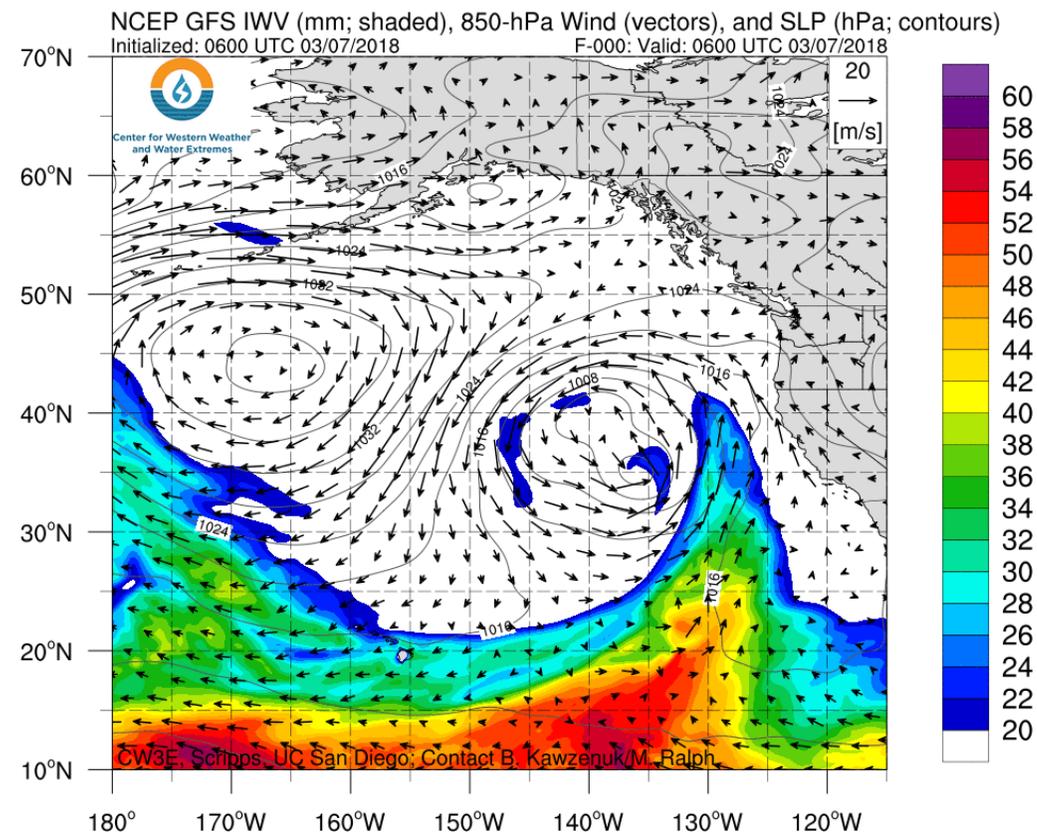
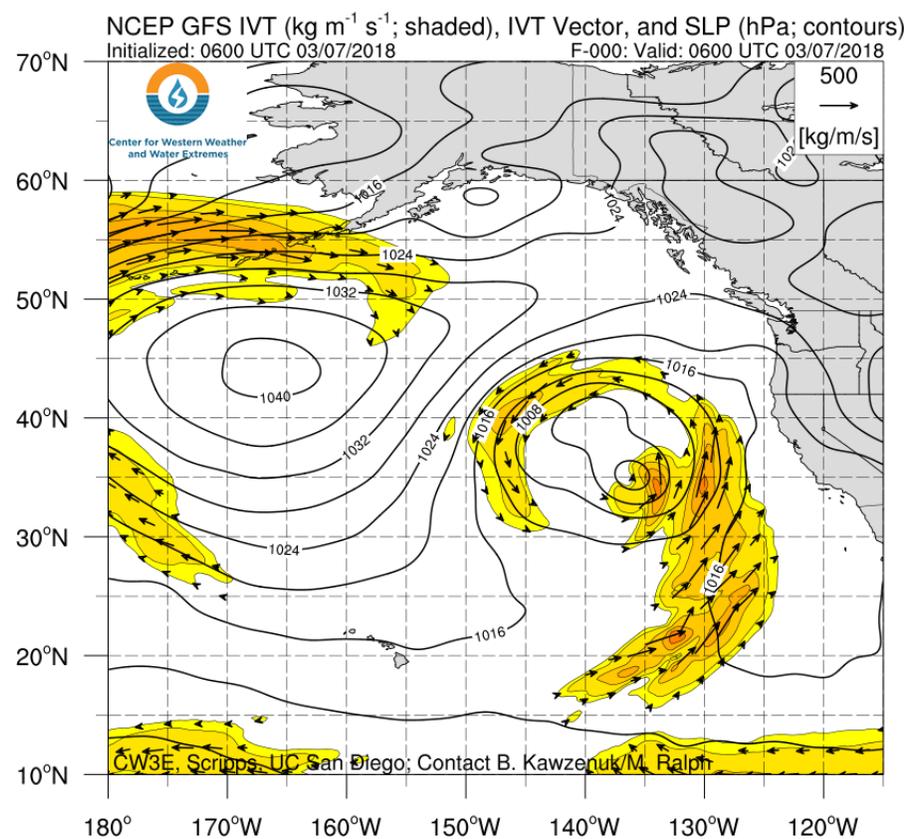


CW3E Atmospheric River Update – Outlook

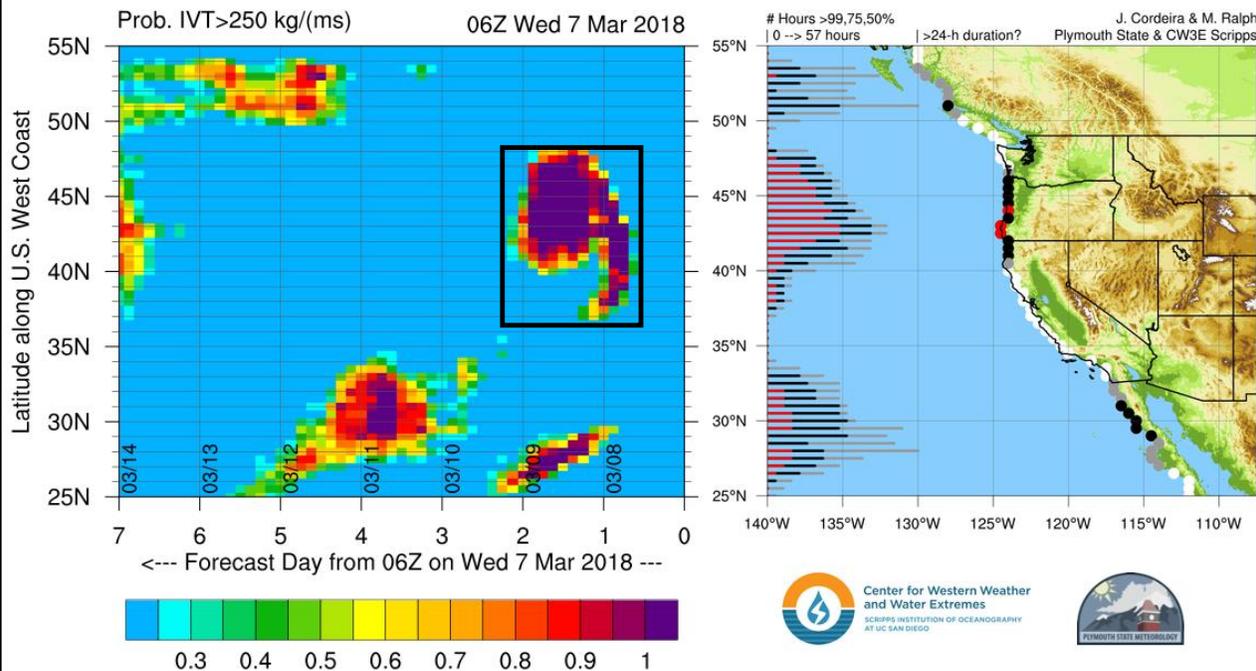
Weak Atmospheric River expected to impact the U.S. West Coast this week

