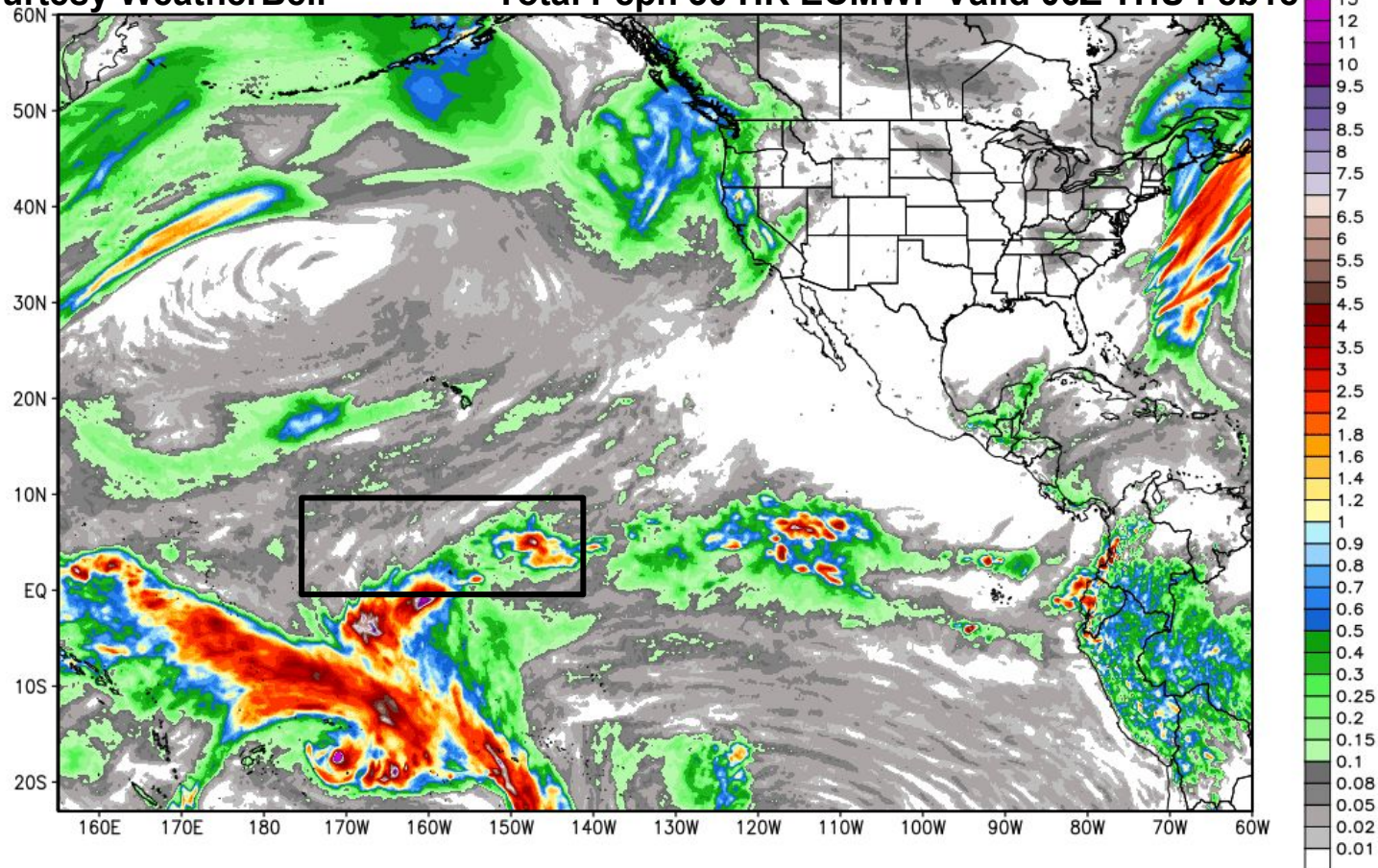


ECMWF Total Precipitation [inches] between 00Z17FEB2016 -- 06Z18FEB2016
INIT: 00Z17FEB2016 fx: [030] hr --> Thu 06Z18FEB2016

Max 27.8 in

Courtesy WeatherBell

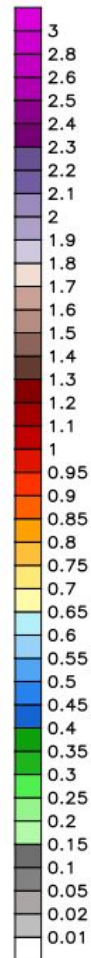
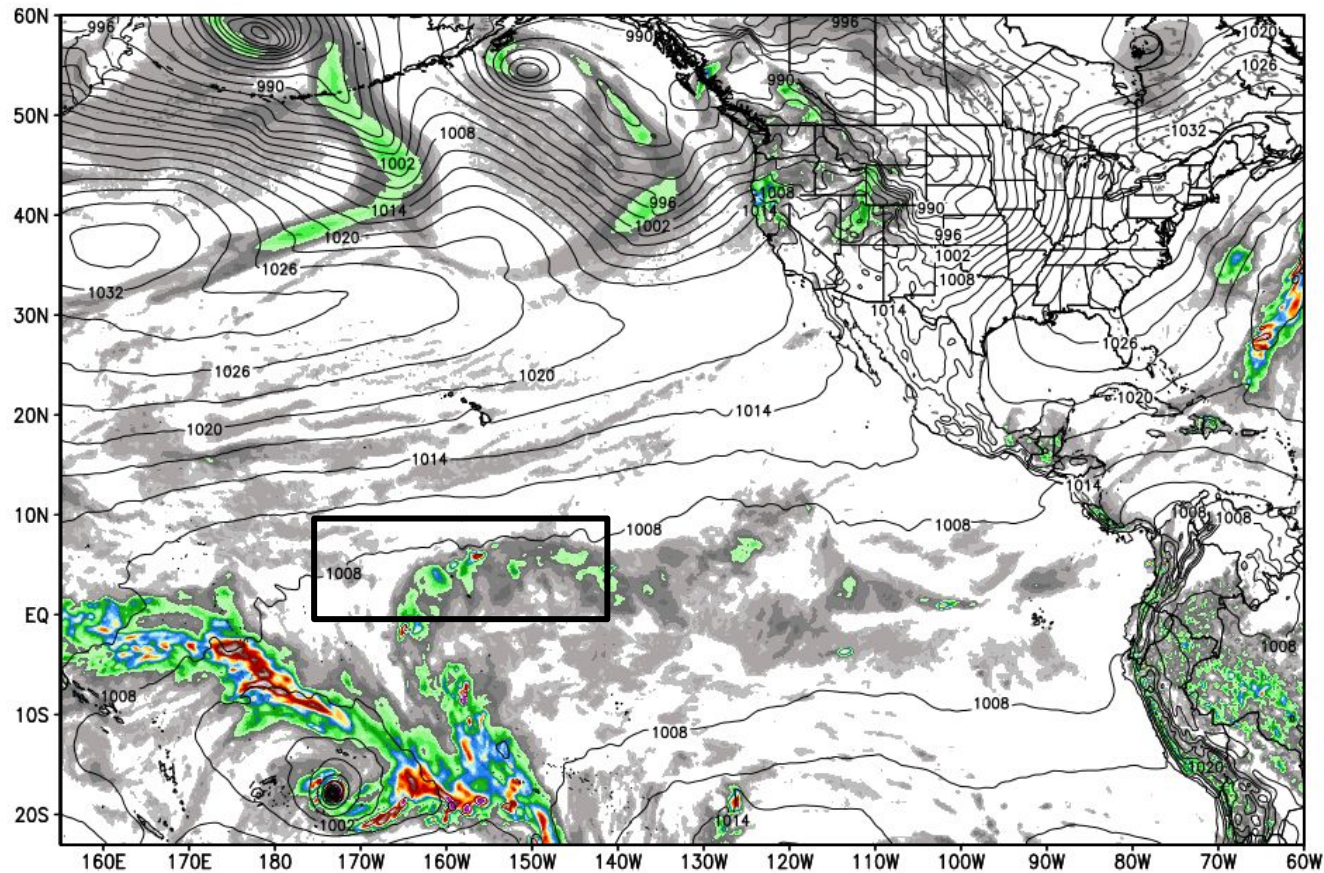
Total Pcpn 30 HR ECMWF Valid 06Z THU Feb18



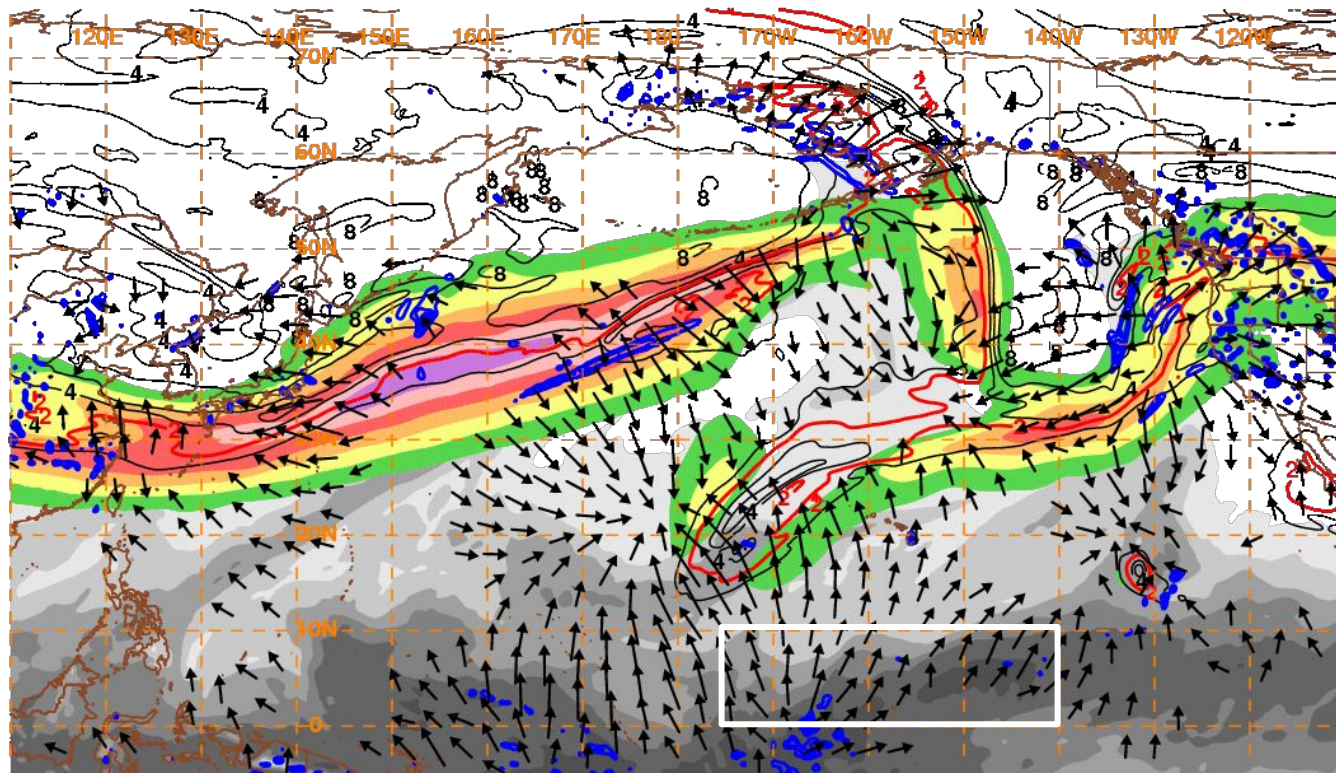
ECMWF 6-hourly Precipitation [inches] between 18Z18FEB2016 -- 00Z19FEB2016 & MSLP [hPa]
INIT: 00Z17FEB2016 fx: [048] hr --> Fri 00Z19FEB2016

Courtesy WeatherBell

Latest 48 HR ECMWF Valid 00Z FRI Feb19



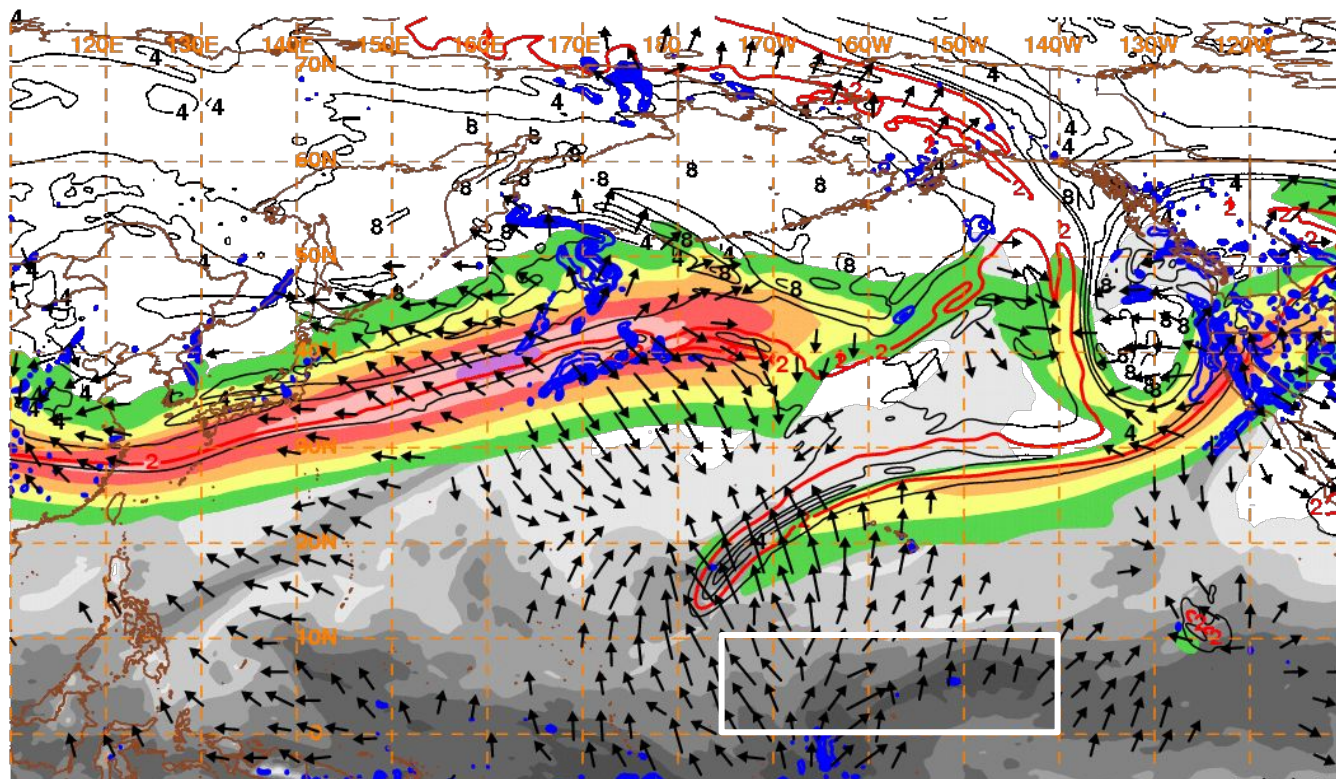
Analysis 06Z WED Feb 17: 200 mb DIV Wind Vectors



10 m/s → 160217/0600V000 PW, 250 hPa Isotachs, PV, Irr. Wind, 500 hPa Upward Vert. Vel



