Summary of Key Briefing Points
1030-1130am MST Tue Feb 16, 2016

Current Conditions as of TUE 12Z-15Z February 16

Tropics and Mid-latitudes

Over the Tropical Pacific:

- Convection: Scattered cells in band 155-140W, 3-5N this morning
- Upper level SSW winds in FD,
- Strong cross-equatorial flow, SH anticyclone and Divergent mass outflow

Tropical Outlook

- GFS EC models agree on quite convection, except eastern portion of FD
- Both EC and GFS continue trend of convection ioriented SW-NE across the central part of the FD
- Poleward outflow from convection expected to feed entrance region of jet affected WCOAST Tues-Thur

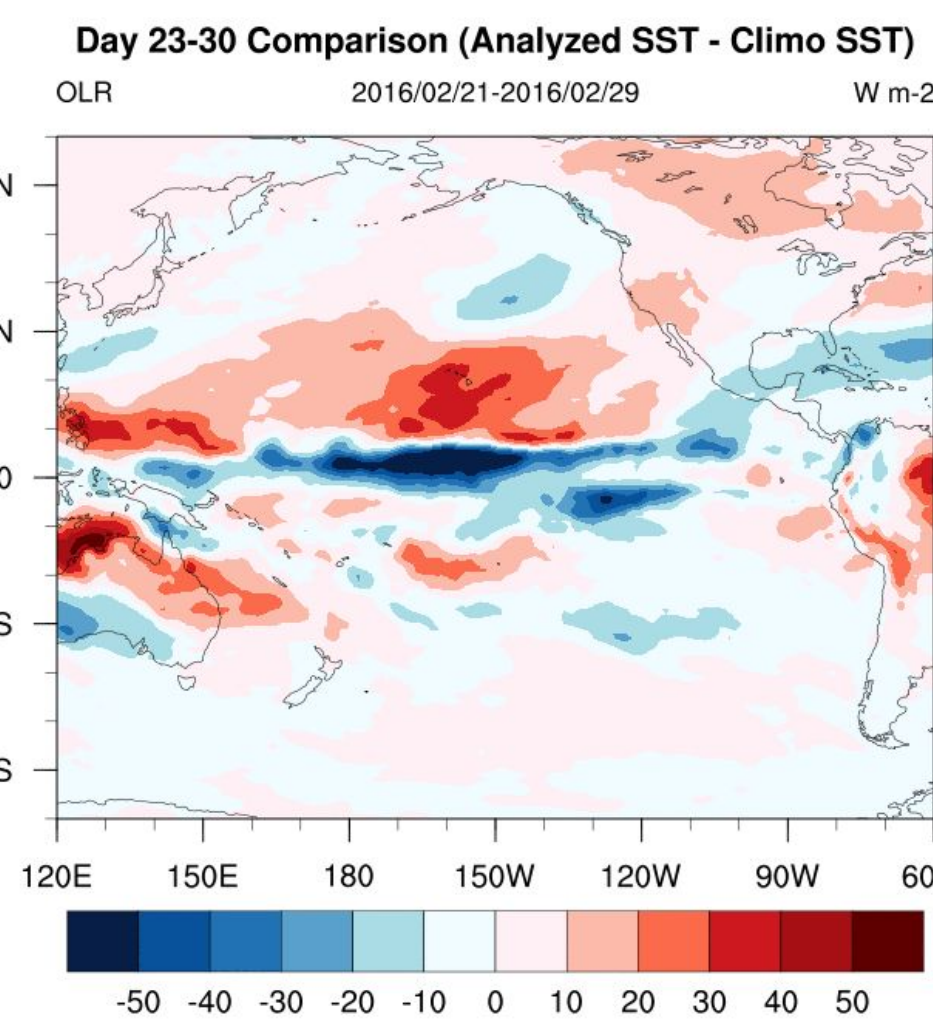
Midlatitude Conditions/Outlook

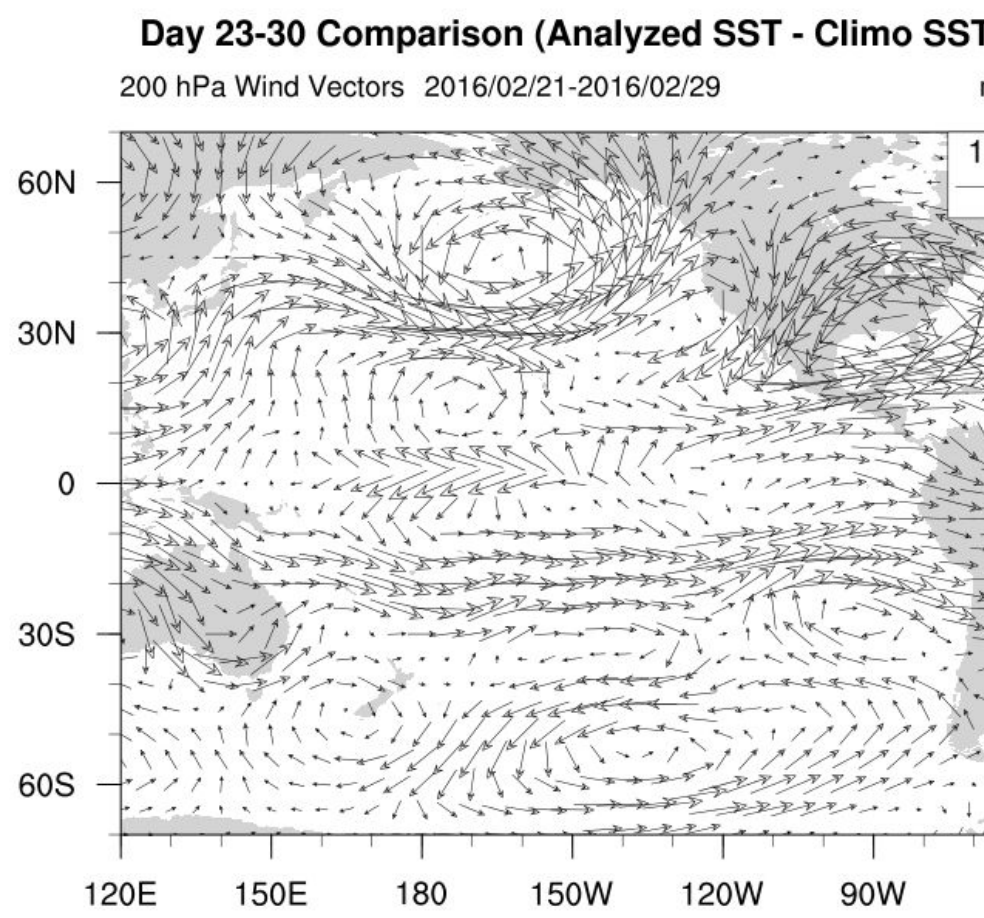
Short Term:

- 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

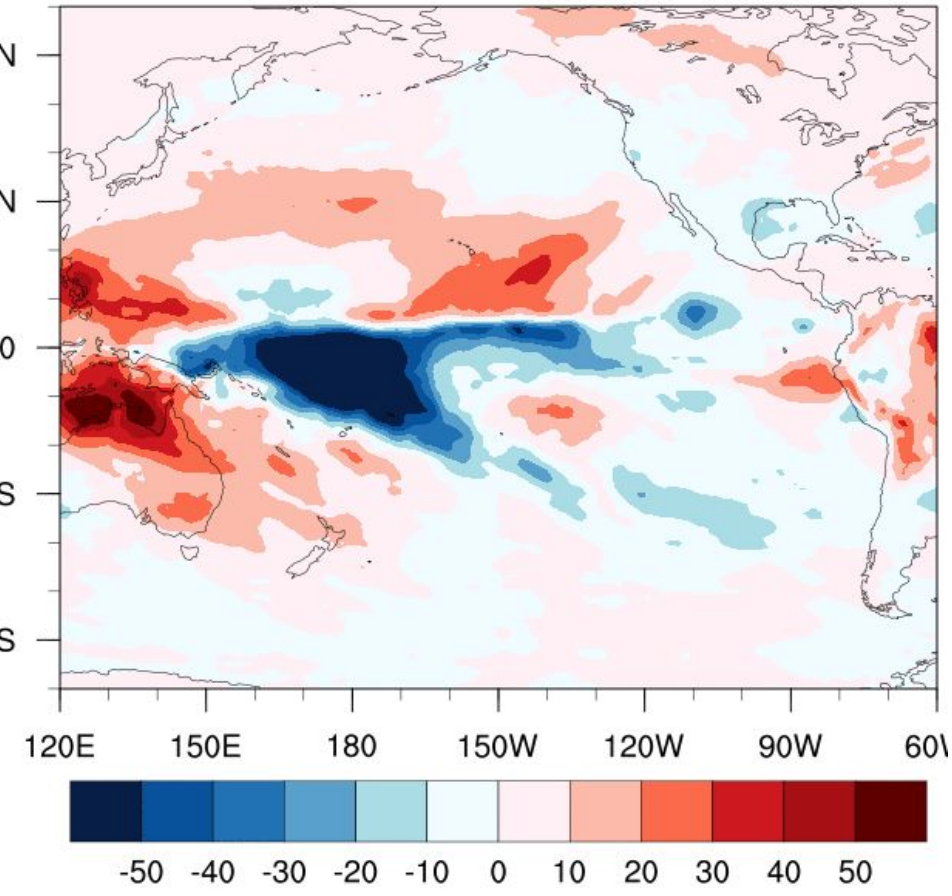
Initial Condition Dependency of the El Niño Signal


Day 23-30 Comparison (Analyzed SST - Climo SST)
OLR
2016/02/21-2016/02/29
W m-2
120E
150E
180
150W
120W
90W
-50
-40
-30
-20
-10
0
10
20
30
40
50


Day 23-30 Comparison (Analyzed SST - Climo SST
200 hPa Wind Vectors
2016/02/21-2016/02/29
60N
30N
0
30S
60S
120E
150E
180
150W
120W
90W

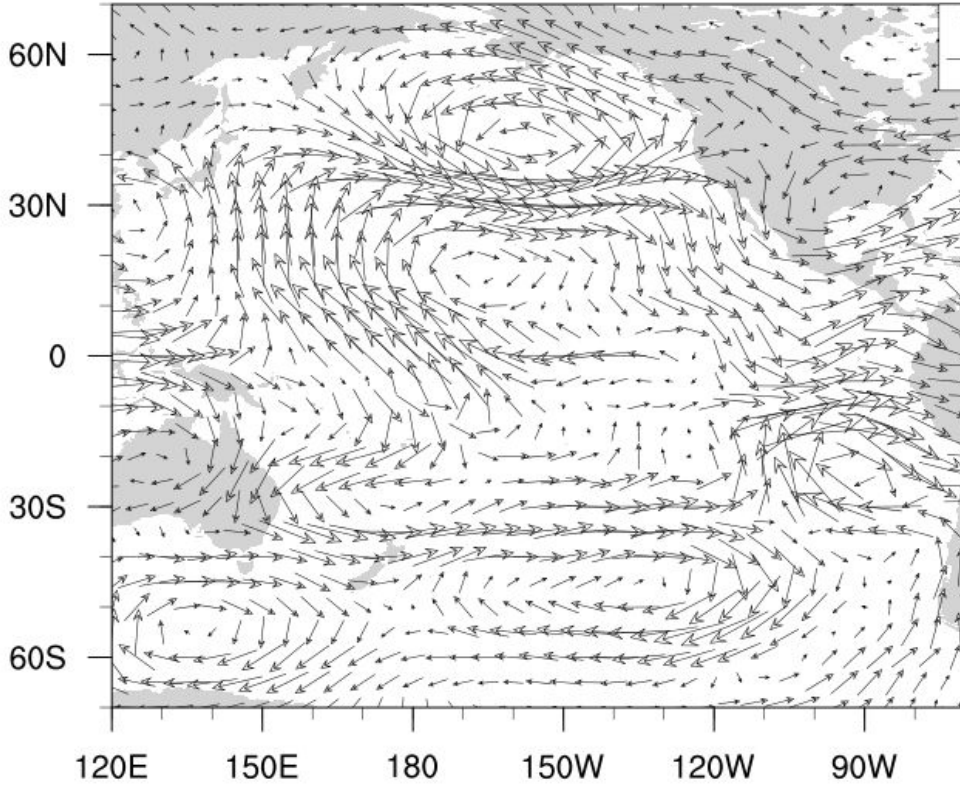
Day 15-22 Comparison (Analyzed SST - Climo SST)

OLR 2016/02/21-2016/02/29 W m-2



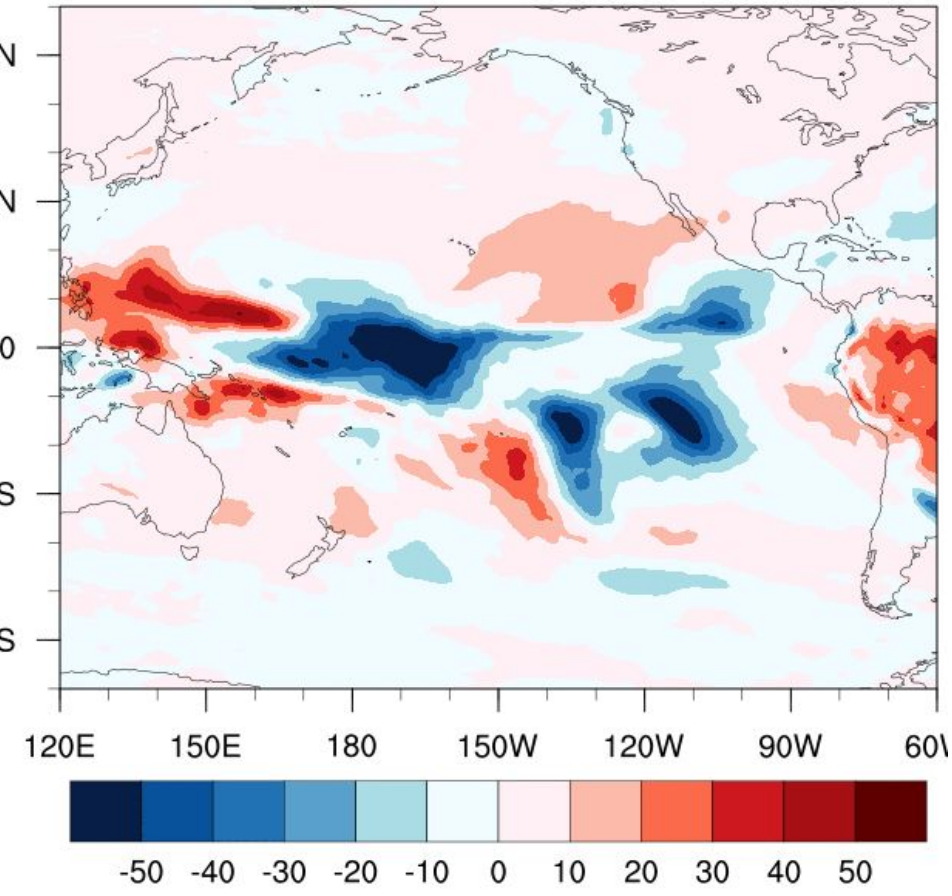
Day 15-22 Comparison (Analyzed SST - Climo SS

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



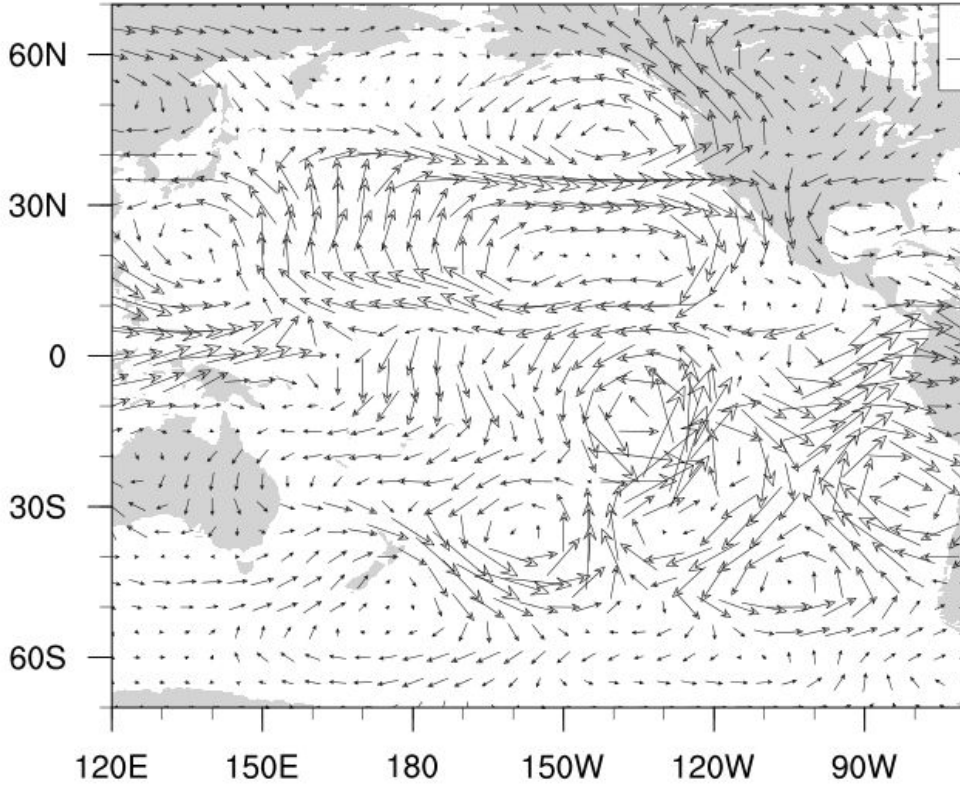
Day 8-14 Comparison (Analyzed SST - Climo SST)

OLR 2016/02/22-2016/02/29 W m-2



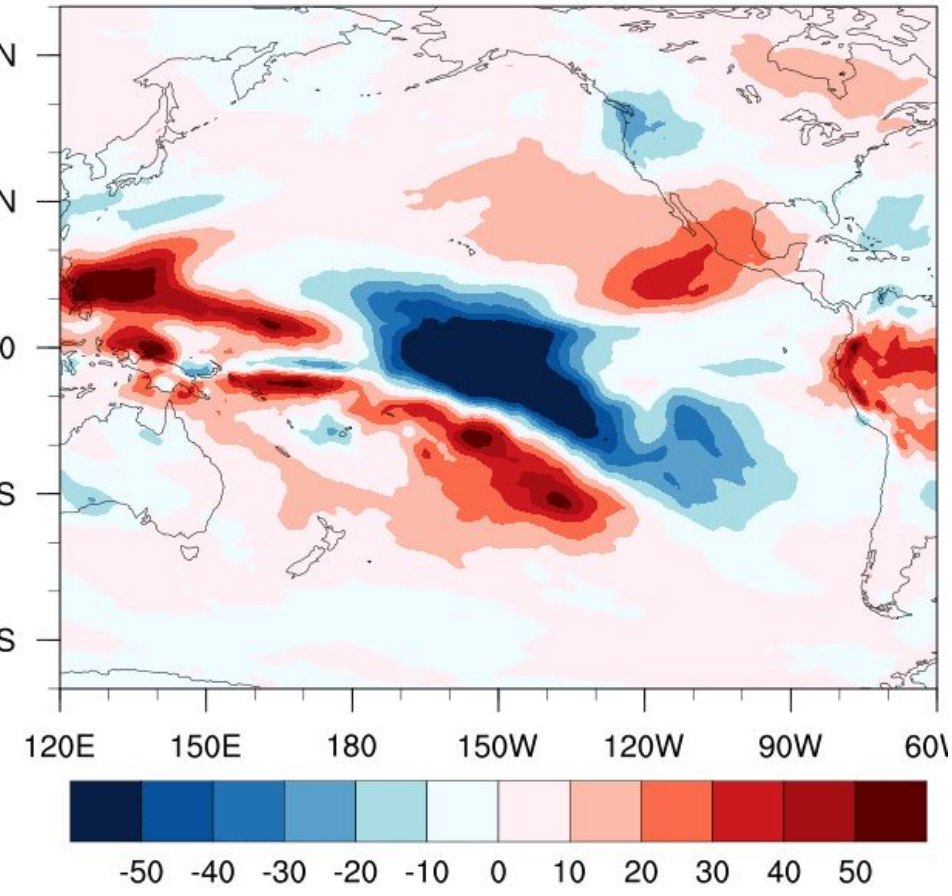
Day 8-14 Comparison (Analyzed SST - Climo SST

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



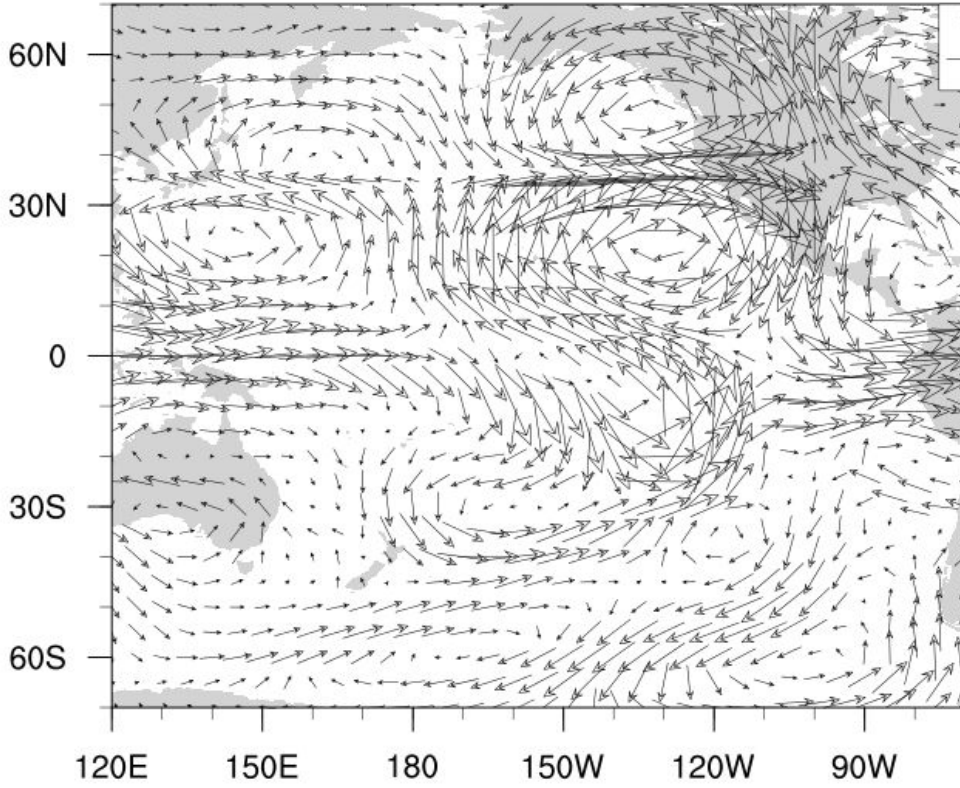
Day 15-22 Comparison (Analyzed SST - Climo SST)