- A weak or potentially moderate AR is expected to make landfall over northern CA and the Pacific Northwest on 8 March 2018
- This AR will produce precipitation over the Pacific Northwest and northern CA over the next three days
- Precipitation amounts during this event are not expected to be extreme, with the highest accumulations predicted to be less than 3 inches

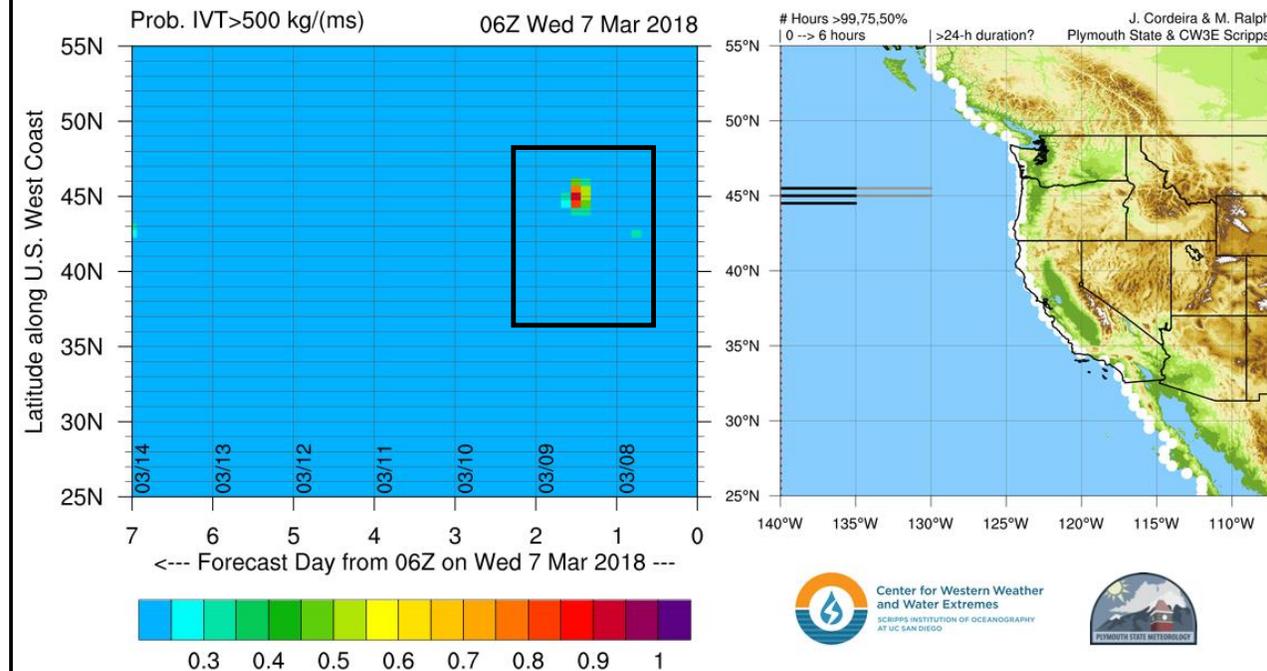




Odds of at least a **WEAK** AR making landfall



Odds of a **MODERATE-STRENGTH** AR making landfall



- There is high certainty (>95%) of weak AR conditions (IVT > 250 kg m⁻¹ s⁻¹) over the Pacific Northwest during the next 48 hours
- AR conditions are predicted to last up to 30 hours over OR and WA

- Northwest Oregon is expected to experience moderate AR conditions (IVT > 500 kg m⁻¹ s⁻¹) for ~3 hours on 8 March