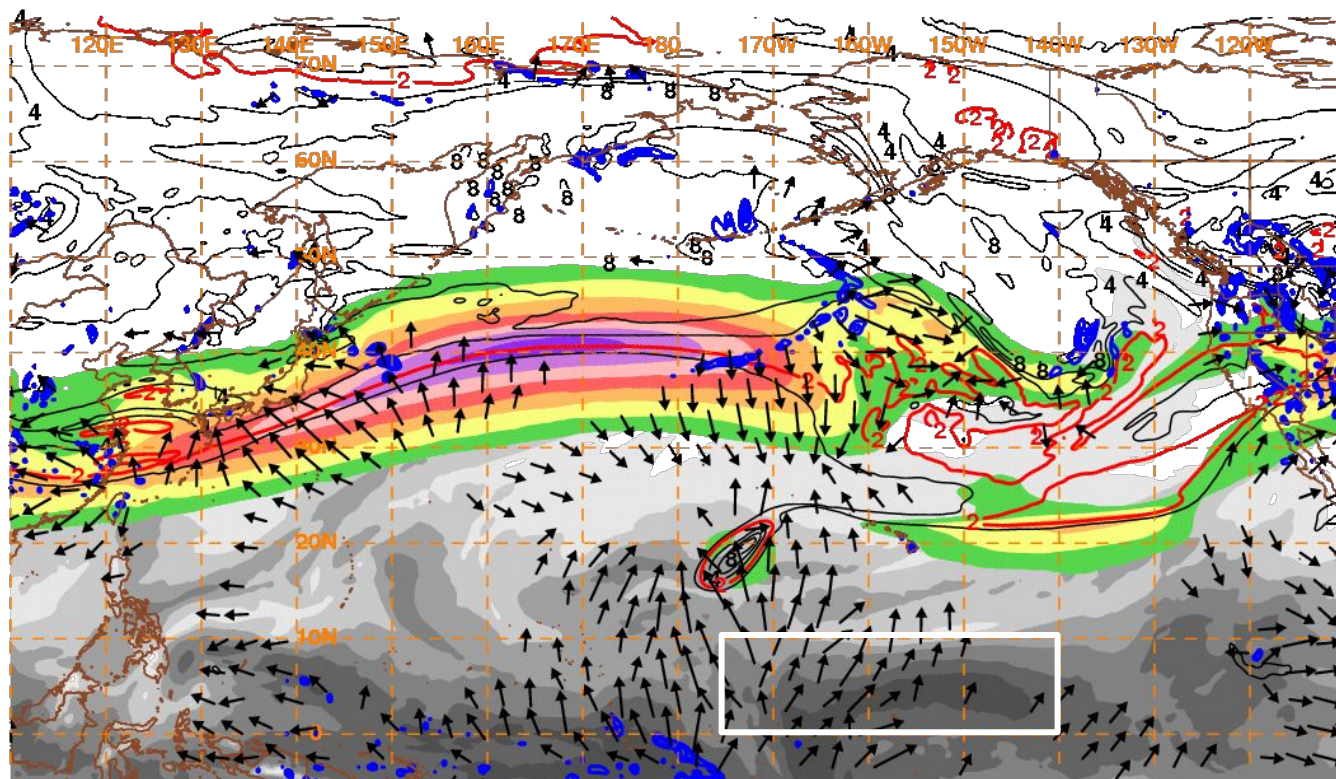
GFS 18HR FCST Valid 00Z Thu Feb 18: 200 mb DIV Wind Vectors



10 m/s → 160218/0000V018 PW, 250 hPa Isotachs, PV, Irr. Wind, 500 hPa Upward Vert. Vel



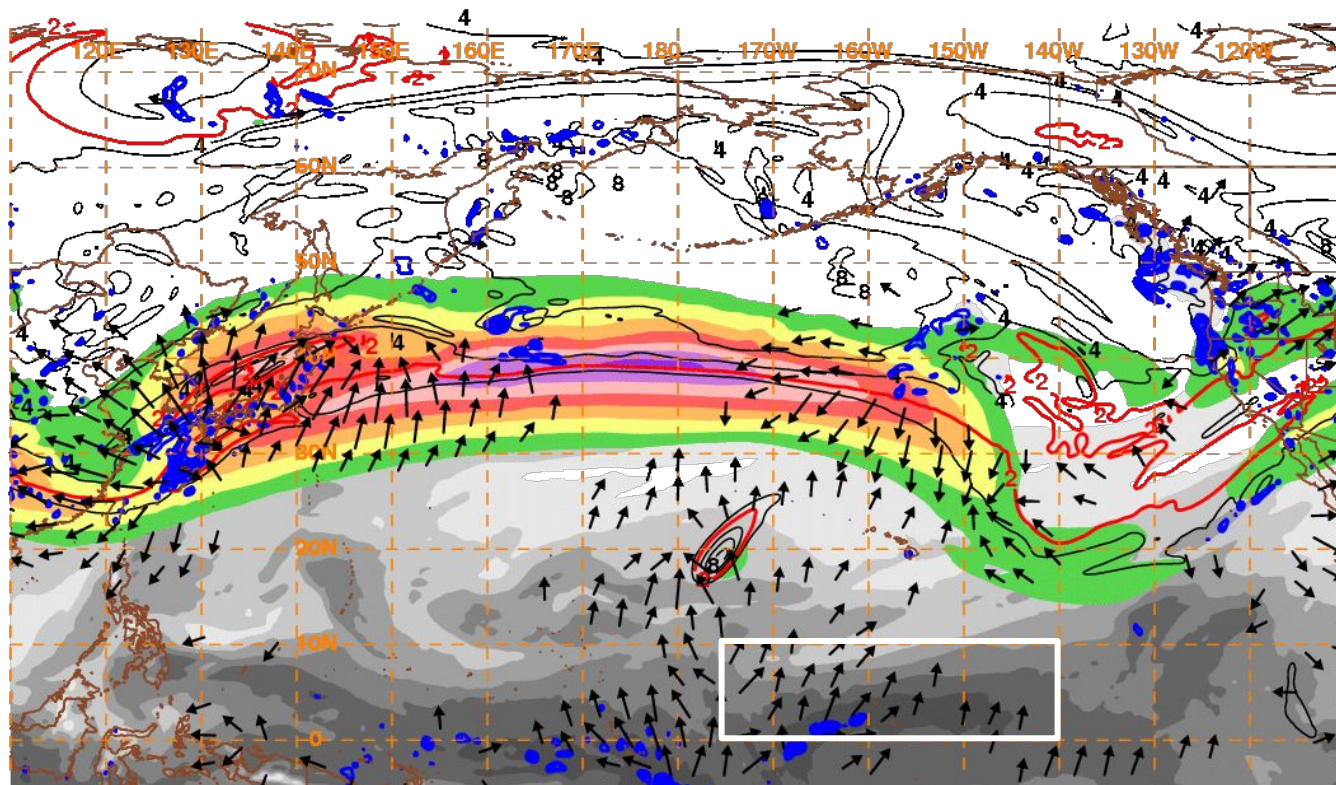
GFS 42HR FCST Valid 00Z FRI Feb 19: 200 mb DIV Wind Vectors



10 m/s → **160219/0000V042 PW, 250 hPa Isotachs, PV, Irr. Wind, 500 hPa Upward Vert. Vel**



GFS 66HR FCST Valid 00Z SAT Feb 20: 200 mb DIV Wind Vectors

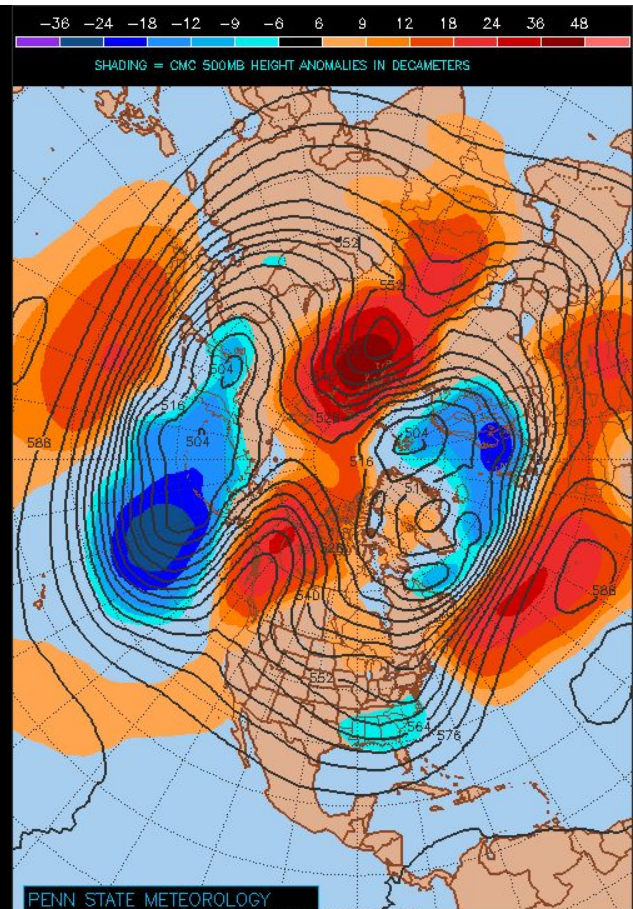
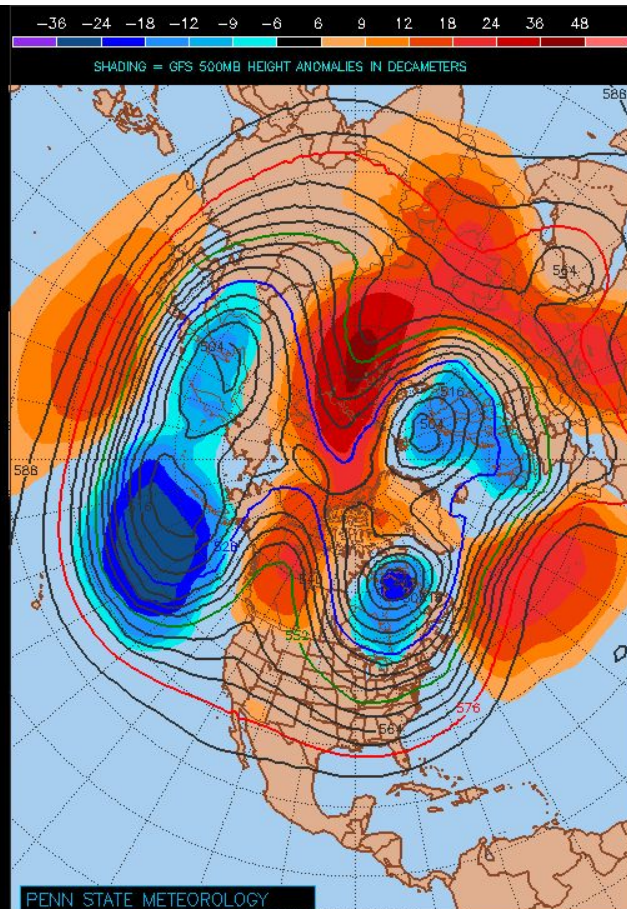
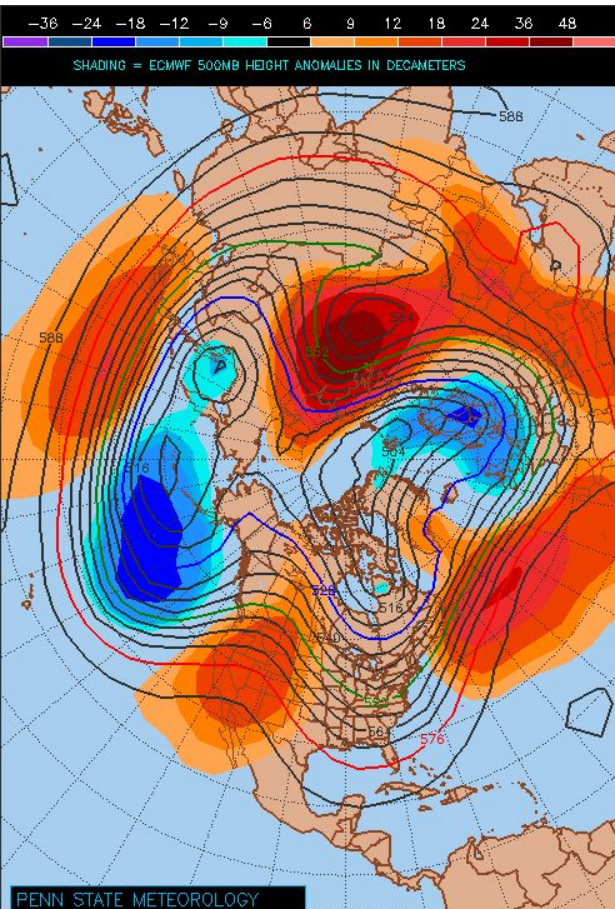


10 m/s → 160219/1800V060 PW, 250 hPa Isotachs, PV, Irr. Wind, 500 hPa Upward Vert. Vel



