

Summary of Key Briefing Points

1030-1130am MST Saturday January 30, 2016

Current Conditions as of Saturday 12Z-15Z 30 January

Tropics and Mid-latitudes

Over the Tropical Pacific:

- Convection: Convective very active this morning in the mission region, substantially more widespread than 12z Friday
- Convection is along a line 1N-5N, from 170W to 145W
- Southern edge of activity about 1° latitude further south than yesterday.
- In mission region, convectively active zone appears to include Christmas Island location this morning
- In the region 160W-150W, little drift of convection
- Cloud track upper level winds indicate a larger scale westerly flow (10-20 kts) in region on the west flank of convection
- Most of the upper flow in 0-10N, 165W-145W is dominated by the convectively driven outflow

Tropical Outlook

- Convection to remain active in region 160W-150W SAT aftn/00Z SUN--
 - Confidence is high based on EC/GFS model agreement
 - Confidence is high based on consistency of forecasts among successive Initializations
 - Convection expected to be more active in a zonal band 145W-170W
 - Convection expected to be most active just north of CI
- By 00Z MON 1 FEB, convection and upper level outflow in mission region less active
 - Confidence is moderately high based on model consistency/agreement
 - Low confidence in pattern of convection in the 0-10N, 165W-145W region: model disagreement
 - Band of activity from 2N-5N; just north of CI
- By 00z TUES, 2 FEB EC/GFS predict some convection in mission domain, details unclear
- Large scale convection expected to be favorable north of equator 165-145W in Tues-Thurs per GFS 12Z SAT run

--- in summary, the preliminary indication from SAT forecasts is for a favorable convective regime for flight mission activity Sunday, with activity expected to diminish SUN/early next week.

Midlatitude Outlook

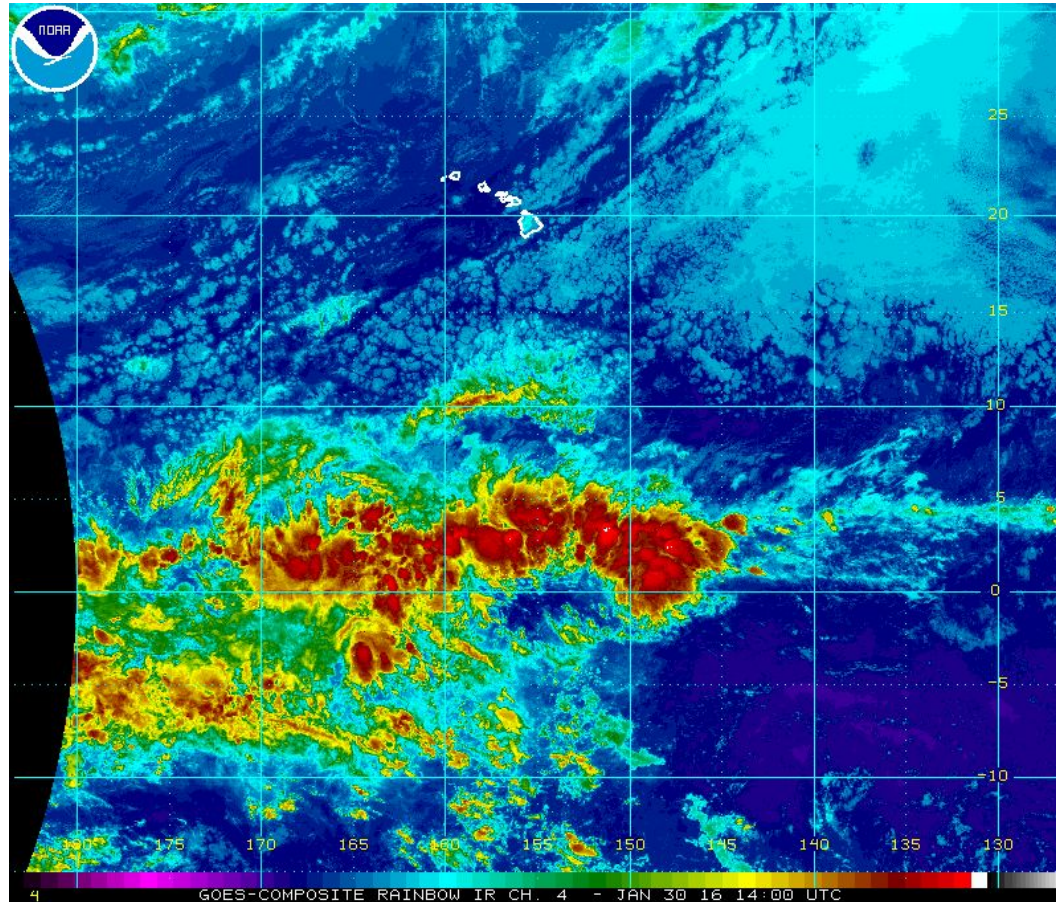
Short Term:

- Atmospheric river event left 5"+ rains in NSierra overnight Friday
- Saturday drying out most CA
- Sunday will see rains in central- SCAL: 1-3" in higher elevations of San Bernardino Mtns

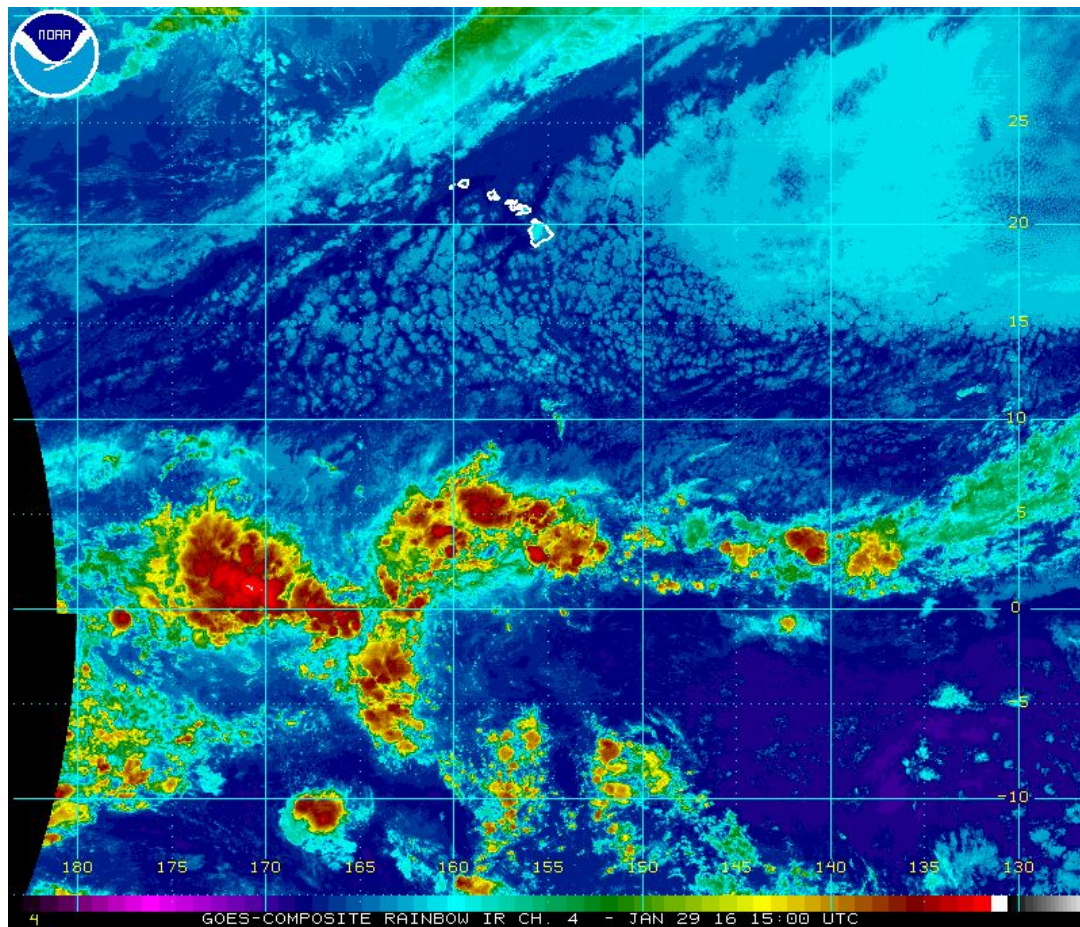
Medium - Long Term:

- Day 0-7 accumulated pcpn for CA shows little pcpn, except for the Sunday event
--- compared the Calibrated probability fcst of >2" rain for 30Jan-6Feb from the short lead to the long lead....showing the very different guidance from the two leads
- Days 7 -10 fcsts from 00SAT runs indicate sharpe WCOASt Ridge
- Days 7-10 indicates high model agreement

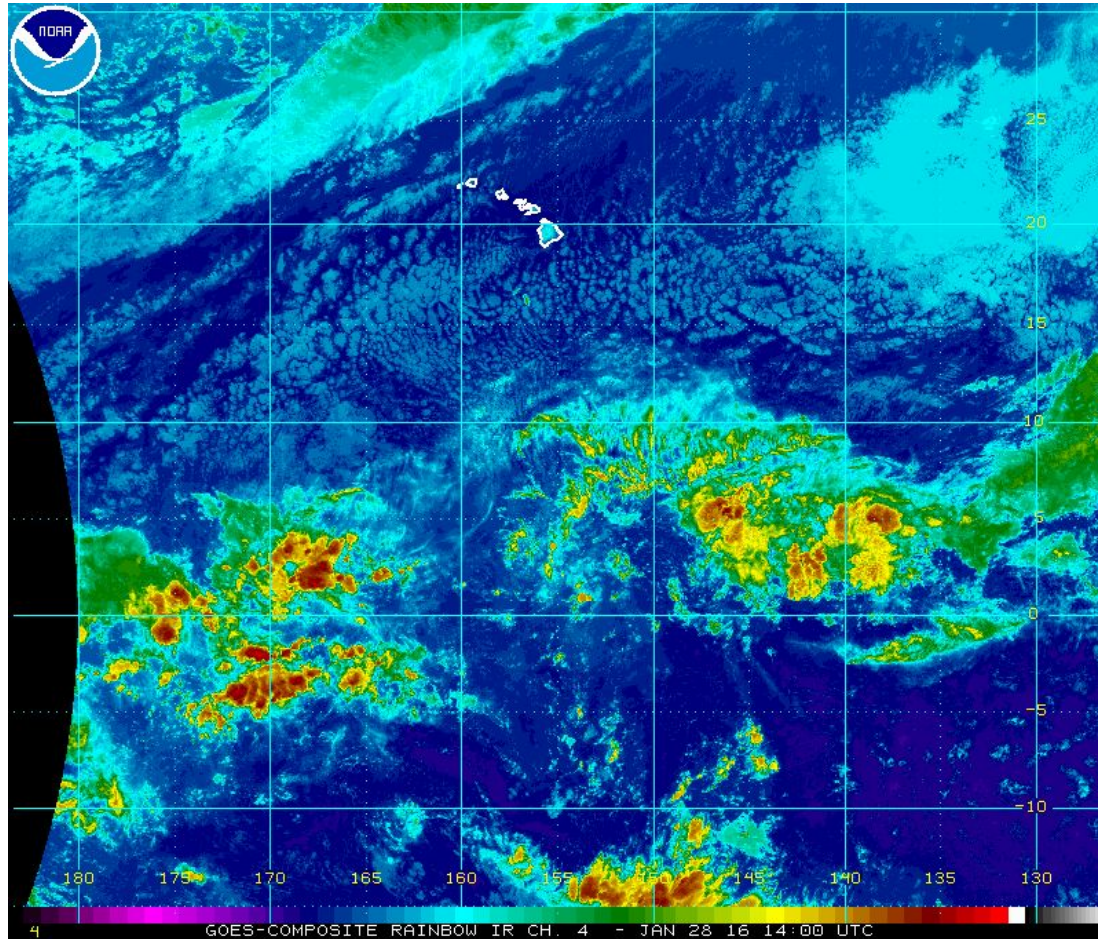
Saturday 14Z January 30 Enhanced IR Image



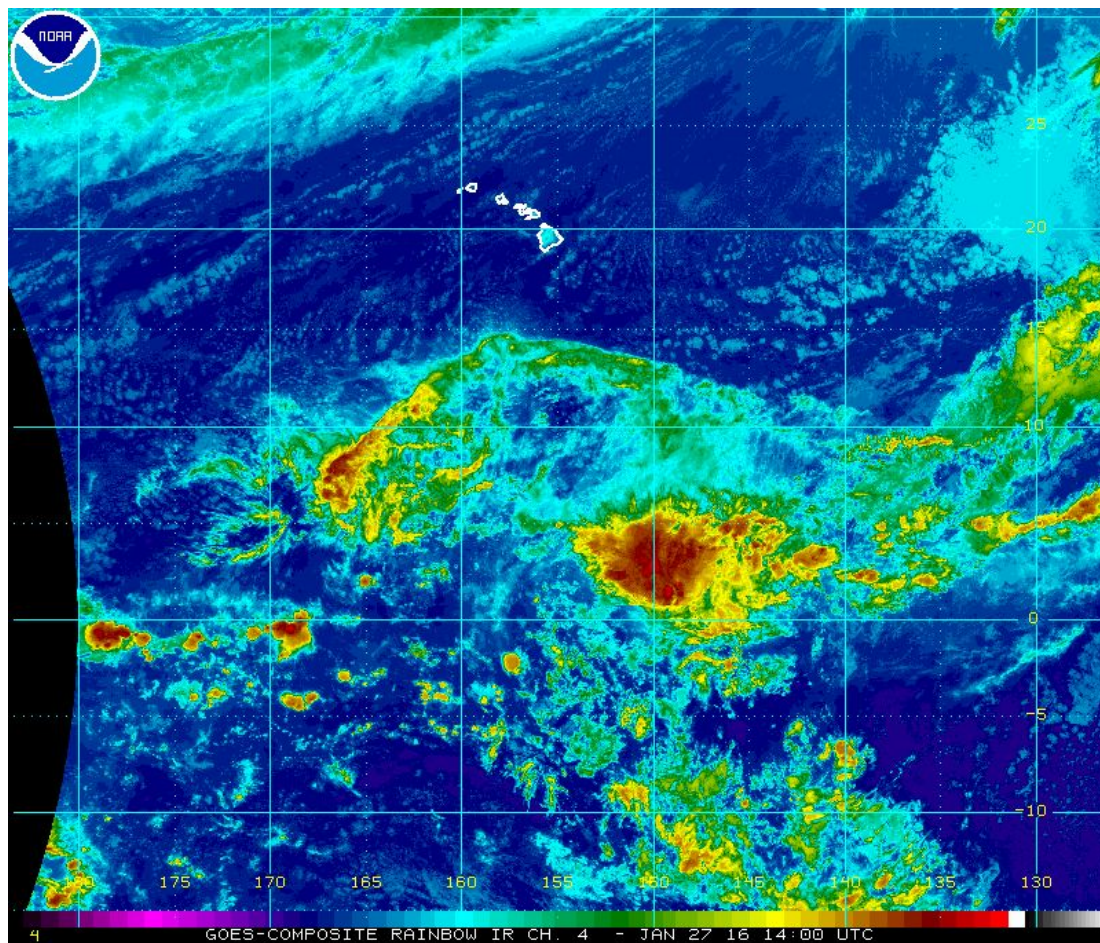
Friday 15Z January 29 Enhanced IR Image



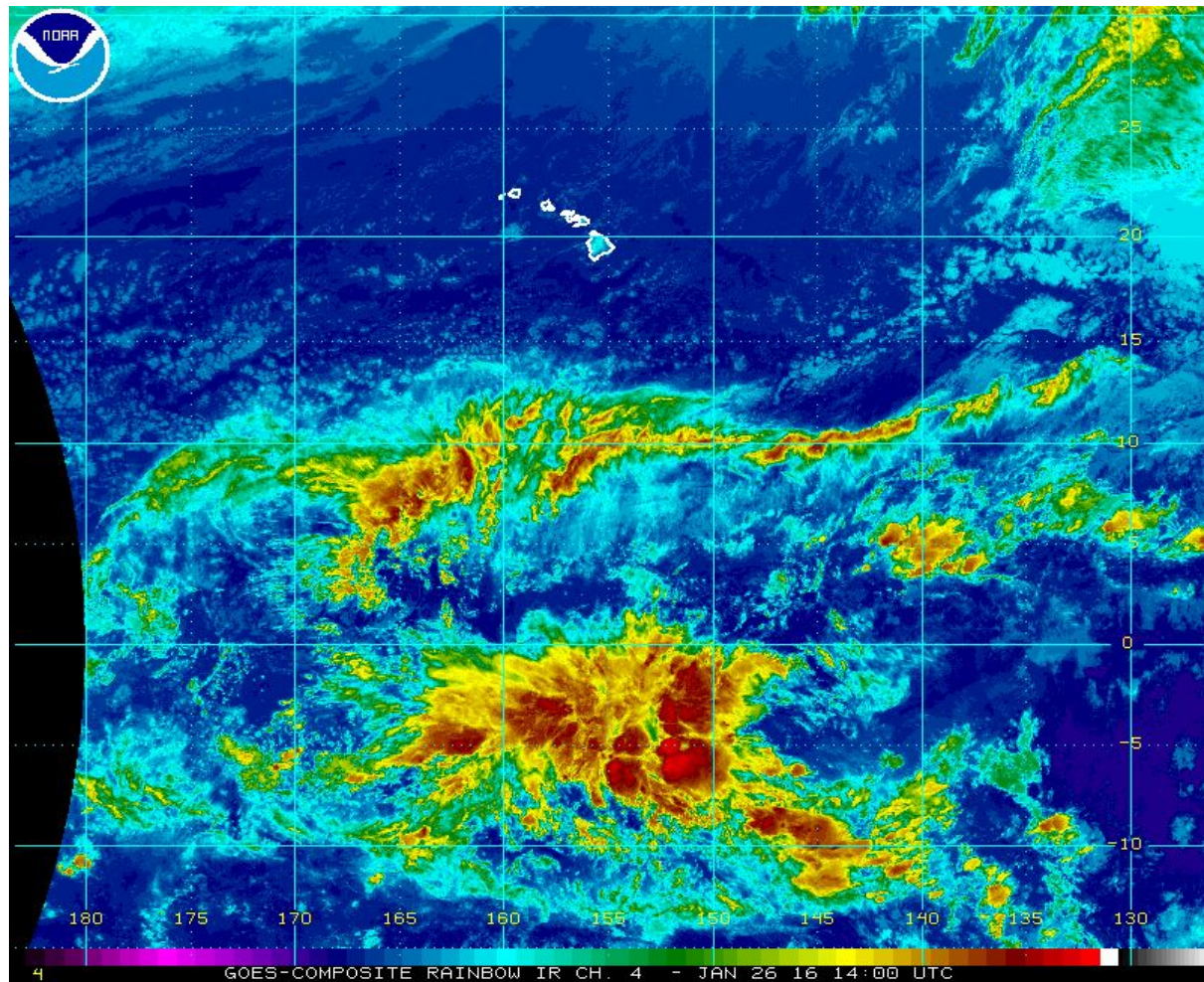
Thursday 14Z January 28 Enhanced IR Image



