

AR Update: 16 March 2017

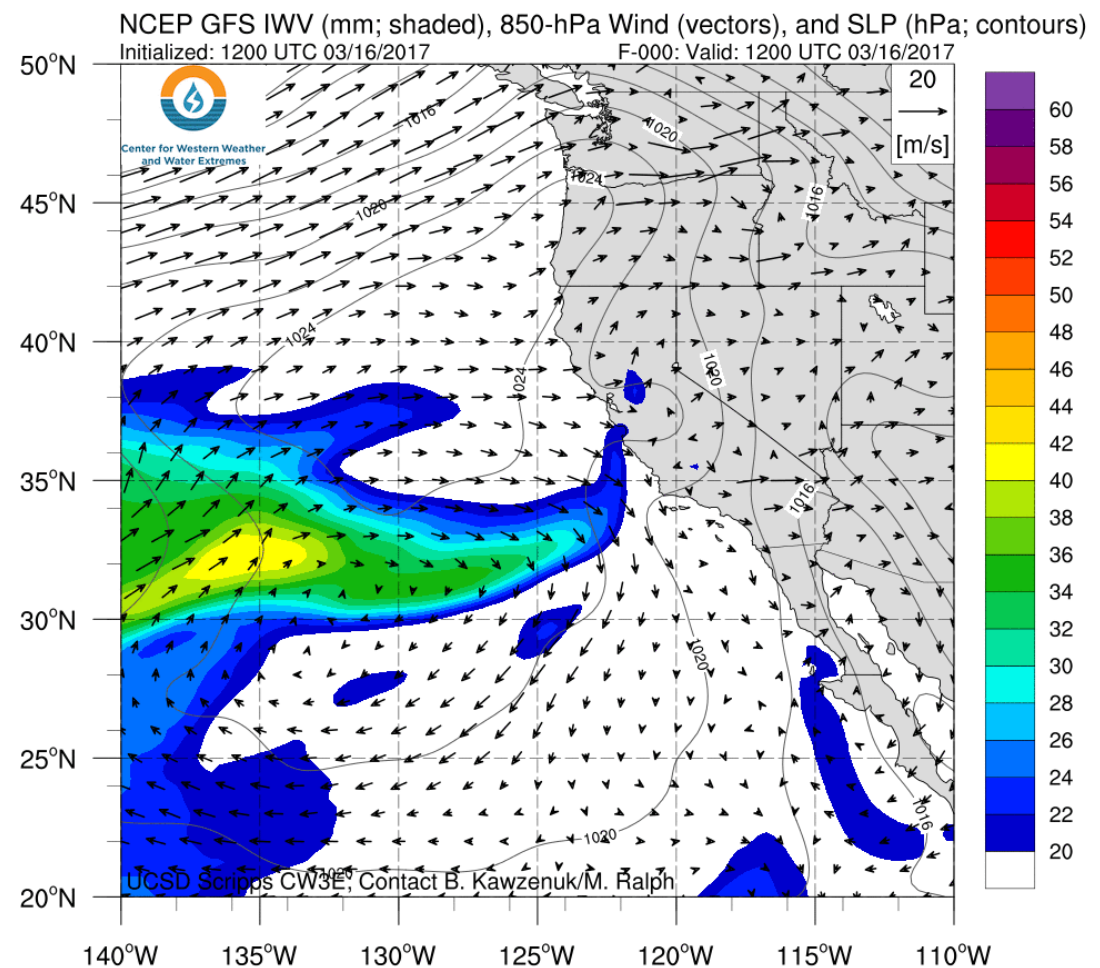
