

**Ocean Surface Topography Science Team (OSTST) Meeting
and 7th Coastal Altimetry Workshop (CAW-7)**

7 Oct 2013 to 11 Oct 2013
Boulder, CO



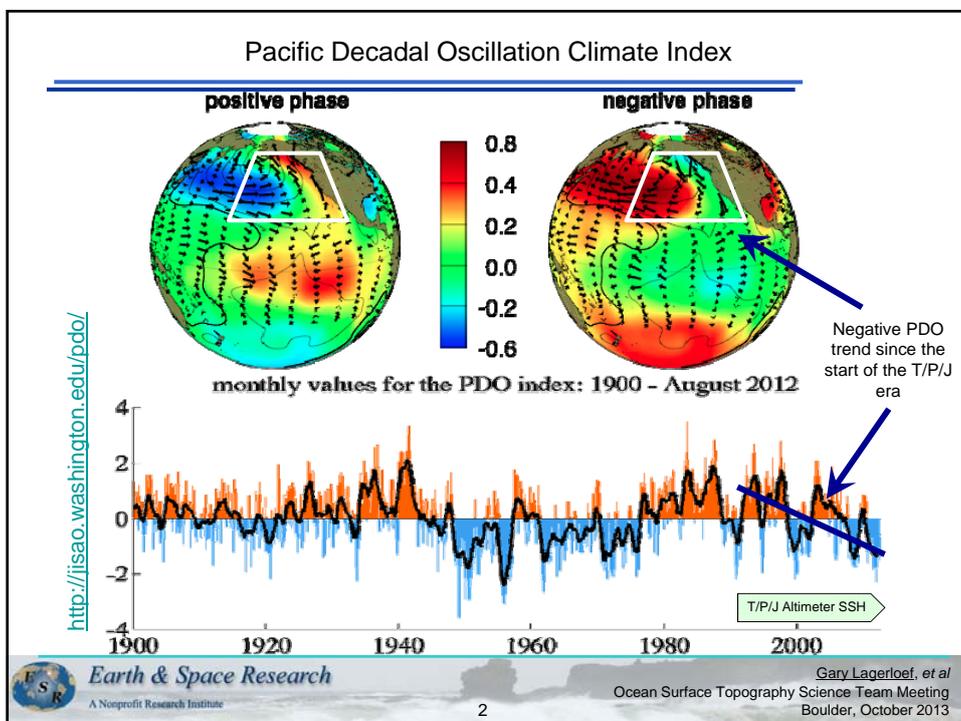
The Phase of the Pacific Decadal Oscillation (PDO) and Sea Level Trends in the North Pacific

