Geophysical Research Abstracts
Vol. 19, EGU2017-2656, 2017
EGU General Assembly 2017


# Remote sensing hydrology experiment in cold regions of the Heihe watershed allied telemetry experimental research (HiWATER)

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This presenation reports an integrated hydrological experiment which has the core objective to address the improvement of observations, utilities of remote sensing data, and modeling and assimilation of hydrological processes in cold regions. The distributed automatic meteorological stations (AMS), wireless sensors network (WSN), and runoff (including isotope) measurements were established to obtain the distribution and heterogeneity of near surface meteorological and hydrological variables in spatial and temporal. A snow observation superstation was set up to obtain the snow accumulation and ablation process in typical mountain region, while a frozen ground observation superstation was set up to obtain the water and heat balance in a typical seasonal frozen ground region. A large number of field measurements are designed to develop and validate the remote sensing data products, in particular the snow cover area (SCA) and snow cover fraction (SCF) and soil temperature and soil moisture. The integrated experiment will support the interdisciplinary research in cold regions.