AR Outlook: 7 March 2018

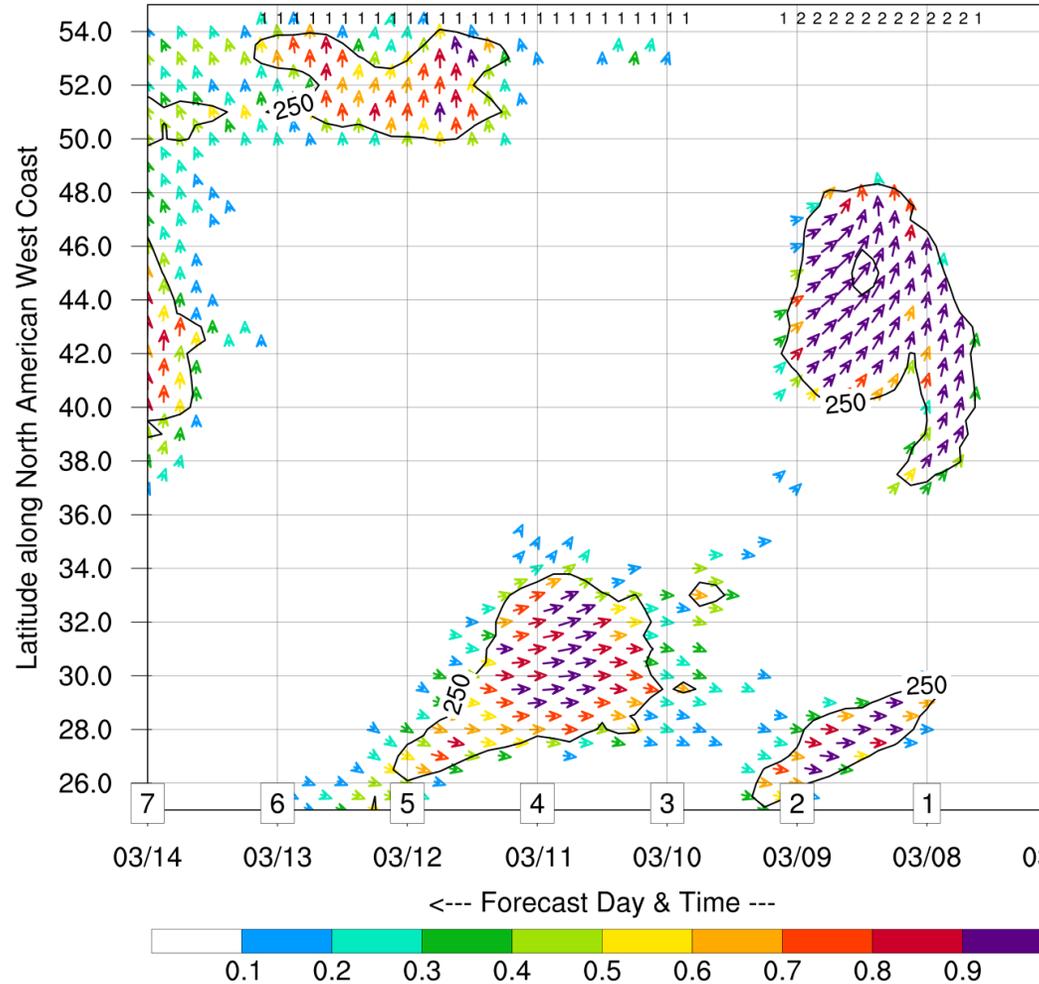
For California DWR's AR Program



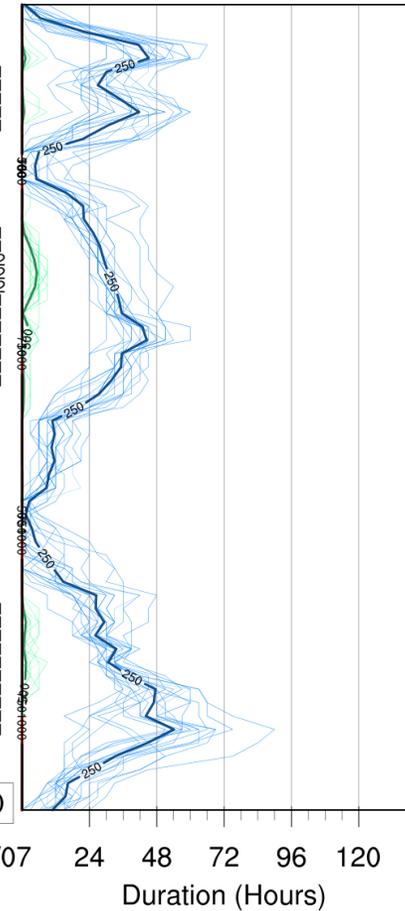
Center for Western Weather and Water Extremes
SCRIPPS INSTITUTION OF OCEANOGRAPHY
AT UC SAN DIEGO

AR Landfall Tool: 06Z Wed 7 Mar 2018

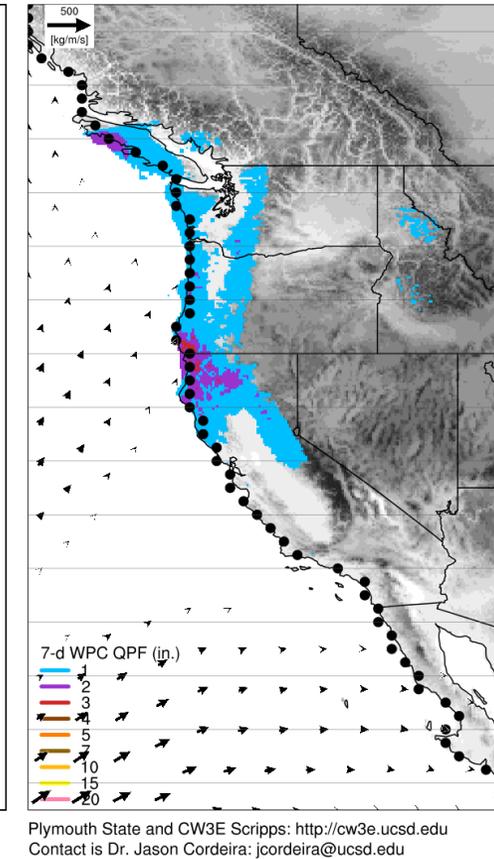
a. 7-d GFS Ens. Mean IVT Colored by Ens. Fraction >250 kg/m/s



b. Hours >250,500,750,1000



c. Time Mean IVT, Terrain, QPF



Center for Western Weather and Water Extremes
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IVT orientation during 8-9 March is predicted to be southwesterly resulting in the highest precipitation amounts over the Coastal Mountains in northwest CA and southwest OR

AR Outlook: 7 March 2018

For California DWR's AR Program



Center for Western Weather and Water Extremes
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There is relatively high certainty in the GEFS of the magnitude and timing of the AR conditions over OR during 8–9 March