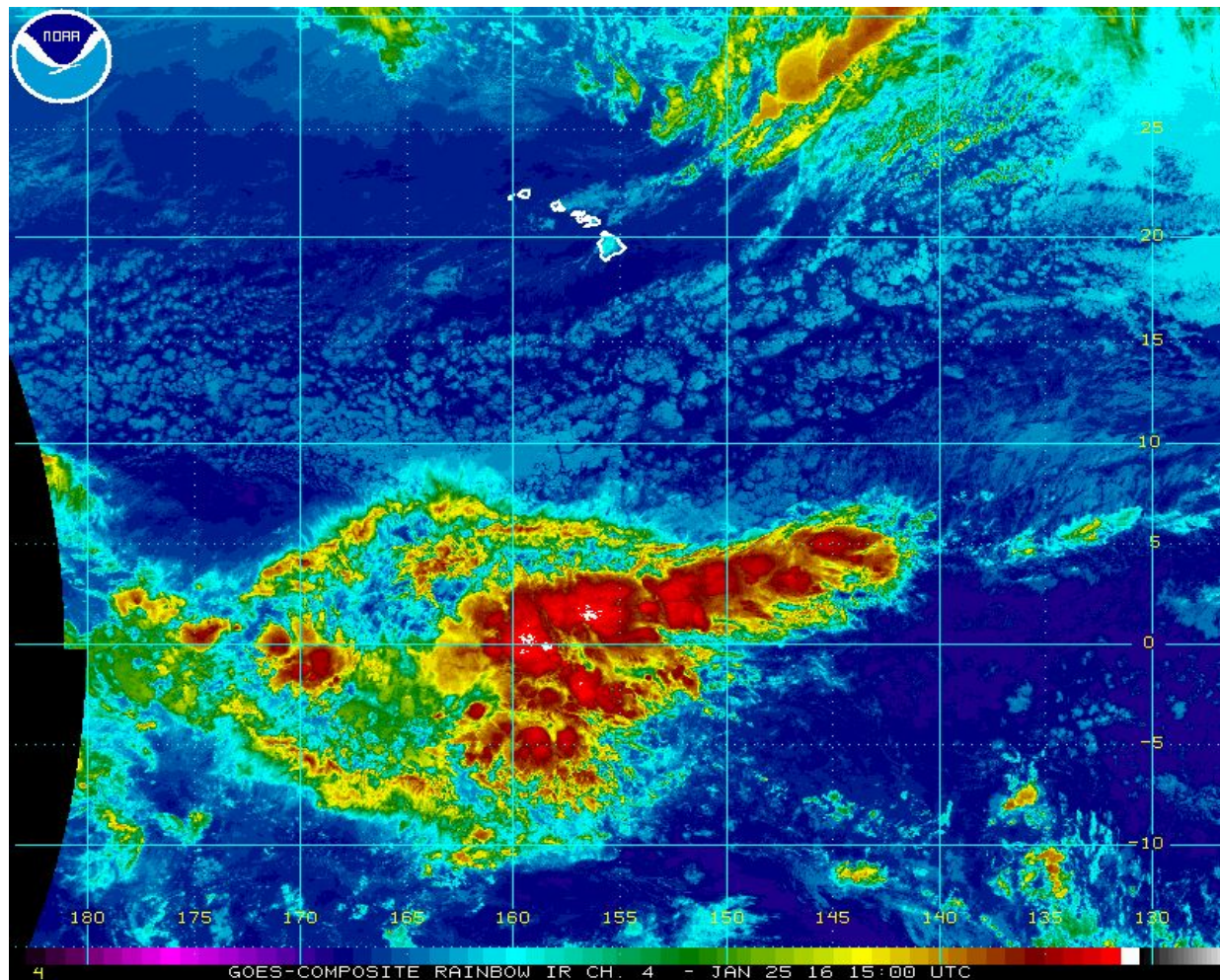
Wednesday 14Z January 27 Enhanced IR Image



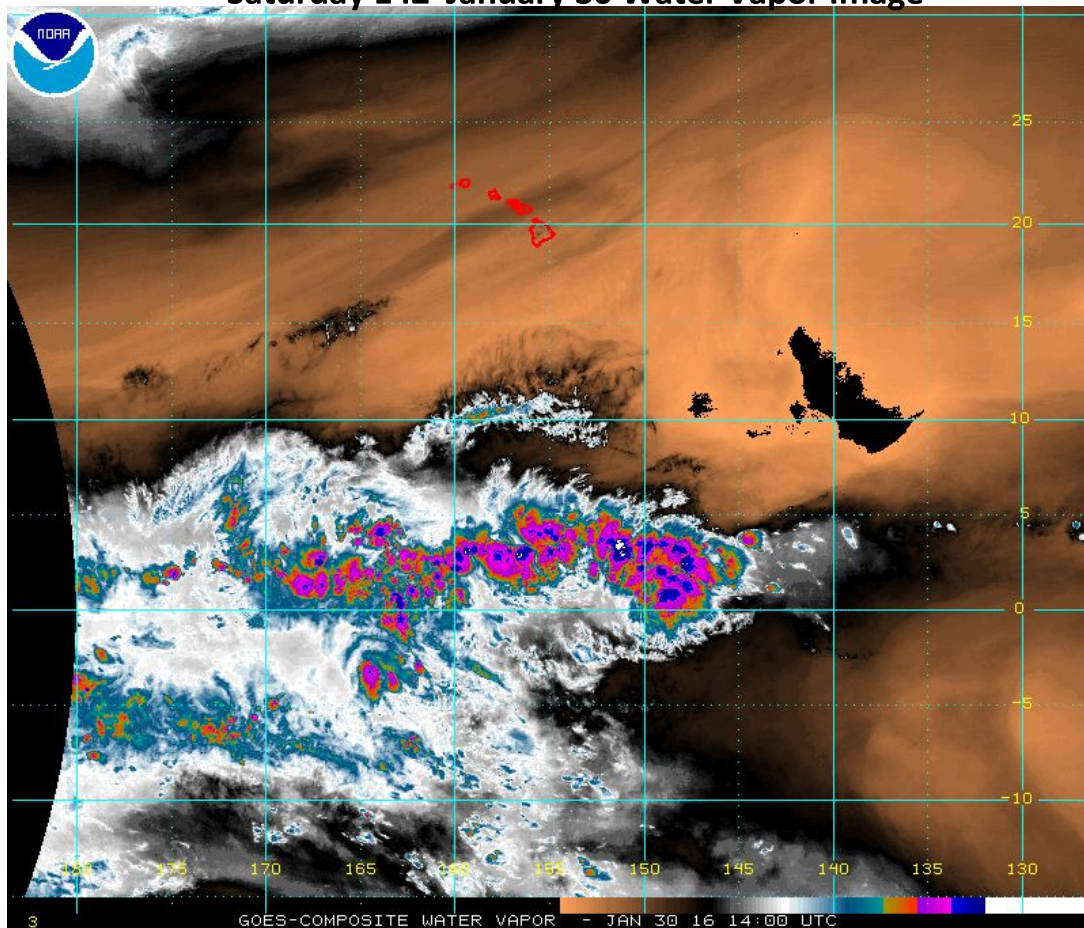
Tuesday 14Z January 26 Enhanced IR Image



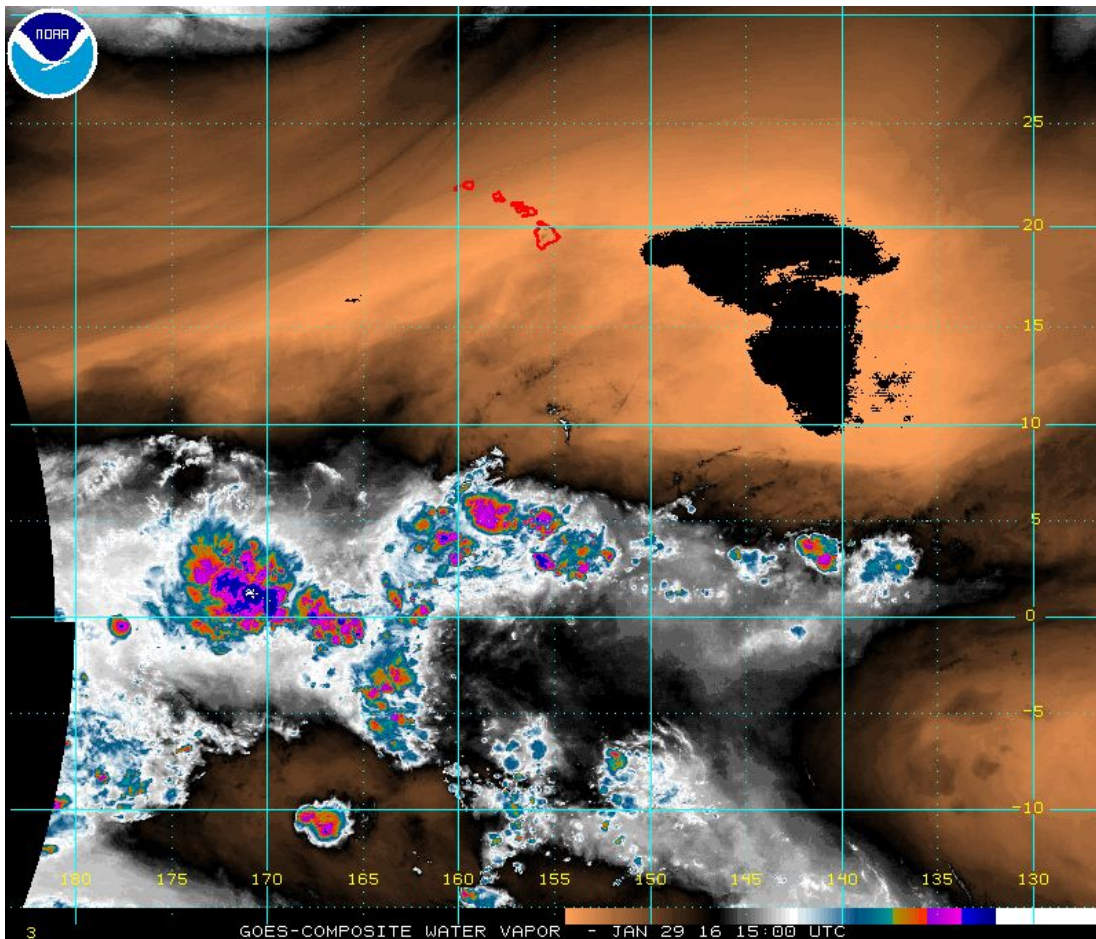
Monday 15Z January 25 Enhanced IR Image



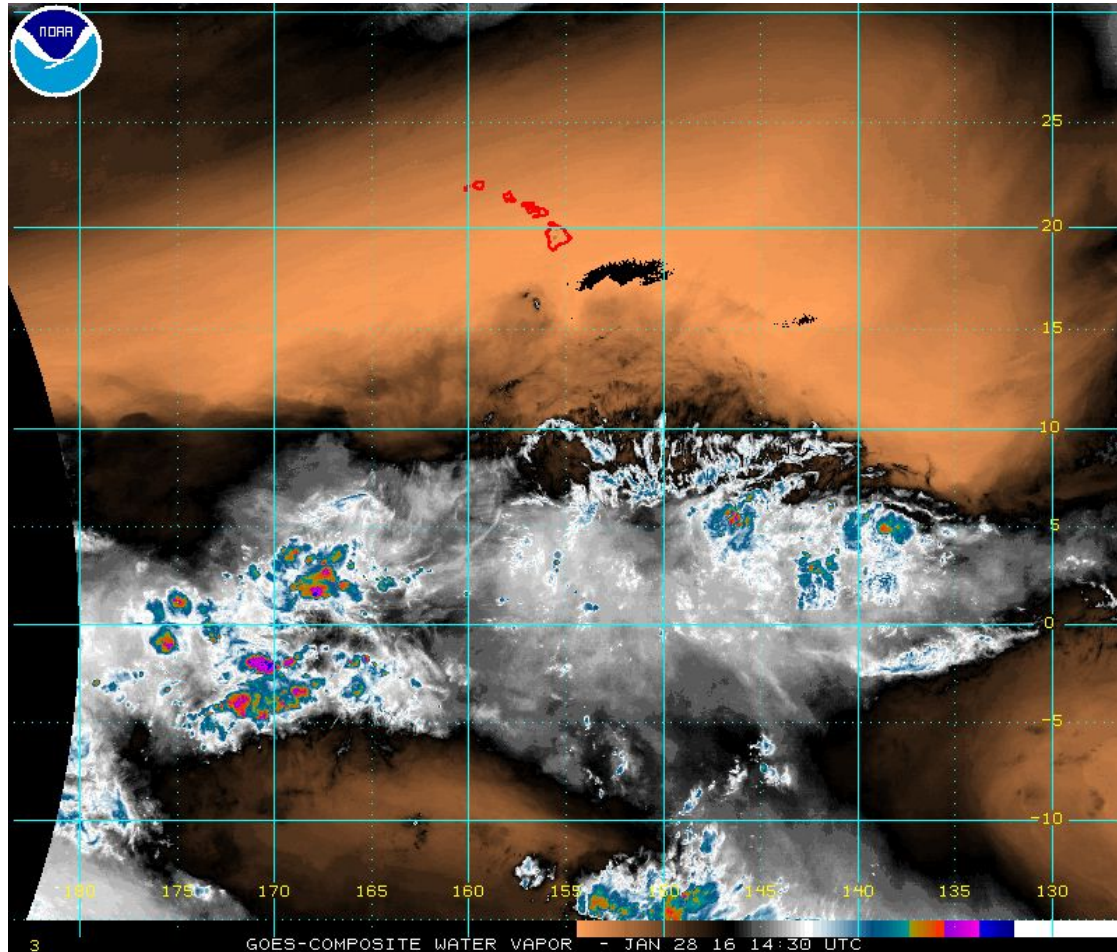
Saturday 14Z January 30 Water Vapor Image



