



The North American Regional Reanalysis estimates of the NAME focus years



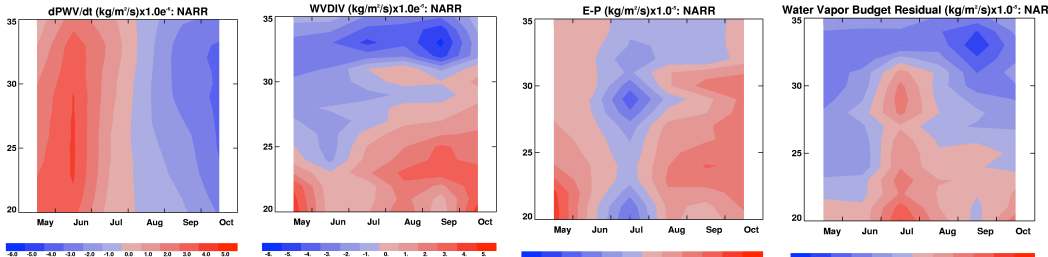
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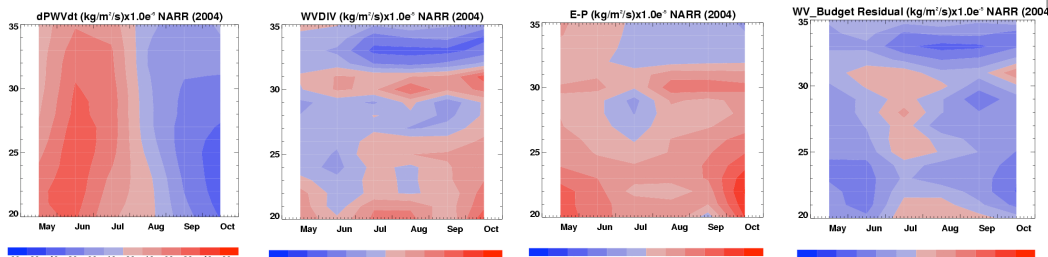
ABSTRACT. The years 1990 and 2004, subjects of the NAMAP - I and NAME campaigns were intercompared, and compared with a long series, based on the North American Regional Reanalysis (NARR) in the NAME Region I. We note that there was a considerable difference in precipitation, water vapor divergence, and direction of moisture transport vectors over the North American Monsoon region in the two years. The NARR results help identify the characteristics of seasonal variability, including the role of the Sea of Cortez/Gulf of California in the moisture budgets.

Moisture budget components for 1990, 2004, 1979-2004, and 2004 residual in the NAME-1 region