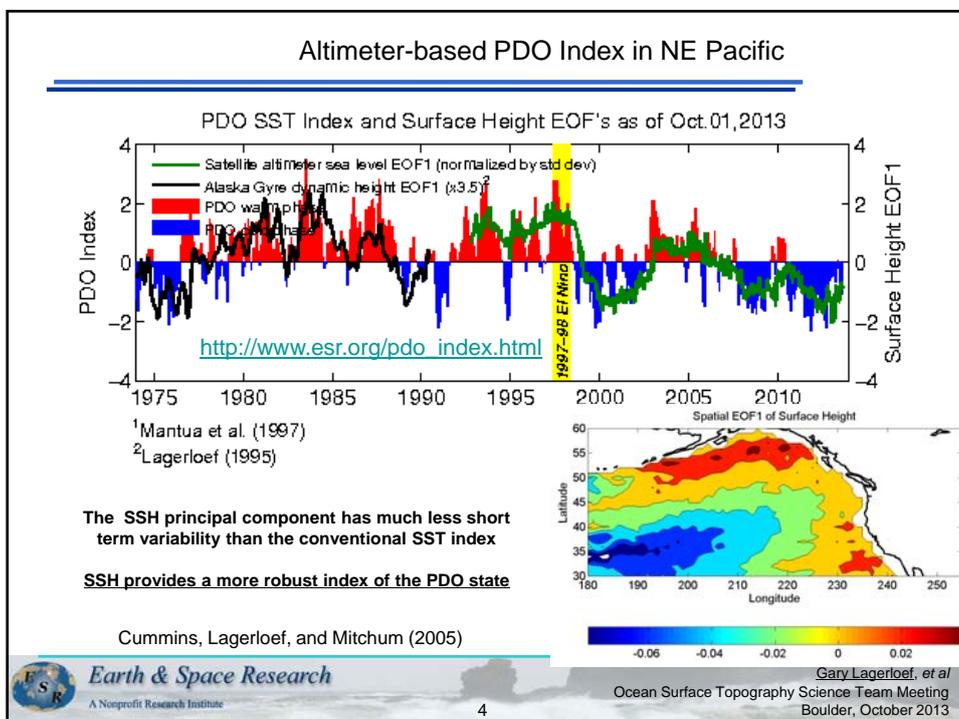
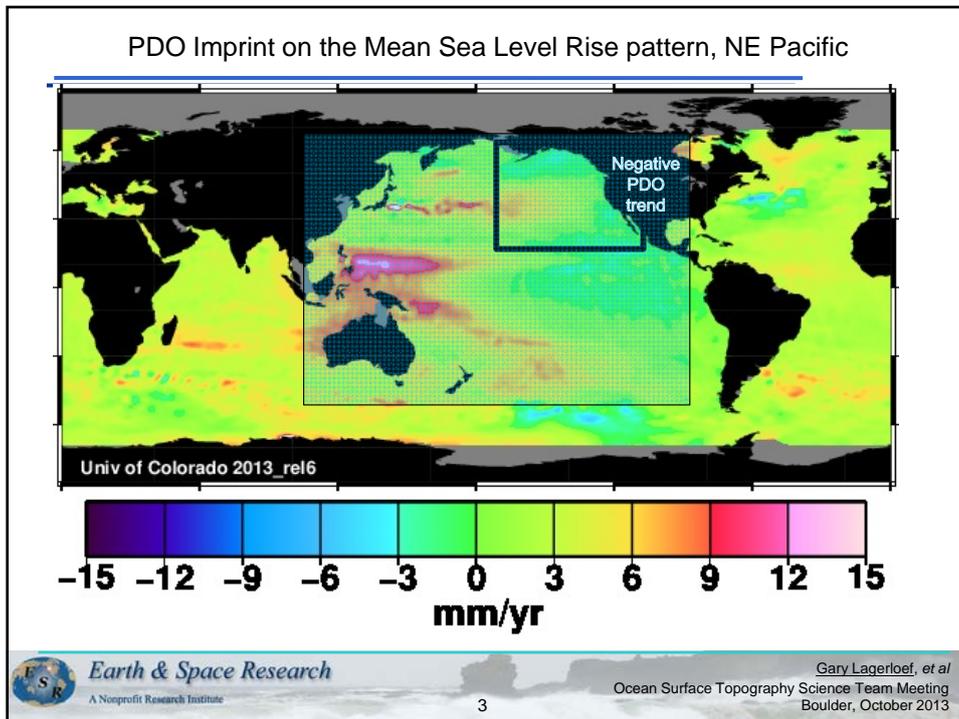
Gary Lagerloef, ChuanLi Jiang, Scott Springer
Earth and Space Research, Seattle, WA, USA

