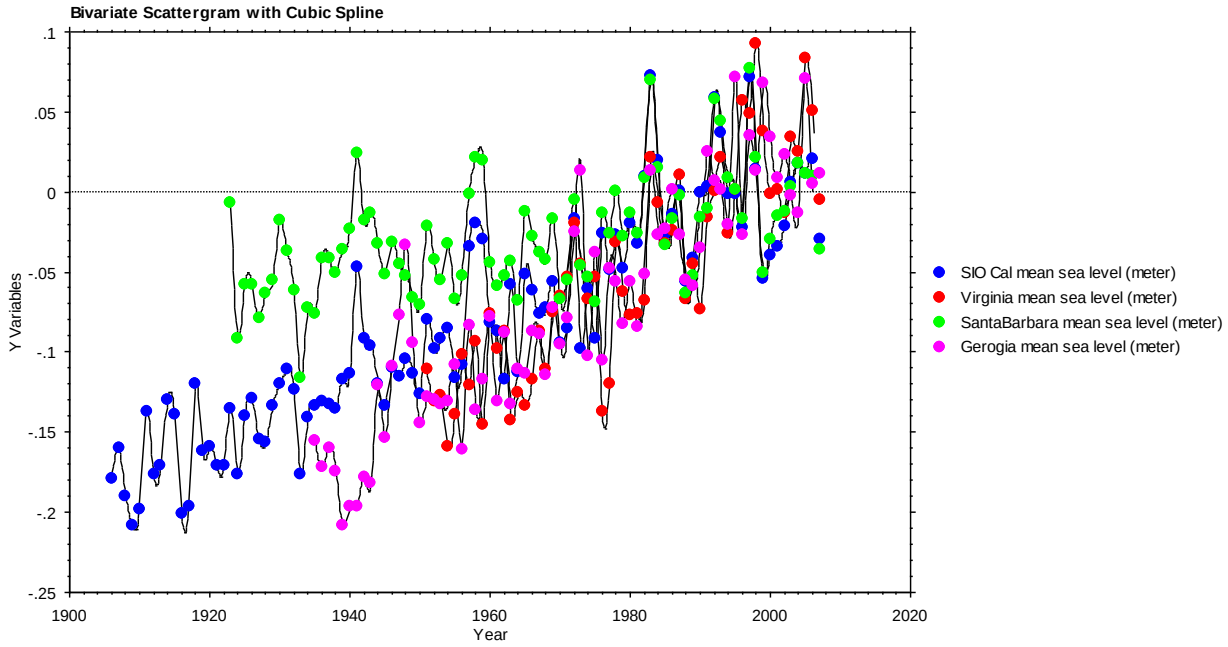
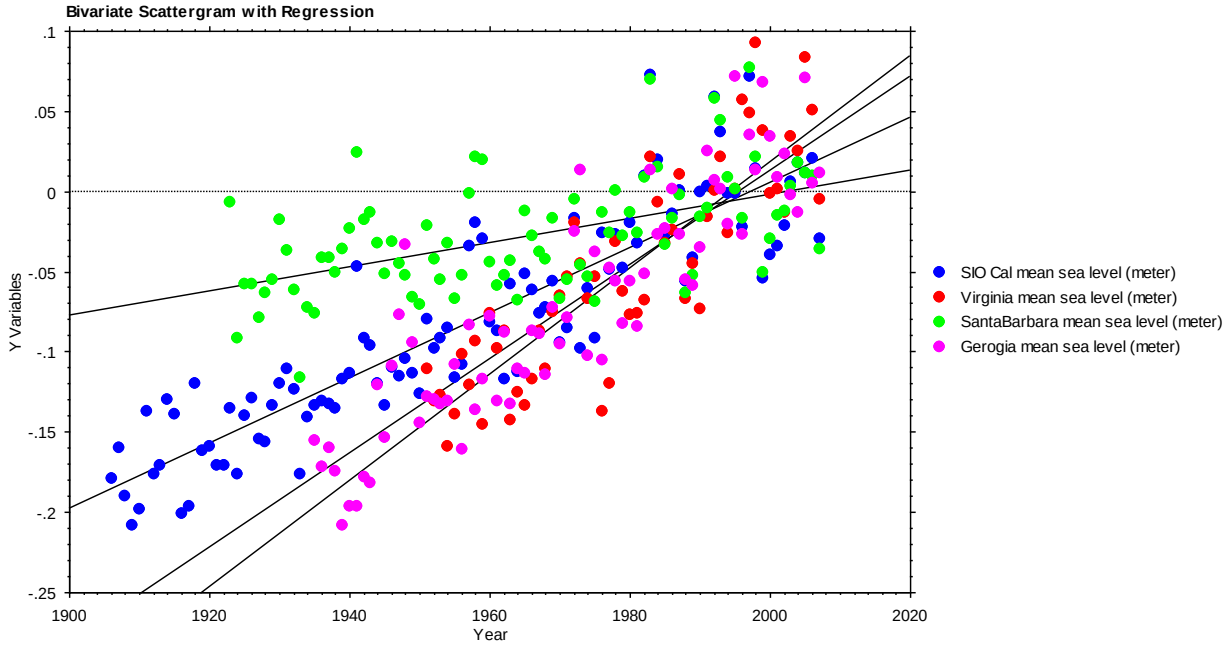




SIO Cal mean sea level (meter) = -4.048 + .002 * Year; R^2 = .806
Virginia mean sea level (meter) = -6.617 + .003 * Year; R^2 = .739
SantaBarbara mean sea level (meter) = -1.507 + .001 * Year; R^2 = .28
Gerogia mean sea level (meter) = -5.874 + .003 * Year; R^2 = .788