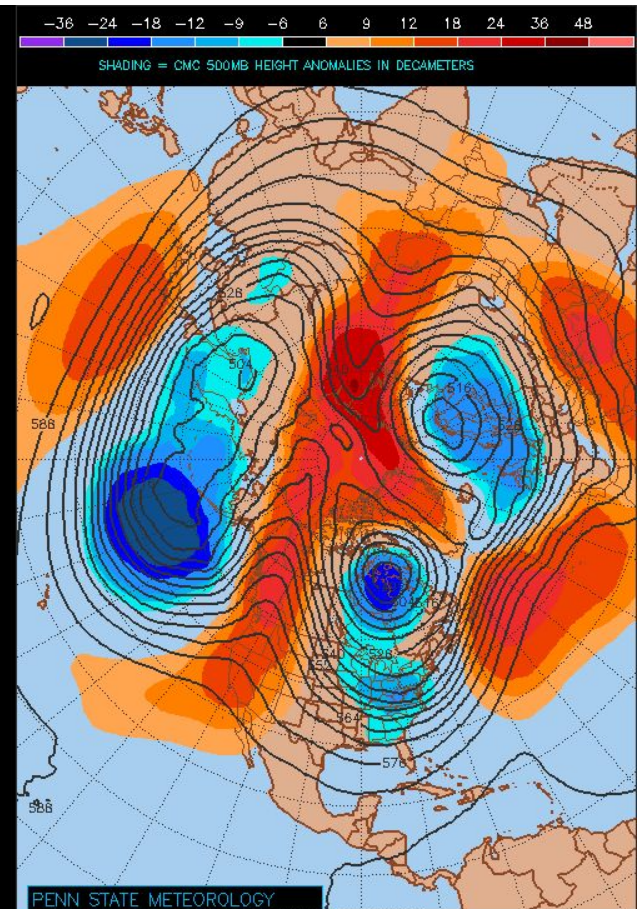
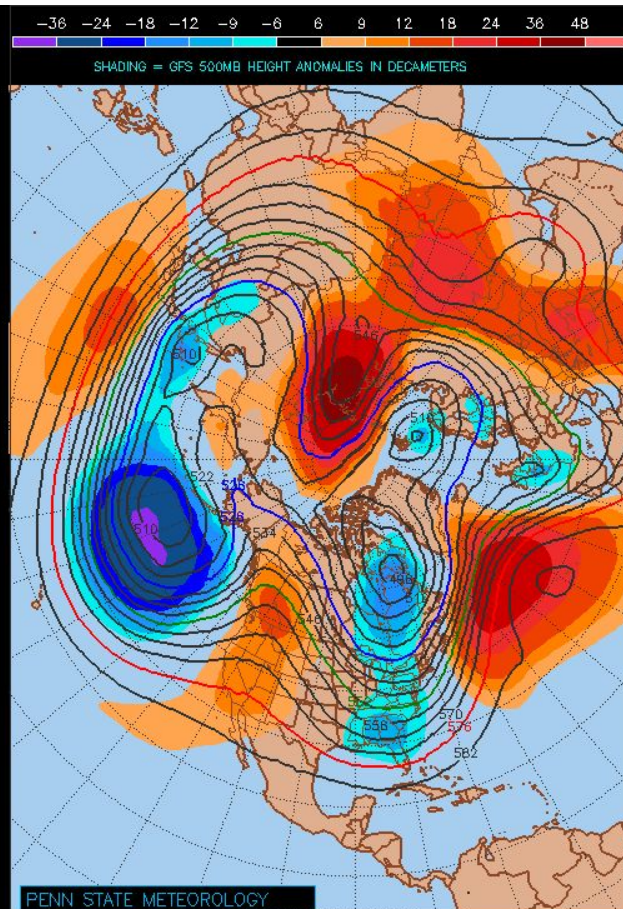
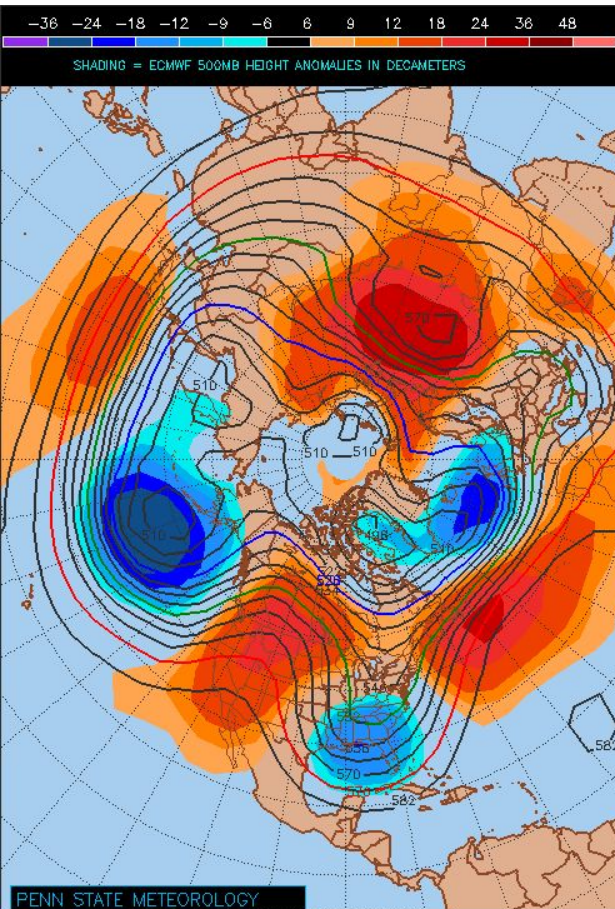
Medium - Long Range Forecast

Day 7-10 Initialized 00Z TUE 16 Feb



Medium - Long Range Forecast

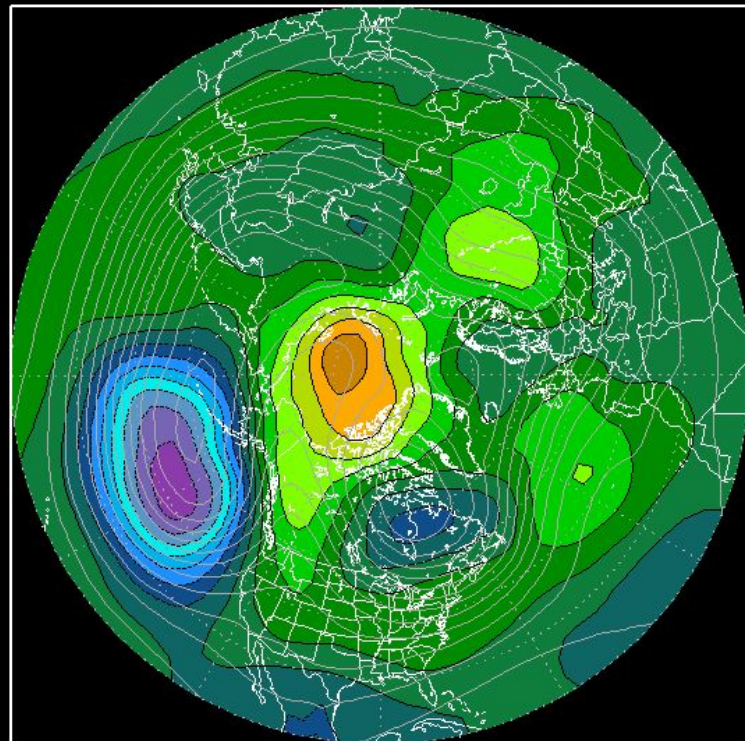
Day 7-10 Initialized 00Z WED 17 Feb



NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

360H Forecast from: 00Z Wed FEB,17 2016

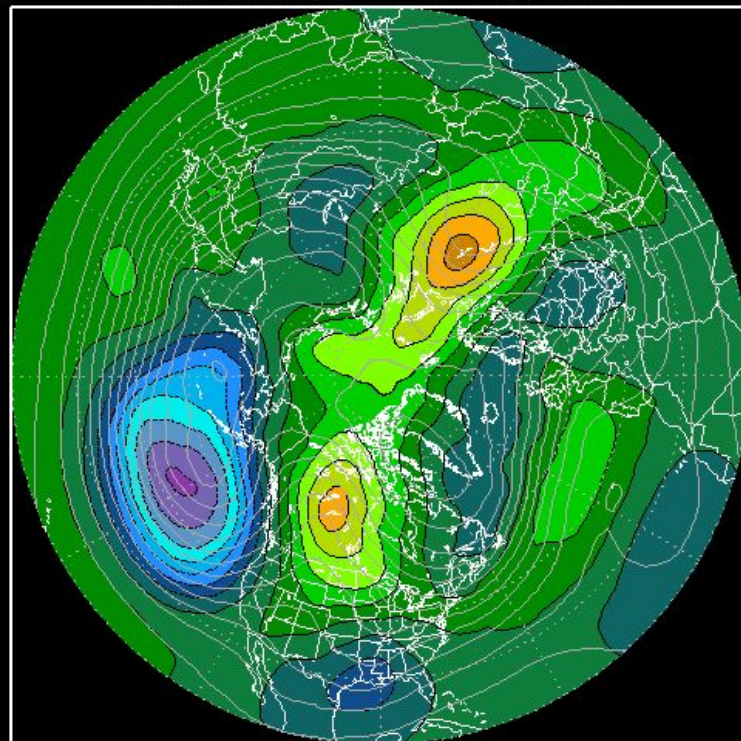
Valid time: 00Z Thu MAR,03 2016



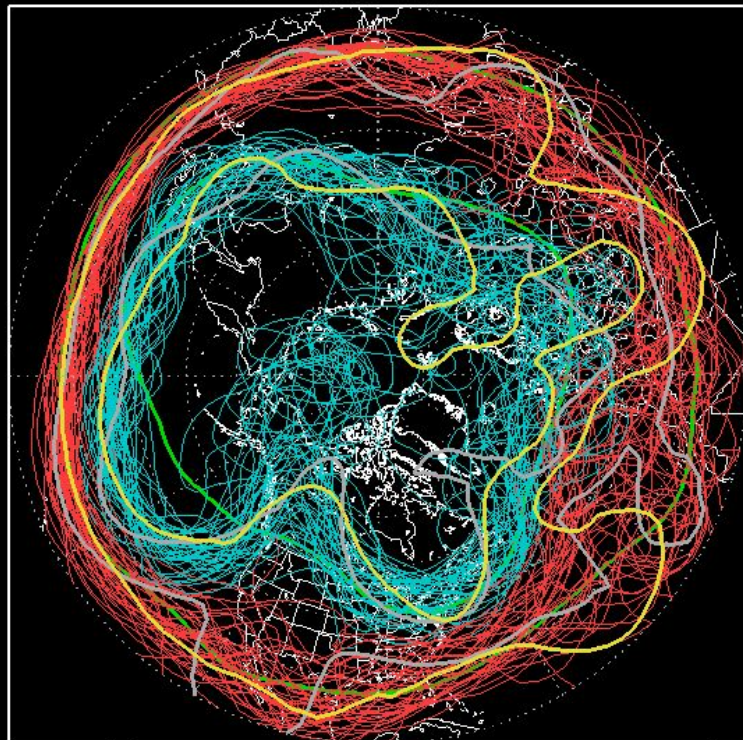
500mb HEIGHT ANOMALY(m), ESRL/PSD

360H Forecast from: 00Z Wed FEB 17 2016

Valid time: 00Z Thu MAR 03 2016



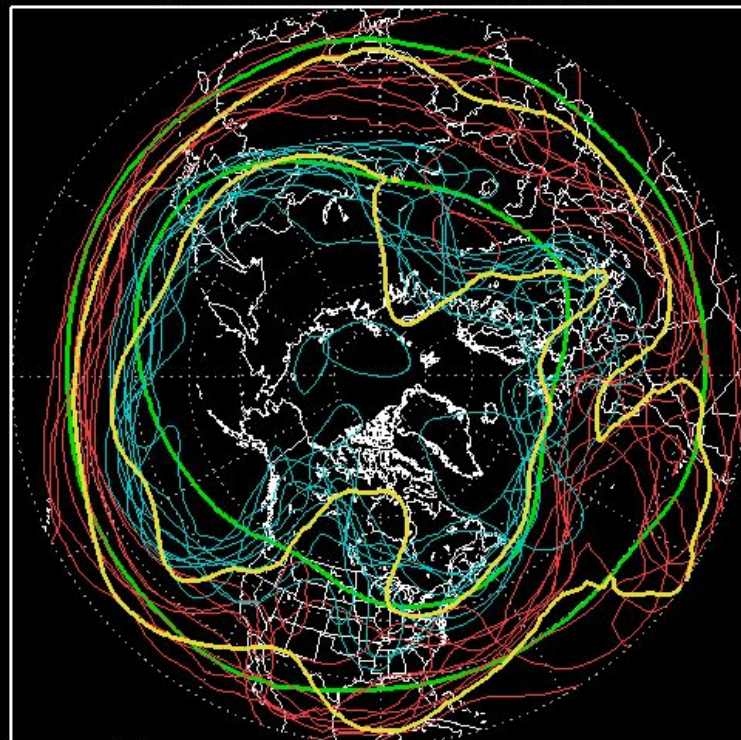
NCEP ENSEMBLE 500mb Z 360H Forecast from: 00Z Wed FEB,17 2016 Valid time: 00Z Thu MAR,03 2016



00z Runs:(21) 12z Runs:(21)

— 5460m — 5760m — Cntrl 00z — Cntrl 12z — CLIM

500mb HEIGHT SPAG, ESRL/PSD 360H Forecast from: 00Z Wed FEB 17 2016 Valid time: 00Z Thu MAR 03 2016



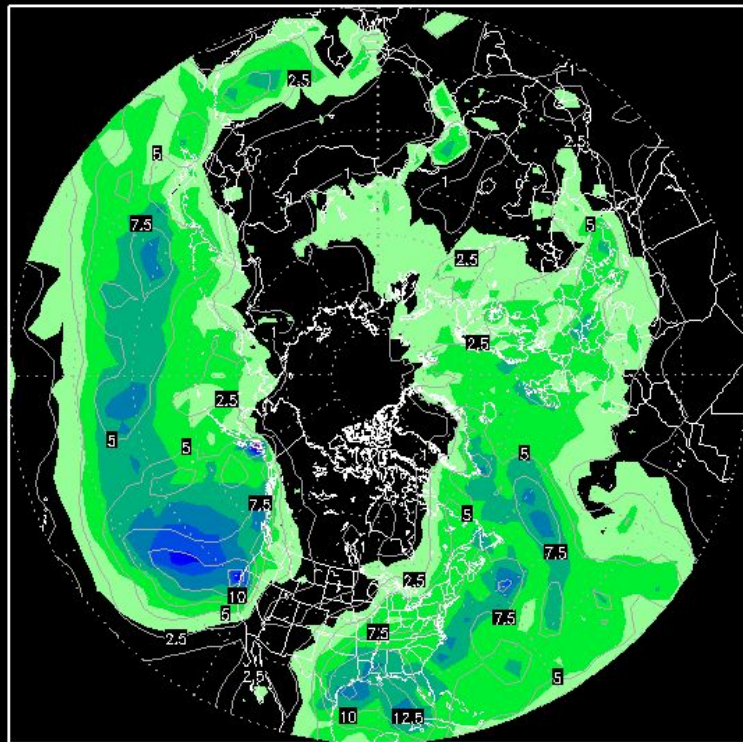
00z Runs:(11)

— 5460m — 5760m — Control 00z — CLIM

NCEP ENS MEAN PREC(color) and Std Dev(contour)