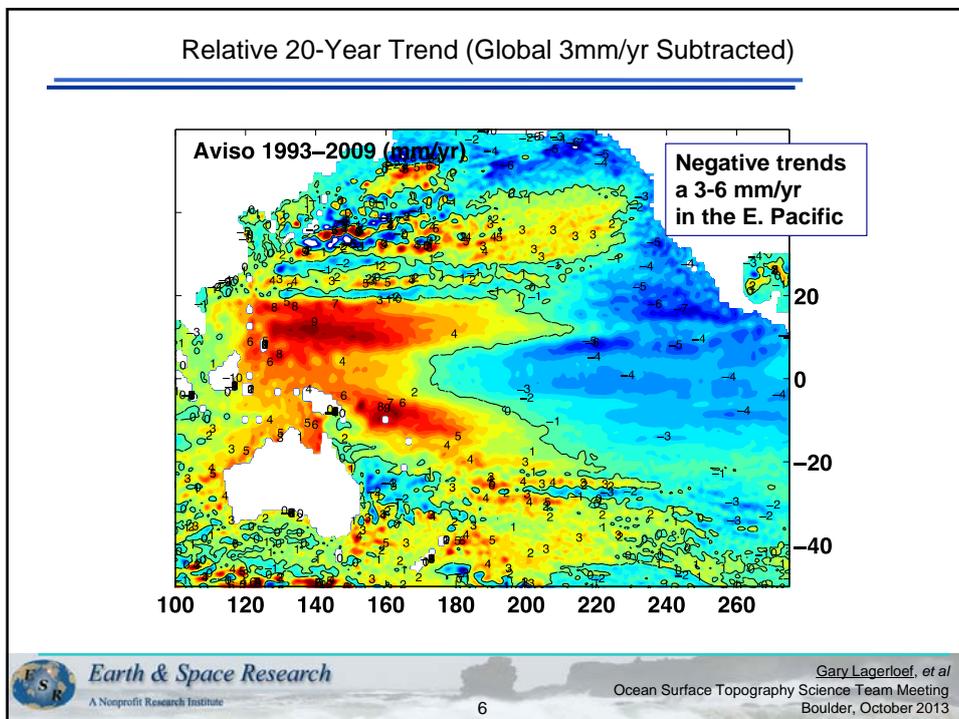
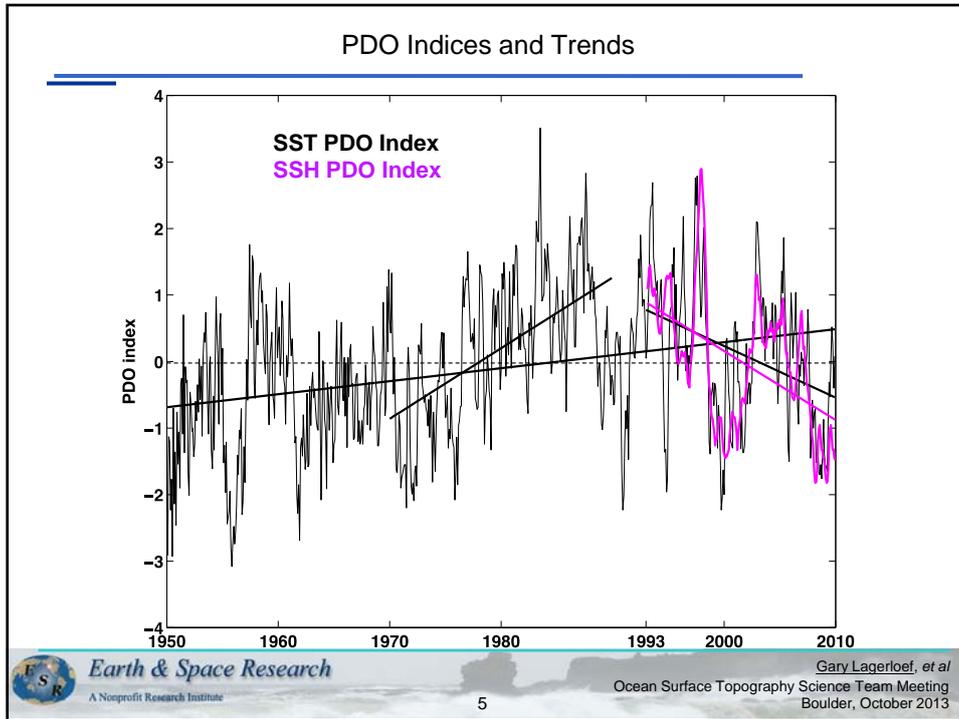
 Earth & Space Research
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