

**Summary of Key Briefing Points**  
**1030-1130am MST Fri Mar 4, 2016**

# Current Conditions as of Thu 12Z-15Z Mar 4

## Tropics and Mid-latitudes

### *Over the Tropical Pacific:*

- Quiet in FD today
- PW maximum moving NWard out of domain

# Tropical Outlook

- Main convection in SPCZ----

# Midlatitude Conditions/Outlook

## Short Term:

- Rains poised for NCAL this weekend, total in Sierra 4-8"
- **Medium - Long Term:**
- Heavy rains likely over weekend, and then again mid/late next week: 10" total for Sierra likely
- Major rain event for lower MS Valley, >10" rains in Ozarks
- Day 10-15 to be mostly dry for CA. i

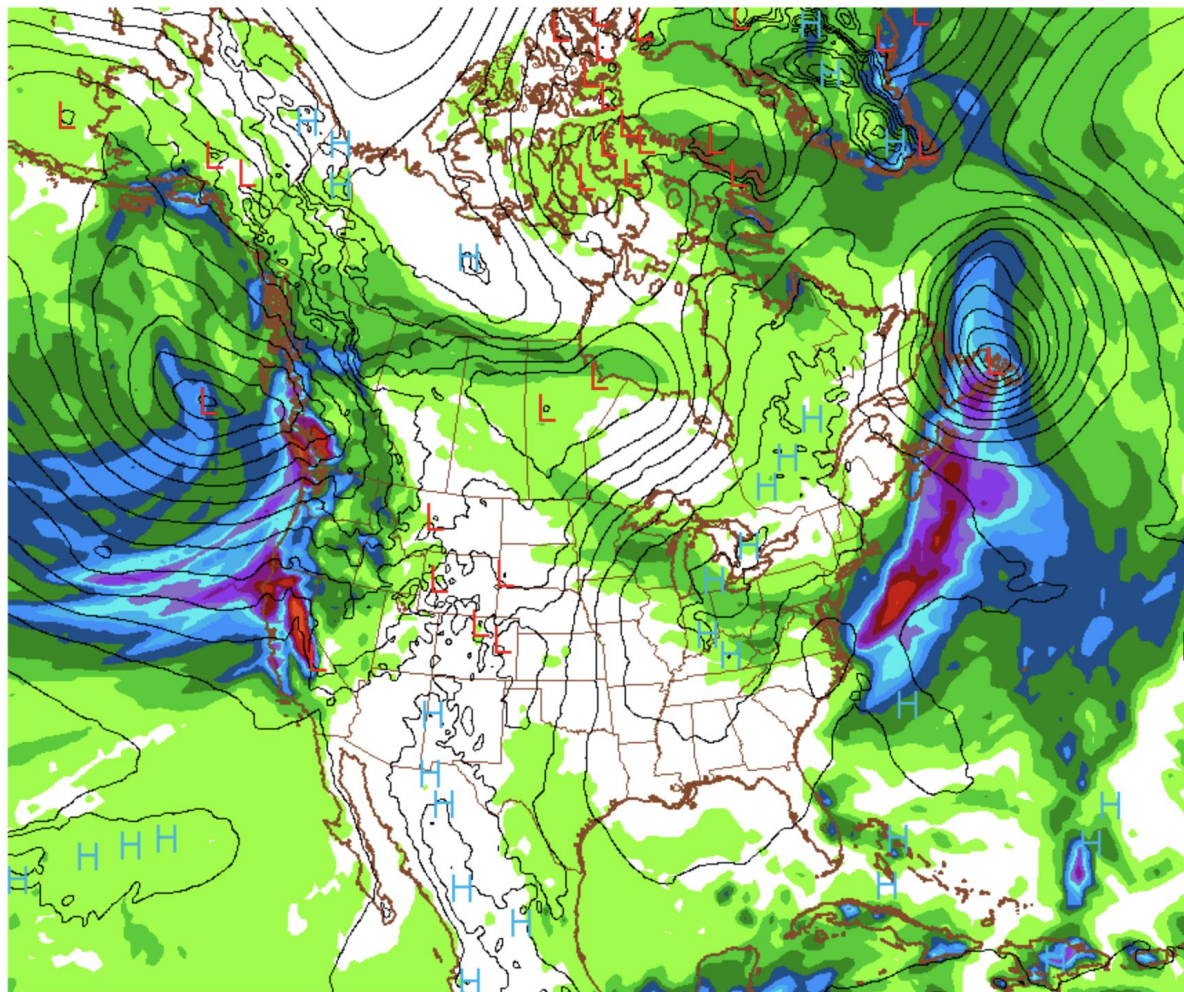
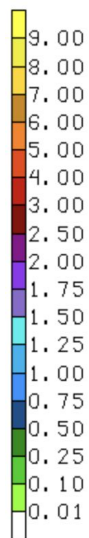


The Rains Cometh... 12Z Friday NAM



03/04/16 12UTC 048HR FCST VALID Sun 03/06/16 12UTC NCEP/NWS/NOAA

# NAM 48 Hr Pcpn Total ending 12Z Sun

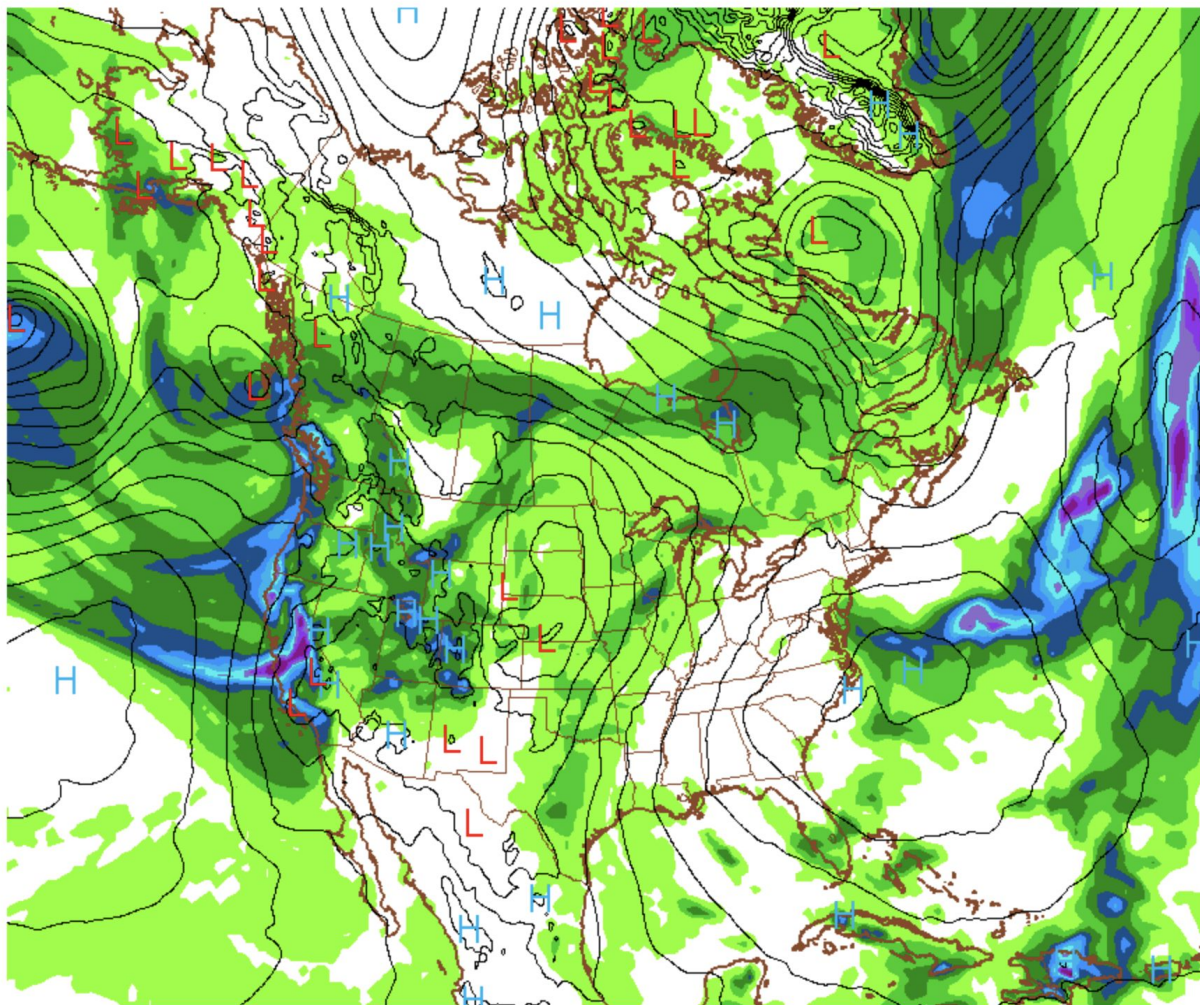
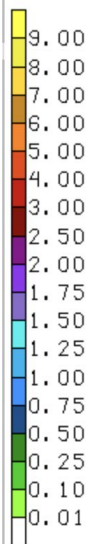


160306/1200V048 NAM44 048-HR TOTAL PCPN (IN)



03/04/16 12UTC 084HR FCST VALID Tue 03/08/16 00UTC NCEP/NWS/NOAA

# NAM 36 Hr Pcpn Total ending 00Z Tue



160308/0000Y084 NAM44 084-HR TOTAL PCPN (IN)

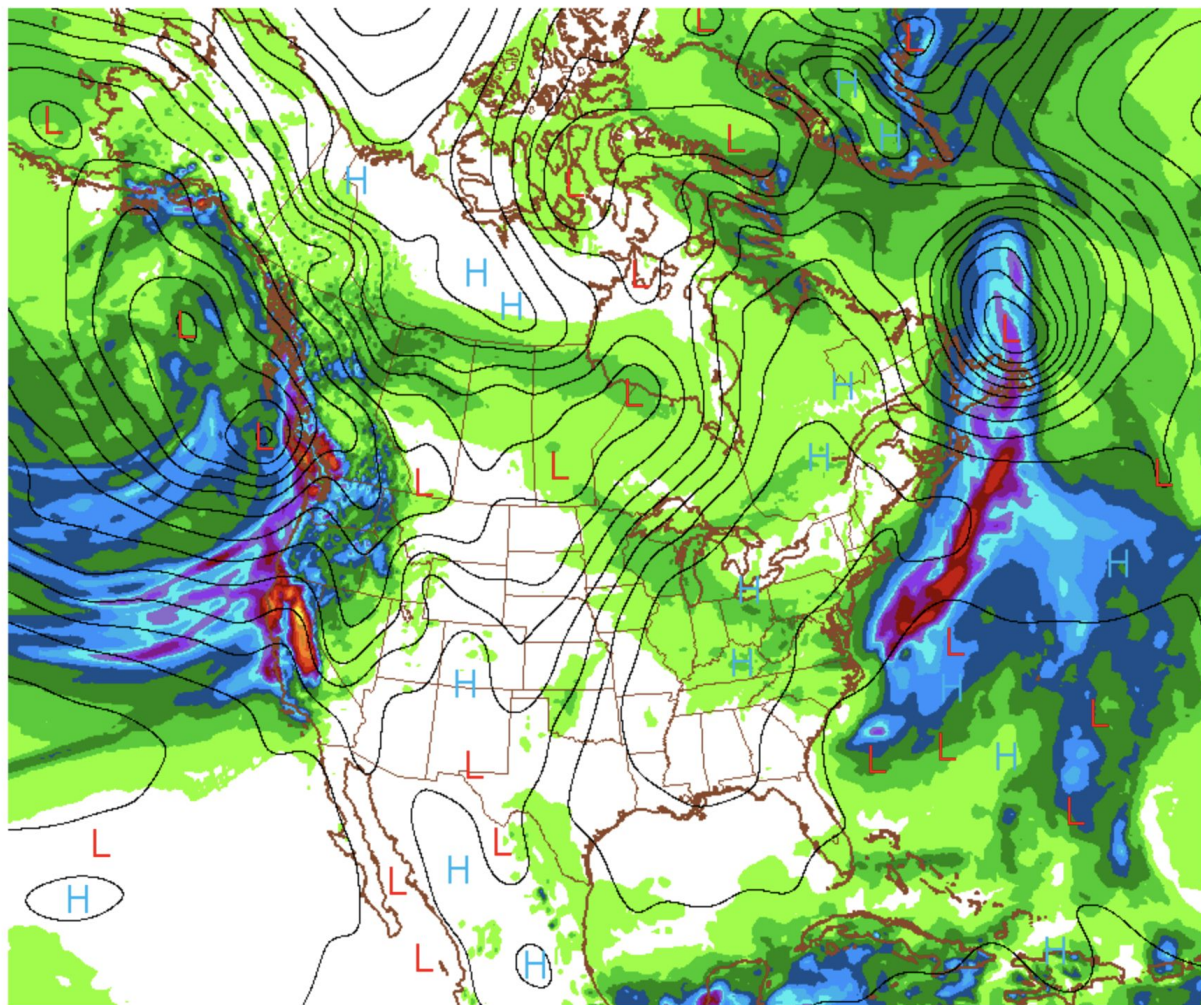
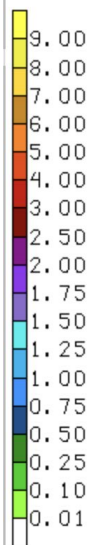
The Rains Cometh... 12Z Friday GFS





03/04/16 12UTC 048HR FCST VALID Sun 03/06/16 12UTC NCEP/NWS/NOAA

# GFS 48 Hr Pcpn Total ending 12Z Sun

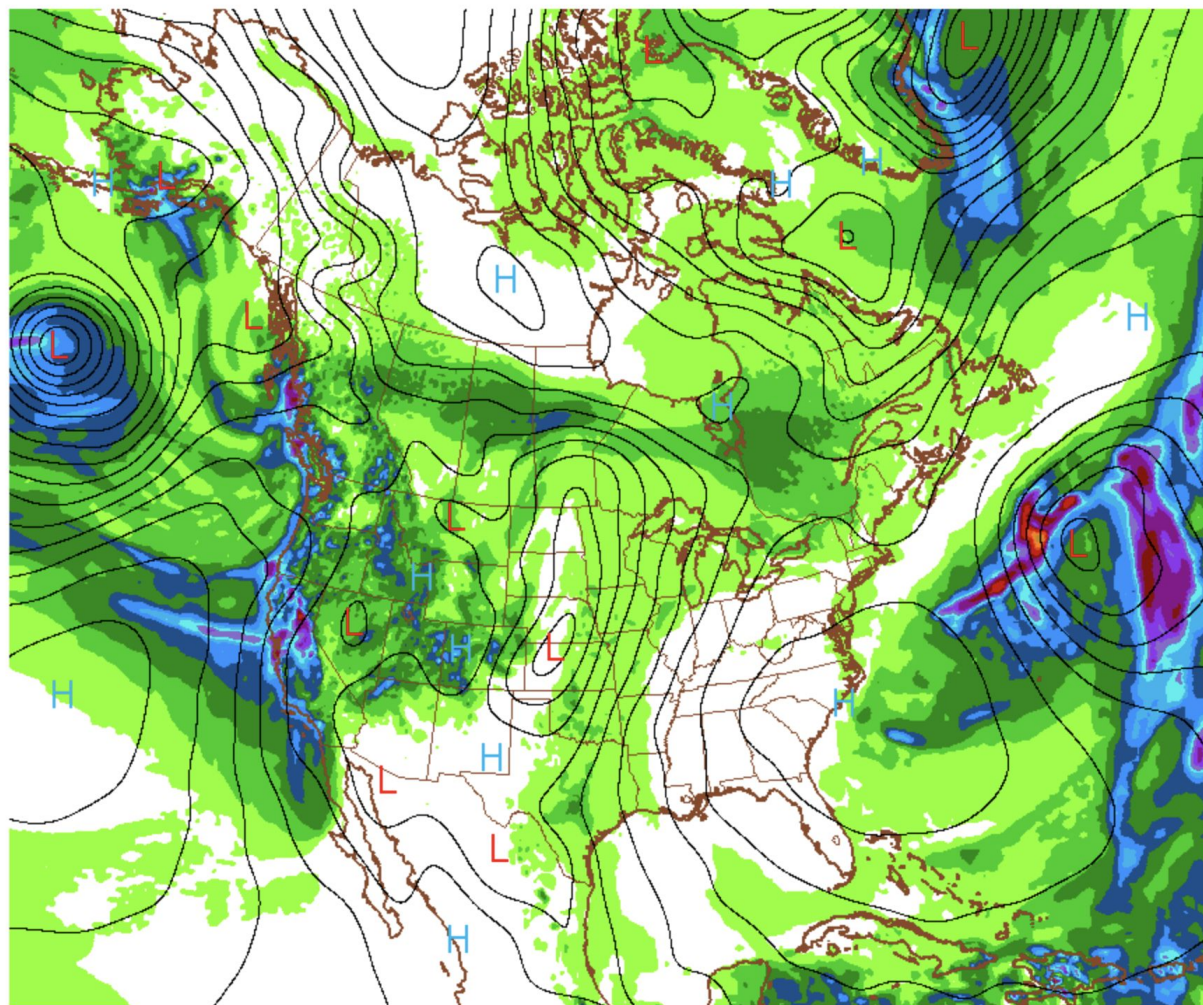
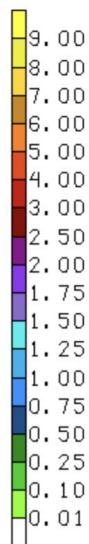


160306/1200V048 GFS 048-HR TOTAL PCPN (IN)



03/04/16 12UTC 084HR FCST VALID Tue 03/08/16 00UTC NCEP/NWS/NDAA

# GFS 36 Hr Pcpn Total ending 00Z Tue



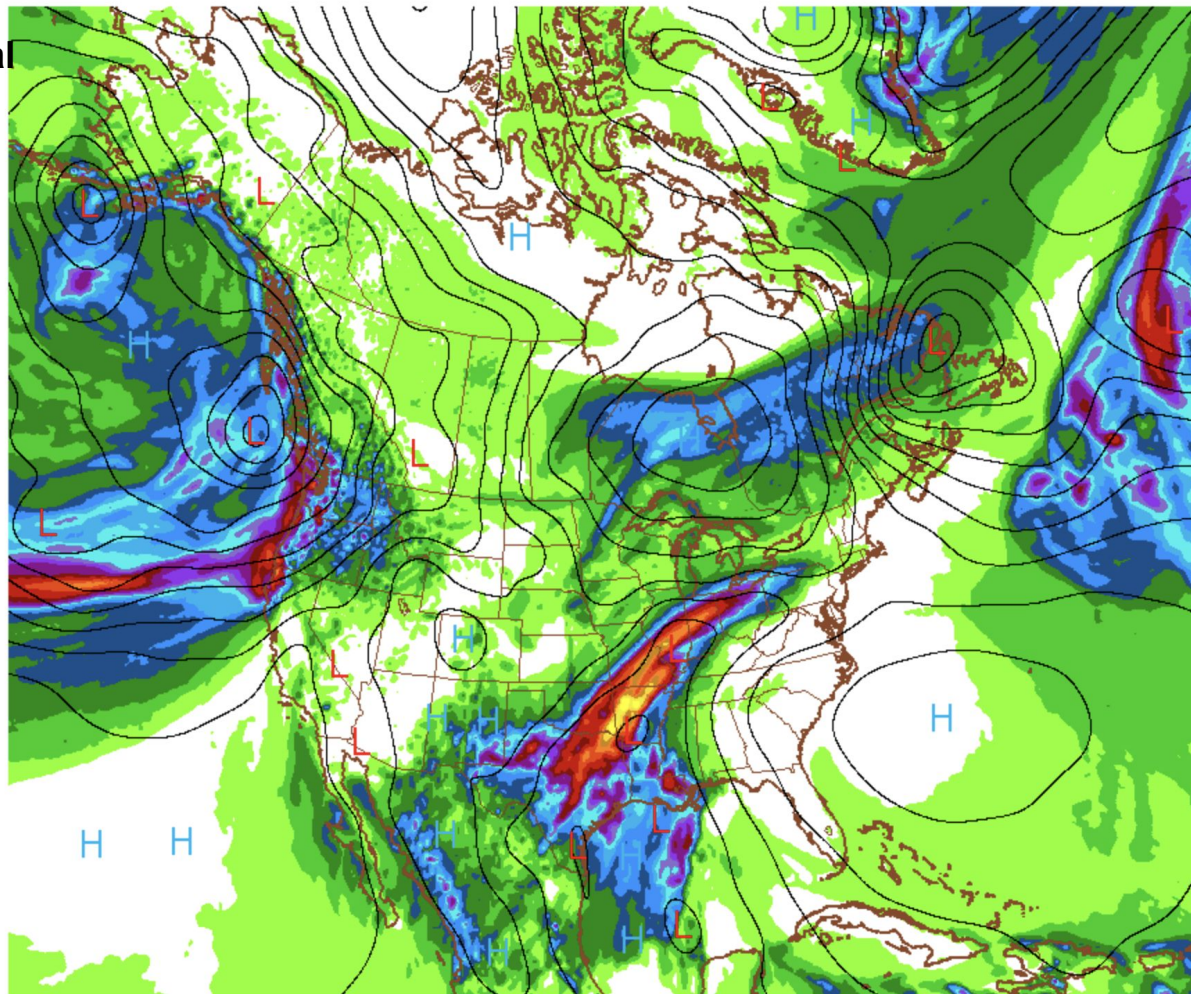
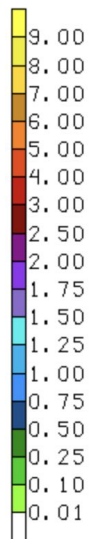
160308/0000V084 GFS 084-HR TOTAL PCPN (IN)





03/04/16 12UTC 144HR FCST VALID Thu 03/10/16 12UTC NCEP/NWS/NOAA

# GFS 60 Hr Pcpn Total ending 12Z Tue

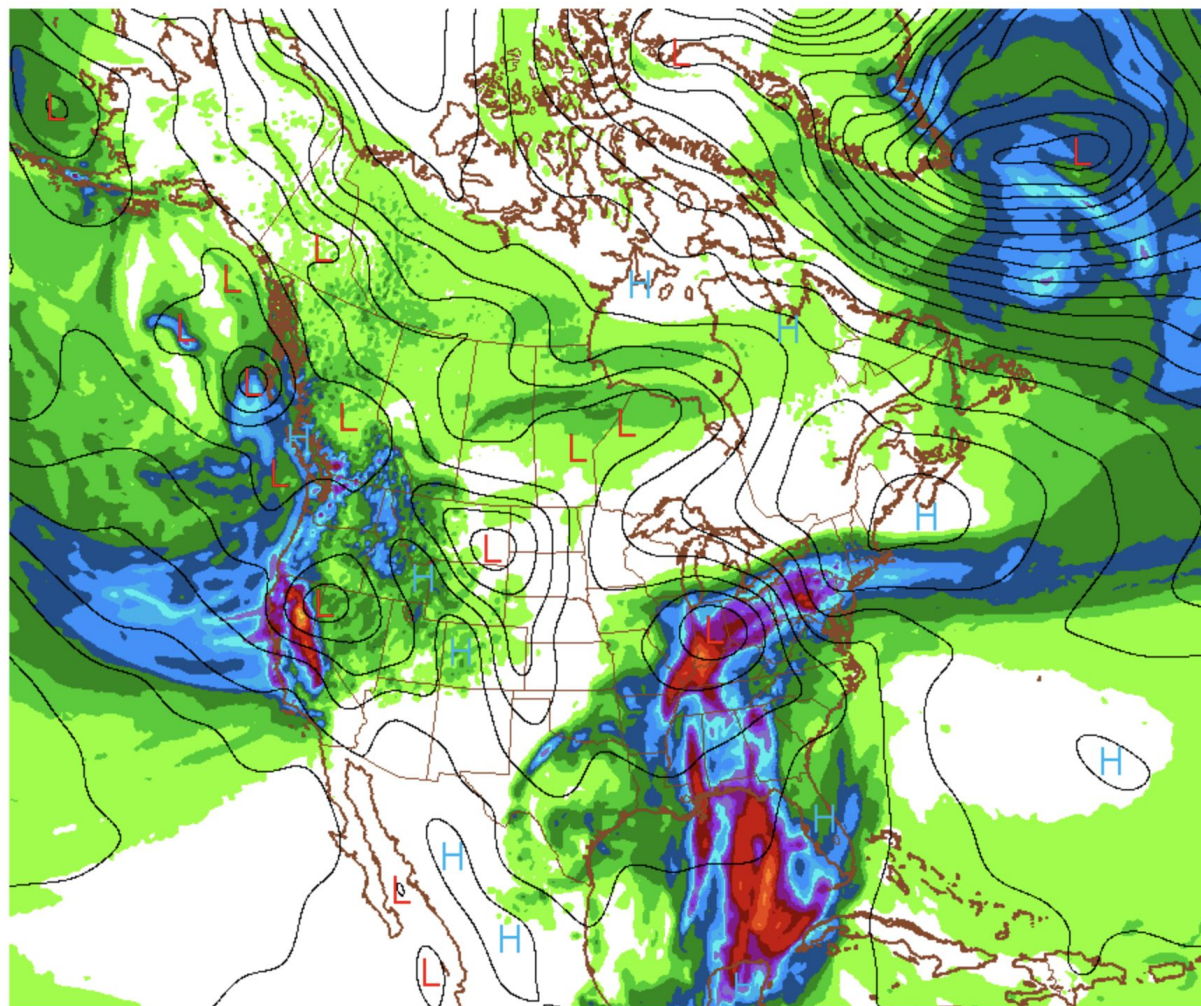
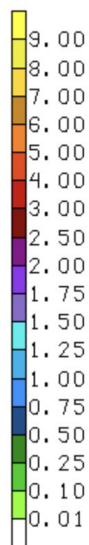


160310/1200V144 GFS 144-HR TOTAL PCPN (IN)



03/04/16 12UTC 192HR FCST VALID Sat 03/12/16 12UTC NCEP/NWS/NOAA

# GFS 48 Hr Pcpn Total ending 12Z Sat



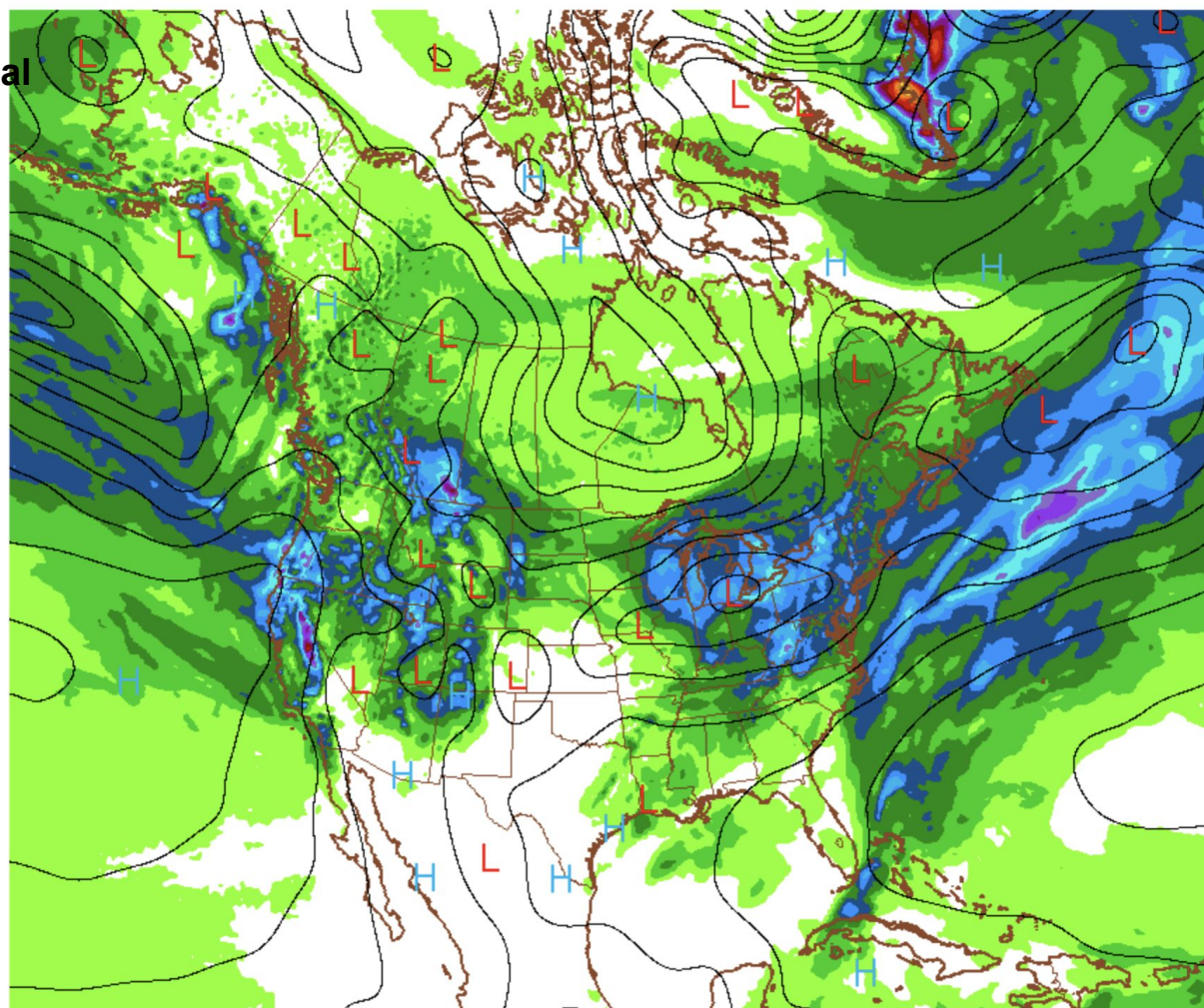
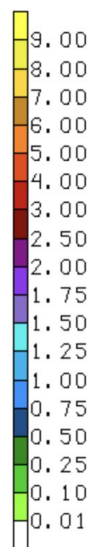
160312/1200V192 GFS 192-HR TOTAL PCPN (IN)





03/04/16 12UTC 252HR FCST VALID Tue 03/15/16 00UTC NCEP/NWS/NOAA

# GFS 60 Hr Pcpn Total ending 00Z TUE



160315/0000V252 GFS 252-HR TOTAL PCPN (IN)

Goodbye Winter, Hello Spring?

