

Seasonal Outlook for Winter of 2016/17



The Yosemite Conservancy www.yosemiteconservancy.org

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Oceanography

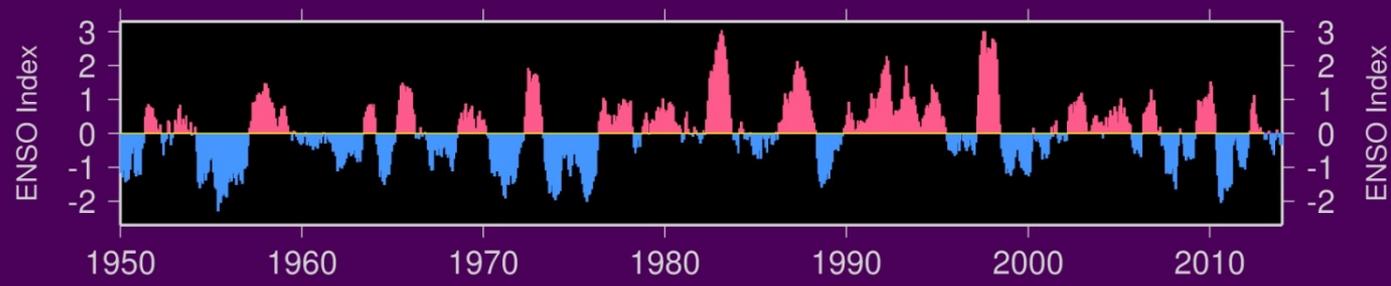
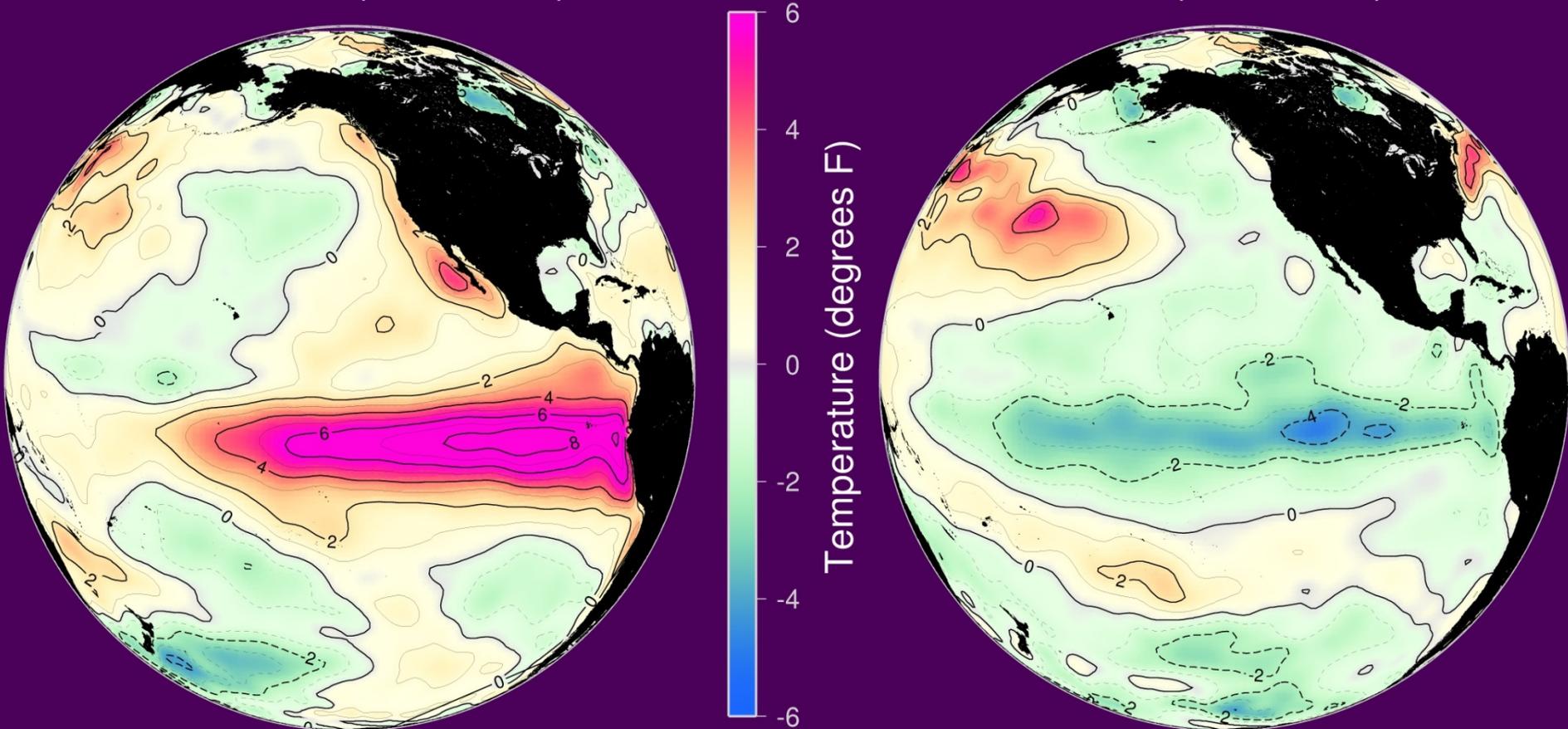
Scripps Institution of Oceanography

La Jolla, CA

El Nino/Southern Oscillation (ENSO) Sea Surface Temperatures (Departure from Normal)