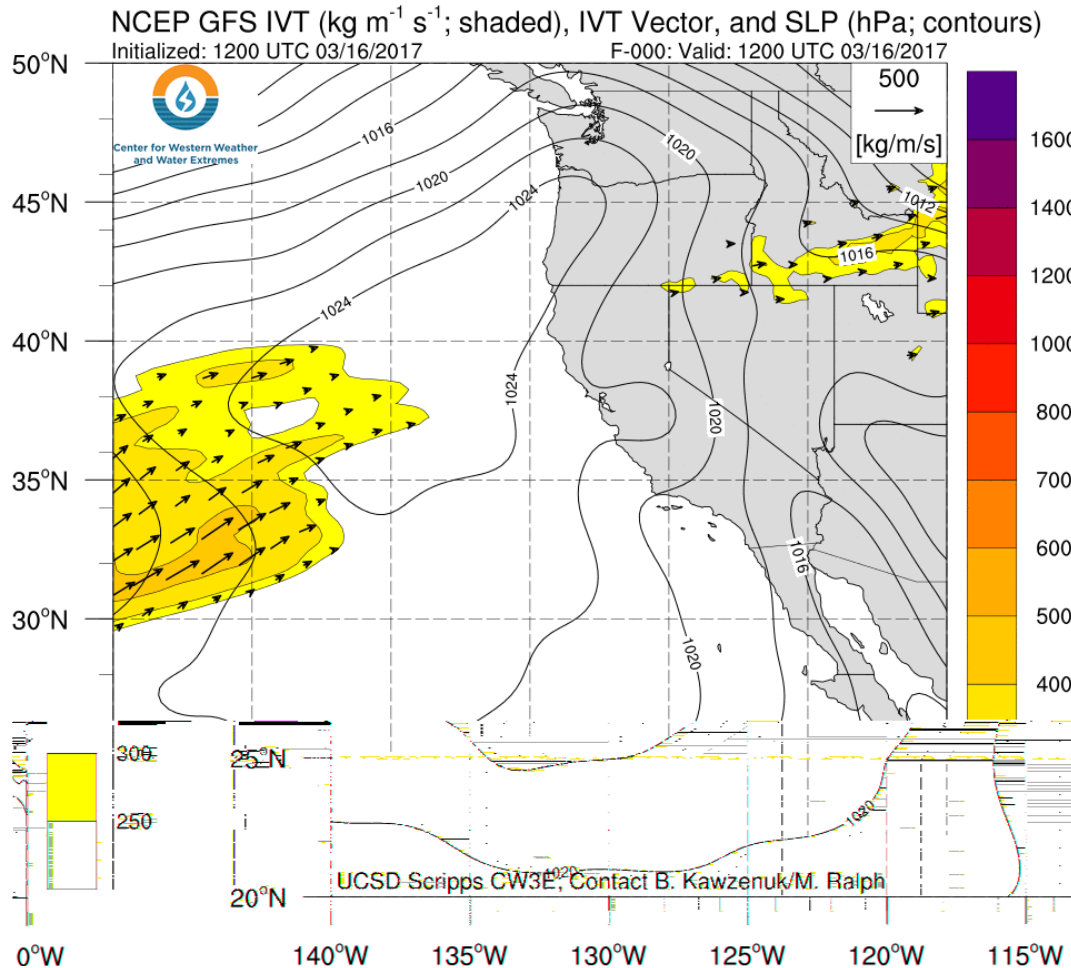
For California DWR's AR Program



