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Trancing the hydrological cycle by water stable isotopes on the Tibetan plateau

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A network of precipitation, river, lake water, ice core and atmospheric vapor sampling was set up on the Tibetan Plateau to trance the moisture origins supplied to the plateau, the inland hydrological cycle process and land surface evaporation processes. This work shows different moisture supplies from Indian Ocean monsoon and the westerlies, which dominated the precipitation in the south and north of the plateau. The different moisture supplies also affect the climatic signals in the ice core records. Large change in the lake water isotopes is much related to the local climate, especially the humidity change. The on-going isotope work especially in the basin scale can improve the understanding of hydrological processes in the research area.