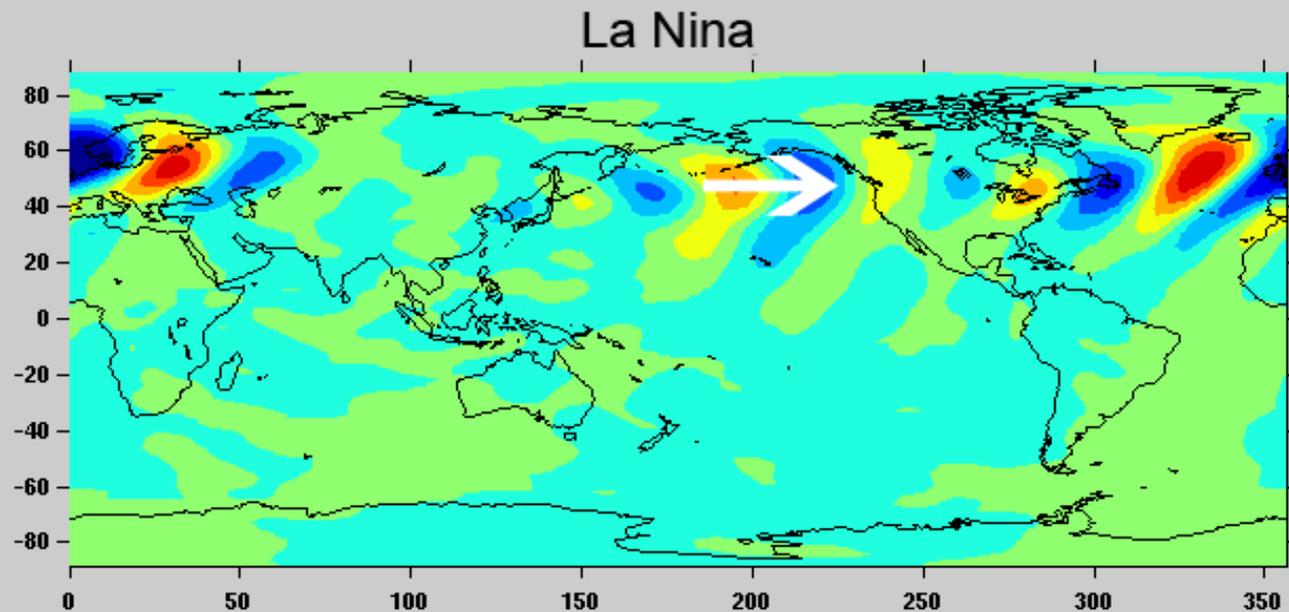
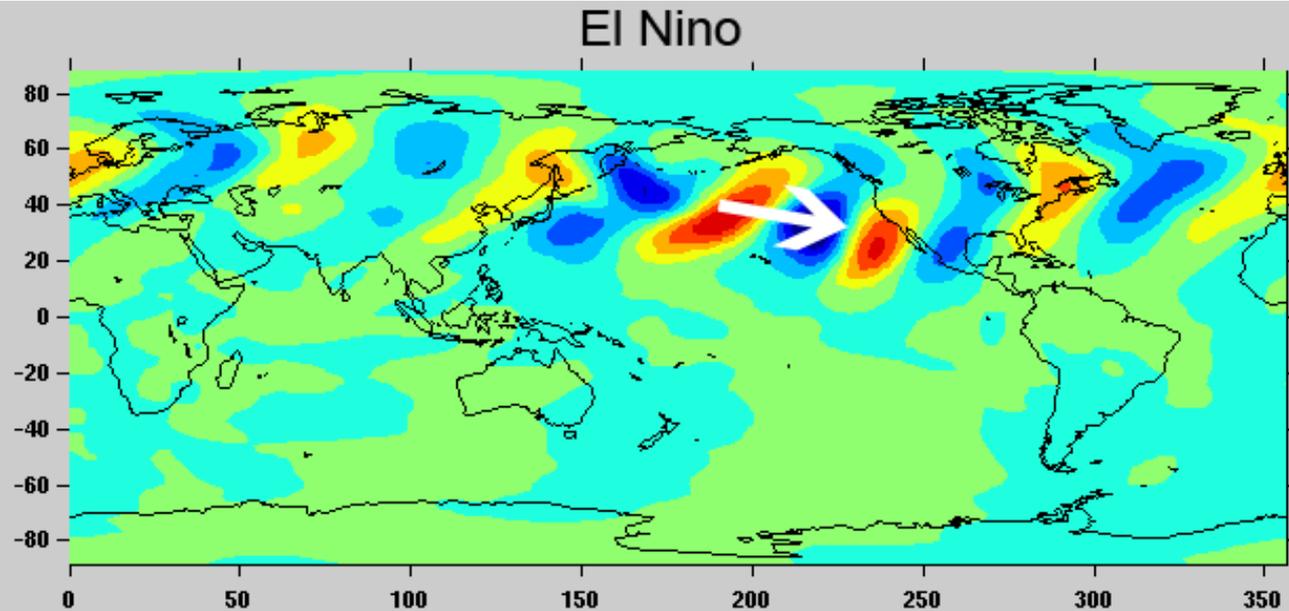
El Nino (Dec 1997)

La Nina (Dec 1999)



**How does
La Nina
affect our
weather?**

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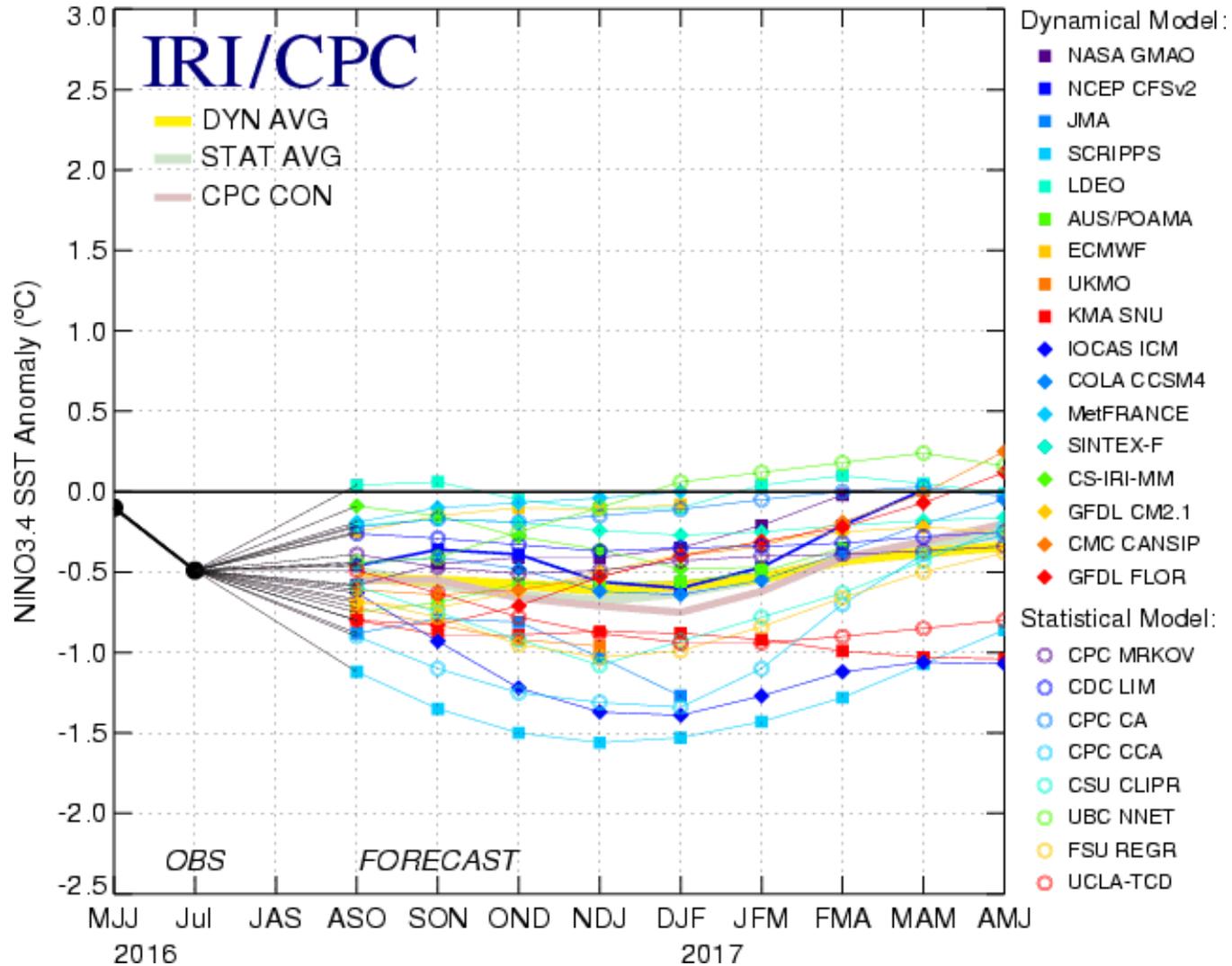


Colored
blobs show
example
storms
coming
across
Pacific in El
Nino and La
Nina year