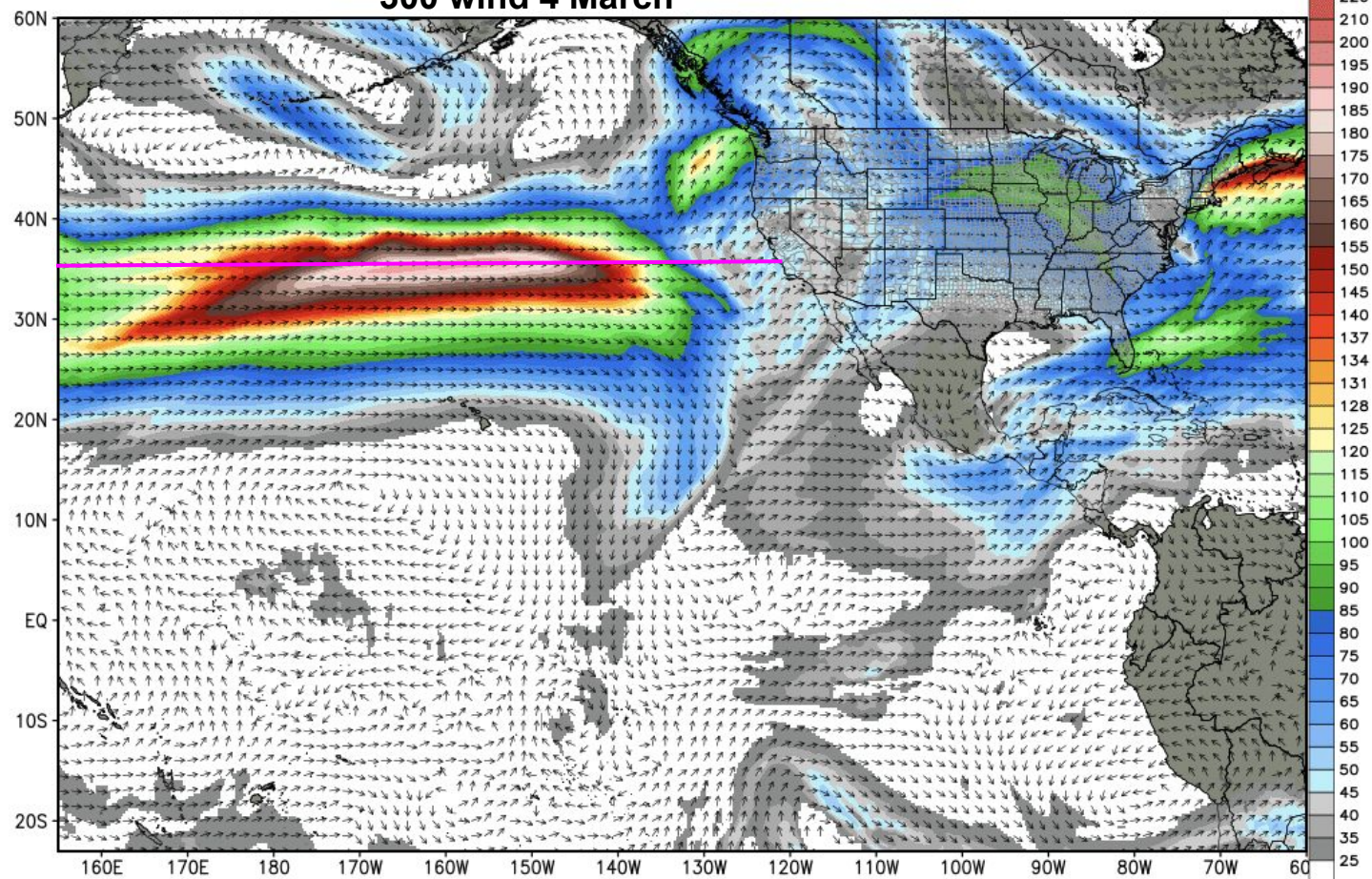


ECMWF 300 hPa Wind Speed & Vector Direction [knots]

INIT: 00Z04MAR2016 fx: [018] hr --> Fri 18Z04MAR2016

Max Wind 194.7 knots

### 300 wind 4 March



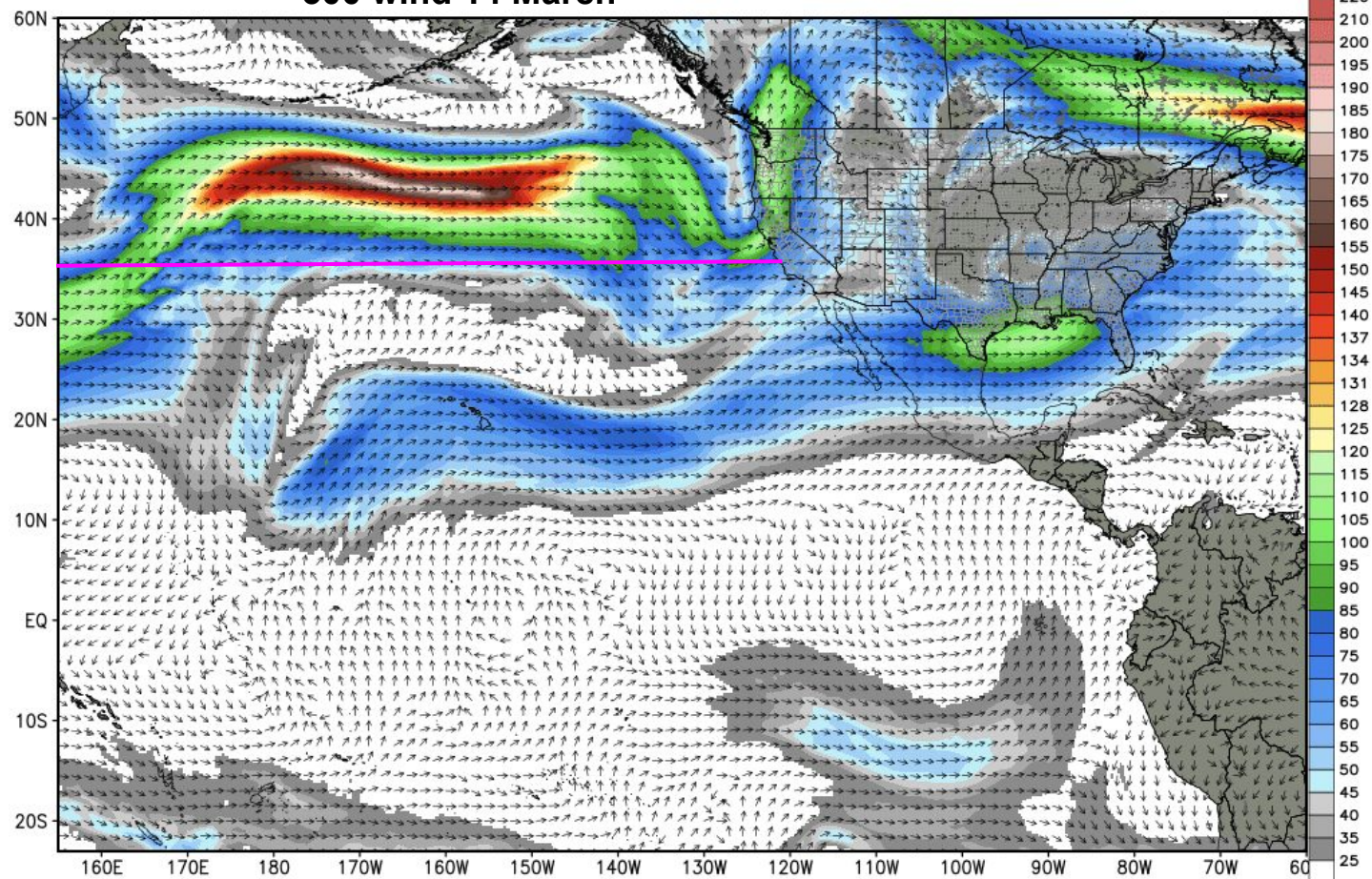


ECMWF 300 hPa Wind Speed & Vector Direction [knots]

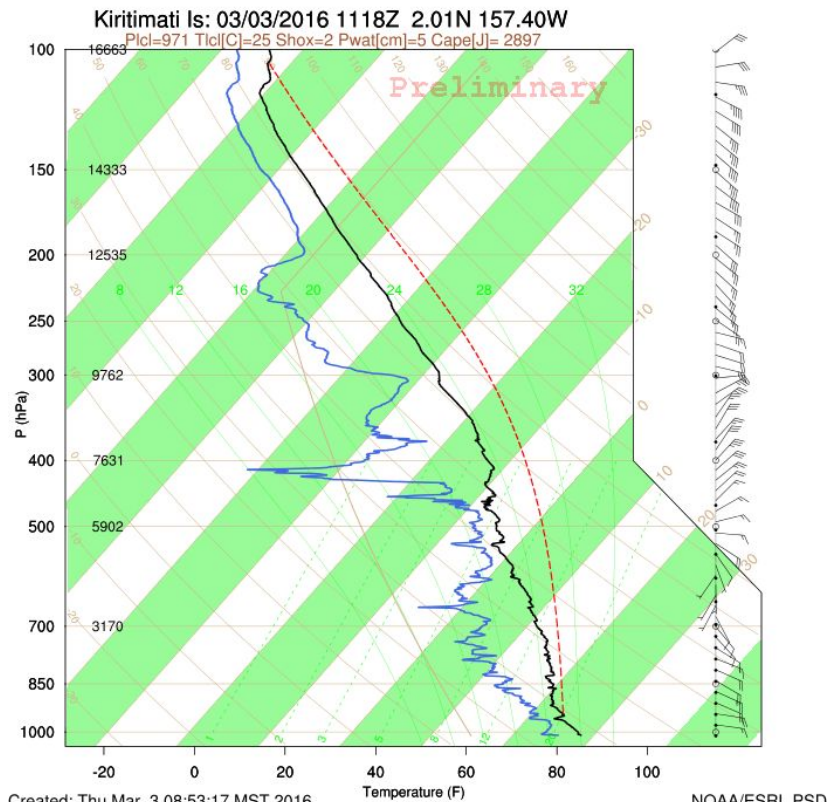
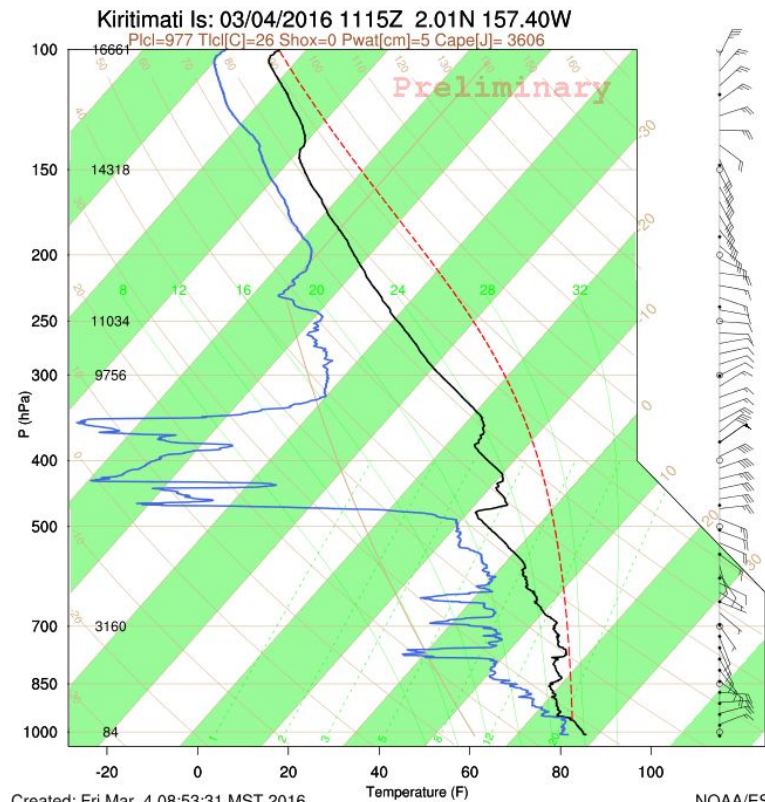
INIT: 00Z04MAR2016 fx: [240] hr --> Mon 00Z14MAR2016

Max Wind 184.2 knots

### 300 wind 14 March

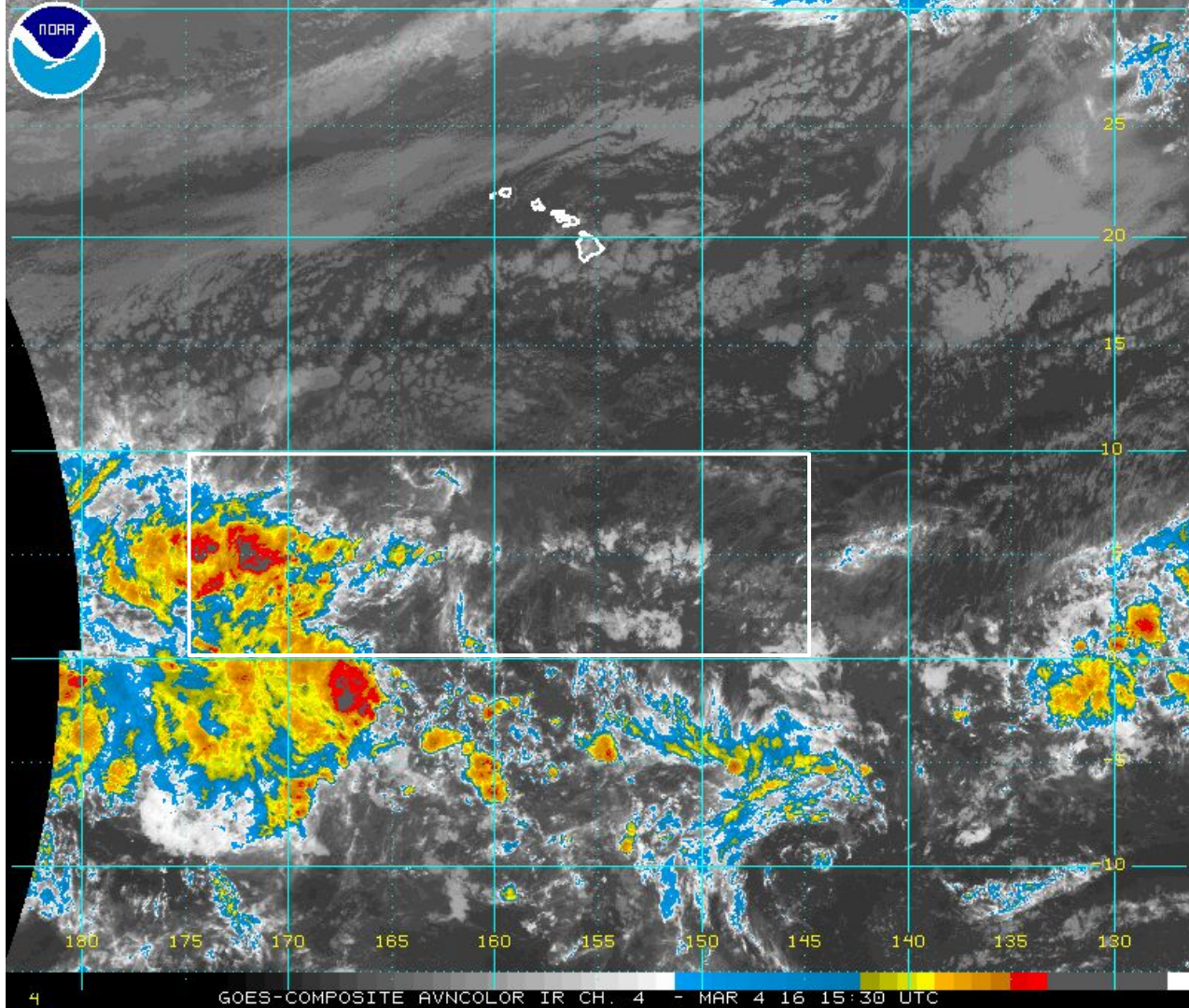




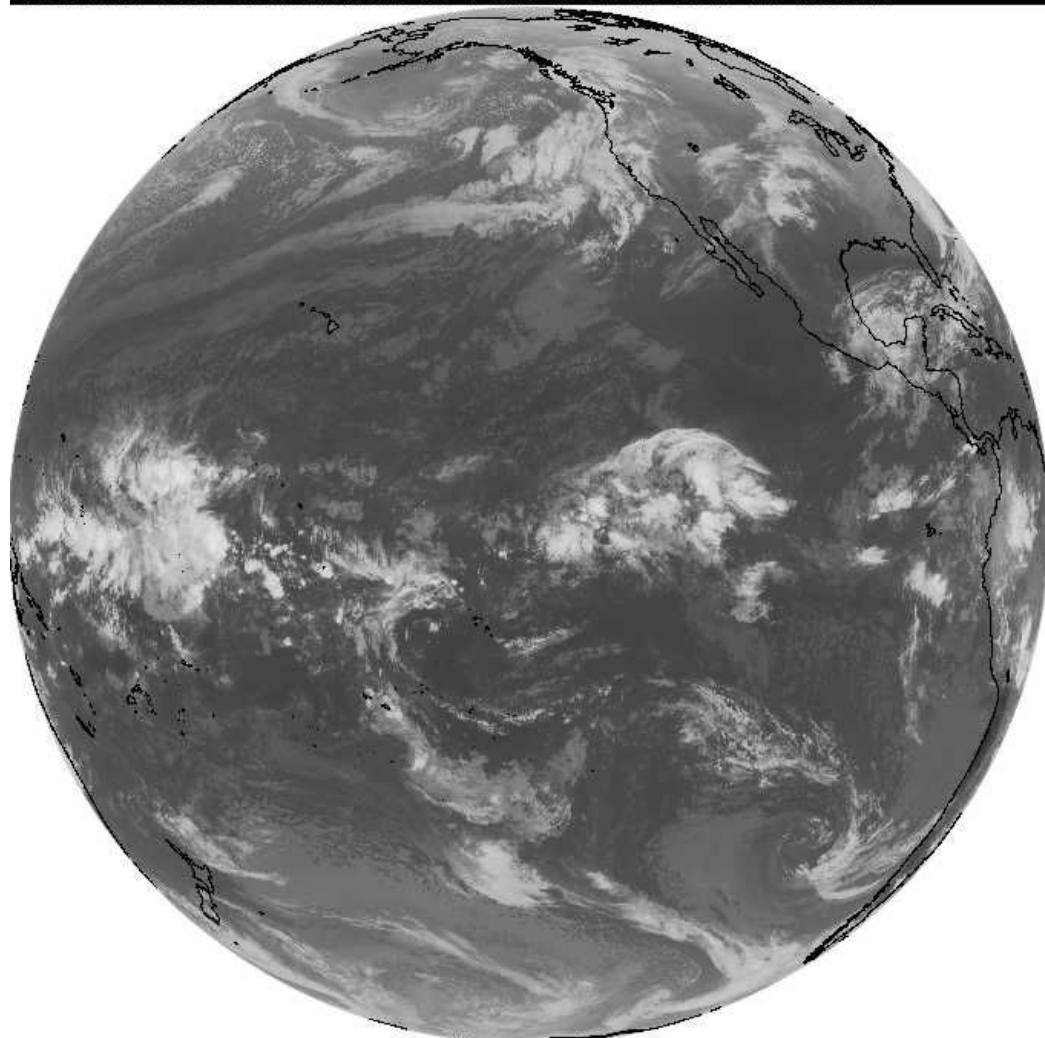




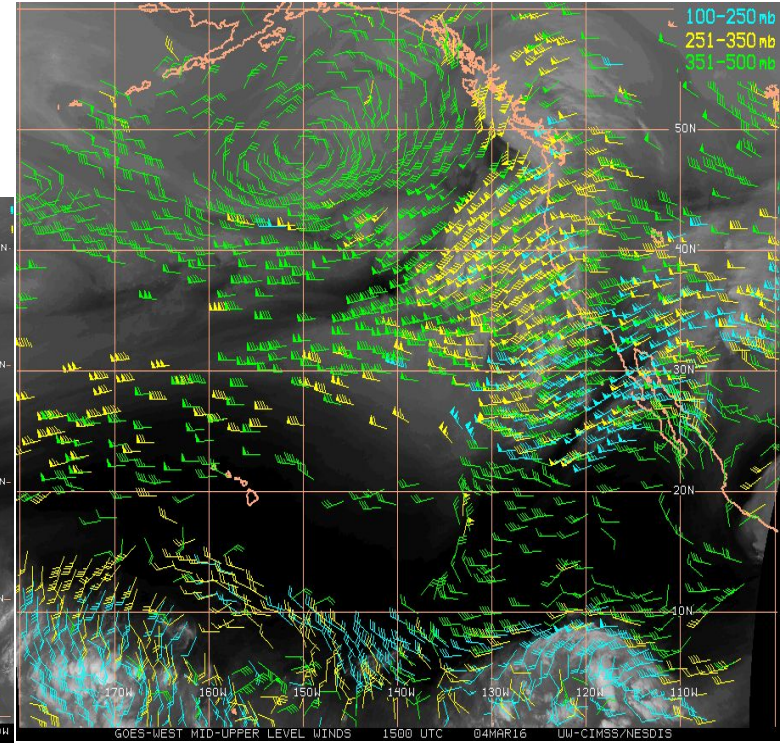
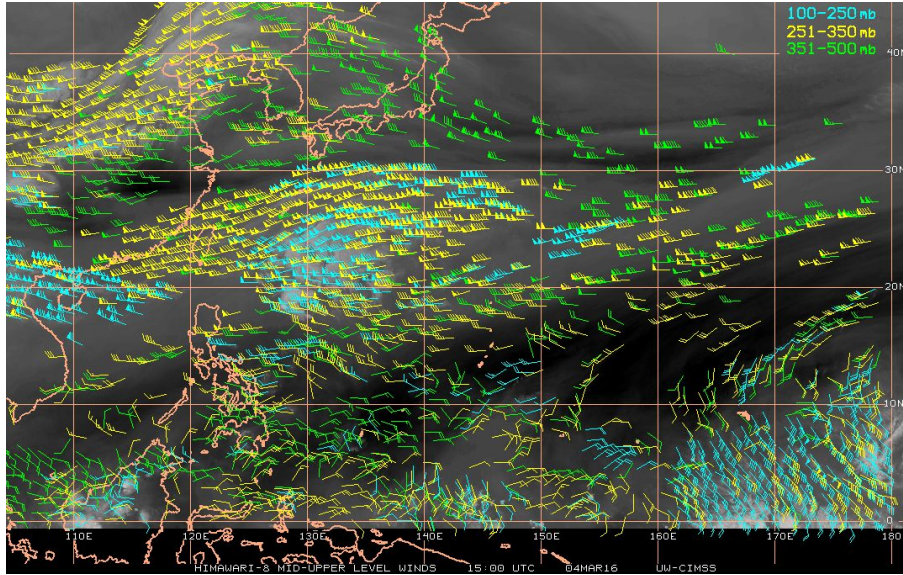
Fri 1530Z



