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Session abstract

Title: Real-time Ecology

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A key problem in hydroecology is the disparity between the spatial and temporal scales at which measurements are conducted and the scales at which the relevant hydroecological processes occur. Real-time hydroecology is necessary to monitor rapid alterations of freshwater systems (e. g. pulse events), to detect thresholds (e. g. switches between states) and to provide early warning signals. The present session aims to improve the capability to quantify transfer and transformation processes of matter, to improve the knowledge of physical, chemical and biological processes and focuses on the temporal variability of the aforementioned processes. Climate and land use change are key challenges of the coming decades; to be managed by society profound scientific hydroecological knowledge is a prerequisite. Contributions presenting visionary solutions and innovative strategies for monitoring and data acquisition as well as novel concepts for an integrated monitoring of processes across scales are more than welcome. Contributions presenting time series of hydroecological data are invited as well as conceptual models and discussions based on measured data, modelling and theoretical considerations.