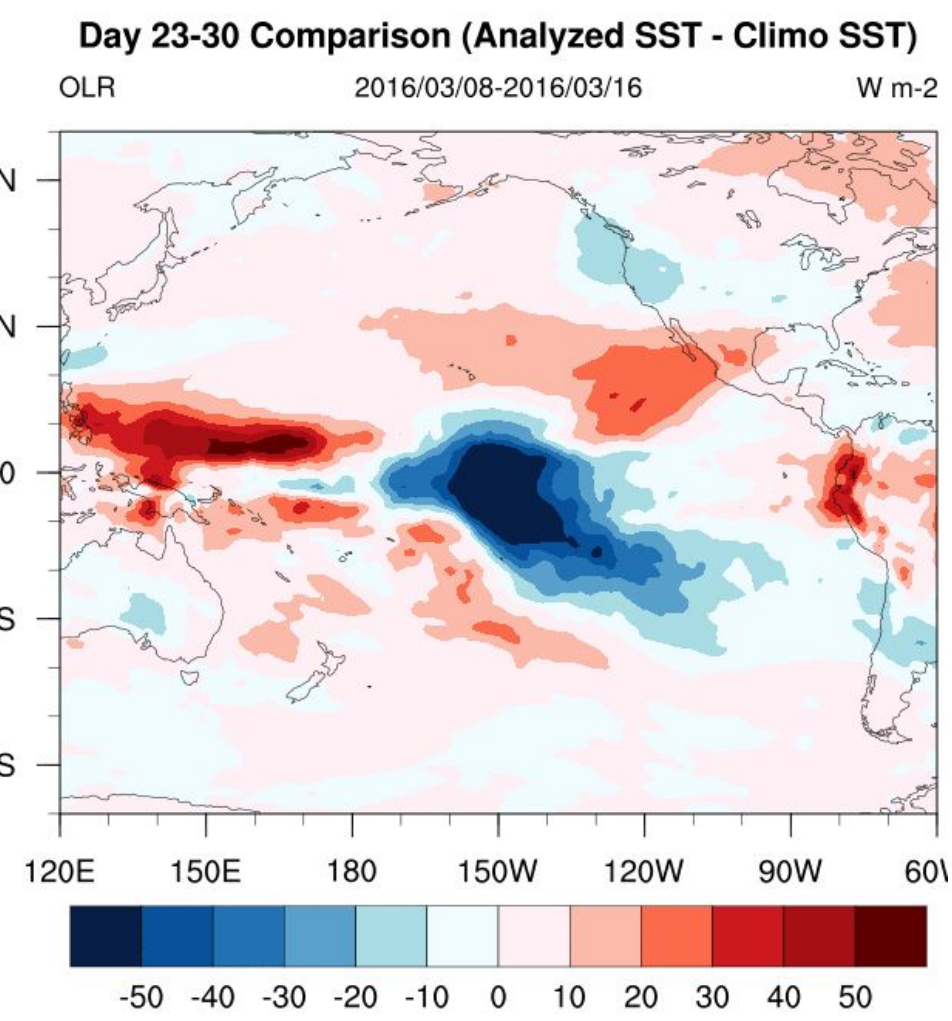
OLR 2016/02/29-2016/03/08 W m-2

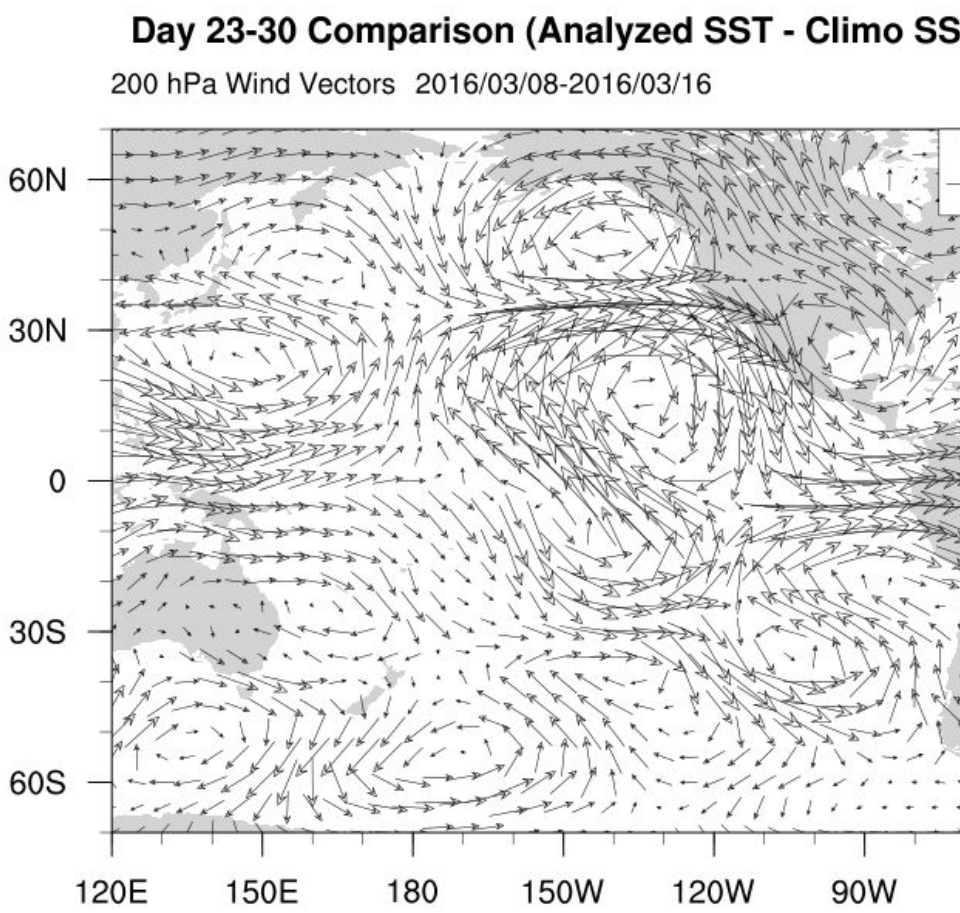


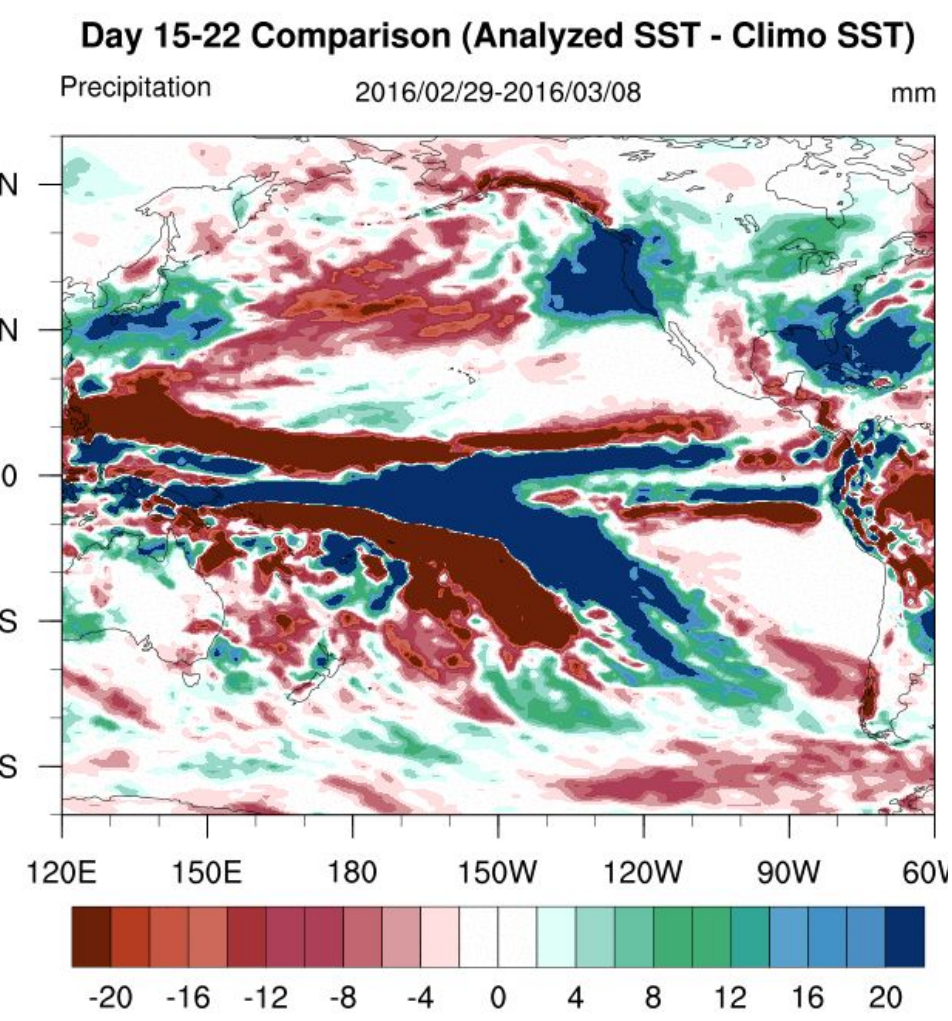
Day 15-22 Comparison (Analyzed SST - Climo SS

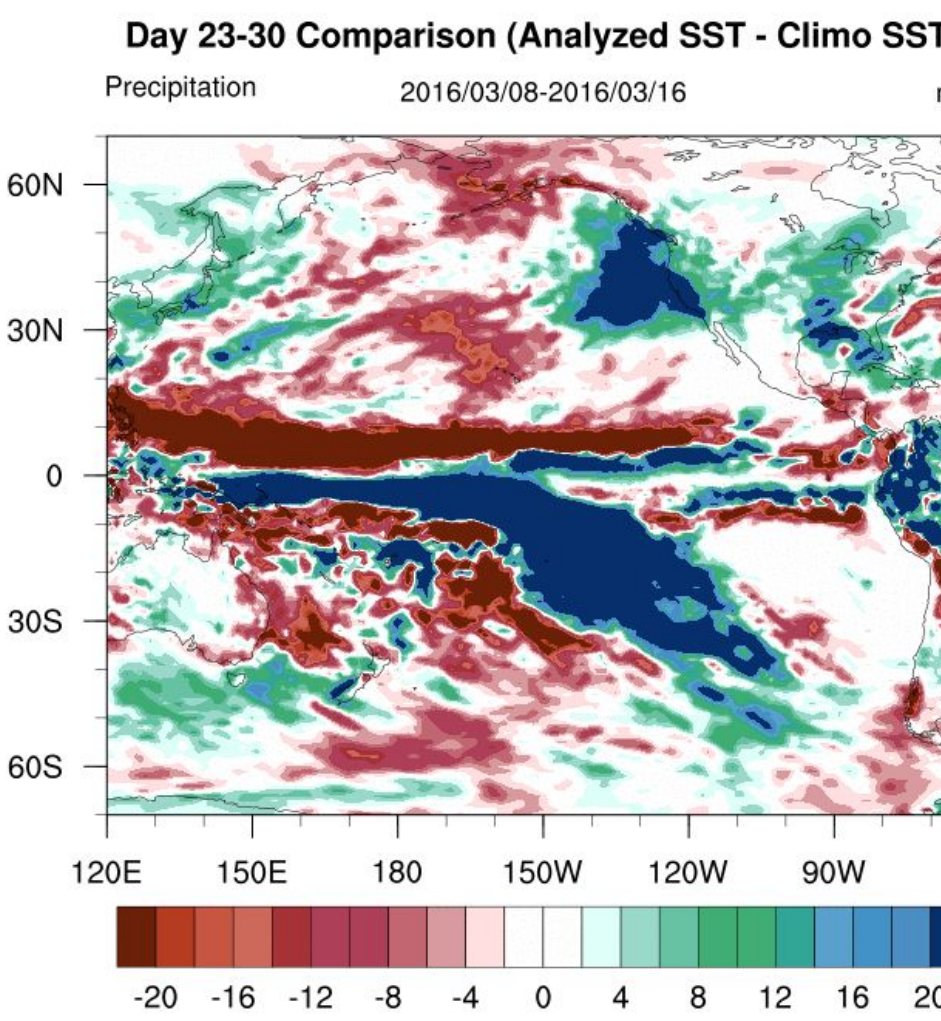
200 hPa Wind Vectors 2016/02/29-2016/03/08



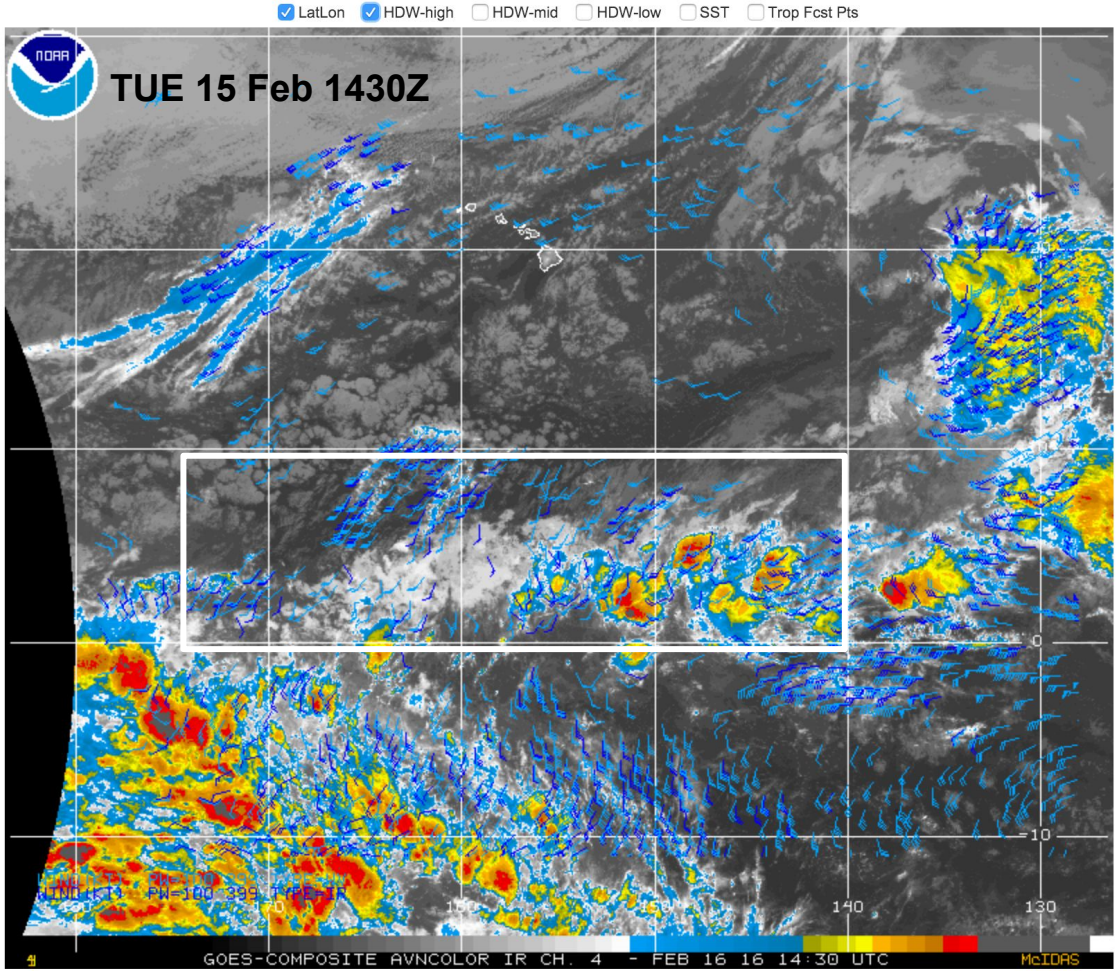

Day 23-30 Comparison (Analyzed SST - Climo SST)
OLR
2016/03/08-2016/03/16
W m-2
N
N
0
S
S
120E
150E
180
150W
120W
90W
60\
-50
-40
-30
-20
-10
0
10
20
30
40
50


Day 23-30 Comparison (Analyzed SST - Climo SS
200 hPa Wind Vectors
2016/03/08-2016/03/16
60N
30N
0
30S
60S
120E
150E
180
150W
120W
90W

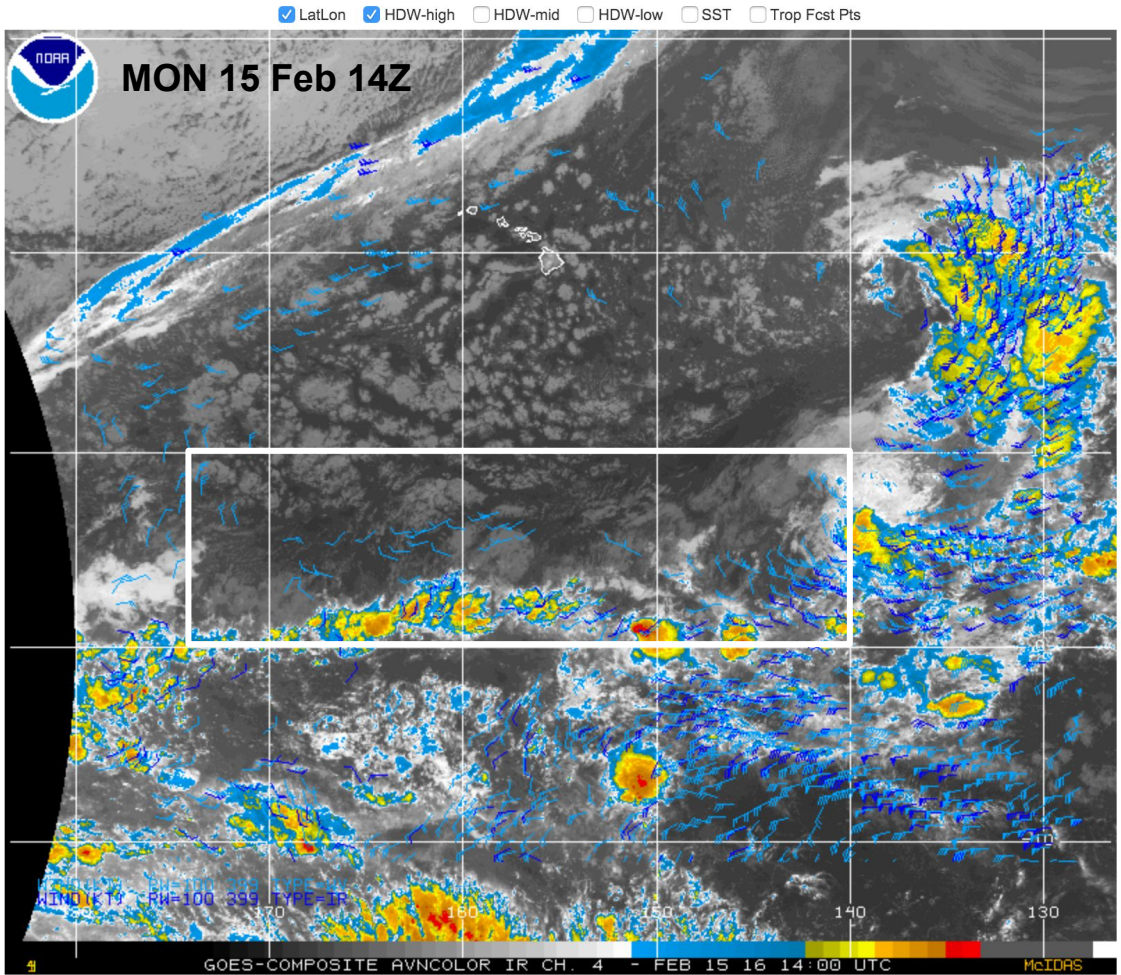

Day 15-22 Comparison (Analyzed SST - Climo SST)
Precipitation
2016/02/29-2016/03/08
mm
N
N
0
S
S
120E
150E
180
150W
120W
90W
60W
-20
-16
-12
-8
-4
0
4
8
12
16
20


Day 23-30 Comparison (Analyzed SST - Climo SST
Precipitation
2016/03/08-2016/03/16
60N
30N
0
30S
60S
120E
150E
180
150W
120W
90W
-20
-16
-12
-8
-4
0
4
8
12
16
20

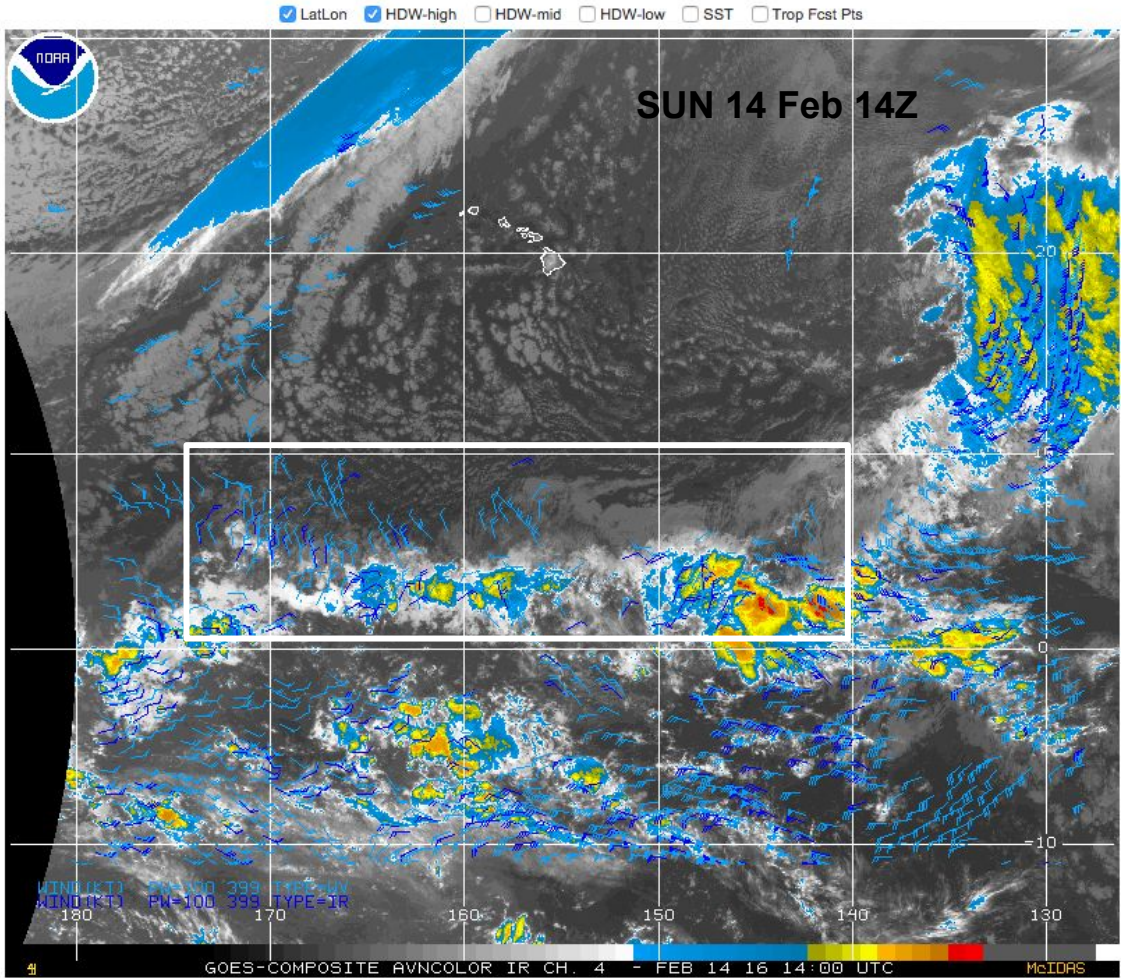
GOES Composite - El Niño Support – AVN Color Infrared Loop

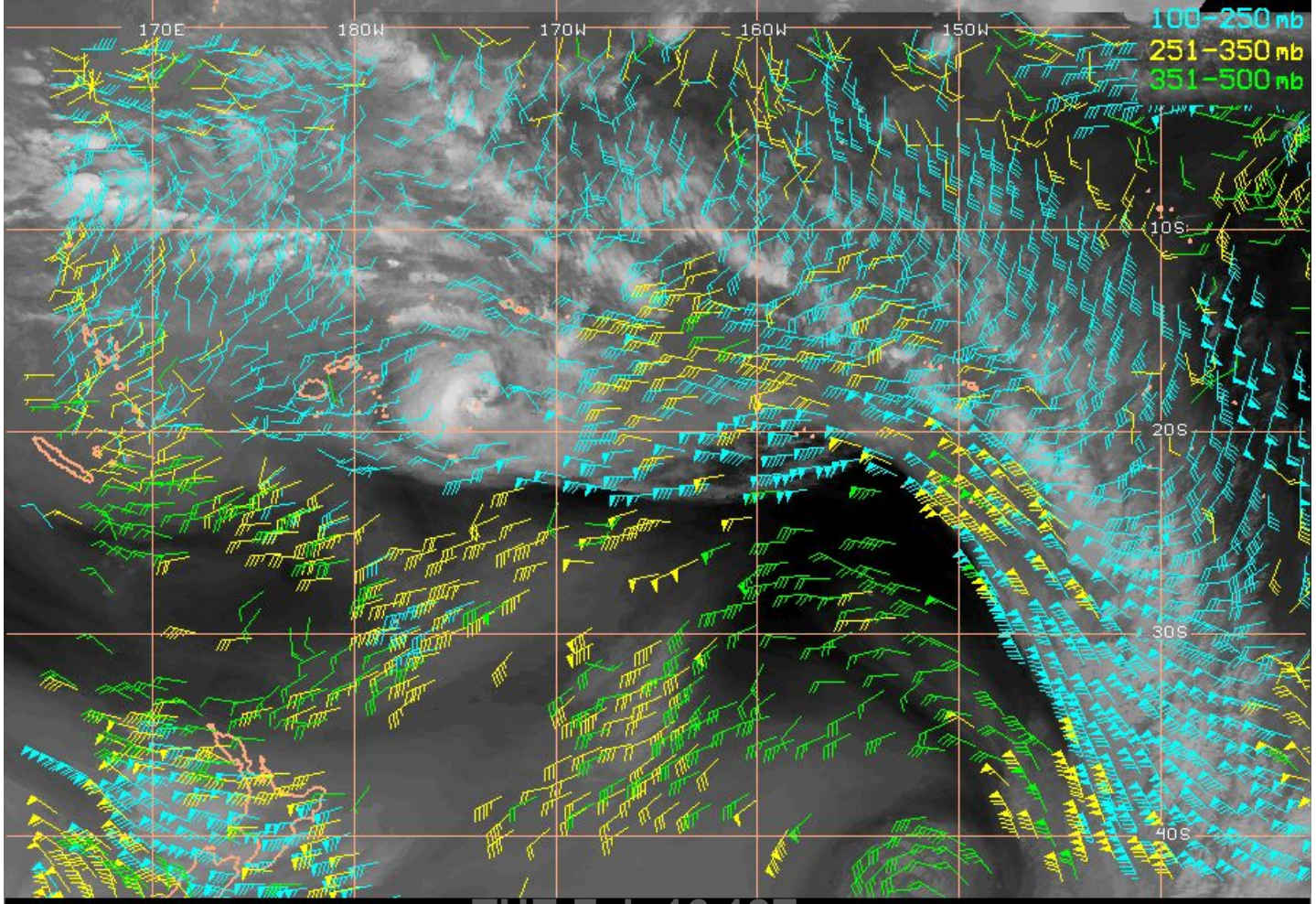


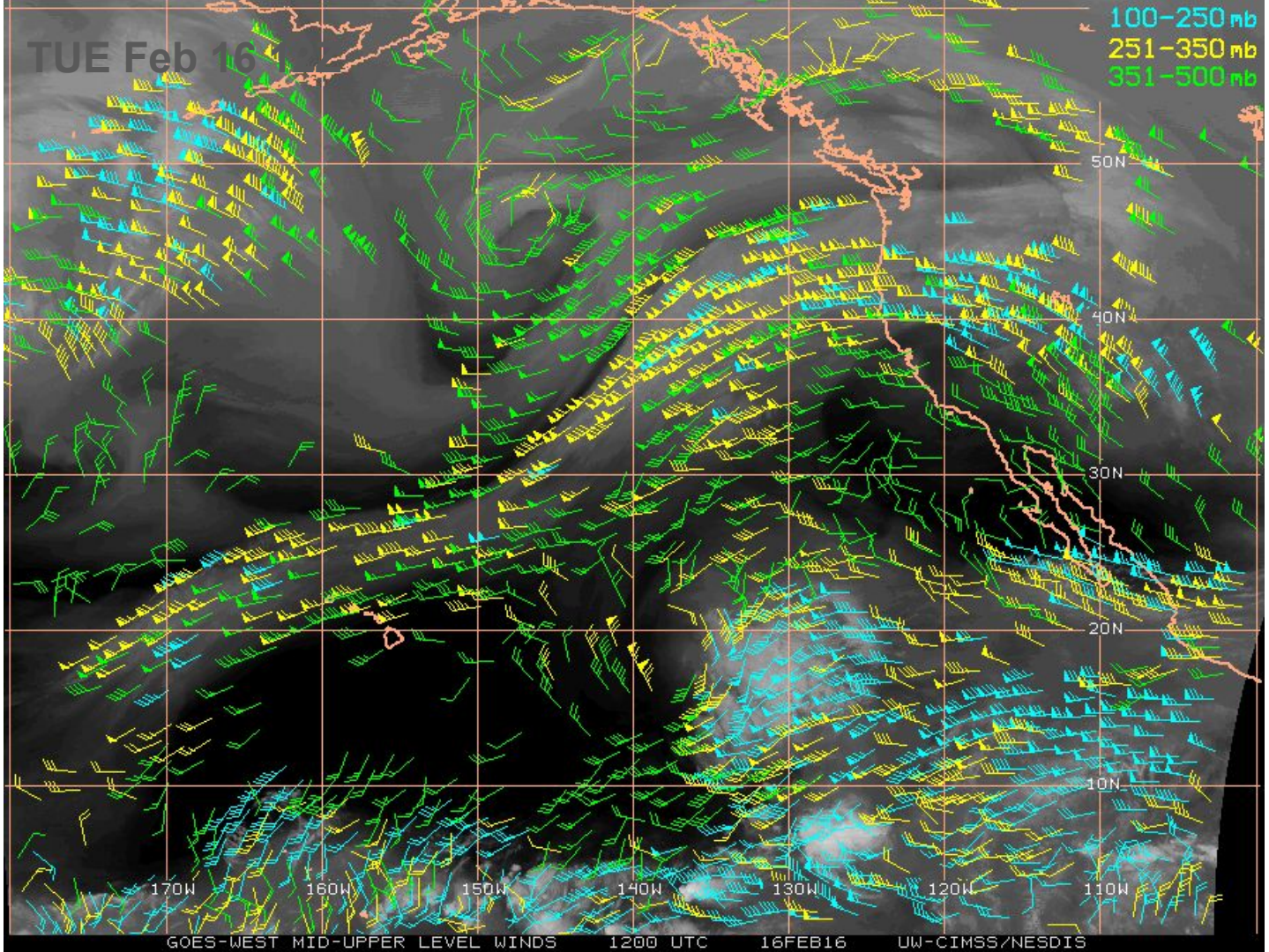
GOES Composite - El Niño Support – AVN Color Infrared Loop