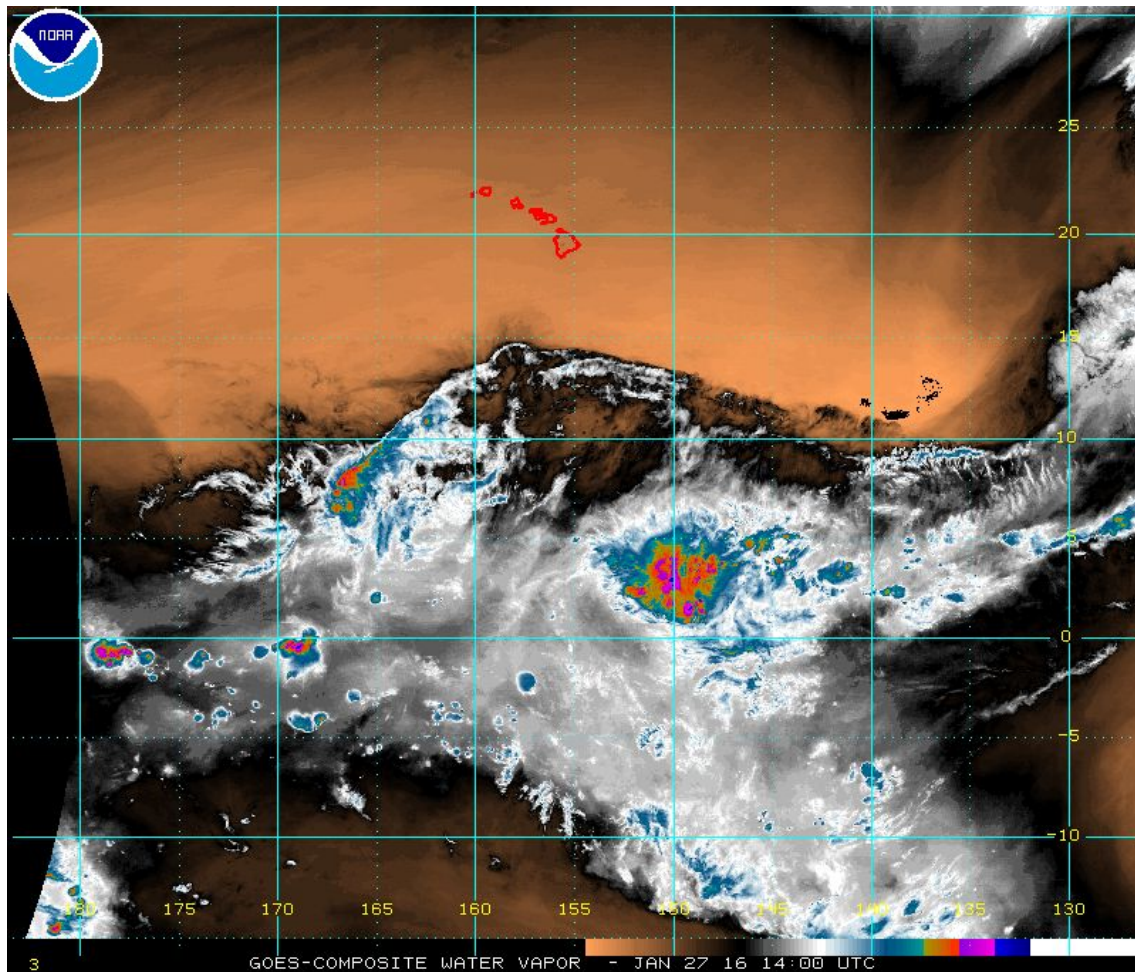
Friday 15Z January 29 Water Vapor Image



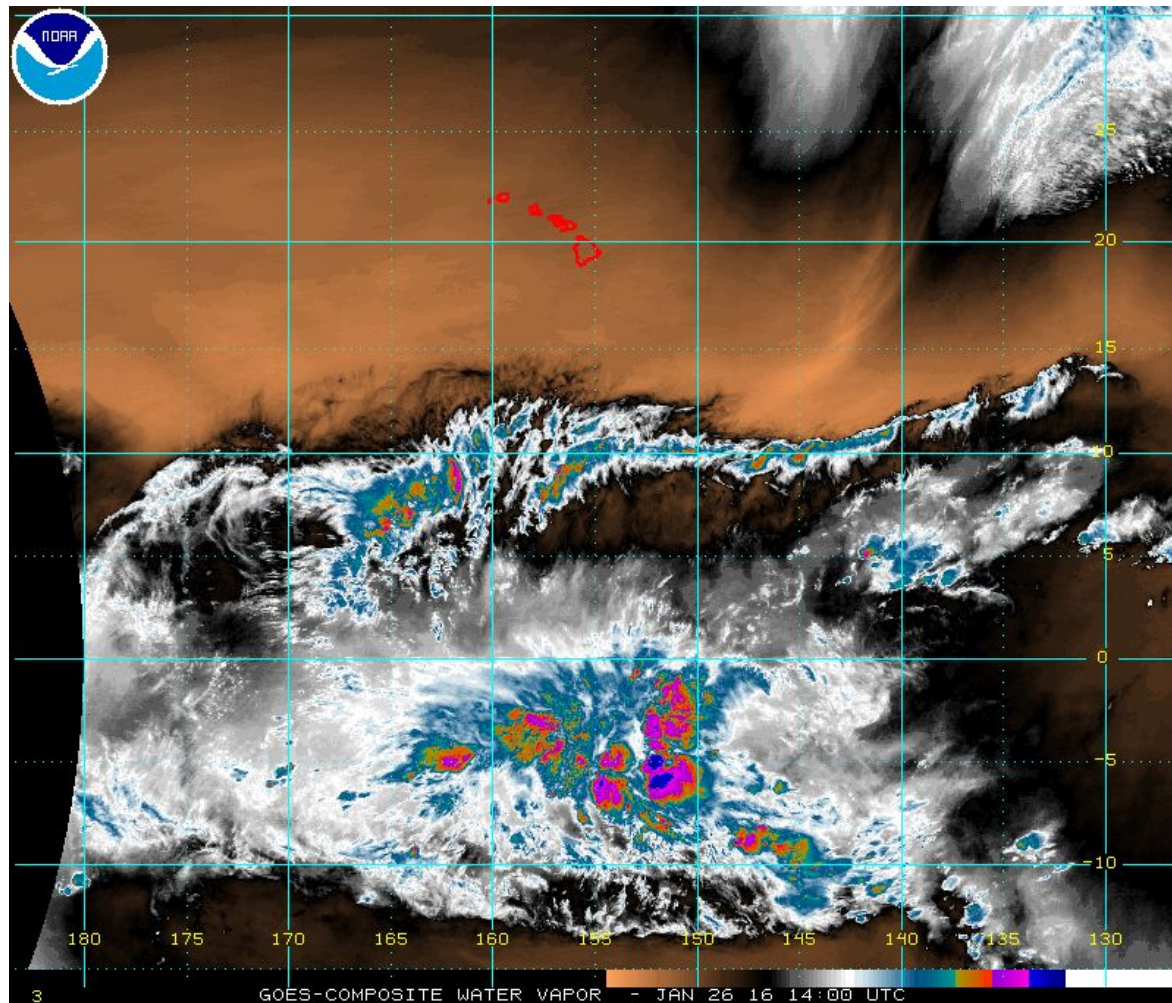
Thursday 14Z January 28 Water Vapor Image



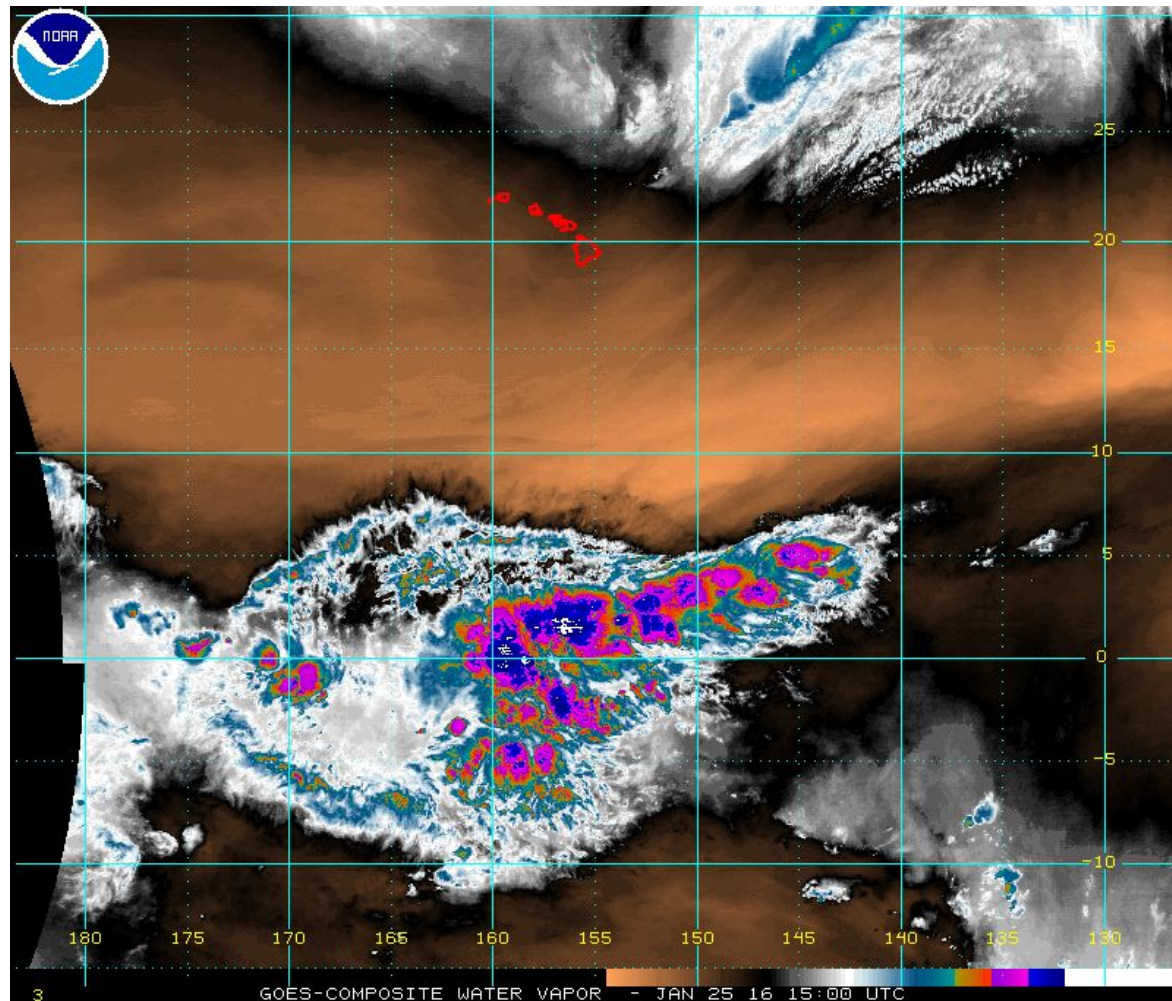
Wednesday 14Z January 27 Water Vapor Image



Tuesday 14Z January 26 Water Vapor Image

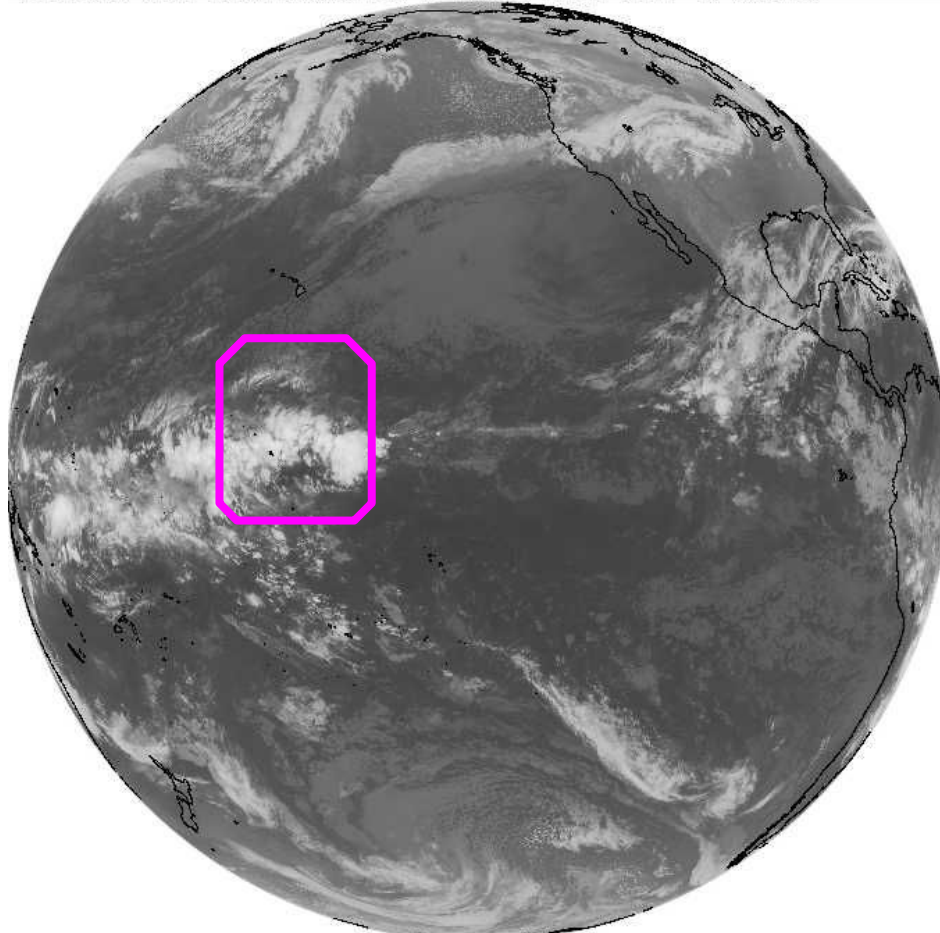


Monday 15Z January 25 Water Vapor Image



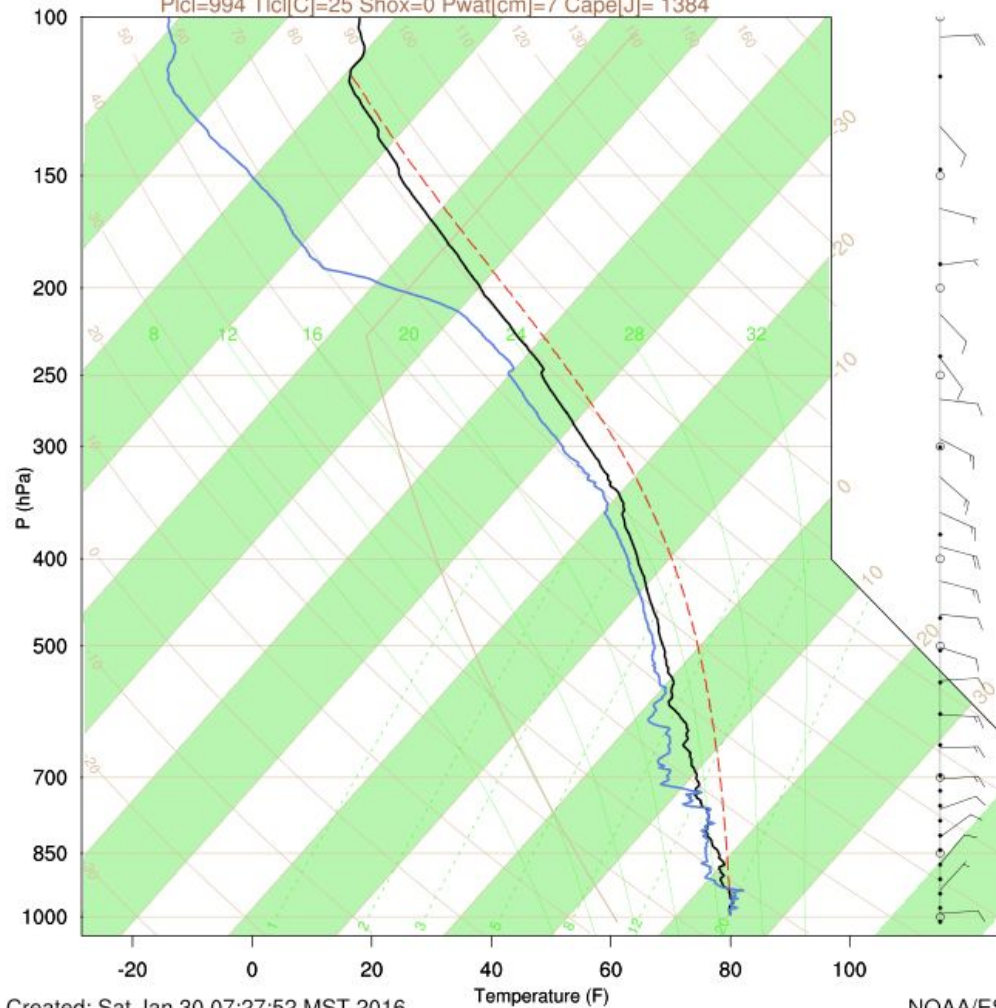
SAT 12Z January 30 GOES West IR Image

GOES WEST FULL DISK LONGWAVE IR 30 JAN 16 12:00 SSEC: UW-MADISON



Kiritimati Is: 01/29/2016 2317Z Downward 2.01N 157.40W

Ptcl=994 Tlcl[C]=25 Shox=0 Pwat[cm]=7 Cape[J]= 1384



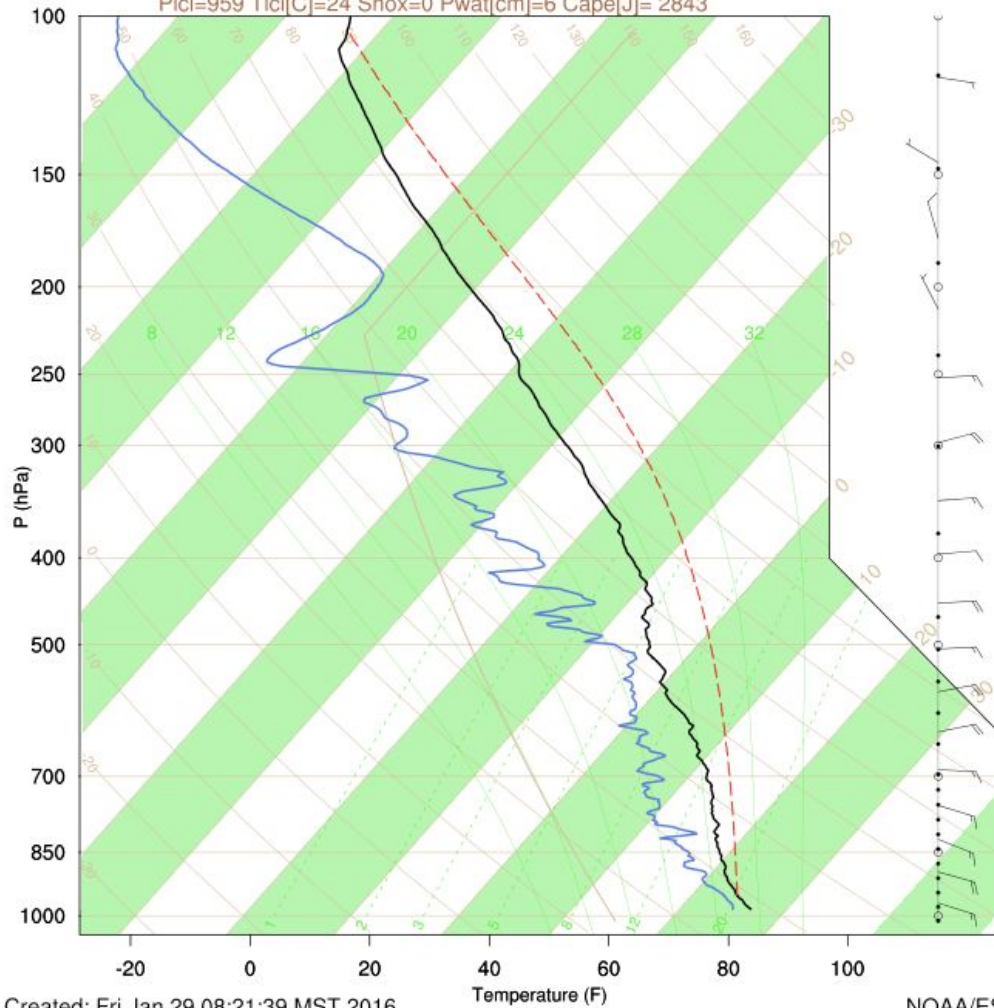
Created: Sat Jan 30 07:27:52 MST 2016

Temperature (F)