Fri 15Z







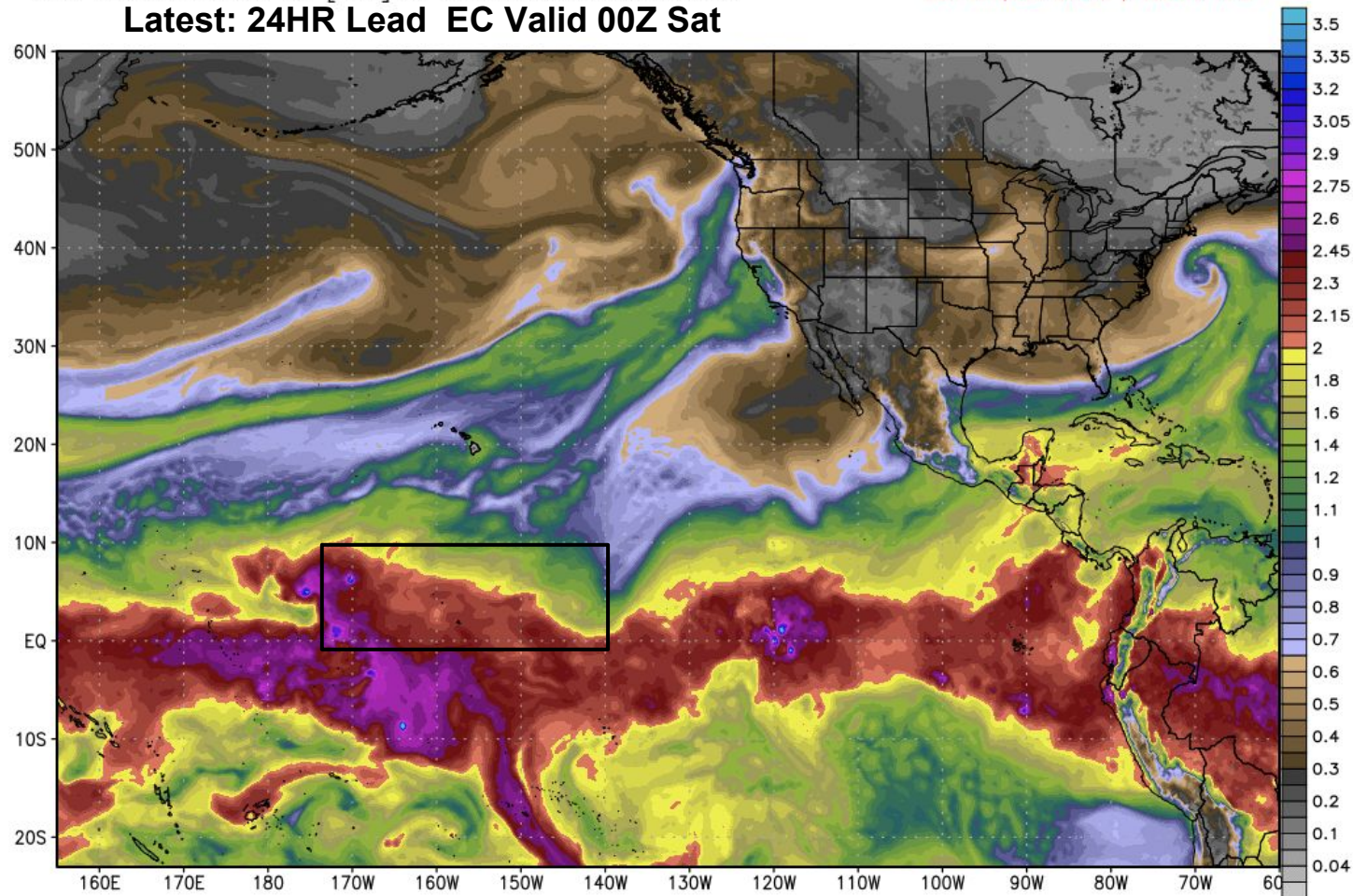
**15Z WPac and EPac Satellite Winds**

EC Fcst from 00Z Fri Initializations

ECMWF Column Water [inch]  
INIT: 00Z04MAR2016 fx: [024] hr --> Sat 00Z05MAR2016

MaxPWAT: 4.41 inch  
SLP Min|Max 964.0 | 1028.7 hPa

**Latest: 24HR Lead EC Valid 00Z Sat**

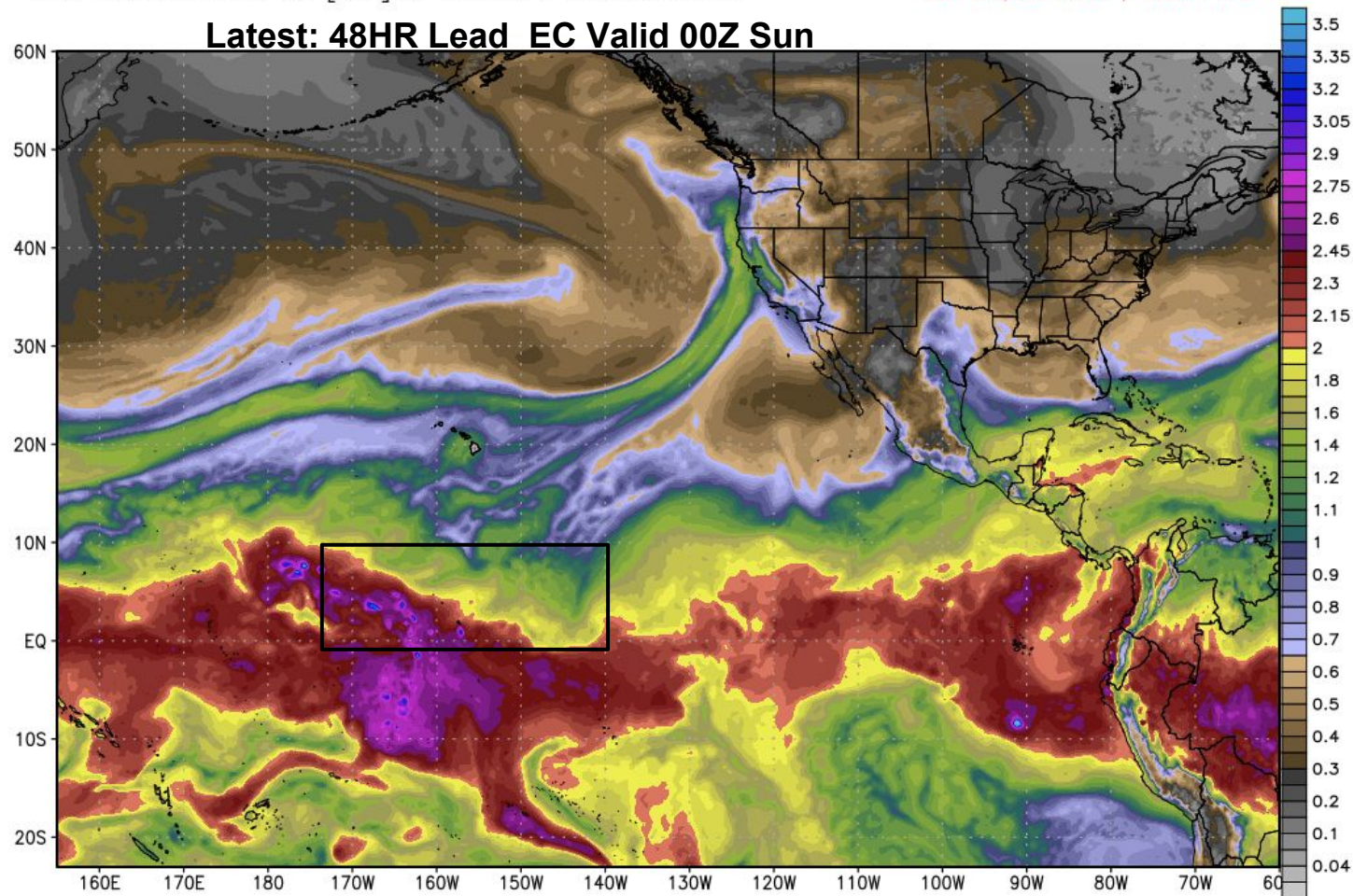




ECMWF Column Water [inch]  
INIT: 00Z04MAR2016 fx: [048] hr --> Sun 00Z06MAR2016

MaxPWAT: 4.05 inch  
SLP Min|Max 972.0 | 1031.5 hPa

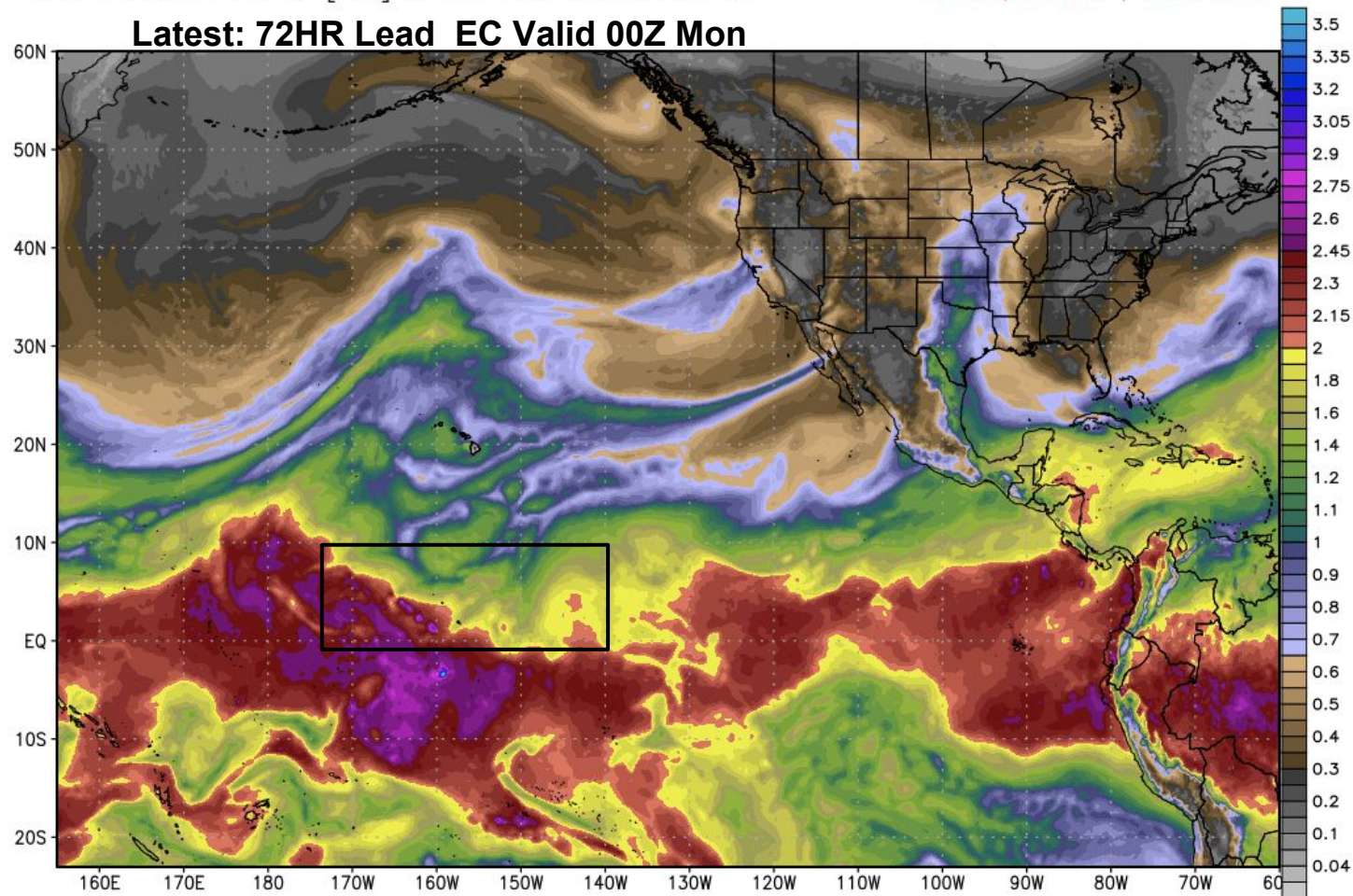
## Latest: 48HR Lead EC Valid 00Z Sun



ECMWF Column Water [inch]  
INIT: 00Z04MAR2016 fx: [072] hr --> Mon 00Z07MAR2016

MaxPWAT: 3.74 inch  
SLP Min|Max 969.0 | 1033.7 hPa

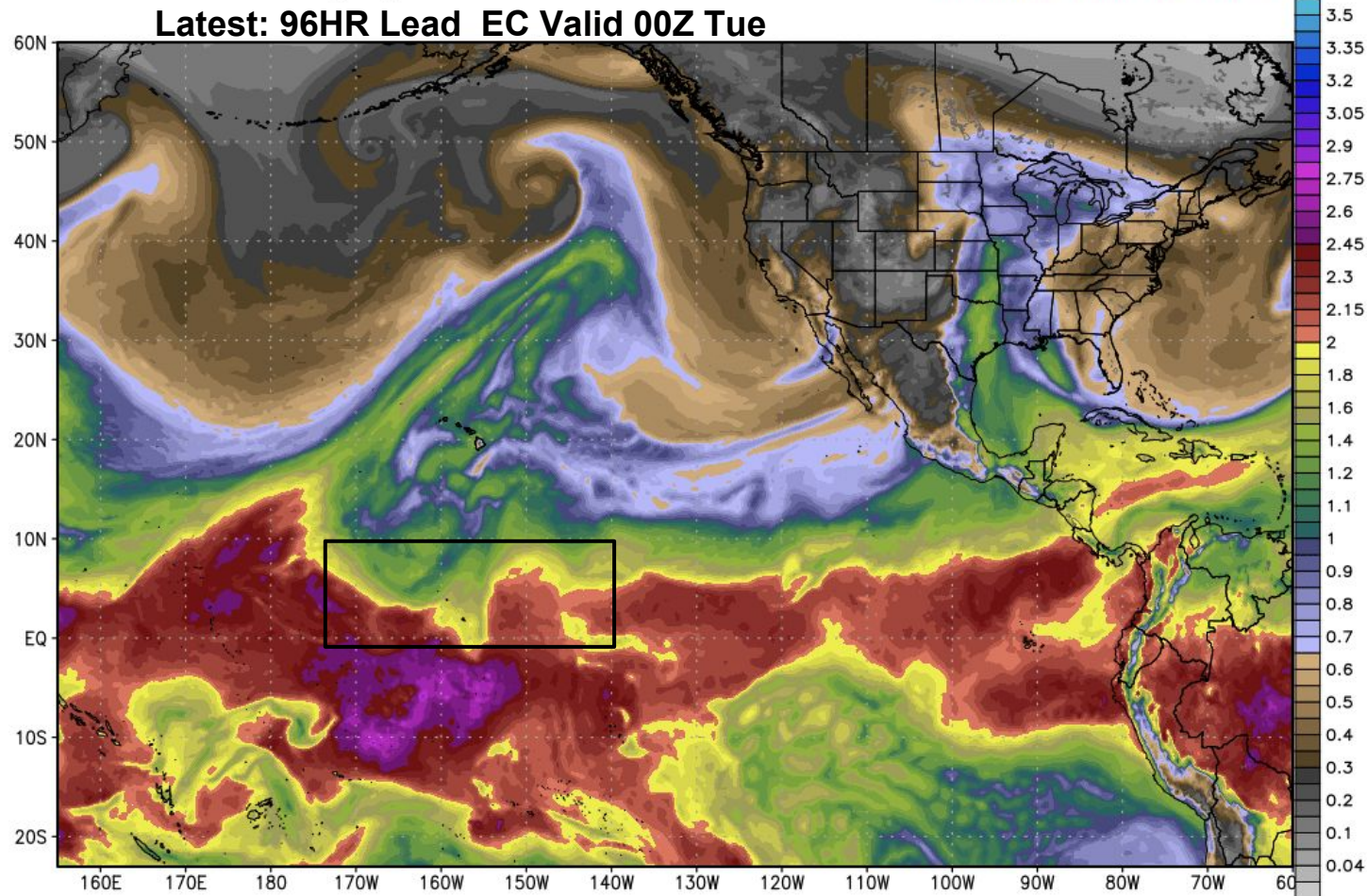
## Latest: 72HR Lead EC Valid 00Z Mon





ECMWF Column Water [inch]  
INIT: 00Z04MAR2016 fx: [096] hr --> Tue 00Z08MAR2016

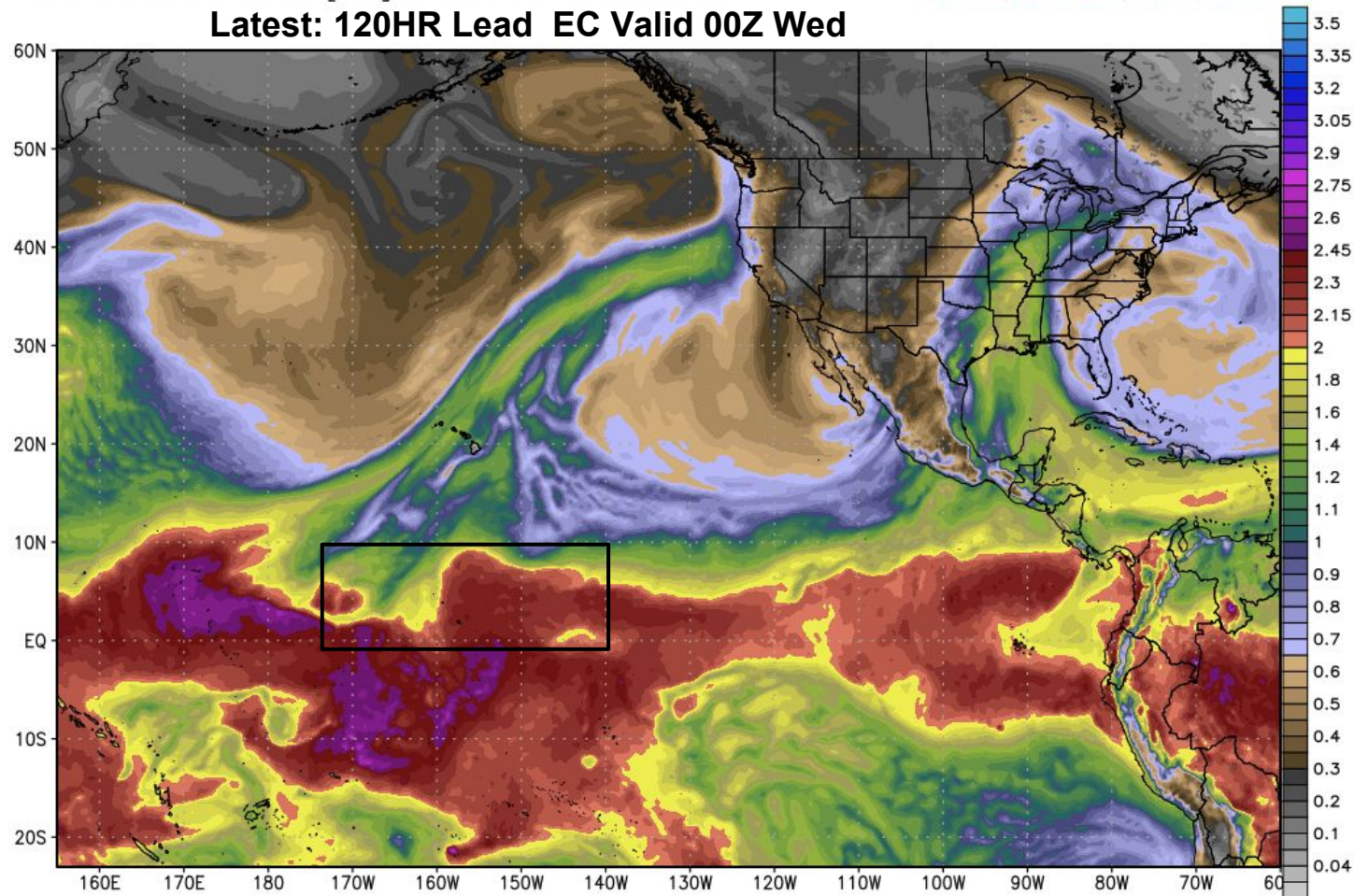
MaxPWAT: 3.46 inch  
SLP Min|Max 970.1 | 1034.4 hPa



ECMWF Column Water [inch]  
INIT: 00Z04MAR2016 fx: [120] hr --> Wed 00Z09MAR2016

MaxPWAT: 3.55 inch  
SLP Min|Max 970.8 | 1034.7 hPa

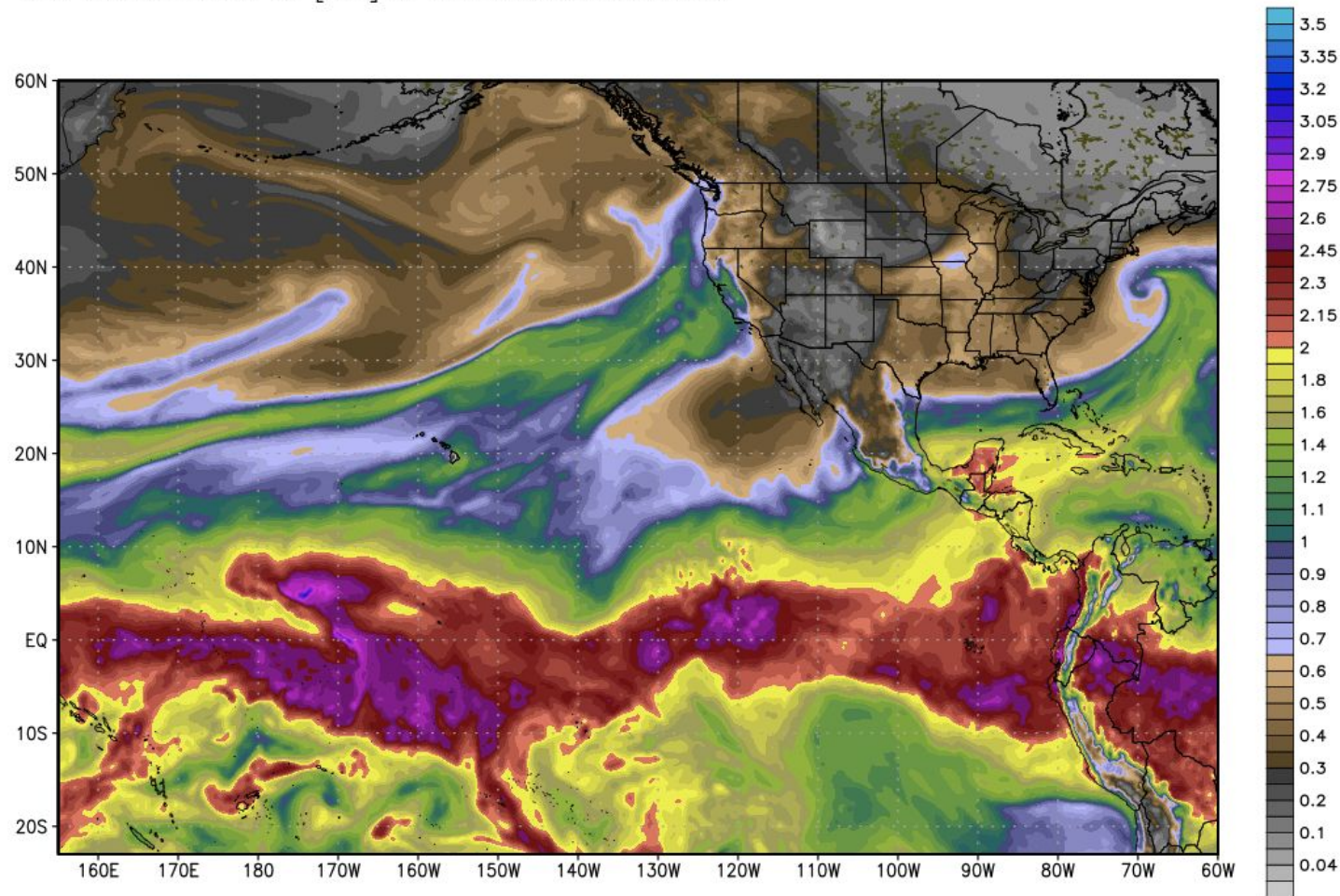
## Latest: 120HR Lead EC Valid 00Z Wed



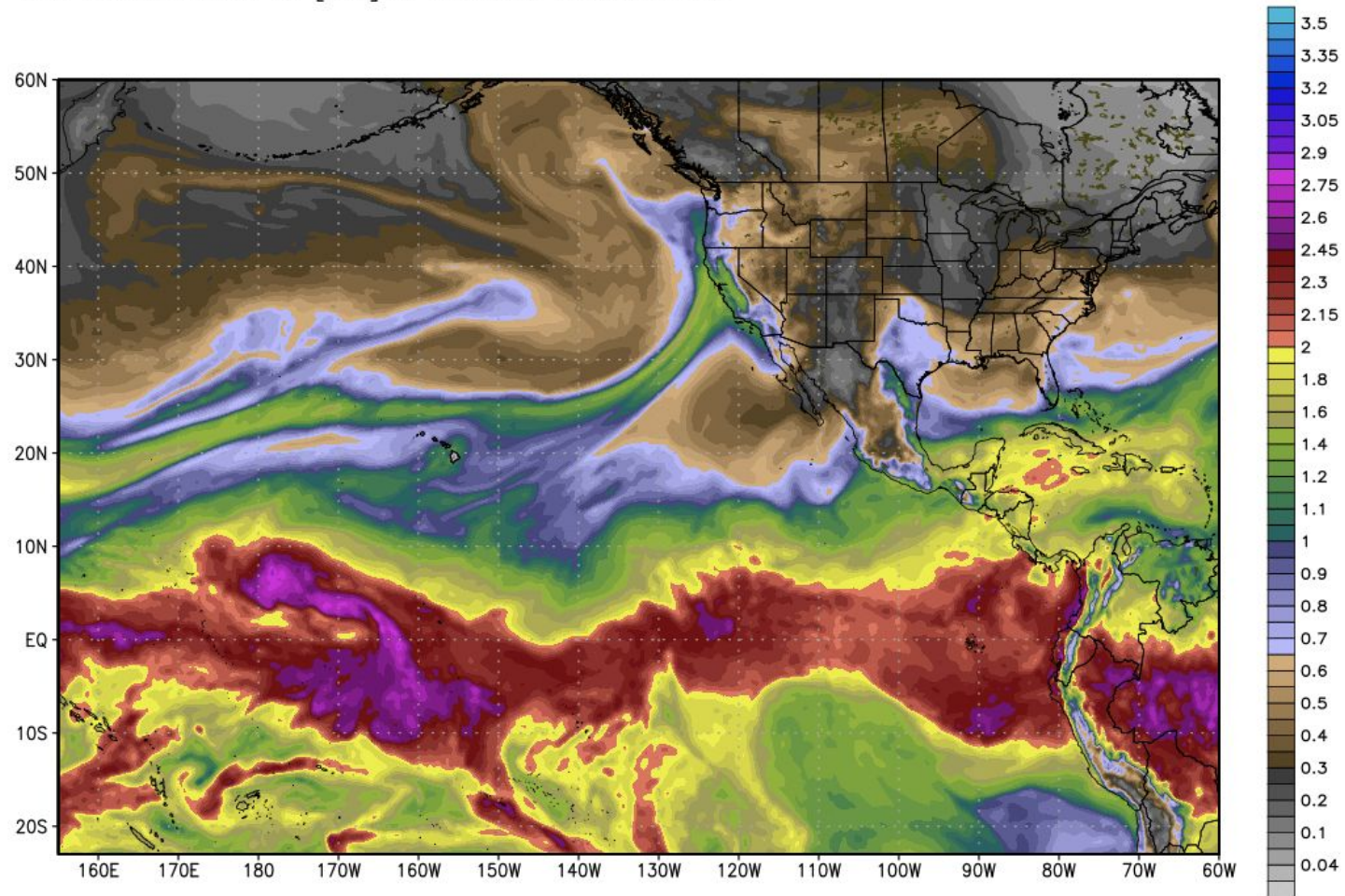
GFS PWAT



NCEP GFS Precipitable Water [inch]  
INIT: 12Z04MAR2016 fx: [012] hr --> Sat 00Z05MAR2016

