Geophysical Research Abstracts
Vol. 21, EGU2019-14577, 2019
EGU General Assembly 2019

Precipitation recycling change over the Tibetan Plateau in recent years

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Precipitation recycling over the Tibetan Plateau (TP) is essential for regional land-atmosphere interactions and hydrological cycle processes. In this study, the characteristic and mechanism of moisture source variation in recent years (1982-2011) are assessed using the quasi-isentropic backward trajectory method and ERA-Interim dataset. The contribution percent of moisture source inside and outside the TP to the total precipitation in 1982-2011 is 39% and 61% respectively. Local evaporative source over the TP, evaporative source from Arabian Sea and over the southeast TP are the sub-regions that with moisture source increasing contribution. Monthly precipitation change for the TP coherence better with the moisture source change outside the TP than inside. Moisture source change inside the TP is mainly because of the latent heat change in 1998-2011 relative to 1982-1997.