NOAA/ESRL PSD

Kiritimati Is: 01/29/2016 1118Z Downward 2.01N 157.40W

Ptcl=959 Tlcl[C]=24 Shox=0 Pwat[cm]=6 Cape[J]= 2843



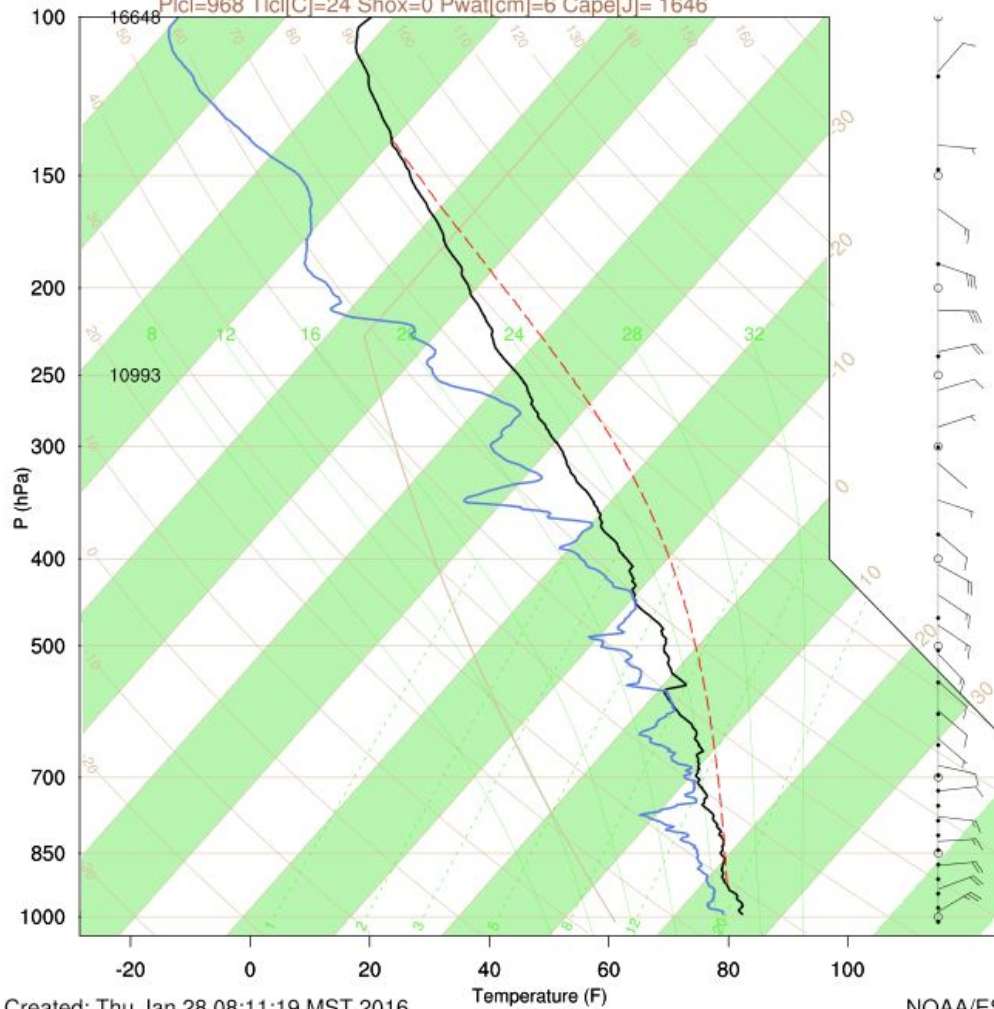
Created: Fri Jan 29 08:21:39 MST 2016

Temperature (F)

NOAA/ESRL PSD

Kiritimati Is: 01/27/2016 2323Z Downward 2.01N 157.40W

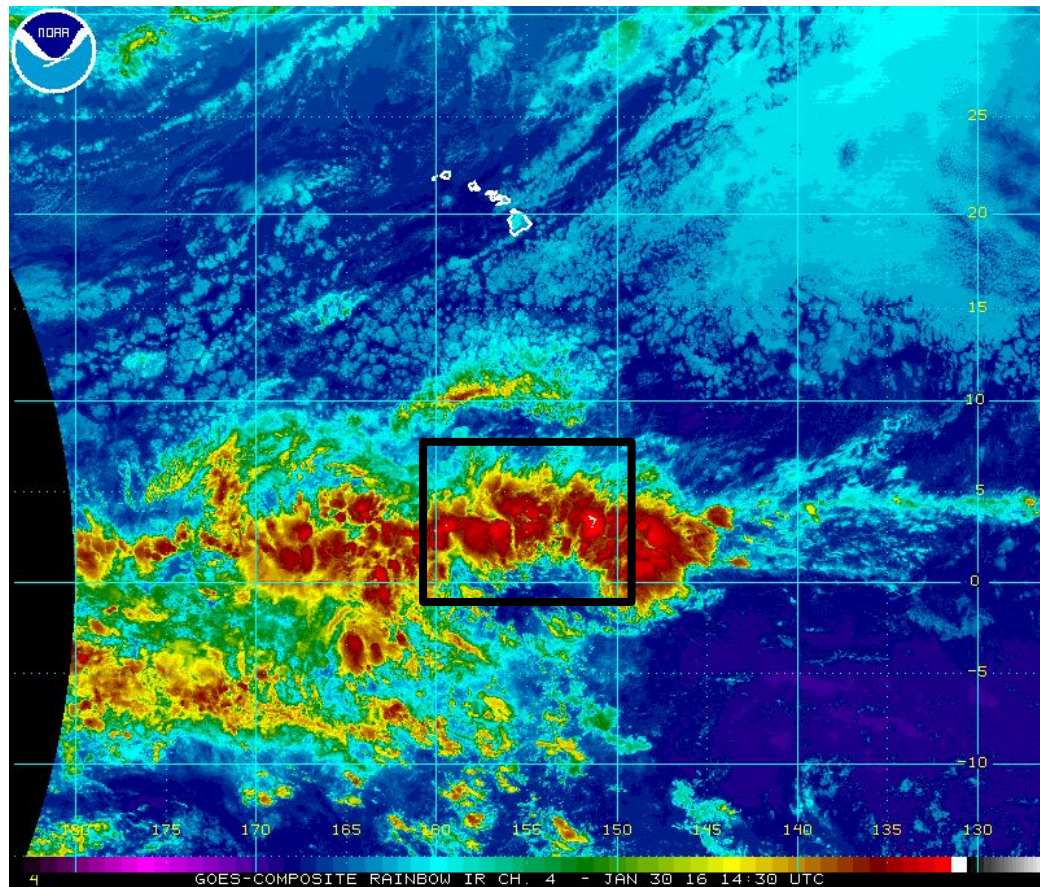
Ptcl=968 Tlcl[C]=24 Shox=0 Pwat[cm]=6 Cape[J]= 1646



Created: Thu Jan 28 08:11:19 MST 2016

NOAA/ESRL PSD

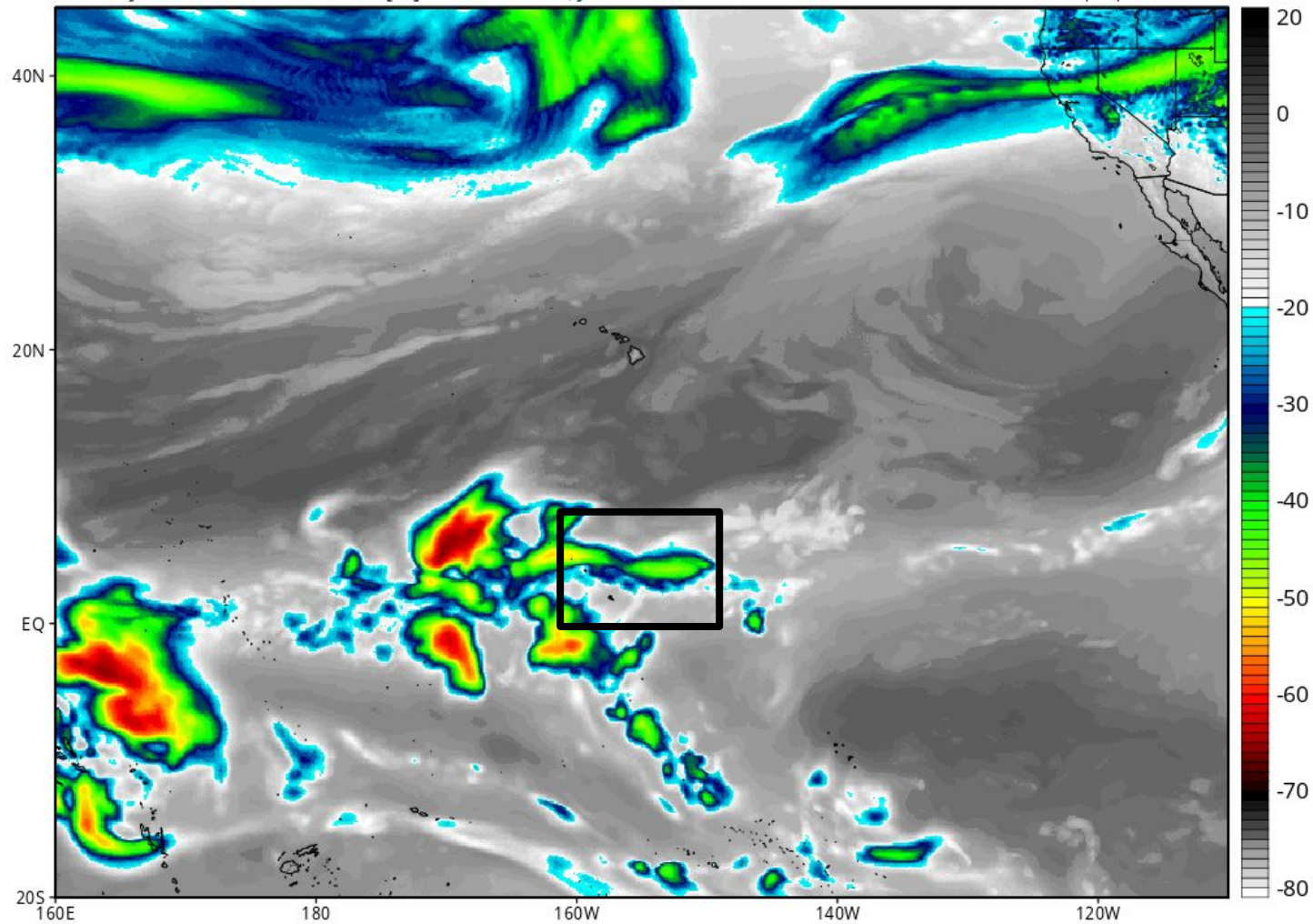
SAT 1430Z January 30 Enhanced IR Image



GFS Simulated IR Brightness Temperature (°C)
Init: 12z Jan 27 2016 Forecast Hour: [78] valid at 18z Sat, Jan 30 2016

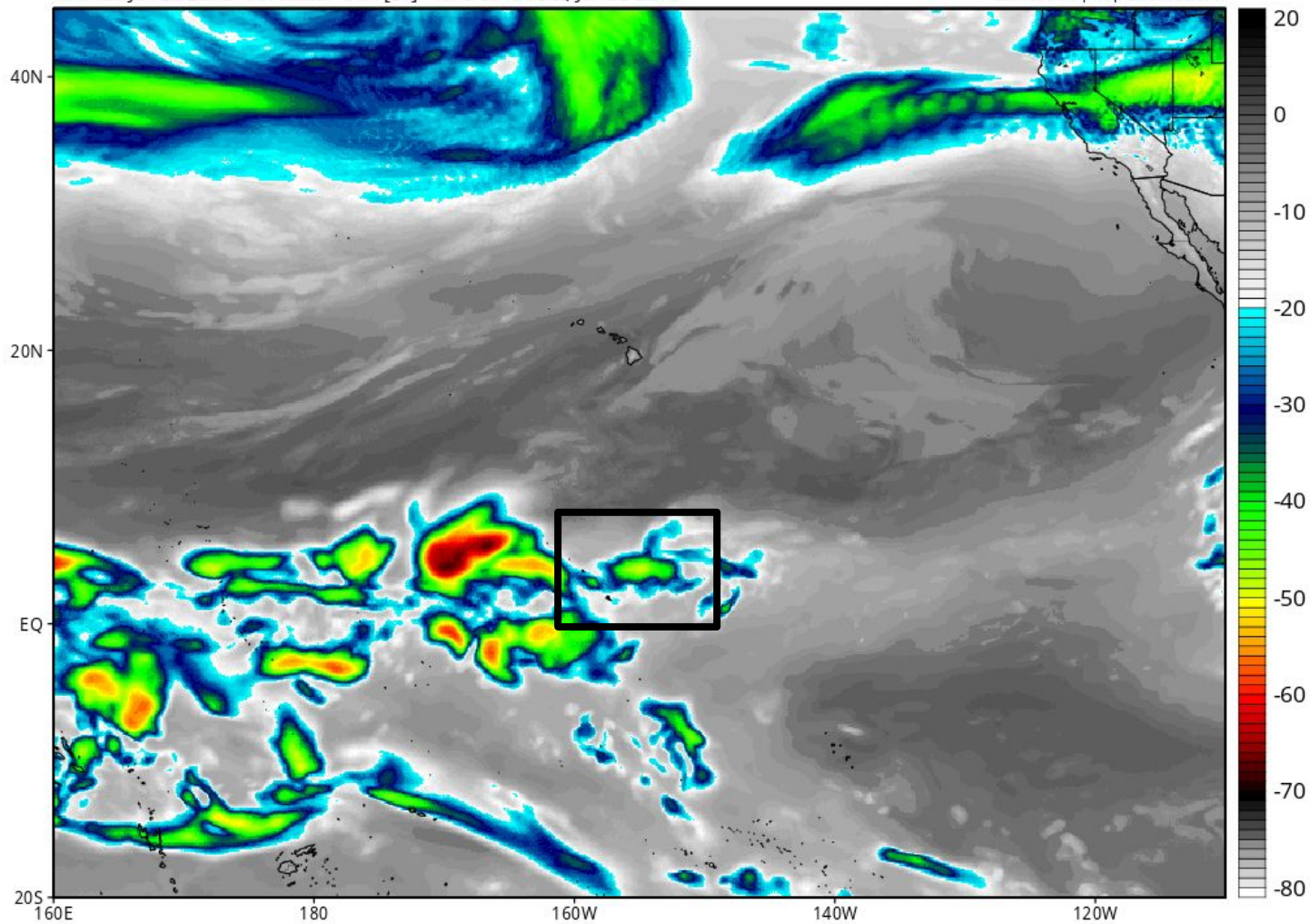
Prior GFS FCST: 78 hr Lead Valid 18Z Sat

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GFS Simulated IR Brightness Temperature (°C)
Init: 12z Jan 28 2016 Forecast Hour: [54] valid at 18z Sat, Jan 30 2016

