22nd Conference on Hydrology

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A Satellite View of Global Water and Energy Cycling

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With their unprecedented new observation capacity combined with revolutions in modeling capability, satellite observations have great potential to make huge advances in water and energy cycle prediction. To realize this goal, we must develop a discipline of prediction and verification through the integration of water and energy cycle observations and models, and to verify model predictions against observed phenomena to ensure that research delivers reliable improvements in prediction skill. Accomplishing these goals will require, in part, an accurate accounting of the key reservoirs and fluxes associated with the global water and energy cycle, including their spatial and temporal variability, through integration of all necessary observations and research tools. This challenge is essentially to document and enable improved, observationally-based, predictions of water and energy cycle consequences of Earth system variability and change. This presentation will feature an overview of recent progress towards this challenge, and lay out the plan for coordination with complementary international efforts.

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