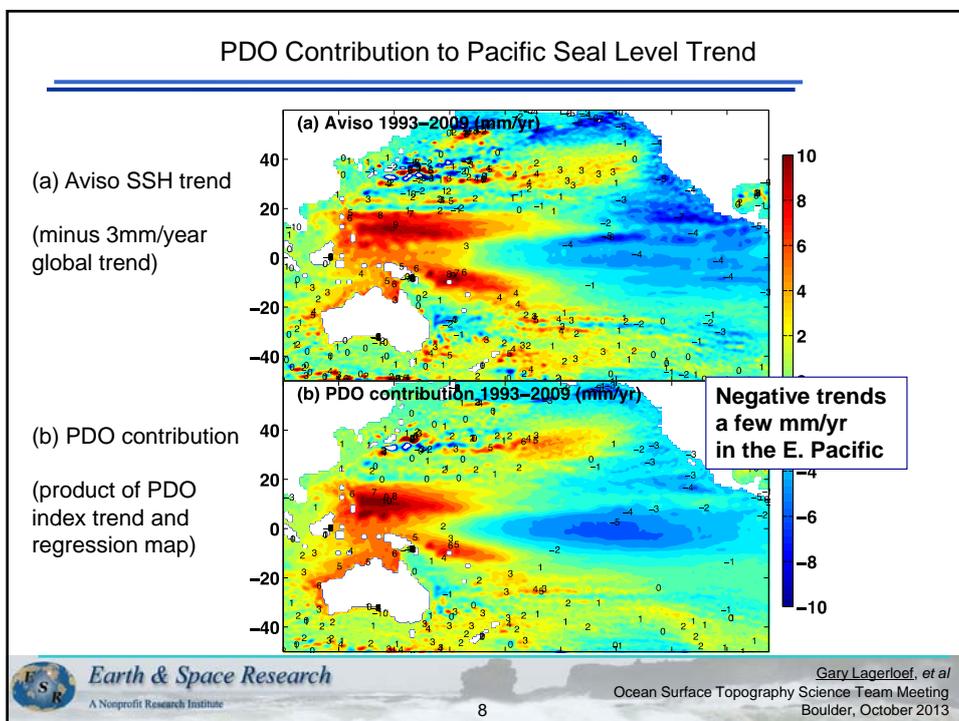
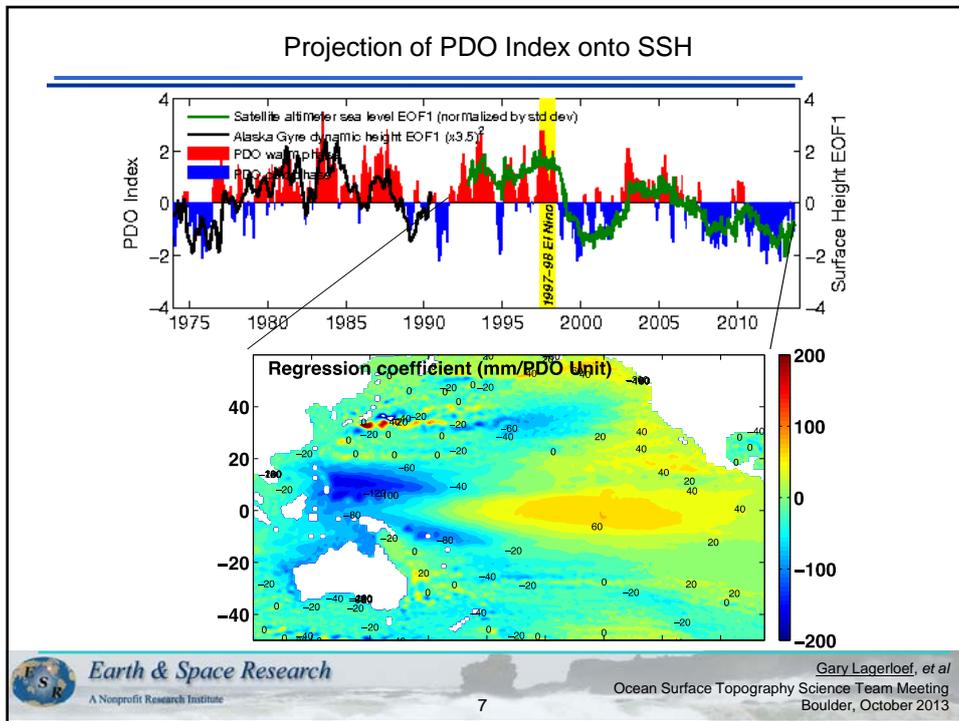
Gary Lagerloef, et al
Ocean Surface Topography Science Team Meeting
Boulder, October 2013

