

# Applying Reconstructed Daily Water Storage and Modified Wetness Index to Flood Monitoring: A Case Study in the Yangtze River Basin

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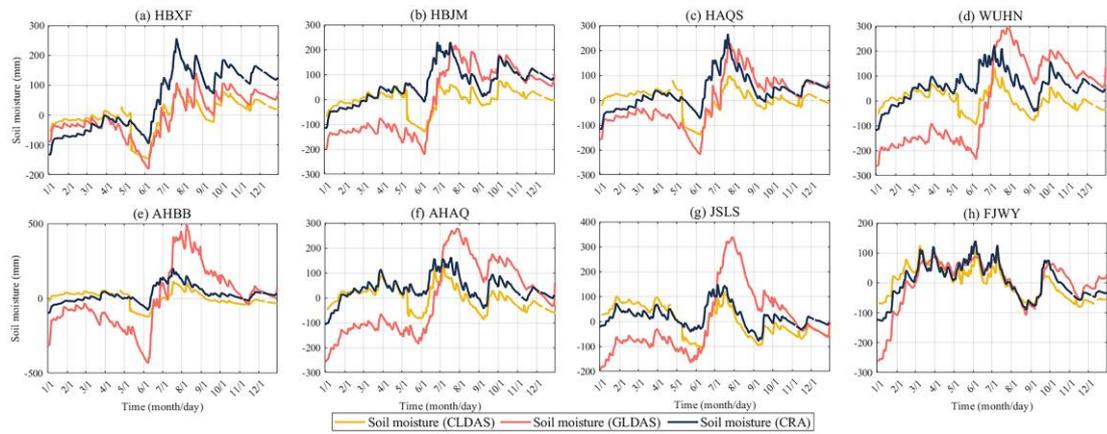


Figure S1. Comparison of three soil moisture products.

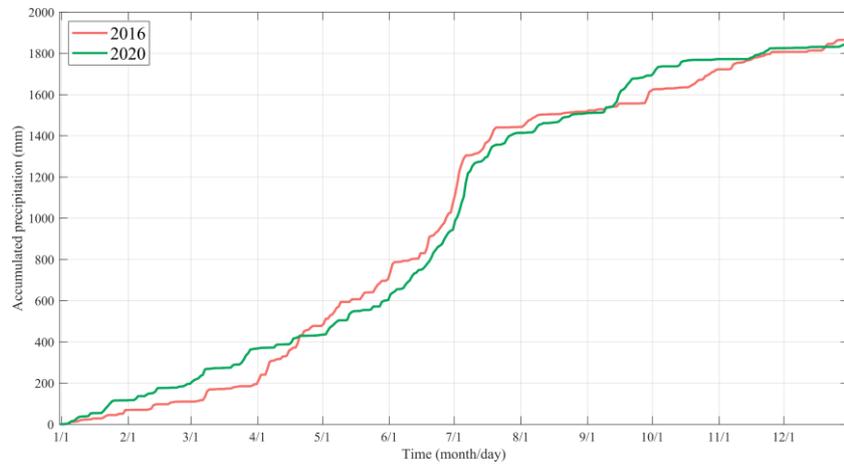


Figure S2. The accumulated precipitation in 2016 and 2020.

TWS change (TWSC) can be calculated from the water balance equation [1] which is expressed as:

$$TWSC(t_1, t_2) = P - E - R \quad (S1)$$

where  $TWSC$  is the TWS change (mm) from  $t_1$  to  $t_2$ ;  $P$ ,  $E$ , and  $R$  is the precipitation, evapotranspiration, and net flows.

The following equation can be derived from the above equation:

$$TWSA(t) = TWSA(t-1) + P(t) - E(t) - R(t) \quad (S2)$$

[1] M. Rodell, "Basin scale estimates of evapotranspiration using GRACE and other observations," *Geophysical Research Letters*, vol. 31, no. 20, 2004.