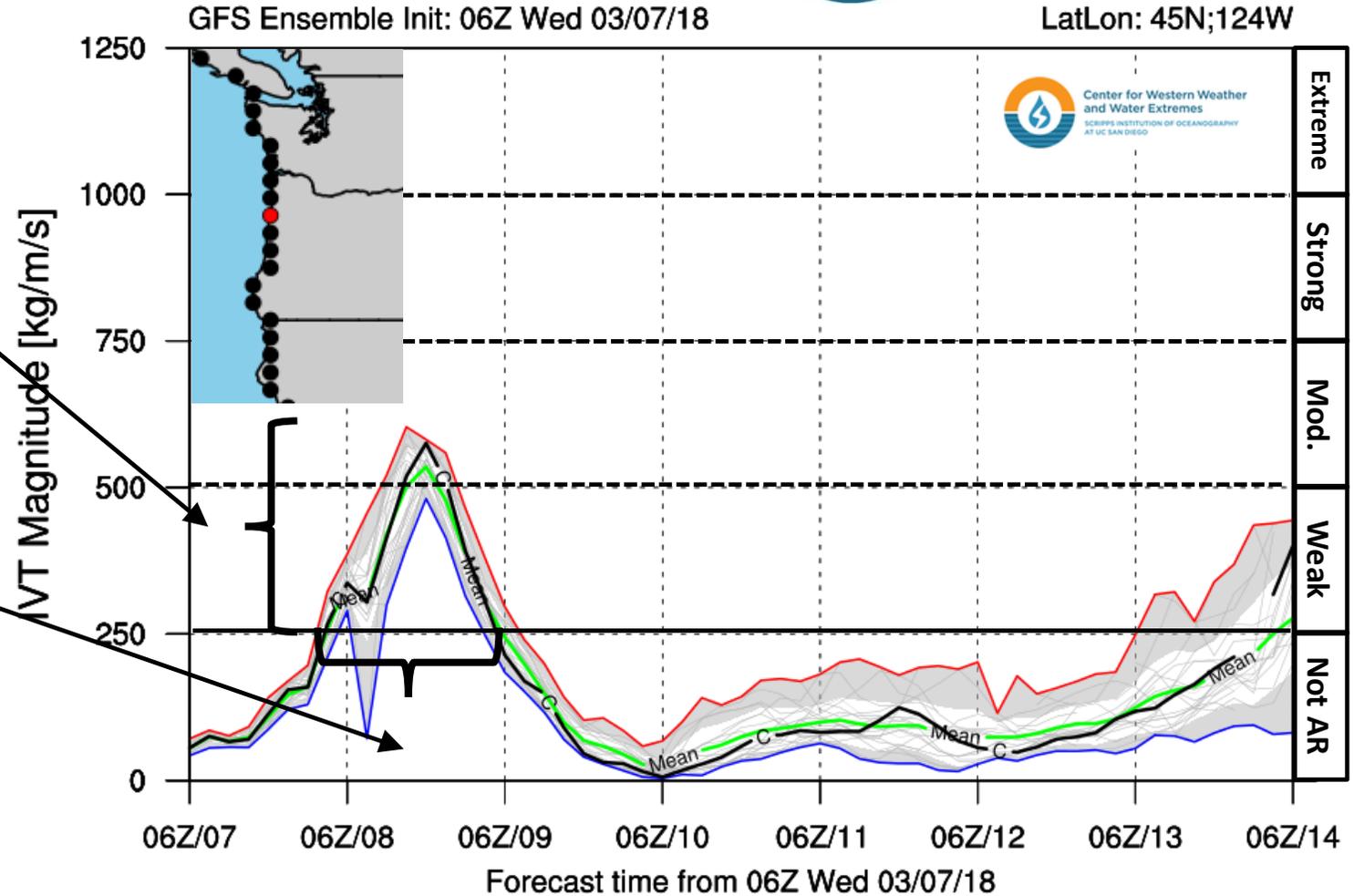
Magnitude of Potential AR

- Maximum possible IVT $\sim 600 \text{ kg m}^{-1} \text{ s}^{-1}$
- Mean IVT $\sim 525 \text{ kg m}^{-1} \text{ s}^{-1}$
- Minimum possible IVT $\sim 400 \text{ kg m}^{-1} \text{ s}^{-1}$

Duration of AR conditions

- Weak: $\sim 30 \text{ hours} \pm 6 \text{ h}$
- Moderate: $\sim 6 \text{ hours} \pm 6 \text{ h}$

Nearly all of GEFS members are predicting moderate AR conditions for a short period during 8–9 March.



AR Outlook: 7 March 2018



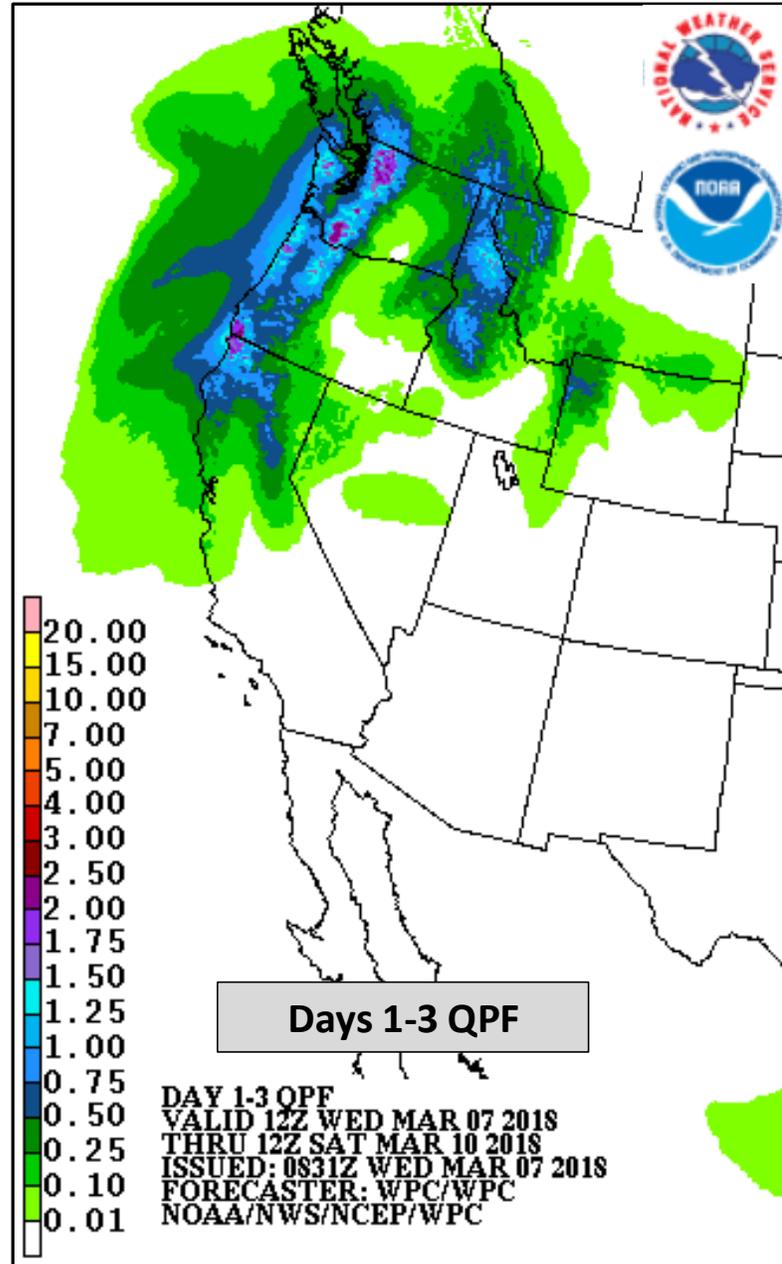
NOAA Weather Prediction Center

Weather Prediction Center QPF

The elevated moisture transport over the U.S. West coast could produce up to 2.5 inches of precipitation over the next three days.

The highest precipitation amounts are predicted to be over the Coastal Mountains in northwest CA and southwest OR and the Cascade Mountains in WA.

Nearly all of the Coastal and Cascade Ranges in northern CA, OR, and WA are expected to receive at least 1 inch of precipitation.