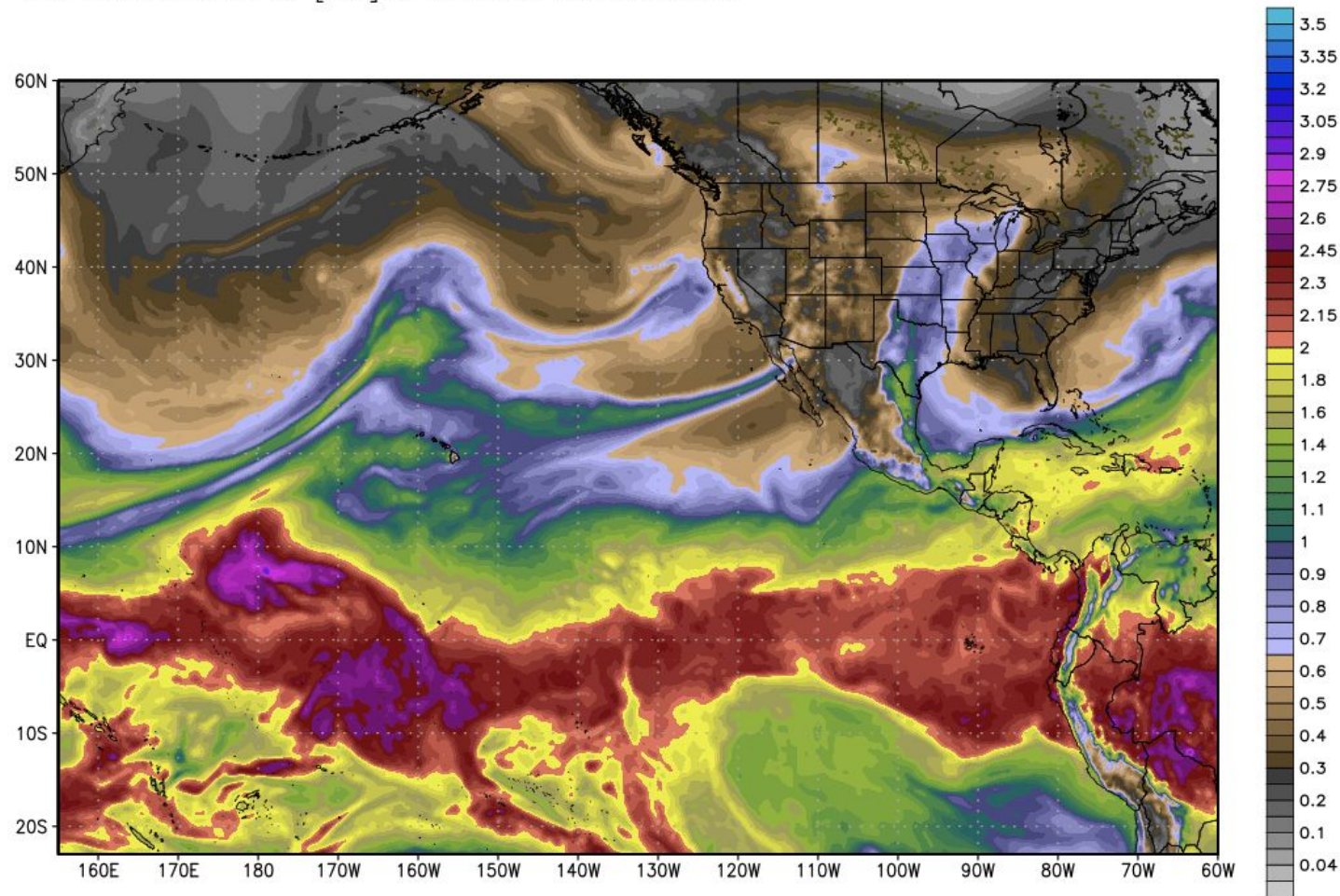


NCEP GFS Precipitable Water [inch]  
INIT: 12Z04MAR2016 fx: [036] hr --> Sun 00Z06MAR2016

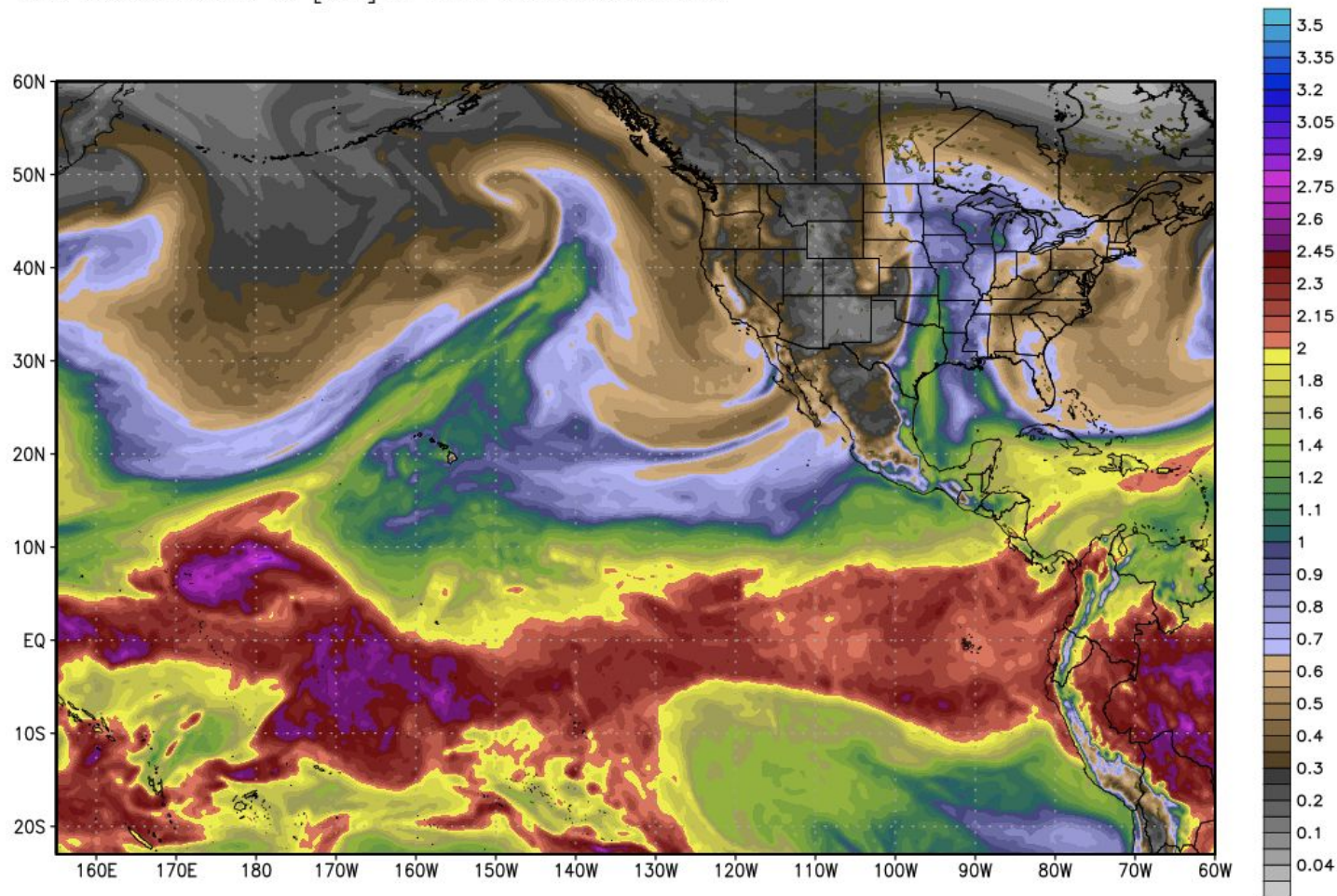




NCEP GFS Precipitable Water [inch]  
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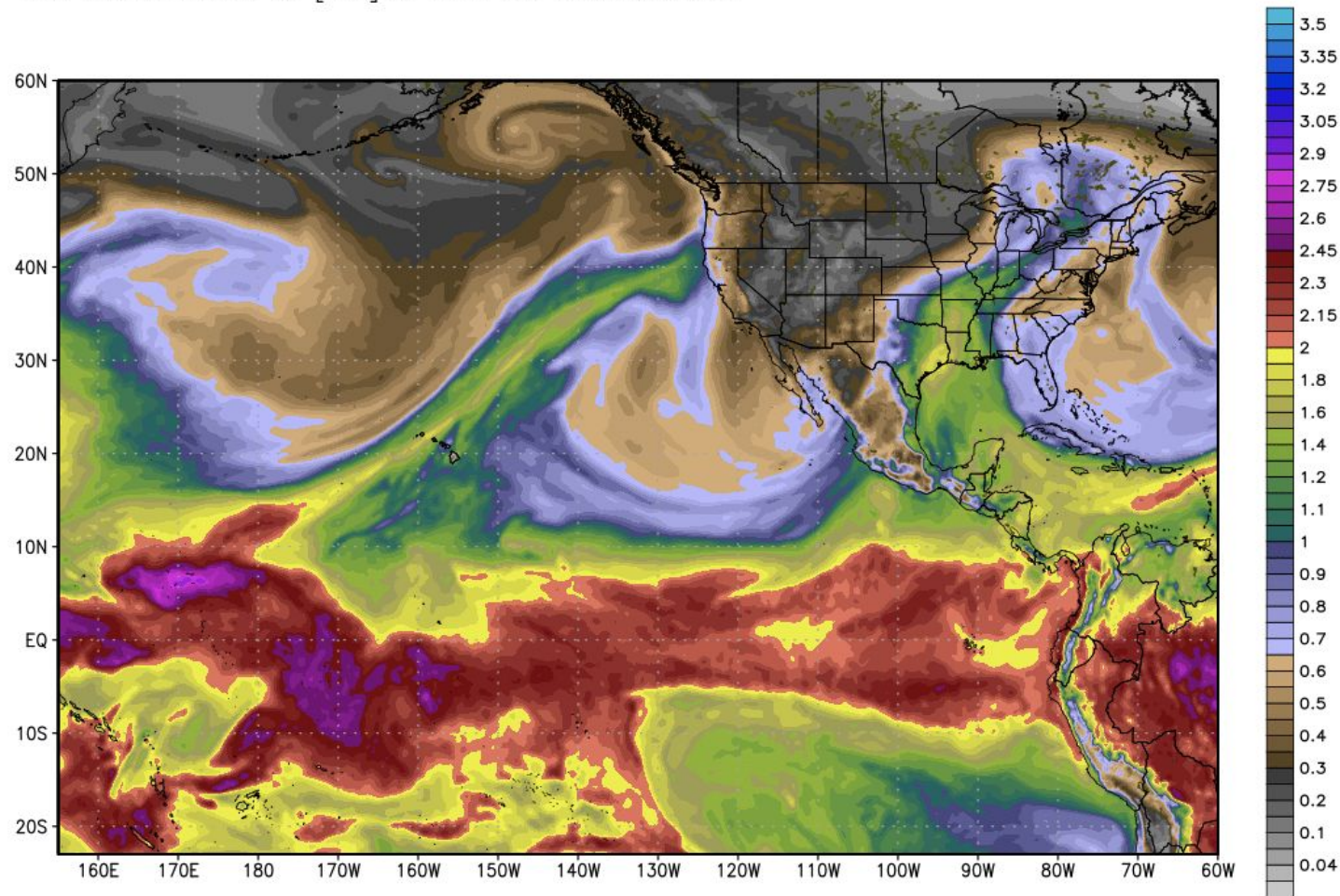


NCEP GFS Precipitable Water [inch]  
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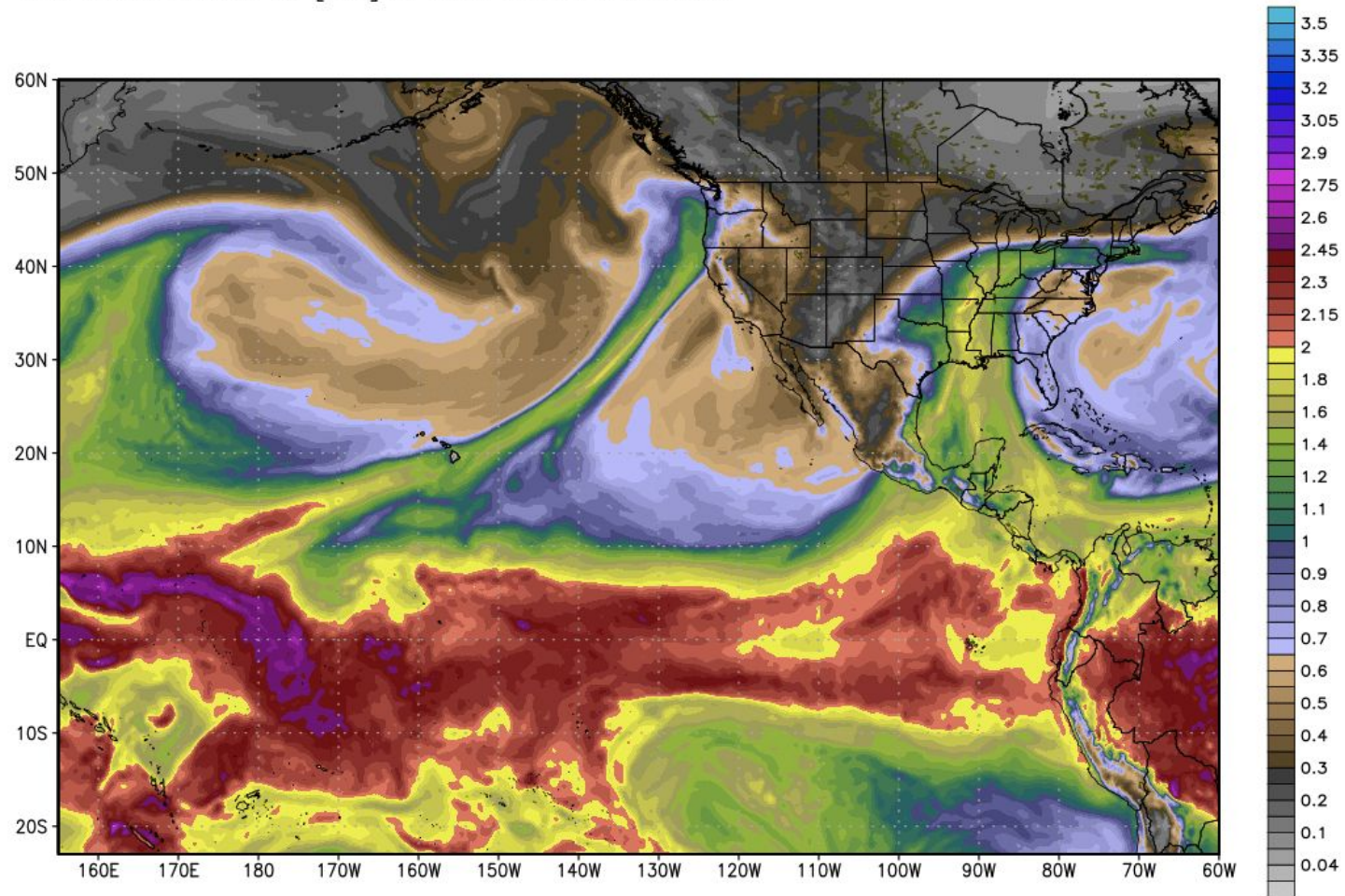




NCEP GFS Precipitable Water [inch]  
INIT: 12Z04MAR2016 fx: [108] hr --> Wed 00Z09MAR2016

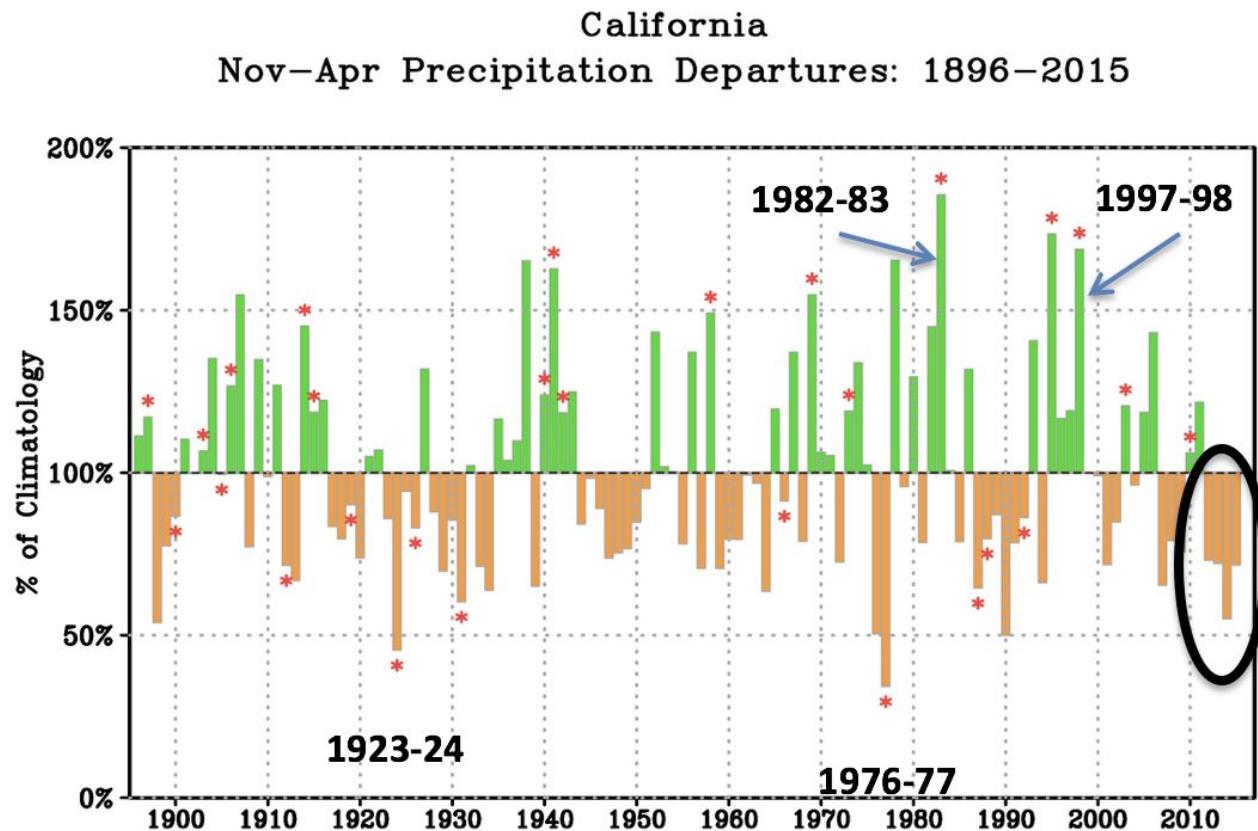


NCEP GFS Precipitable Water [inch]  
INIT: 12Z04MAR2016 fx: [132] hr --> Thu 00Z10MAR2016



California Dream'n

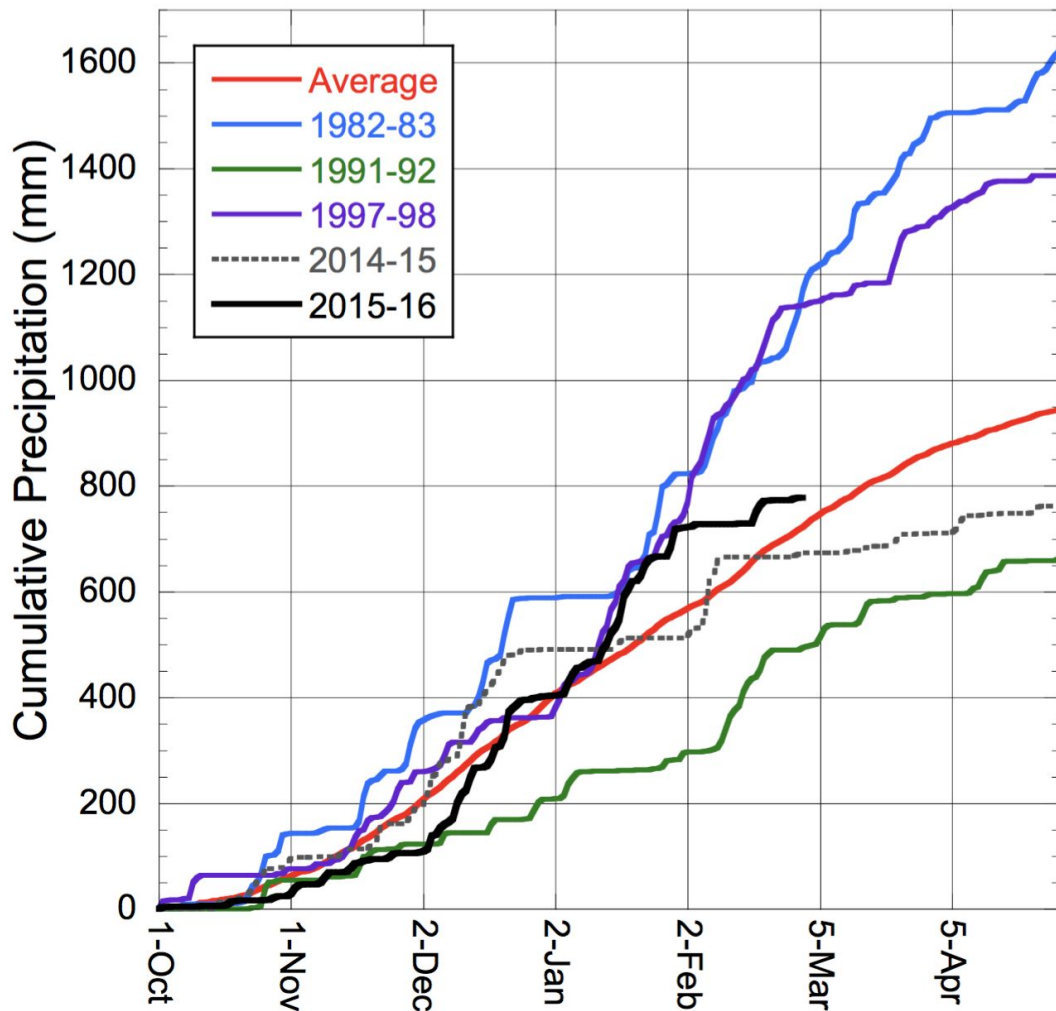
# Is El Niño A California Drought Buster?





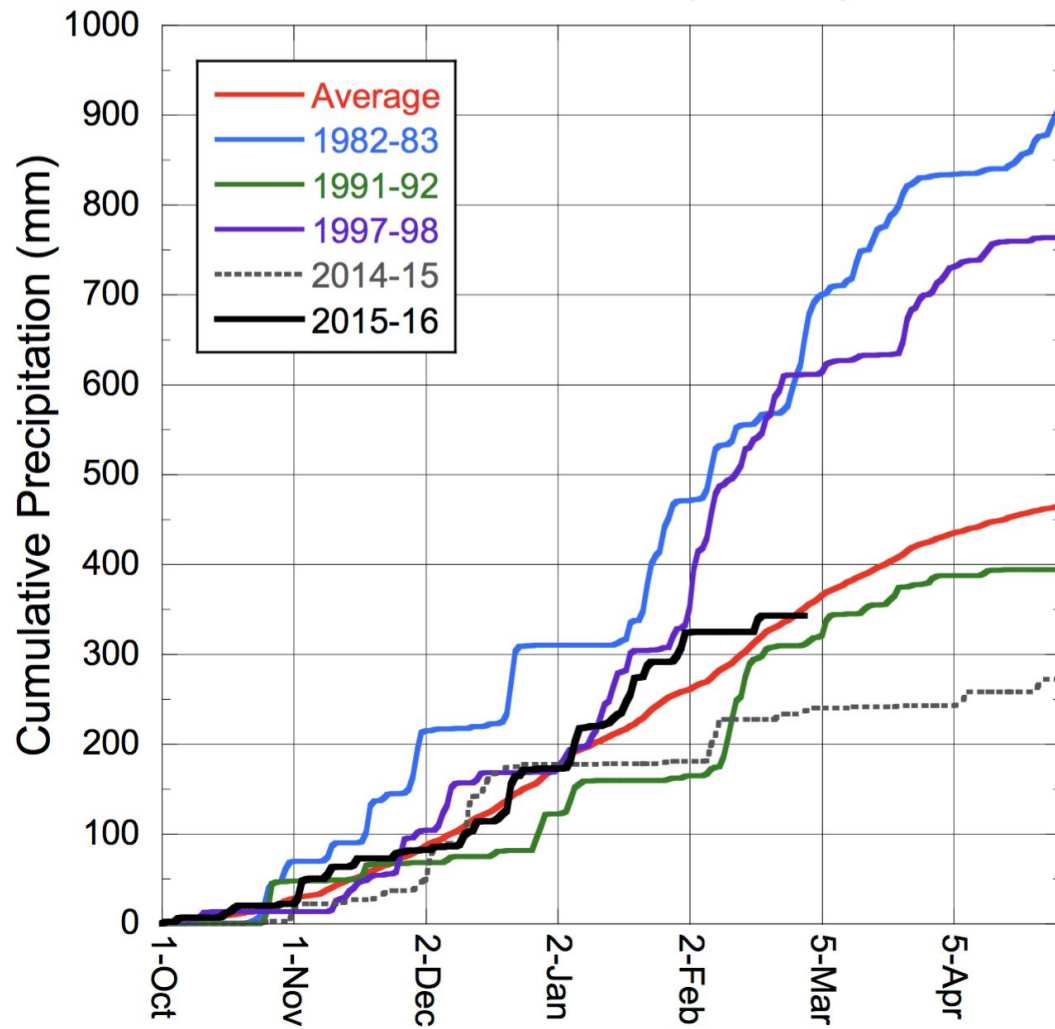
# Northern California (PRISM)