Prior GFS FCST: 54 hr Lead Valid 18Z Sat
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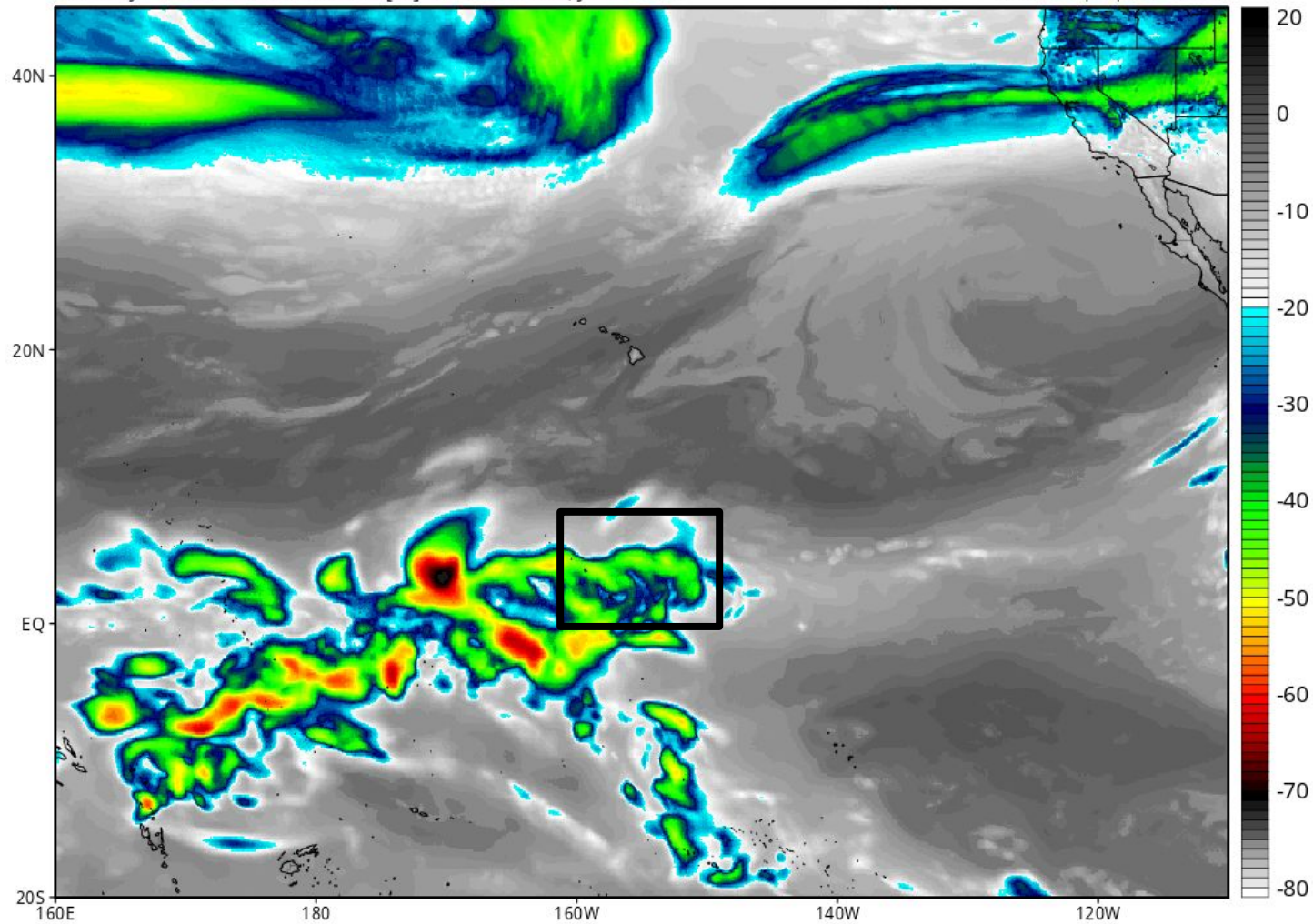


GFS Simulated IR Brightness Temperature (°C)

Init: 12z Jan 29 2016 Forecast Hour: [30] valid at 18z Sat, Jan 30 2016

Prior GFS FCST: 30hr Lead Valid 18Z Sat

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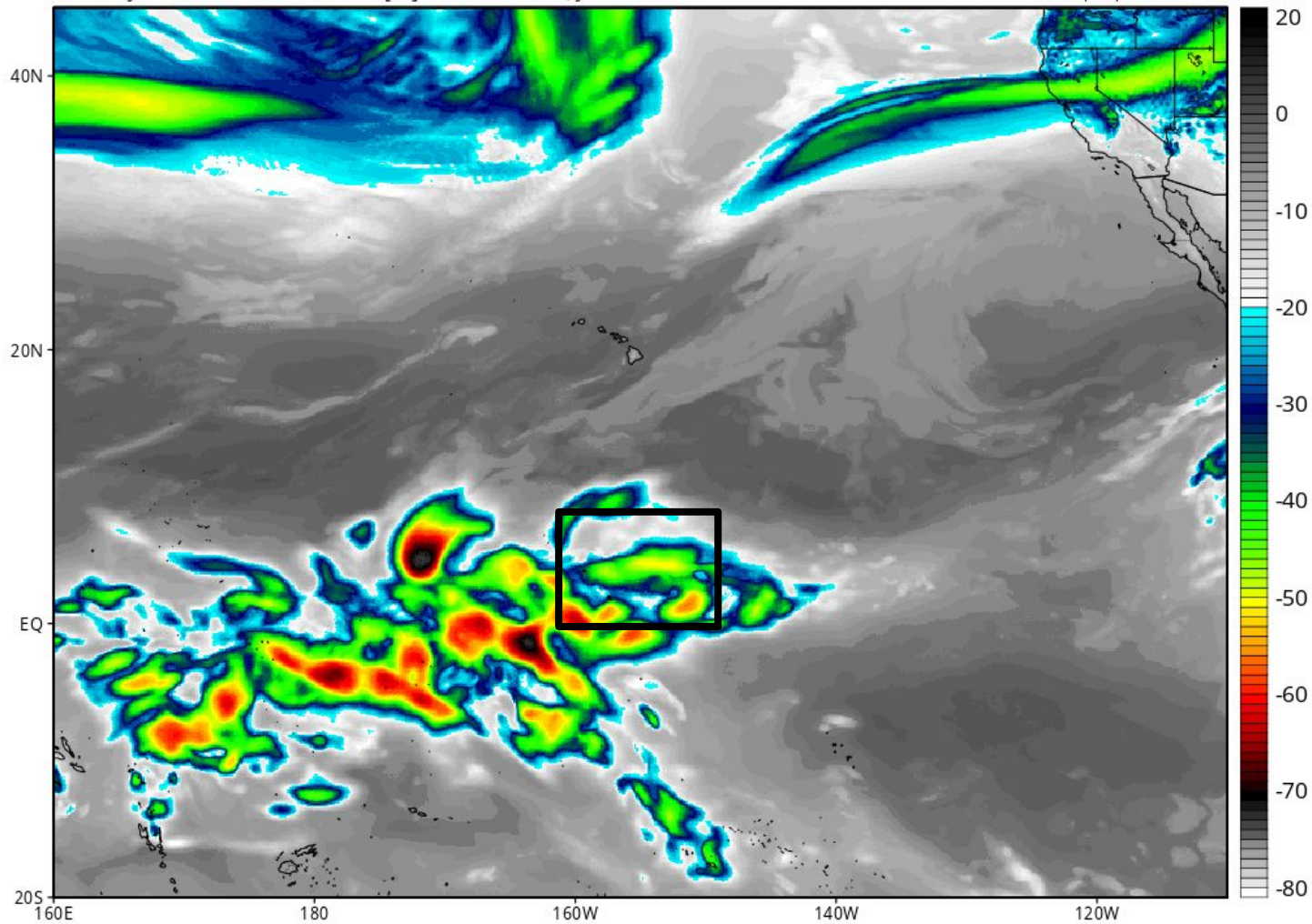


GFS Simulated IR Brightness Temperature (°C)

Init: 06z Jan 30 2016 Forecast Hour: [12] valid at 18z Sat, Jan 30 2016

Prior GFS FCST: 12hr Lead Valid 18Z Sat

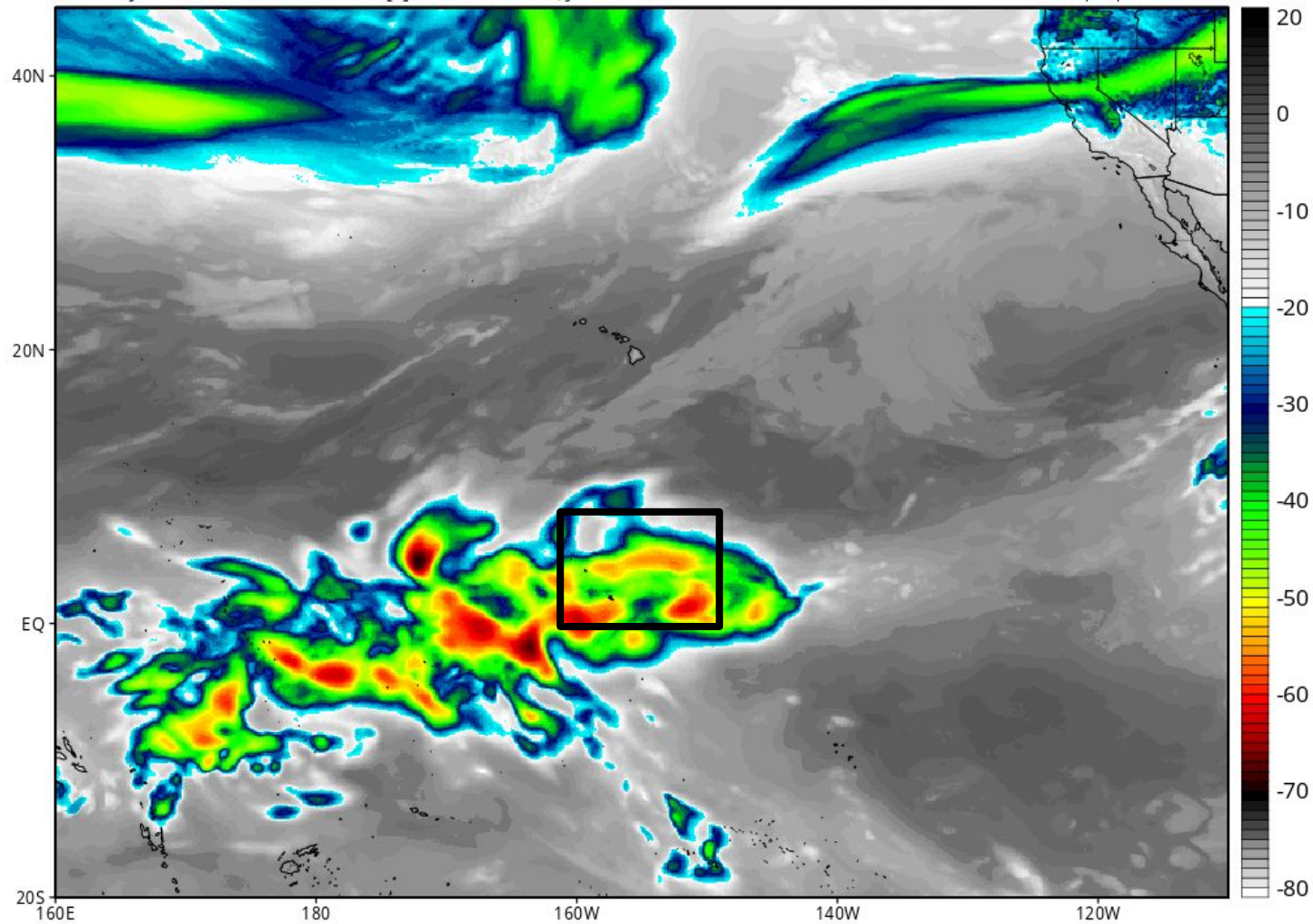
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GFS Simulated IR Brightness Temperature (°C)
Init: 12z Jan 30 2016 Forecast Hour: [6] valid at 18z Sat, Jan 30 2016

Latest GFS FCST: 6hr Lead Valid 18Z Sat

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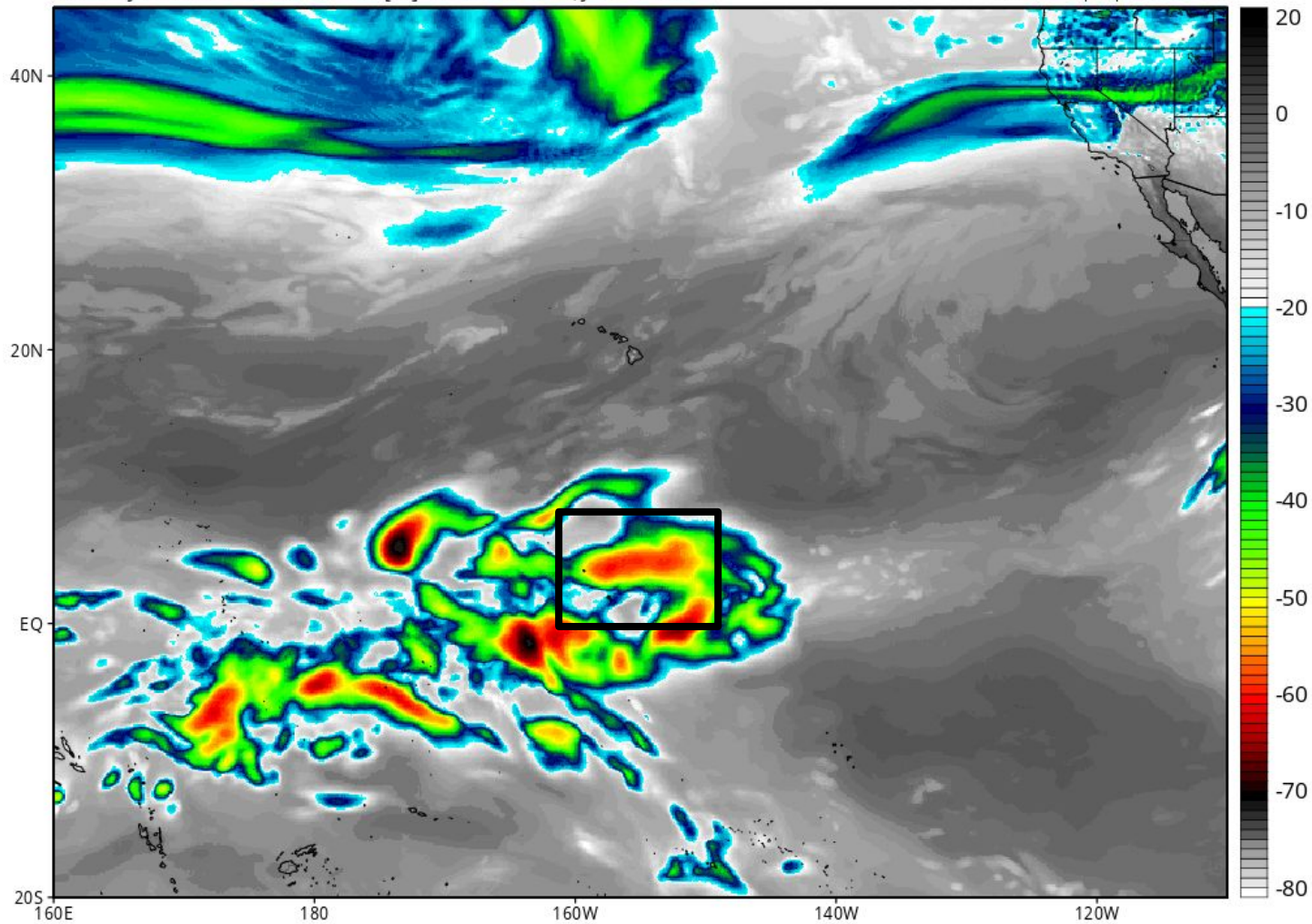


GFS Simulated IR Brightness Temperature (°C)