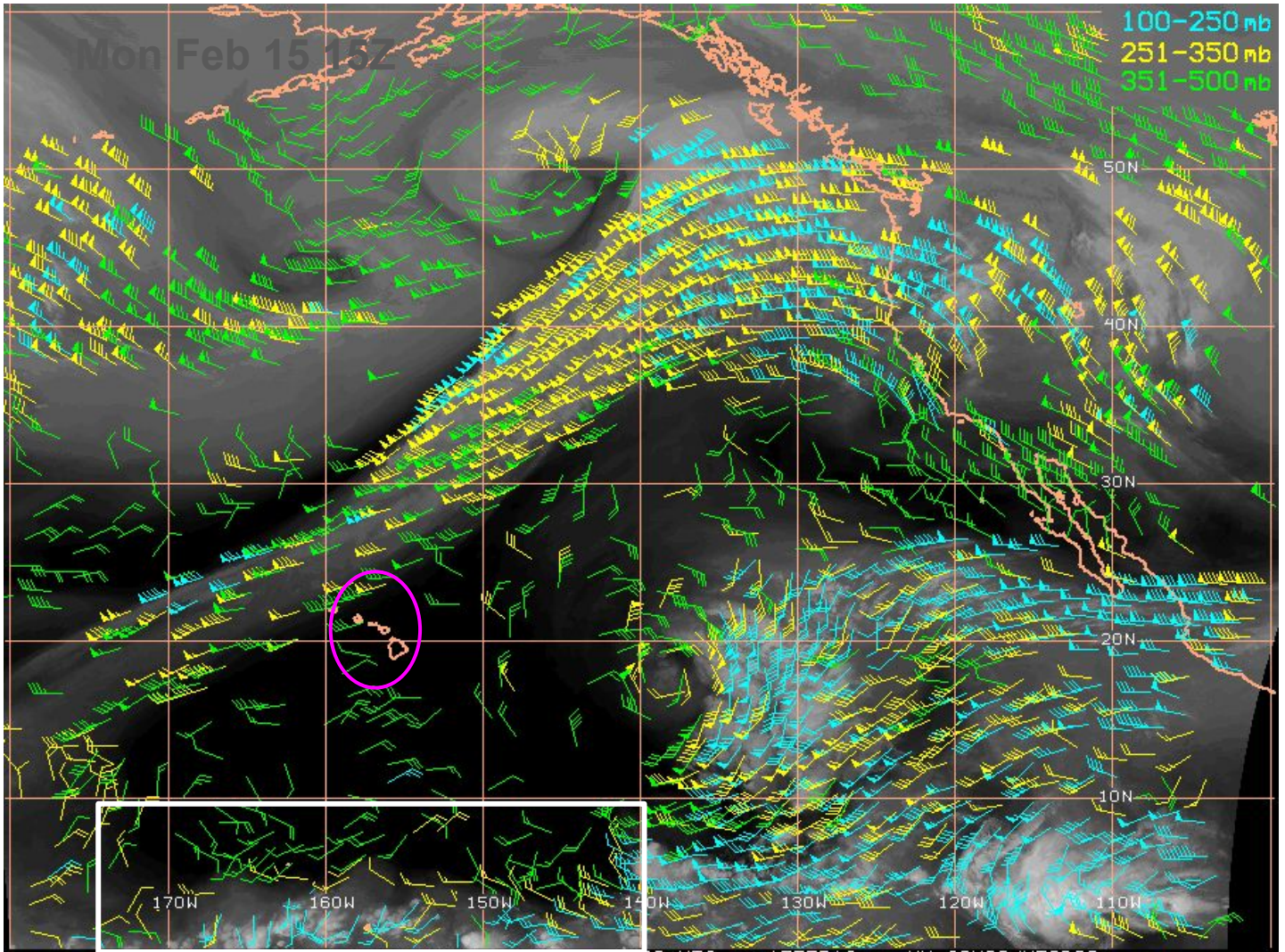


GOES Composite - El Niño Support – AVN Color Infrared Loop

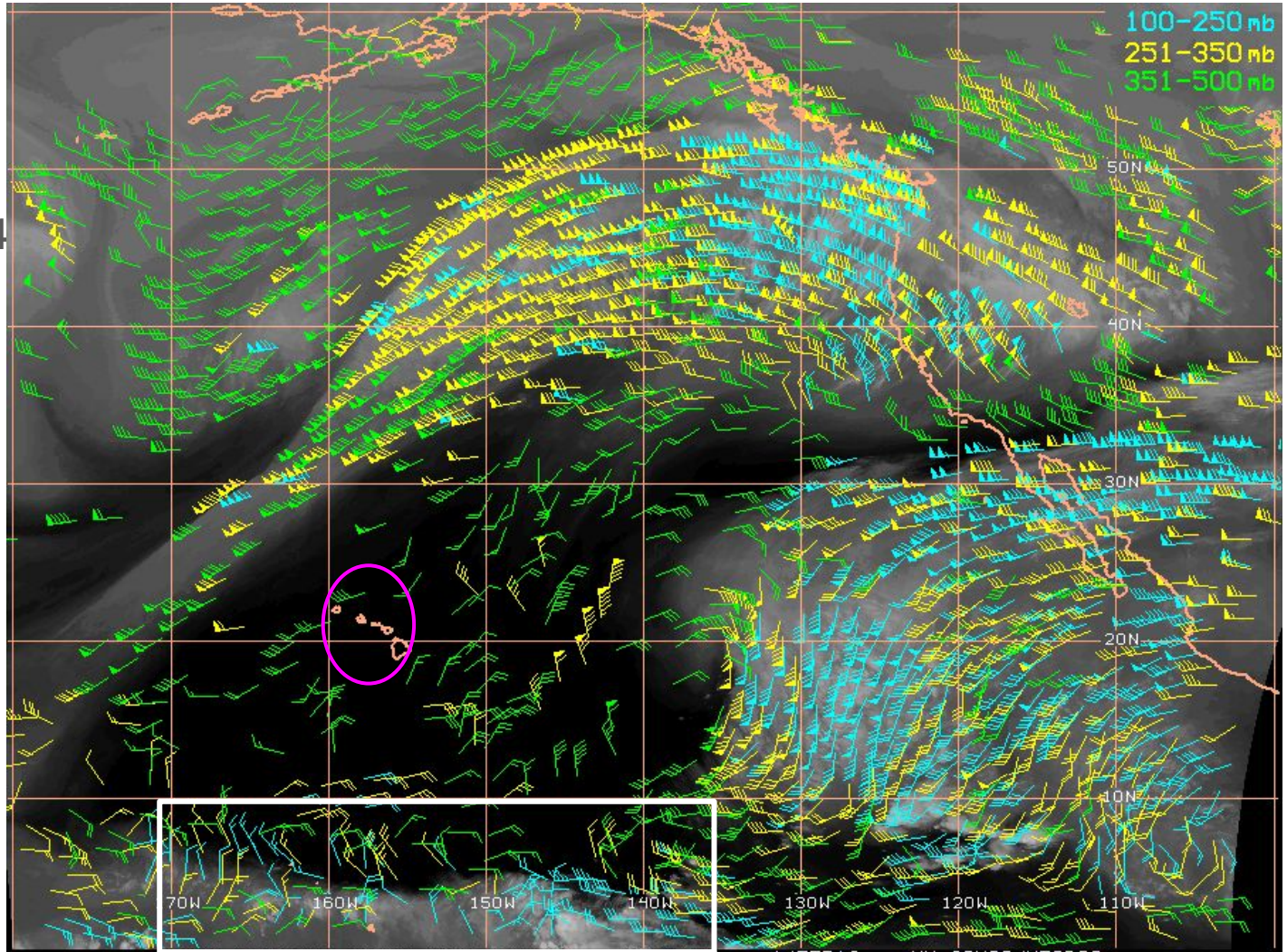


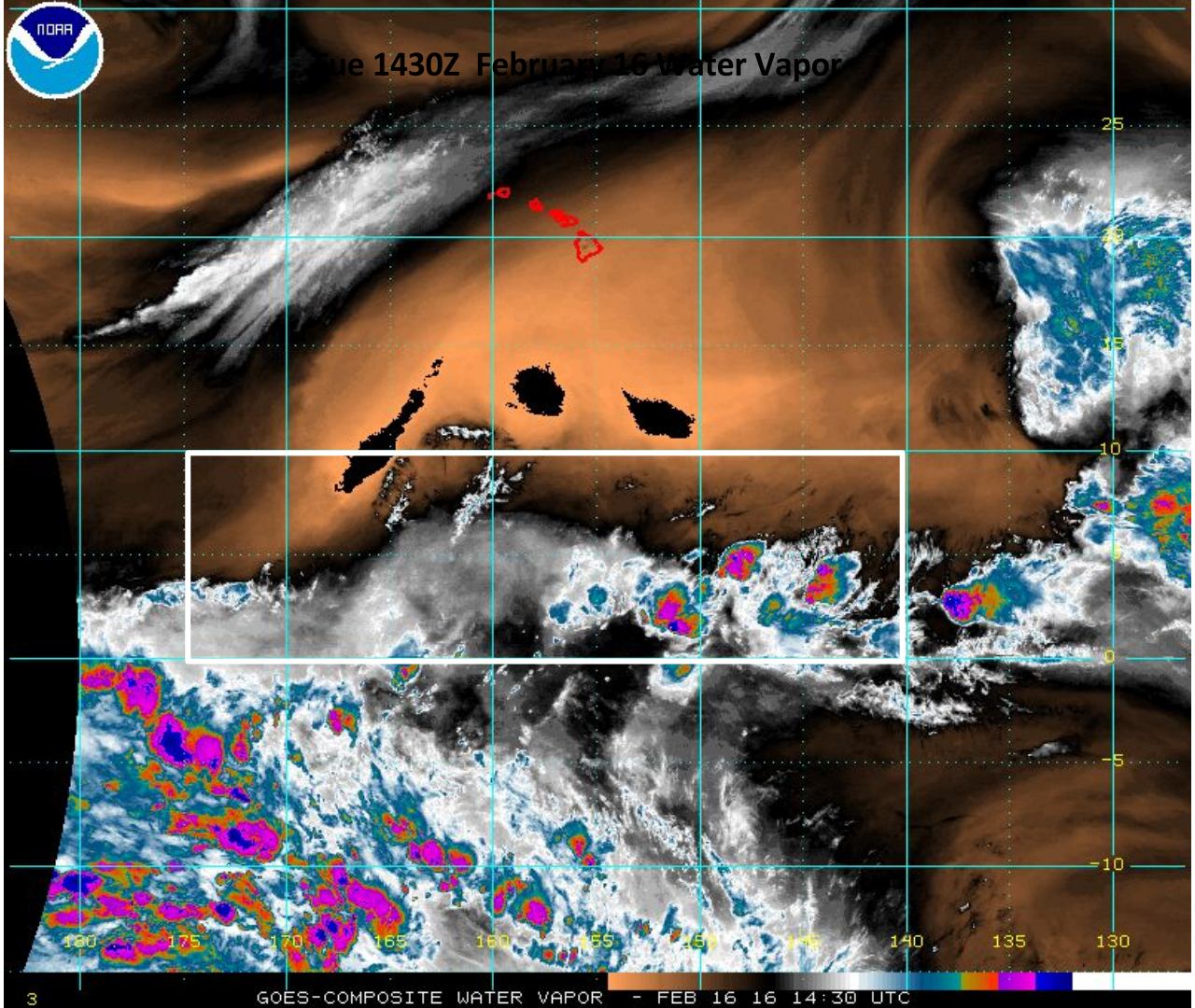

170E
180W
170W
160W
150W
100-250 mb
251-350 mb
351-500 mb
10S
20S
30S
40S
TUE Feb 16 12Z
GOES-WEST/HIMAWARI MID-UPPER LEVEL WINDS 1200 UTC 16FEB16 UW-CIMSS/NESDIS

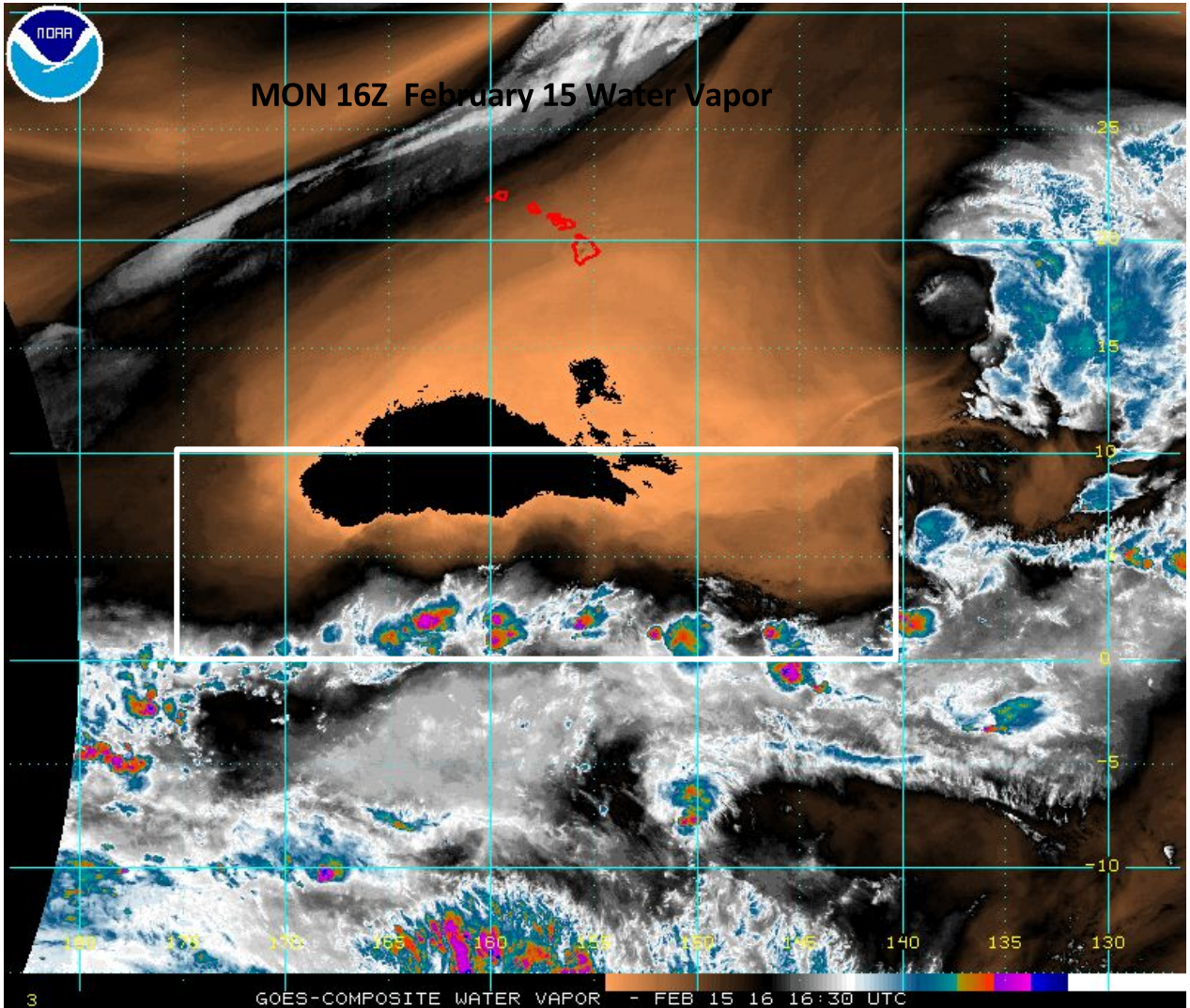

TUE Feb 16
100-250 mb
251-350 mb
351-500 mb
50N
40N
30N
20N
10N
170W
160W
150W
140W
130W
120W
110W
GOES-WEST MID-UPPER LEVEL WINDS 1200 UTC 16FEB16 UW-CIMSS/NESDIS


Mon Feb 15 15Z
100-250 mb
251-350 mb
351-500 mb
50N
40N
30N
20N
10N
170W
160W
150W
140W
130W
120W
110W

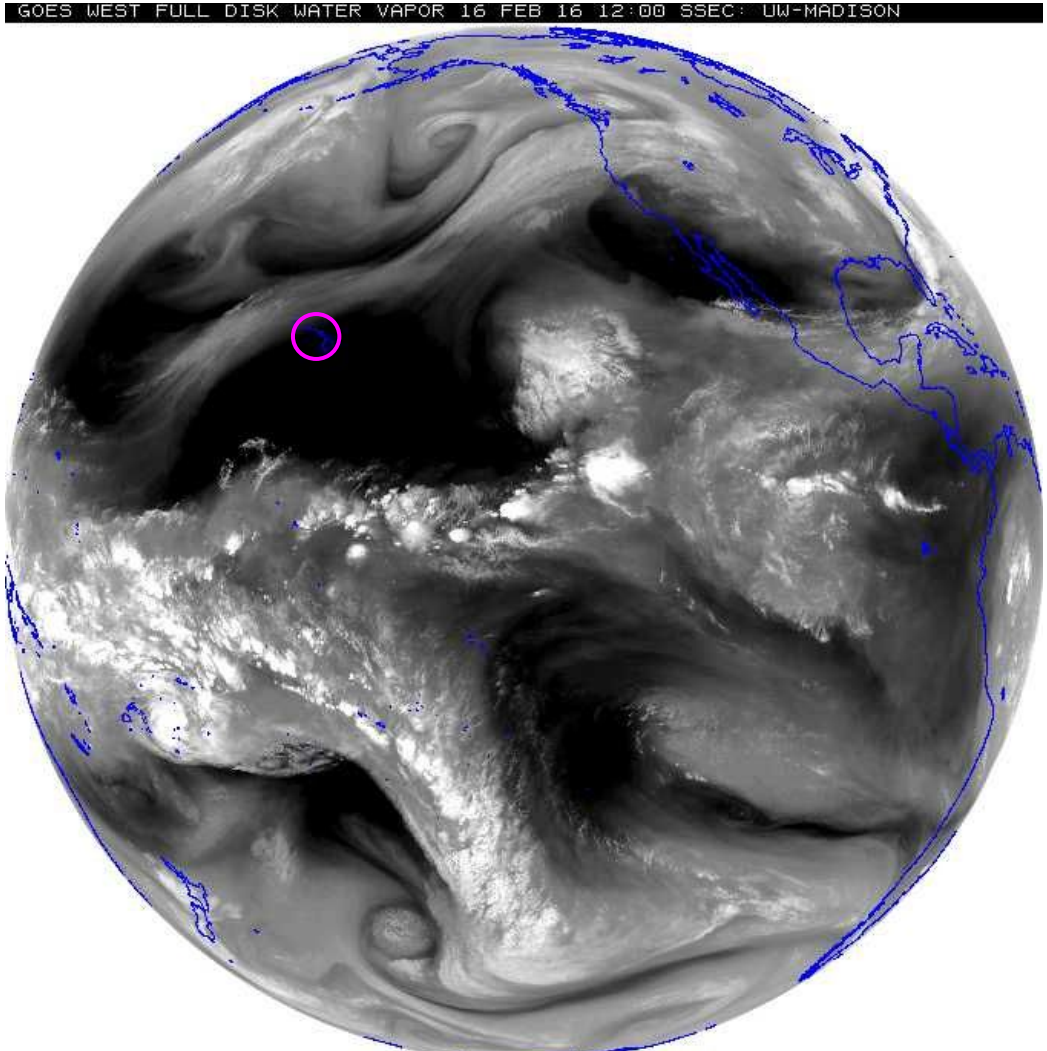
Sun Feb 14
12Z



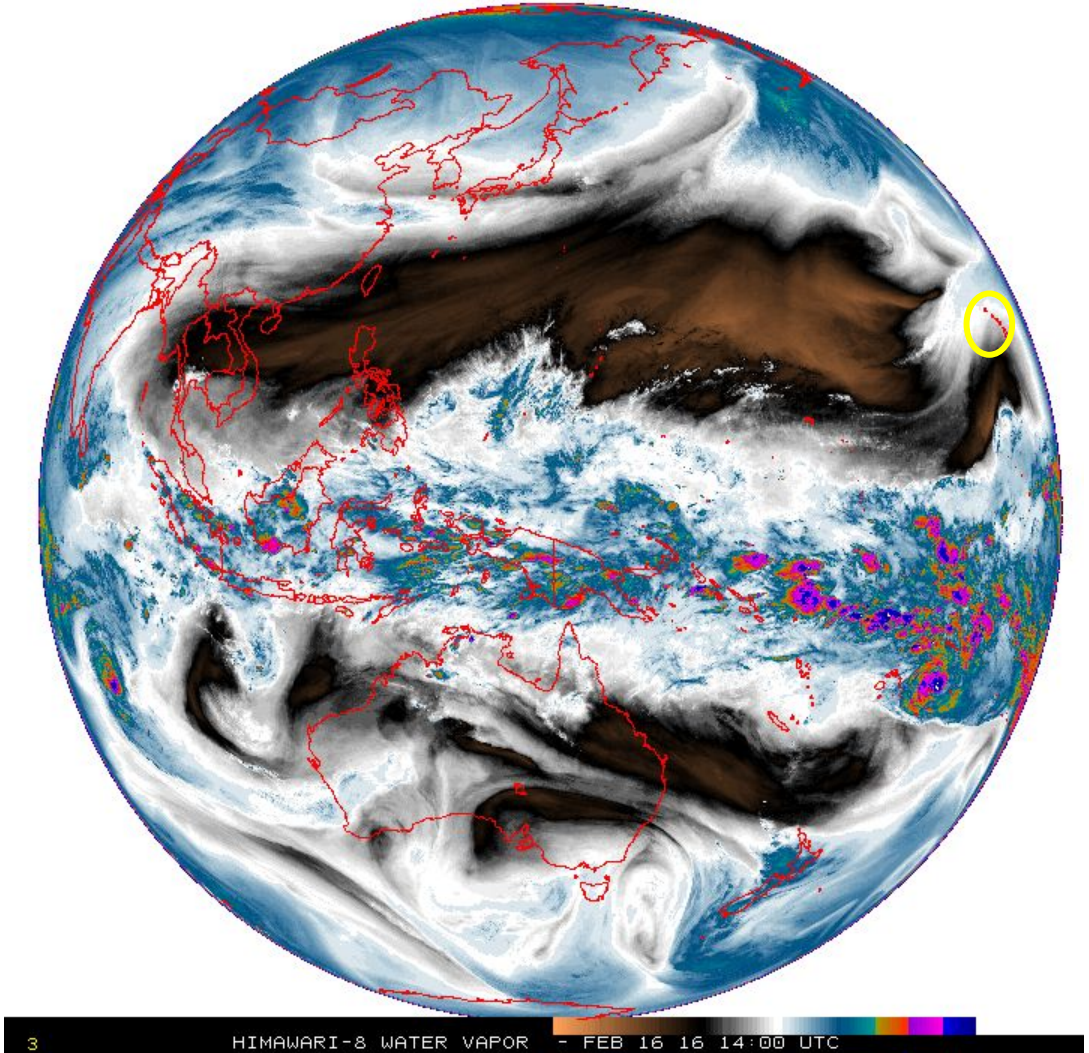

NOAA
ue 1430Z February 16 Water Vapor
25
20
15
10
5
0
-5
-10
180
175
170
165
160
155
150
145
140
135
130
3
GOES-COMPOSITE WATER VAPOR - FEB 16 16 14:30 UTC


MON 16Z February 15 Water Vapor
25
20
15
10
5
0
-5
-10
160
140
135
130
GOES-COMPOSITE WATER VAPOR - FEB 15 16 16:30 UTC