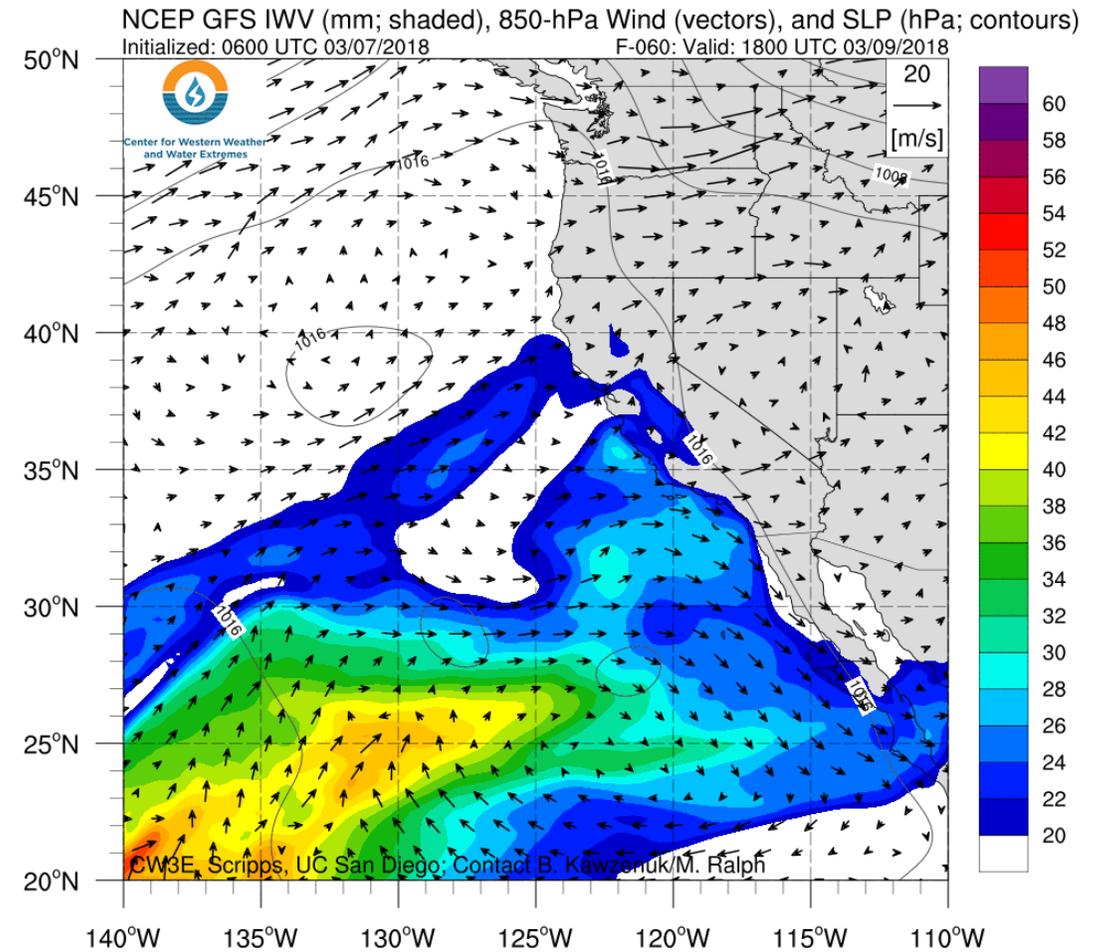
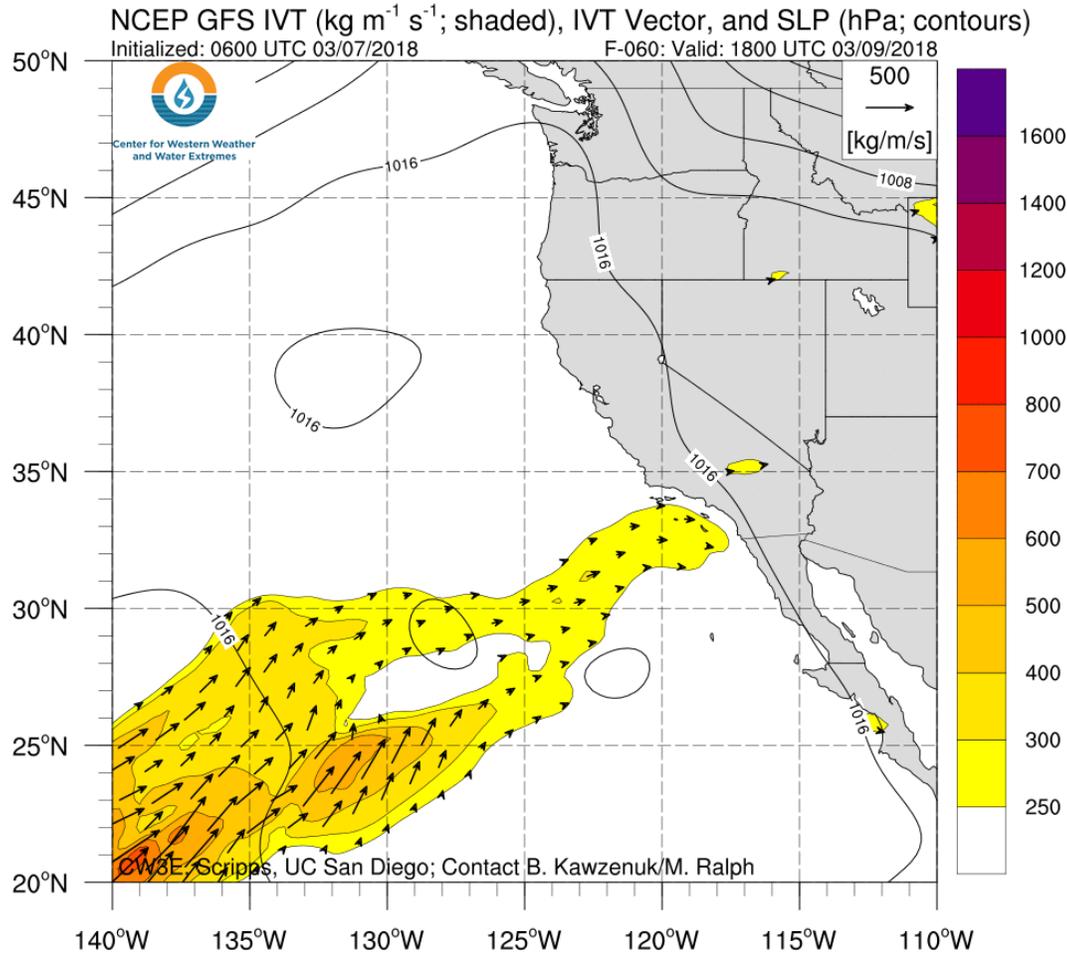
CW3E Atmospheric River Update – Outlook



