

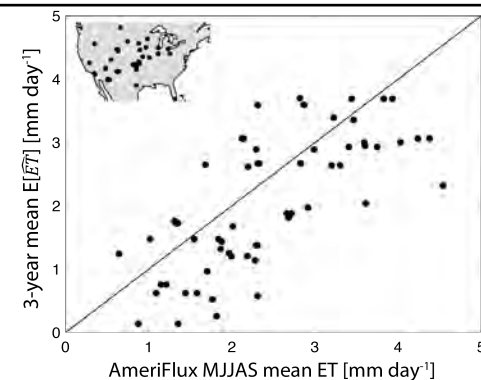
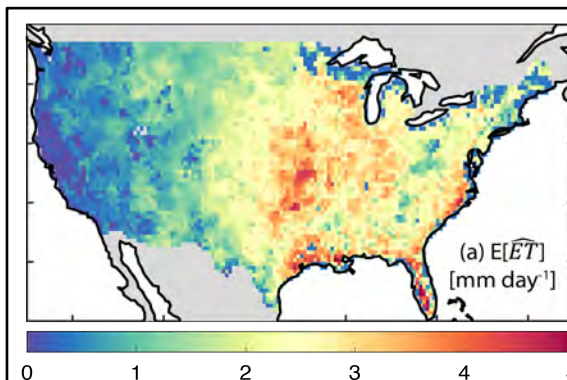
# SMAP Enables First Observations-Driven Global Maps of Water Fluxes Over Land



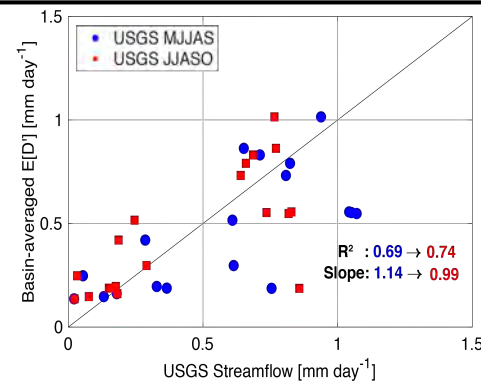
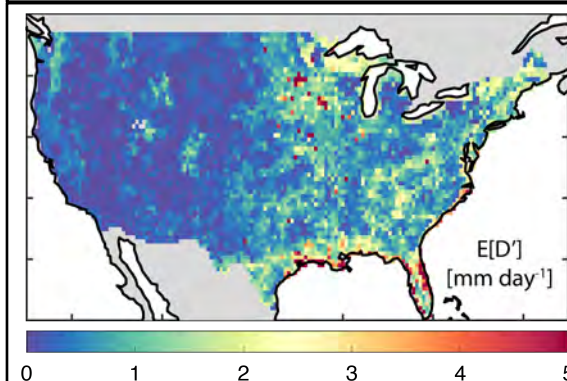
**Problem:** Observation-driven estimates of evapotranspiration (ET) and drainage runoff (D) are available only at sparse locations of the flux tower and stream-gauge networks.

**Findings:** Using SMAP Brightness Temperature measurements and precipitation information, ET and D are mapped globally (*SMAP's first of five Science Goals*).

**Impact:** SMAP-derived maps of global evapotranspiration and drainage hydroclimatologies explain about 70% of their corresponding variability at in situ sites.



SMAP and Precipitation derived 3-year climatology of ET [ $\text{mm day}^{-1}$ ] and comparison with AmeriFlux.



SMAP and Precipitation derived 3-year climatology of D [ $\text{mm day}^{-1}$ ] and comparison with USGS stream-gauge sites.