360H Forecast from: 00Z Wed FEB,17 2016

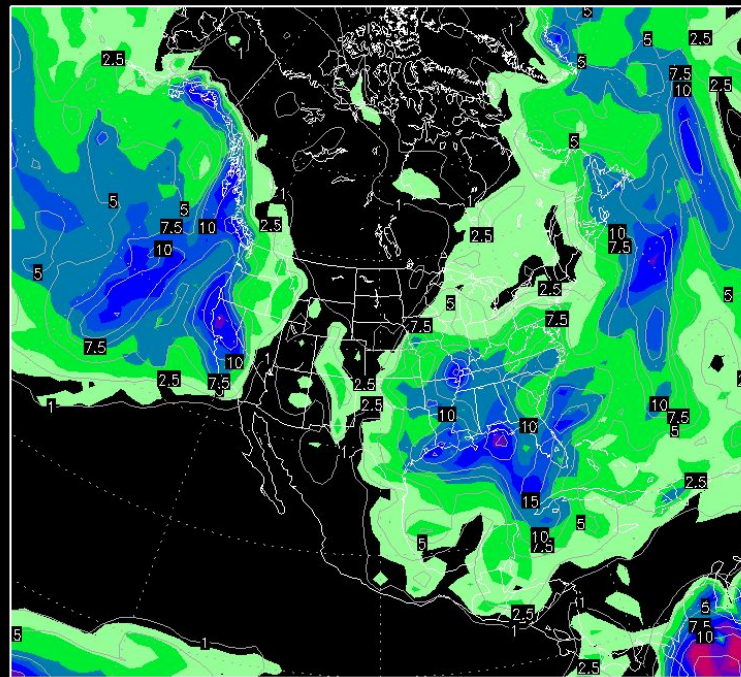
Valid time: 00Z Thu MAR,03 2016



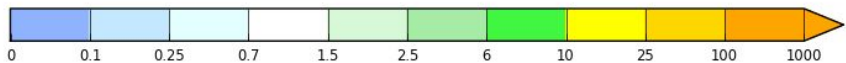
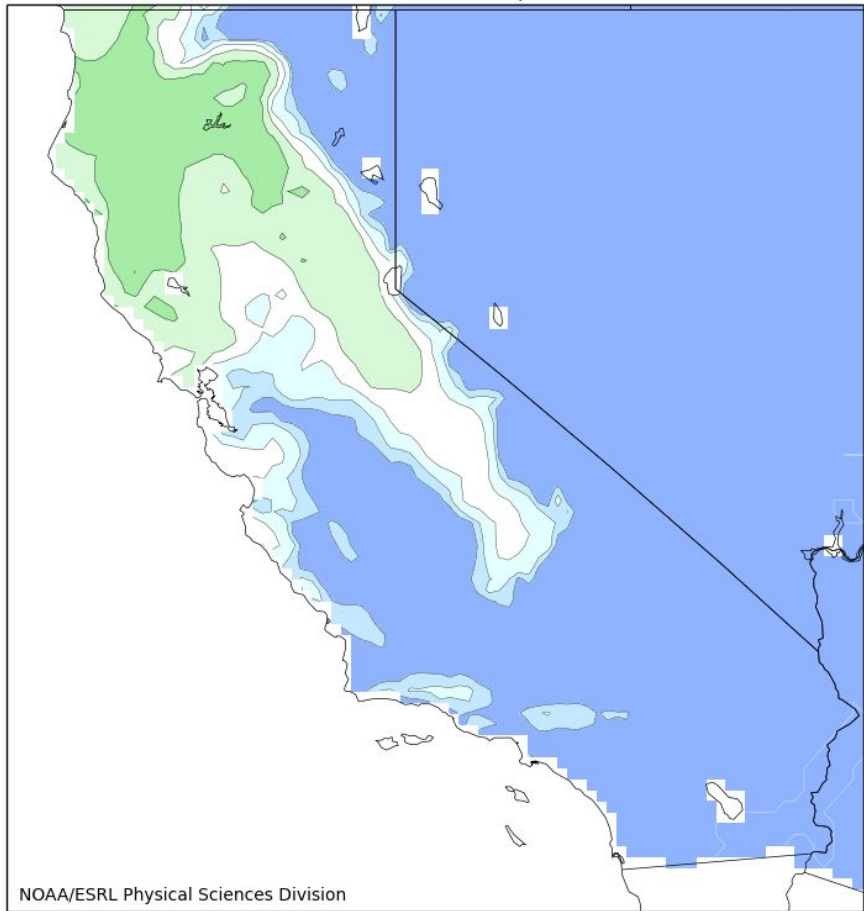
PRECIP(mm), Mean(color) and Std Dev(cont), ESRL/PSD

360H Forecast from: 00Z Wed FEB 17 2016

Valid time: 00Z Thu MAR 03 2016

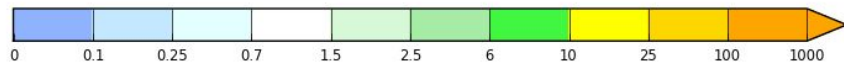
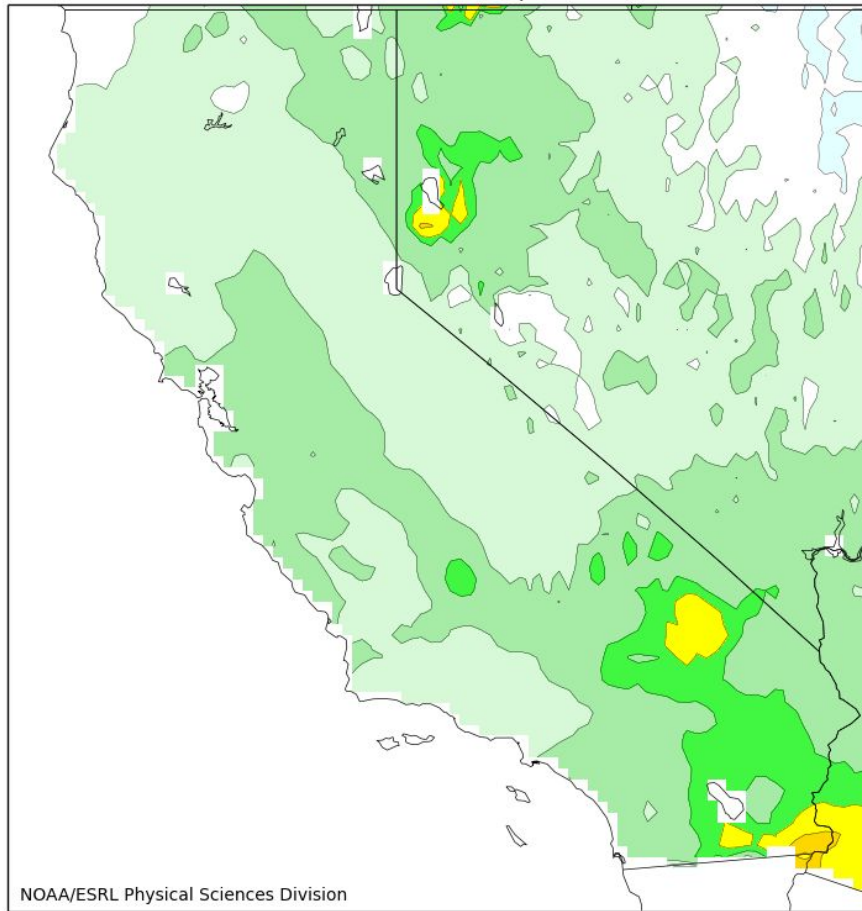


000-168hr fcst from 00Z Tue Feb 16. Valid 00Z Tue Feb 16 - 00Z Tue Feb 23
Ratio. Forecast/Climo Prob of Precip > 50mm. CSGD.



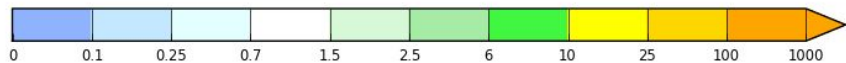
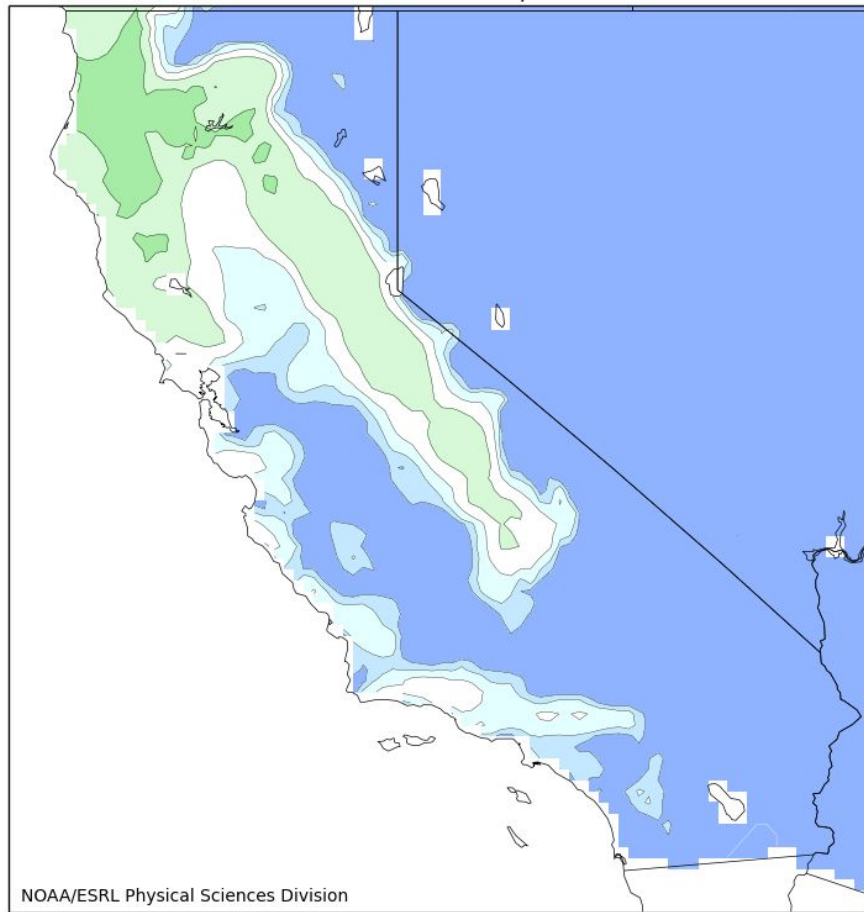
Ratio: Forecast Probability / Climatological Probability

198-360hr fcst from 00Z Tue Feb 16. Valid 06Z Wed Feb 24 - 00Z Wed Mar 02
Ratio. Forecast/Climo Prob of Precip > 50mm. CSGD.



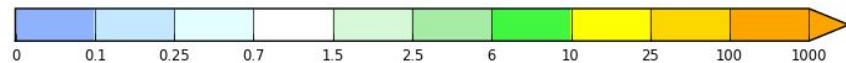
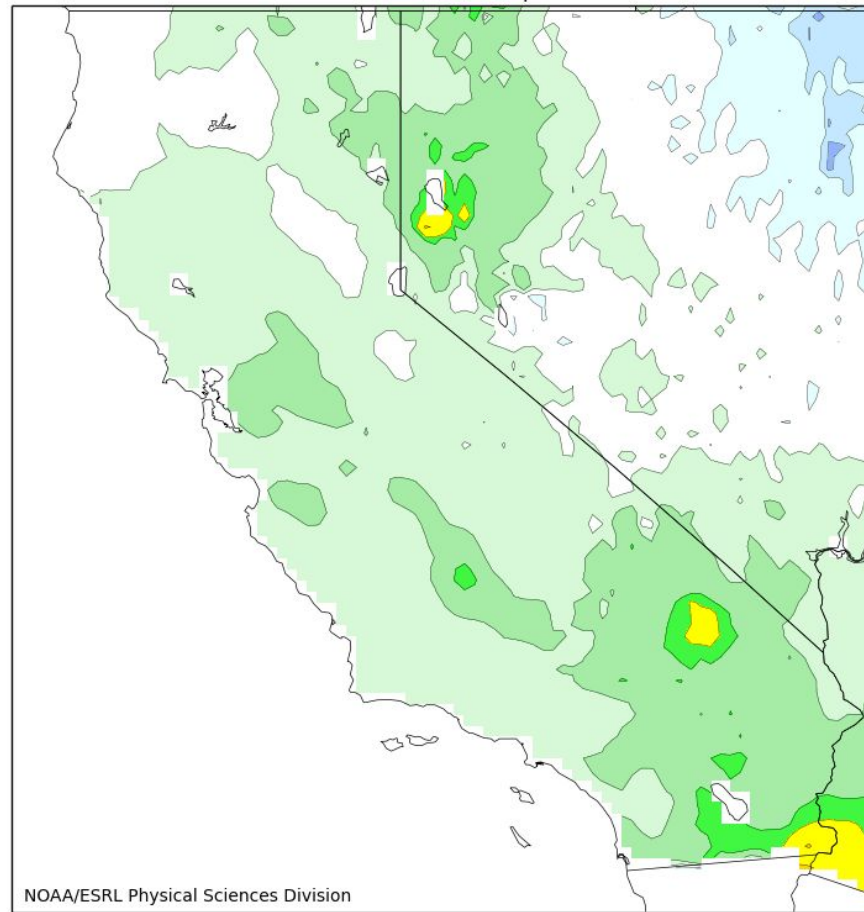
Ratio: Forecast Probability / Climatological Probability

000-168hr fcst from 00Z Wed Feb 17. Valid 00Z Wed Feb 17 - 00Z Wed Feb 24
Ratio. Forecast/Climo Prob of Precip > 50mm. CSGD.



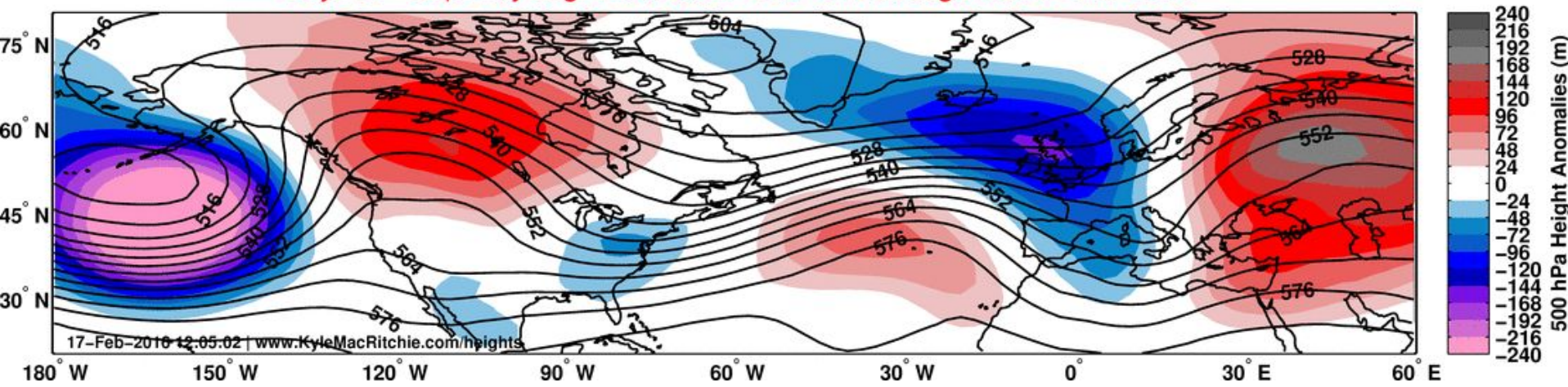
Ratio: Forecast Probability / Climatological Probability

198-360hr fcst from 00Z Wed Feb 17. Valid 06Z Thu Feb 25 - 00Z Thu Mar 03
Ratio. Forecast/Climo Prob of Precip > 50mm. CSGD.