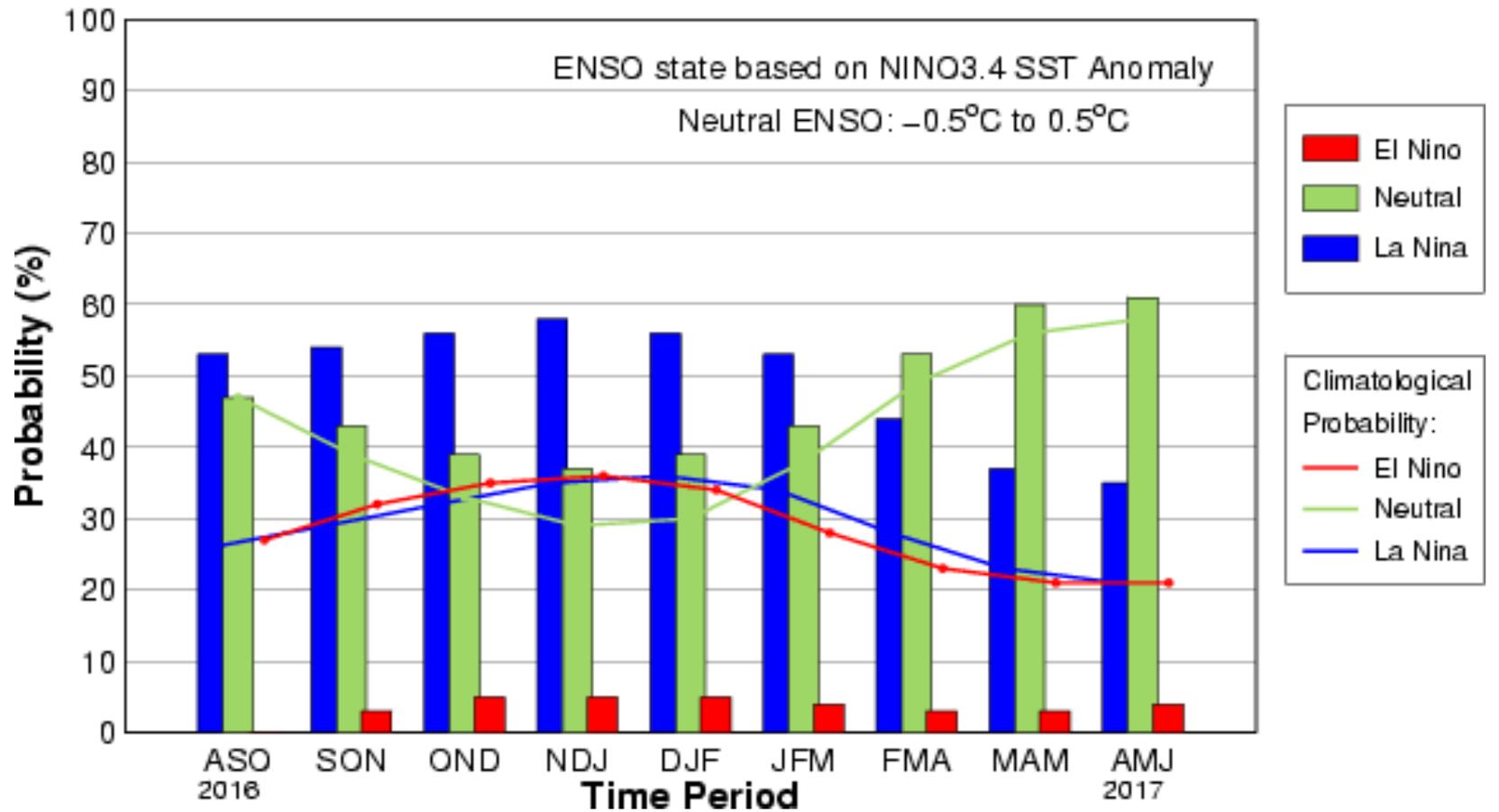
Current La Nina Forecast

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Mid-Aug 2016 Plume of Model ENSO Predictions

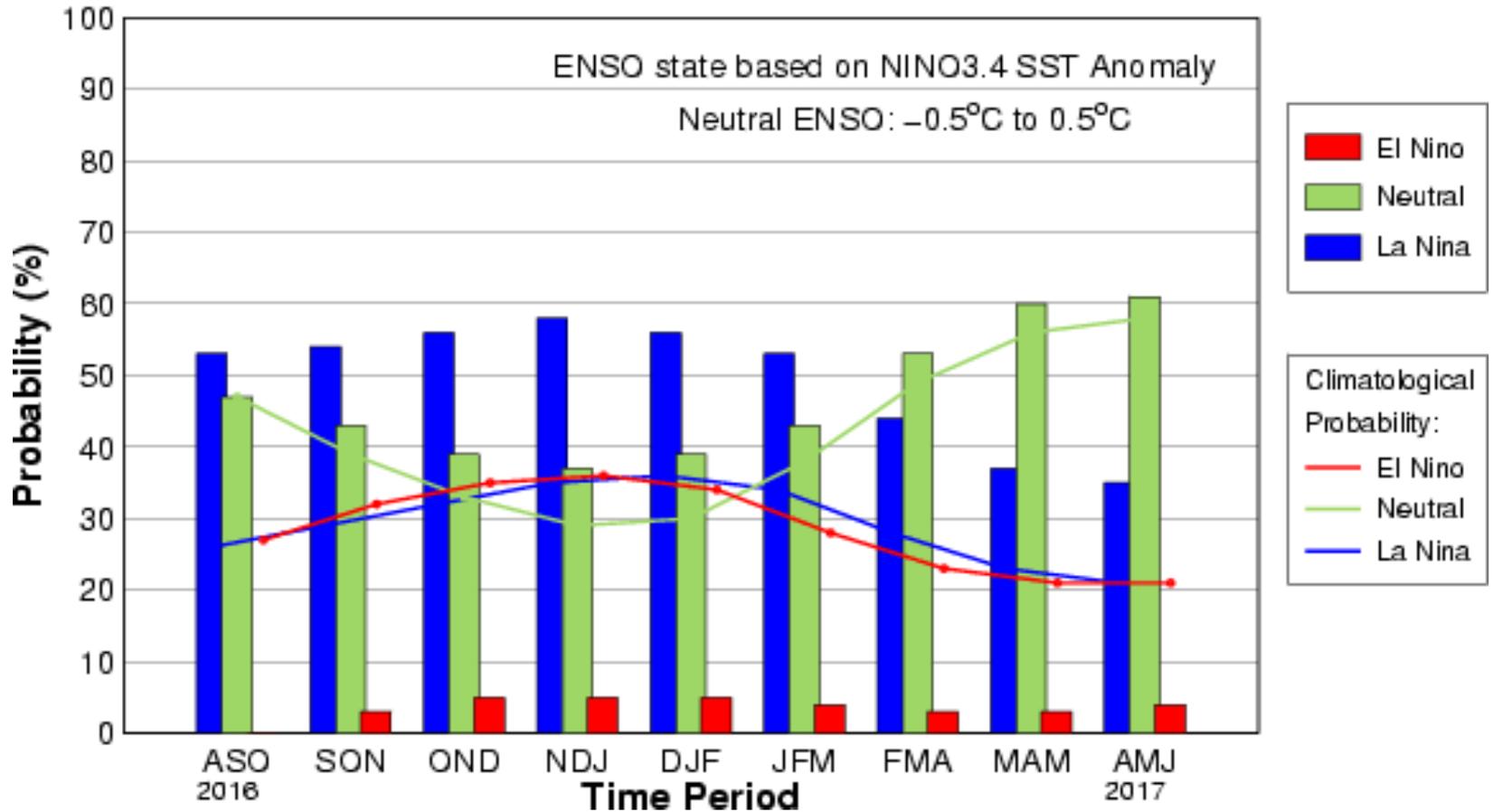


Mid-Aug IRI/CPC Model-Based Probabilistic ENSO Forecast



<http://iri.columbia.edu/our-expertise/climate/forecasts/enso/current/>

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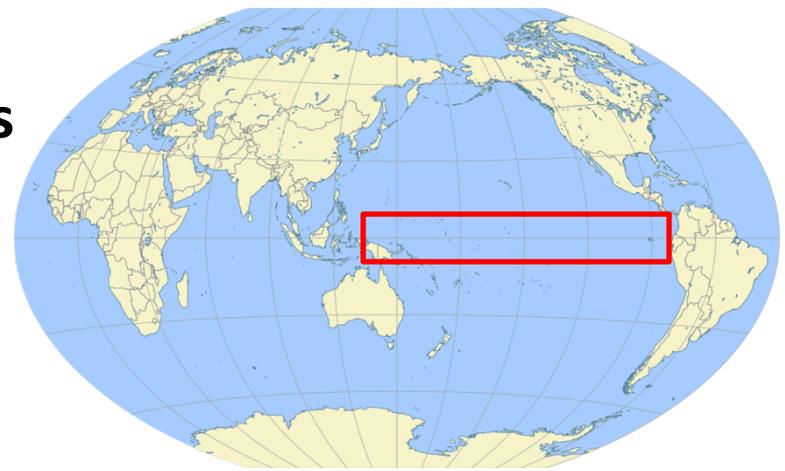


