The Future of Earth Observation and Water Cycle Science

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Observation of the water cycle at various scales is critical in managing our water resources, through better understanding of the processes involved and improved predictions of the various aspects of the water cycle, such as precipitation, flooding, droughts etc.. With the “stationarity is dead in hydrology” hypothesis now generally accepted the importance of continued and improved observation of the water cycle is only strengthened. In this presentation a concise overview of the most important near to midterm (less than 15 years) developments in earth observation of the water cycle will be presented along with an analysis of the gaps and omissions that are still there which need to be tackled in the longterm (beyond 15 years from now). Much of the presentation will draw upon the conclusions from the recently held ESA-EGU-GEWEX-ISPRS topical conference on “Earth Observation and Water Cycle Science”.