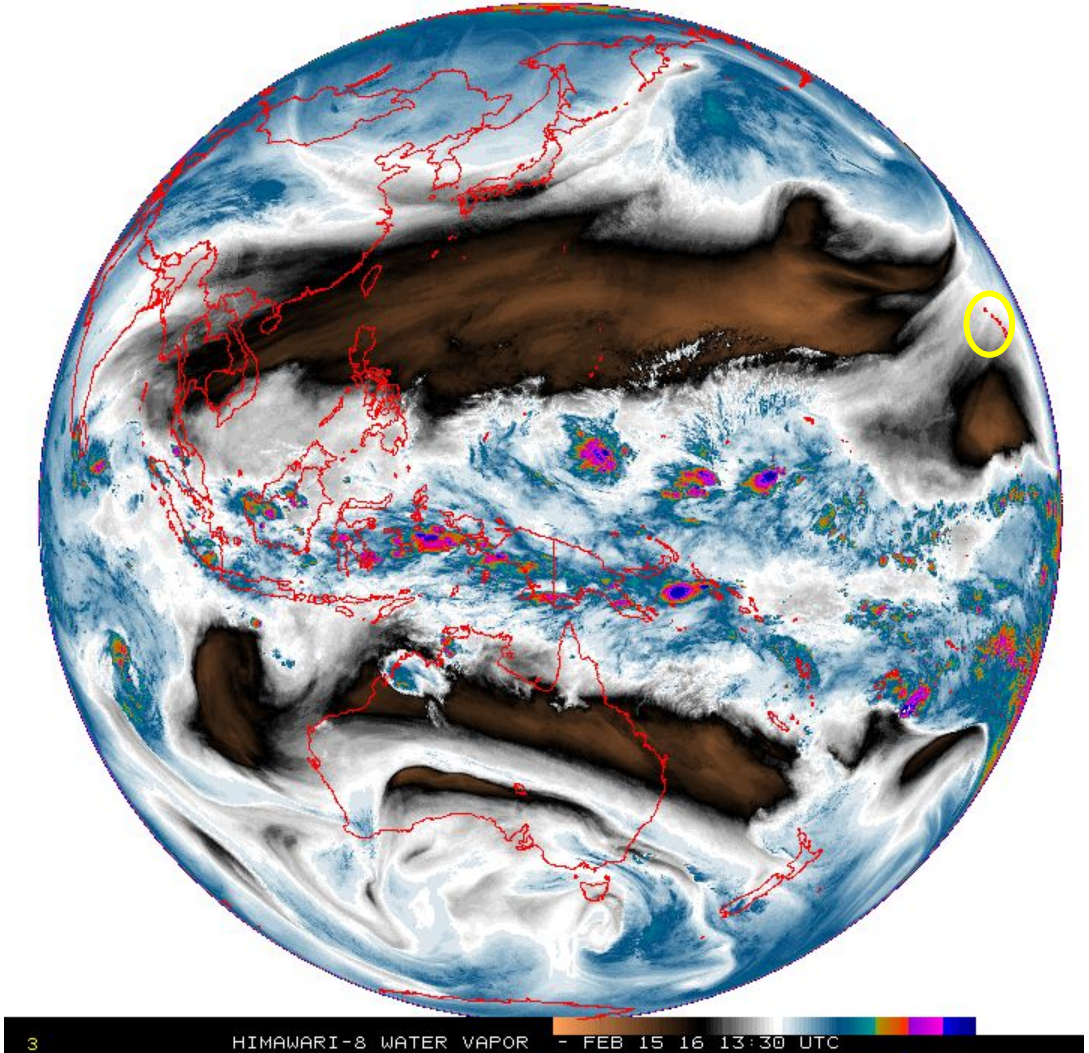
Water Vapor
12Z TUE



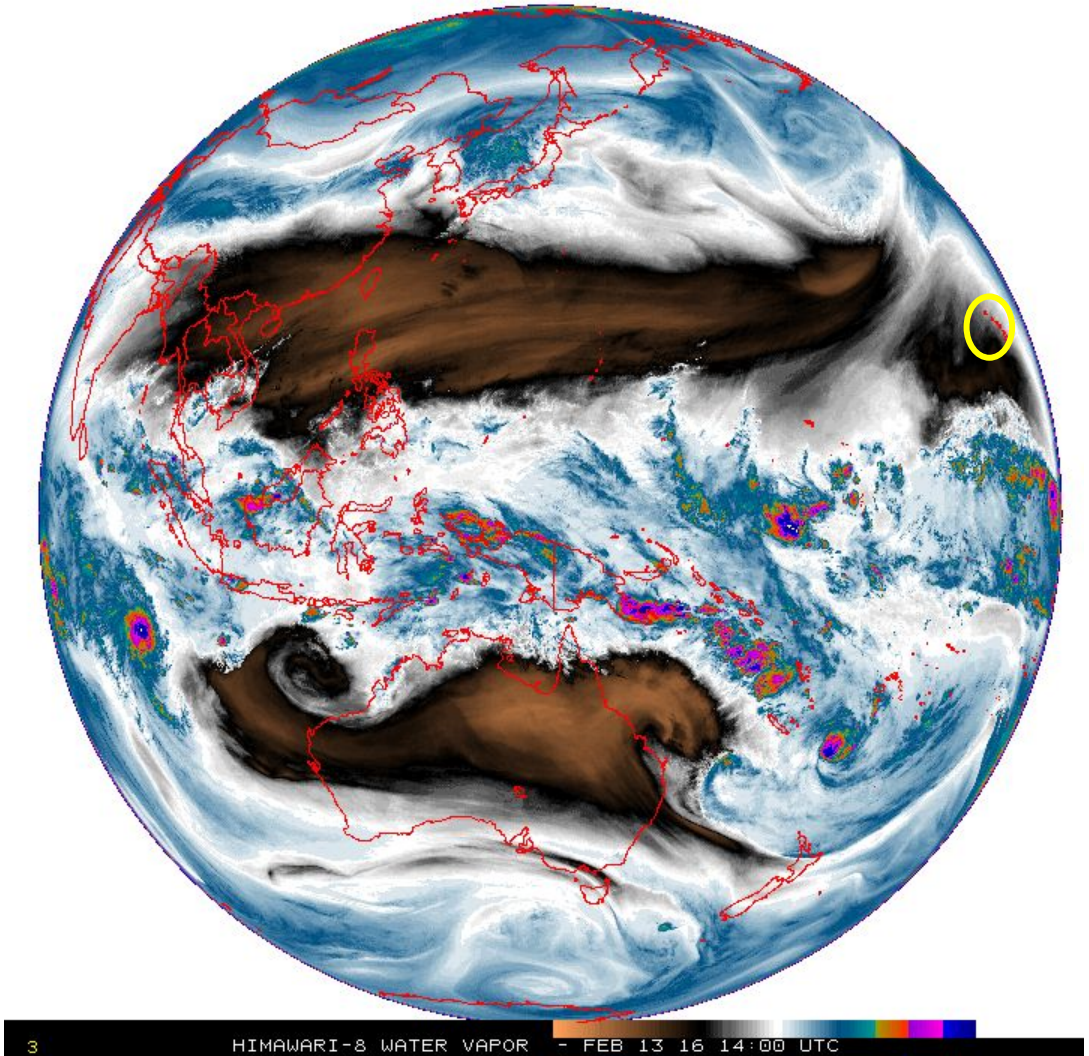
Water Vapor
14Z Tues



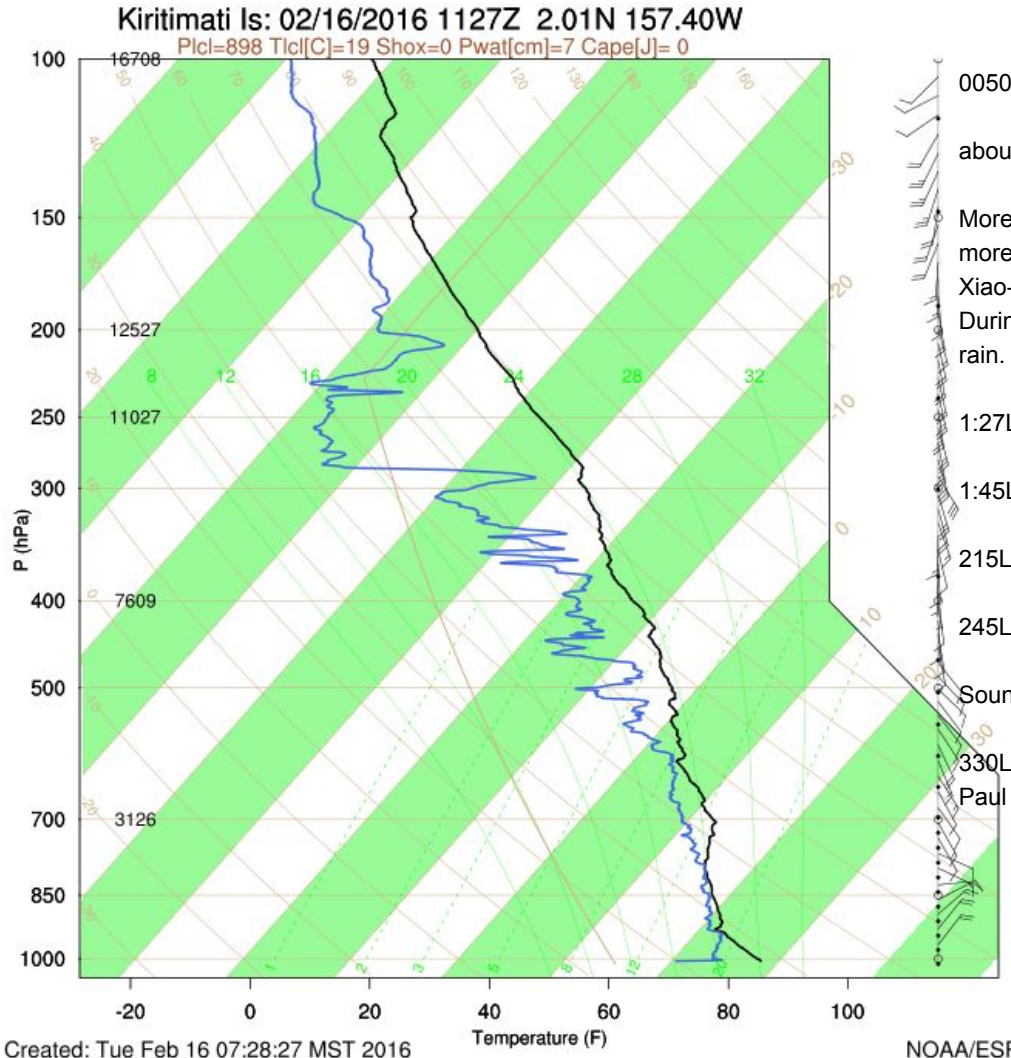
MON 1330Z



Sat 14Z



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.

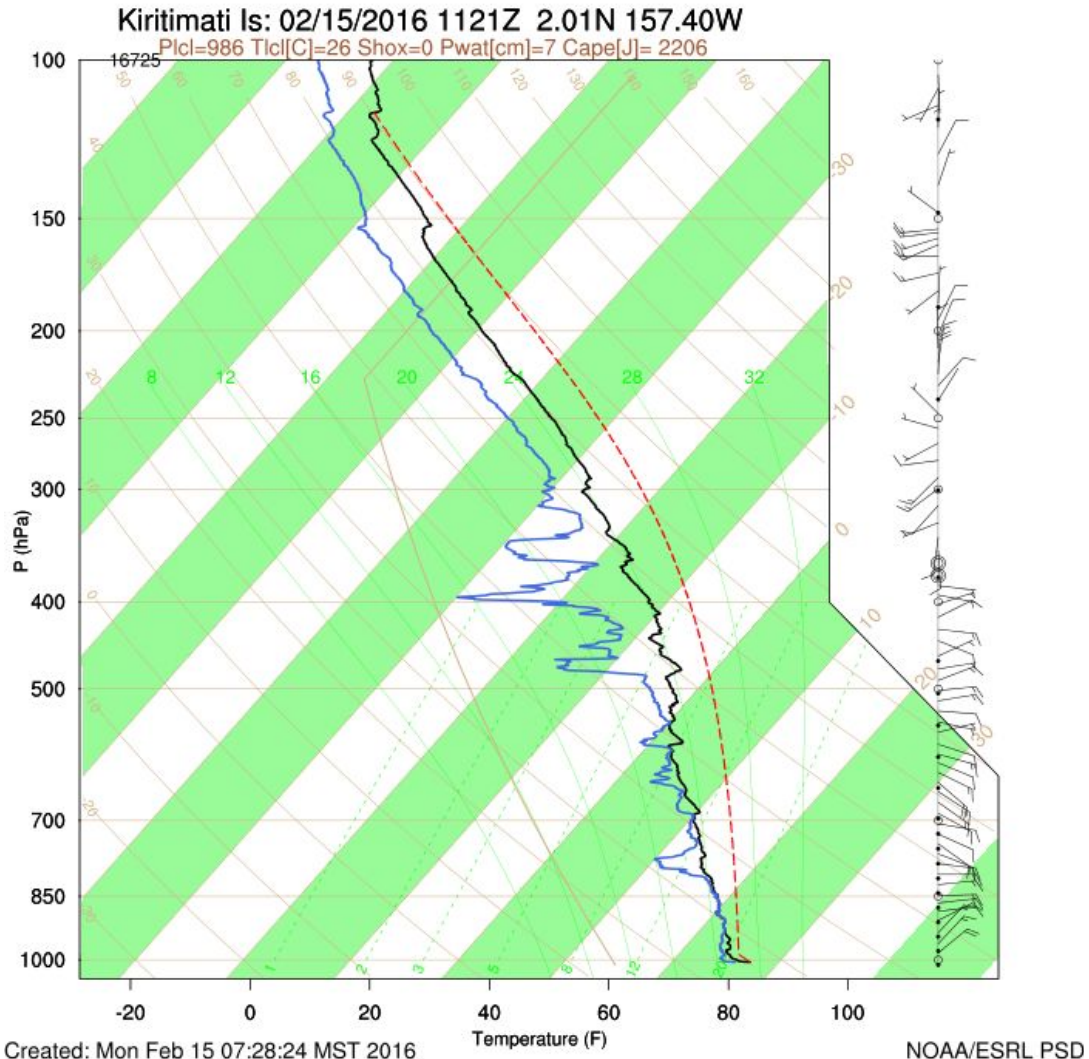
215LT: No stars, still dry and breezy.

245LT: No stars, still strong onshore wind.

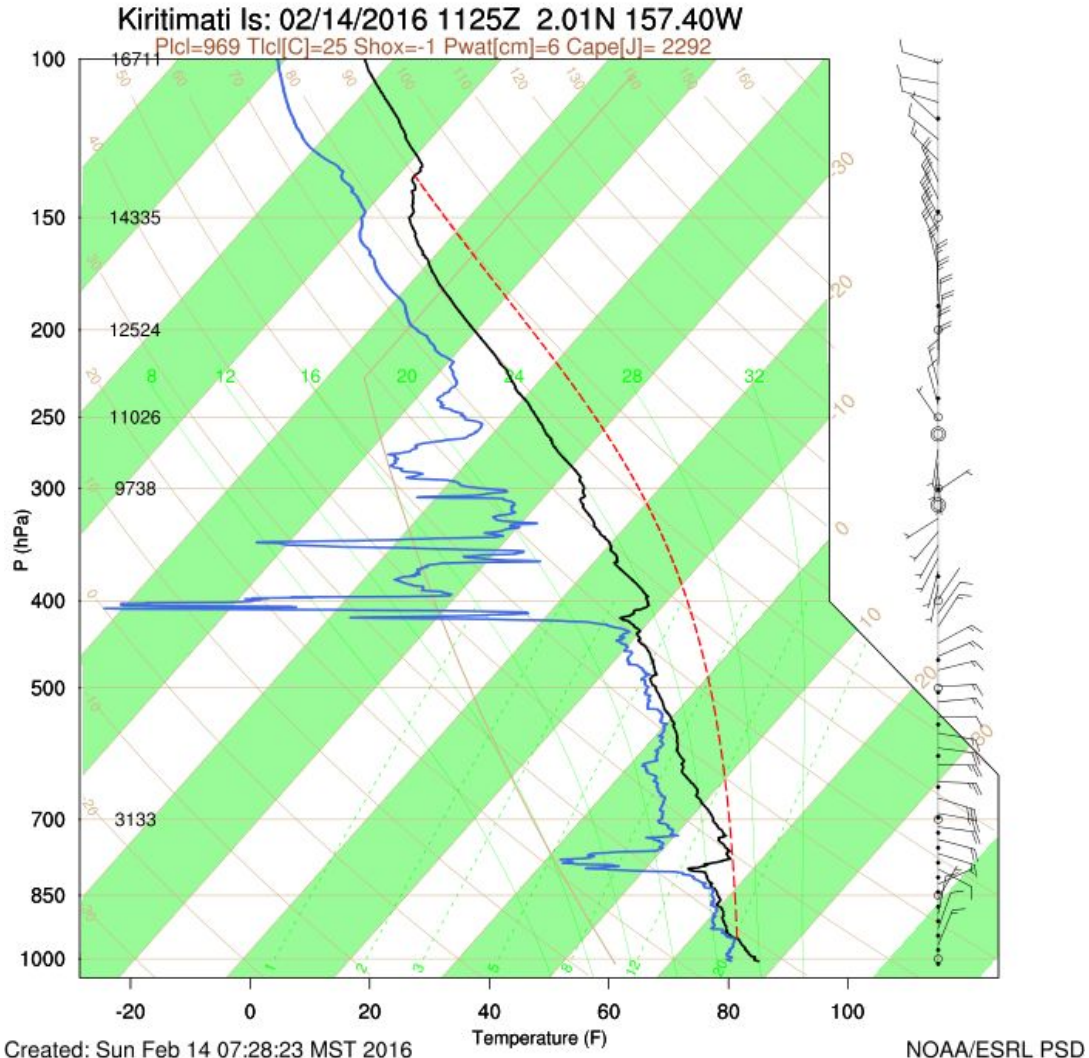
Sounding took at totally different trajectory tonight.