Courtesy Brant Liebmann



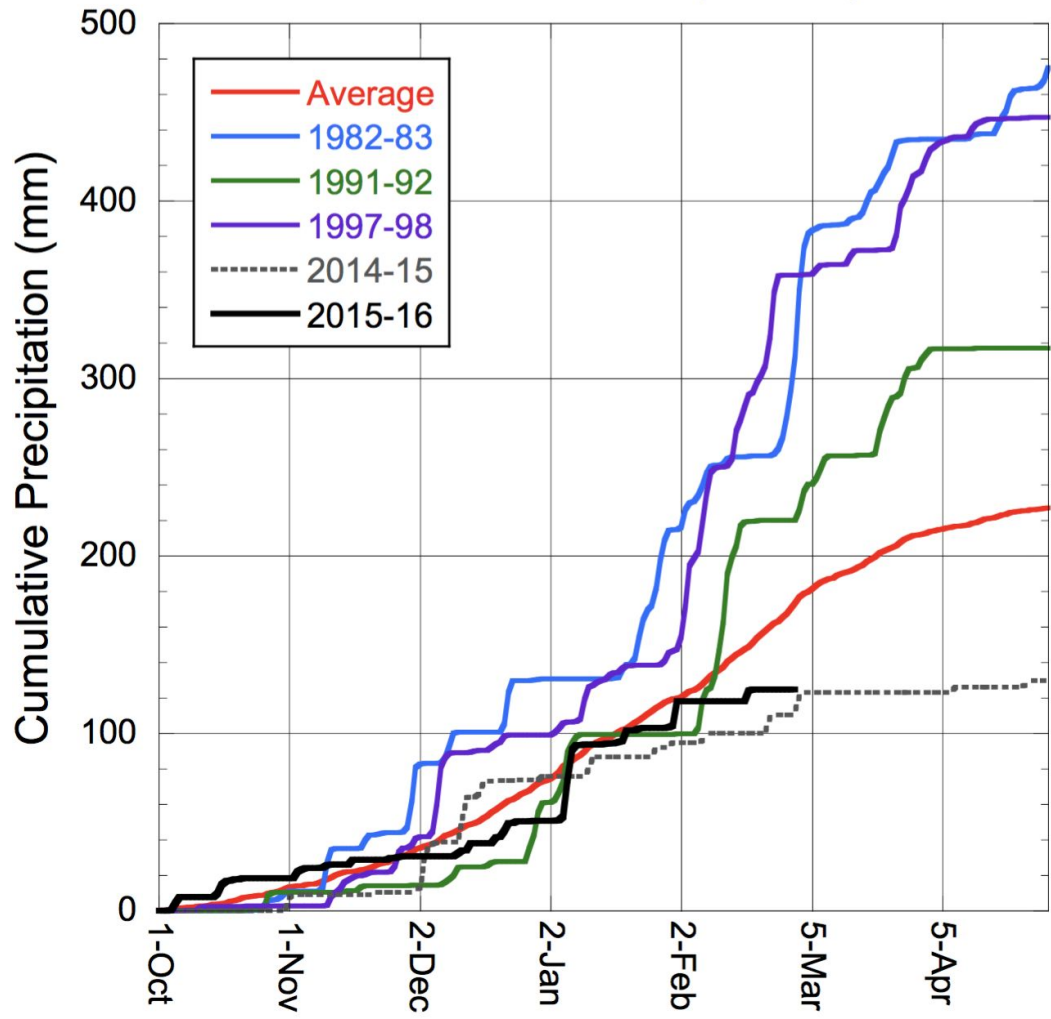
# Central California (PRISM)

Courtesy Brant Liebmann



# Southern California (PRISM)

Courtesy Brant Liebmann





For CA, a few examples of stations from across the state, departures since Oct. 1:

#### SOCAL

San Diego (Brown Field ) -2.22

Los Angeles (LAX) -5.03

Paso Robles -3.43

Santa Barbara -5.99

#### CENTRAL/NORCAL

San Francisco (downtown) -3.67

San Jose -2.21

Sacramento -4.05

Stockton -0.31

Modesto +0.67

Redding -1.25 (+1.74 since January)

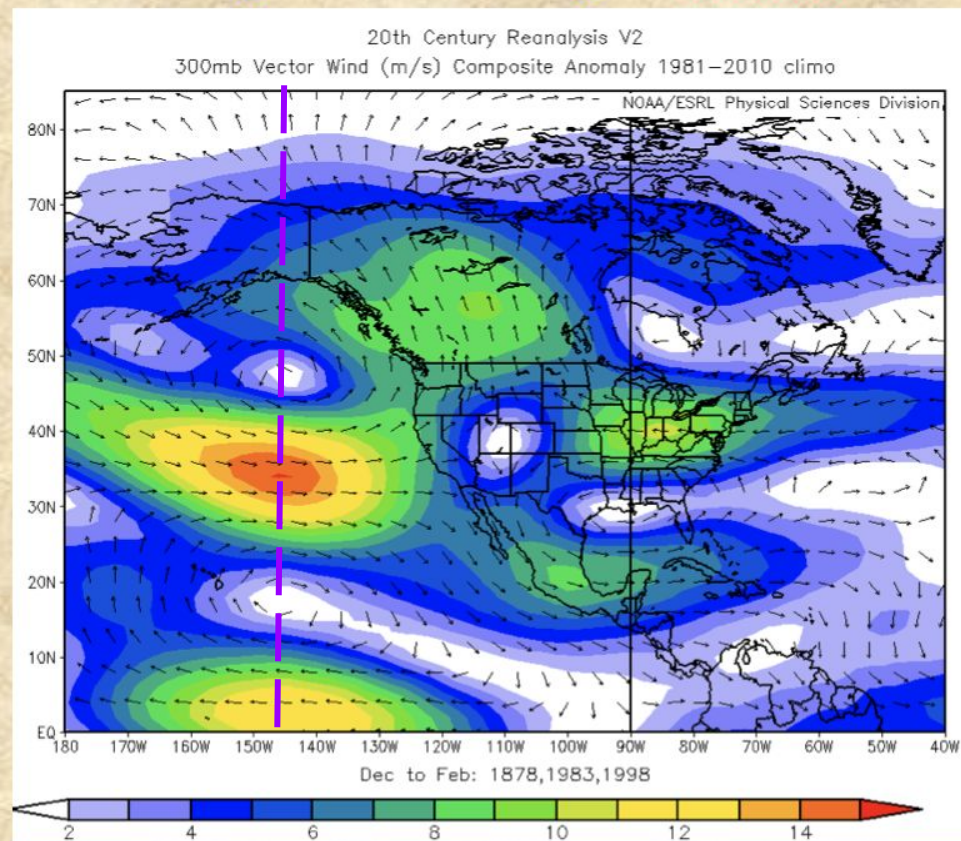
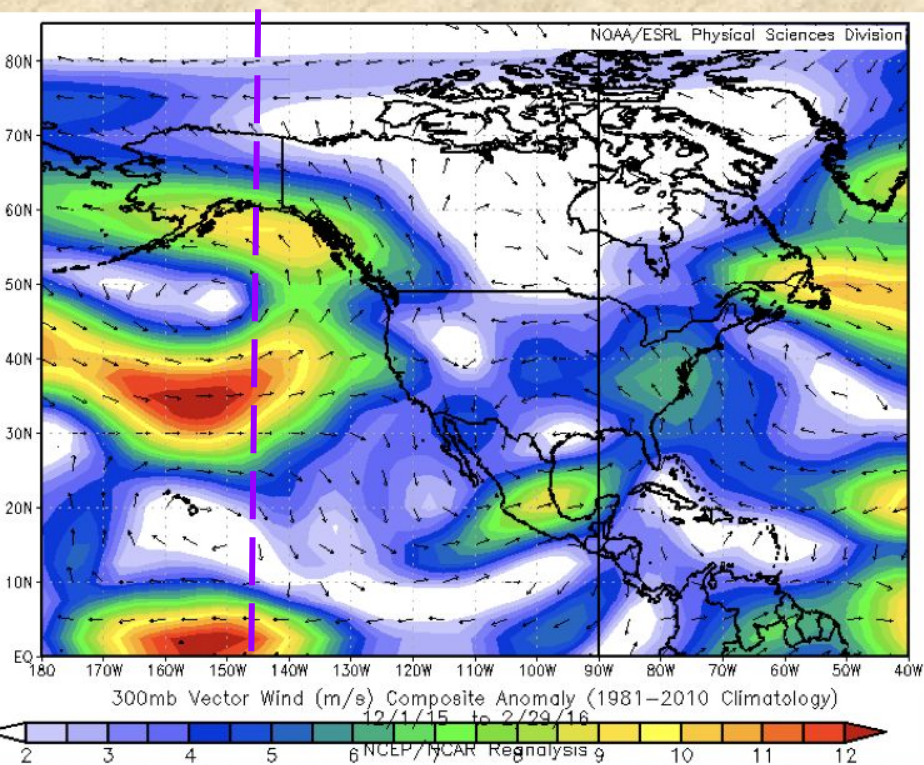
Eureka +7.59

Crescent City +8.73

*thanks to Randy for this update....*

Is El Nino 2016 El Nino-No Show?

# *Circulation in DJF 2015-16 versus three previous 'Super Niños'*

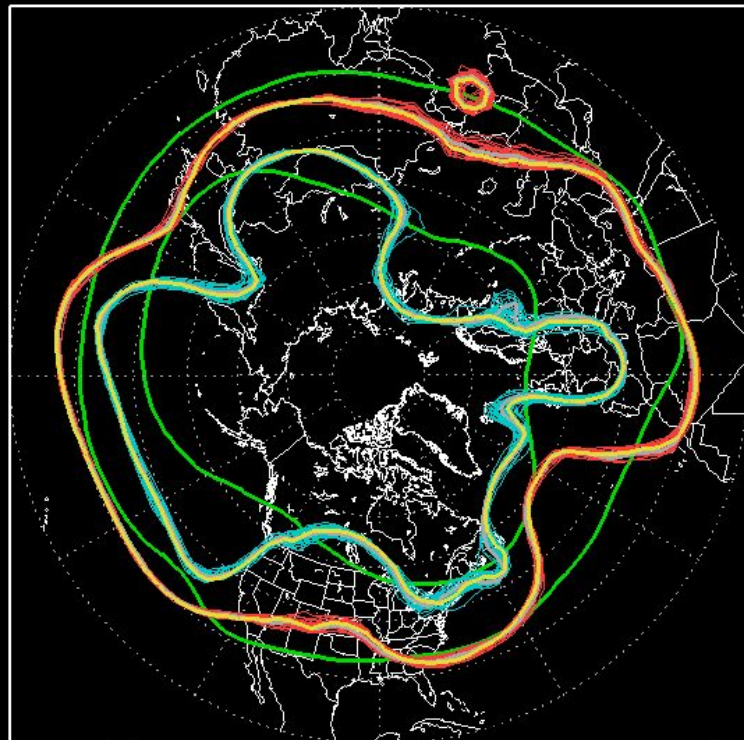


Courtesy of Klaus Wolter, based on oral presentation to Nevada Water Resources Association



# NCEP ENSEMBLE 500mb Z

048H Forecast from: 00Z Fri MAR,04 2016  
Valid time: 00Z Sun MAR,06 2016



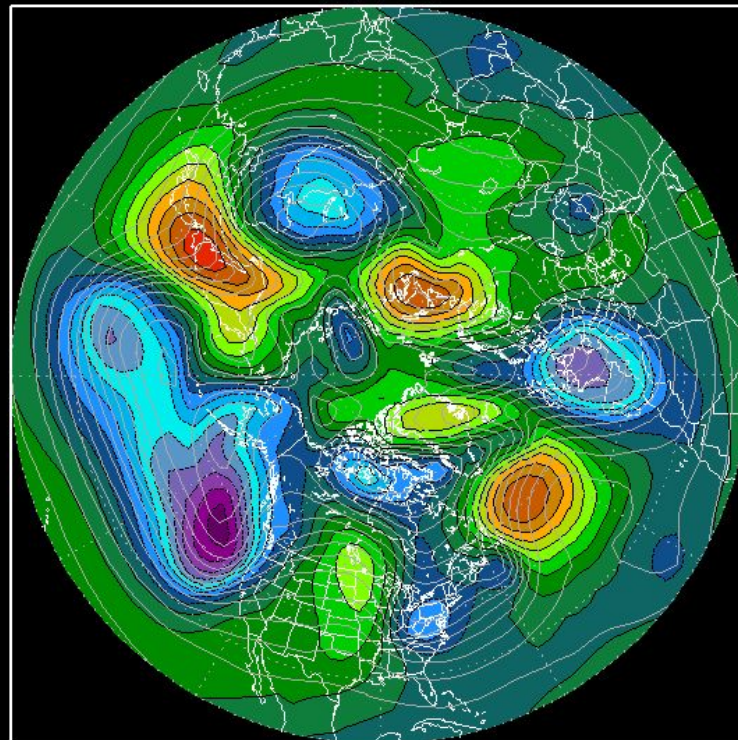
00z Runs:(21)

12z Runs:(21)

— 5400m — 5700m — Cntrl 00z — Cntrl 12z — CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

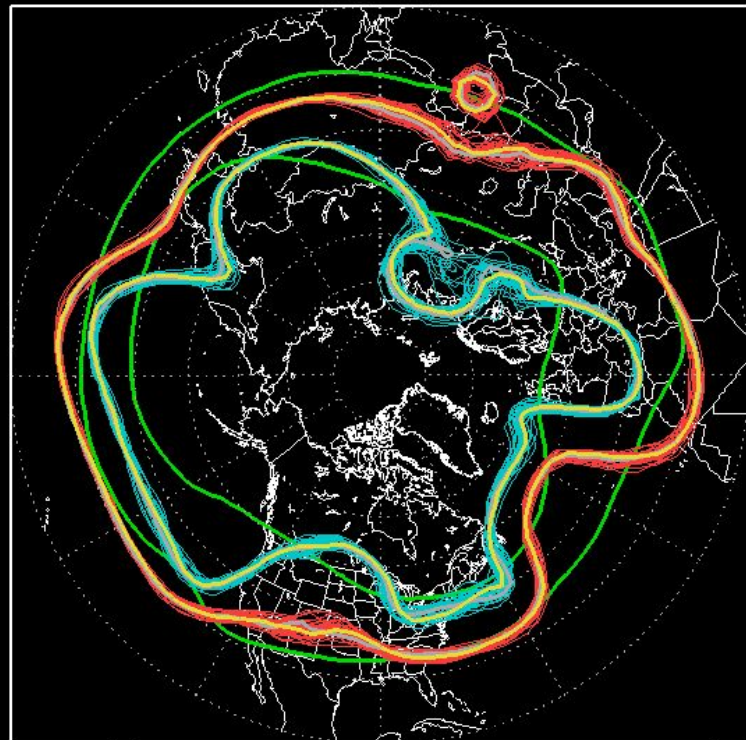
048H Forecast from: 00Z Fri MAR,04 2016  
Valid time: 00Z Sun MAR,06 2016



— -360 — -280 — -200 — -120 — -40 — 40 — 120 — 200 — 280 — 360

# NCEP ENSEMBLE 500mb Z

072H Forecast from: 00Z Thu MAR,03 2016  
Valid time: 00Z Sun MAR,06 2016



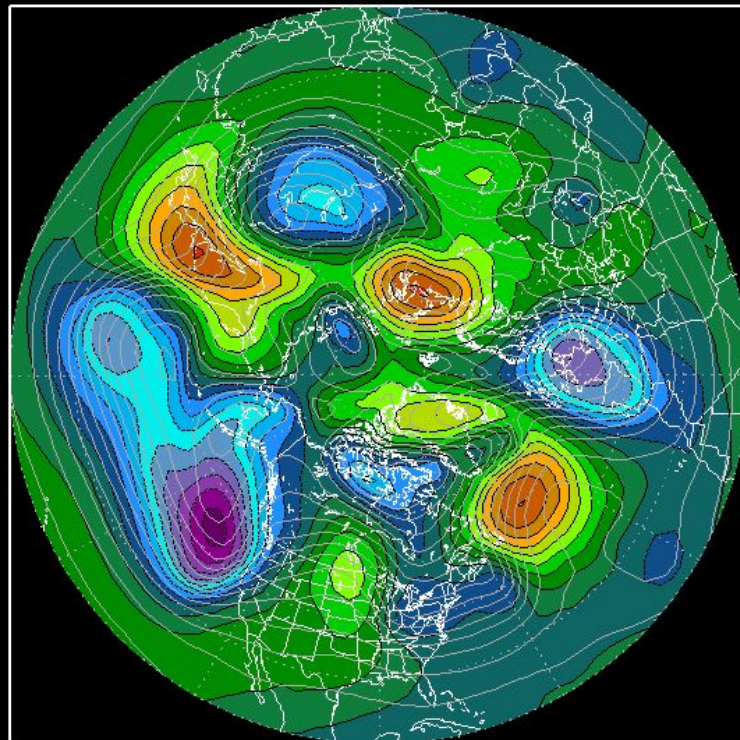
00z Runs:(21)

12z Runs:(21)

— 5460m — 5700m — Cntrl 00z — Cntrl 12z — CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

072H Forecast from: 00Z Thu MAR,03 2016  
Valid time: 00Z Sun MAR,06 2016

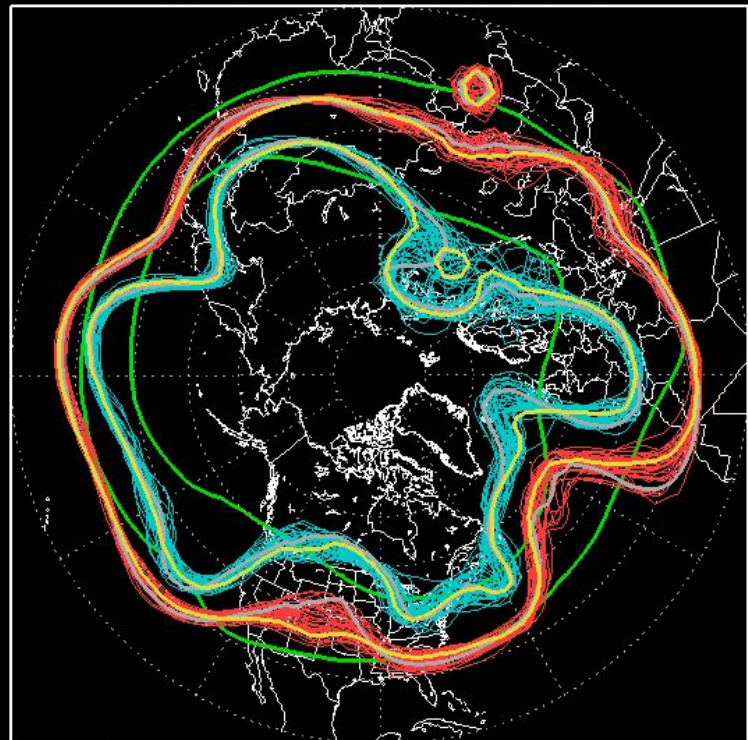


-360 -280 -200 -120 -40 40 120 200 280 360



# NCEP ENSEMBLE 500mb Z

096H Forecast from: 00Z Wed MAR,02 2016  
Valid time: 00Z Sun MAR,06 2016

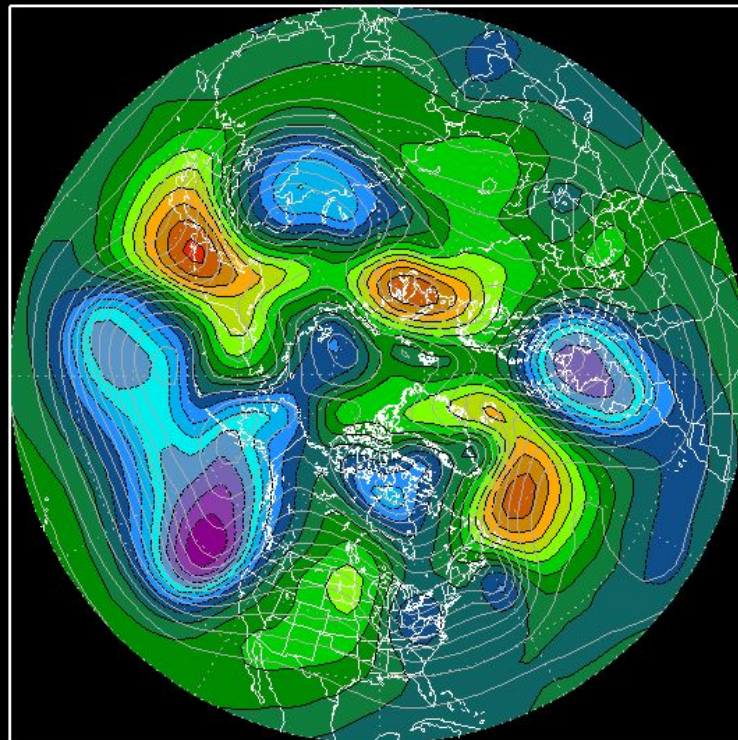


00z Runs:(21) 12z Runs:(21)

5460m 5700m Cntrl 00z Cntrl 12z CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

096H Forecast from: 00Z Wed MAR,02 2016  
Valid time: 00Z Sun MAR,06 2016

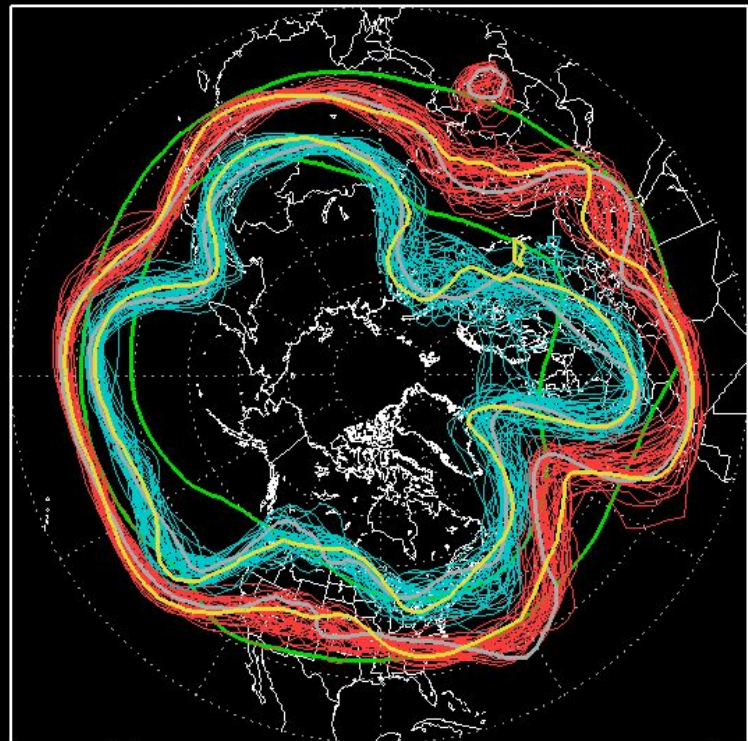


-360 -280 -200 -120 -40 40 120 200 280 360



# NCEP ENSEMBLE 500mb Z

144H Forecast from: 00Z Mon FEB,29 2016  
Valid time: 00Z Sun MAR,06 2016

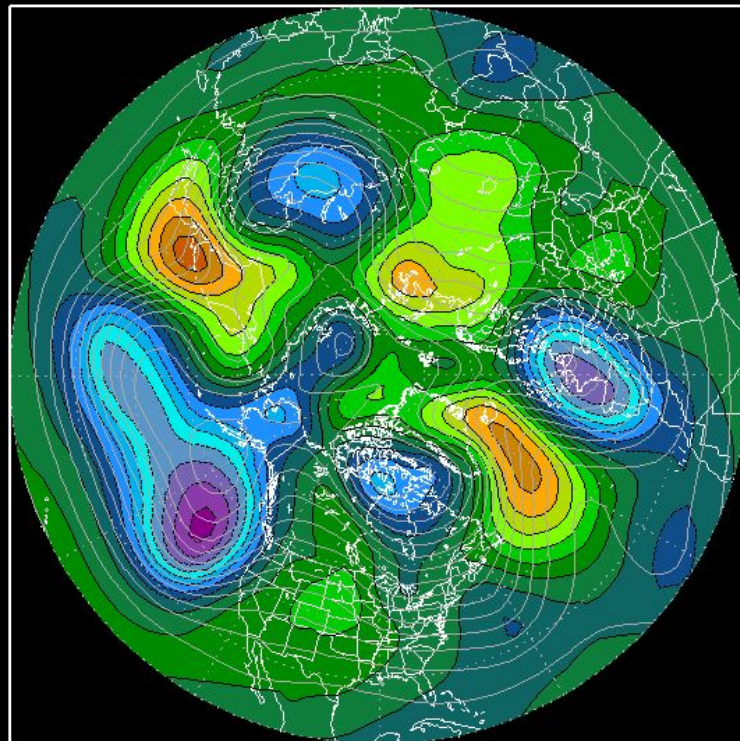


00z Runs:(21) 12z Runs:(21)

5460m 5700m Cntrl 00z Cntrl 12z CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

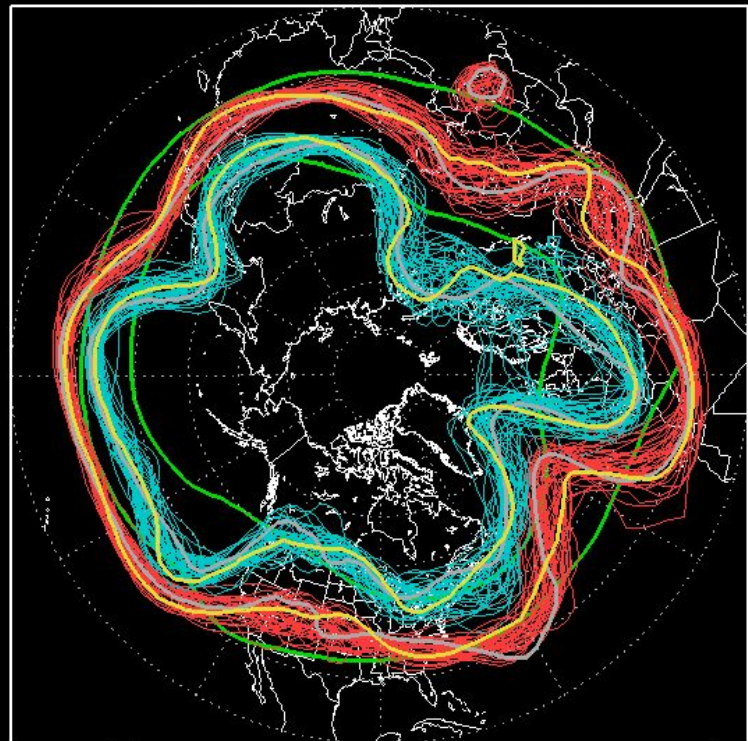
144H Forecast from: 00Z Mon FEB,29 2016  
Valid time: 00Z Sun MAR,06 2016



-360 -280 -200 -120 -40 40 120 200 280 360

# NCEP ENSEMBLE 500mb Z

144H Forecast from: 00Z Mon FEB,29 2016  
Valid time: 00Z Sun MAR,06 2016

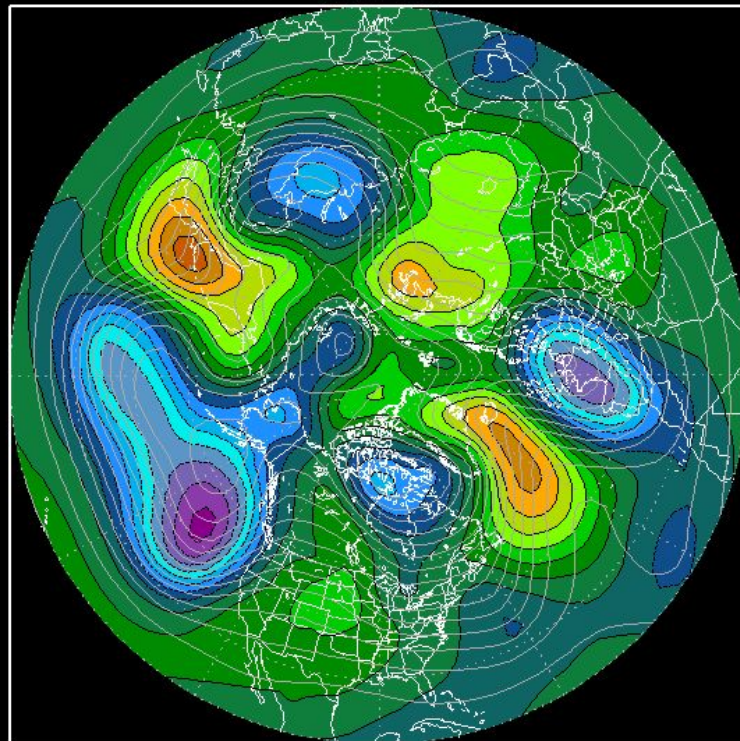


00z Runs:(21) 12z Runs:(21)