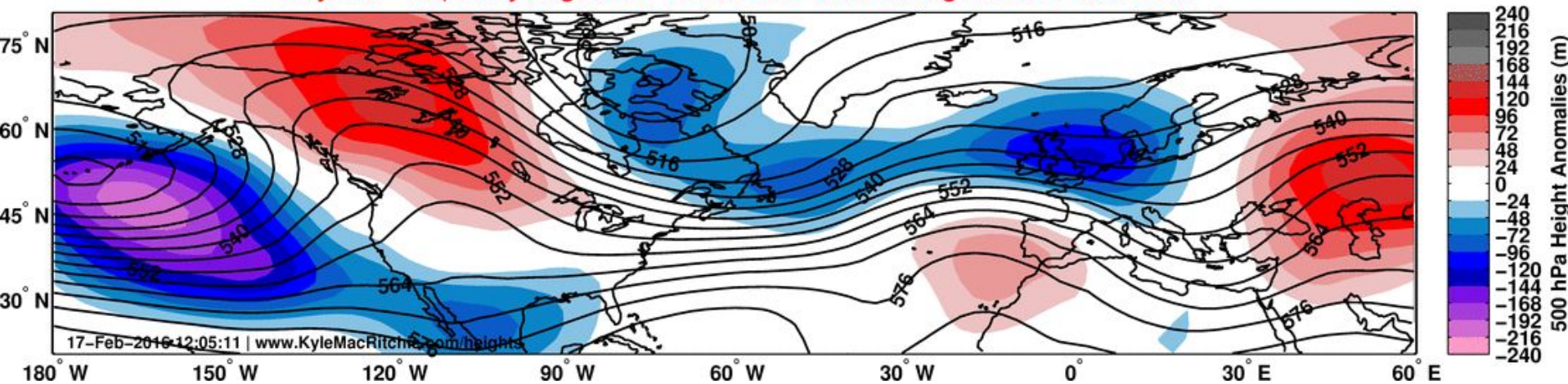


Ratio: Forecast Probability / Climatological Probability

CFS (Ens. Mean) 500 hPa Hgts Anoms & Total | North America/Europe | Run at Wed 17-Feb-2016 00z
Days 11 – 15 | 5 Day Avg. Valid: Sat 27-Feb-2016 through Wed 02-Mar-2016

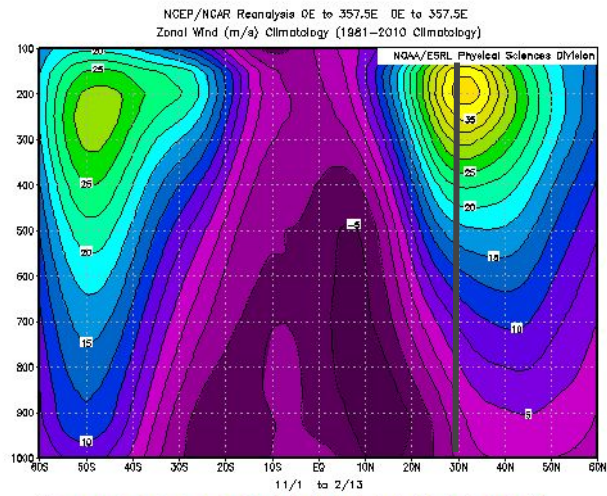


CFS (Ens. Mean) 500 hPa Hgts Anoms & Total | North America/Europe | Run at Wed 17-Feb-2016 00z
Days 16 – 20 | 5 Day Avg. Valid: Thu 03-Mar-2016 through Mon 07-Mar-2016

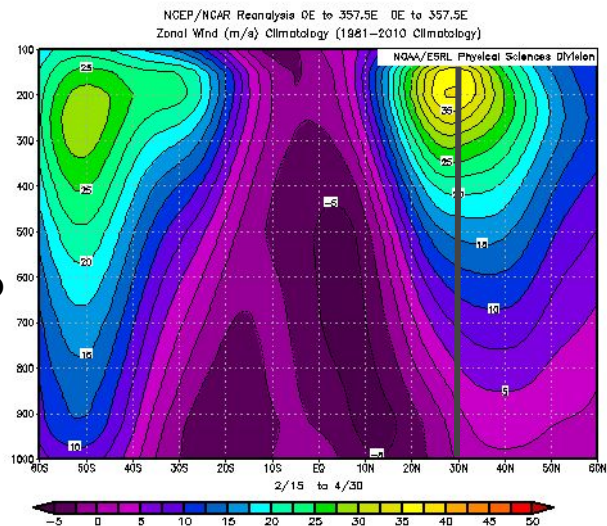


The Curious Incident of the Zonal Mean Zonal Wind in 2016

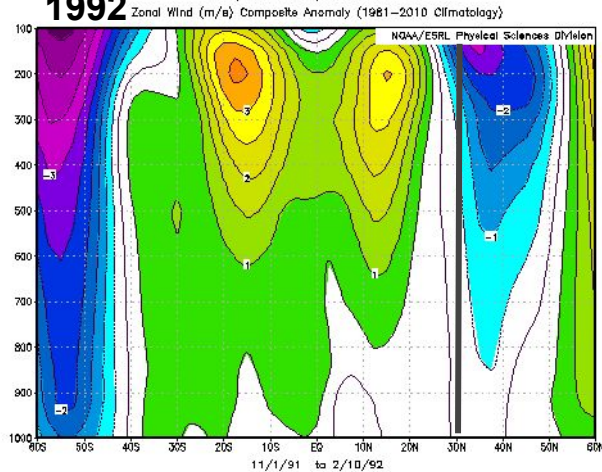
Zonal Mean U Nov 1- Feb 13 Climo



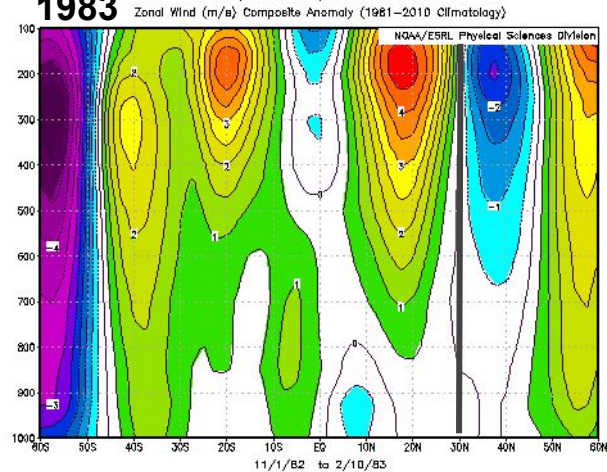
Zonal Mean U Feb 15 - Apr 30 Climo



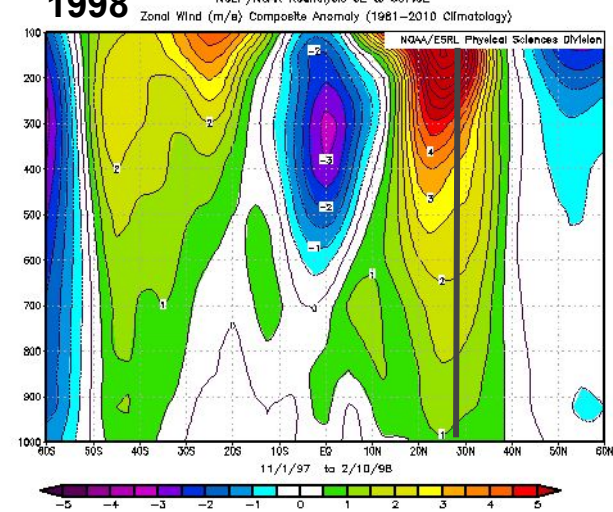
1992 NCEP/NGAR Reanalysis OE to 357.5E



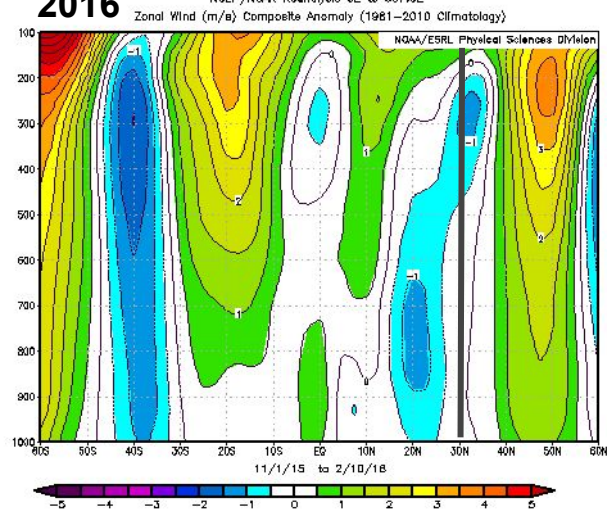
1983 NCEP/NGAR Reanalysis OE to 357.5E

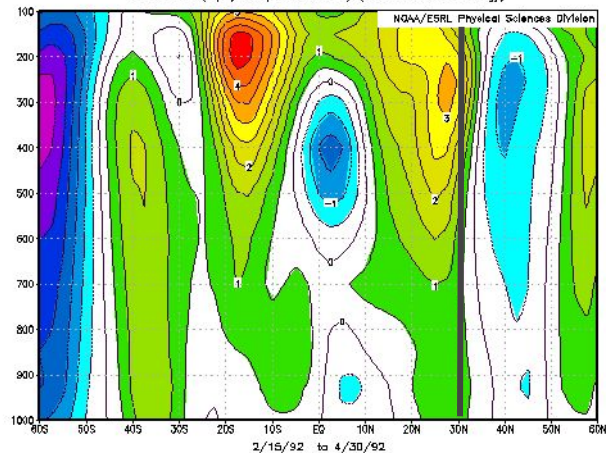
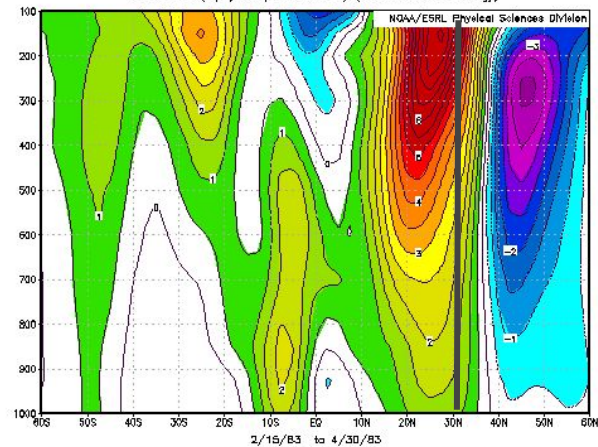
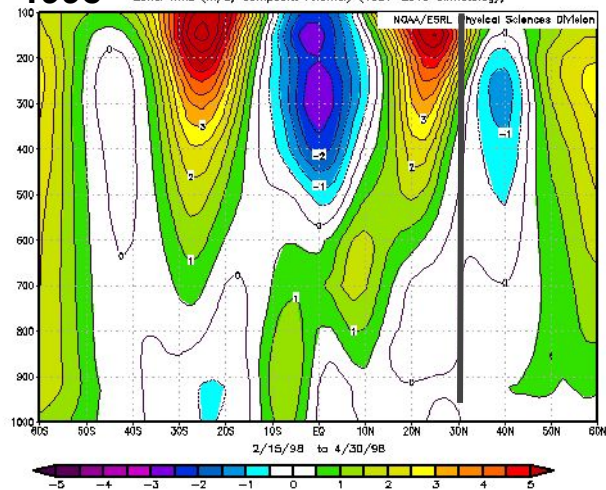


1998 NCEP/NGAR Reanalysis OE to 357.5E

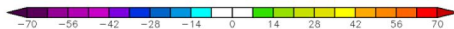
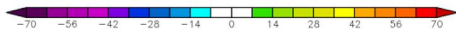
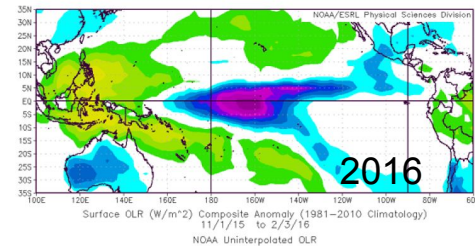
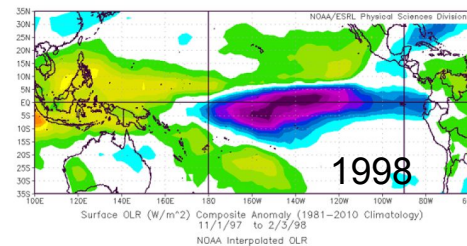
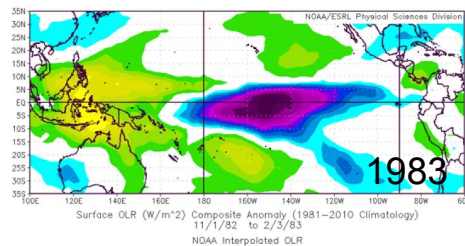
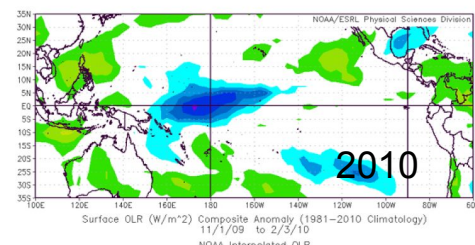
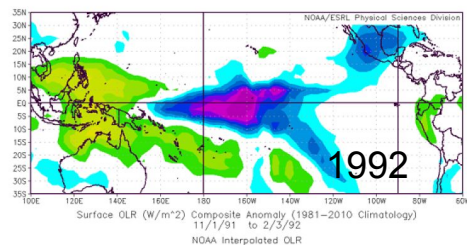
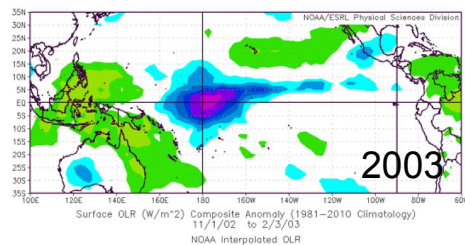
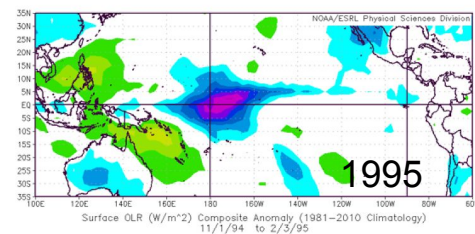
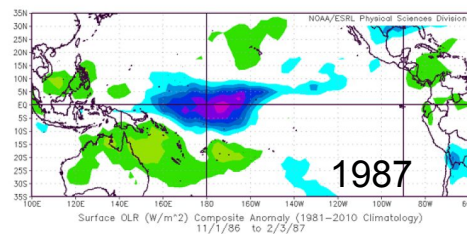
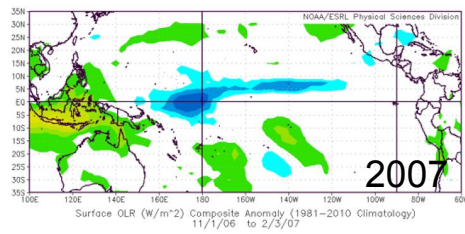


2016 NCEP/NGAR Reanalysis OE to 357.5E

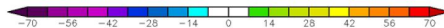
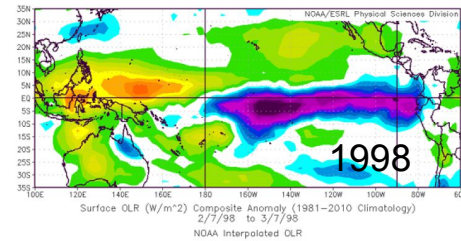
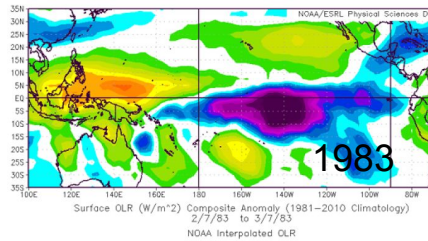
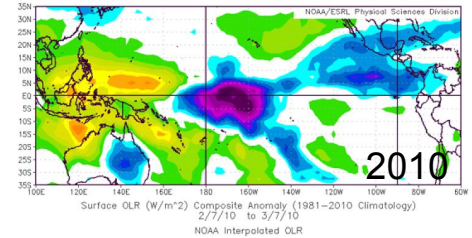
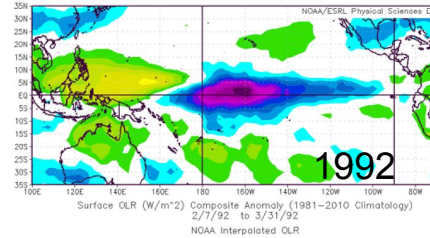
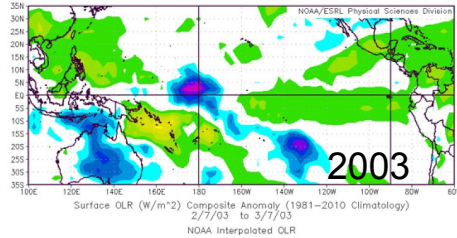
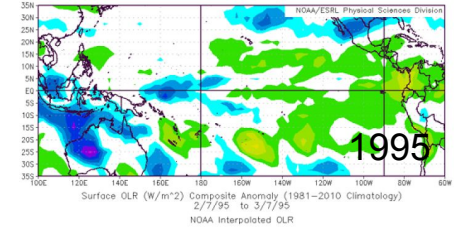
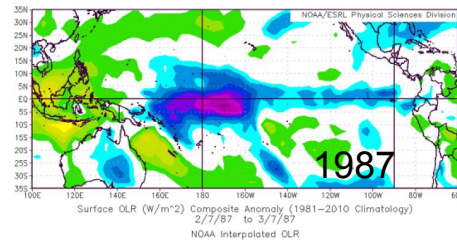
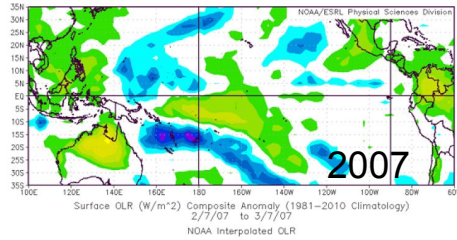