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

Two ARs Forecast to Impact West Coast Over the Next Week

- First AR to make landfall over Oregon Friday morning and primarily impact the Pacific Northwest and Northern CA
- Second AR is forecast to impact Oregon and Northern CA beginning Monday Morning
- Coastal Oregon could potentially experience strong AR conditions around 8 PM PDT Friday associated with first AR
- Second AR could bring moderate AR conditions to Northern California but forecast confidence is currently low
- Precipitation forecasts range from 2 to 4.8 inches over the high elevations of Northern California and the Pacific Northwest

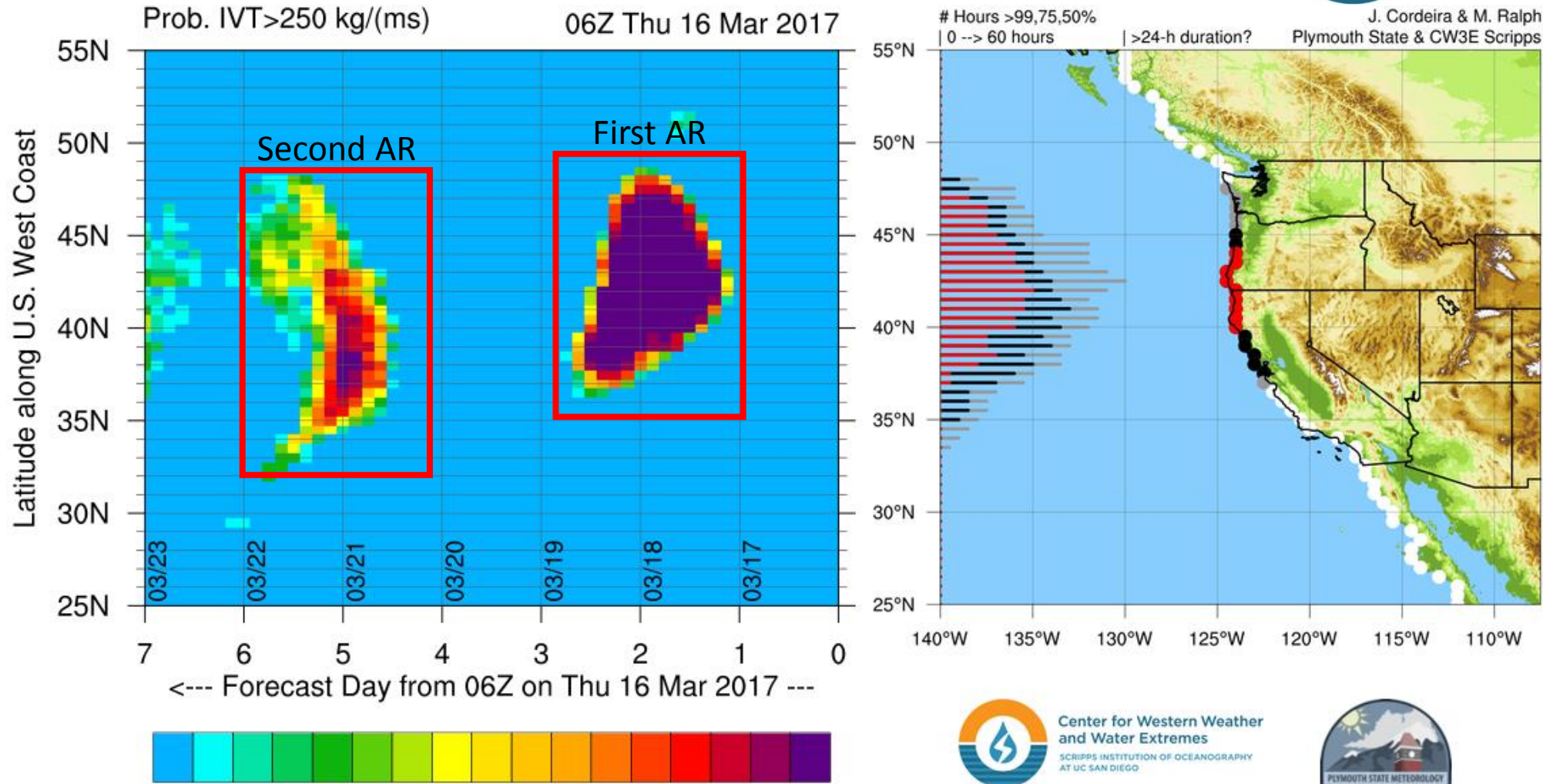


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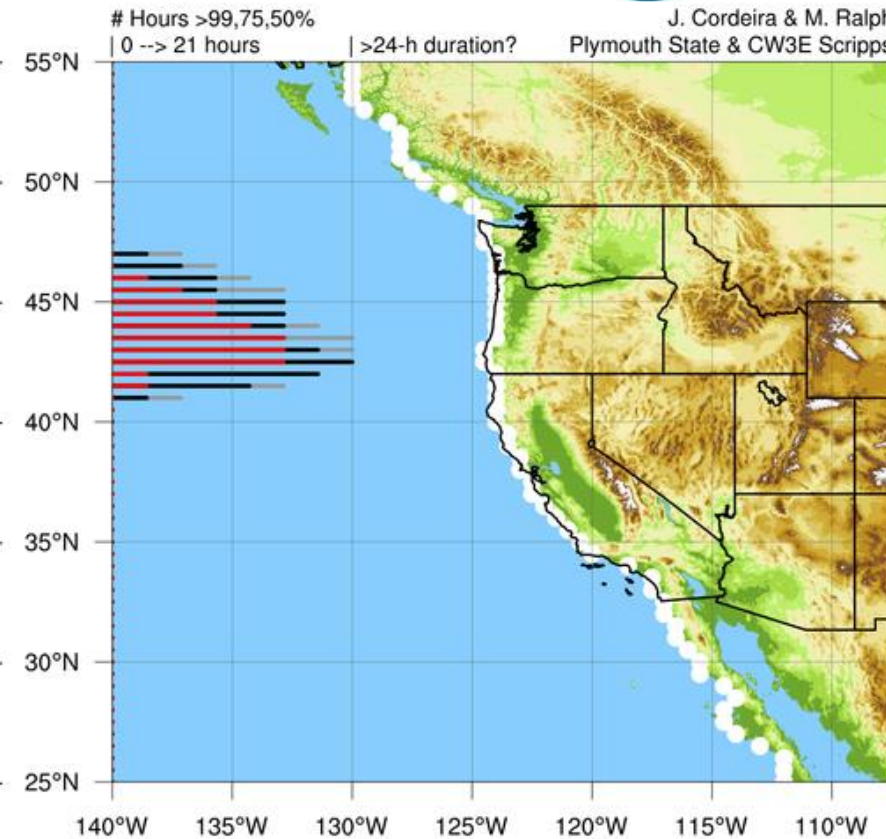