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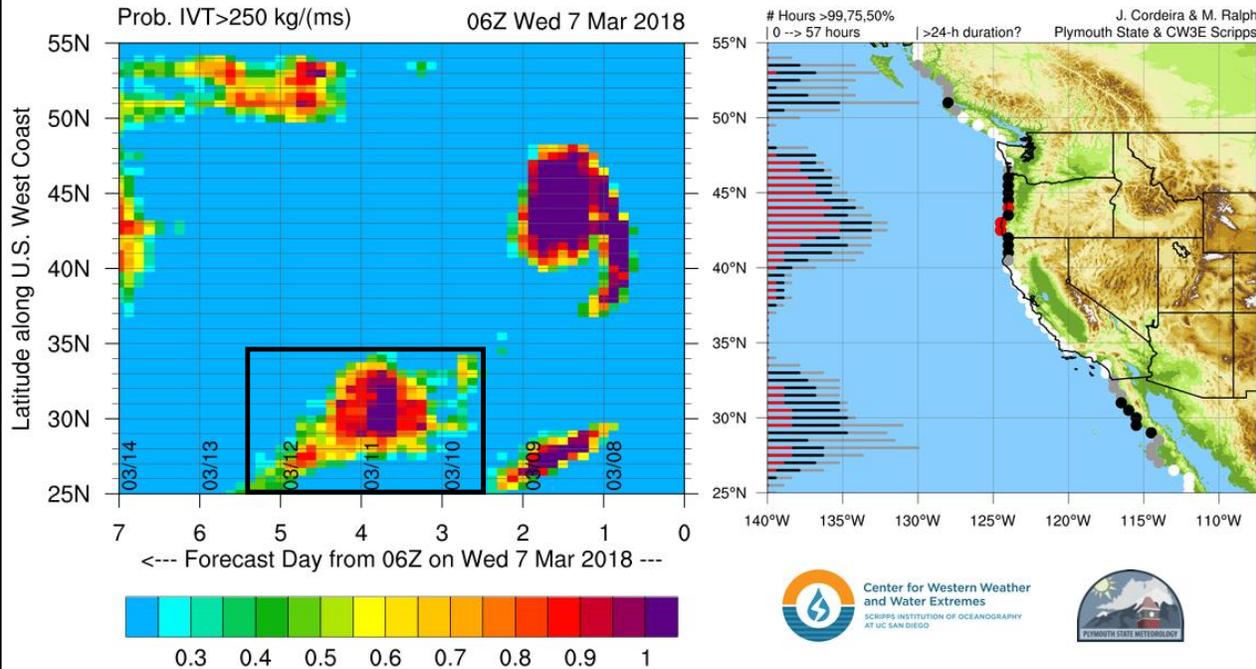
A second AR is expected to make landfall this weekend

- A second weak Atmospheric River is expected to make landfall over southern CA and Baja CA on 10 March 2016
- This AR is expected to produce precipitation over the southern CA with two day accumulations of less than 1 inch.

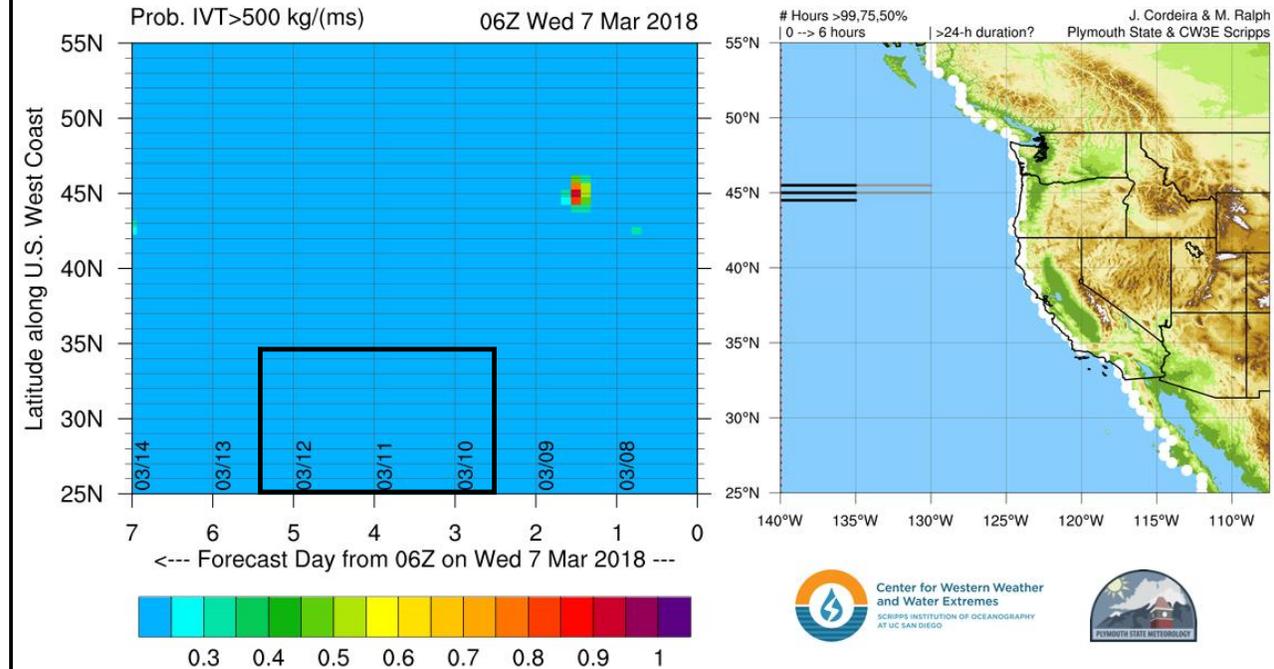




Odds of at least a **WEAK** AR making landfall



Odds of a **MODERATE-STRENGTH** AR making landfall



- There is high certainty (>95%) of weak AR conditions (IVT > 250 kg m⁻¹ s⁻¹) over southern CA and Baja California during 10–12 March
- There is uncertainty in the timing and duration of the AR conditions

- Currently no GEFS members are predicting moderate AR conditions (IVT > 500 kg m⁻¹ s⁻¹) during 10–12 March