Correlation Matrix

	Year	SIO Cal mean sea level (meter)	Virginia mean sea level (meter)	SantaBarbara mean sea level (meter)	Gerogia mean sea level (meter)
Year	1.000	.898	.860	.529	.888
SIO Cal mean sea level (meter)	.898	1.000	.677	.846	.719
Virginia mean sea level (meter)	.860	.677	1.000	.509	.861
SantaBarbara mean sea level (meter)	.529	.846	.509	1.000	.419
Gerogia mean sea level (meter)	.888	.719	.861	.419	1.000

Counts

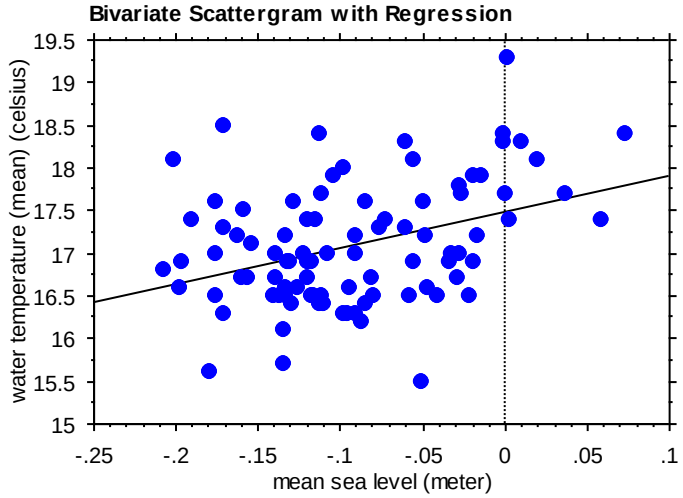
	Year	SIO Cal mean sea level (meter)	Virginia mean sea level (meter)	SantaBarbara mean sea level (meter)	Gerogia mean sea level (meter)
Year	102	102	57	85	73
SIO Cal mean sea level (meter)	102	102	57	85	73
Virginia mean sea level (meter)	57	57	57	57	57
SantaBarbara mean sea level (meter)	85	85	57	85	73
Gerogia mean sea level (meter)	73	73	57	73	73

SIO California Current

Correlation Matrix

	mean sea level (meter)	w ater temperature (mean) (celsius)
mean sea level (meter)	1.000	.376
w ater temperature (mean) (celsius)	.376	1.000

91 observations w ere used in this computation.
11 cases w ere omitted due to missing values.



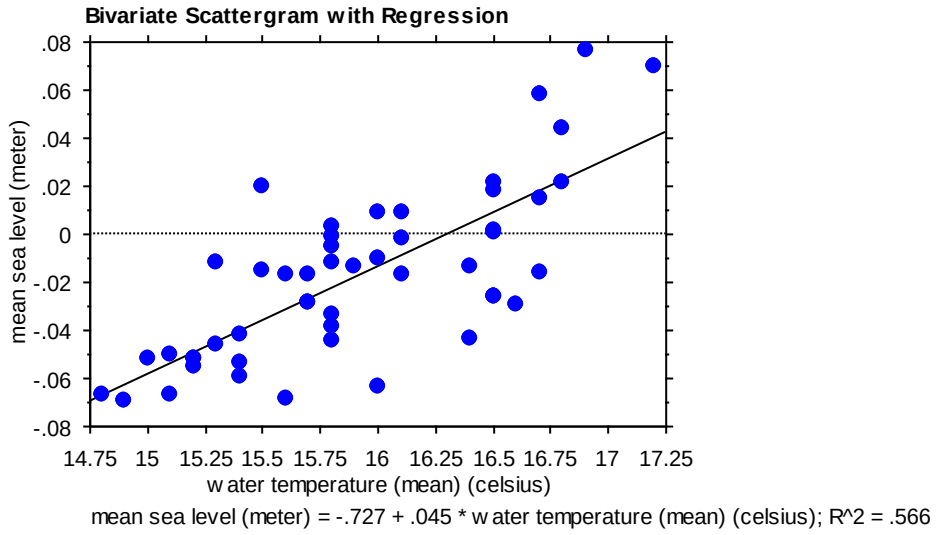
w ater temperature (mean) (celsius) = 17.483 + 4.227 * mean sea level (meter); R^2 = .141

Santa Barbara

Correlation Matrix

	Year	mean sea level (meter)	water temperature (mean) (celsius)
Year	1.000	.413	.400
mean sea level (meter)	.413	1.000	.752
water temperature (mean) (celsius)	.400	.752	1.000

50 observations were used in this computation.
35 cases were omitted due to missing values.



1. Hypothesis: Global warming drives observed sea level rises (mechanisms – expansion of water as a consequence of heating + some input from melting). Predictions: Sea level rise through time correlated across sites, including both ocean basins (Pacific & Atlantic).

   Results: Qualitatively confirmed.
   Alternate interpretations: Parallel local climatic effects?

   Constraints: few adequate data sets.

2. Hypothesis: Changes in local temp drive sea level rises. Prediction: sea level and mean annual temp to be positively correlated.

   Only adequate data for two Pacific Coast sites in California.

   Results: Qualitatively confirmed.

   Alternative. Water temperature and Sea Level both reflect global climate drivers (global warming). Year – of sample makes a good predictor of each factor. Thus both are increasing in parallel as a consequence of global warming.