1992NGEP/NGAR Reanalysis 0E to 357.5E
Zonal Wind (m/s) Composite Anomaly (1981–2010 Climatology)**1983**NGEP/NGAR Reanalysis 0E to 357.5E
Zonal Wind (m/s) Composite Anomaly (1981–2010 Climatology)**1998**NGEP/NGAR Reanalysis 0E to 357.5E
Zonal Wind (m/s) Composite Anomaly (1981–2010 Climatology)

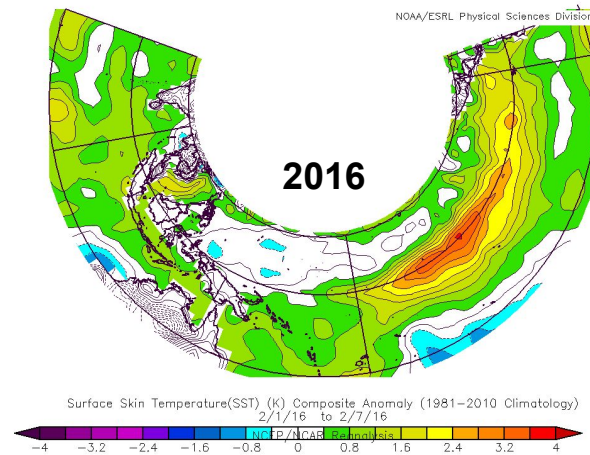
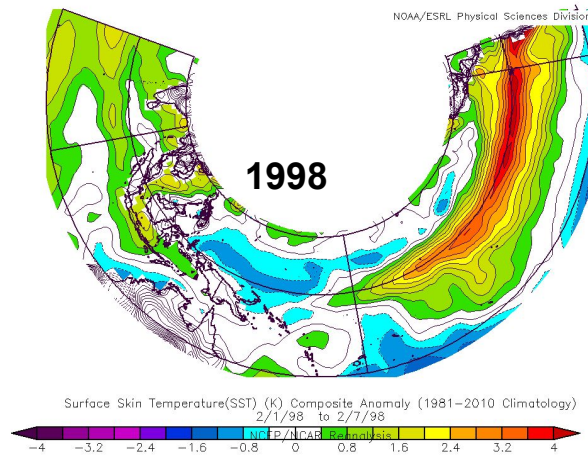
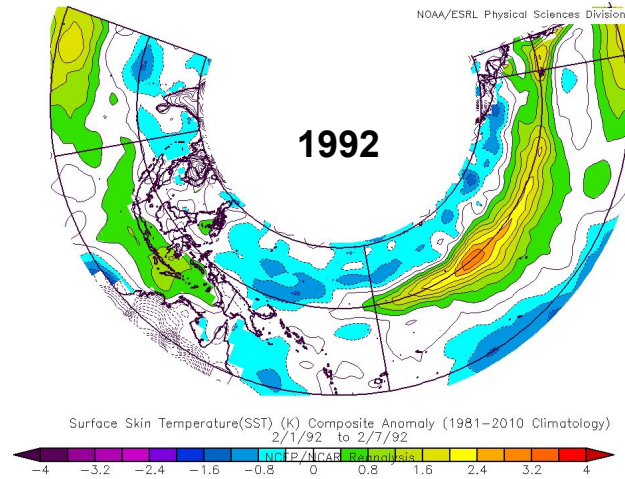
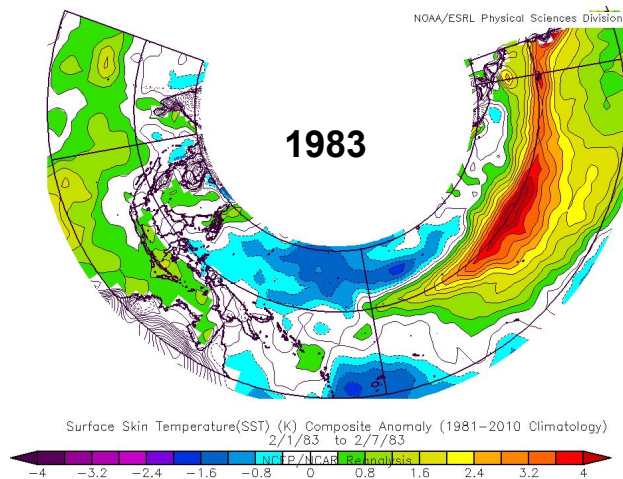
Observed OLR Anomalies : 1 Nov - 3 Feb

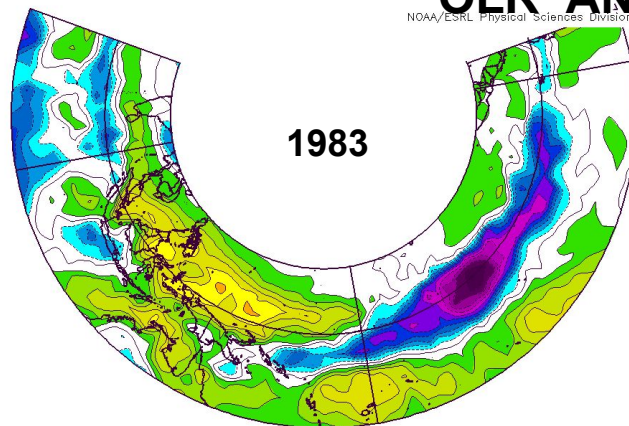


Observed OLR Anomalies : 7 Feb - 7 Mar

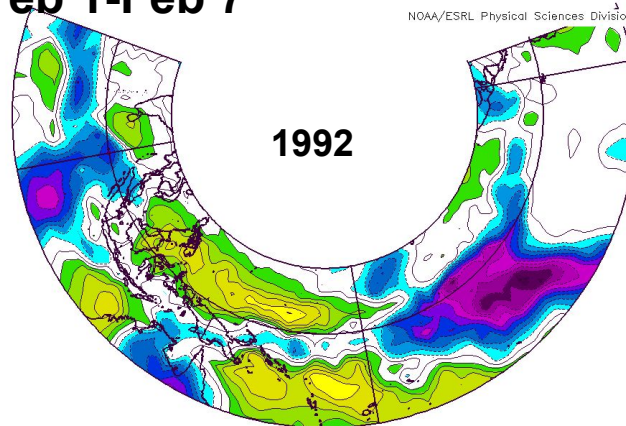
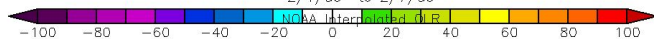


SST ANOM Feb 1-Feb 7

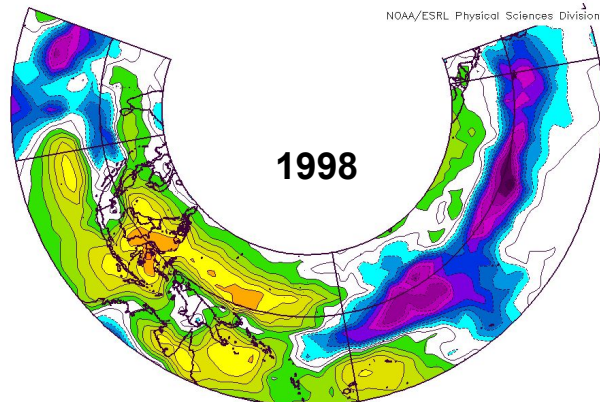
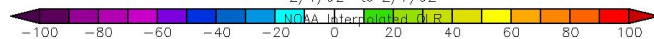




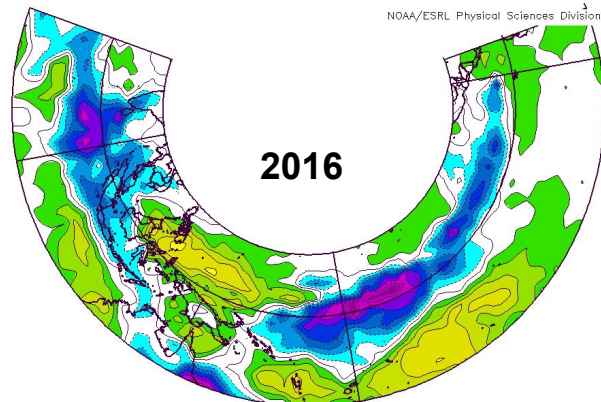
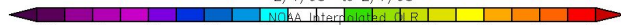
Surface OLR (W/m^2) Composite Anomaly (1981–2010 Climatology)
2/1/83 to 2/7/83



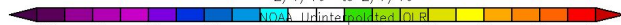
Surface OLR (W/m^2) Composite Anomaly (1981–2010 Climatology)
2/1/92 to 2/7/92



Surface OLR (W/m^2) Composite Anomaly (1981–2010 Climatology)
2/1/98 to 2/7/98



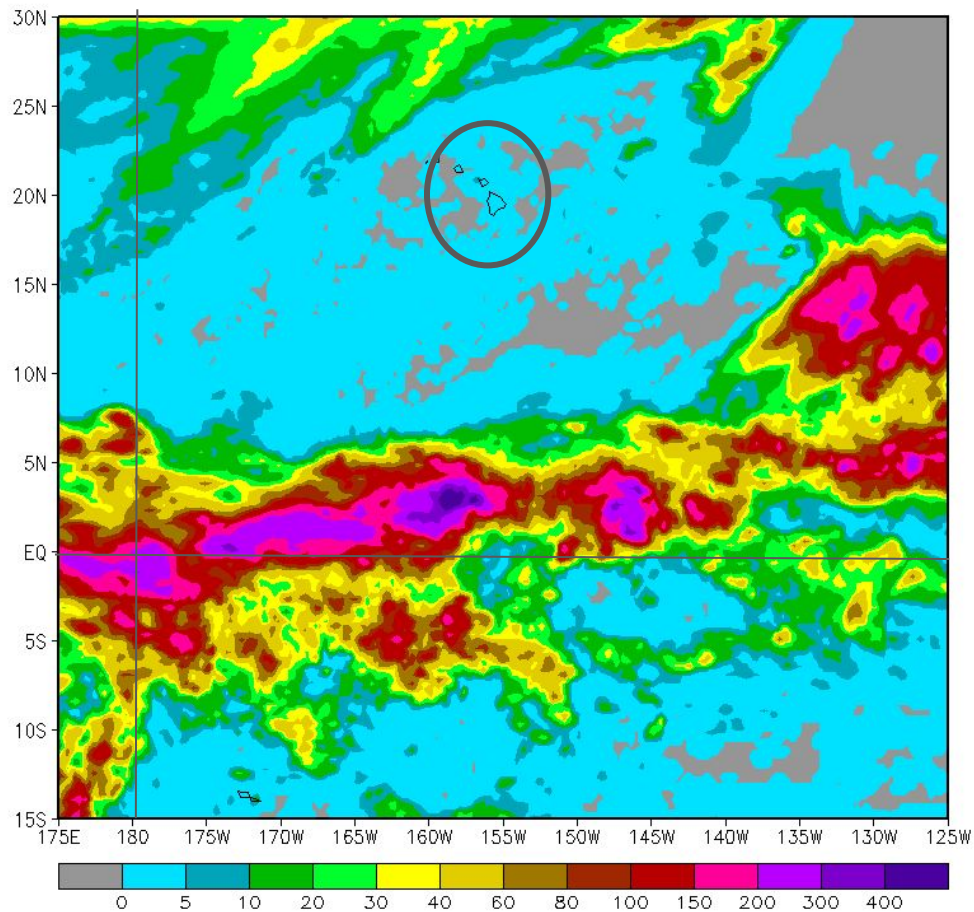
Surface OLR (W/m^2) Composite Anomaly (1981–2010 Climatology)
2/1/16 to 2/7/16



CMORPH 7-day Rainfall Accumulation (mm)
(08Feb2016 12Z - 15Feb2016 12Z)