5460m 5700m Cntrl 00z Cntrl 12z CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

144H Forecast from: 00Z Mon FEB,29 2016  
Valid time: 00Z Sun MAR,06 2016

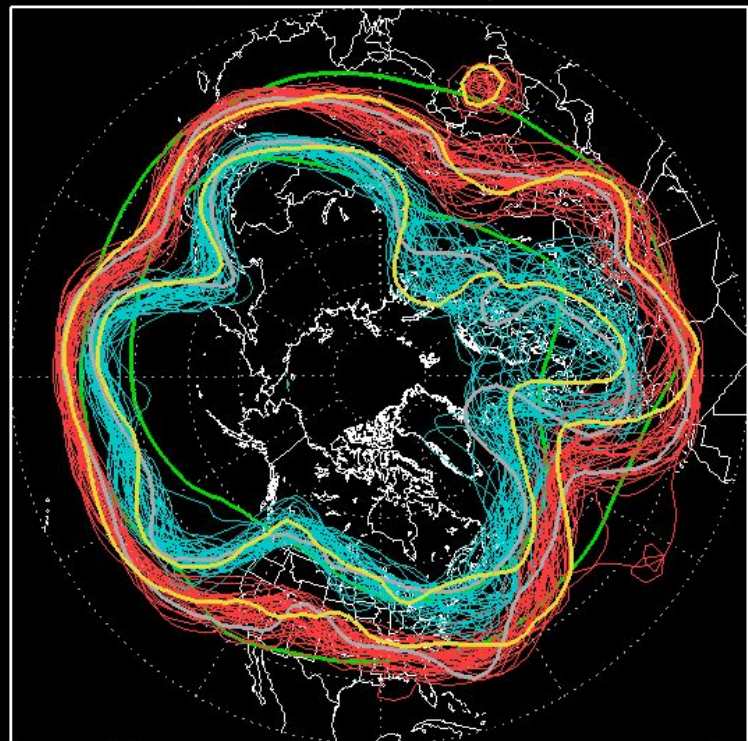




# NCEP ENSEMBLE 500mb Z

168H Forecast from: 00Z Sun FEB,28 2016

Valid time: 00Z Sun MAR,06 2016



00z Runs:(21)

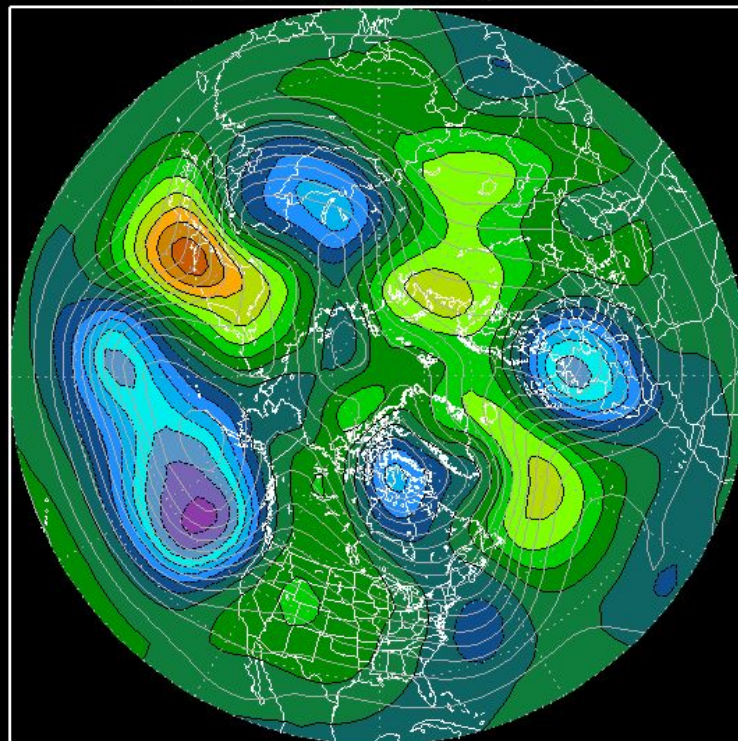
12z Runs:(21)

5460m 5700m Cntrl 00z Cntrl 12z CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

168H Forecast from: 00Z Sun FEB,28 2016

Valid time: 00Z Sun MAR,06 2016

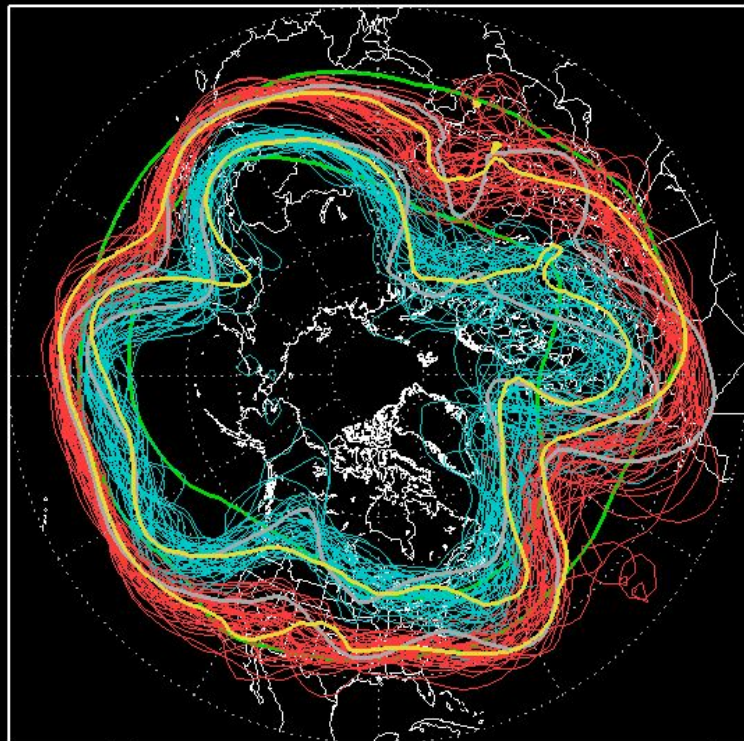


-360 -280 -200 -120 -40 40 120 200 280 360



# NCEP ENSEMBLE 500mb Z

192H Forecast from: 00Z Sat FEB,27 2016  
Valid time: 00Z Sun MAR,06 2016

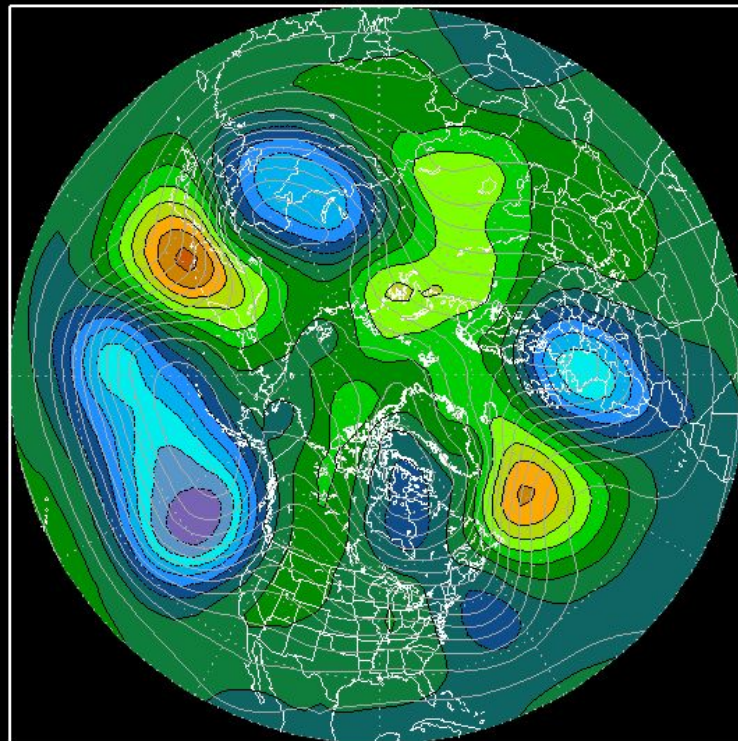


00z Runs:(21) 12z Runs:(21)

— 5460m — 5700m — Cntrl 00z — Cntrl 12z — CLIM

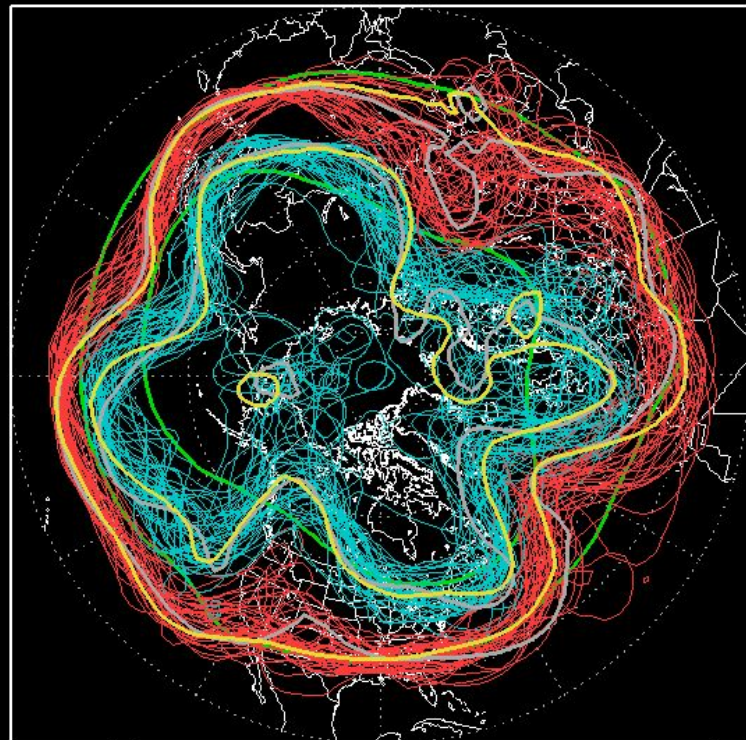
# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

192H Forecast from: 00Z Sat FEB,27 2016  
Valid time: 00Z Sun MAR,06 2016



# NCEP ENSEMBLE 500mb Z

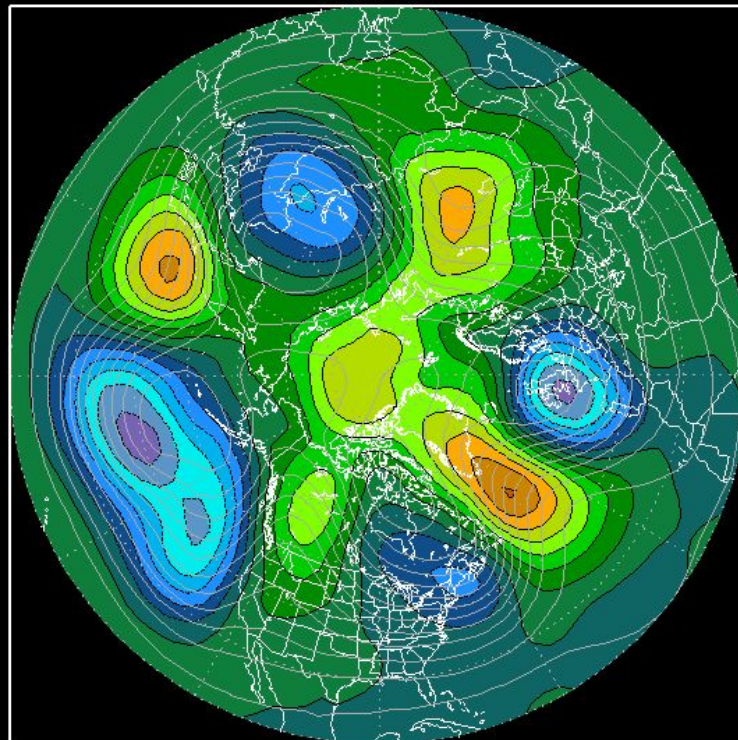
216H Forecast from: 00Z Fri FEB,26 2016  
Valid time: 00Z Sun MAR,06 2016



00z Runs:(21) 12z Runs:(21)  
— 5400m — 5700m — Cntrl 00z — Cntrl 12z — CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

216H Forecast from: 00Z Fri FEB,26 2016  
Valid time: 00Z Sun MAR,06 2016

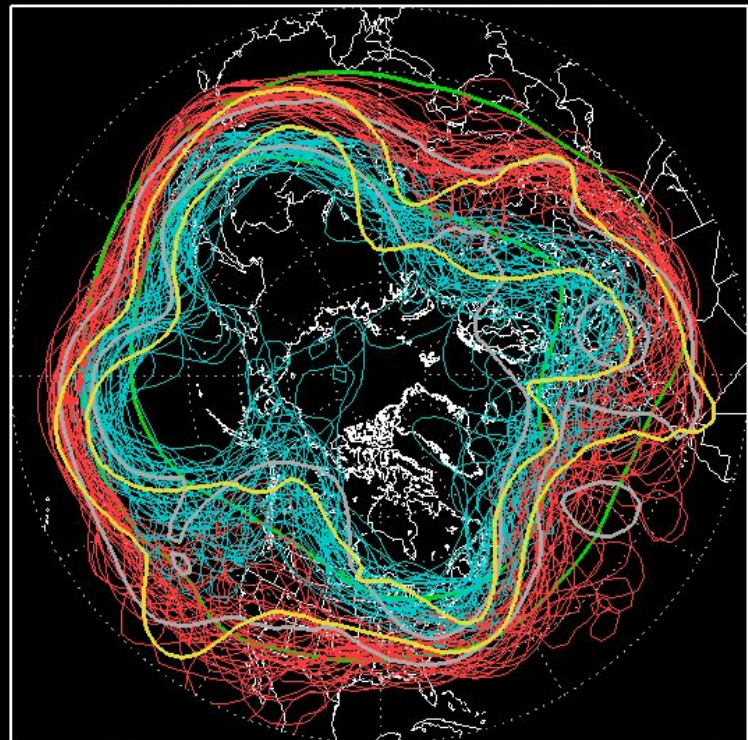


-360 -280 -200 -120 -40 40 120 200 280 360



# NCEP ENSEMBLE 500mb Z

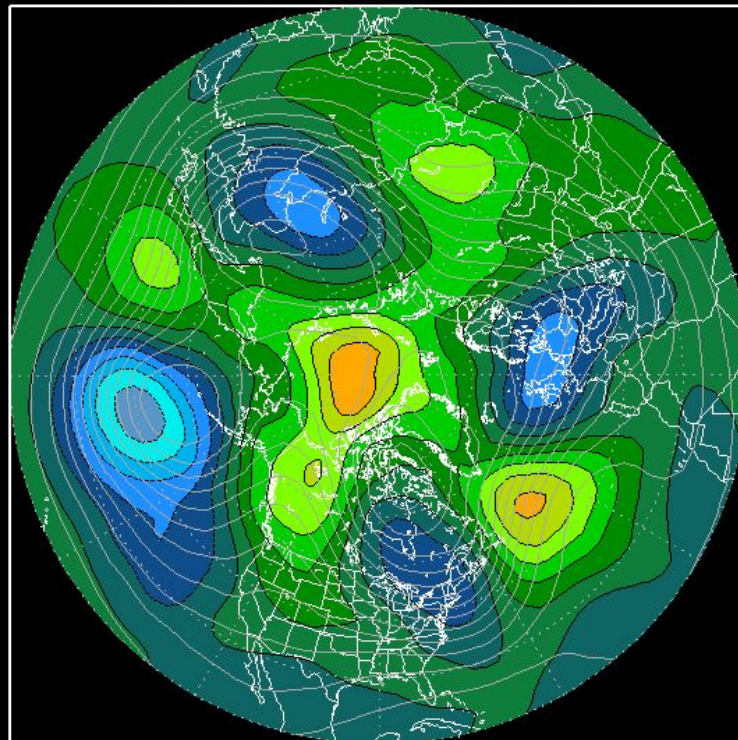
264H Forecast from: 00Z Wed FEB,24 2016  
Valid time: 00Z Sun MAR,06 2016



00z Runs:(21) 12z Runs:(21)  
5460m 5700m Cntrl 00z Cntrl 12z CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

264H Forecast from: 00Z Wed FEB,24 2016  
Valid time: 00Z Sun MAR,06 2016

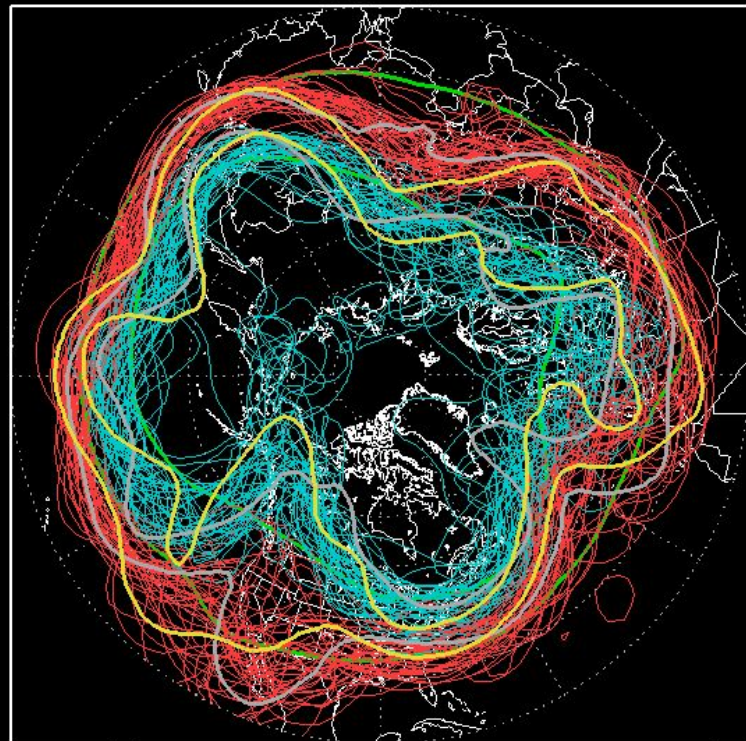


-360 -280 -200 -120 -40 40 120 200 280 360



# NCEP ENSEMBLE 500mb Z

288H Forecast from: 00Z Tue FEB,23 2016  
Valid time: 00Z Sun MAR,06 2016

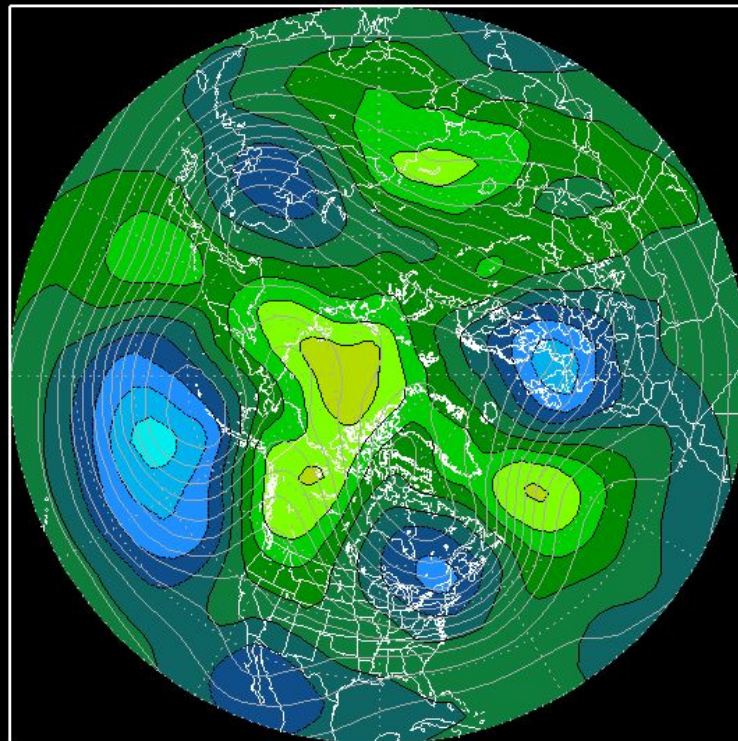


00z Runs:(21) 12z Runs:(21)

— 5460m — 5700m — Cntrl 00z — Cntrl 12z — CLIM

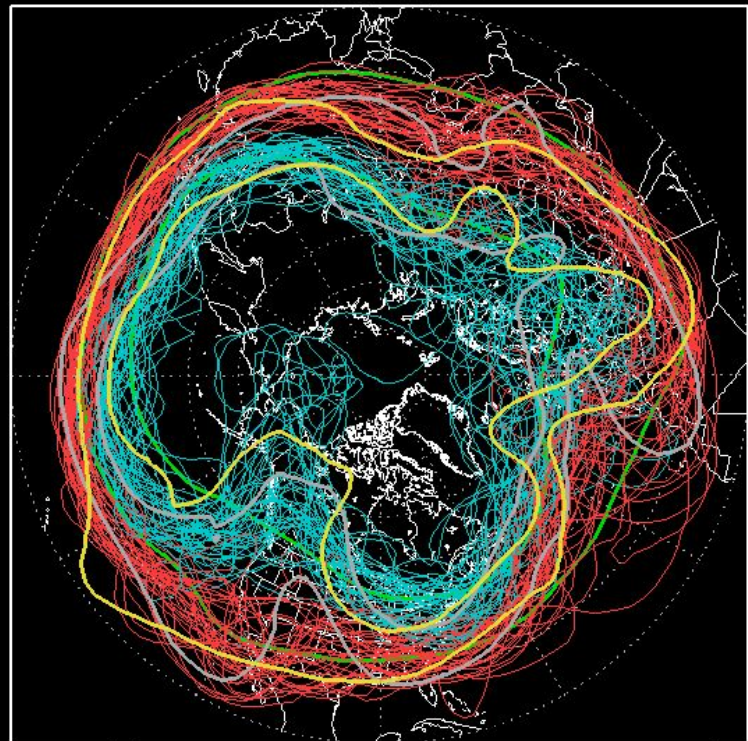
# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

288H Forecast from: 00Z Tue FEB,23 2016  
Valid time: 00Z Sun MAR,06 2016



# NCEP ENSEMBLE 500mb Z

312H Forecast from: 00Z Mon FEB,22 2016  
Valid time: 00Z Sun MAR,06 2016

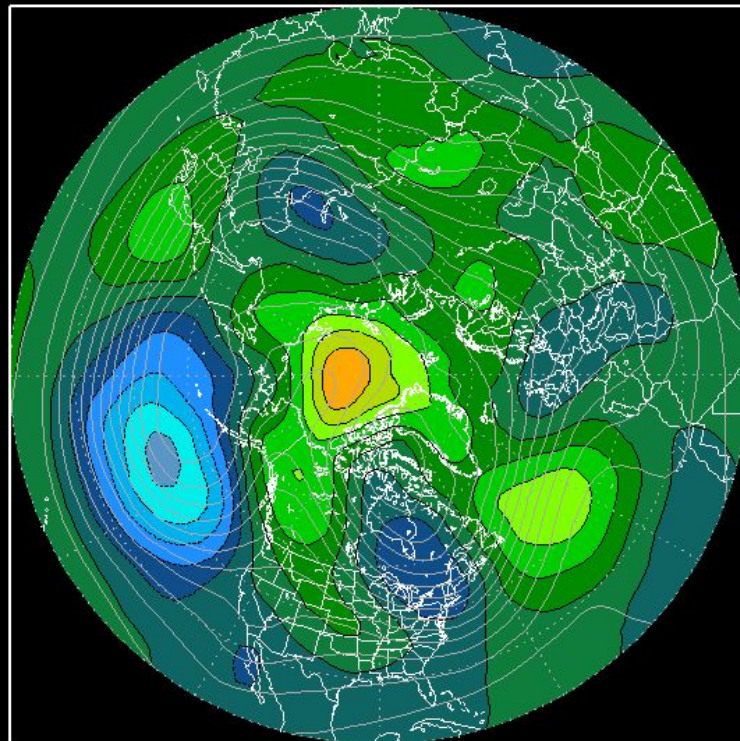


00z Runs:(21) 12z Runs:(21)

5460m 5700m Cntrl 00z Cntrl 12z CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

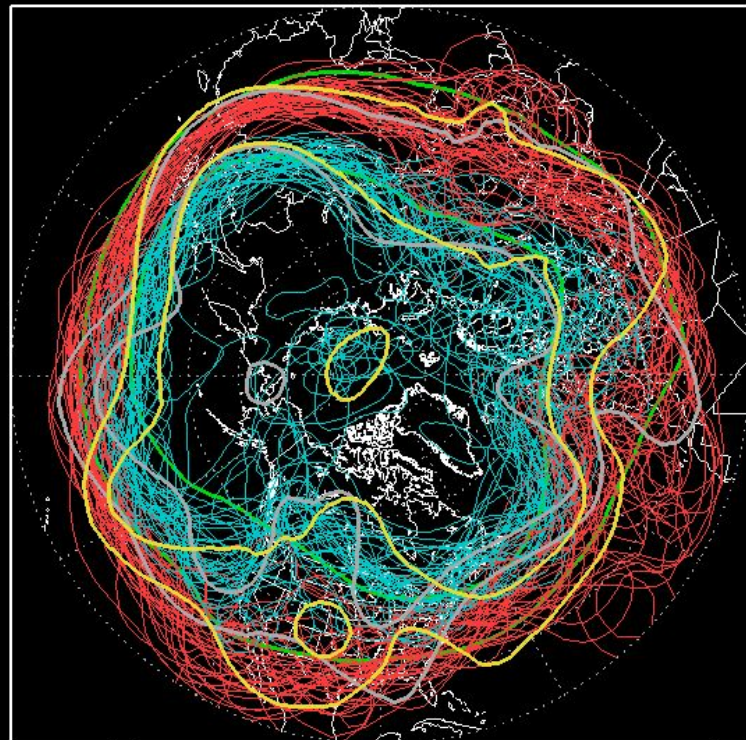
312H Forecast from: 00Z Mon FEB,22 2016  
Valid time: 00Z Sun MAR,06 2016