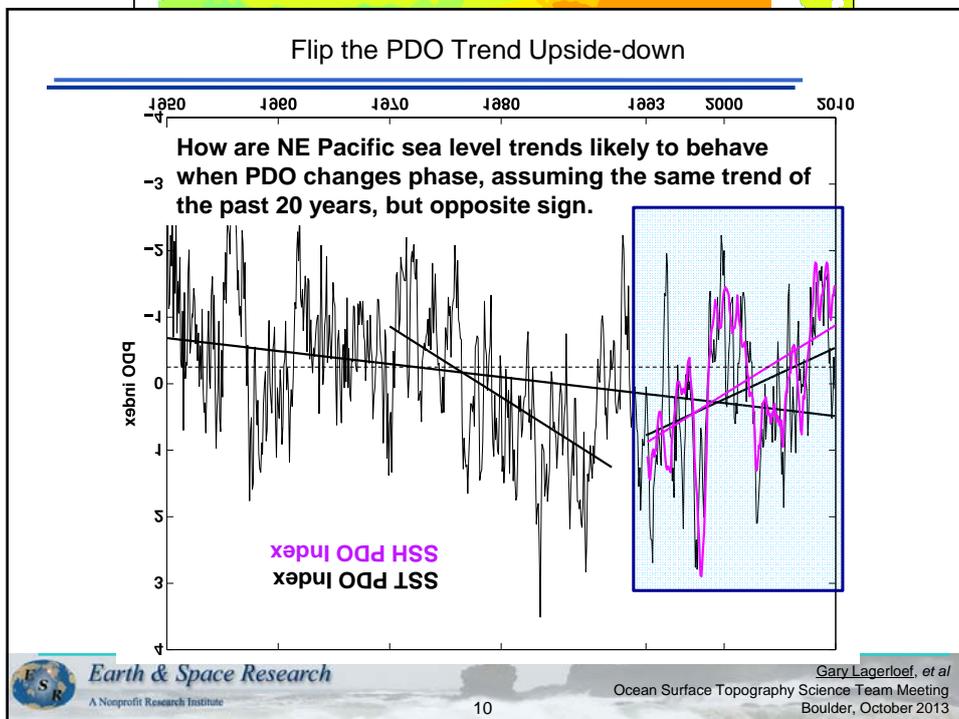
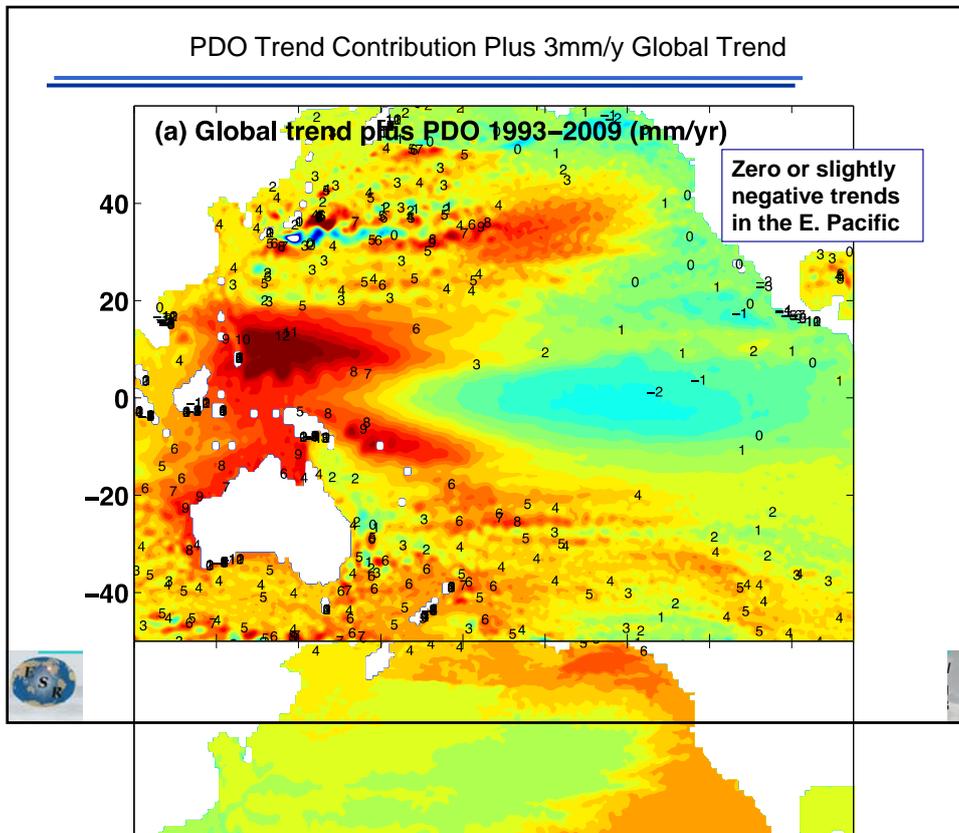
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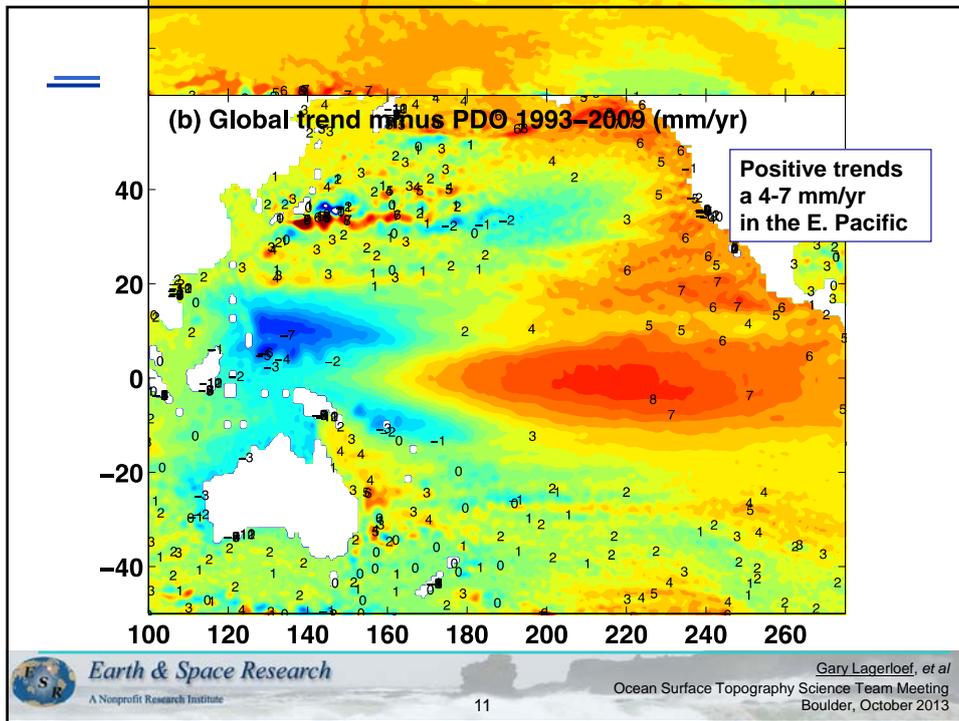