CMORPH: 7-Day

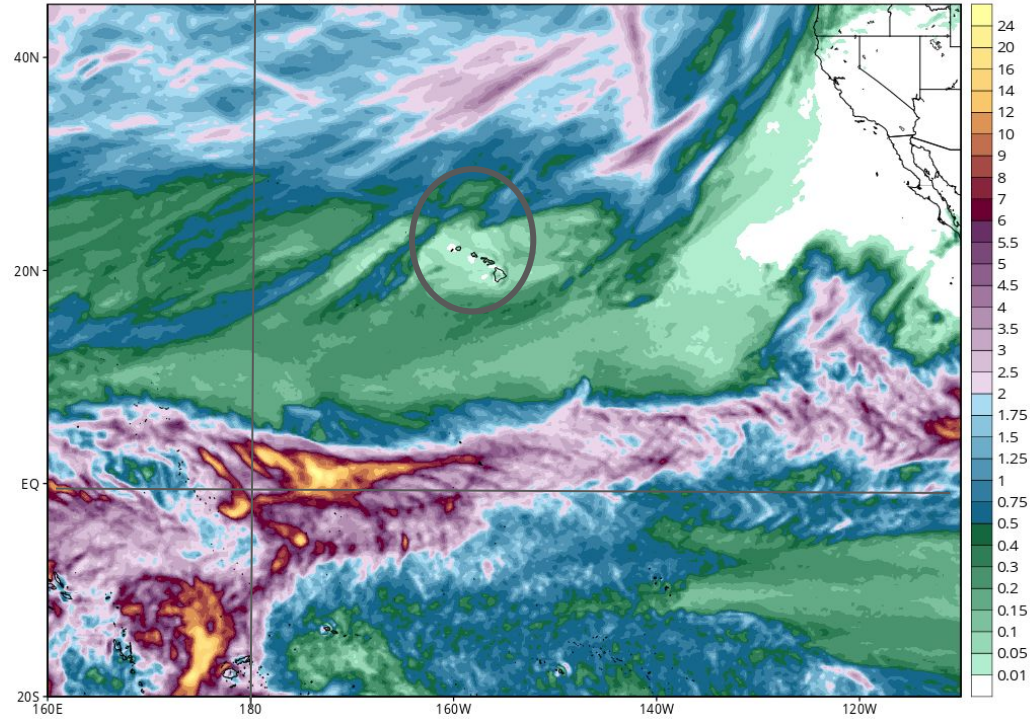
8 - 15 Feb



GFS Total Accumulated Precipitation (inches) from 06z08Feb2016 to 00z15Feb2016

Init: 06z Feb 08 2016 Forecast Hour: [162] valid at 00z Mon, Feb 15 2016

Levi Cowan | tropicaltidbits.com



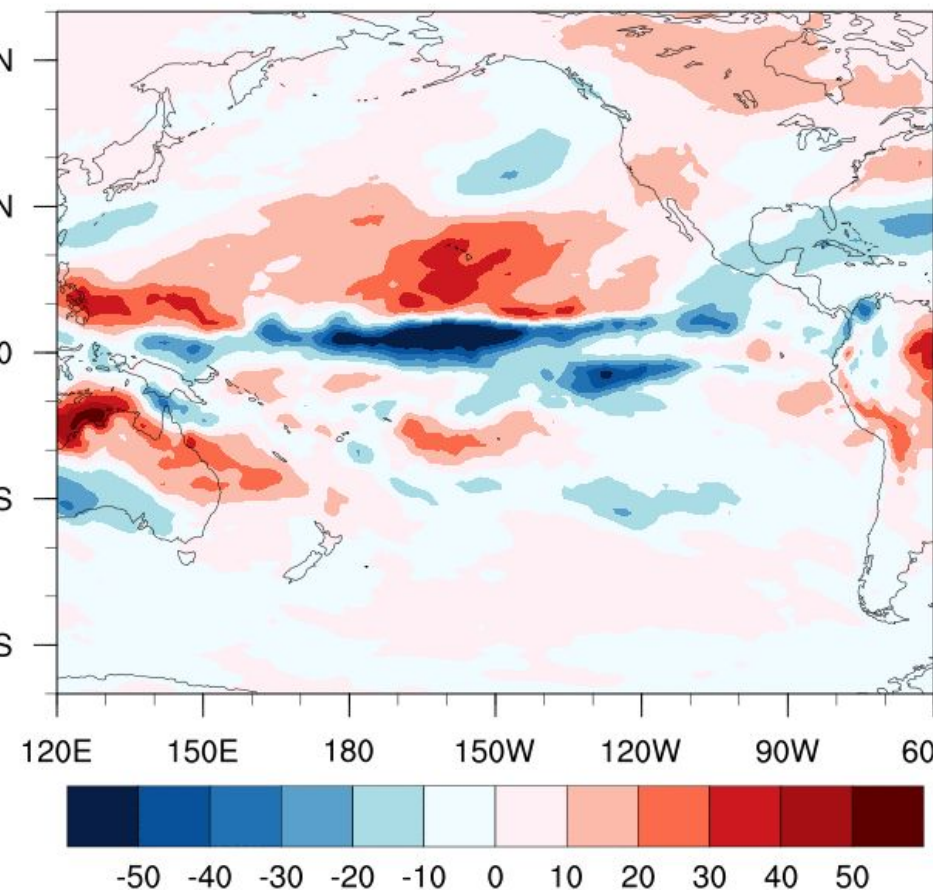
Initial Condition Dependency of the El Niño Signal

Day 23-30 Comparison (Analyzed SST - Climo SST)

OLR

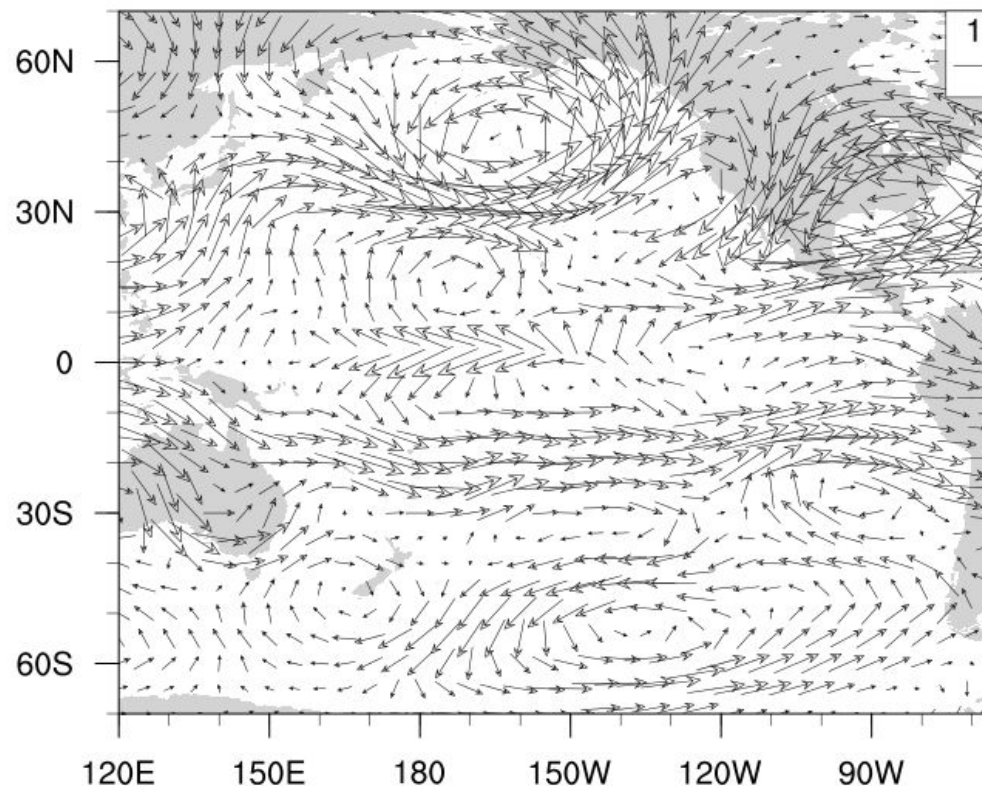
2016/02/21-2016/02/29

W m-2



Day 23-30 Comparison (Analyzed SST - Climo SST)

200 hPa Wind Vectors 2016/02/21-2016/02/29

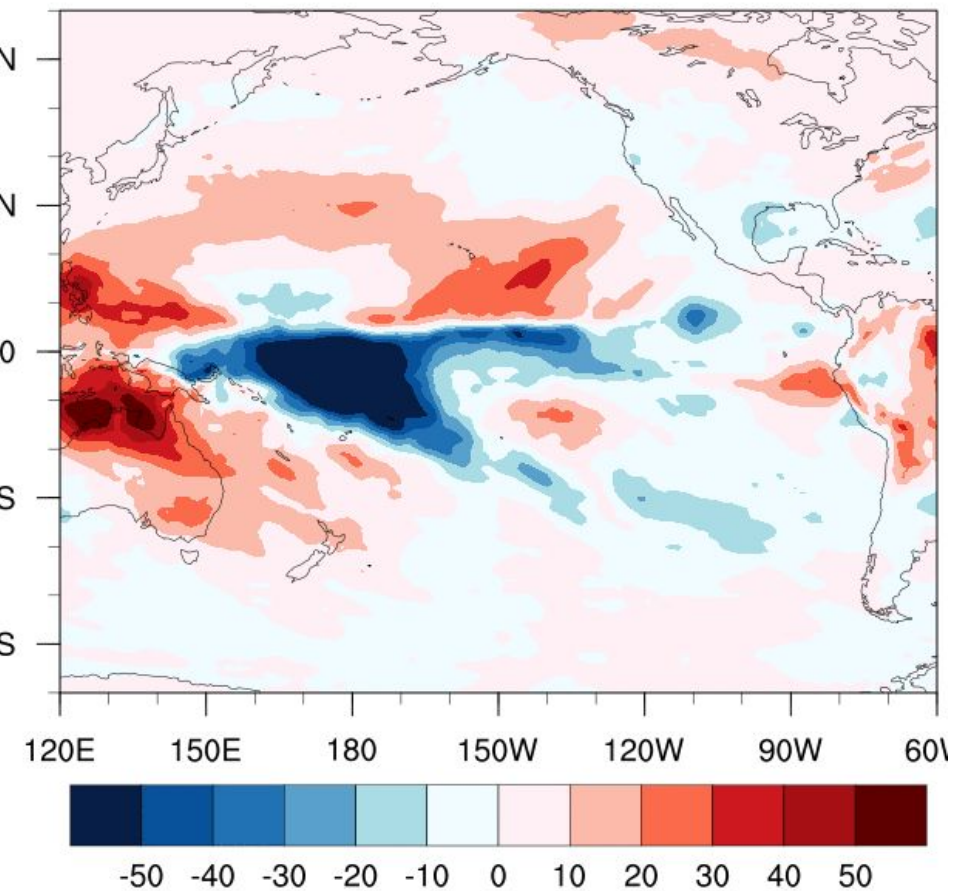


Day 15-22 Comparison (Analyzed SST - Climo SST)

OLR

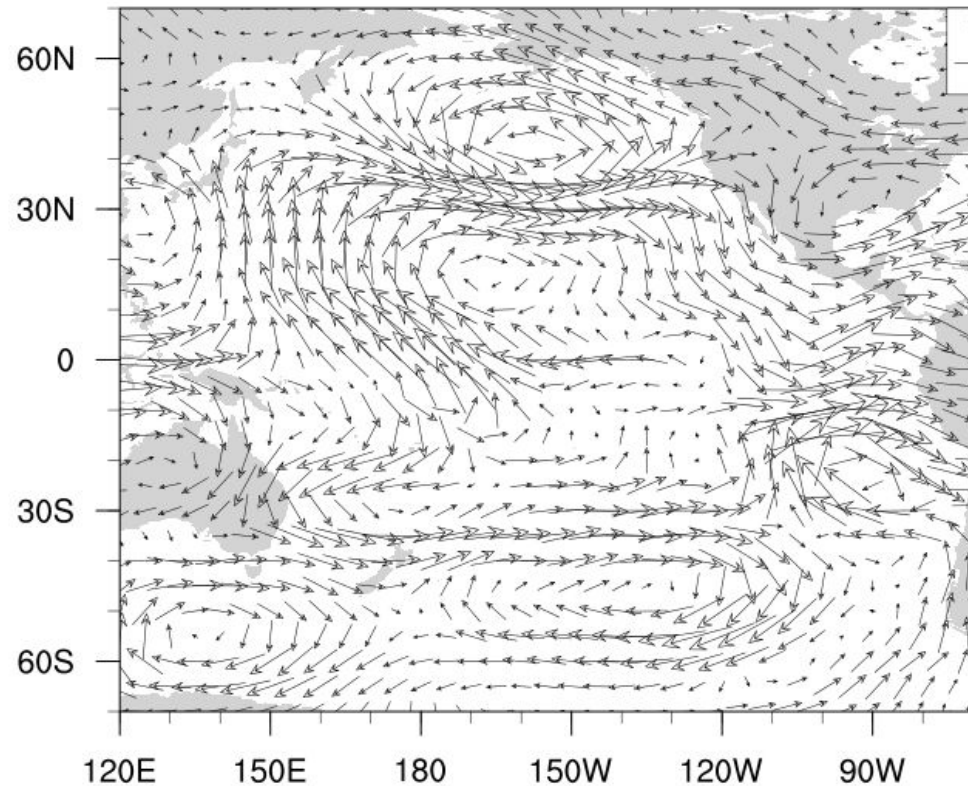
2016/02/21-2016/02/29

W m⁻²



Day 15-22 Comparison (Analyzed SST - Climo SS

200 hPa Wind Vectors 2016/02/21-2016/02/29

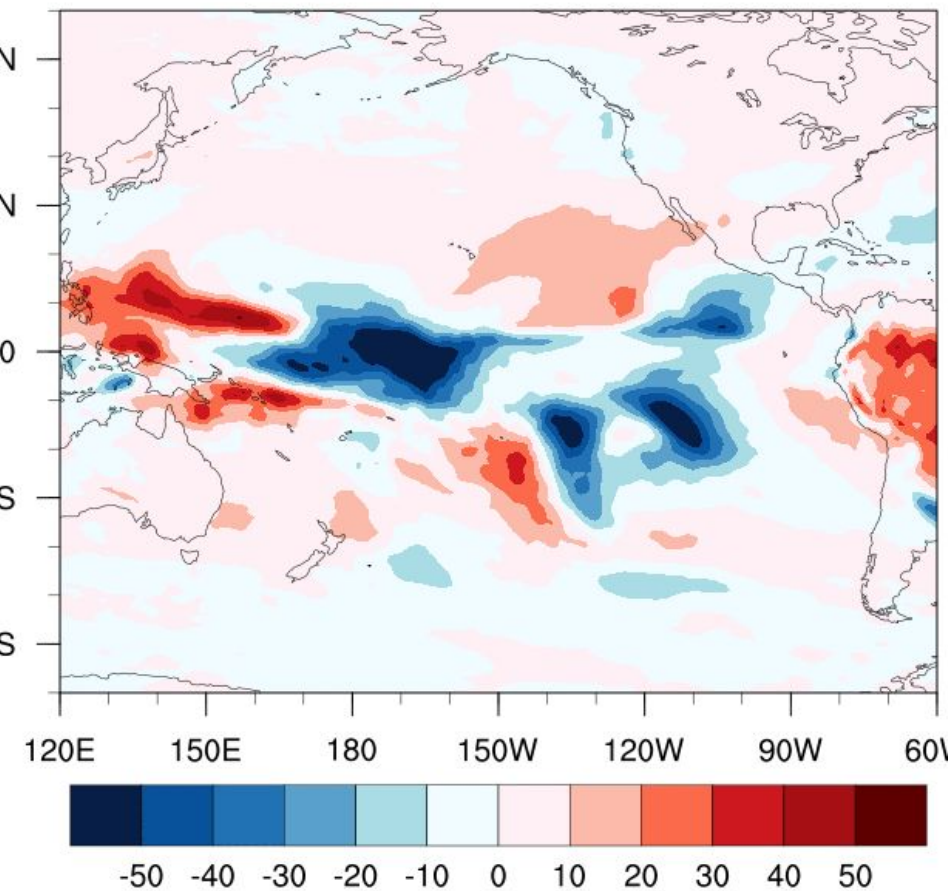


Day 8-14 Comparison (Analyzed SST - Climo SST)

