Quantifying consumptive water use in areas of irrigated agriculture

SMAP, SMOS and GPM together help GRACE signal be separated into groundwater.

GRACE
provides changes in total water storage.

For use in decision making, the agricultural management and water resources communities need better quantification of where water that is drawn from groundwater and reservoirs reaches its final destination. Finding an answer to this question helps with water cycle investigations to identify: 1. How much water recharges into groundwater locally; 2. How much evaporates (local recycling); and 3. How much is transported out of the region.

Extremely high-resolution (1 m or better) for targeted agricultural assessments using visible imagery from commercial sensors such as Digital Globe®.