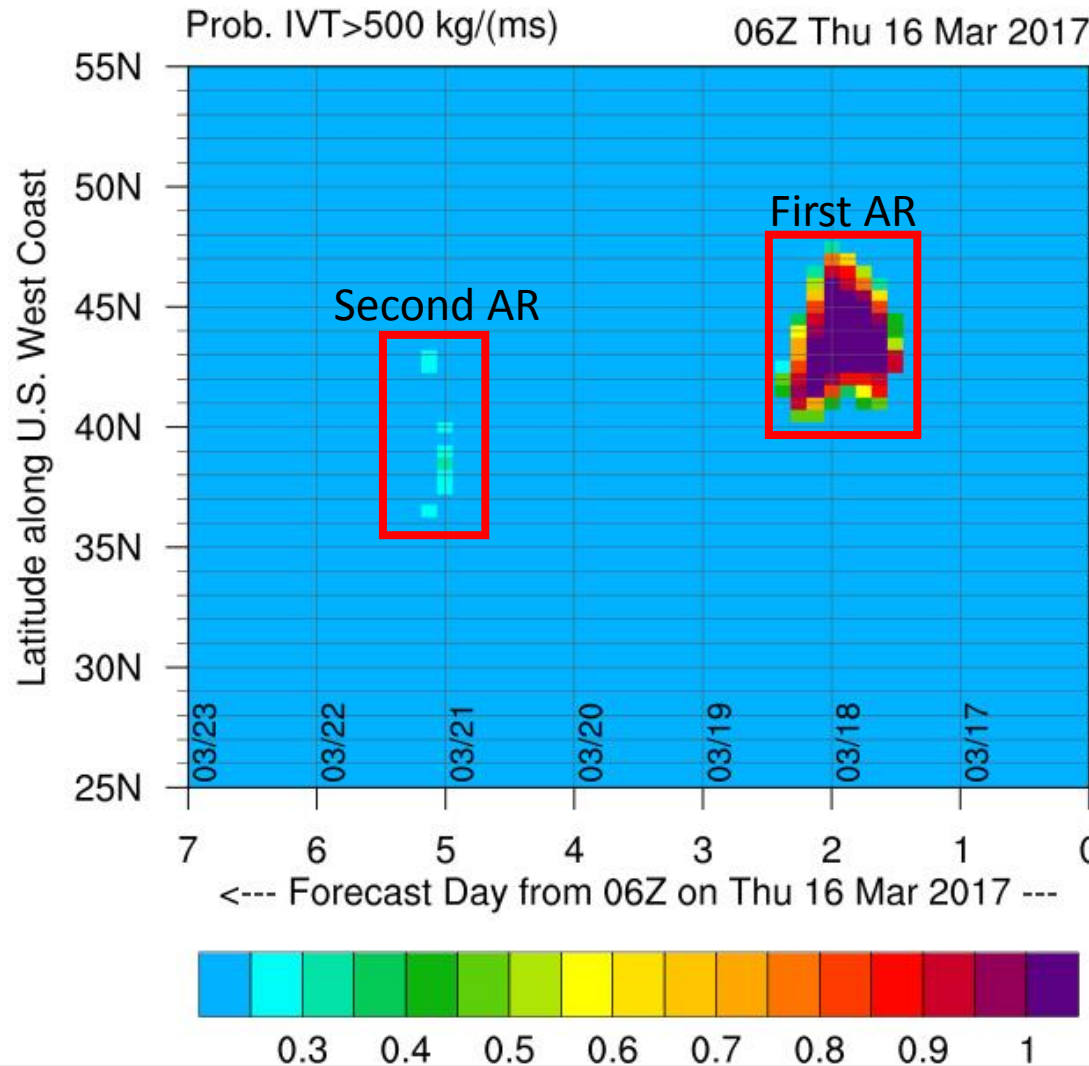
- High probability of at least weak AR conditions ($IVT > 250 \text{ kg m}^{-1} \text{ s}^{-1}$) lasting up to 36 hours over Oregon and Northern CA with first AR beginning at approximately midnight on the 17 March
- Lower probability of AR conditions associated with the second AR beginning ~11 am 20 March over OR and Northern CA