AR Outlook: 7 March 2018

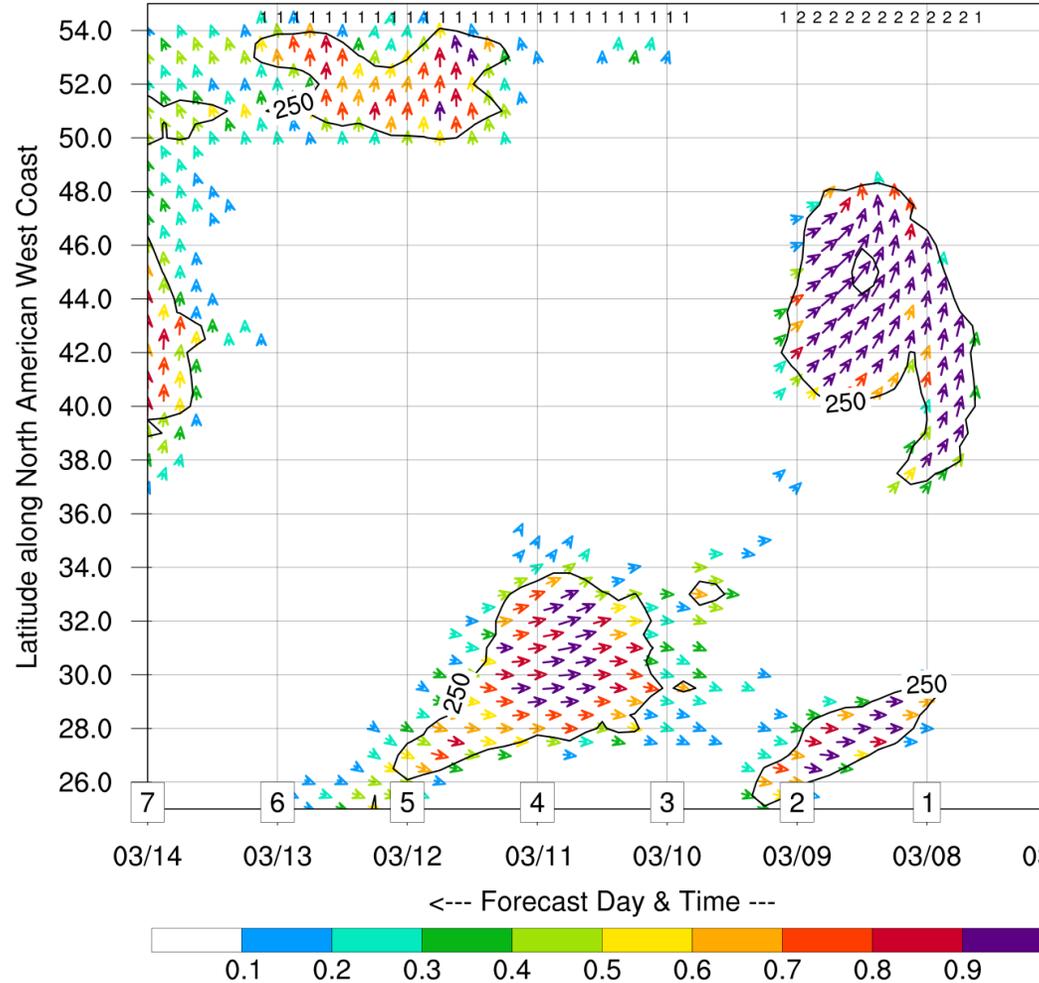
For California DWR's AR Program



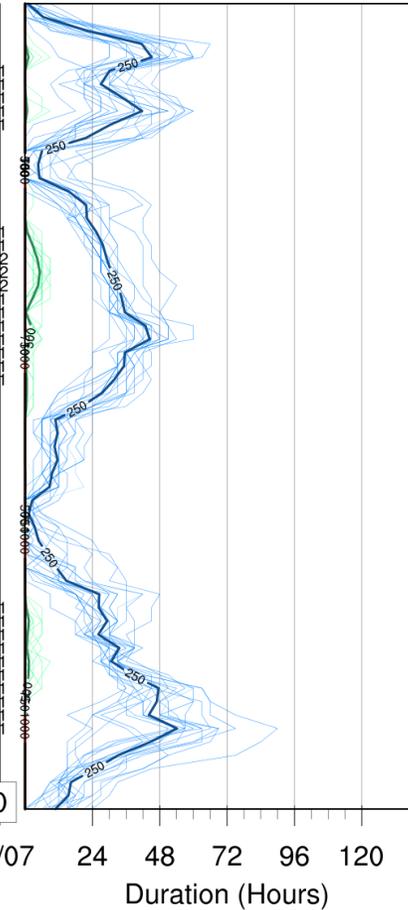
Center for Western Weather and Water Extremes
SCRIPPS INSTITUTION OF OCEANOGRAPHY
AT UC SAN DIEGO

AR Landfall Tool: 06Z Wed 7 Mar 2018

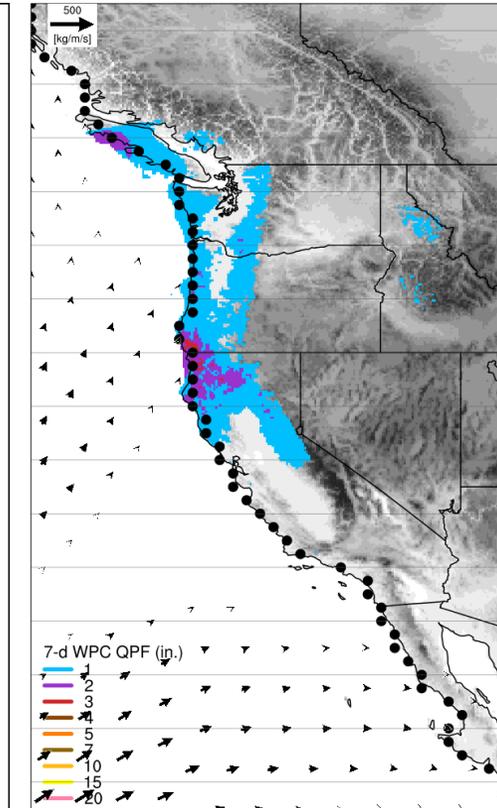
a. 7-d GFS Ens. Mean IVT Colored by Ens. Fraction >250 kg/m/s



b. Hours >250,500,750,1000



c. Time Mean IVT, Terrain, QPF



Plymouth State and CW3E Scripps: <http://cw3e.ucsd.edu>
Contact is Dr. Jason Cordeira: jcordeira@ucsd.edu



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IVT orientation during 10-12 March is predicted to be westerly, and precipitation amounts are currently predicted to be less than 1 inch.

AR Outlook: 7 March 2018

For California DWR's AR Program



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There is uncertainty in the GEFS of the magnitude and timing of the AR conditions over CA and Baja CA during 10–12 March