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	La Nina	Neutral	El Niño
Climatology	35%	30%	35%
This year, 2016	57% (1.62x)	38% (1.27x)	5% (0.14x)

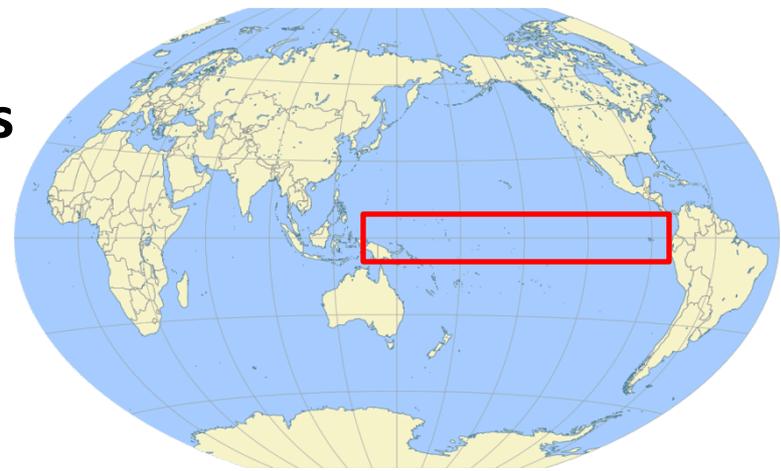
Current ocean temperature conditions

(Departure from normal for this time of year, °C)

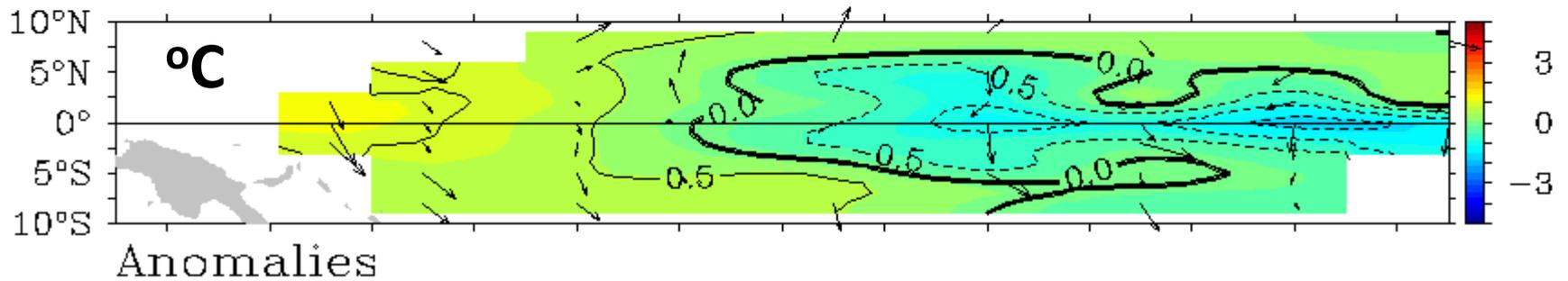


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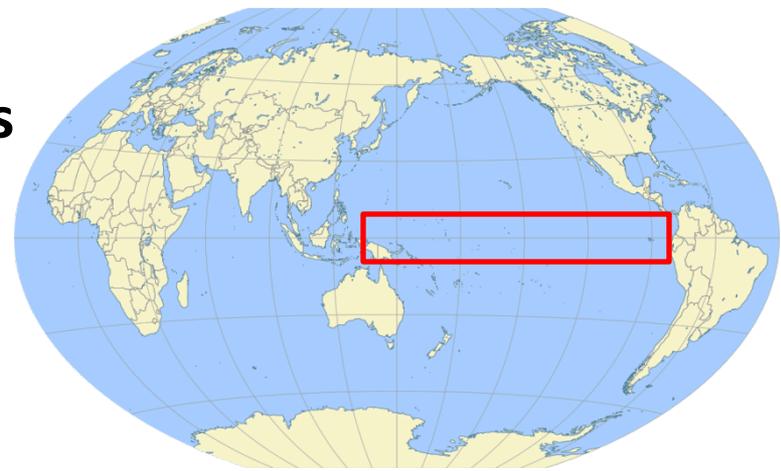


