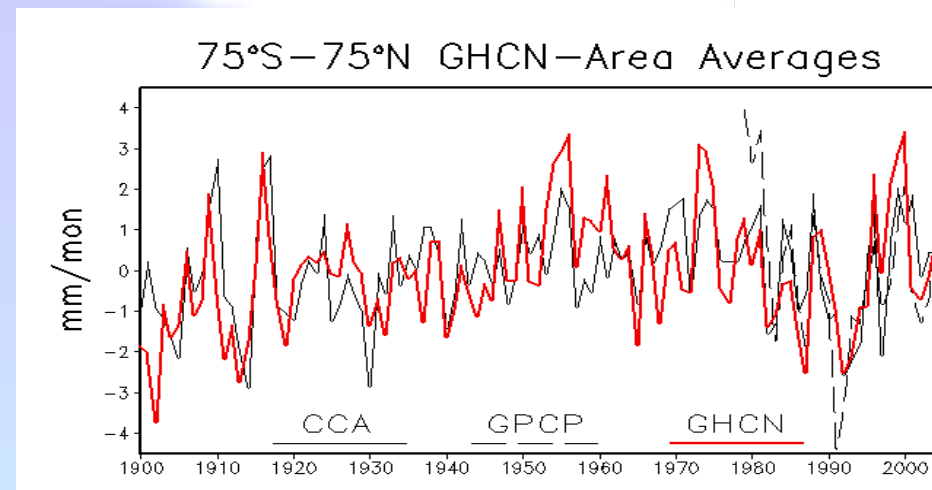


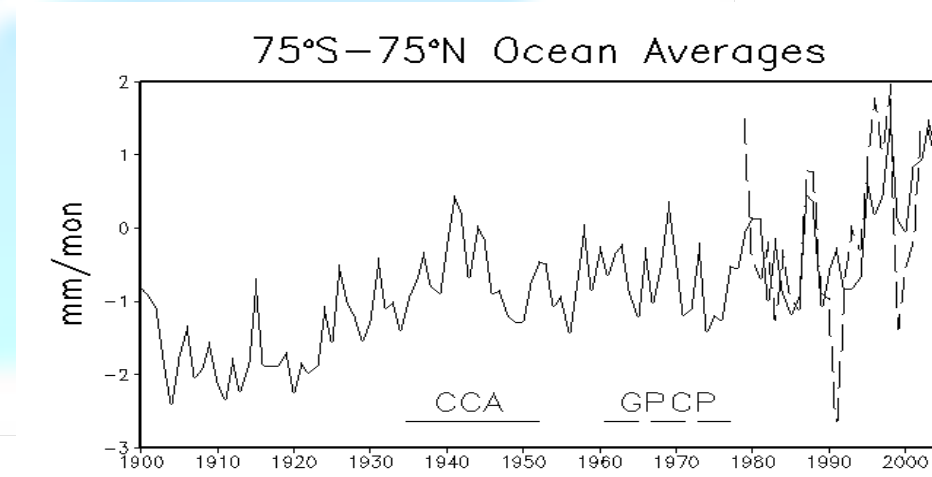


Historical Precipitation Reconstructions

- Reconstructions for 20th century
 - Needed to assess land-ocean climate variations
- EOF-based
 - Fit land station data to large-scale spatial modes
 - Resolves most interannual variations outside the Southern Oceans
- CCA-based
 - Covariance between precipitation and combines SST & SLP
 - Resolves multi-decadal signal more reliably than EOF-based
- Combined
 - Work being done to combine the EOF-based and CCA-based reconstructions
 - Plan to have a new product for climate analysis



CCA-based land reconstruction and data
(note that GHCN not used in CCA)



CCA-based ocean reconstruction and data

Documented with peer review publications:
Smith, T. M., M. R. P. Sapiano, and P. A. Arkin, 2008: Historical Reconstruction of Monthly Oceanic Precipitation (1900-2006), *J. Geophys. Res.*, **113**, D17115, doi:10.1029/2008JD009851.

Smith, T. M., P. A. Arkin, and M. R. P. Sapiano, 2009: Reconstruction of Near-Global Multi-Decadal Precipitation Variations Using Covariance with SST and SLP, *J. Geophys. Res.*, (submitted).