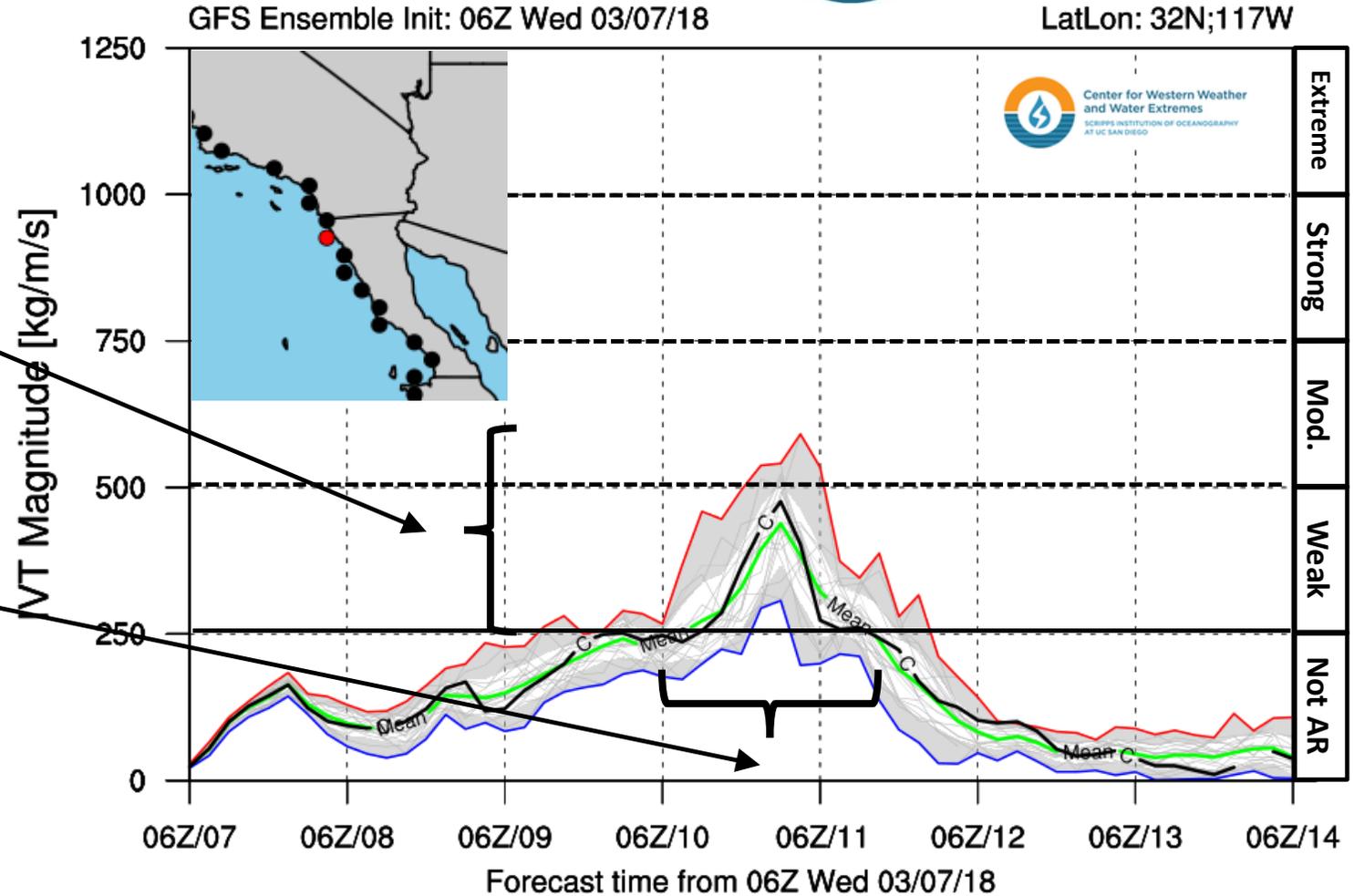
Magnitude of Potential AR

- Maximum possible IVT $\sim 600 \text{ kg m}^{-1} \text{ s}^{-1}$
- Mean IVT $\sim 475 \text{ kg m}^{-1} \text{ s}^{-1}$
- Minimum possible IVT $\sim 300 \text{ kg m}^{-1} \text{ s}^{-1}$

Duration of AR conditions

- Weak: $\sim 30 \text{ hours } \pm 12 \text{ h}$
- Moderate: $\sim 3 \text{ hours } \pm 6 \text{ h}$

All GEFS members are predicting at least weak AR conditions during 10–12 March with only 3 predicting moderate AR conditions.

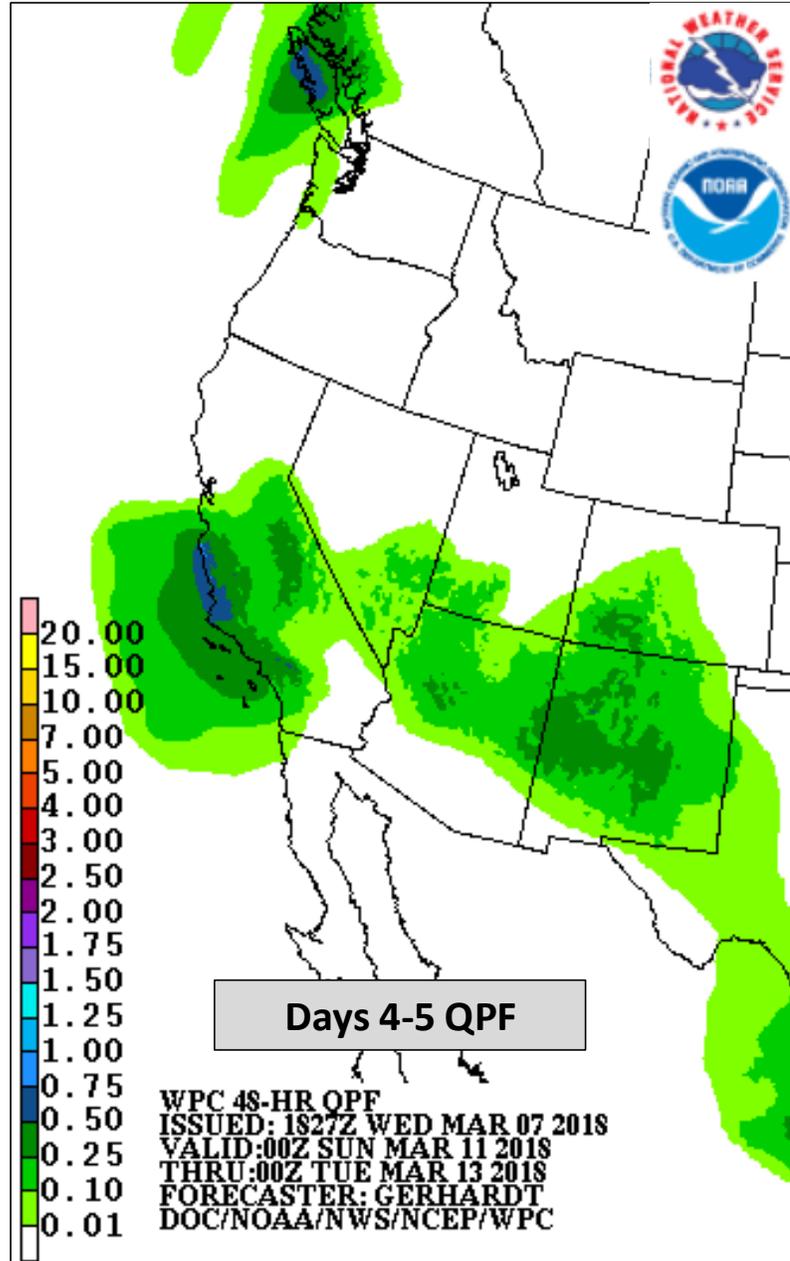


AR Outlook: 7 March 2018



NOAA Weather Prediction Center

Weather Prediction Center QPF



The weak AR over southern CA during 10–12 March is expected to produce precipitation over all of southwestern CA and the southern Sierras, however accumulations are not expected to be high.

The highest precipitation amounts are predicted to be over Santa Barbara, San Luis Obispo, and Monterey counties, but accumulations are predicted to be less than 1 inch over 48 hours.