Mid August, 2016

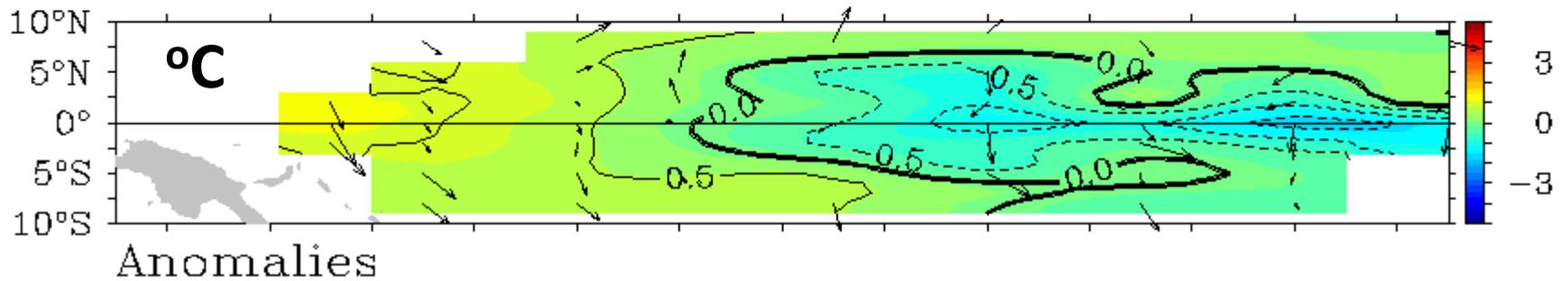


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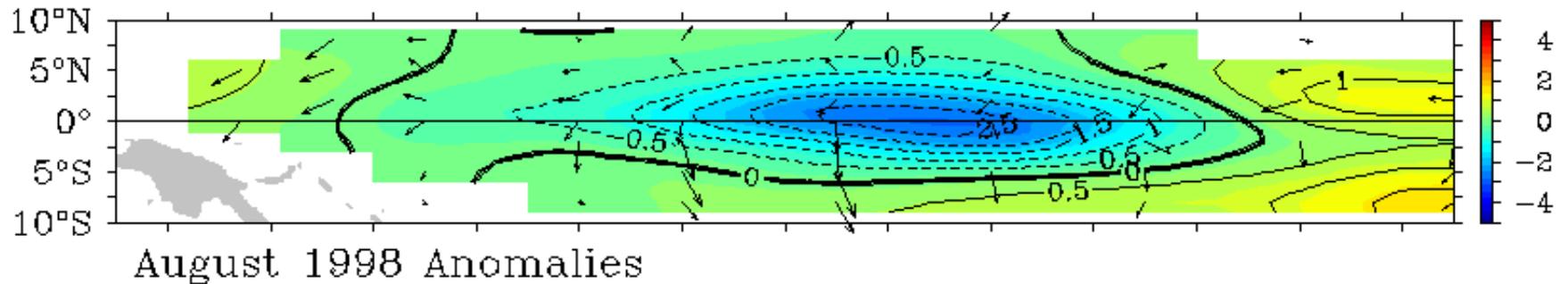
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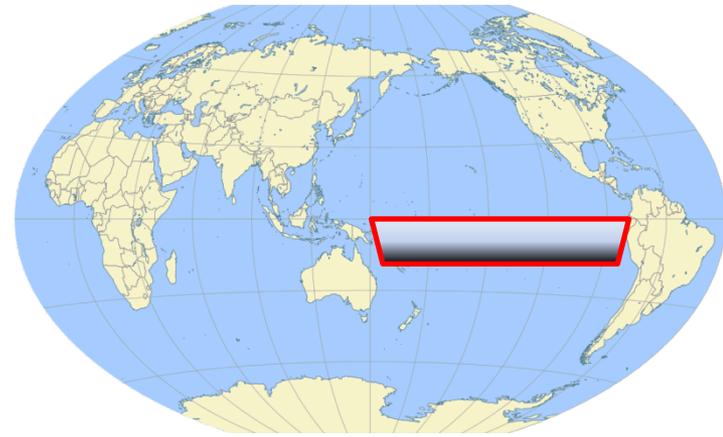


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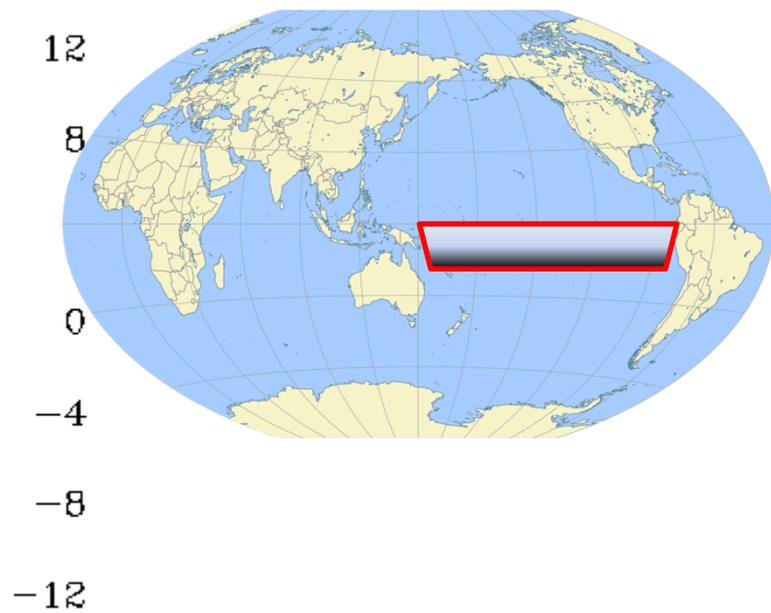
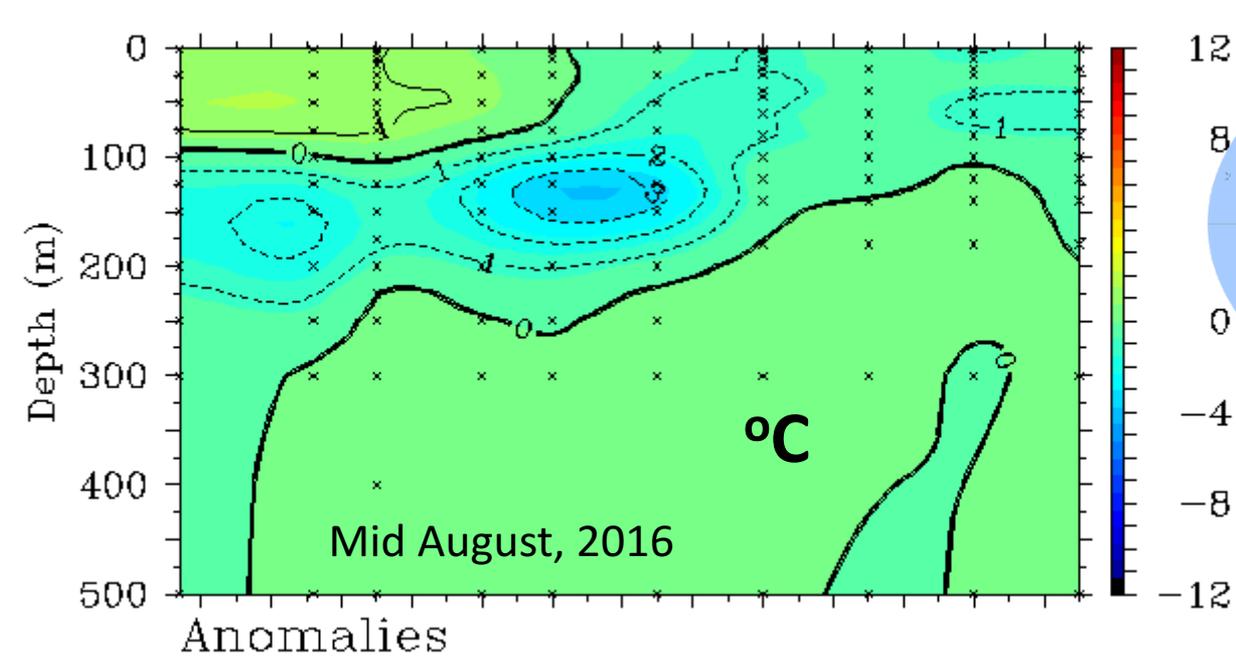