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

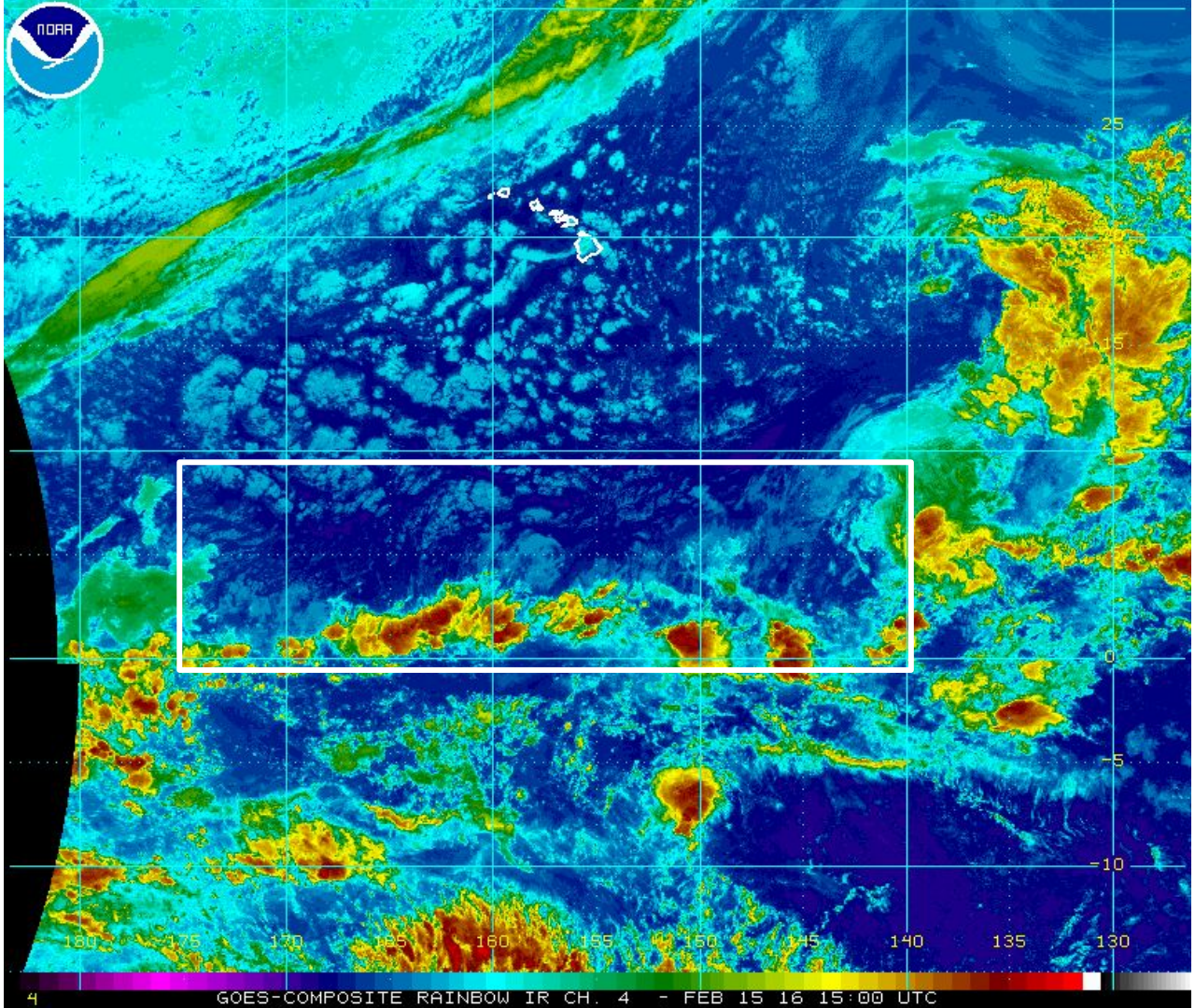
Kiritimati Sonde
1121Z MON



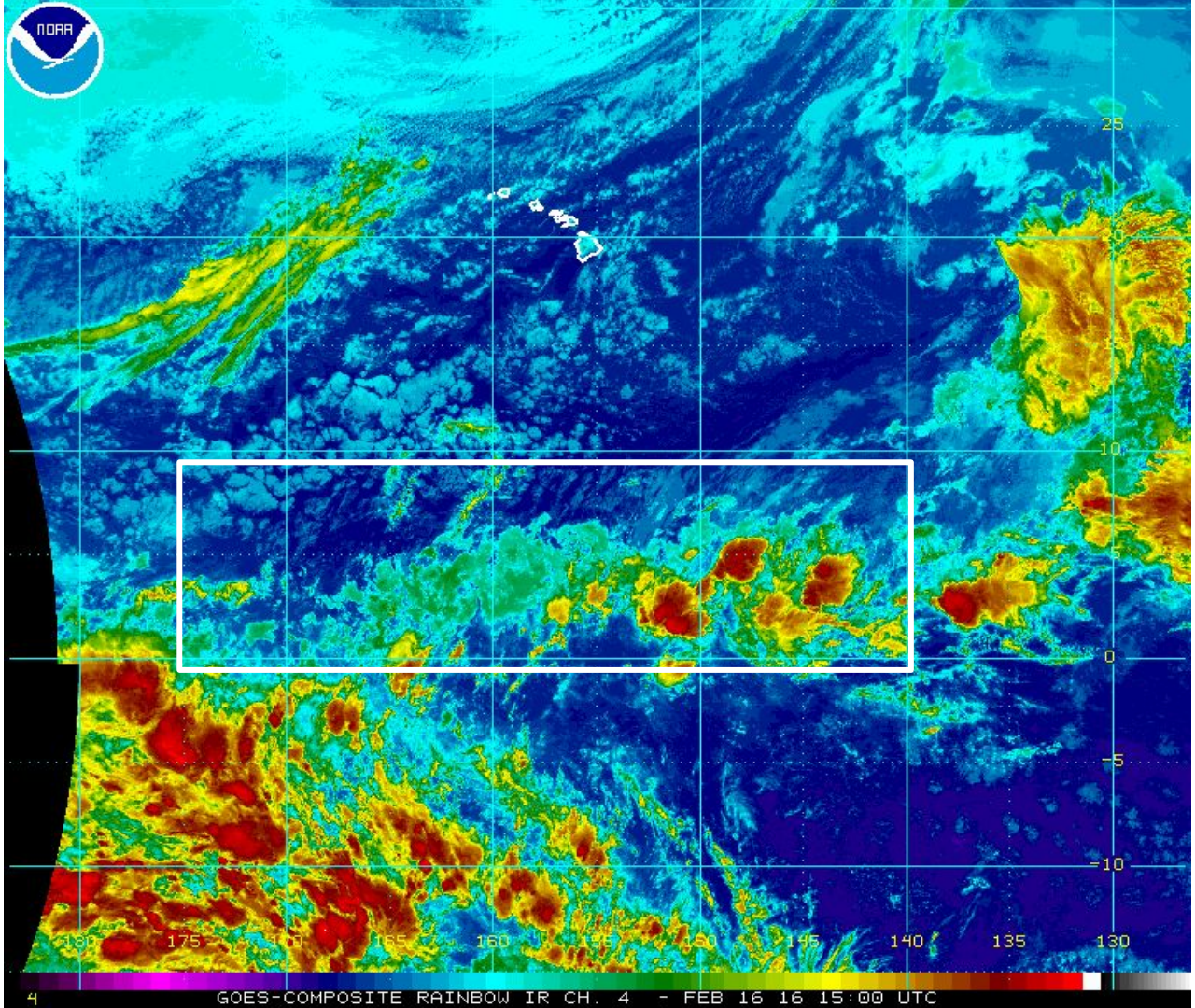
Kiritimati Sonde
12Z SUN

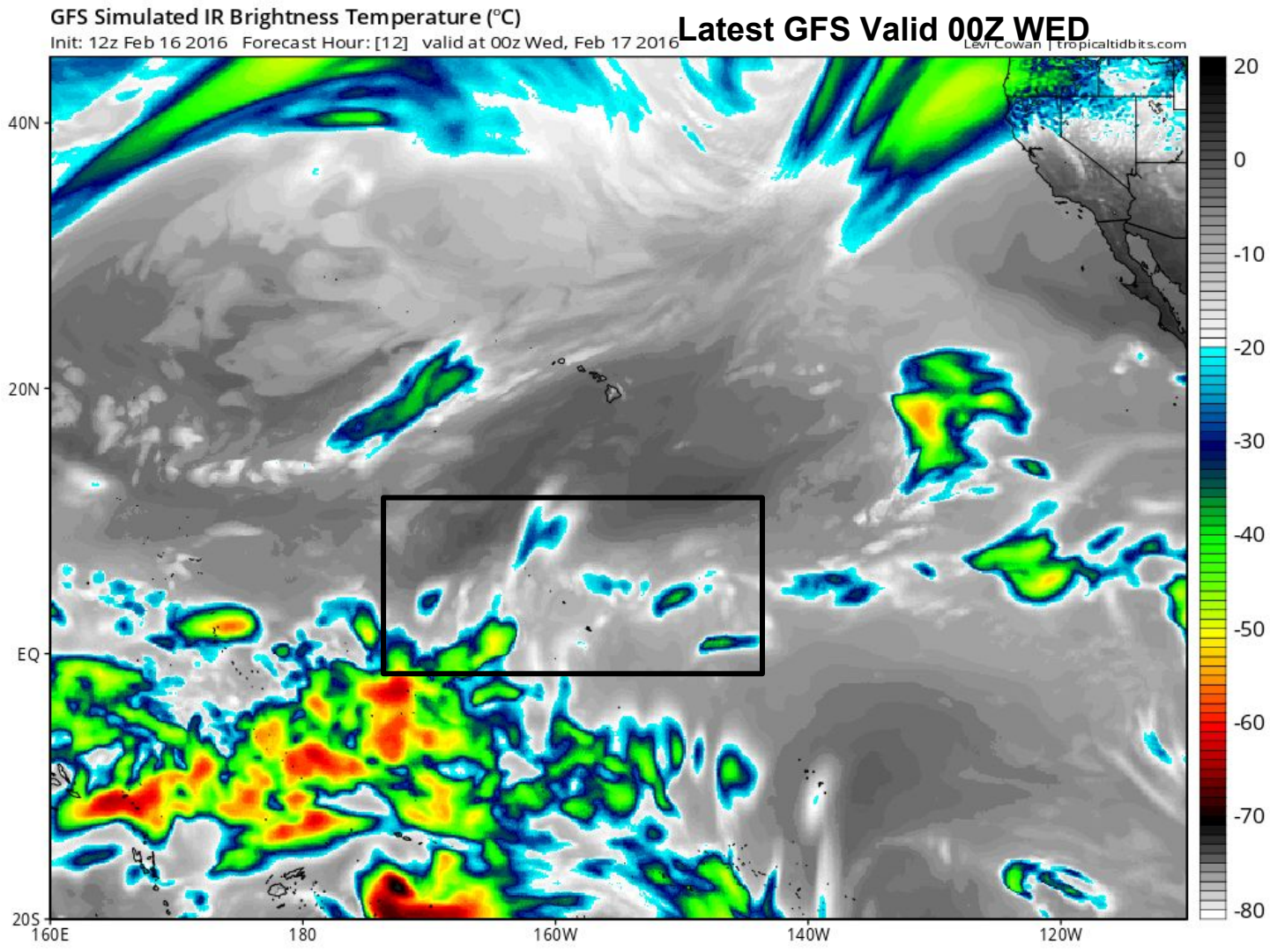


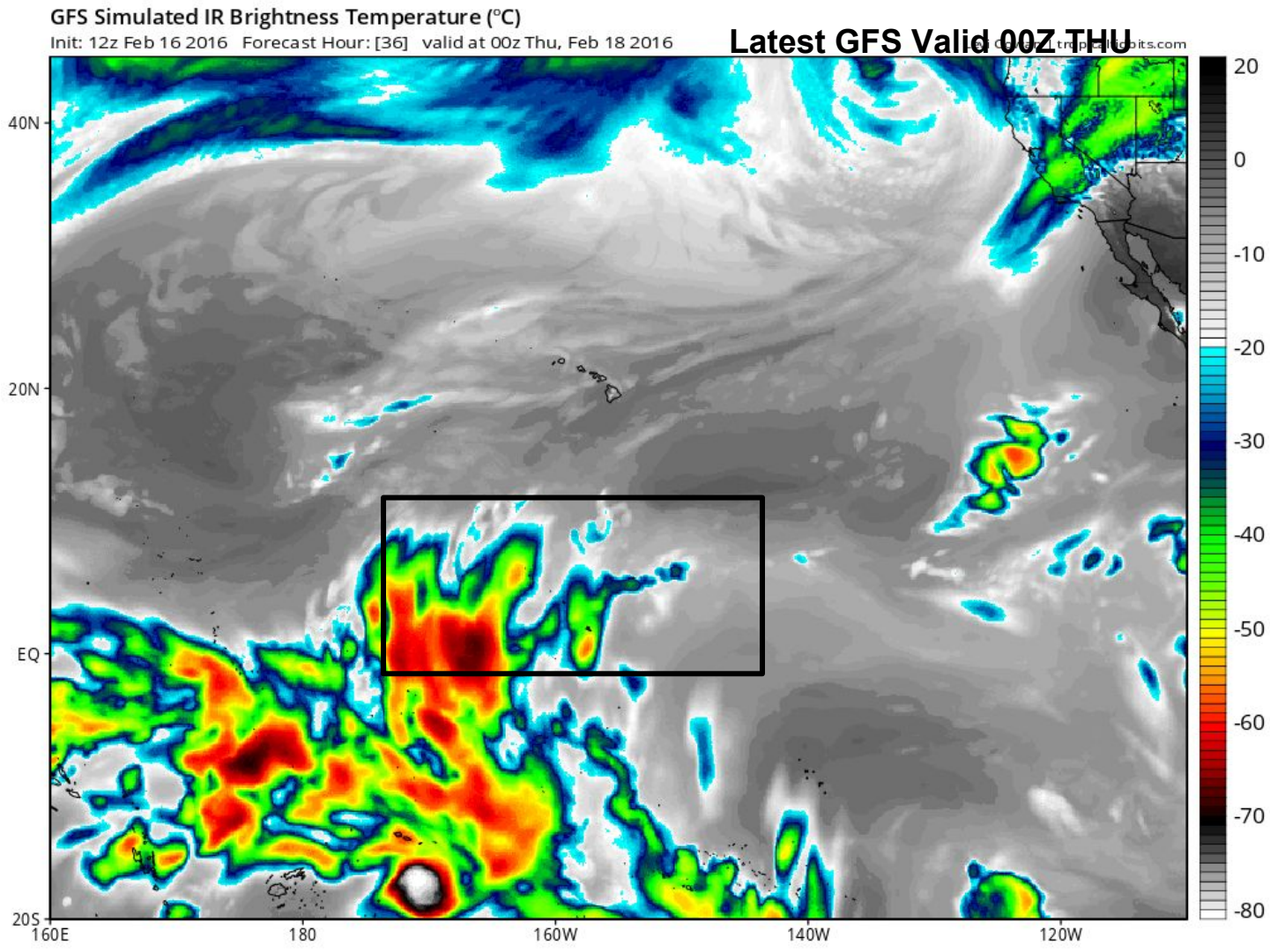
15Z MON

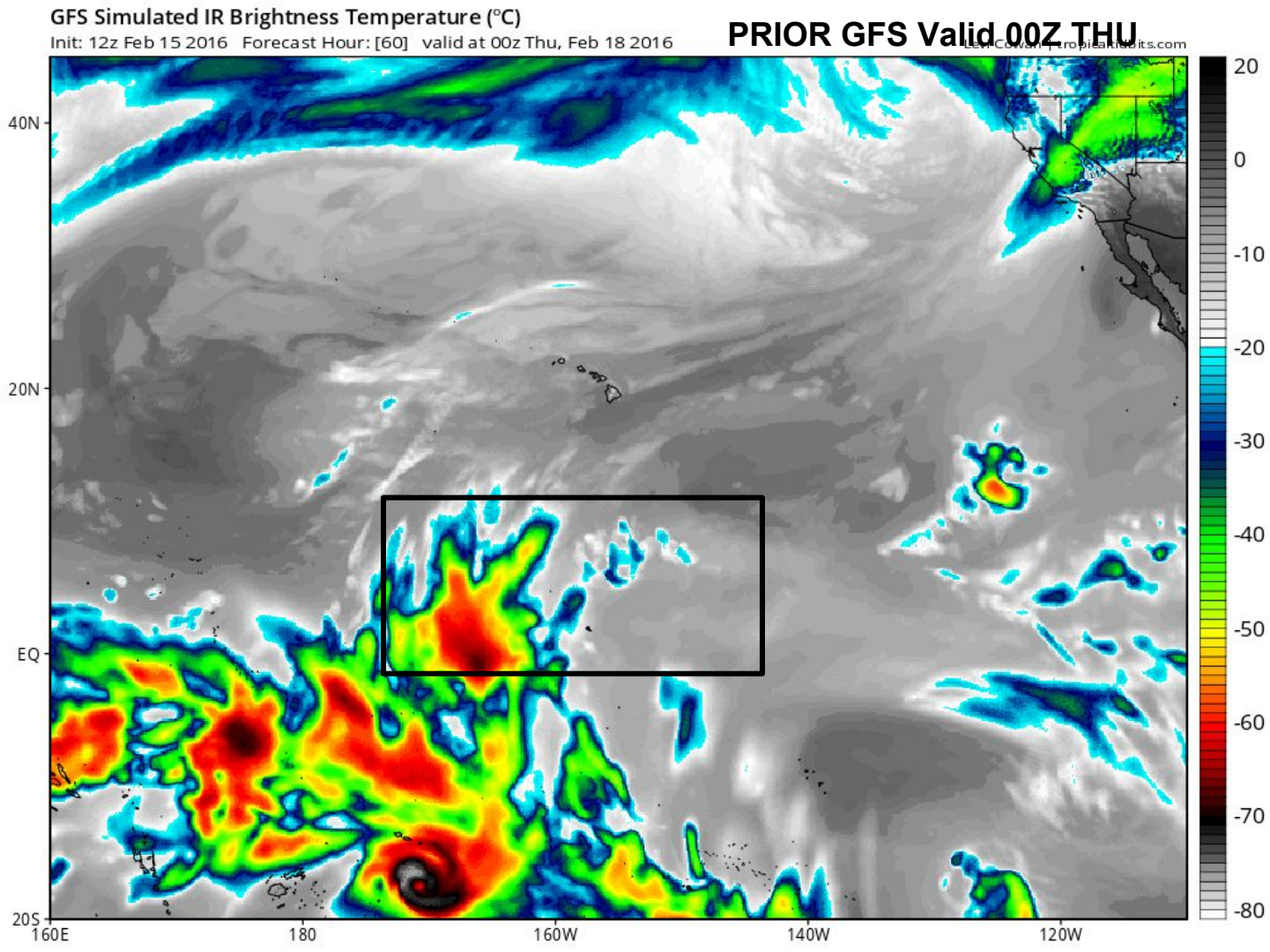

NOAA
25
15
5
0
-5
-10
180
175
170
165
160
155
150
145
140
135
130
4
GOES-COMPOSITE RAINBOW IR CH. 4 - FEB 15 16 15:00 UTC

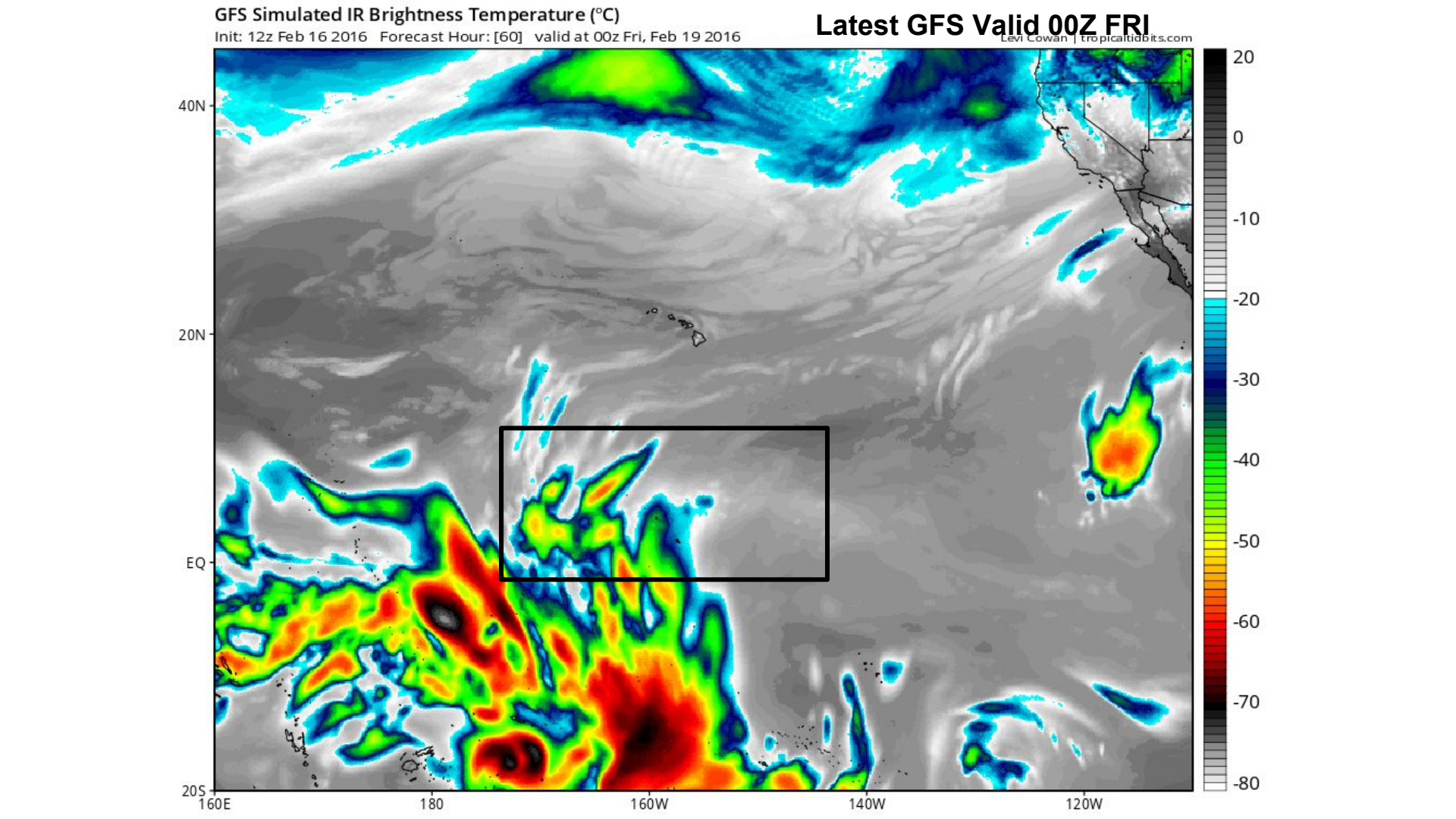
15Z TUE

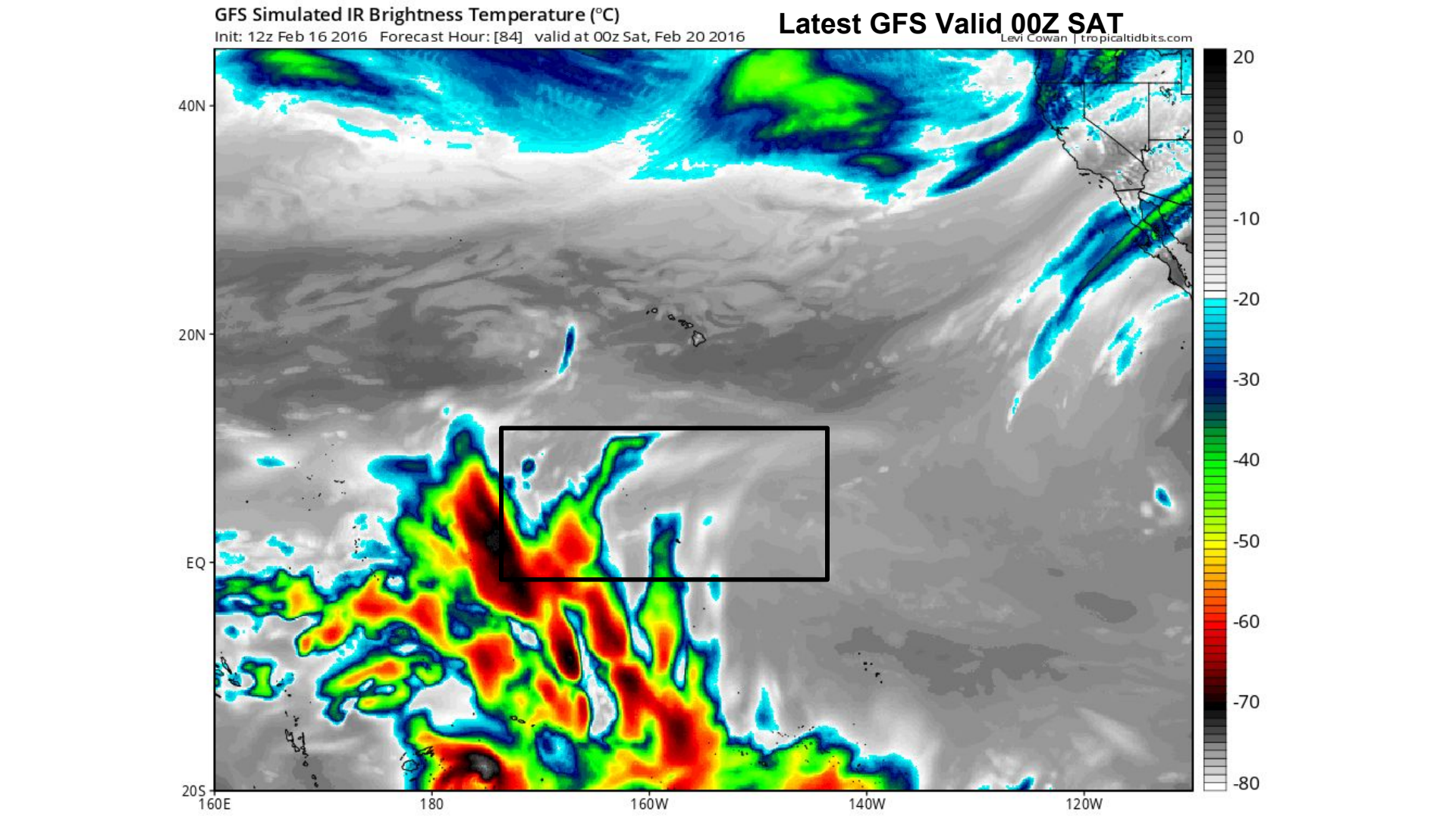

NOAA
25
10
0
-5
-10
180
175
165
160
145
140
135
130
4
GOES-COMPOSITE RAINBOW IR CH. 4 - FEB 16 16 15:00 UTC

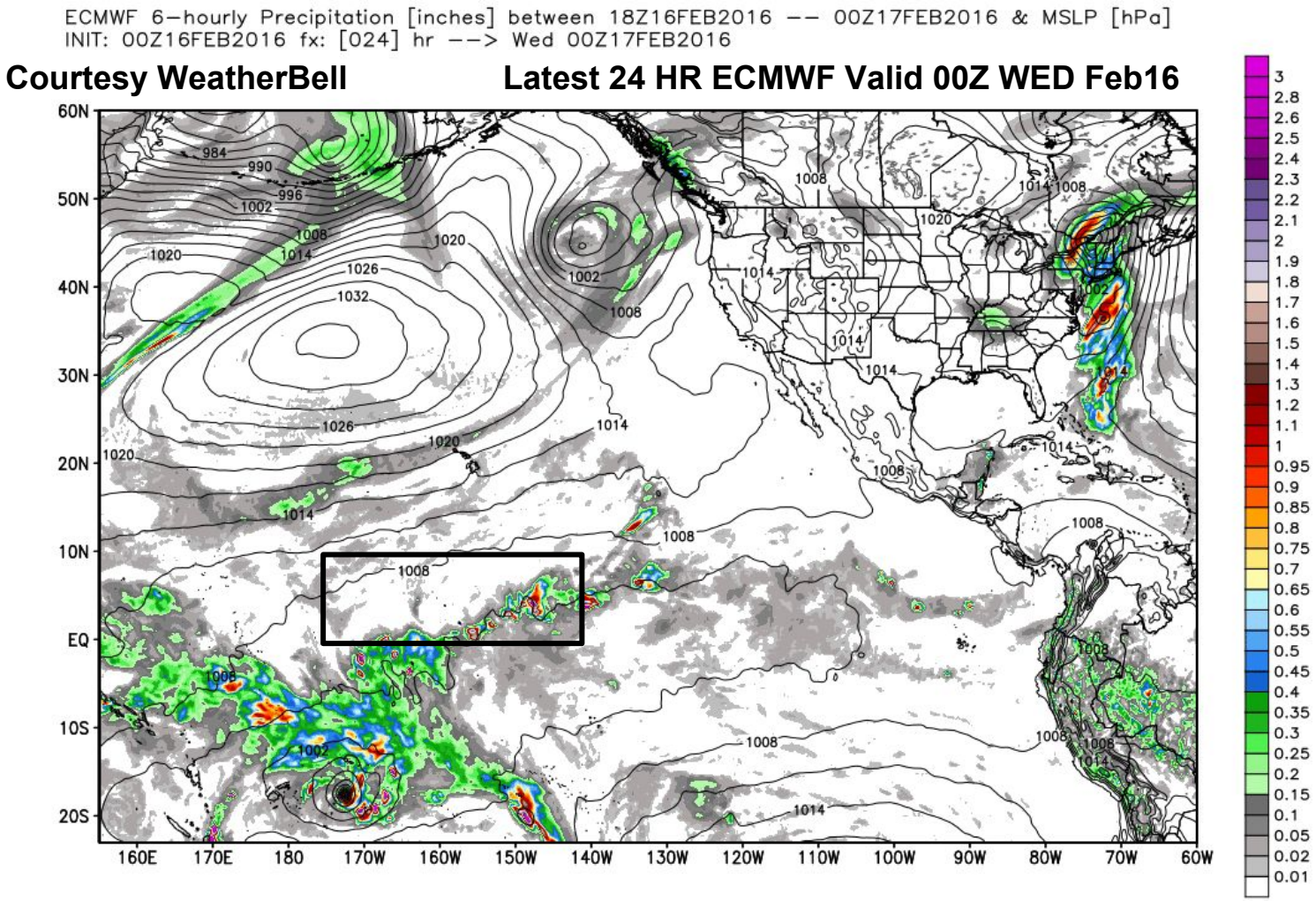

GFS Simulated IR Brightness Temperature (°C)
Init: 12z Feb 16 2016 Forecast Hour: [12] valid at 00z Wed, Feb 17 2016
Latest GFS Valid 00Z WED
Levi Cowan | tropicaltidbits.com
40N
20N
EQ
20S
160E
180
160W
140W
120W
20
0
-10
-20
-30
-40
-50
-60
-70
-80

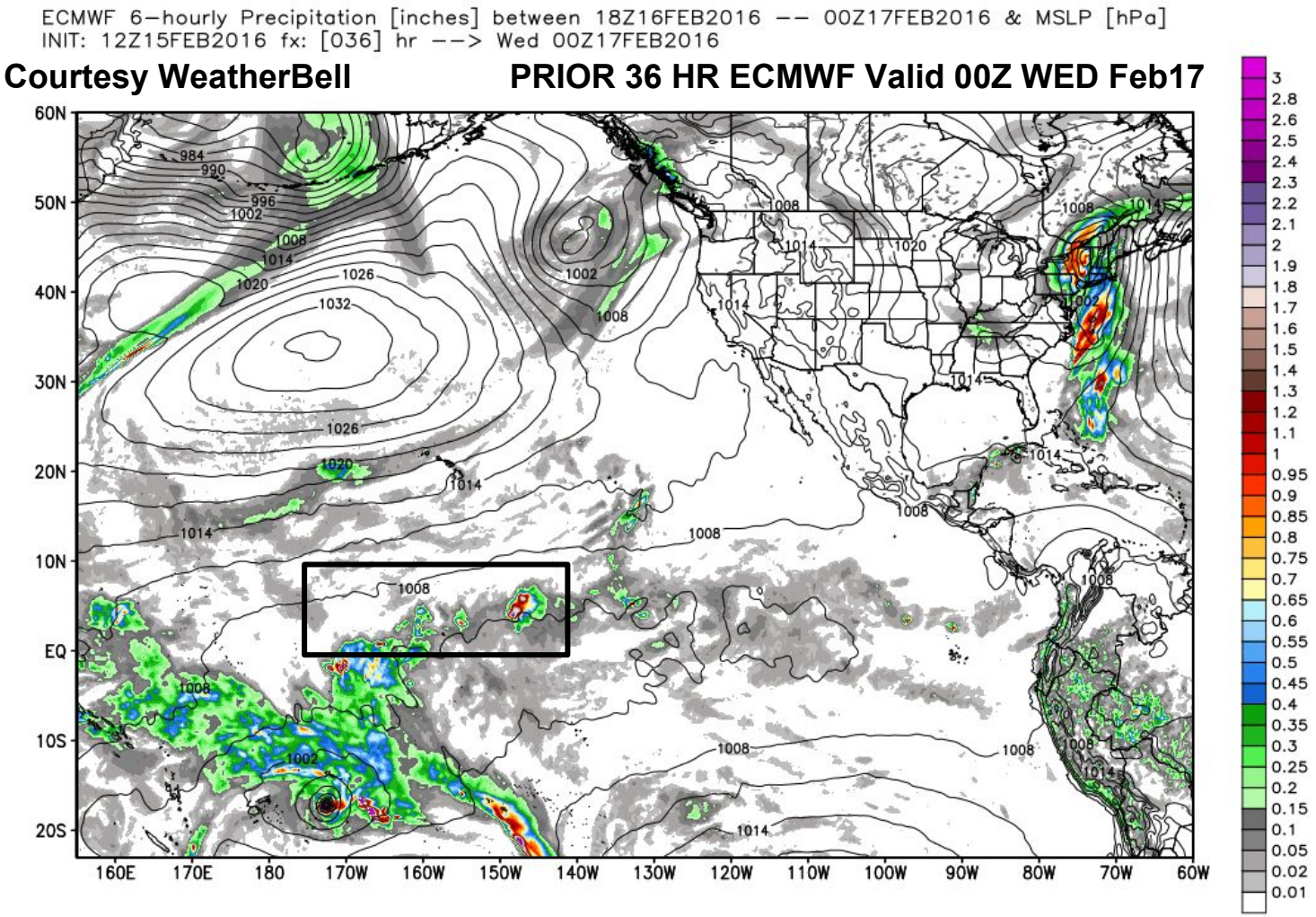

GFS Simulated IR Brightness Temperature (°C)
Init: 12z Feb 16 2016 Forecast Hour: [36] valid at 00z Thu, Feb 18 2016
Latest GFS Valid 00Z THU
40N
20N
EQ
20S
160E
180
160W
140W
120W
20
0
-10
-20
-30
-40
-50
-60
-70
-80

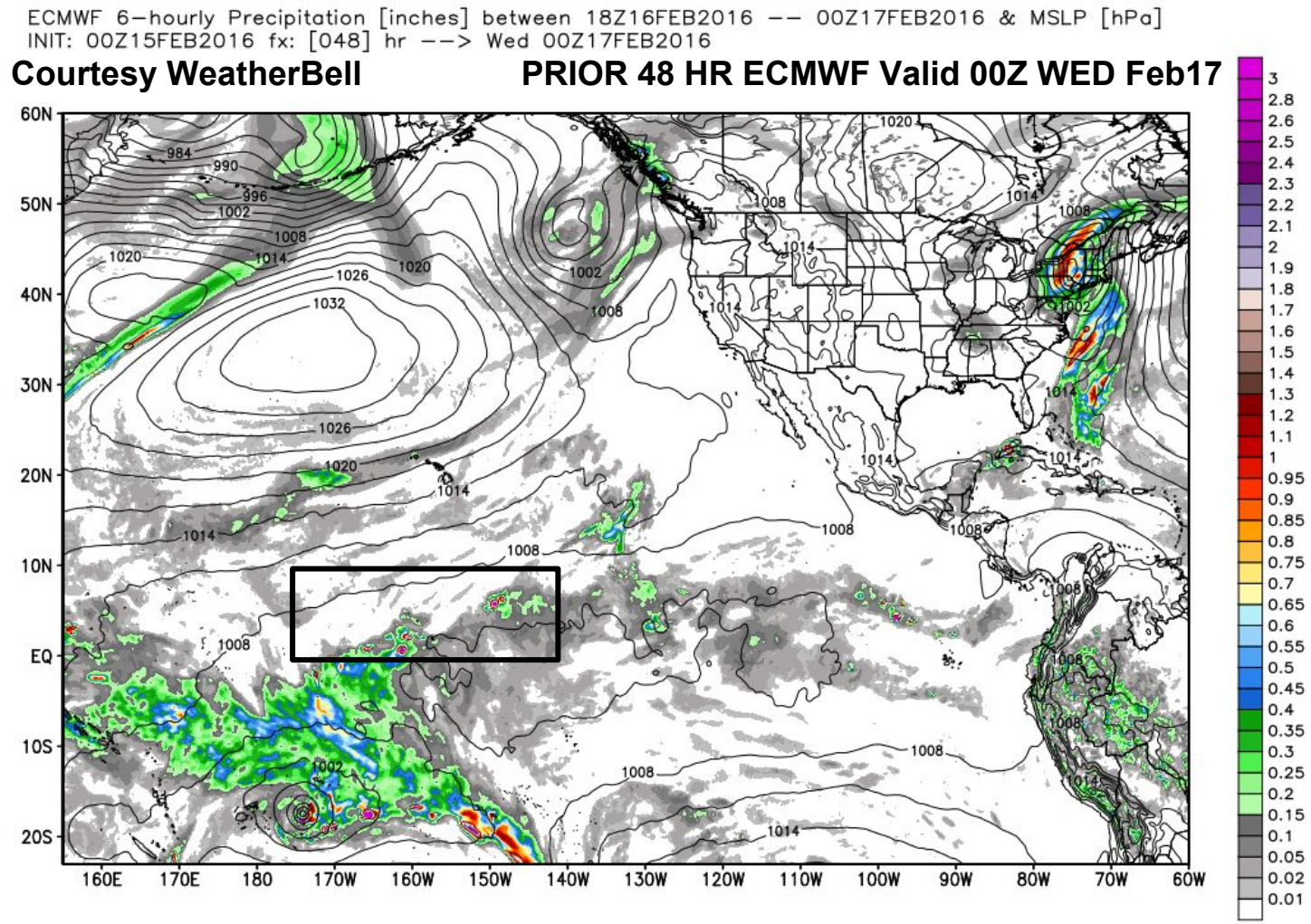

GFS Simulated IR Brightness Temperature (°C)
Init: 12z Feb 15 2016 Forecast Hour: [60] valid at 00z Thu, Feb 18 2016
PRIOR GFS Valid 00Z THU
40N
20N
EQ
20S
160E
180
160W
140W
120W
20
0
-10
-20
-30
-40
-50
-60
-70
-80