Init: 12z Jan 30 2016 Forecast Hour: [12] valid at 00z Sun, Jan 31 2016

Latest GFS FCST: 12hr Lead Valid 00Z SUN

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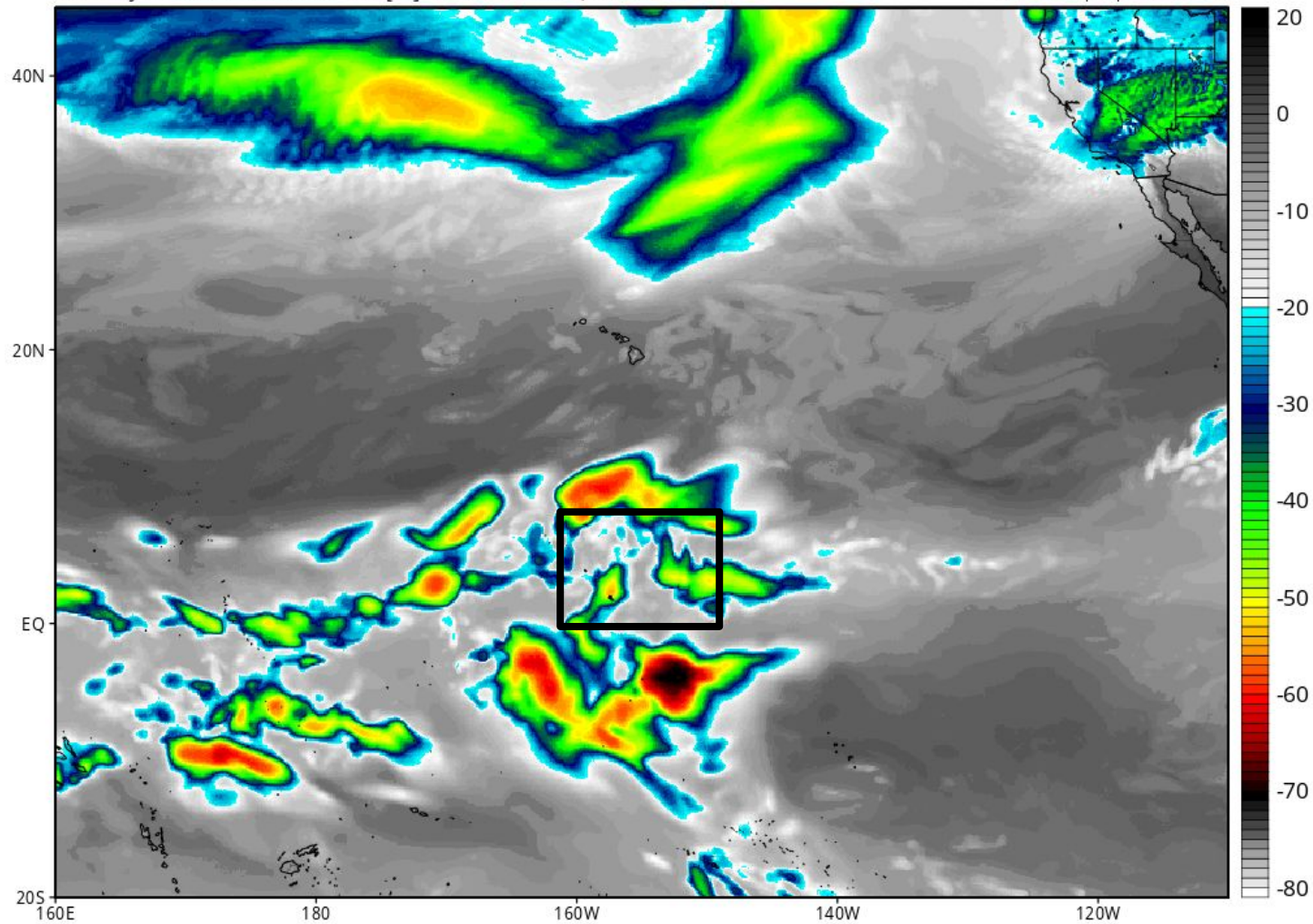


GFS Simulated IR Brightness Temperature (°C)

Latest GFS FCST: 36hr Lead Valid 00Z MON

Init: 12z Jan 30 2016 Forecast Hour: [36] valid at 00z Mon, Feb 01 2016

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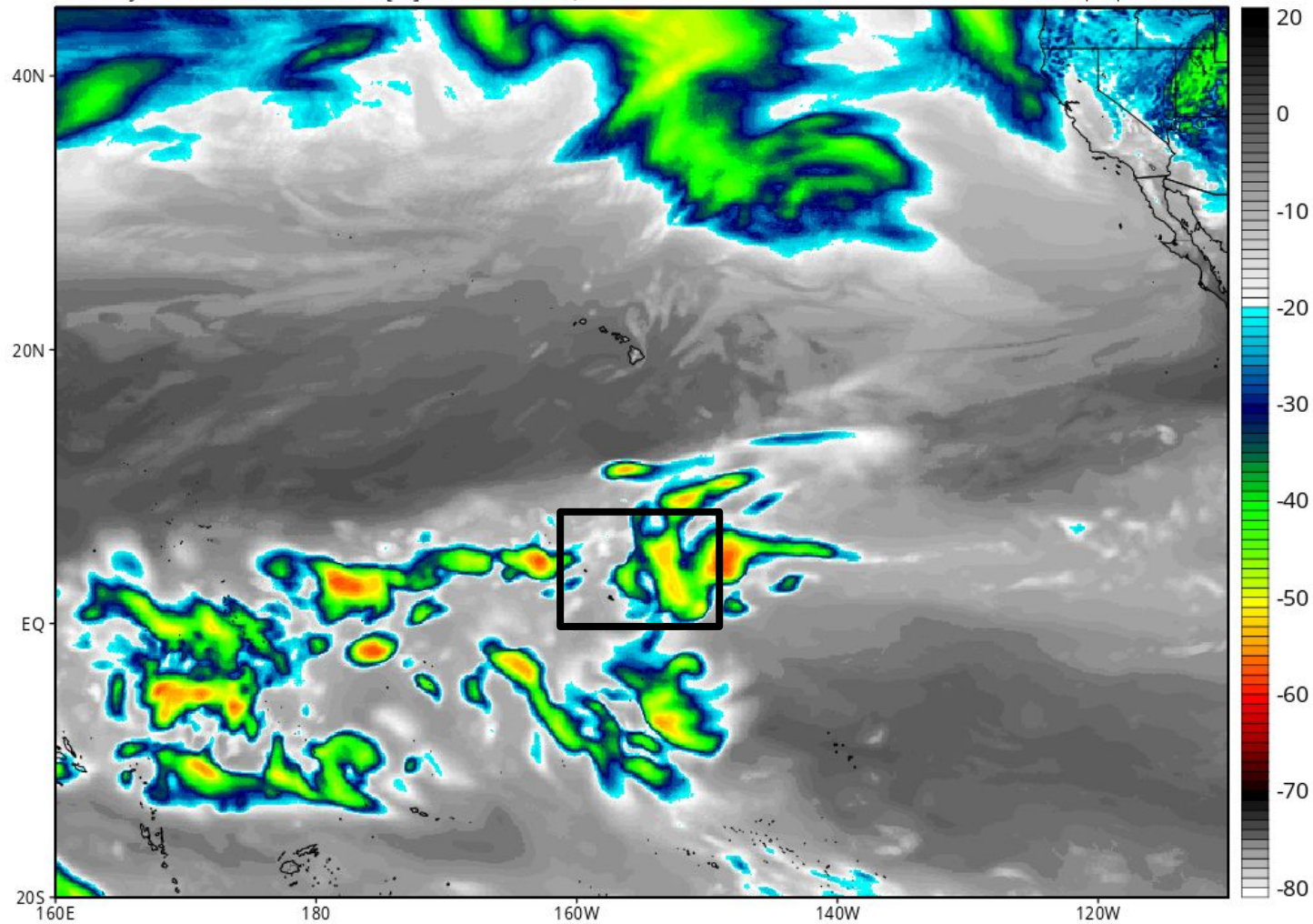


GFS Simulated IR Brightness Temperature (°C)

Init: 12z Jan 30 2016 Forecast Hour: [60] valid at 00z Tue, Feb 02 2016

Latest GFS FCST: 60hr Lead Valid O0Z TUE

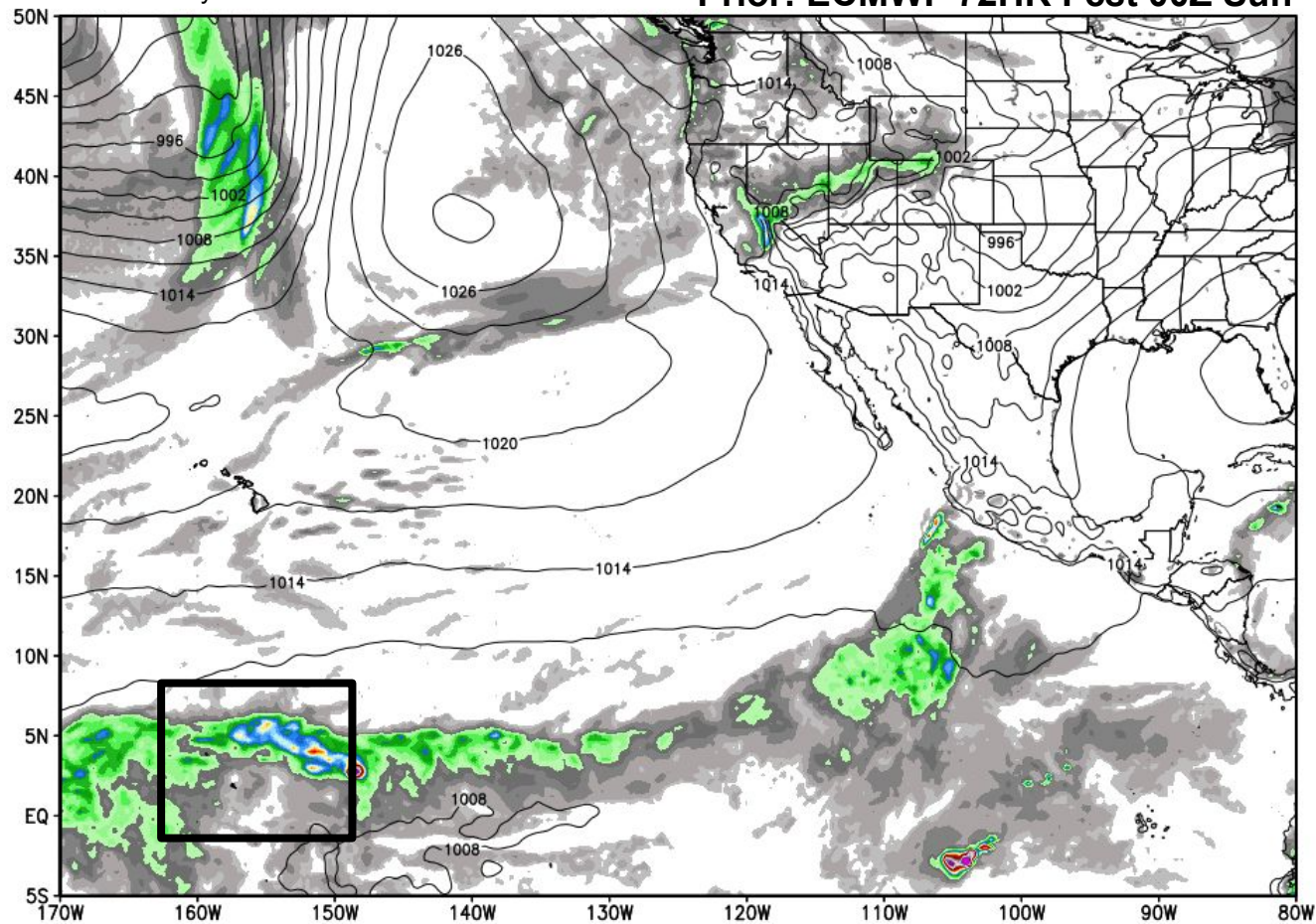
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ECMWF 6-hourly Precipitation [inches] between 18Z30JAN2016 -- 00Z31JAN2016 & MSLP [hPa]
INIT: 00Z28JAN2016 fx: [072] hr --> Sun 00Z31JAN2016

Courtesy of WeatherBell

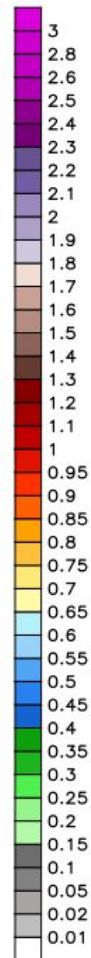
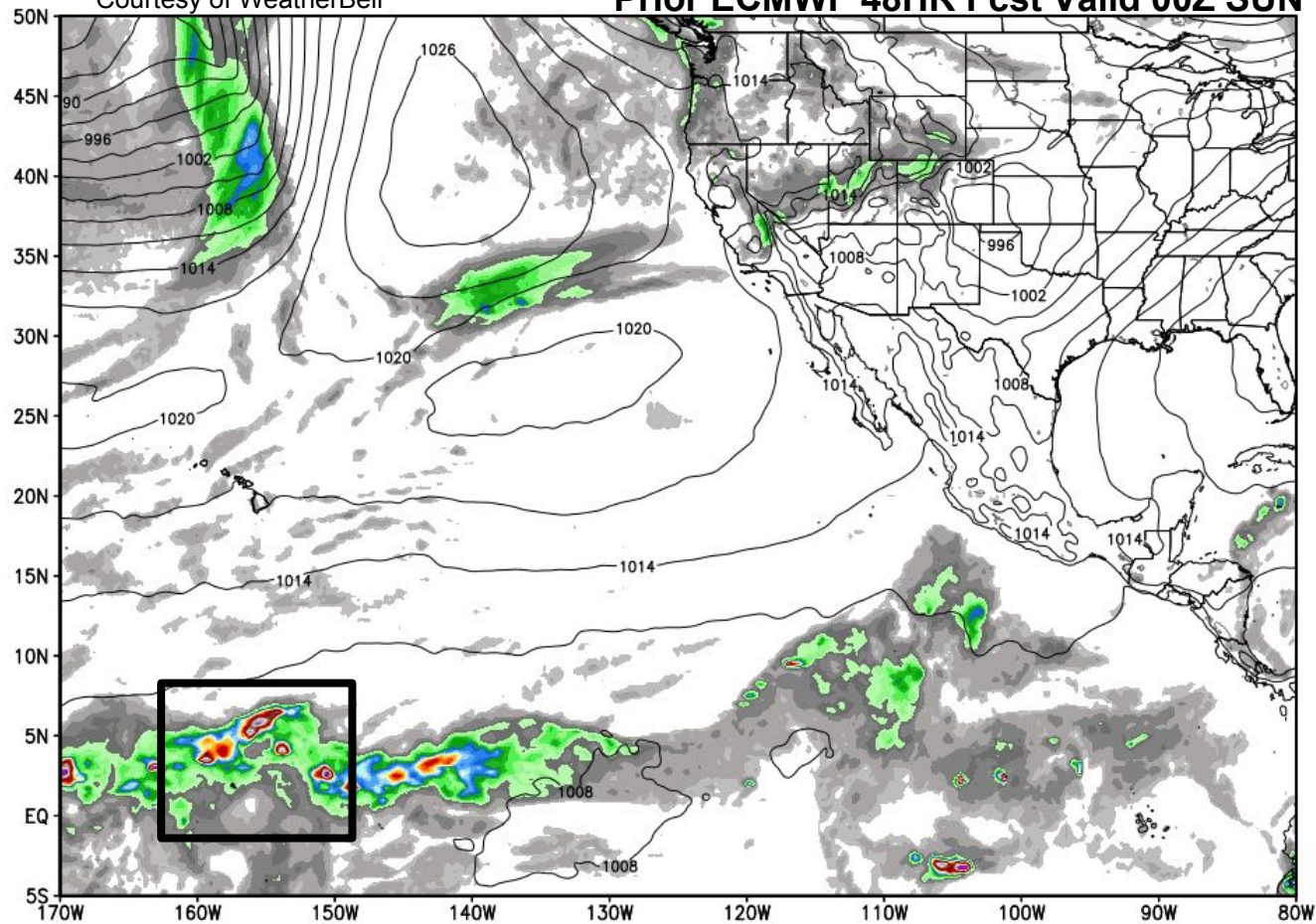
Prior: ECMWF 72HR Fcst 00Z Sun



ECMWF 6-hourly Precipitation [inches] between 18Z30JAN2016 -- 00Z31JAN2016 & MSLP [hPa]
INIT: 00Z29JAN2016 fx: [048] hr --> Sun 00Z31JAN2016

Courtesy of WeatherBell

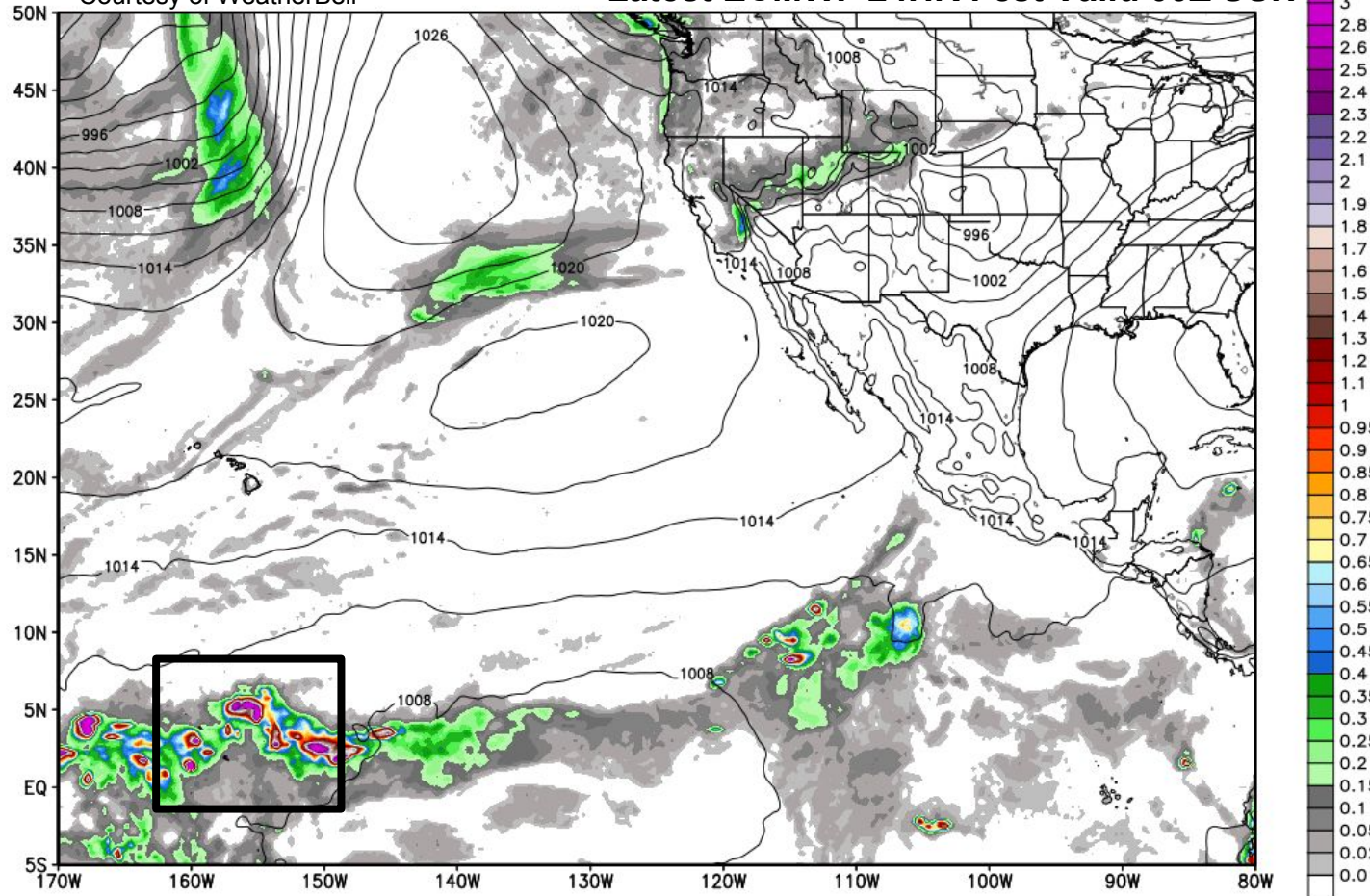
Prior ECMWF 48HR Fcst Valid 00Z SUN



ECMWF 6-hourly Precipitation [inches] between 18Z30JAN2016 -- 00Z31JAN2016 & MSLP [hPa]
INIT: 00Z30JAN2016 fx: [024] hr --> Sun 00Z31JAN2016