# NCEP ENSEMBLE 500mb Z

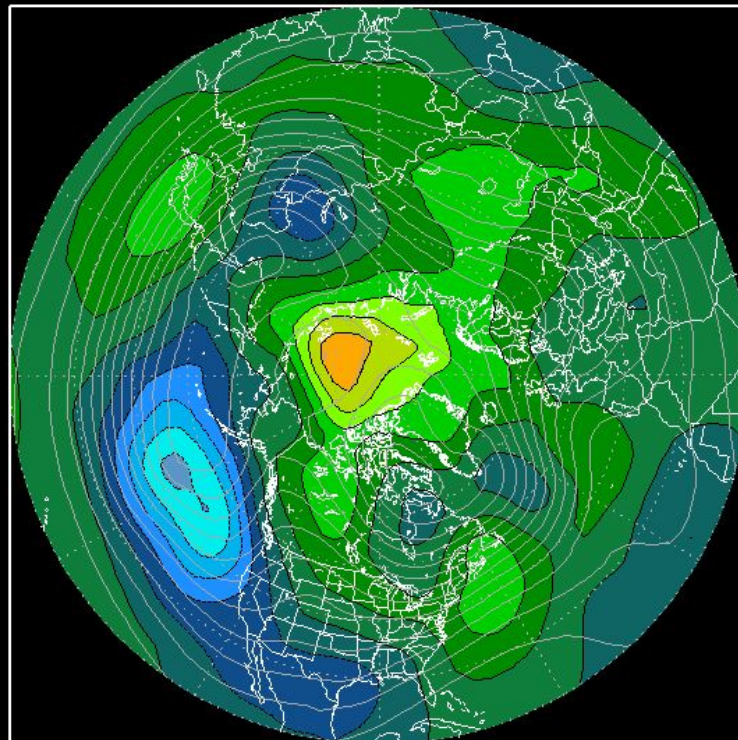
360H Forecast from: 00Z Sat FEB,20 2016  
Valid time: 00Z Sun MAR,06 2016



00z Runs:(21) 12z Runs:(21)  
— 5460m — 5700m — Cntrl 00z — Cntrl 12z — CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

360H Forecast from: 00Z Sat FEB,20 2016  
Valid time: 00Z Sun MAR,06 2016

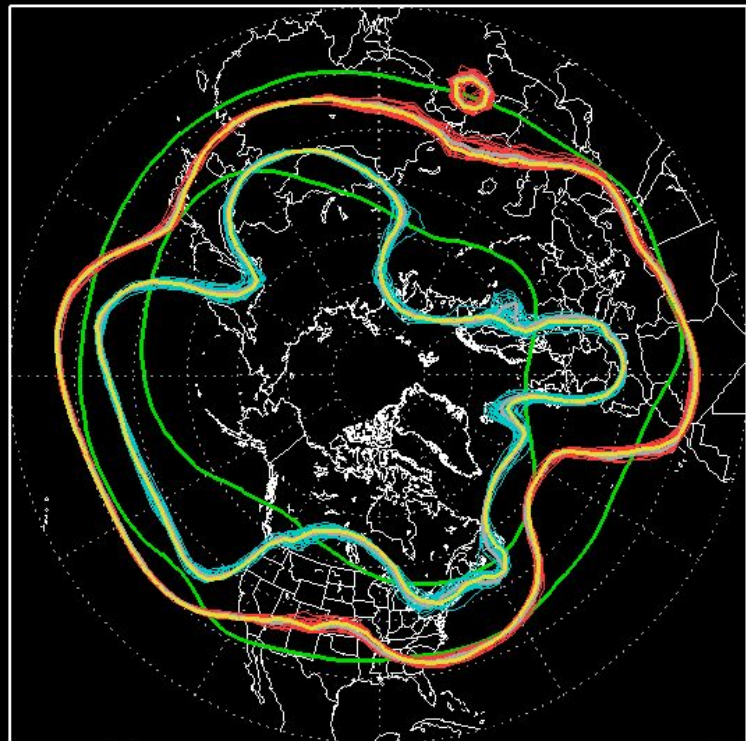


-360 -280 -200 -120 -40 40 120 200 280 360



# NCEP ENSEMBLE 500mb Z

048H Forecast from: 00Z Fri MAR,04 2016  
Valid time: 00Z Sun MAR,06 2016



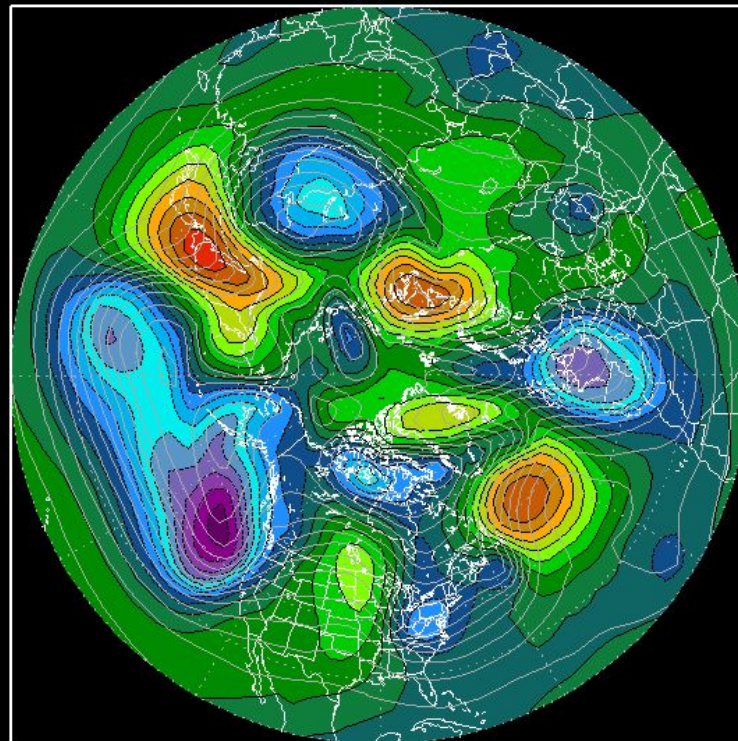
00z Runs:(21)

12z Runs:(21)

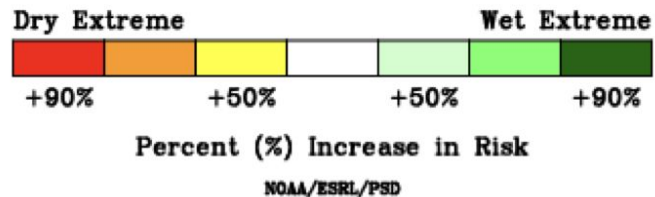
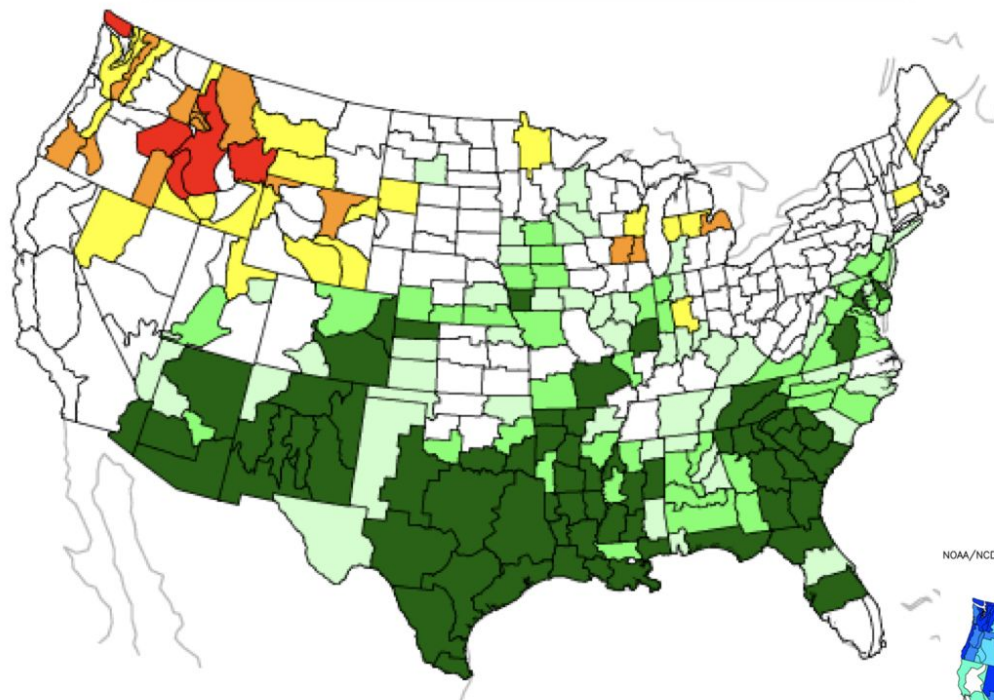
— 5400m — 5700m — Cntrl 00z — Cntrl 12z — CLIM

# NCEP ENSEMBLE MEAN ANOMALY- 500mbZ(m)

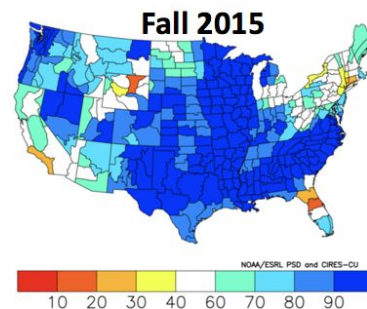
048H Forecast from: 00Z Fri MAR,04 2016  
Valid time: 00Z Sun MAR,06 2016



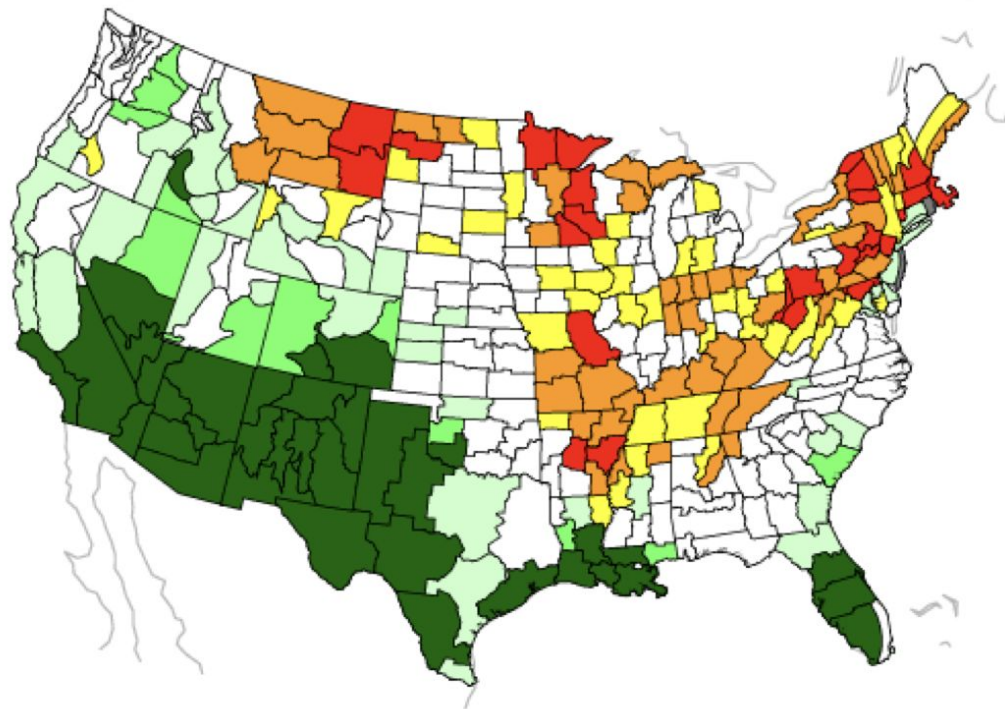
# Fall Impacts of El Niño



NOAA/NCDC Climate Division Precipitation Percentile Relative to 1895–2013  
Oct to Dec 2015



# Spring Impacts of El Niño

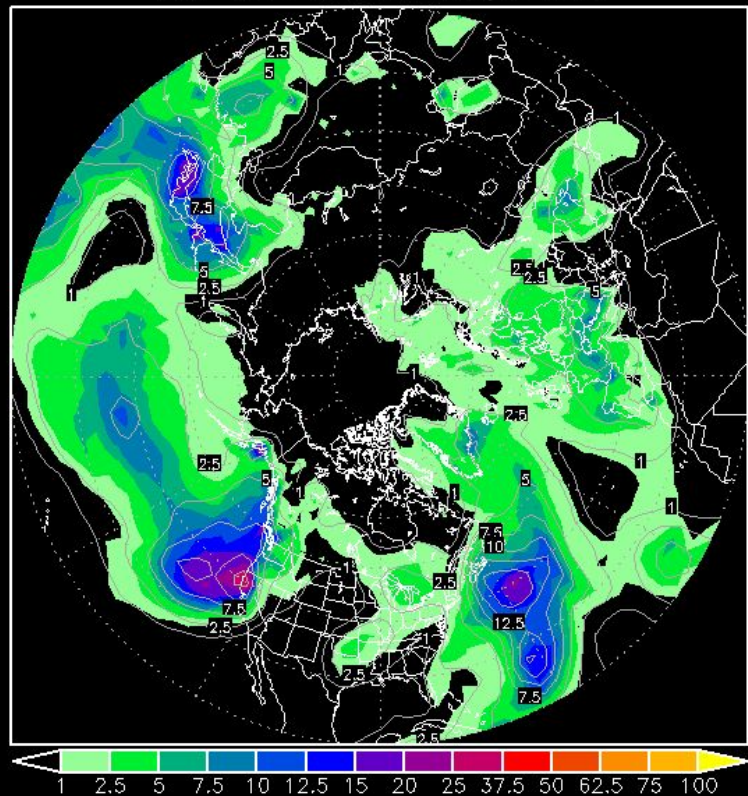


Percent (%) Increase in Risk

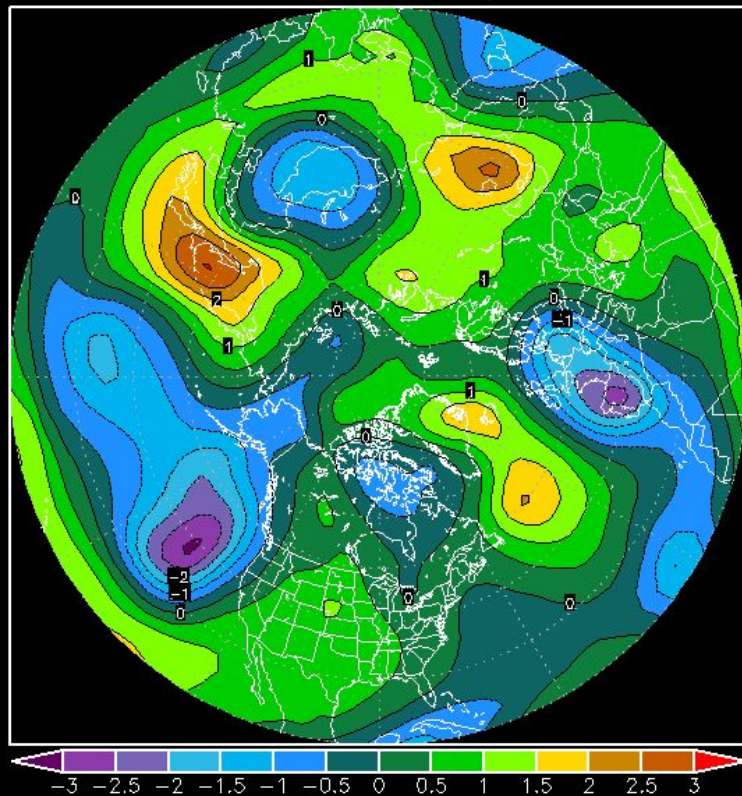
NOAA/ESRL/PSD



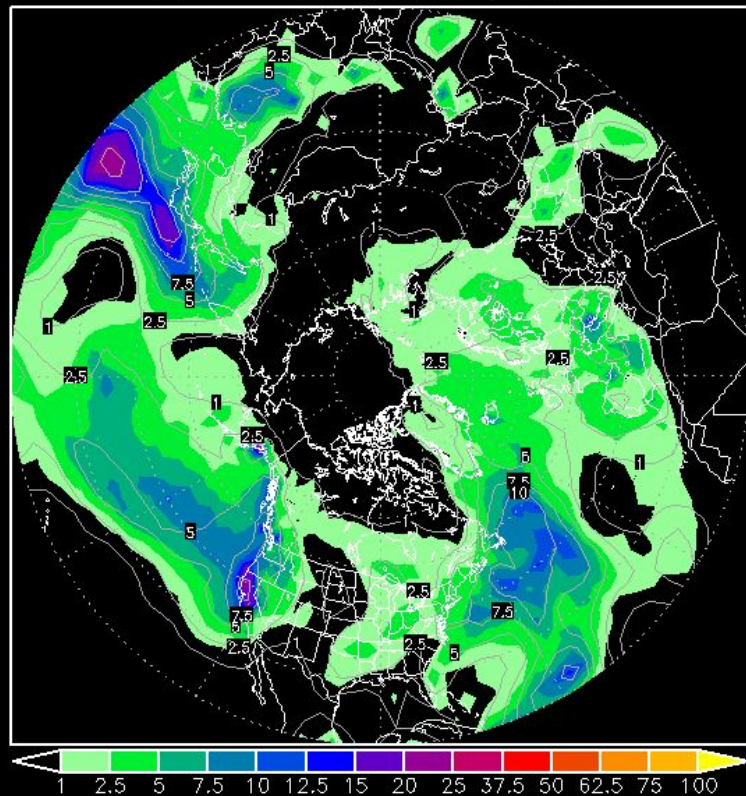
NCEP ENS MEAN PREC(color) and Std Dev(contour)  
 144H Forecast from: 00Z Mon FEB,29 2016  
 Valid time: 00Z Sun MAR,06 2016



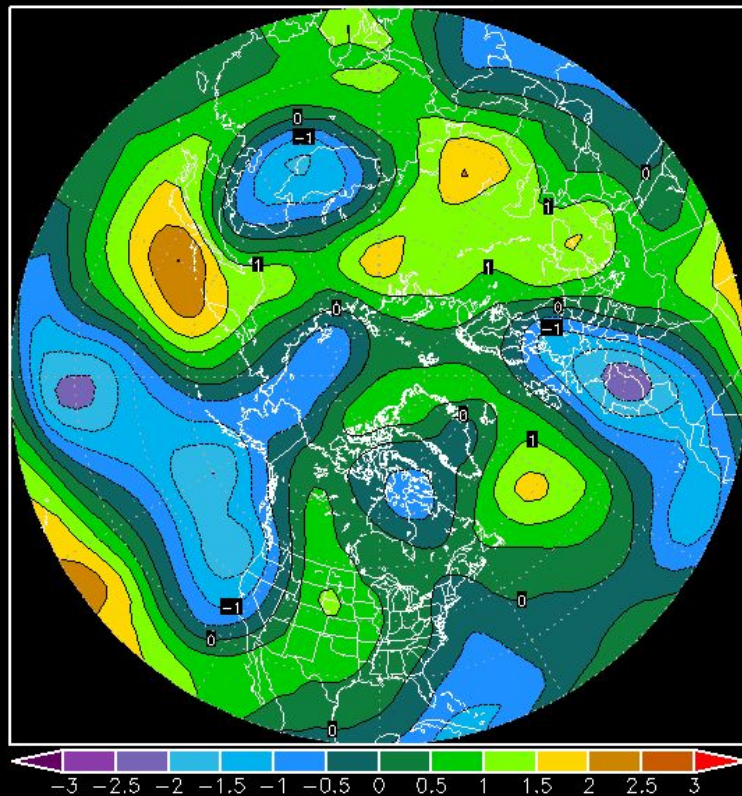
NCEP ENS. MEAN NORM. ANOM - 500mb Z(m)  
 144H Forecast from: 00Z Mon FEB,29 2016  
 Valid time: 00Z Sun MAR,06 2016



NCEP ENS MEAN PREC(color) and Std Dev(contour)  
 168H Forecast from: 00Z Mon FEB,29 2016  
 Valid time: 00Z Mon MAR,07 2016

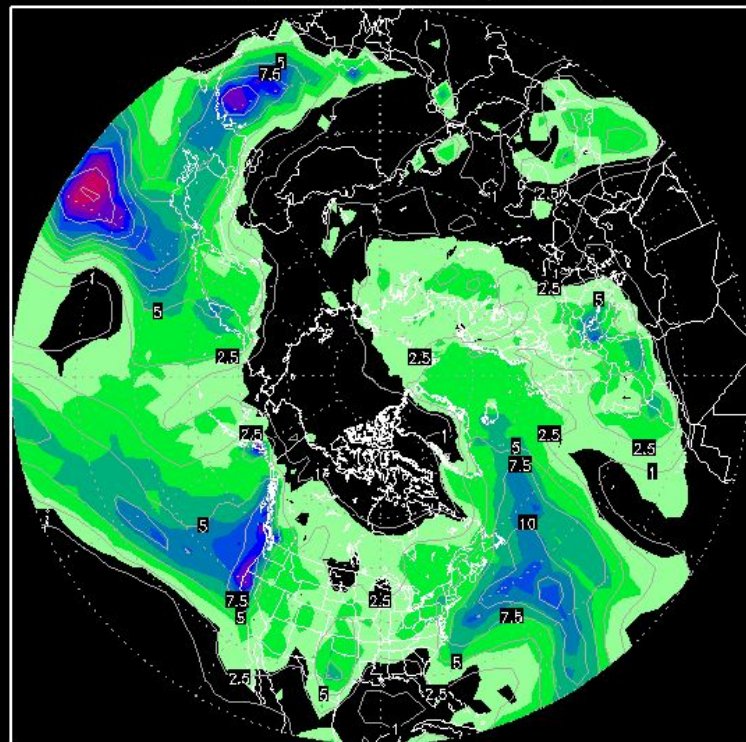


NCEP ENS. MEAN NORM. ANOM - 500mb Z(m)  
 168H Forecast from: 00Z Mon FEB,29 2016  
 Valid time: 00Z Mon MAR,07 2016

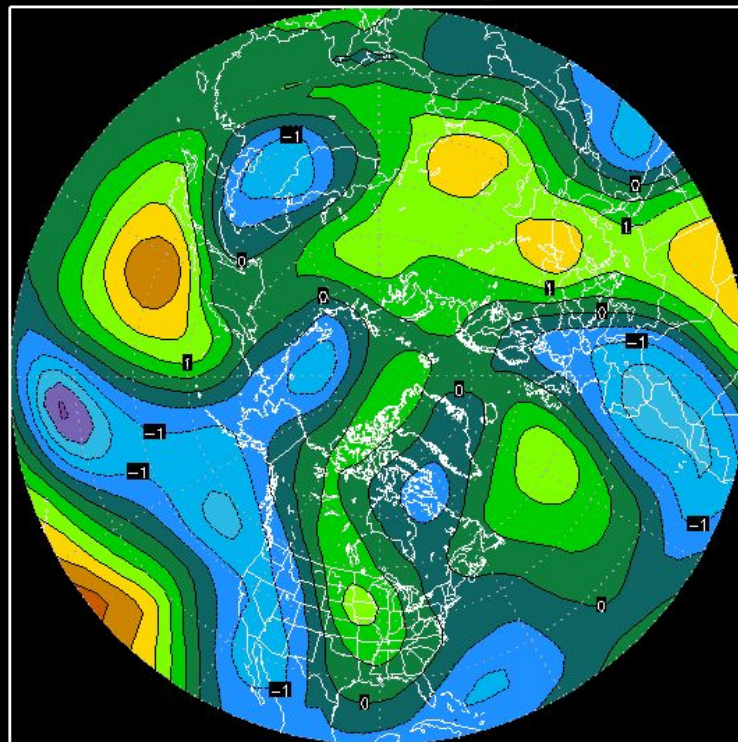




NCEP ENS MEAN PREC(color) and Std Dev(contour)  
 192H Forecast from: 00Z Mon FEB,29 2016  
 Valid time: 00Z Tue MAR,08 2016



NCEP ENS. MEAN NORM. ANOM - 500mb Z(m)  
 192H Forecast from: 00Z Mon FEB,29 2016  
 Valid time: 00Z Tue MAR,08 2016

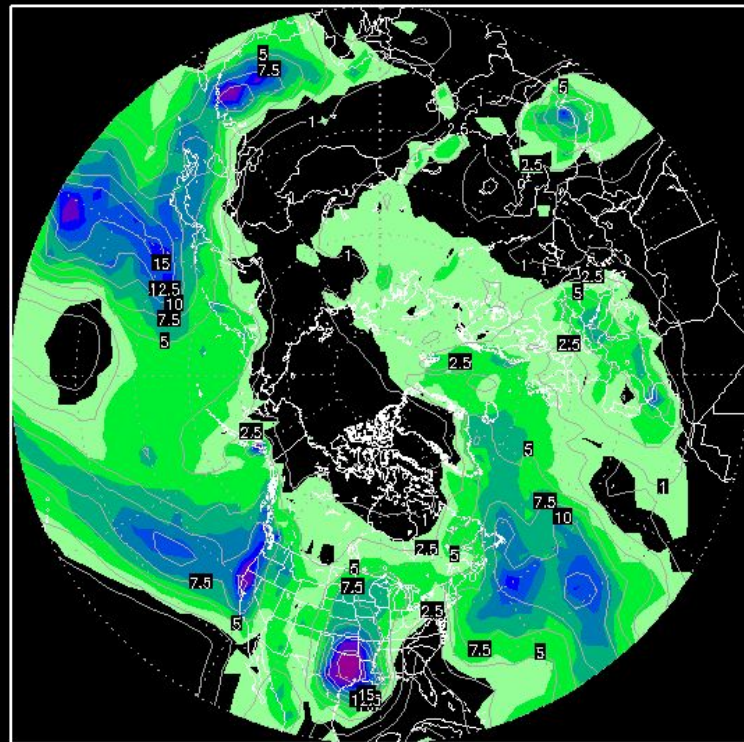




# NCEP ENS MEAN PREC(color) and Std Dev(contour)

216H Forecast from: 00Z Mon FEB,29 2016

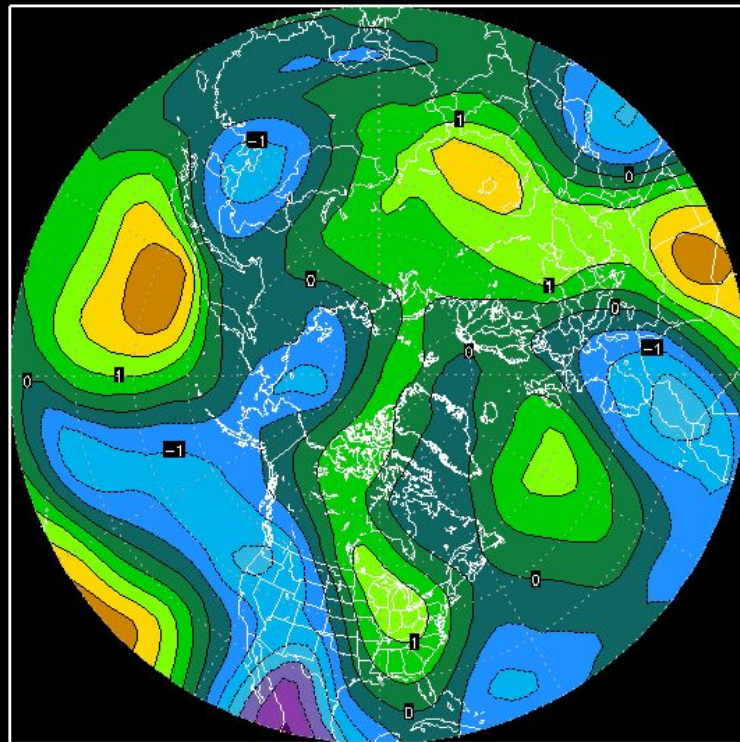
Valid time: 00Z Wed MAR,09 2016



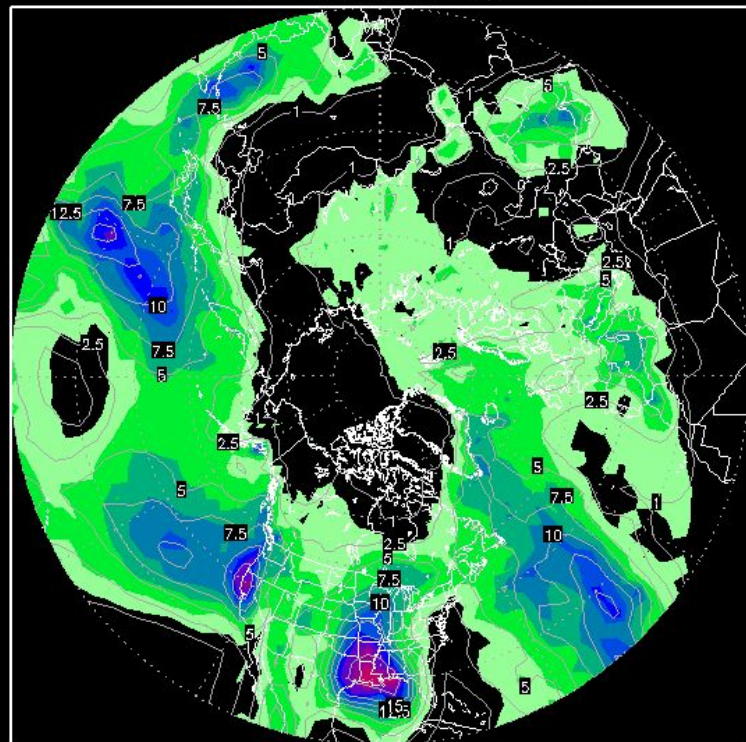
# NCEP ENS. MEAN NORM. ANOM - 500mb Z(m)