August, 1998

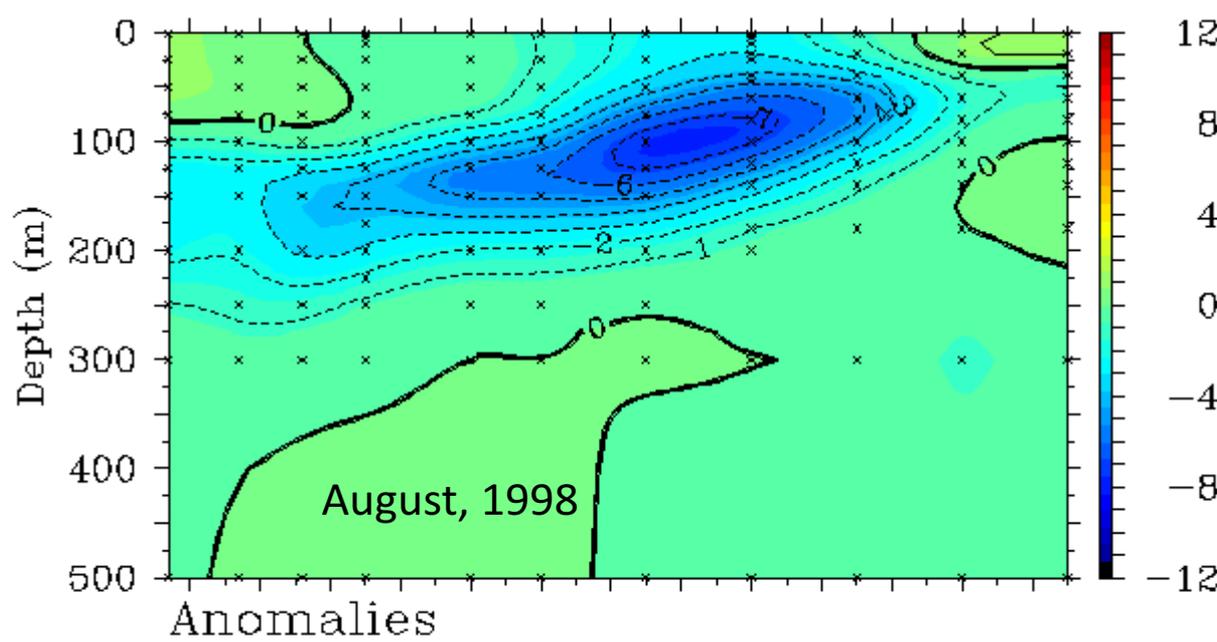
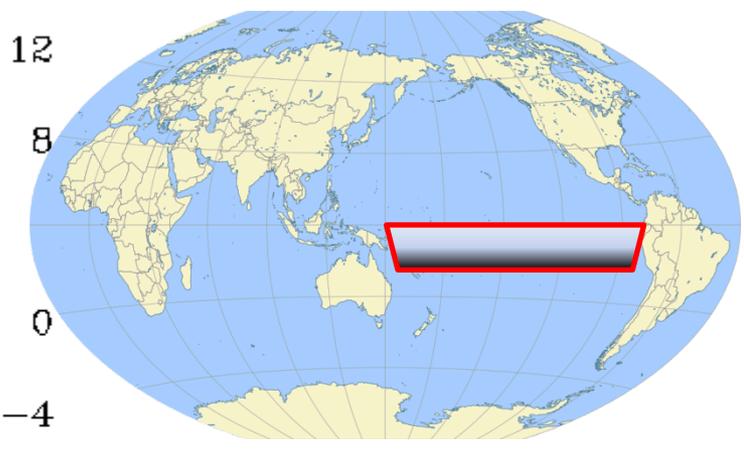
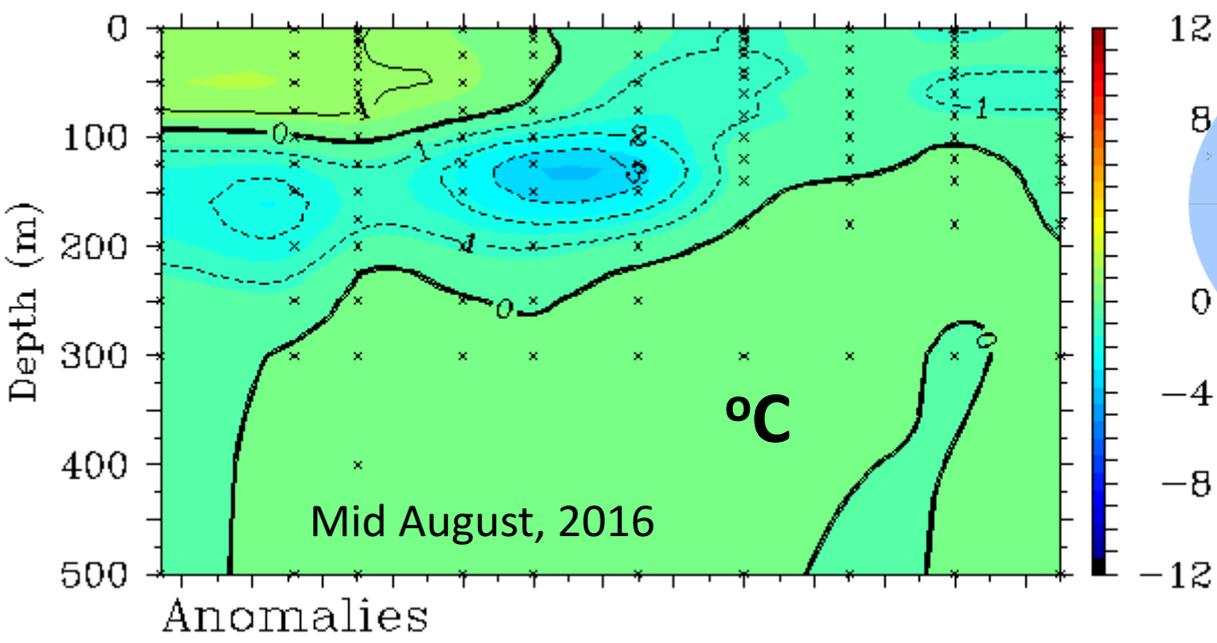




(Departure from normal
water temperature for
this time of year, °C)



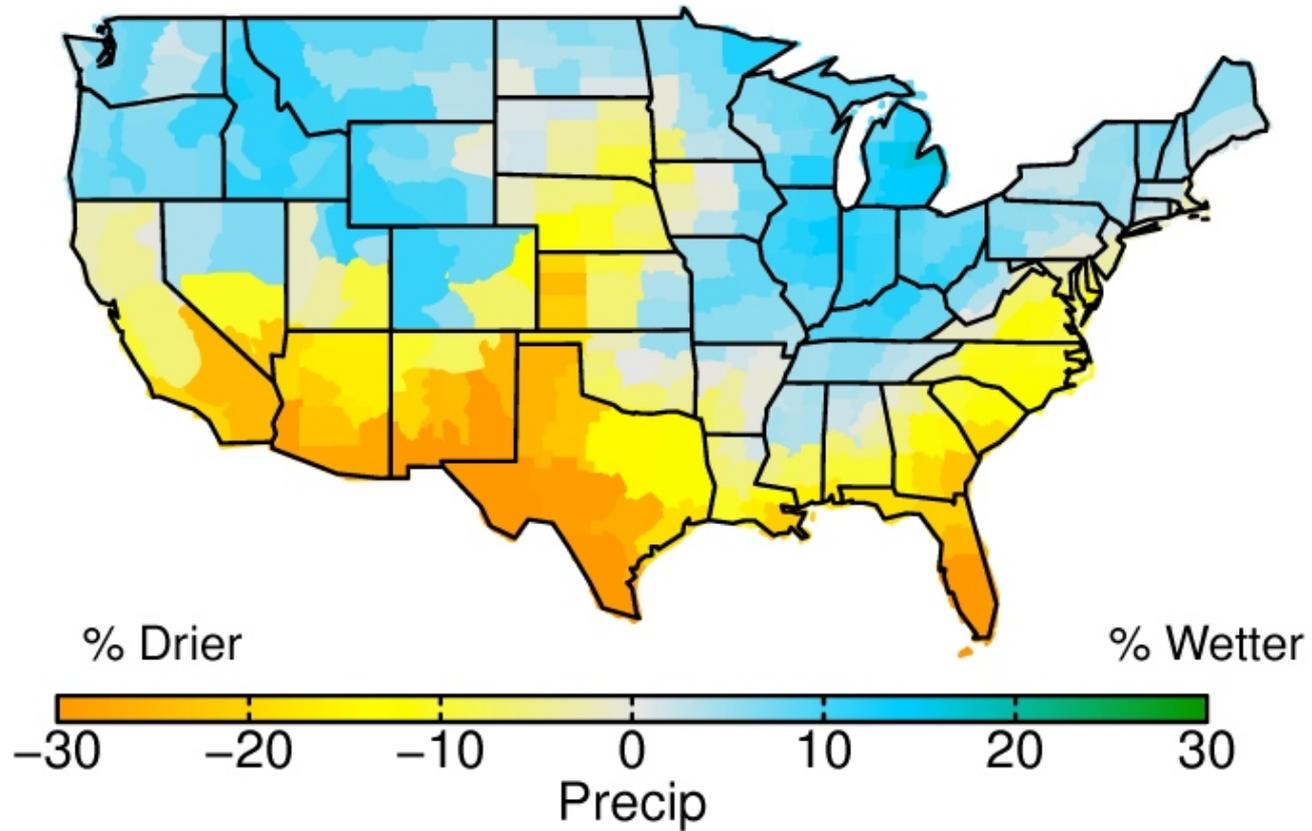
(Departure from normal water temperature for this time of year, °C)