Courtesy of WeatherBell

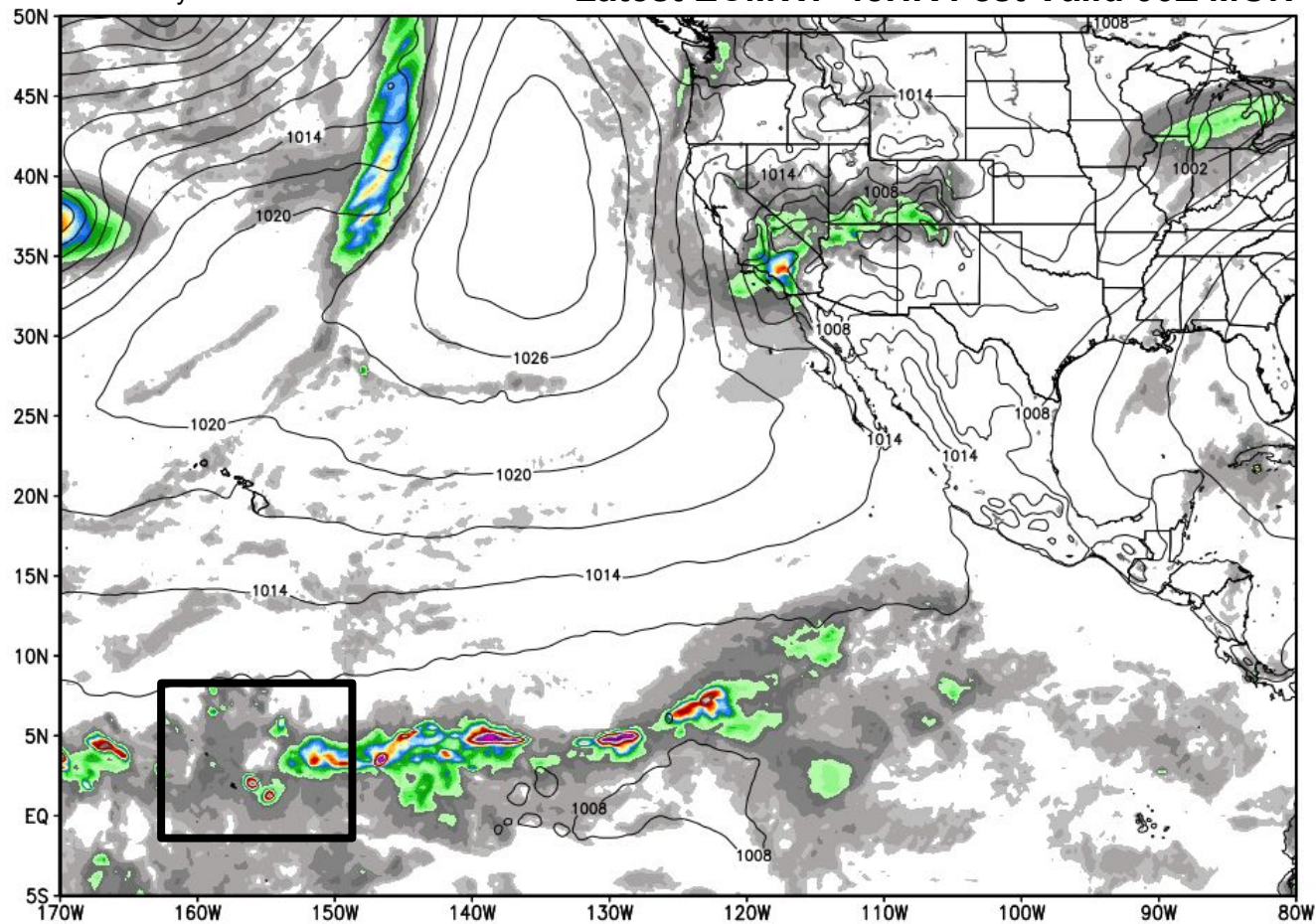
Latest ECMWF 24HR Fcst Valid 00Z SUN



ECMWF 6-hourly Precipitation [inches] between 18Z31JAN2016 -- 00Z01FEB2016 & MSLP [hPa]
INIT: 00Z30JAN2016 fx: [048] hr --> Mon 00Z01FEB2016

Courtesy of WeatherBell

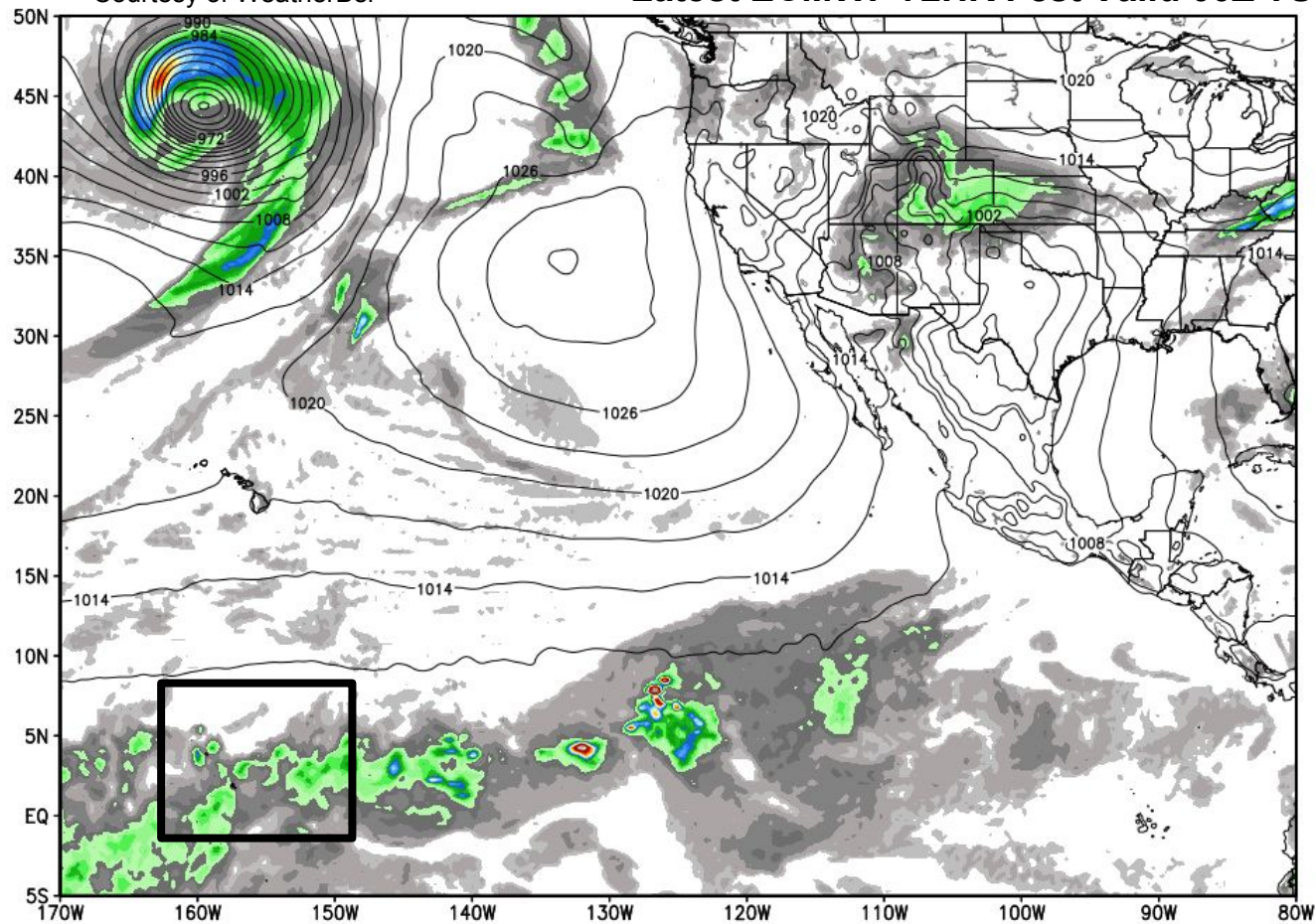
Latest ECMWF 48HR Fcst Valid 00Z MON



ECMWF 6-hourly Precipitation [inches] between 18Z01FEB2016 -- 00Z02FEB2016 & MSLP [hPa]
INIT: 00Z30JAN2016 fx: [072] hr --> Tue 00Z02FEB2016

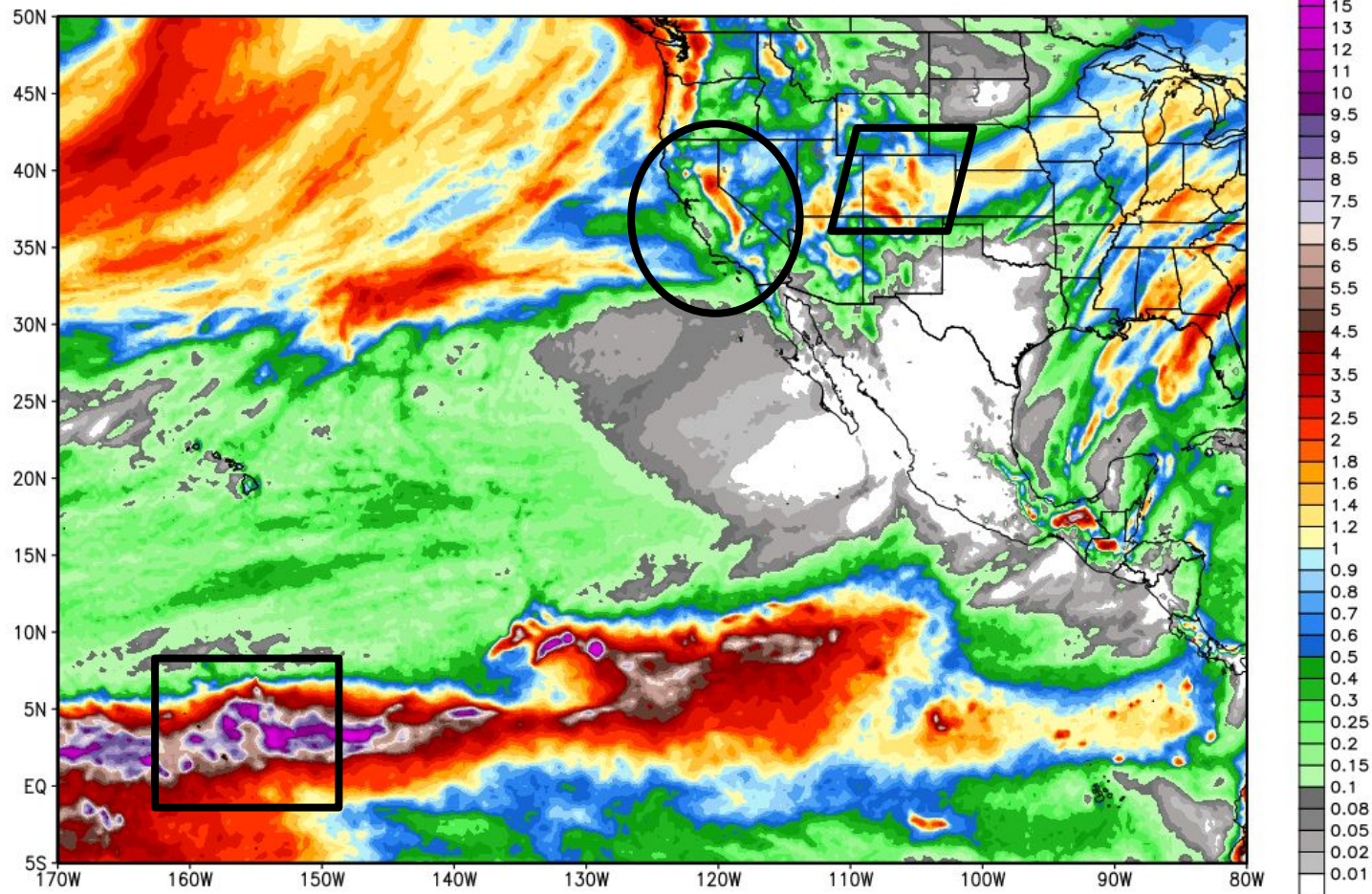
Courtesy of WeatherBel

Latest ECMWF 72HR Fcst Valid 00Z TUE



ECMWF Total Precipitation [inches] between 00Z30JAN2016 -- 00Z06FEB2016
INIT: 00Z30JAN2016 fx: [168] hr --> Sat 00Z06FEB2016