216H Forecast from: 00Z Mon FEB,29 2016

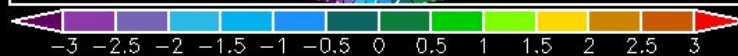
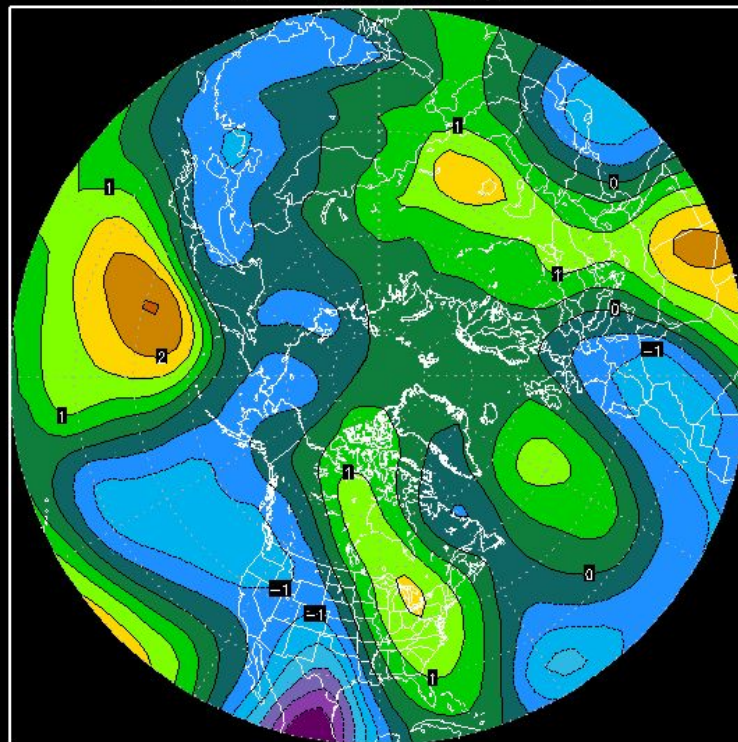
Valid time: 00Z Wed MAR,09 2016



NCEP ENS MEAN PREC(color) and Std Dev(contour)  
 240H Forecast from: 00Z Mon FEB,29 2016  
 Valid time: 00Z Thu MAR,10 2016



NCEP ENS. MEAN NORM. ANOM - 500mb Z(m)  
 240H Forecast from: 00Z Mon FEB,29 2016  
 Valid time: 00Z Thu MAR,10 2016

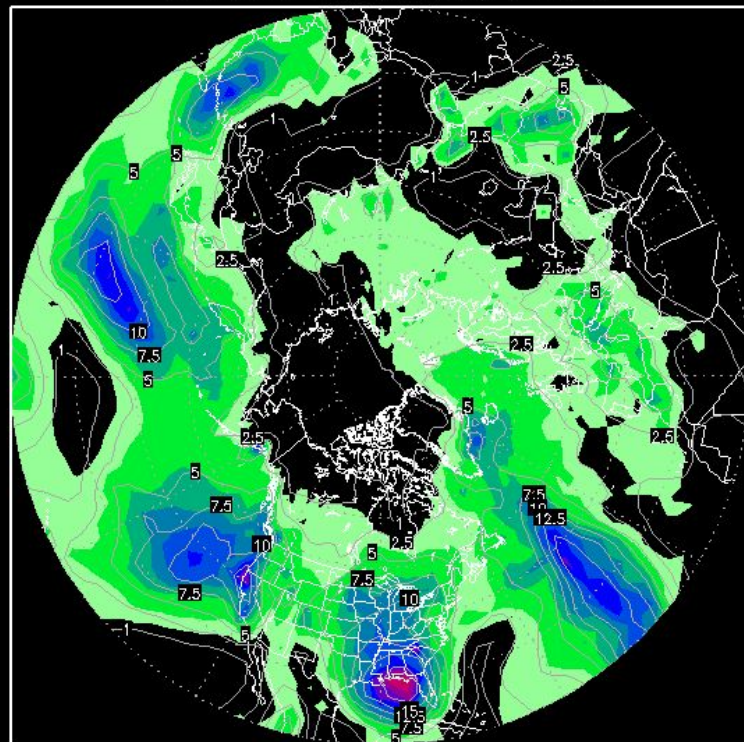




# NCEP ENS MEAN PREC(color) and Std Dev(contour)

264H Forecast from: 00Z Mon FEB,29 2016

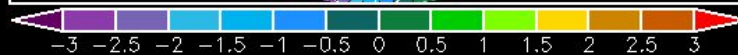
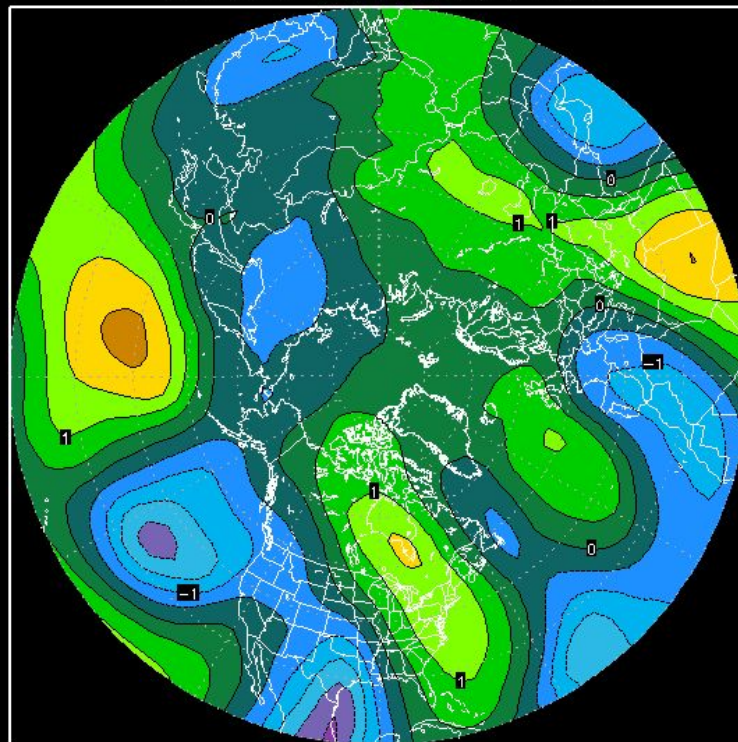
Valid time: 00Z Fri MAR,11 2016



# NCEP ENS. MEAN NORM. ANOM - 500mb Z(m)

264H Forecast from: 00Z Mon FEB,29 2016

Valid time: 00Z Fri MAR,11 2016

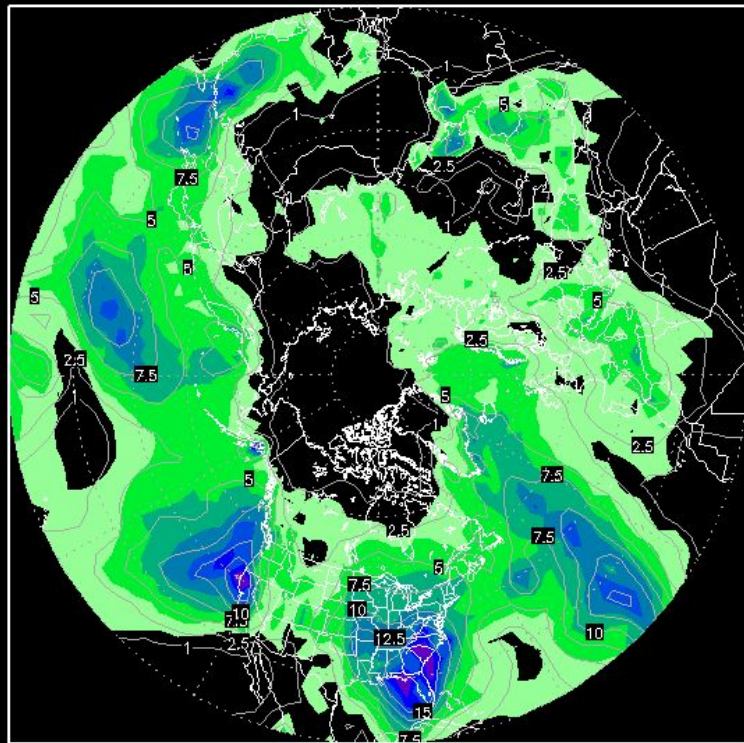




# NCEP ENS MEAN PREC(color) and Std Dev(contour)

288H Forecast from: 00Z Mon FEB,29 2016

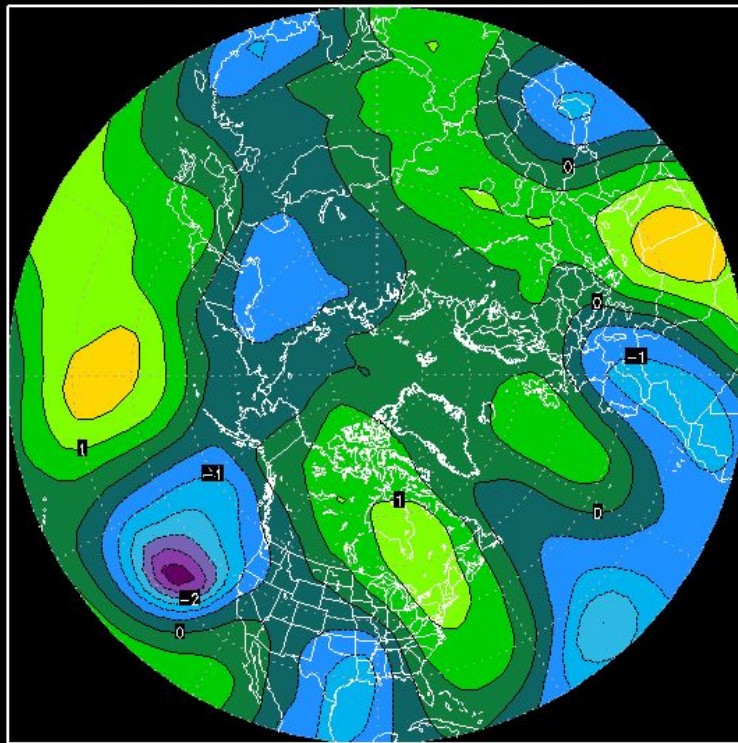
Valid time: 00Z Sat MAR,12 2016



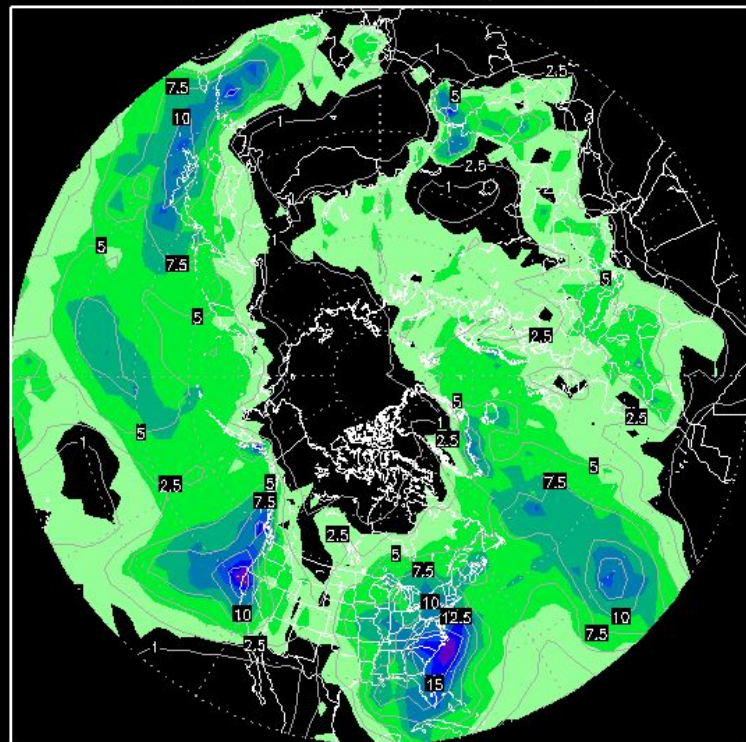
# NCEP ENS. MEAN NORM. ANOM - 500mb Z(m)

288H Forecast from: 00Z Mon FEB,29 2016

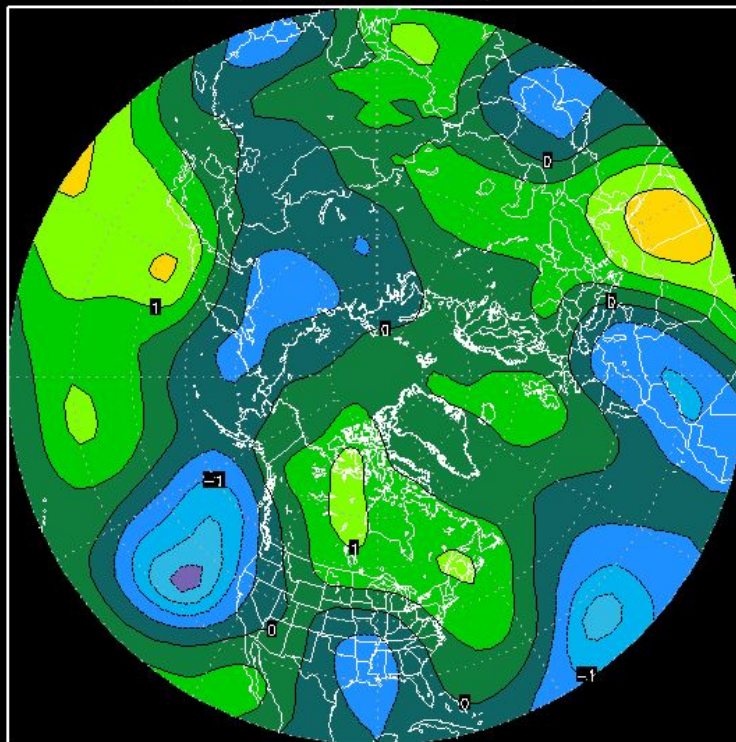
Valid time: 00Z Sat MAR,12 2016



NCEP ENS MEAN PREC(color) and Std Dev(contour)  
 312H Forecast from: 00Z Mon FEB,29 2016  
 Valid time: 00Z Sun MAR,13 2016



NCEP ENS. MEAN NORM. ANOM - 500mb Z(m)  
 312H Forecast from: 00Z Mon FEB,29 2016  
 Valid time: 00Z Sun MAR,13 2016

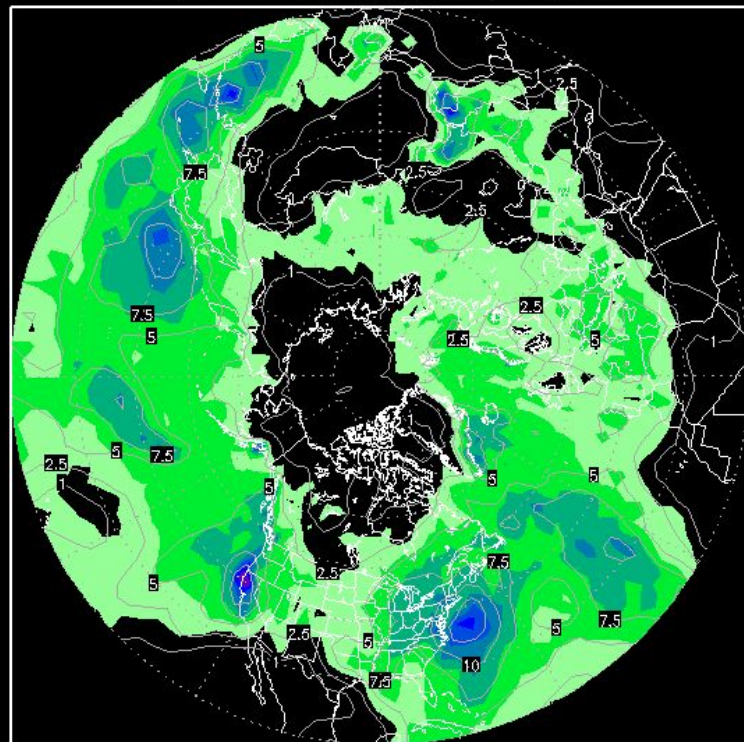




# NCEP ENS MEAN PREC(color) and Std Dev(contour)

336H Forecast from: 00Z Mon FEB,29 2016

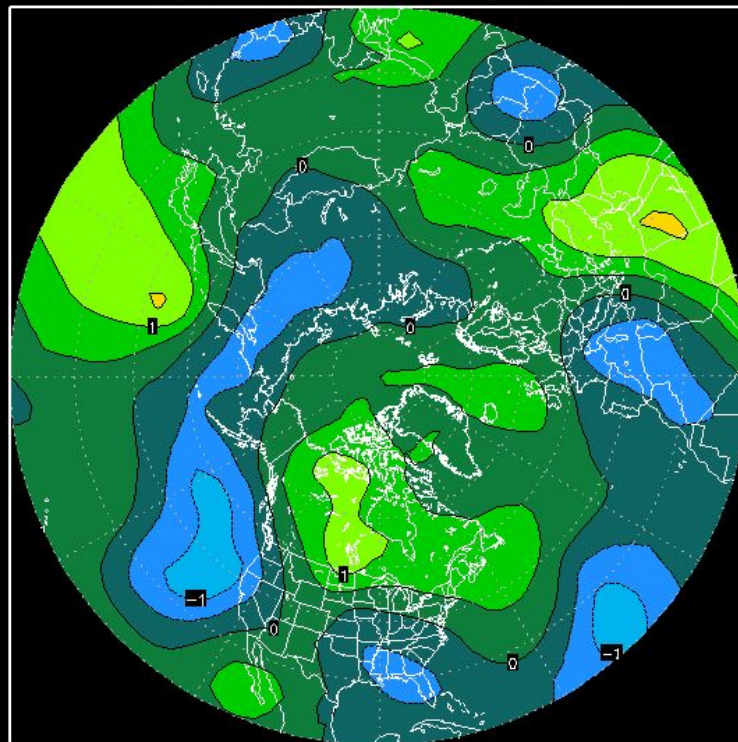
Valid time: 00Z Mon MAR,14 2016



# NCEP ENS. MEAN NORM. ANOM - 500mb Z(m)

336H Forecast from: 00Z Mon FEB,29 2016

Valid time: 00Z Mon MAR,14 2016

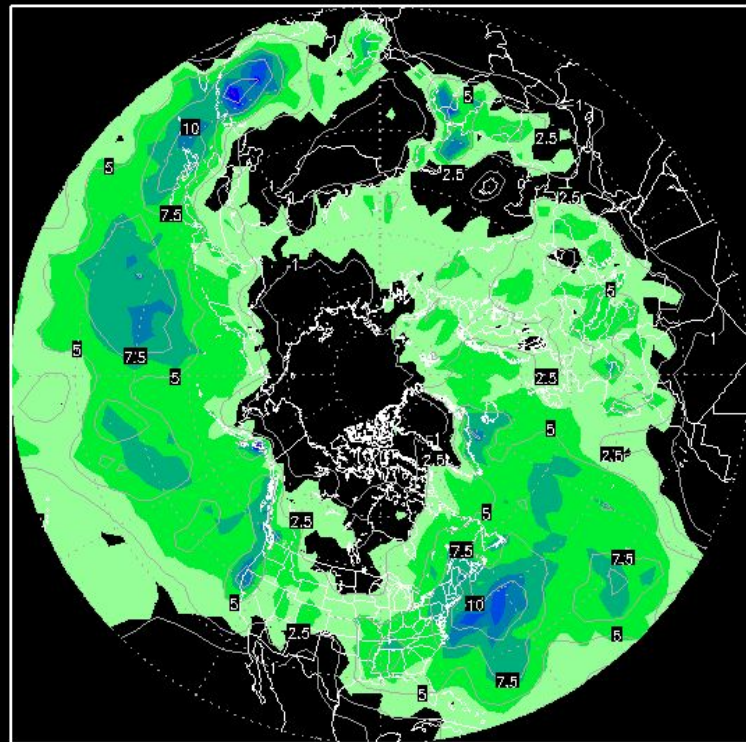




# NCEP ENS MEAN PREC(color) and Std Dev(contour)

360H Forecast from: 00Z Mon FEB,29 2016

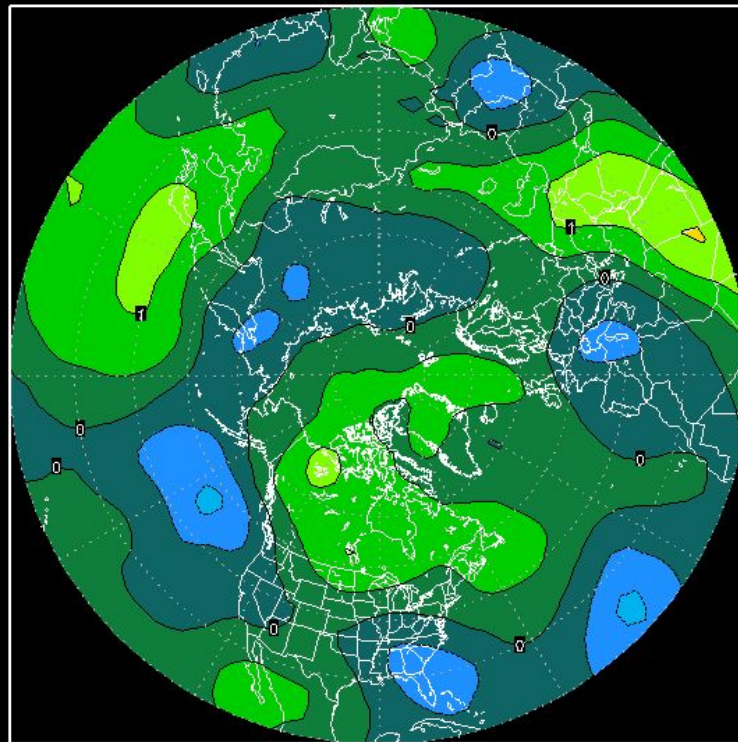
Valid time: 00Z Tue MAR,15 2016



# NCEP ENS. MEAN NORM. ANOM - 500mb Z(m)

360H Forecast from: 00Z Mon FEB,29 2016

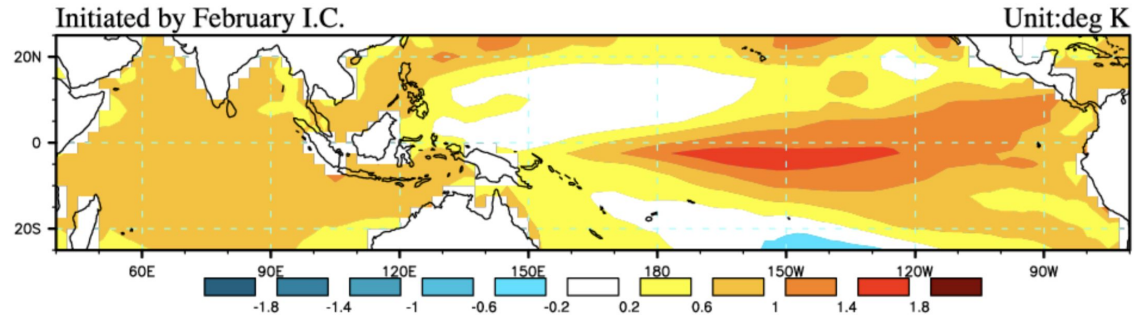
Valid time: 00Z Tue MAR,15 2016



## Spring 2016 Outlook: APEC NMME

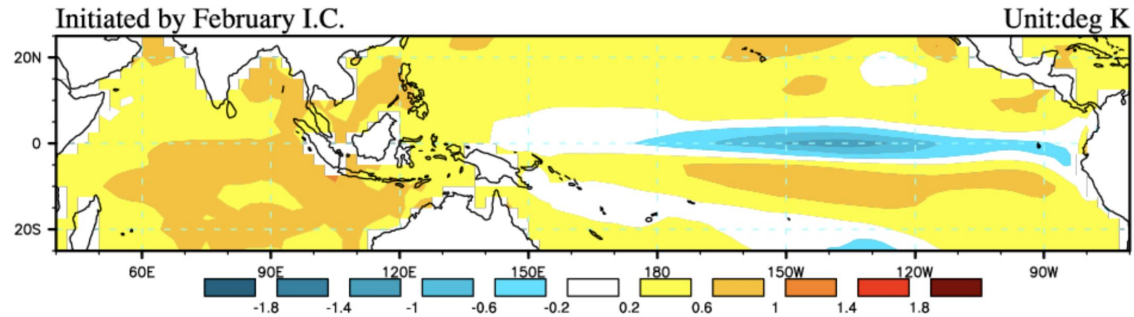


## SST Anomaly for MAM 2016



© APEC Climate Center

## SST Anomaly for JJA 2016



© APEC Climate Center

# Precipitation for March-May 2016