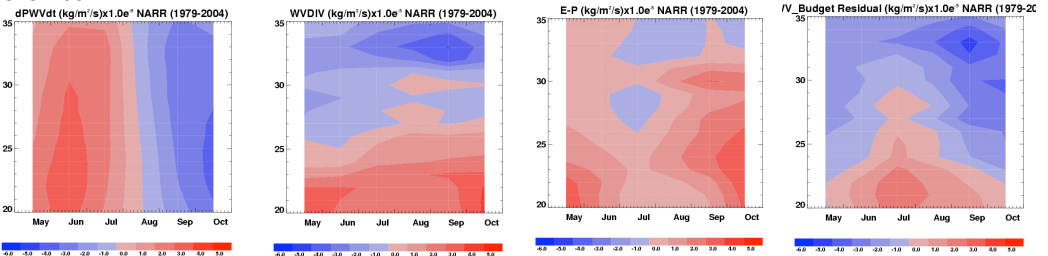
1990



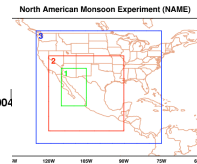
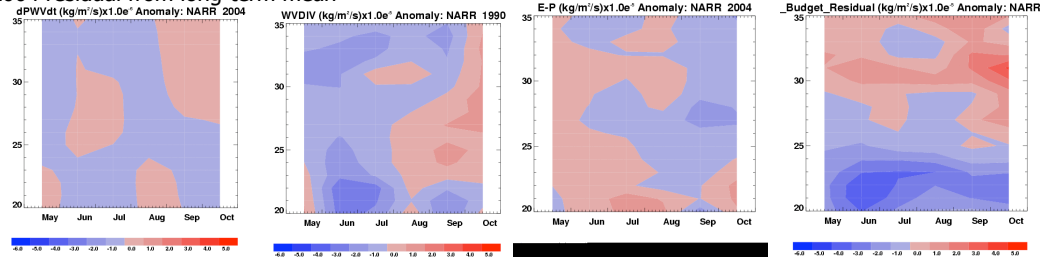
2004



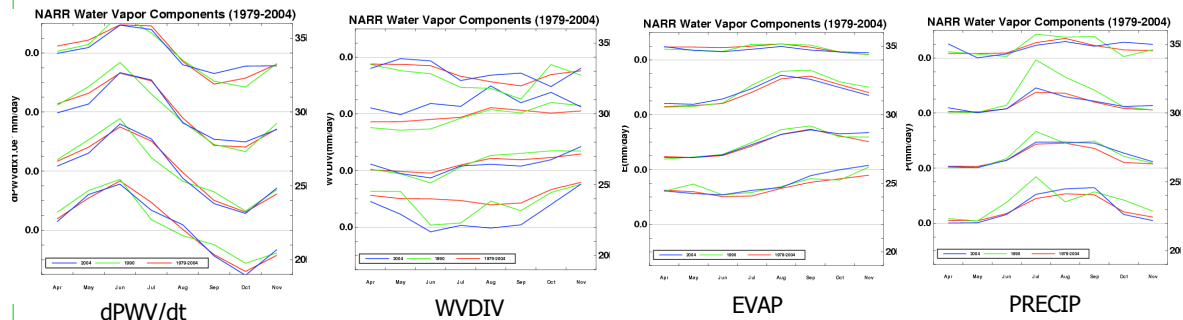
1979-2004



2004 residual from long-term mean

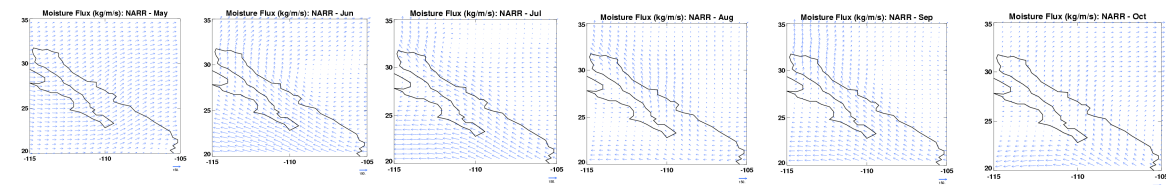


Years of interest, 1990 and 2004, are quite different in the moisture budget, esp the strong 1990 E-P feature in July and WVDIV in Sept.; 2004 has biggest residual in low latitudes in June