Summary

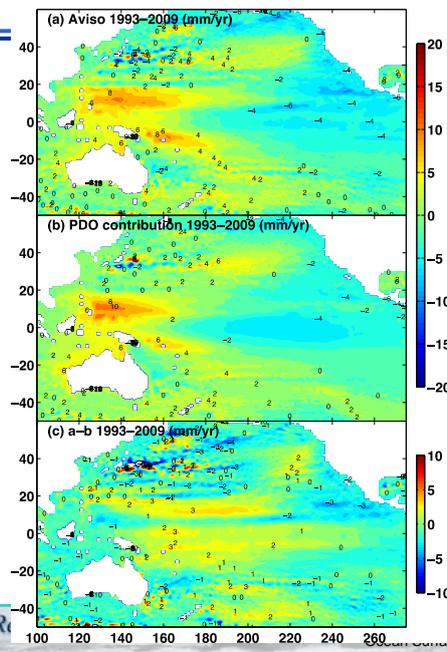
- The “PDO Mode”, conventionally defined by the principal SST EOF, has a highly correlated SSH EOF mode, which is a robust SSH signal in the Pacific.
- The present “cold phase” began with the 1998 La Niña, resulting in negative trend of the PDO indices over the past 20 years.
- The PDO evolution dominates the North Pacific mid-latitude sea level trend of the past 20 years.
- This has offset the global sea level trend in the Eastern Pacific, resulting in near-zero or slightly negative sea level trend regionally.
- When the PDO again changes into an extended warm phase, Eastern Pacific sea levels could rise at 2 to 3 times the global average, affecting the west coast of North America.

Backups

Top(A): Relative SL rise = sea level trend minus 3mm/yr

Middle (B): regression coeff * PDO

Bottom: A - B



Projected PDO Indices onto Pacific Sea Level Trends