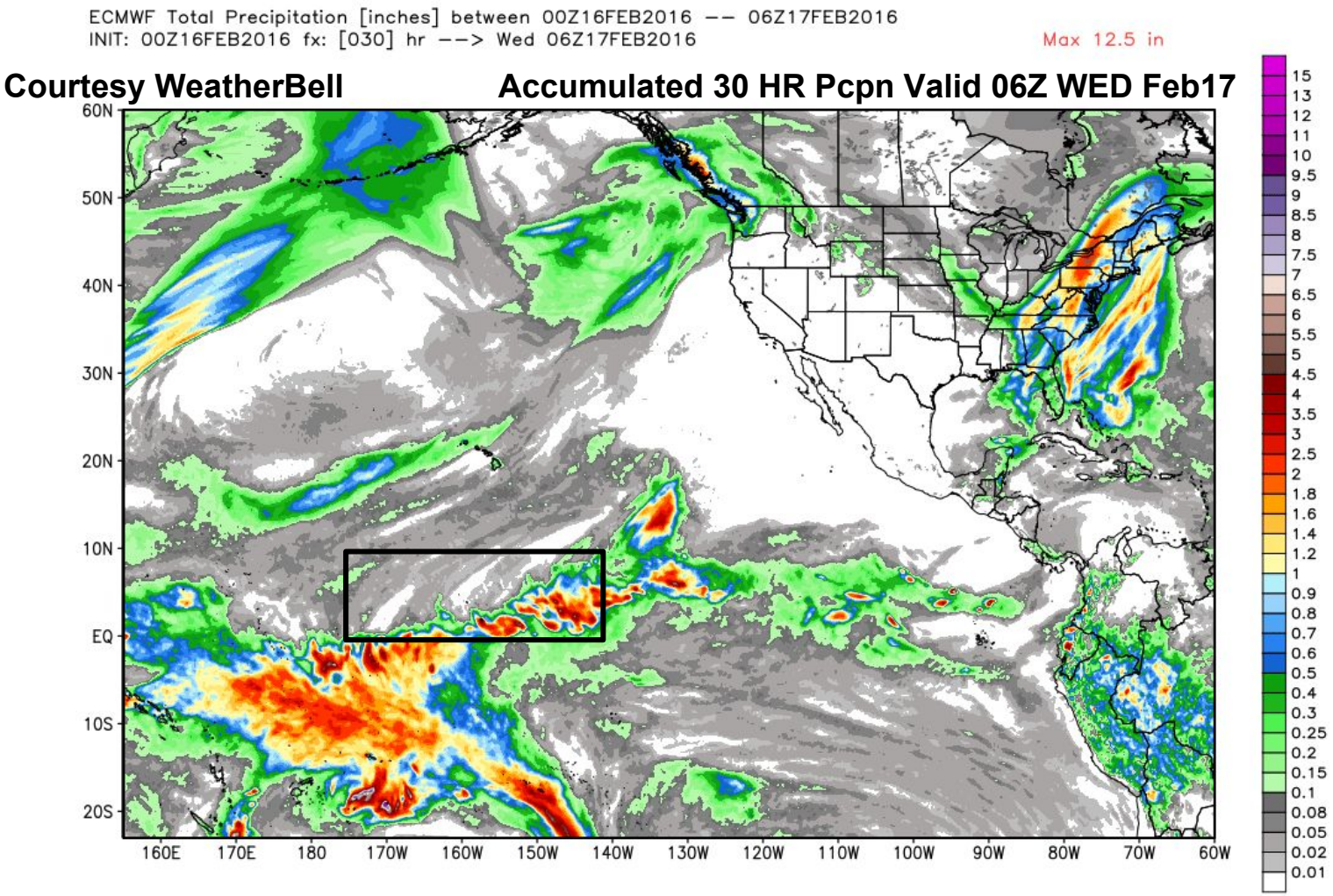

GFS Simulated IR Brightness Temperature (°C)
Init: 12z Feb 16 2016 Forecast Hour: [60] valid at 00z Fri, Feb 19 2016
Latest GFS Valid 00Z FRI
Levi Cowan | tropicaltidbits.com
40N
20N
EQ
20S
160E
180
160W
140W
120W
20
0
-10
-20
-30
-40
-50
-60
-70
-80


GFS Simulated IR Brightness Temperature (°C)
Init: 12z Feb 16 2016 Forecast Hour: [84] valid at 00z Sat, Feb 20 2016
Latest GFS Valid 00Z SAT
Levi Cowan | tropicaltidbits.com
40N
20N
EQ
20S
160E
180
160W
140W
120W
20
0
-10
-20
-30
-40
-50
-60
-70
-80


ECMWF 6-hourly Precipitation [inches] between 18Z16FEB2016 -- 00Z17FEB2016 & MSLP [hPa]
INIT: 00Z16FEB2016 fx: [024] hr --> Wed 00Z17FEB2016
Courtesy WeatherBell
Latest 24 HR ECMWF Valid 00Z WED Feb16
60N
50N
40N
30N
20N
10N
EQ
10S
20S
160E
170E
180
170W
160W
150W
140W
130W
120W
110W
100W
90W
80W
70W
60W
3
2.8
2.6
2.5
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0.02
0.01

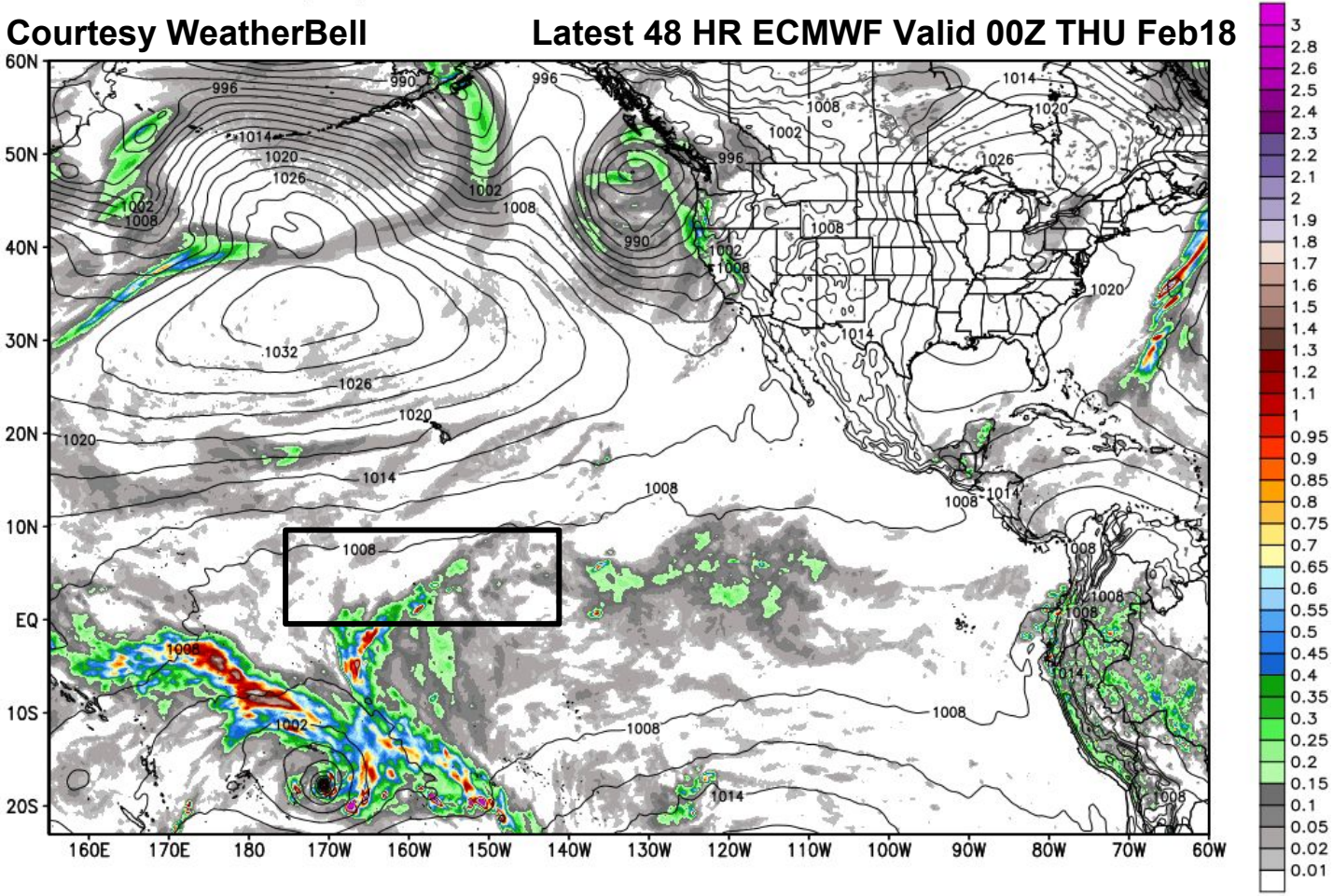

ECMWF 6-hourly Precipitation [inches] between 18Z16FEB2016 -- 00Z17FEB2016 & MSLP [hPa]
INIT: 12Z15FEB2016 fx: [036] hr --> Wed 00Z17FEB2016
Courtesy WeatherBell
PRIOR 36 HR ECMWF Valid 00Z WED Feb17
60N
50N
40N
30N
20N
10N
EQ
10S
20S
160E
170E
180
170W
160W
150W
140W
130W
120W
110W
100W
90W
80W
70W
60W
3
2.8
2.6
2.5
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0.02
0.01

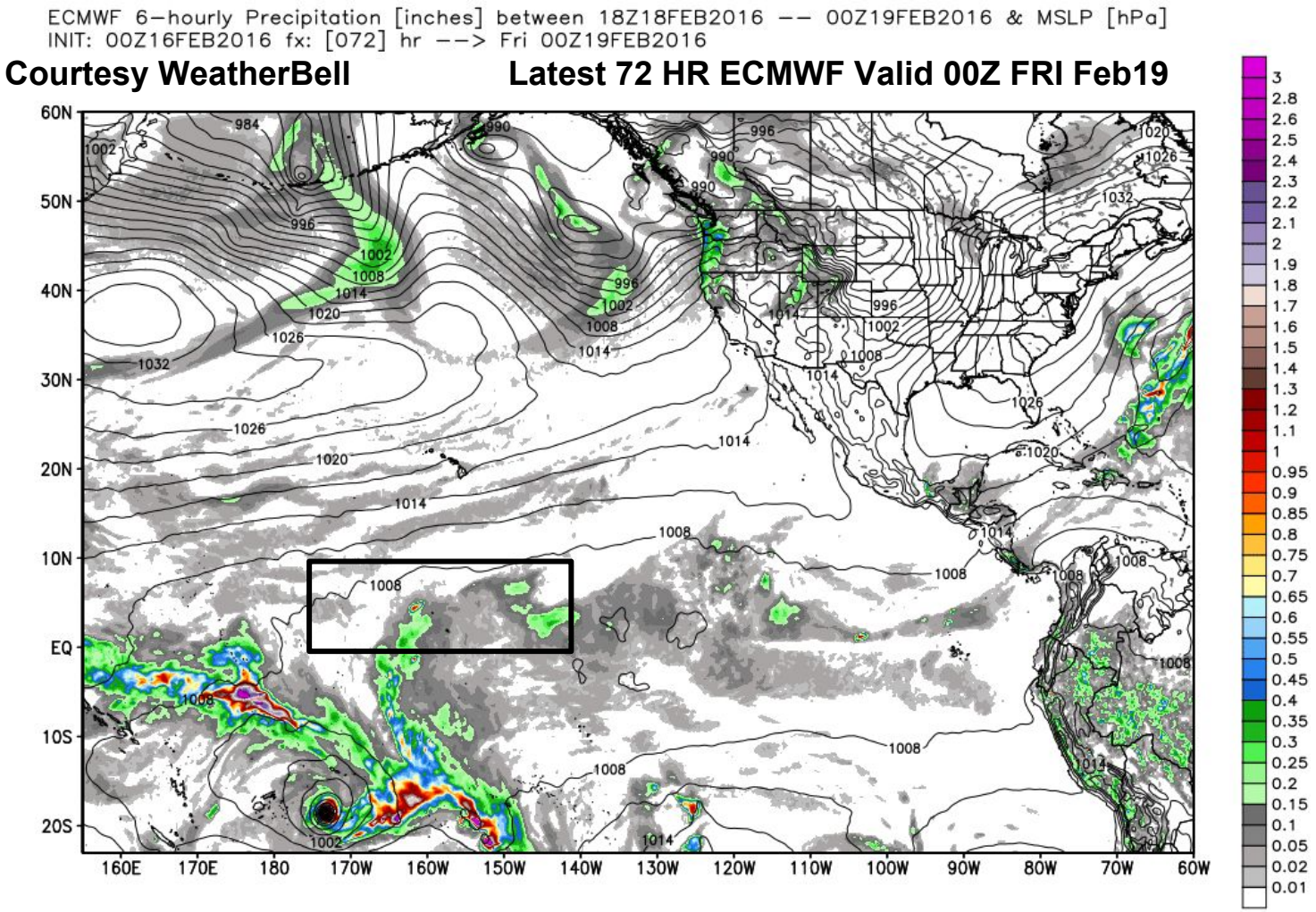

ECMWF 6-hourly Precipitation [inches] between 18Z16FEB2016 -- 00Z17FEB2016 & MSLP [hPa]
INIT: 00Z15FEB2016 fx: [048] hr --> Wed 00Z17FEB2016
Courtesy WeatherBell
PRIOR 48 HR ECMWF Valid 00Z WED Feb17
60N
50N
40N
30N
20N
10N
EQ
10S
20S
160E
170E
180
170W
160W
150W
140W
130W
120W
110W
100W
90W
80W
70W
60W
3
2.8
2.6
2.5
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0.02
0.01

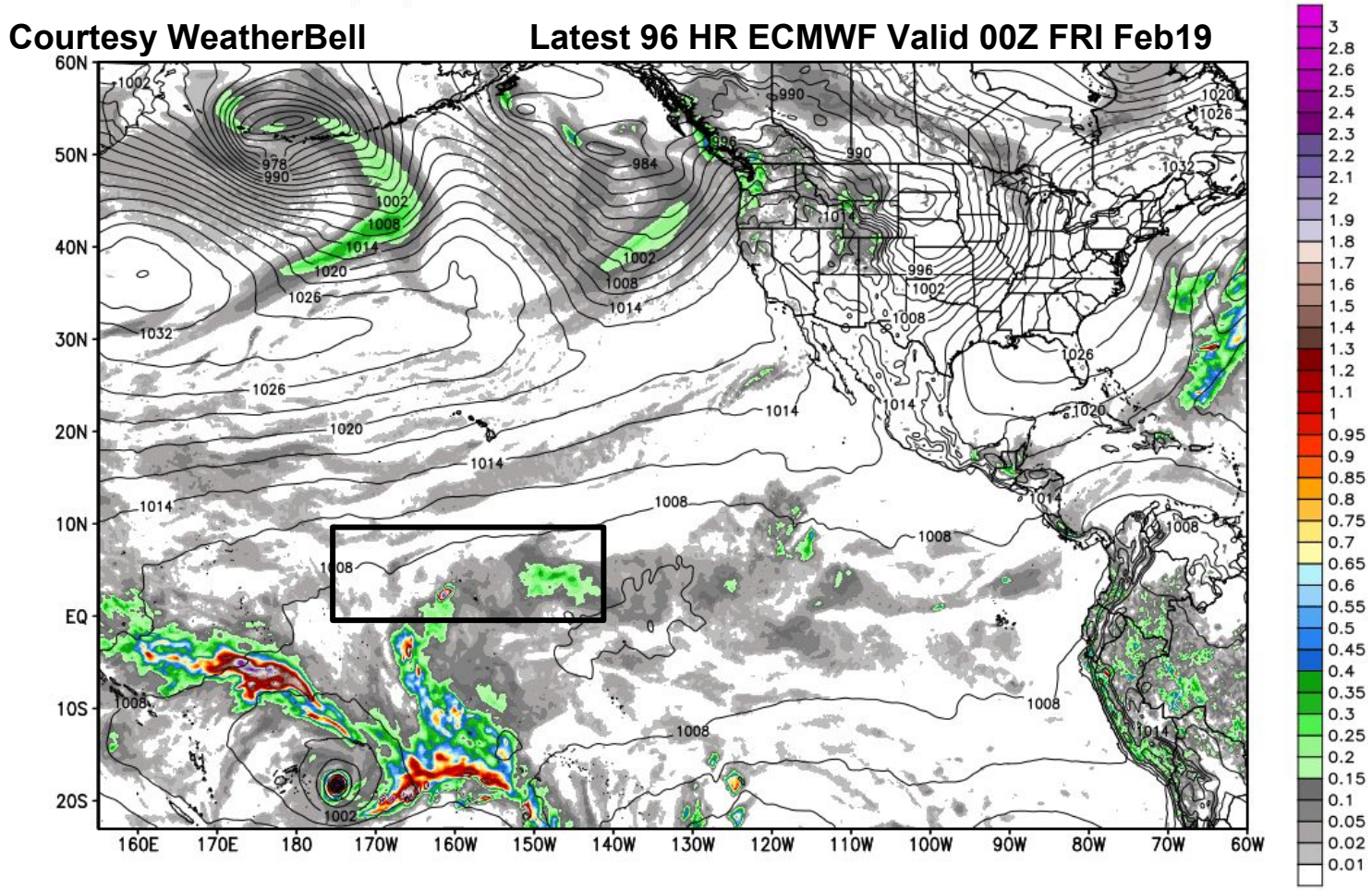

ECMWF Total Precipitation [inches] between 00Z16FEB2016 -- 06Z17FEB2016
INIT: 00Z16FEB2016 fx: [030] hr --> Wed 06Z17FEB2016
Max 12.5 in
Courtesy WeatherBell
Accumulated 30 HR Pcpn Valid 06Z WED Feb17
60N
50N
40N
30N
20N
10N
EQ
10S
20S
160E
170E
180
170W
160W
150W
140W
130W
120W
110W
100W
90W
80W
70W
60W
15
13
12
11
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.8
1.6
1.4
1.2
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.25
0.2
0.15
0.1
0.08
0.05
0.02
0.01

ECMWF 6-hourly Precipitation [inches] between 18Z17FEB2016 -- 00Z18FEB2016 & MSLP [hPa]
INIT: 00Z16FEB2016 fx: [048] hr --> Thu 00Z18FEB2016

Courtesy WeatherBell **Latest 48 HR ECMWF Valid 00Z THU Feb18**



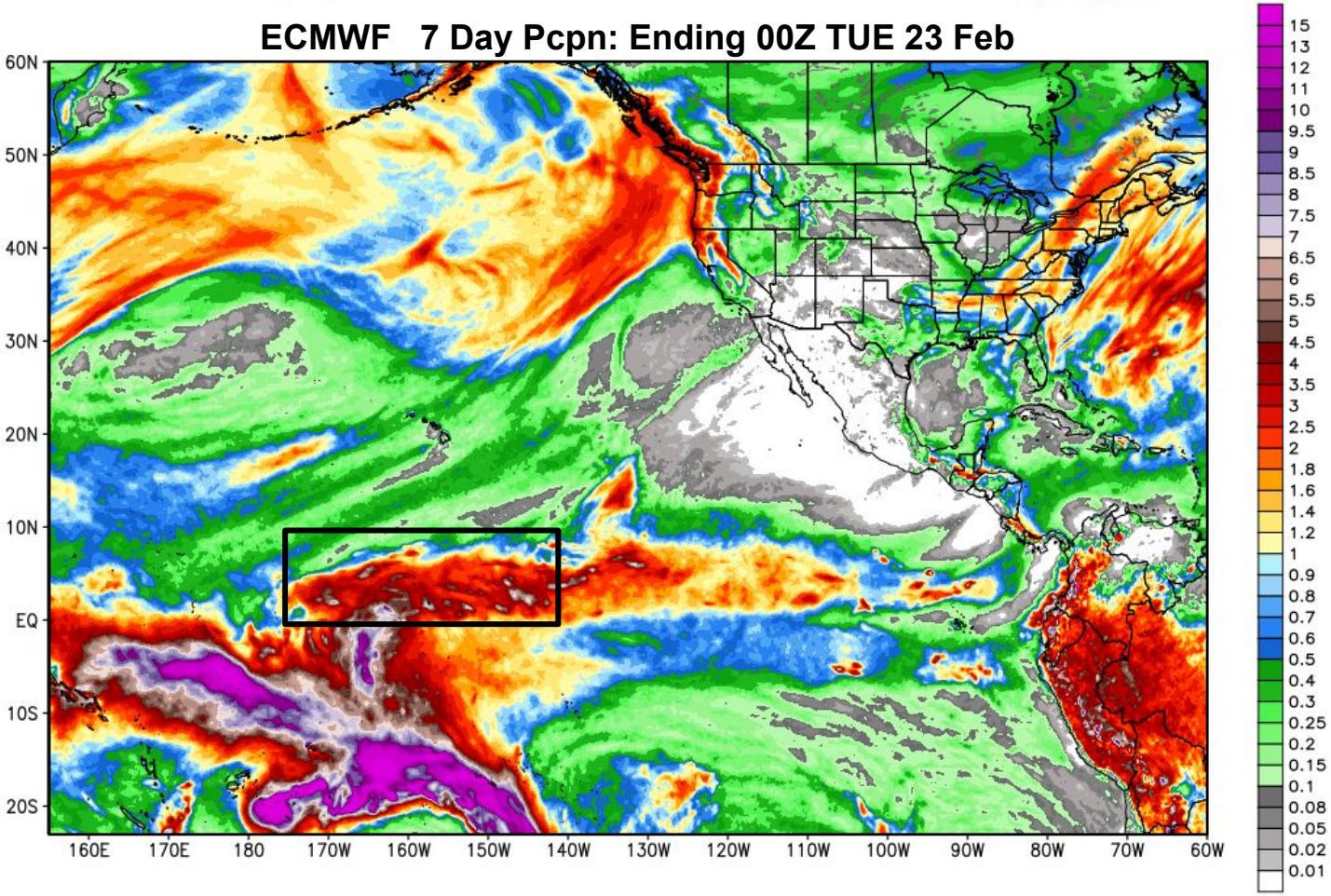

ECMWF 6-hourly Precipitation [inches] between 18Z18FEB2016 -- 00Z19FEB2016 & MSLP [hPa]
INIT: 00Z16FEB2016 fx: [072] hr --> Fri 00Z19FEB2016
Courtesy WeatherBell
Latest 72 HR ECMWF Valid 00Z FRI Feb19
60N
50N
40N
30N
20N
10N
EQ
10S
20S
160E
170E
180
170W
160W
150W
140W
130W
120W
110W
100W
90W
80W
70W
60W
3
2.8
2.6
2.5
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0.02
0.01

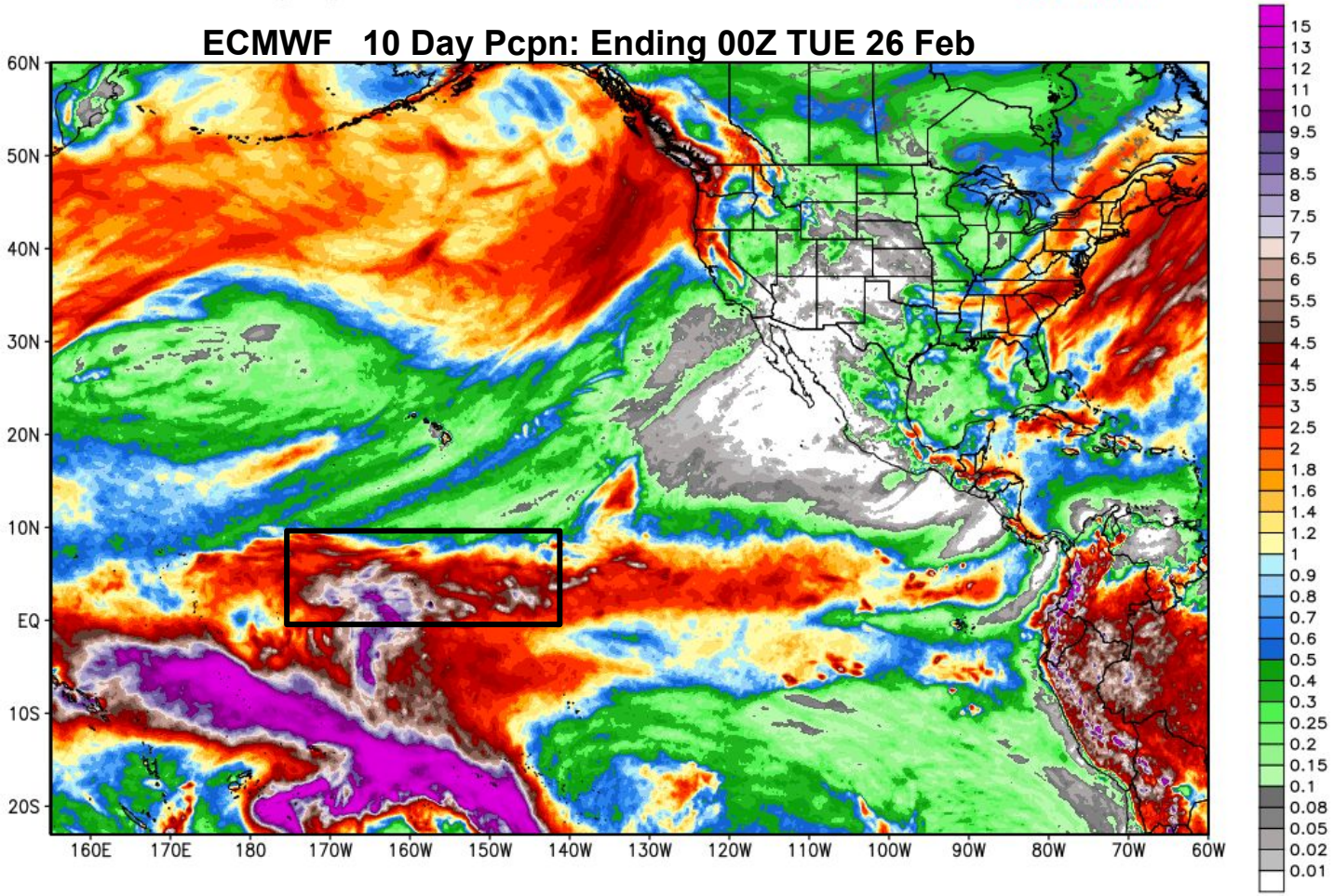

ECMWF 6-hourly Precipitation [inches] between 18Z18FEB2016 -- 00Z19FEB2016 & MSLP [hPa]
INIT: 00Z15FEB2016 fx: [096] hr --> Fri 00Z19FEB2016
Courtesy WeatherBell
Latest 96 HR ECMWF Valid 00Z FRI Feb19
60N
50N
40N
30N
20N
10N
EQ
10S
20S
160E
170E
180
170W
160W
150W
140W
130W
120W
110W
100W
90W
80W
70W
60W
3
2.8
2.6
2.5
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0.02
0.01

ECMWF Total Precipitation [inches] between 00Z16FEB2016 -- 00Z23FEB2016
INIT: 00Z16FEB2016 fx: [168] hr --> Tue 00Z23FEB2016