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Average Effect of La Nina on Winter Precipitation

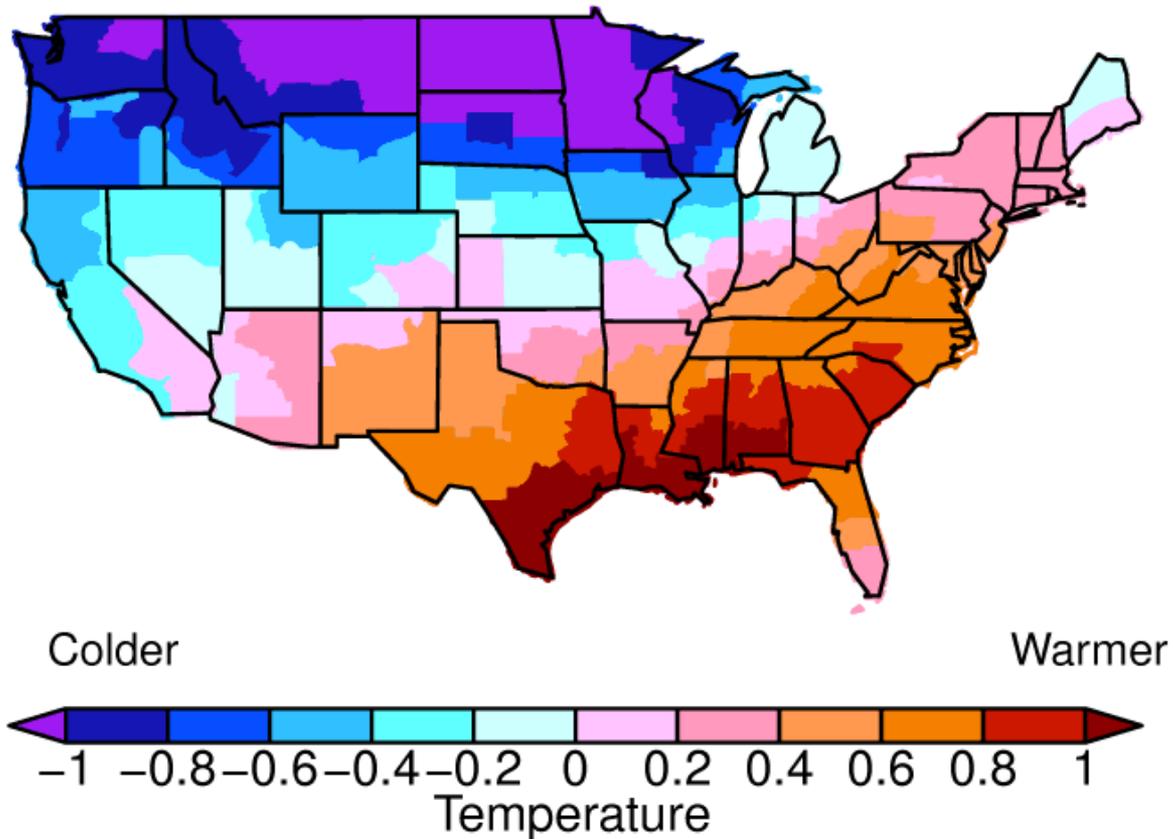
(Departure from normal winter, %)



Average Effect of La Nina on Winter Temperature

(Departure from normal winter, deg F)

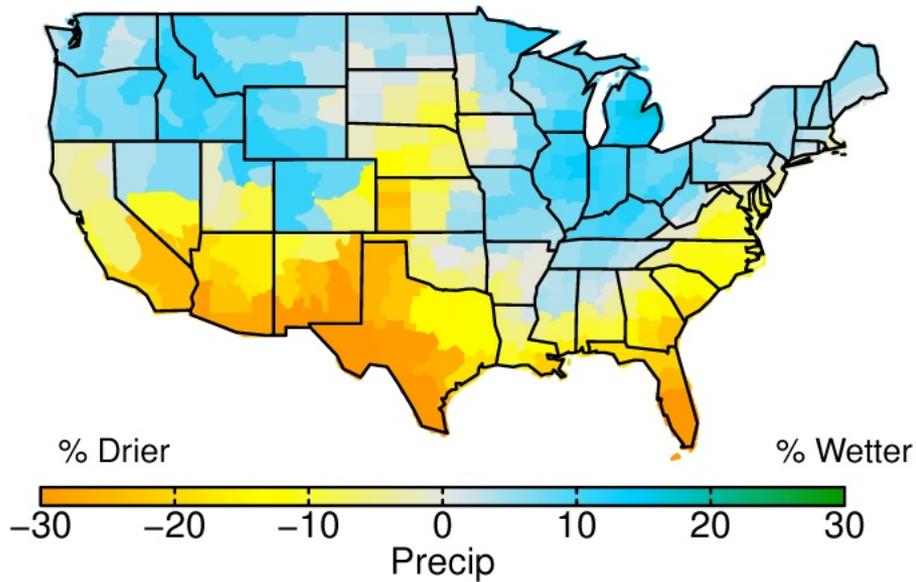
Effect of La Nina Dec–Jan–Feb (deg–F)



Average La Nina vs. 4 Years of Drought

(Departure from normal for winter, %)