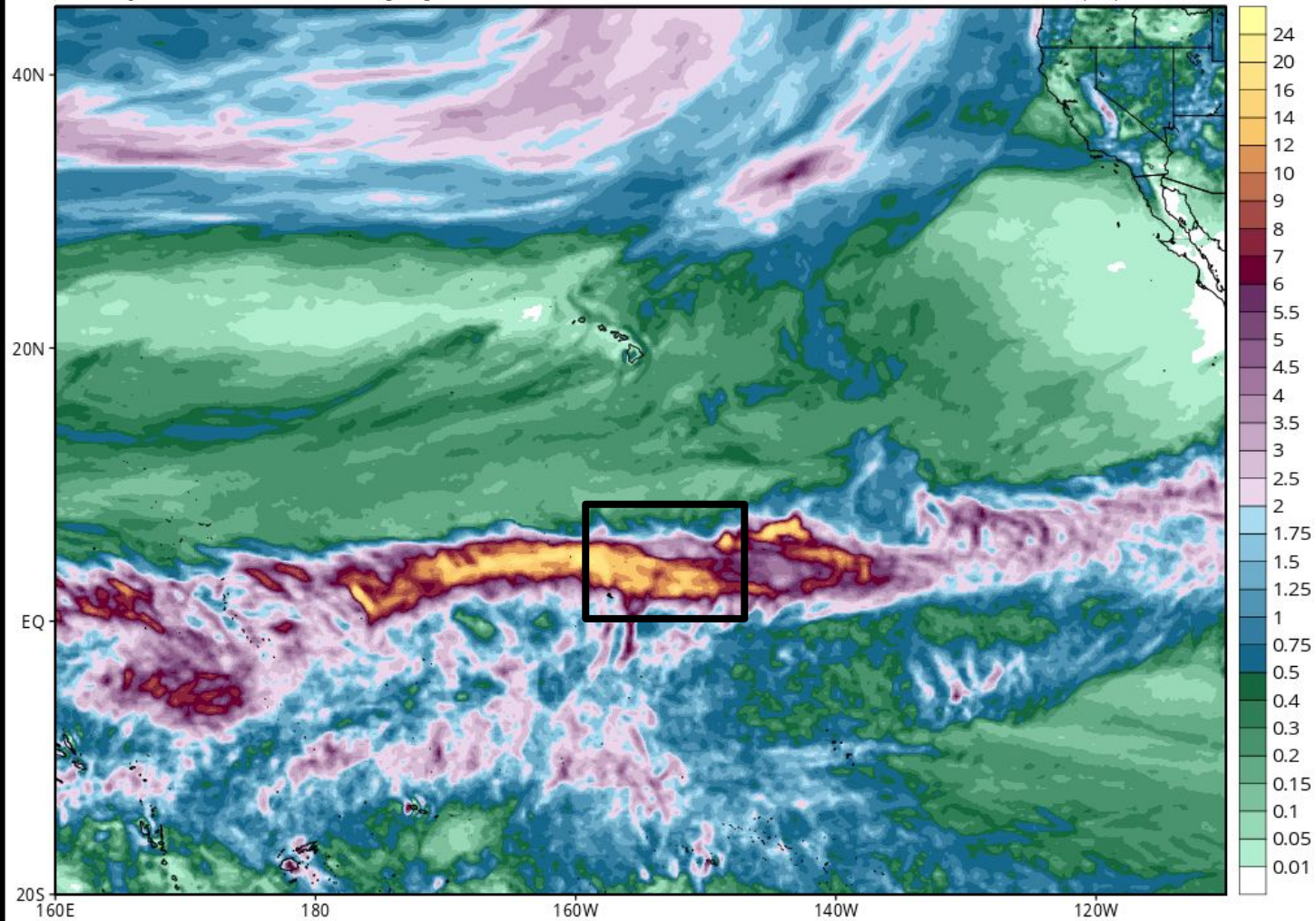
Max 26.1 in



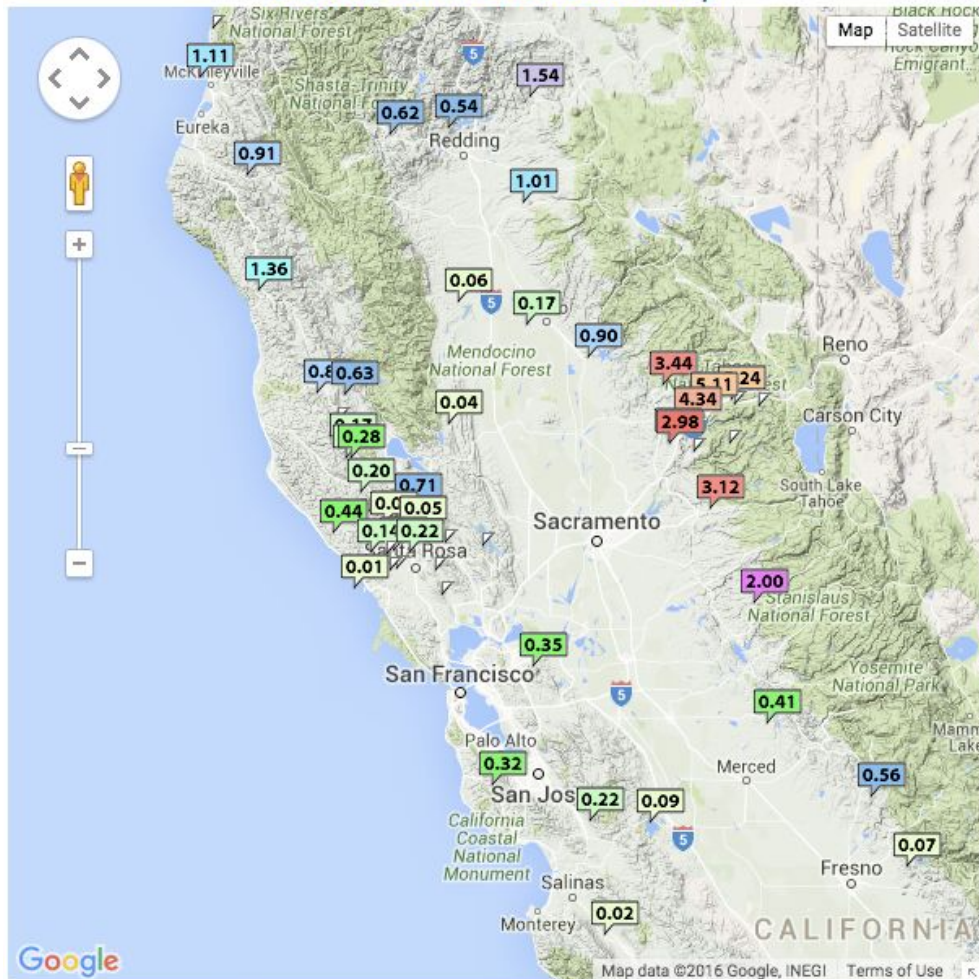
GFS Total Accumulated Precipitation (inches) from 06z30Jan2016 to 00z06Feb2016

Init: 06z Jan 30 2016 Forecast Hour: [162] valid at 00z Sat, Feb 06 2016

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PSD Near Realtime Observations - Map



SurfaceMet Data

- ☐ Temperature (F)
- ☐ Integrated Water Vapor (cm)
- ☐ Snow Depth (in)
- ☐ Wind Speed & Direction (mph)
- Accumulated Precipitation (in)
24Hr
- Soil Moisture Saturation (%)
-

Wind and Precipitation Radar Data

- ☐ Snow Level (kft msl)
- Profiler Wind Speed And Direction (mph)
- Height (m msl): -
- Integrated Water Vapor Flux (cm)(m/s)
-

NEXRAD Data

- ☐ Radar Relectivity Mosaic

**PSD OBS: 24Hr Pcpn
Ending ~ 12ZSAT 30 Jan**

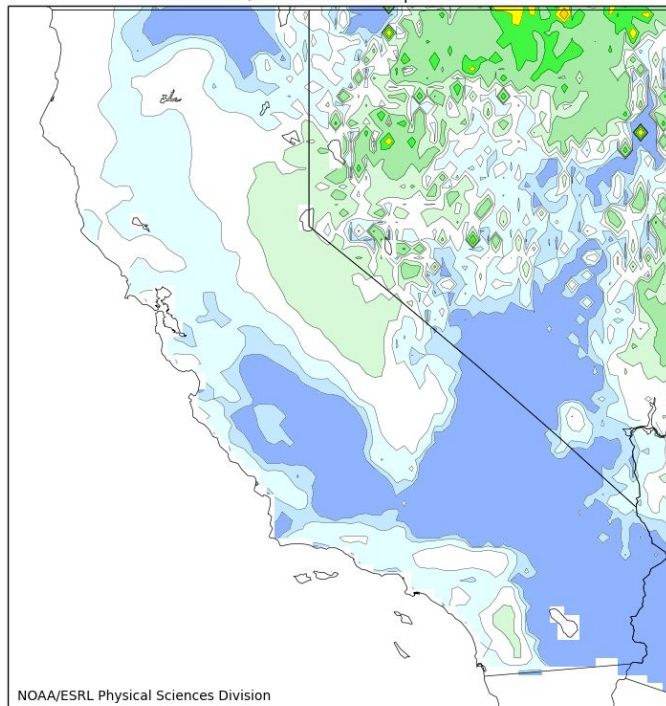
Google

△ = Data Missing □ = No Valid Data

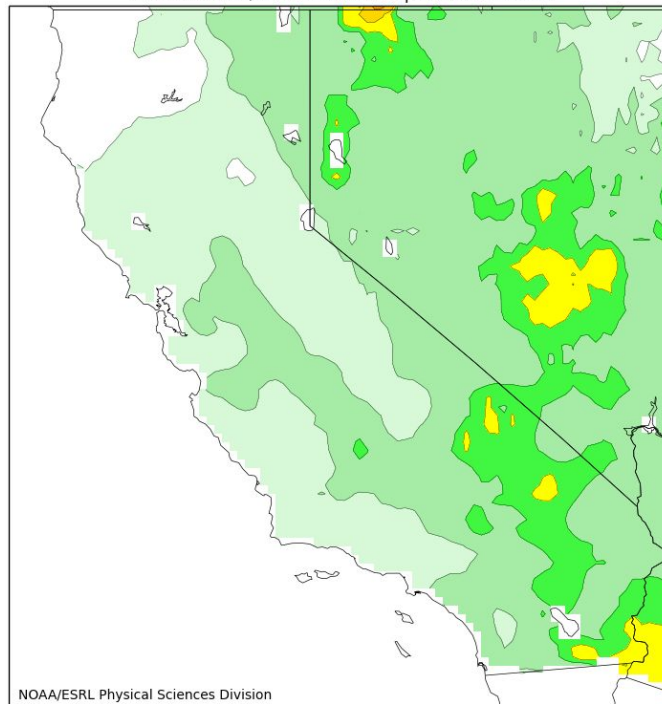
Medium - Long Range Forecast

ESRL-Calibrated Reforecast Pcpn : Day 0-7 Fcst for 00z30 January -00z FRI February 6
(from the 00Z SAT 30 JAN ensembles of the experimental reforecast system)
Comparing to Day 9-15 Fcst Valid for same period (from 00Z 22Jan Ensembles)

000-168hr fcst from 00Z Sat Jan 30. Valid 00Z Sat Jan 30 - 00Z Sat Feb 06
Ratio. Forecast/Climo Prob of Precip > 50mm. CSGD.

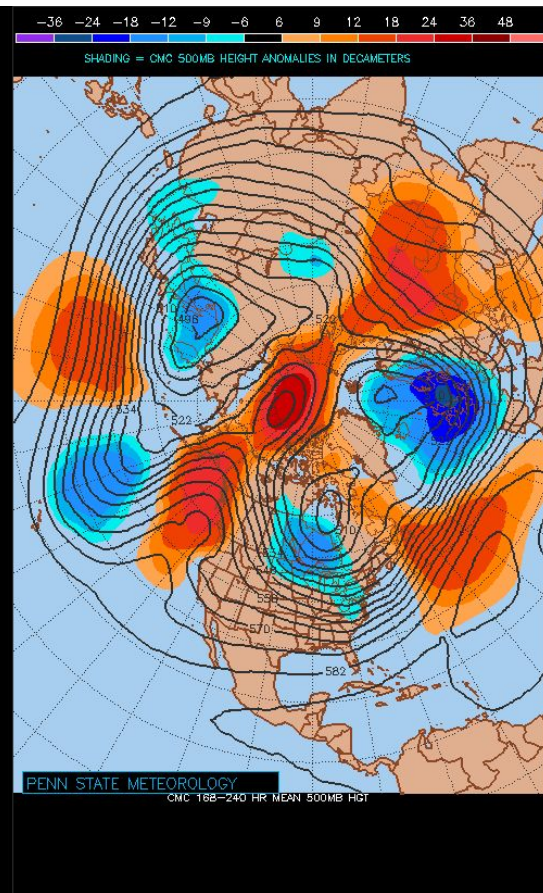
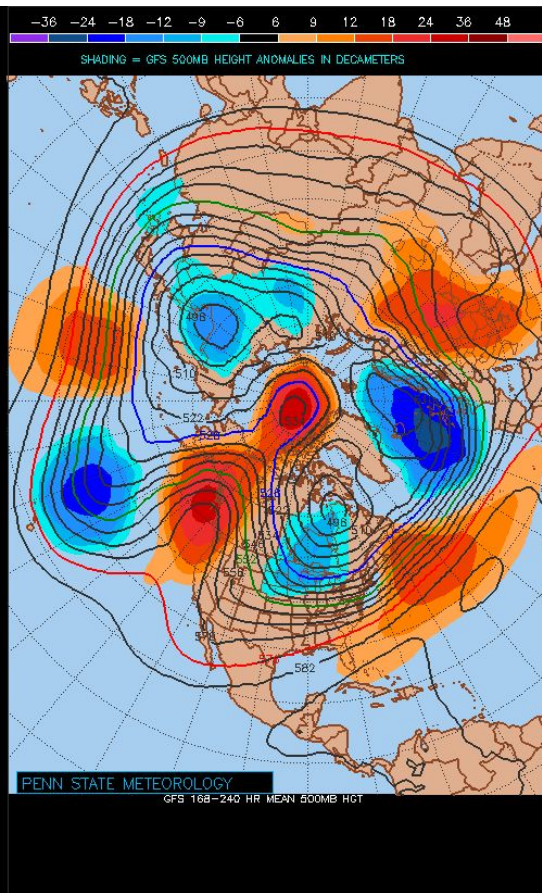
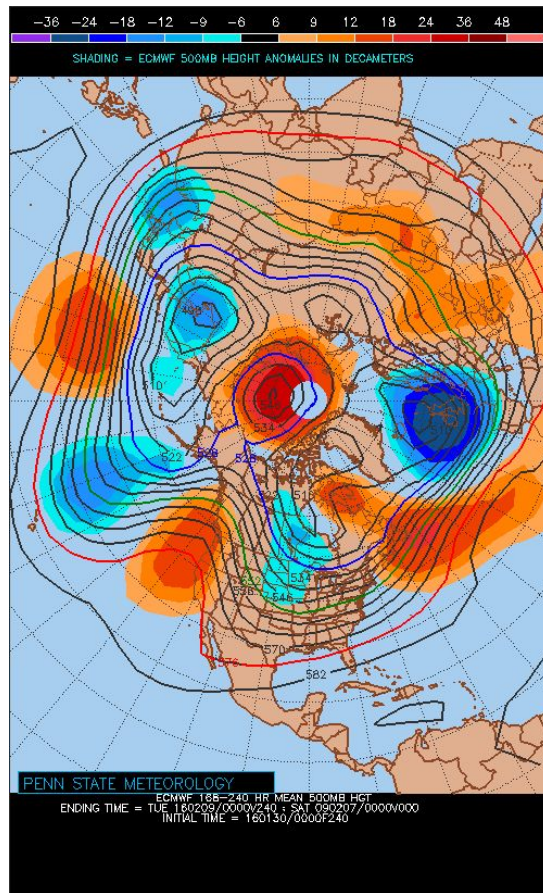


198-360hr fcst from 00Z Fri Jan 22. Valid 06Z Sat Jan 30 - 00Z Sat Feb 06
Ratio. Forecast/Climo Prob of Precip > 50mm. CSGD.



Medium - Long Range Forecast

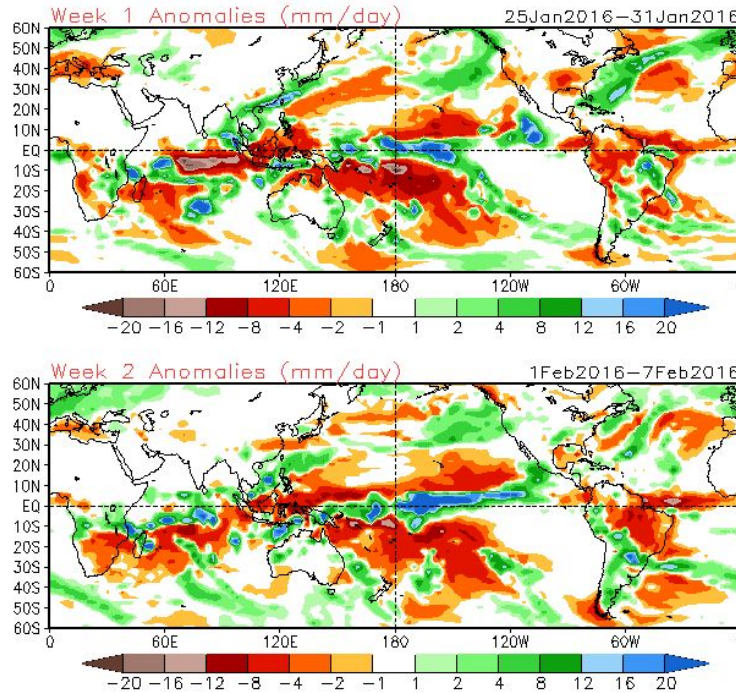
Day 7-10 Initialized 00Z SAT 30 Jan



Medium - Long Range Forecast

CFS Week 1 and Week 2 PCPN Anomalies: Jan 24 initialized

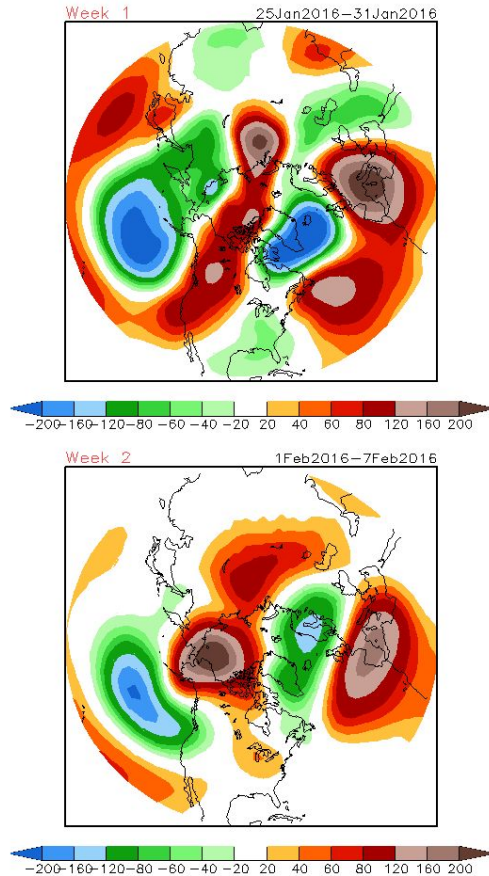
CFSv2 Weeks 1 & 2 Precipitation
16 Member Ensemble Mean Forecast from 24Jan2016



Medium - Long Range Forecast

CFS Week 1 and Week 2 500 mb Height Anomalies: Jan 23 initialized

CFSv2 Weeks 1 & 2 500 hPa Z Anomalies (m)
16 Member Ensemble Mean Forecast from 24Jan2016



Medium - Long Range Forecast

CFS Week 1 and Week 2 NA Pcpn Anomalies: Jan 23 initialized

CFSv2 Weeks 1 & 2 Precipitation
16 Member Ensemble Mean Forecast from 24Jan2016