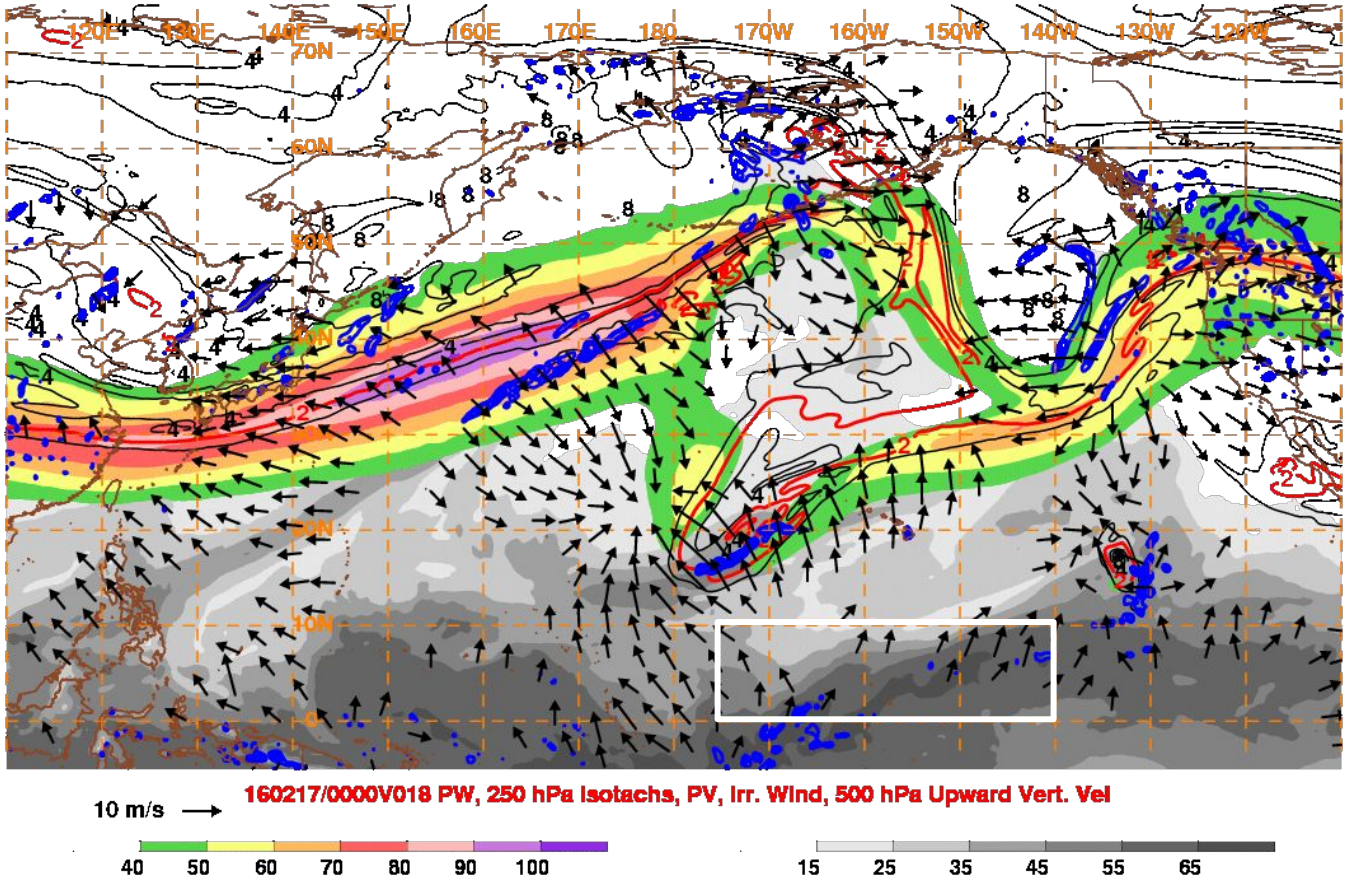
Max 46.4 in

ECMWF 7 Day Pcpn: Ending 00Z TUE 23 Feb

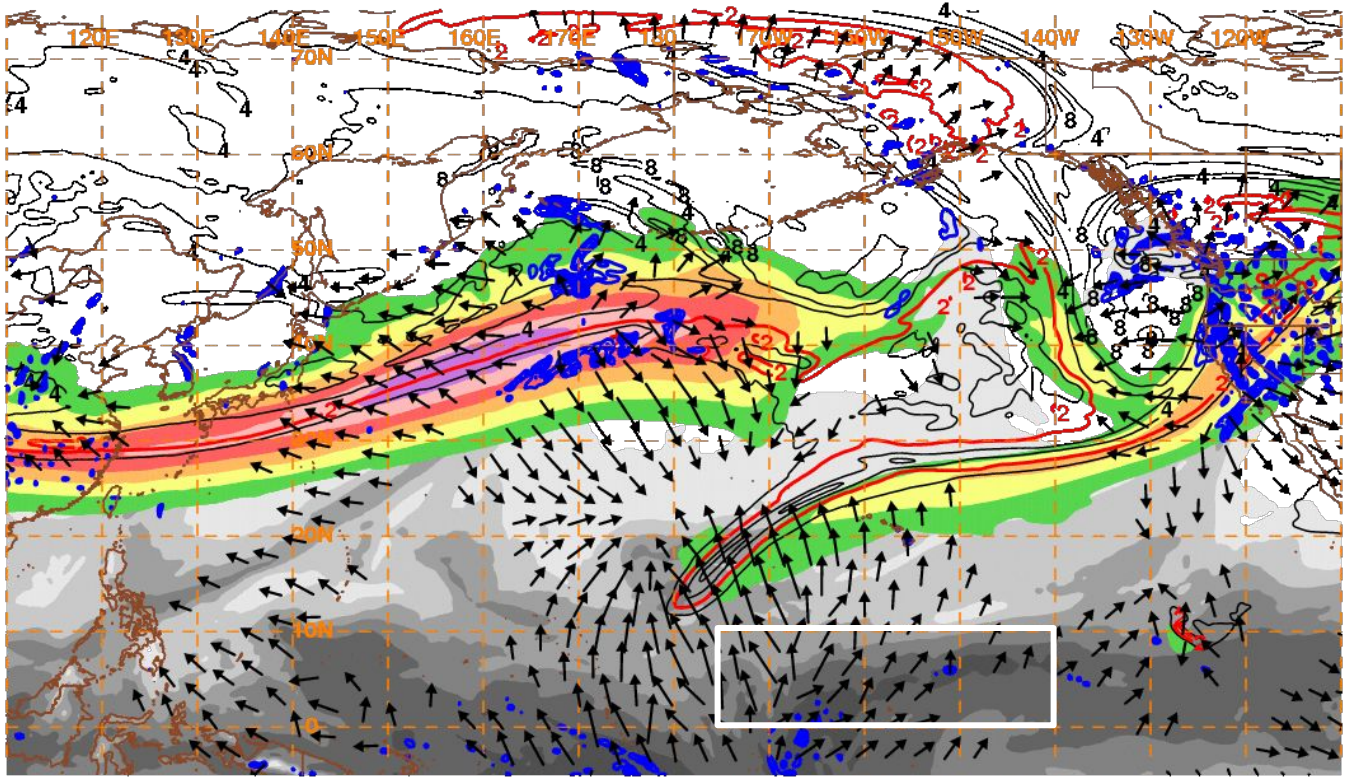



ECMWF Total Precipitation [inches] between 00Z16FEB2016 -- 00Z26FEB2016
INIT: 00Z16FEB2016 fx: [240] hr --> Fri 00Z26FEB2016
Max 46.4 in
ECMWF 10 Day Pcpn: Ending 00Z TUE 26 Feb
60N
50N
40N
30N
20N
10N
EQ
10S
20S
160E
170E
180
170W
160W
150W
140W
130W
120W
110W
100W
90W
80W
70W
60W
15
13
12
11
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.8
1.6
1.4
1.2
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.25
0.2
0.15
0.1
0.08
0.05
0.02
0.01

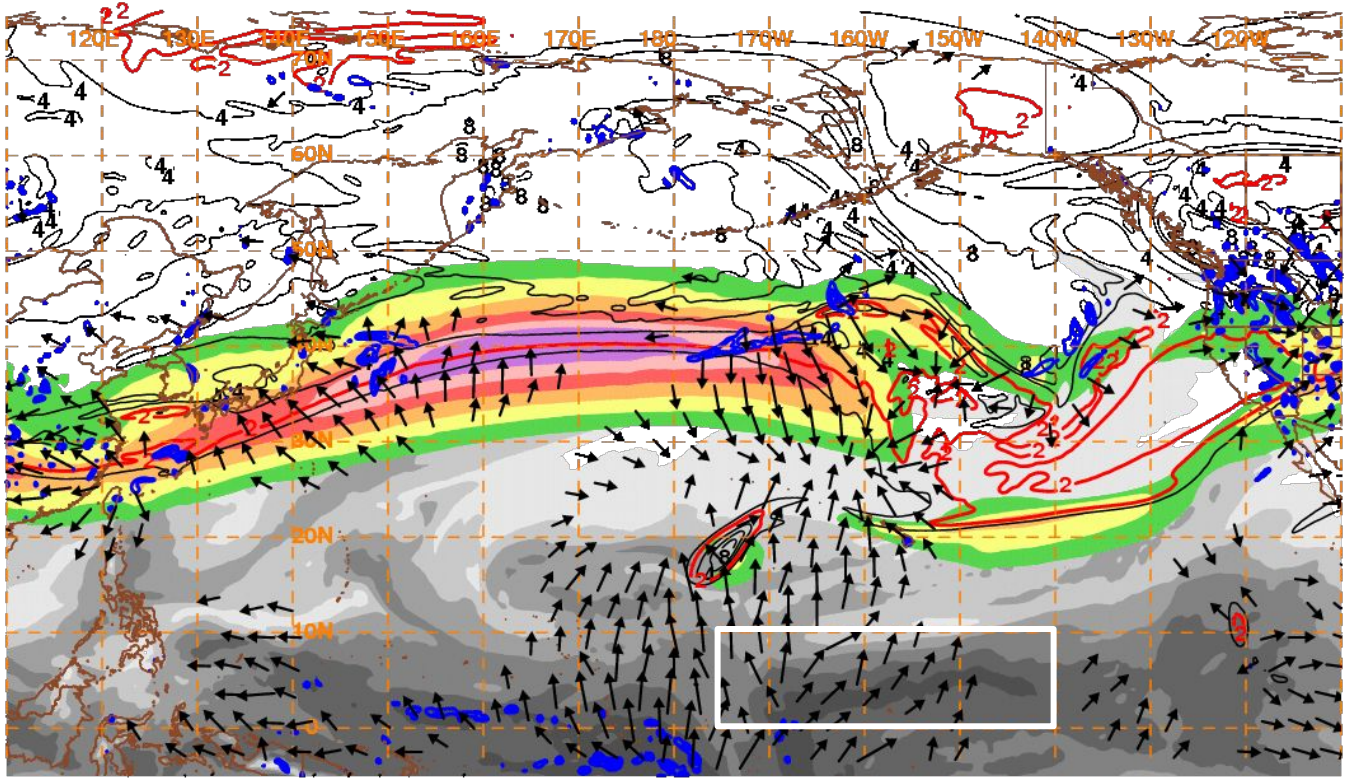
GFS 18HR FCST Valid 00Z WED Feb 17: 200 mb DIV Wind Vectors



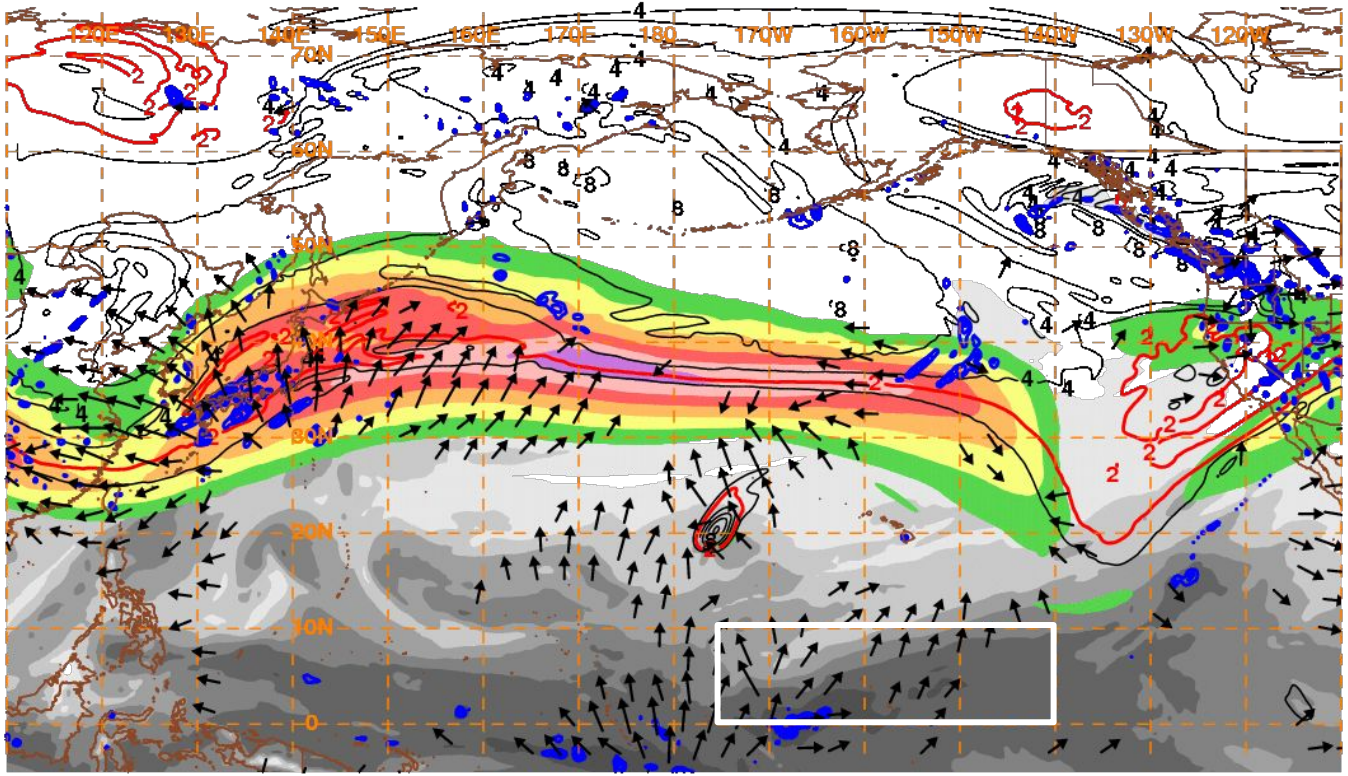
GFS 42HR FCST Valid 00Z THU Feb 18: 200 mb DIV Wind Vectors



GFS 66HR FCST Valid 00Z FRI Feb 19: 200 mb DIV Wind Vectors

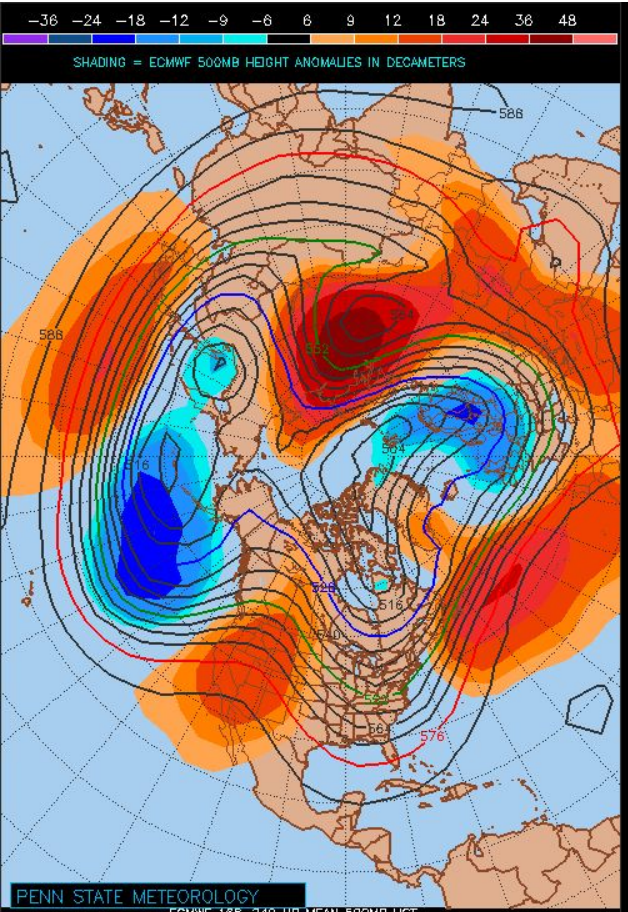


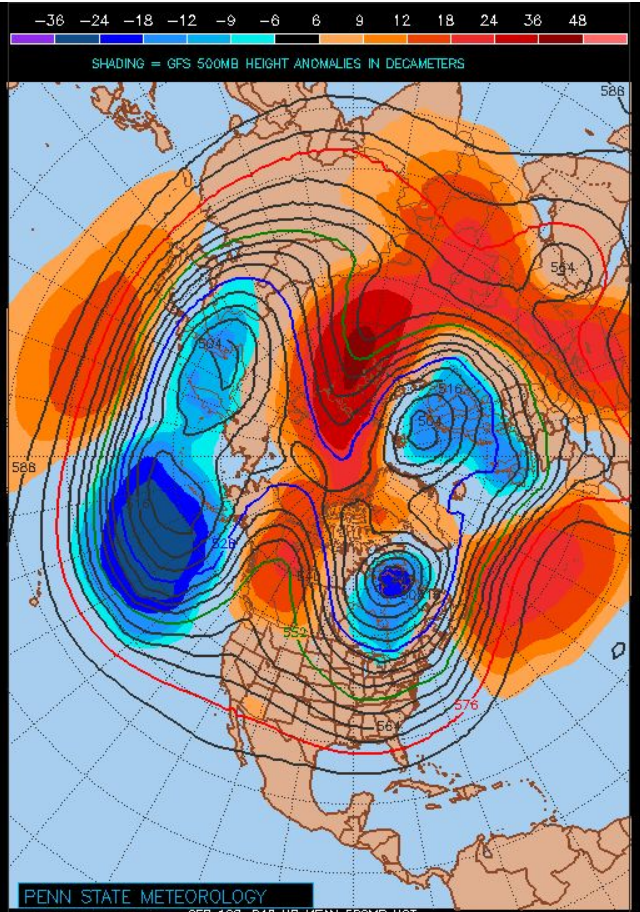
GFS 90HR FCST Valid 00Z SAT Feb 20: 200 mb DIV Wind Vectors

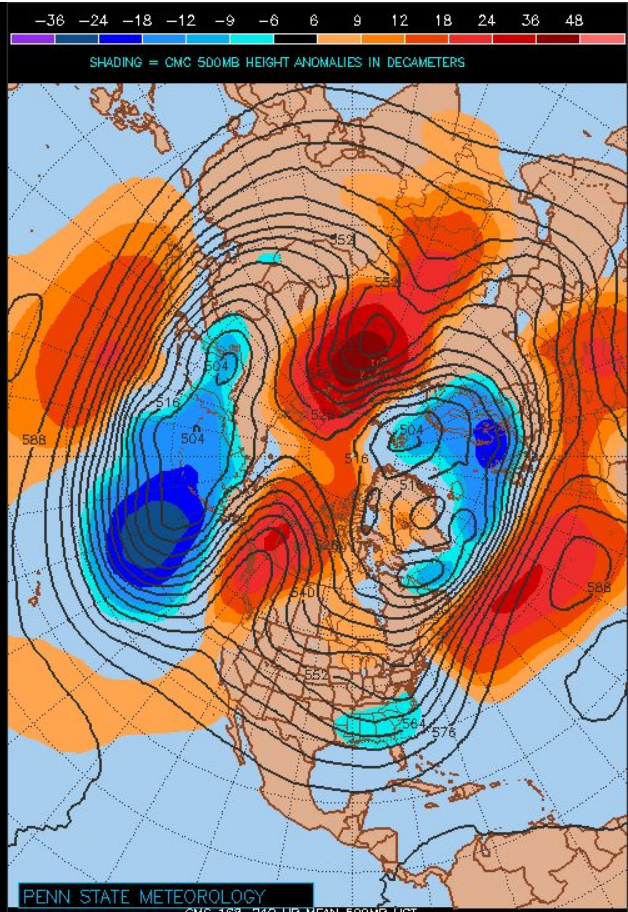


Medium - Long Range Forecast

Day 7-10 Initialized 00Z TUE 16 Feb

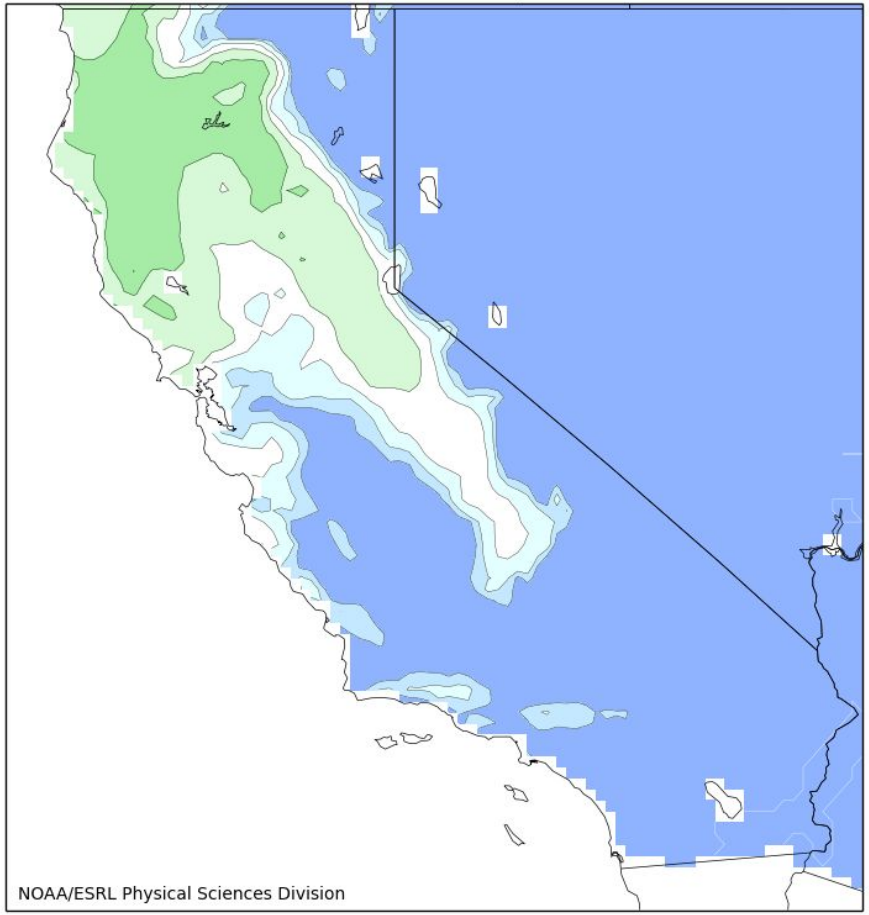


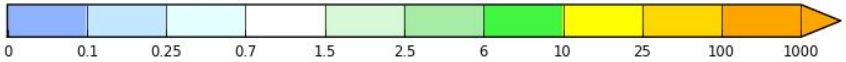




000-168hr fcst from 00Z Tue Feb 16. Valid 00Z Tue Feb 16 - 00Z Tue Feb 23

Ratio. Forecast/Climo Prob of Precip > 50mm. CSGD.

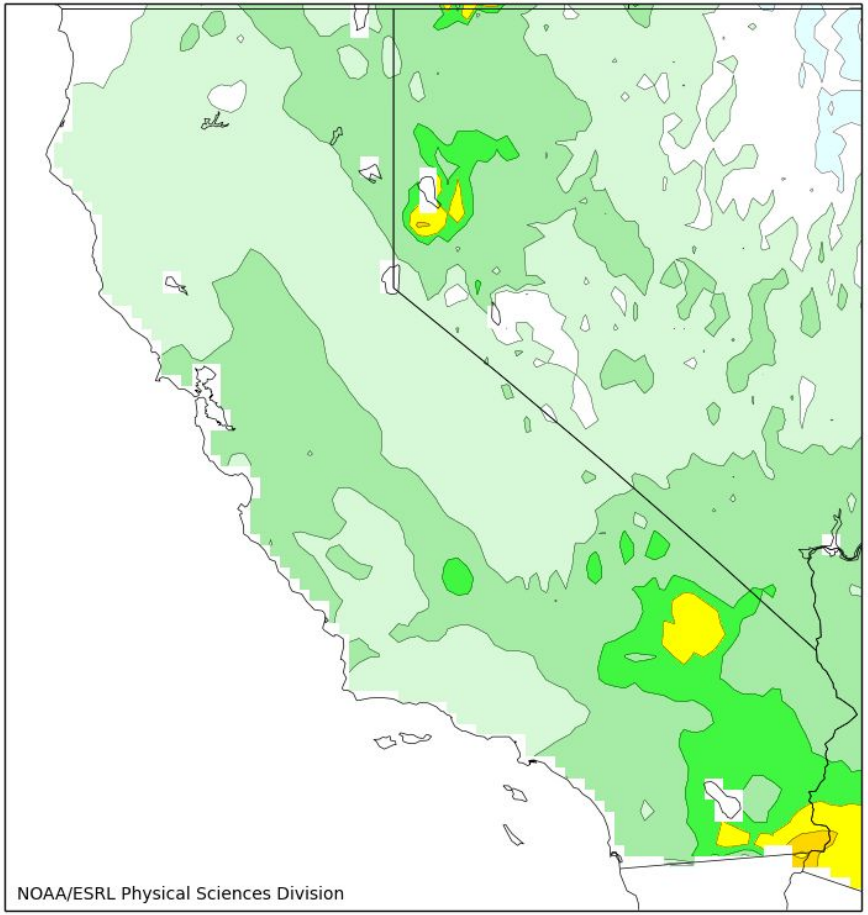


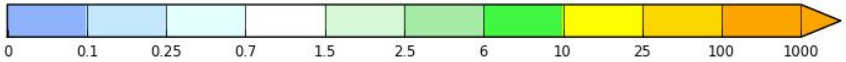


Ratio: Forecast Probability / Climatological Probability

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.