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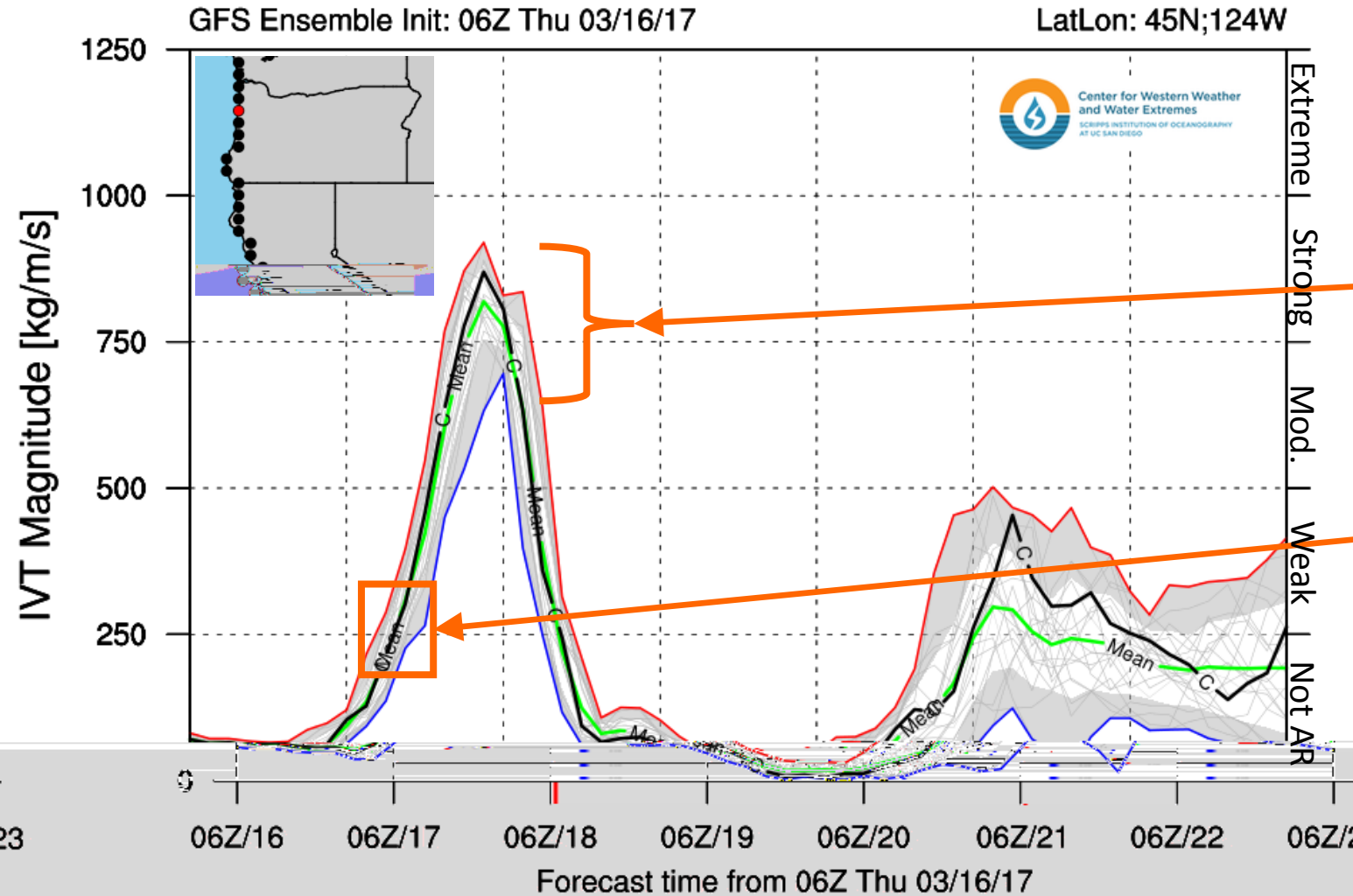
- High probability of moderate AR conditions ($IVT > 500 \text{ kg m}^{-1} \text{ s}^{-1}$) beginning at ~12 PM PDT 17 March over OR associated with first AR
- Currently low (0–30%) probability of moderate AR conditions associated with second AR next week