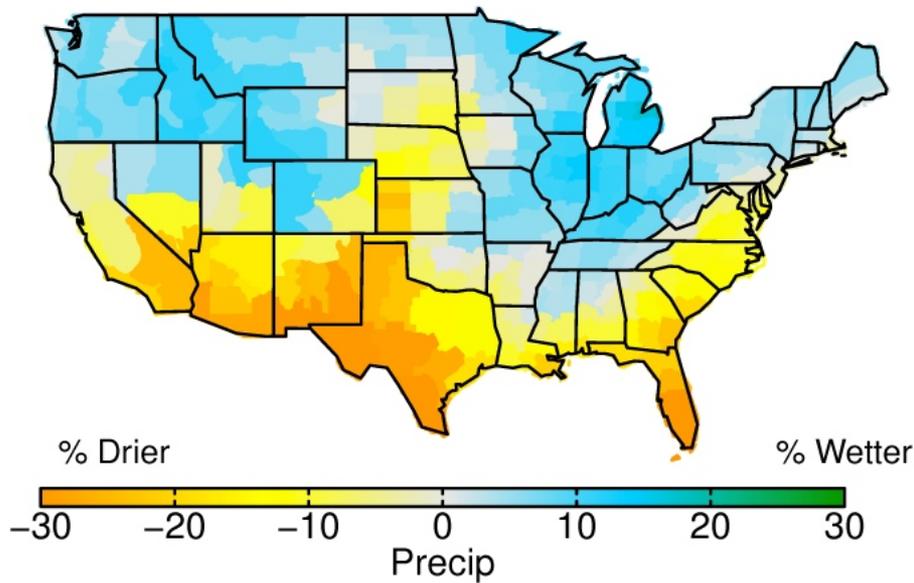
Average La Nina response



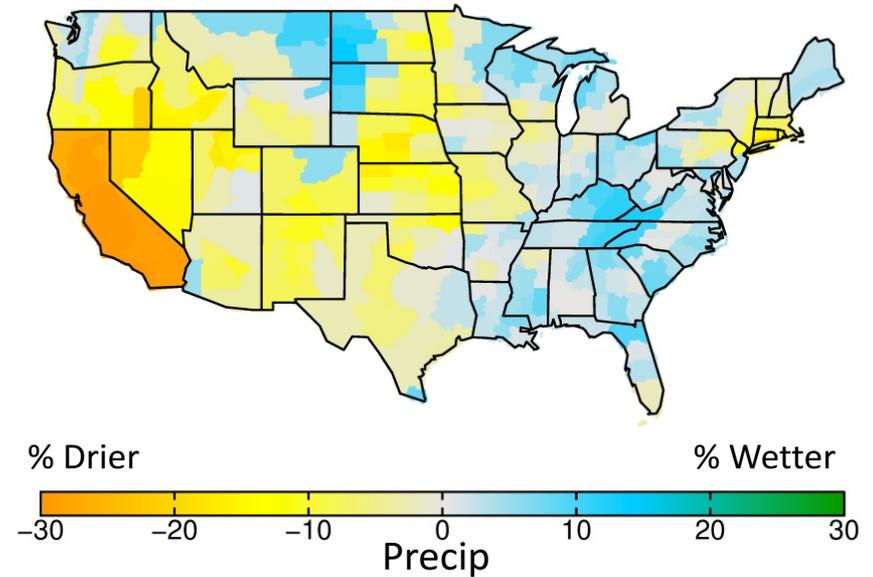
Average La Nina vs. 4 Years of Drought

(Departure from normal for winter, %)

Average La Nina response



Drought, 2012-2015



Summary

- Enhanced chance of a La Nina (cooler than usual tropical Pacific)
- Current est: 57% chance, which is ~60% more likely than usual
- Also enhanced chance of neutral year: 38% chance (27% more likely than usual)
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 - 10-30% drier in Southwest U.S
 - 15-20% drier in Southern California
 - Modestly drier in S. Nevada, wetter in N. Nevada
 - No consistent effect in Northern California (most CA state water resources)

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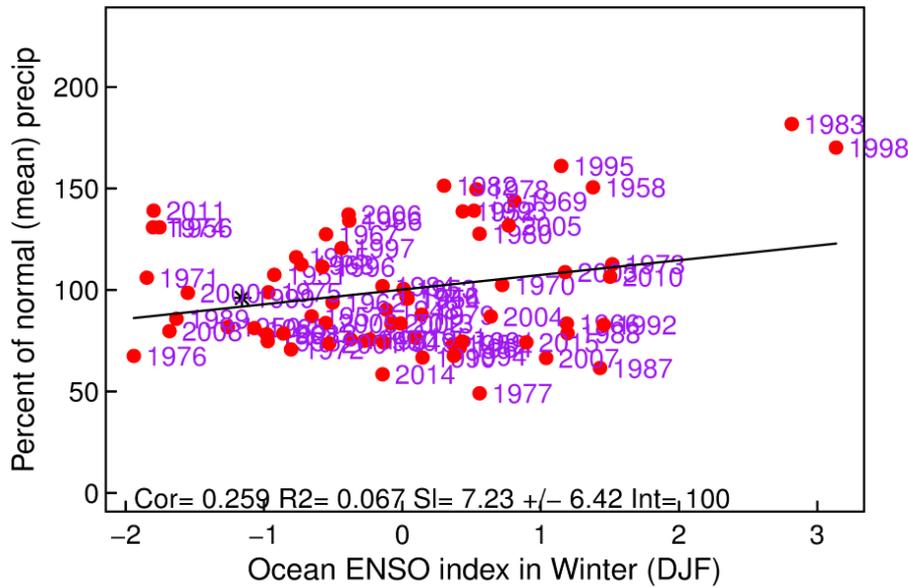
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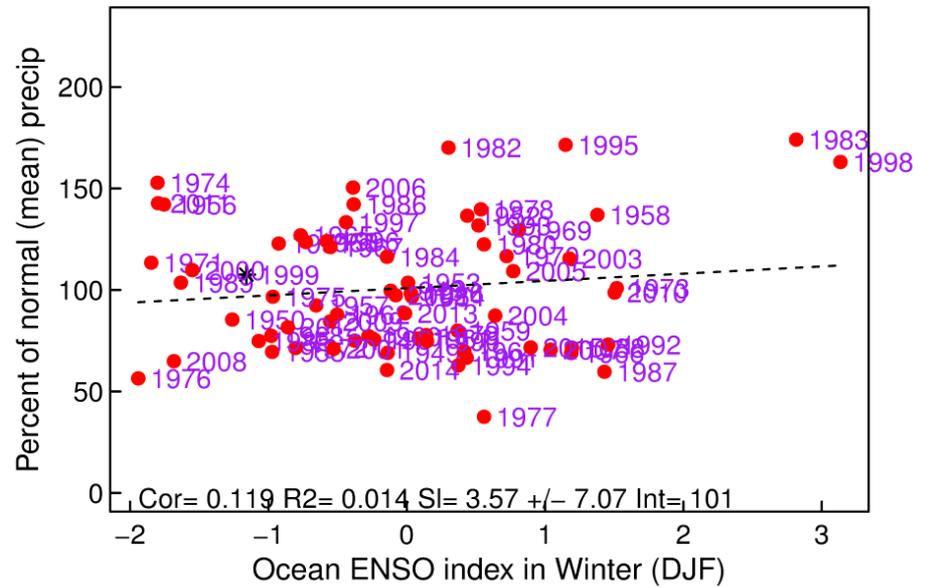
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- The recent 4 years of drought drier than average La Nina, especially in Northern California and Northern Nevada

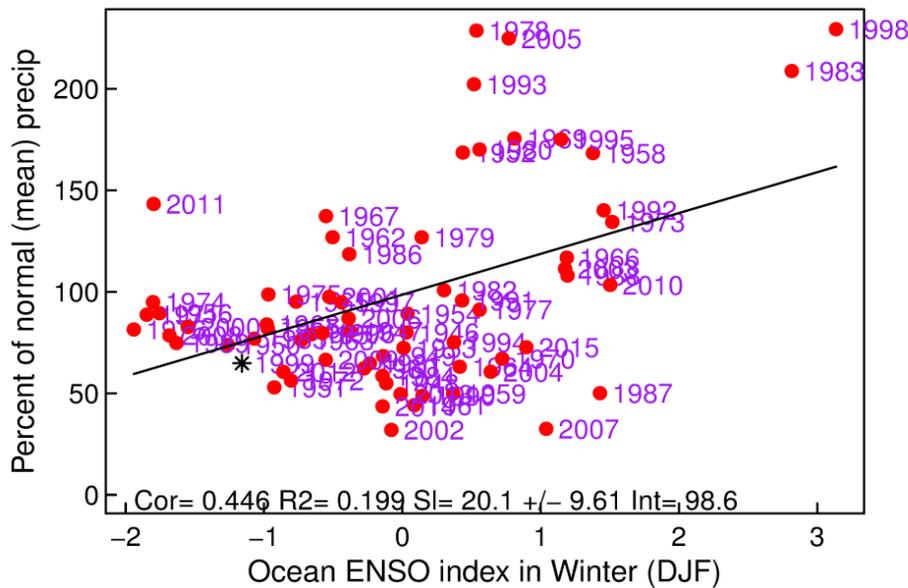
All-California



Sierra Nevada 8 Station Index



LA Basin



San Diego County