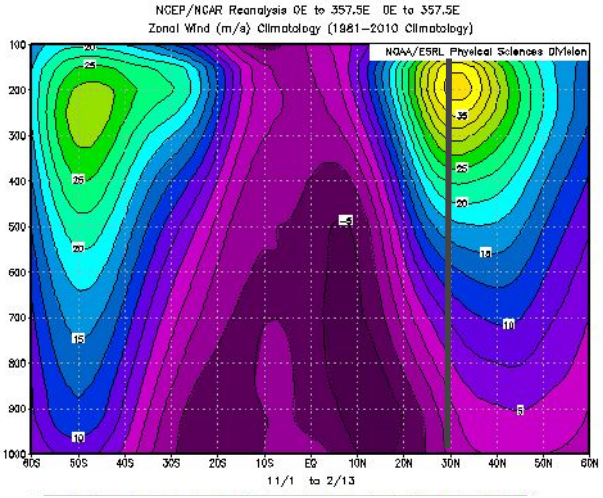




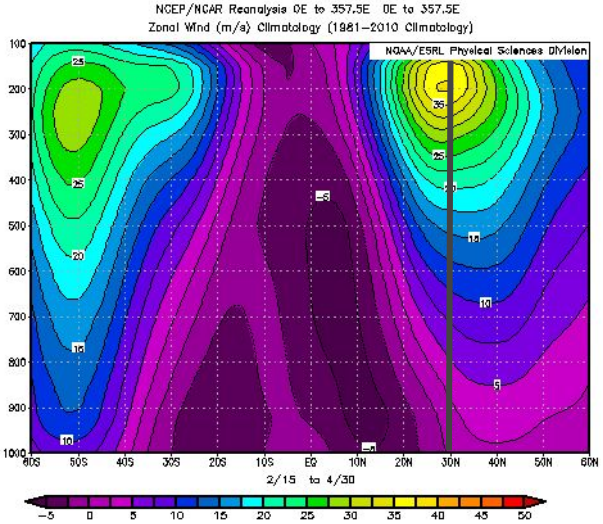
Ratio: Forecast Probability / Climatological Probability

The Curious Incident of the Zonal Mean Zonal Wind in 2016

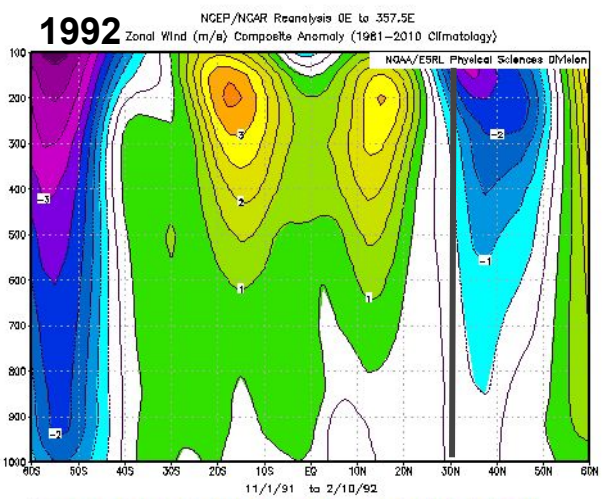
Zonal Mean U
Nov 1- Feb 13 Climo



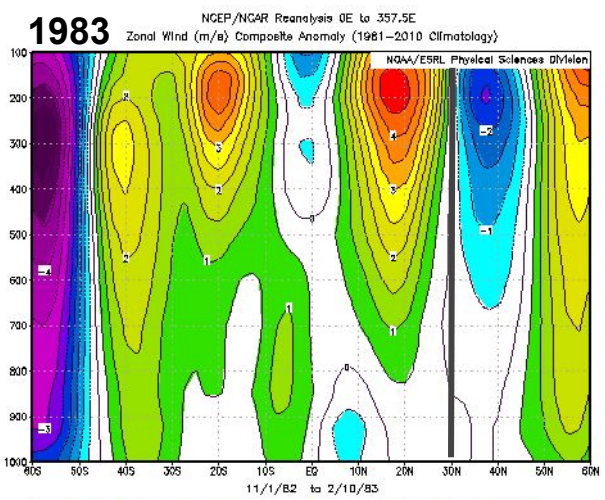
Zonal Mean U
Feb 15 - Apr 30 Climo



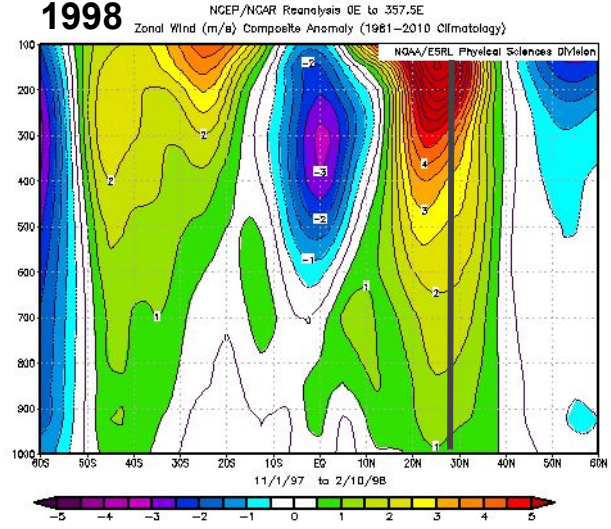
1992



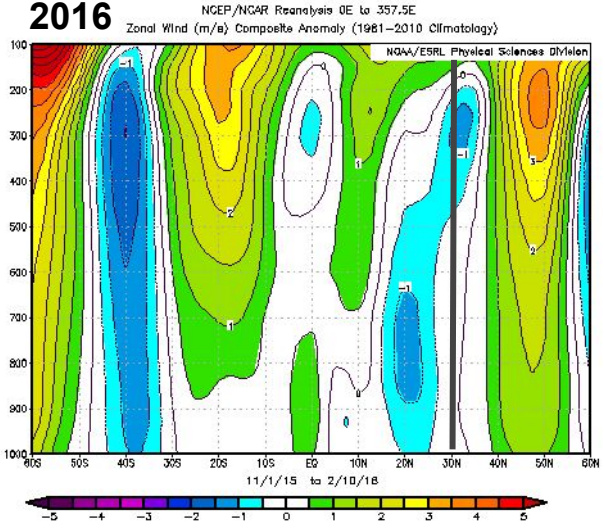
1983



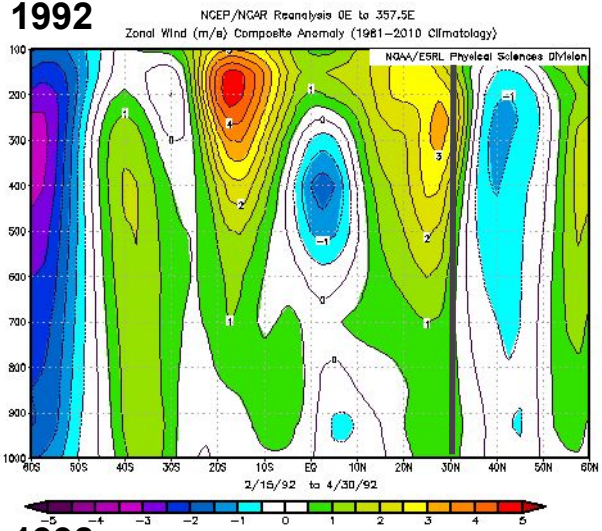
1998



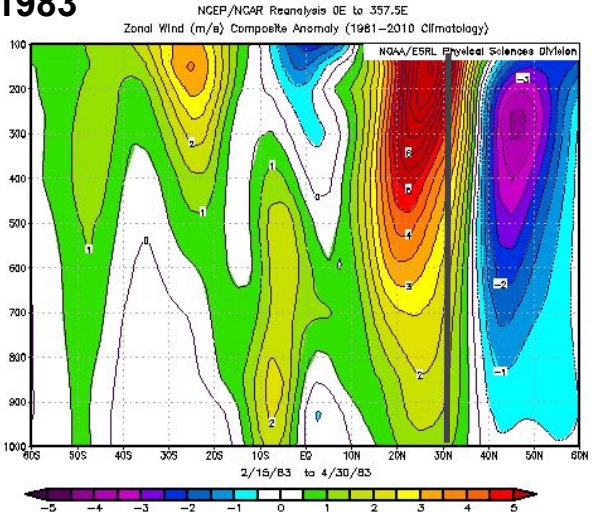
2016



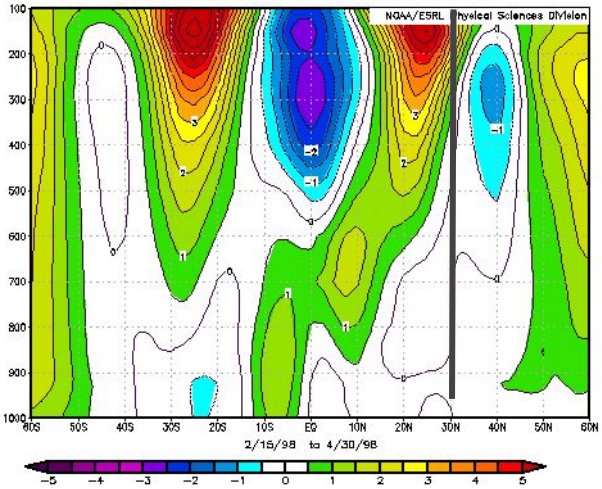
1992



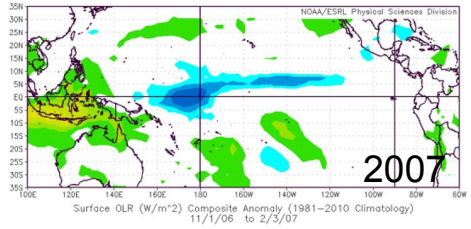
1983

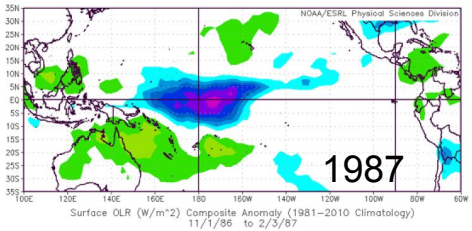


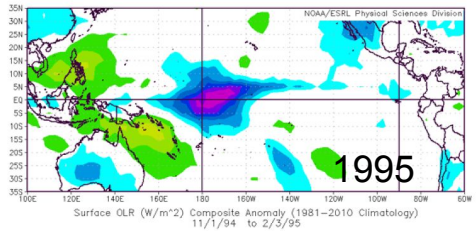
1998

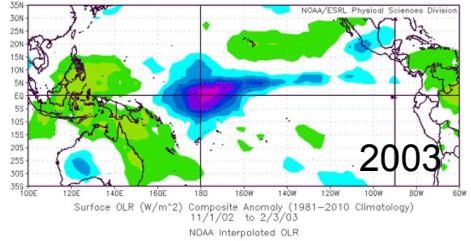


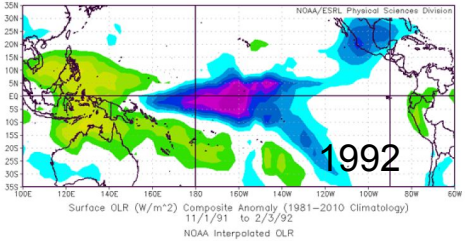
Observed OLR Anomalies : 1 Nov - 3 Feb

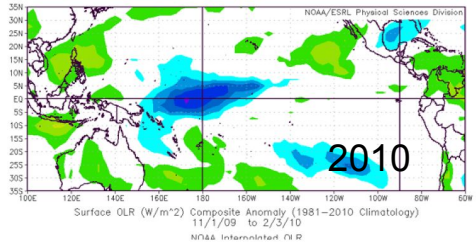


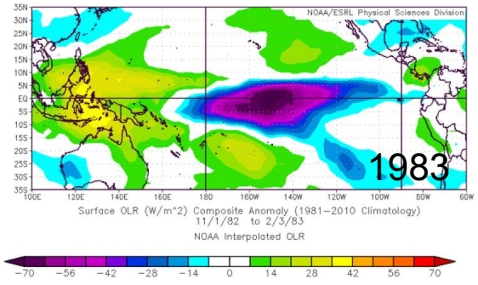


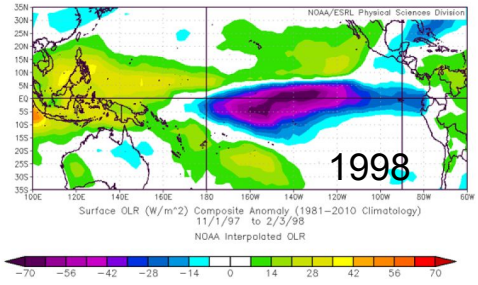


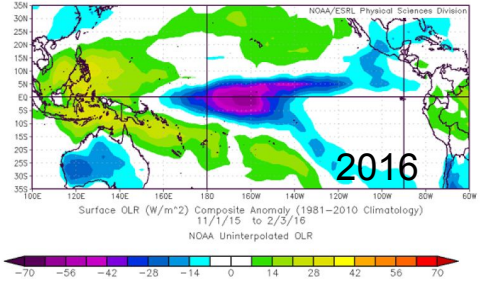




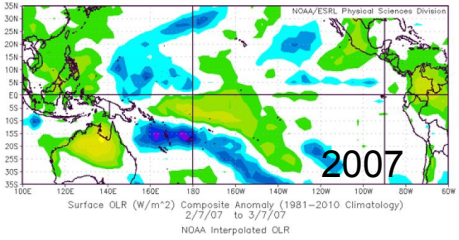


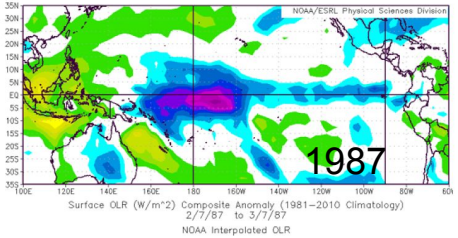


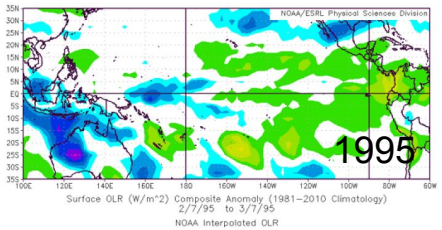


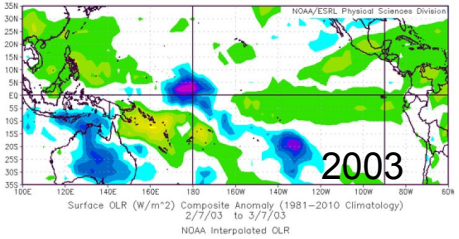


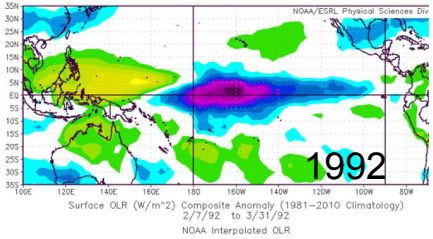
Observed OLR Anomalies : 7 Feb - 7 Mar

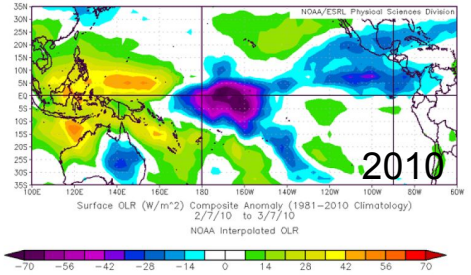


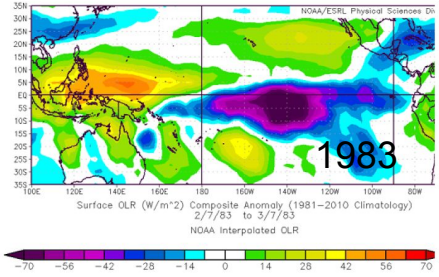


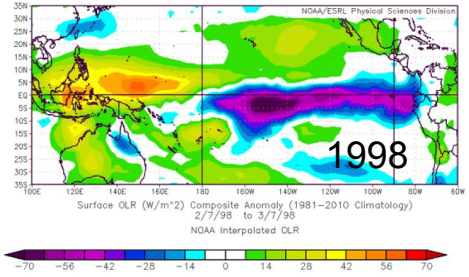




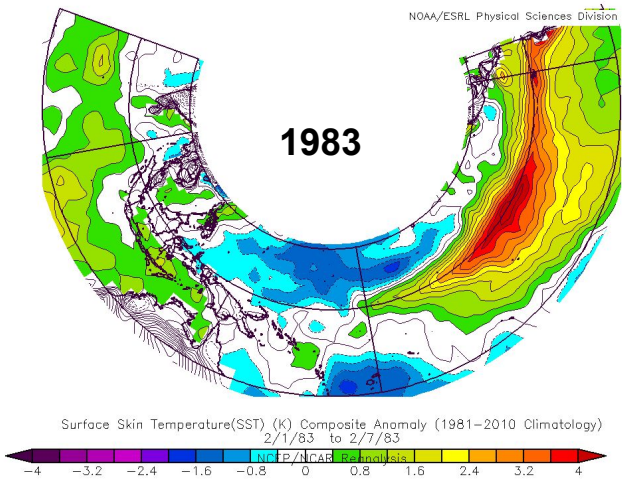


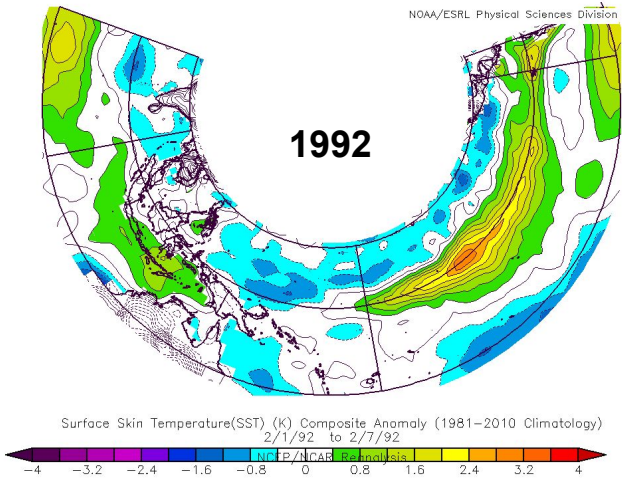


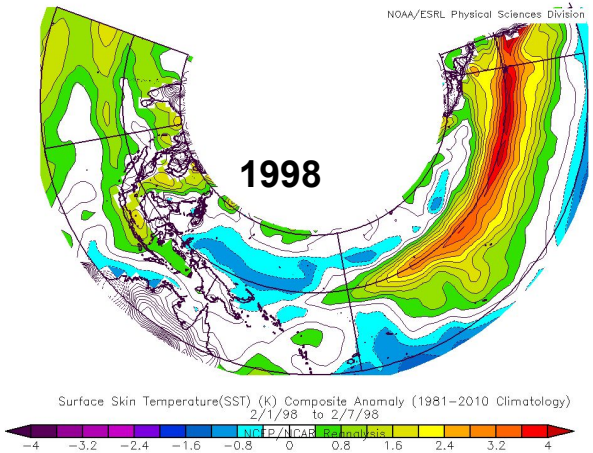


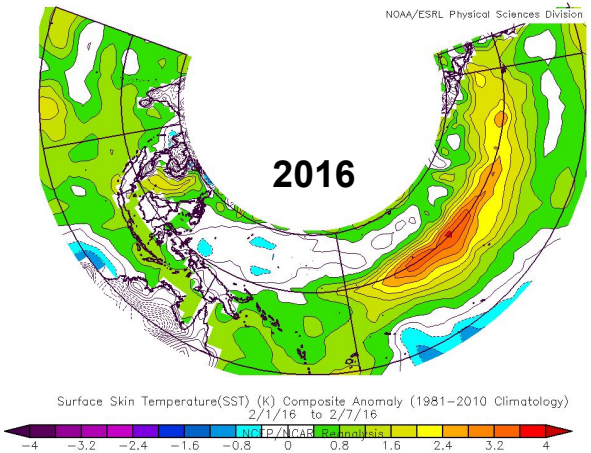


SST ANOM Feb 1-Feb 7

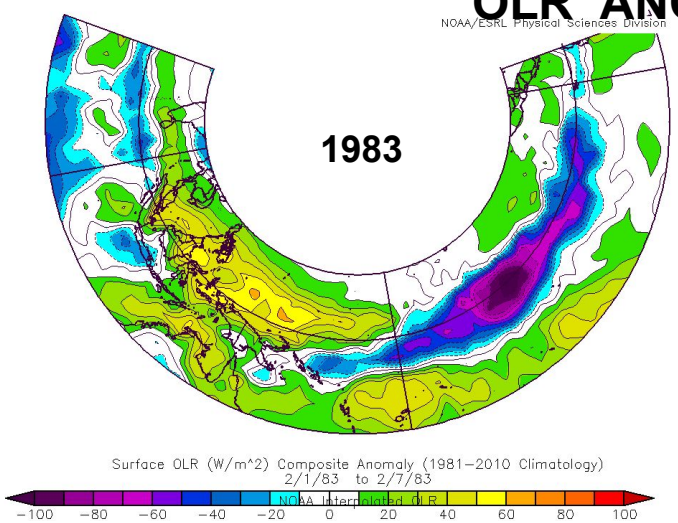


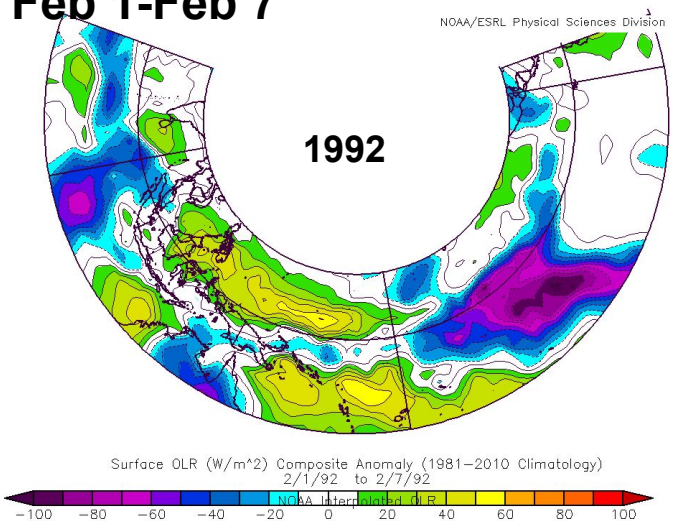


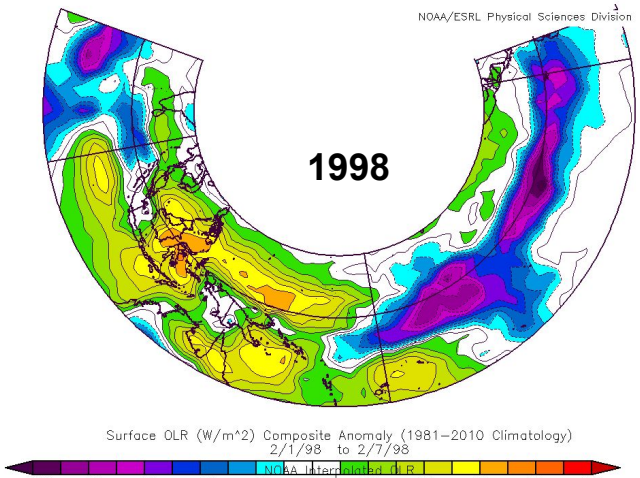


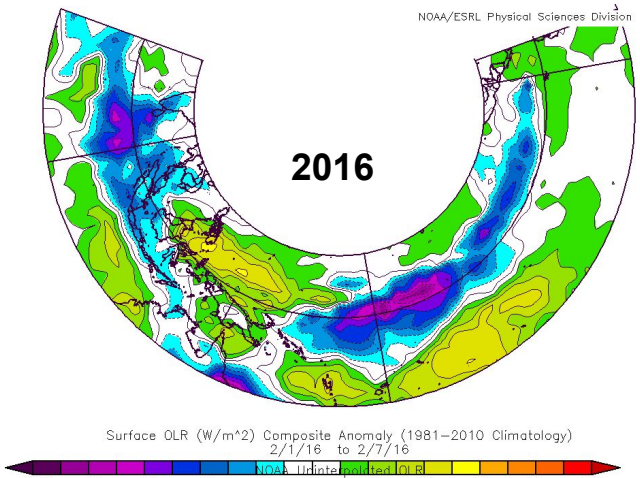


OLR ANOM Feb 1-Feb 7



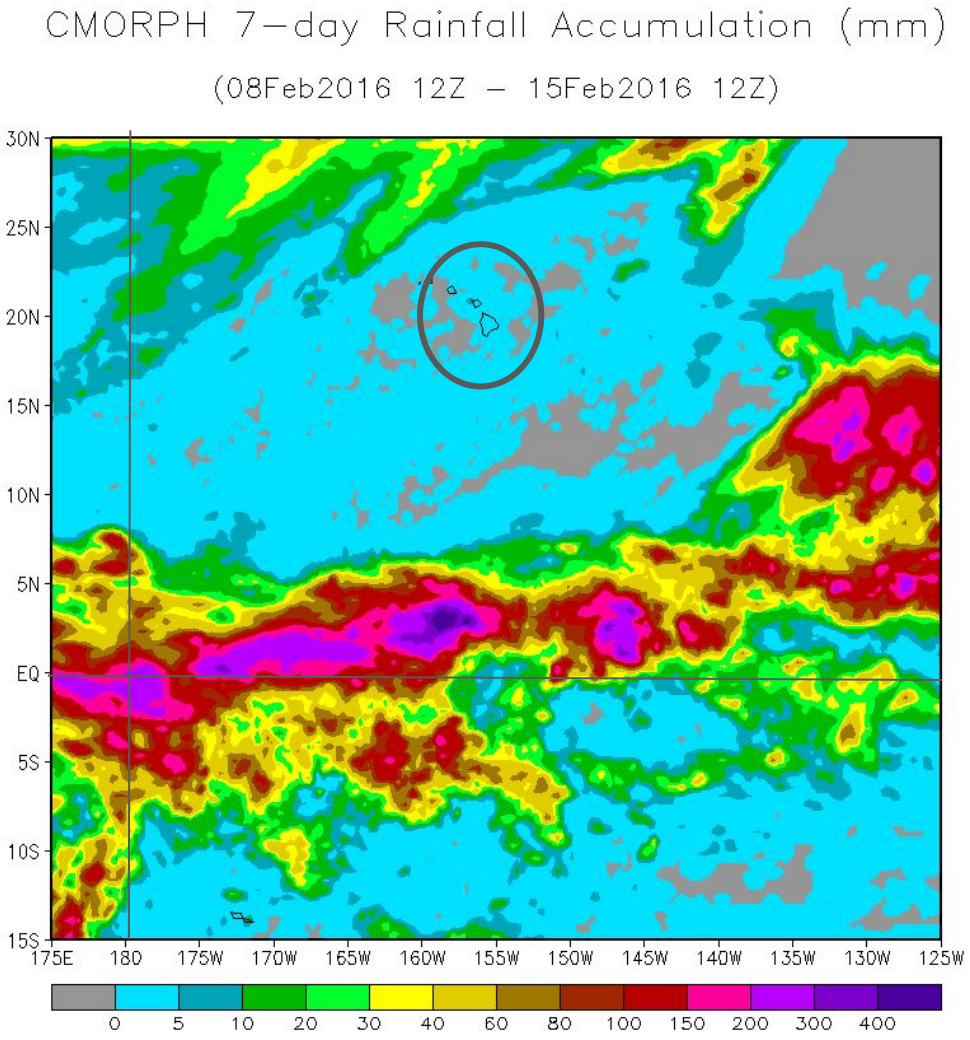


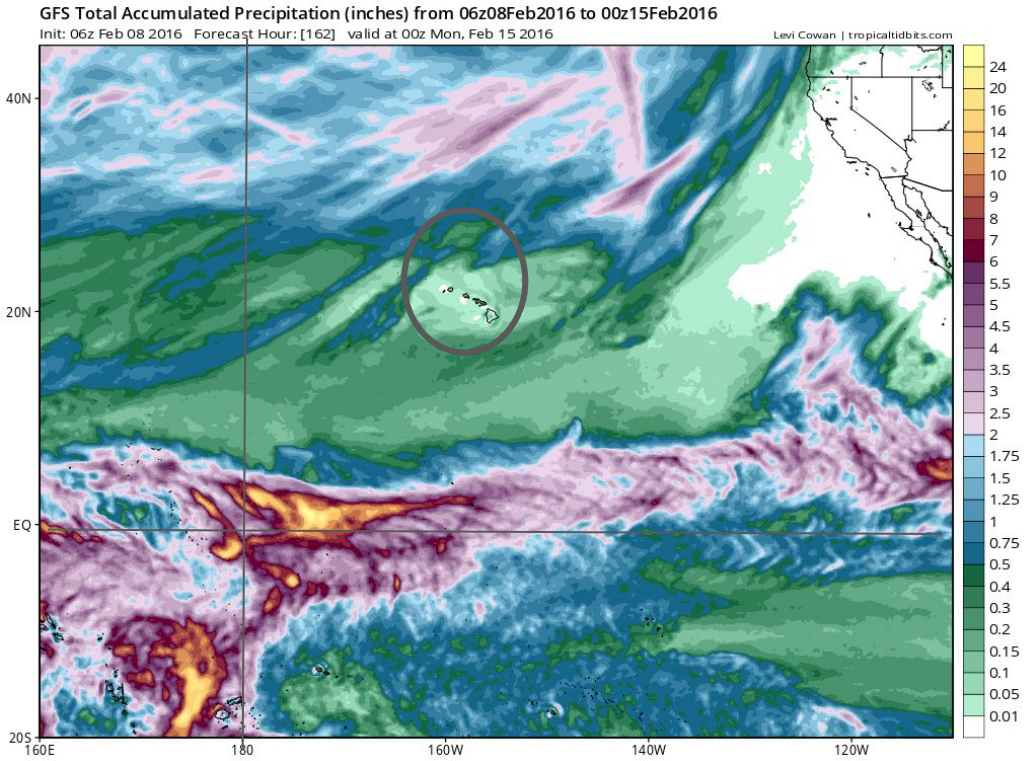




CMORPH: 7-Day

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
40N
20N
EQ
20S
160E
180
160W
140W
120W
24
20
16
14
12
10
9
8
7
6
5.5
5
4.5
4
3.5
3
2.5
2
1.75
1.5
1.25
1
0.75
0.5
0.4
0.3
0.2
0.15
0.1
0.05
0.01