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Coastal OR could potentially experience strong AR conditions, $IVT > 750 \text{ kg m}^{-1} \text{ s}^{-1}$

Magnitude of AR over Coastal Oregon

- Maximum possible IVT $\sim 900 \text{ kg m}^{-1} \text{ s}^{-1}$
- Mean IVT $\sim 800 \text{ kg m}^{-1} \text{ s}^{-1}$
- Uncertainty $\sim \pm 12\%$

High Confidence in onset of AR conditions:

- 6 AM PT Friday 17 March $\pm 3 \text{ h}$

Duration of AR conditions

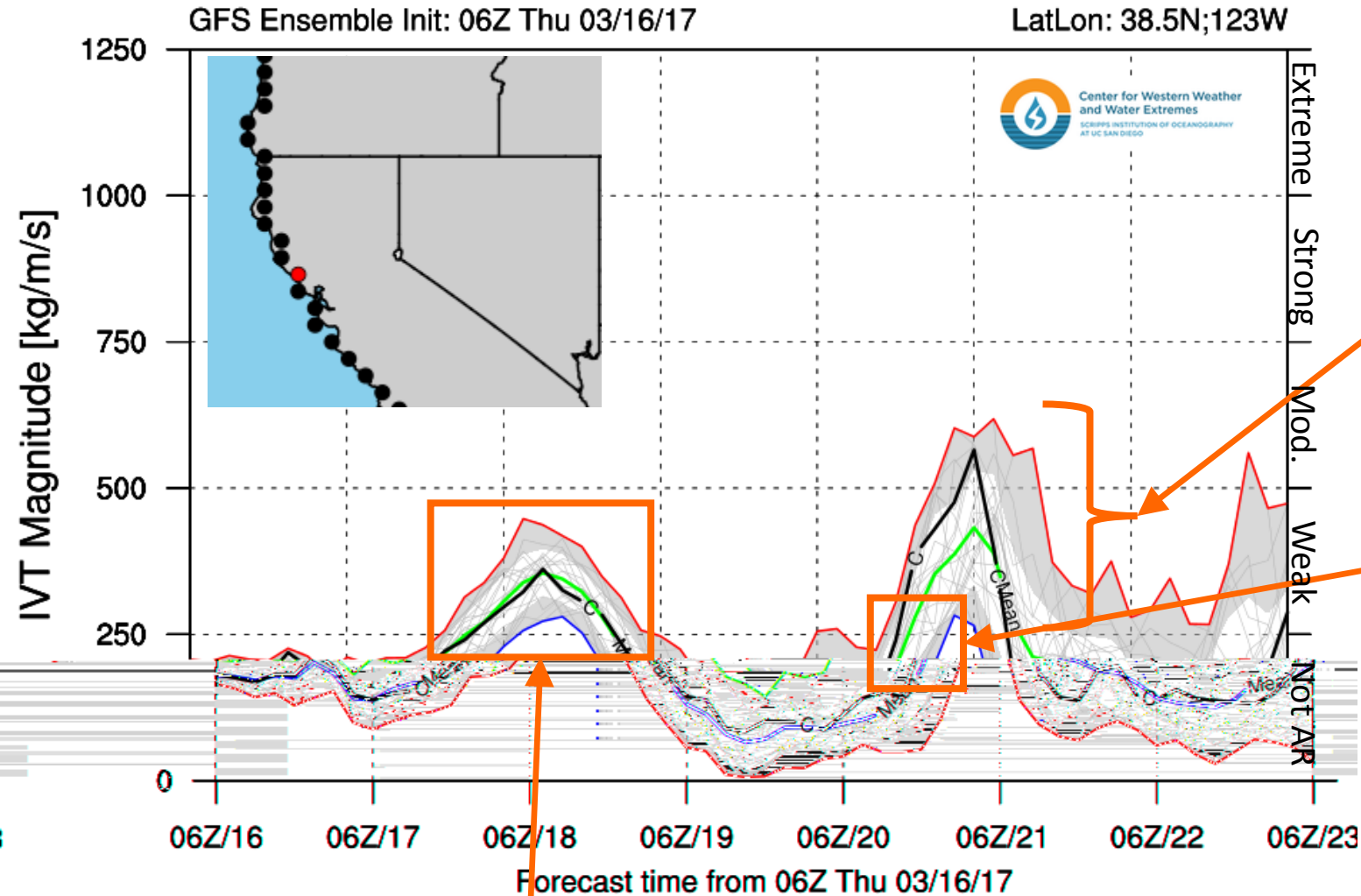
- Weak: $\sim 24 \text{ hours} \pm 6 \text{ h}$
- Moderate: $\sim 14 \text{ hours} \pm 9 \text{ h}$
- Strong: $\sim 6 \text{ hours} \pm 6 \text{ h}$

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The Second AR could potentially bring Weak to Moderate AR conditions to the Russian River Region

Magnitude of AR over Coastal Oregon

- Maximum possible IVT $\sim 650 \text{ kg m}^{-1} \text{ s}^{-1}$
- Mean IVT $\sim 400 \text{ kg m}^{-1} \text{ s}^{-1}$

Large Uncertainty in Onset of AR conditions:

- 11 AM Monday 20 March $\pm 12 \text{ h}$

Duration of AR conditions

- Weak: $\sim 12 \text{ hours} \pm 12 \text{ h}$
- Moderate: $\sim 3 \text{ hours} \pm 9$

The Russian River Region may experience up to 24 hours of weak AR conditions associated with the first AR

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1-3 day precipitation forecasts from the NOAA-WPC are forecasting 1.5 to 4.05 inches of precipitation over higher elevations of the Pacific Northwest in association with the first AR. Lower elevations are forecast to receive up to .75 inches

7-day WPC precipitation forecasts range from 1 to 4.8 inches over Northern CA and the Pacific Northwest. Lower elevations could receive up to 1.5 inches

For Official NOAA-NWS Precipitation Forecasts see www.wpc.ncep.noaa.gov/qpf/qpf2.shtml

