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H53E: Remote Sensing Applications for Water Resources Management, Including Droughts, Floods, and Associated Water Cycle Extremes I

Water resources management can benefit from applications of remote sensing and hydrologic models. These tools can be especially valuable during extreme events and in data-sparse regions. Observational platforms include the GPM, SMAP, Terra, Aqua, Landsat, GRACE, and Sentinel satellites, and other satellite and airborne platforms. They can support the operational water resources management community in responding to climate change, increases in climate variability and the frequency of extreme events. This session will highlight advances in the use of satellite, airborne and ground-based sensor networks to: measure the quantity/quality of hydrologic resources in the U.S. and internationally; provide information to water managers to improve water resources management; and support risk-based decision making. Topics of interest include (1) extreme events such as floods and droughts; (2) water supply and snow water resource monitoring and forecasting; (3) evapotranspiration, soil moisture, groundwater, and agricultural water management; (4) water quality and (5) global water sustainability.