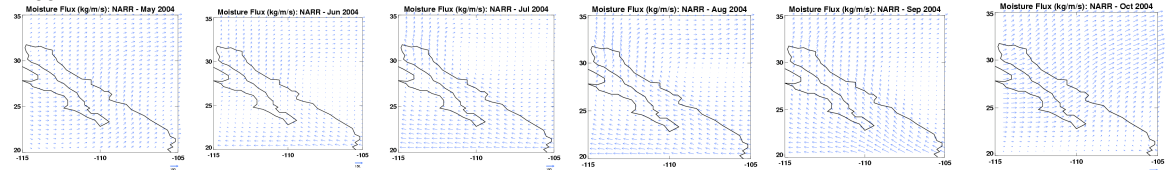


Monthly moisture fluxes

1990



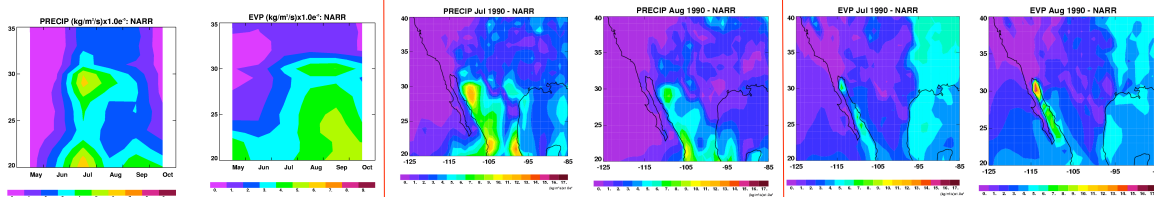
2004



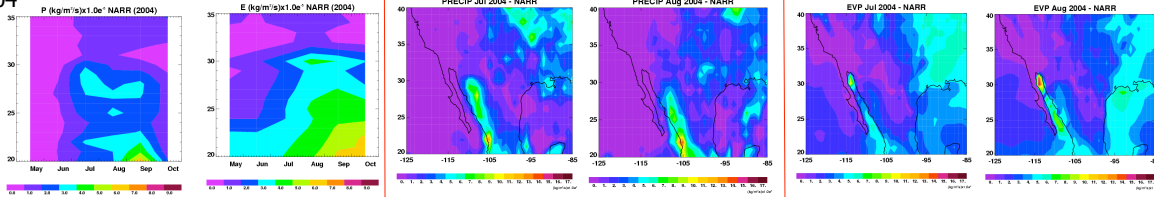
The origin of the moisture in the NAME area is generally from the Pacific, with fluxes directly along the Gulf of California (Sea of Cortez) in some months. The flow was weaker in 2004 than 1990 during June and July, but stronger in August.

Precipitation and evaporation

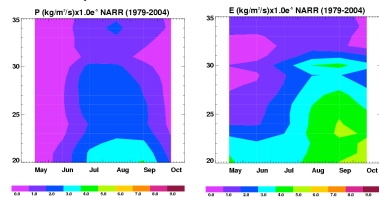
1990



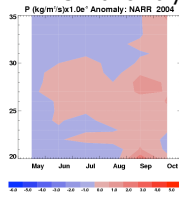
2004



1979-2004, PRECIP and EVP

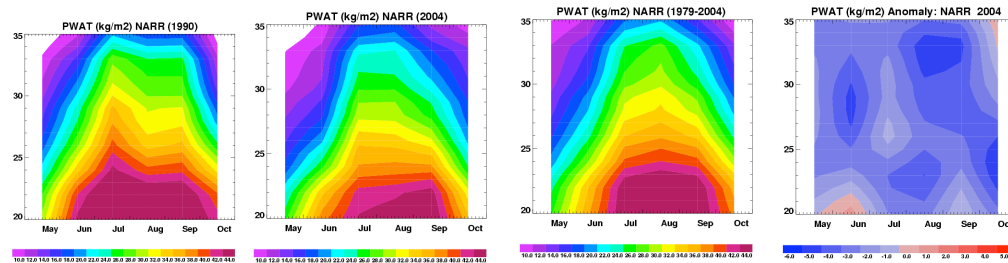


2004 PRECIP anomaly



PRECIP is maximized in July, in 1990, with a center as far north as 30 degrees, but lesser residual in 2004. EVP appears to be maximum in September and October in both years after the ground has absorbed the moisture. July PRECIP similar, but different magnitude in two years at its max in northern Mexico. August also has weaker magnitude of PRECIP there. EVP maximizes in northern Sea of Cortez, esp in August. Plots also show the high value of July 1990 PRECIP.

Precipitable water for 1990, 2004, 1979-2004, and 2004 anomaly



2004 has less precipitable water than the long-term mean, throughout the region