OLR

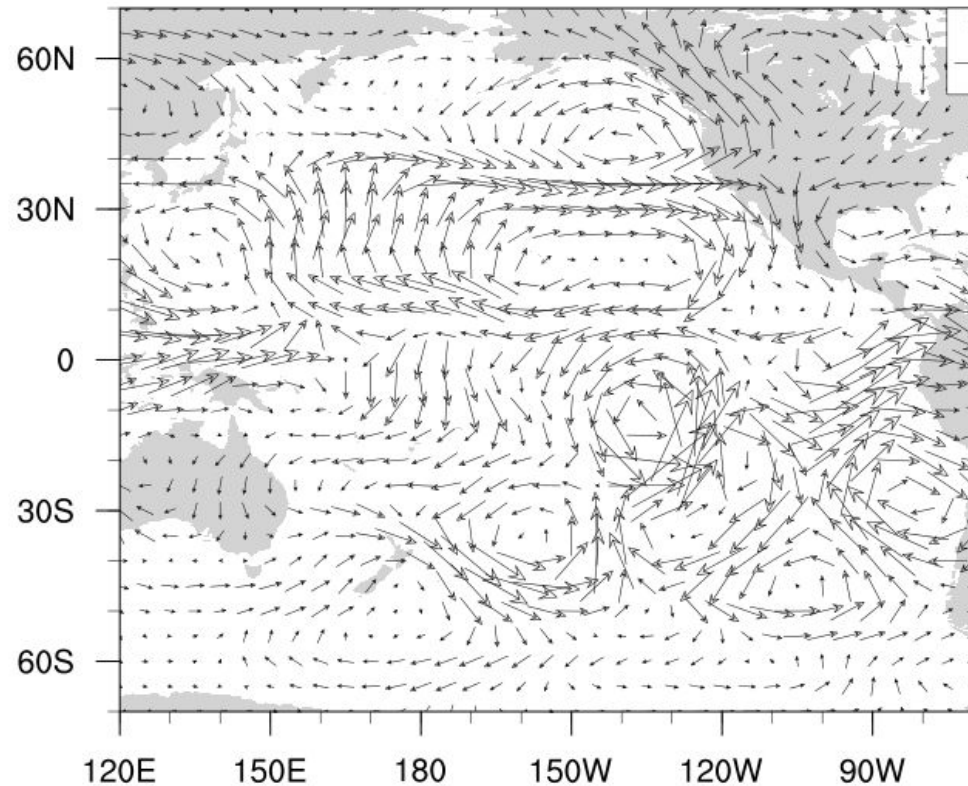
2016/02/22-2016/02/29

W m⁻²



Day 8-14 Comparison (Analyzed SST - Climo SST)

200 hPa Wind Vectors 2016/02/22-2016/02/29

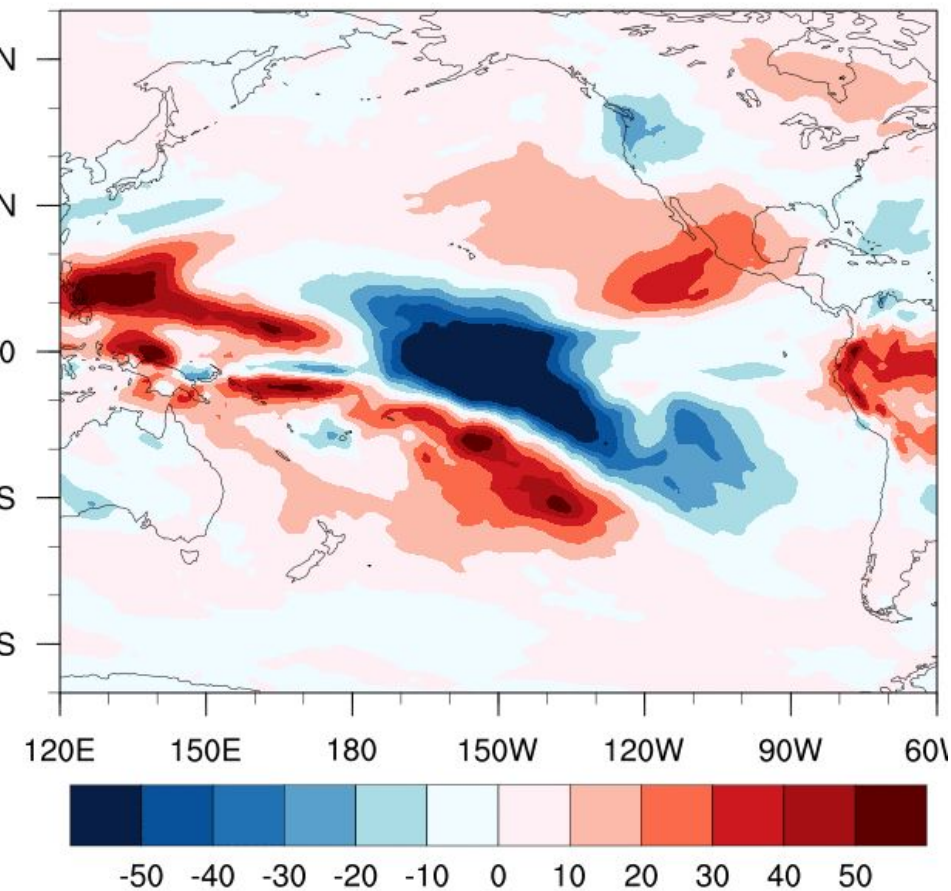


Day 15-22 Comparison (Analyzed SST - Climo SST)

OLR

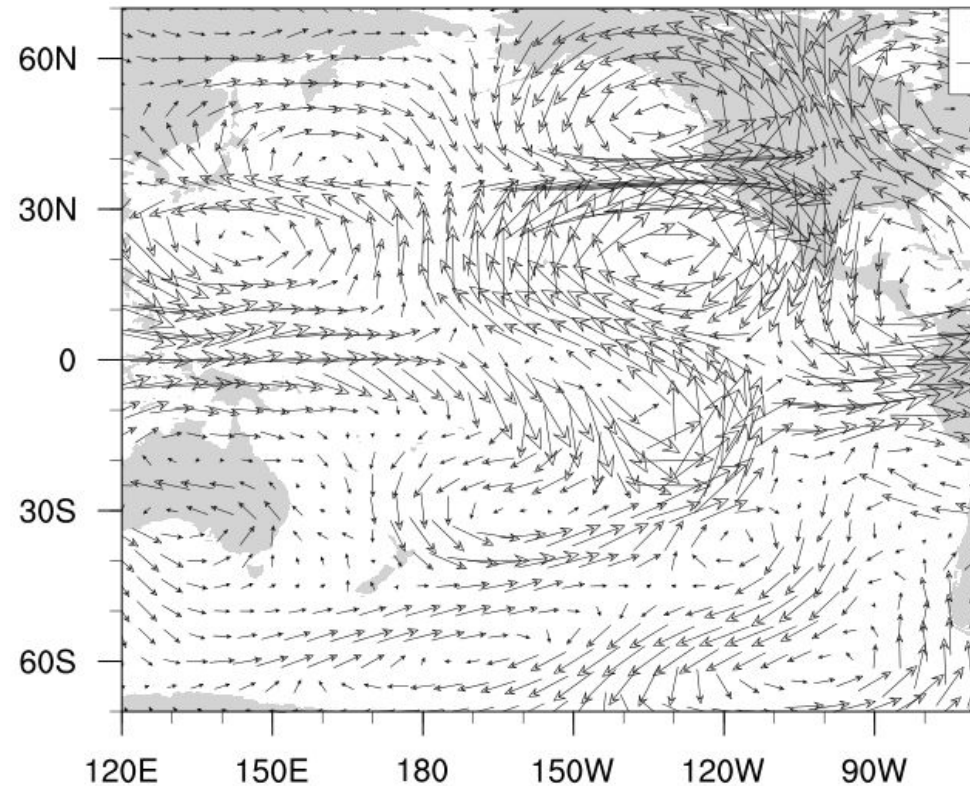
2016/02/29-2016/03/08

W m⁻²



Day 15-22 Comparison (Analyzed SST - Climo SS

200 hPa Wind Vectors 2016/02/29-2016/03/08

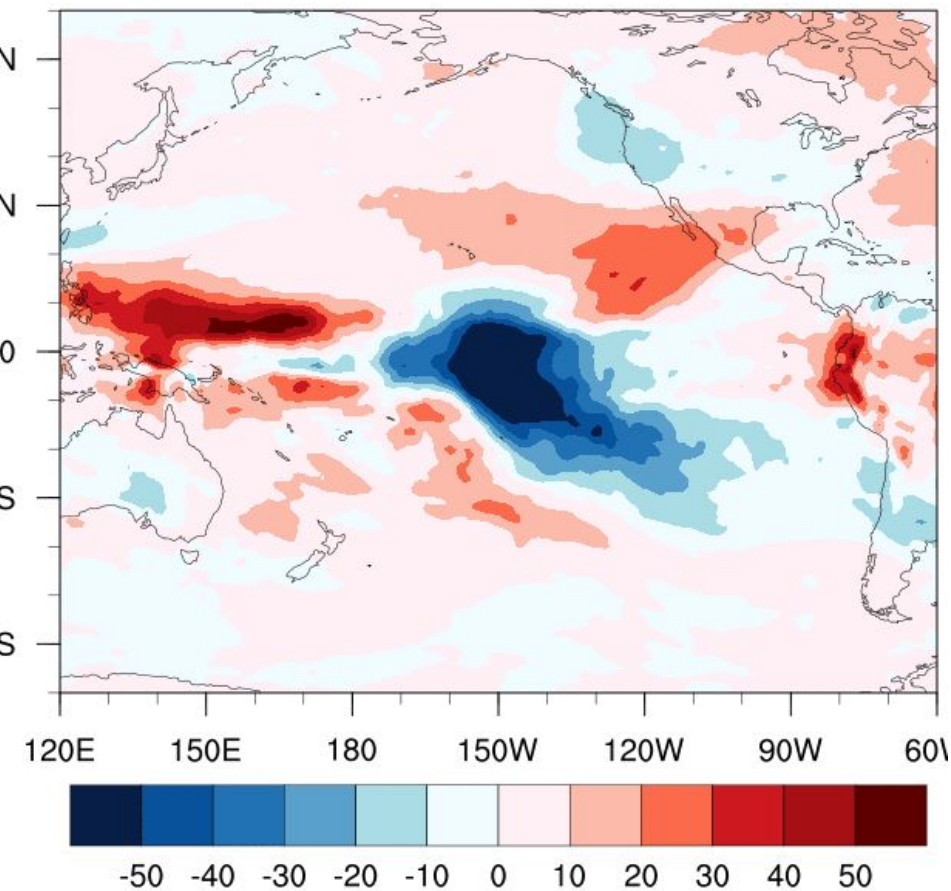


Day 23-30 Comparison (Analyzed SST - Climo SST)

OLR

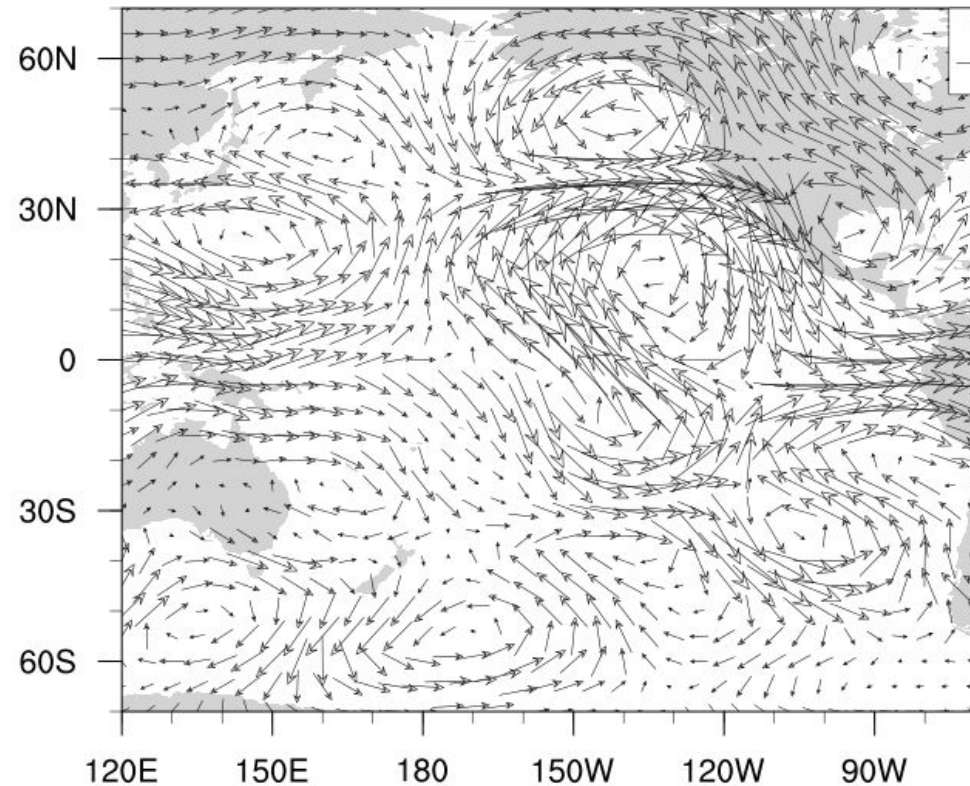
2016/03/08-2016/03/16

W m-2



Day 23-30 Comparison (Analyzed SST - Climo SS

200 hPa Wind Vectors 2016/03/08-2016/03/16

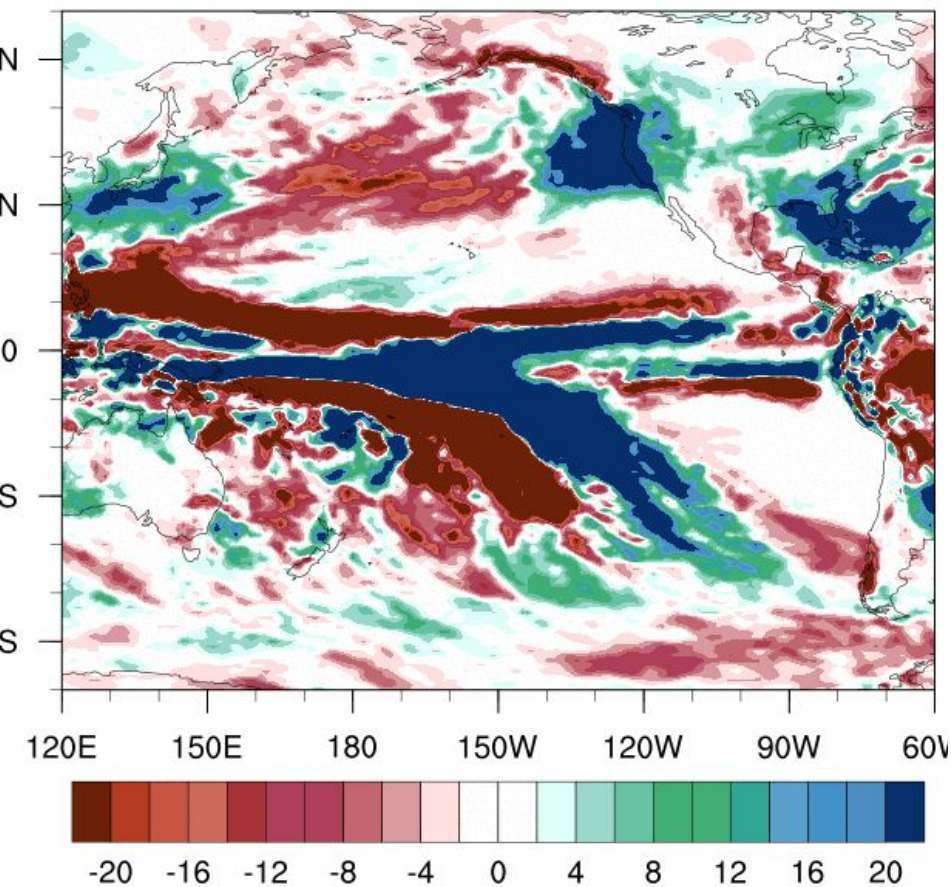


Day 15-22 Comparison (Analyzed SST - Climo SST)

Precipitation

2016/02/29-2016/03/08

mm



Day 23-30 Comparison (Analyzed SST - Climo SST)

Precipitation

2016/03/08-2016/03/16

mm

