

H03: Recent Advances in Isotopes as Tracers of Hydrology and Earth-System-Science

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Session Description

At a World Summit on Sustainable Development, a partnership between the International Atomic Energy Agency (IAEA) and United Nations Educational, Scientific and Cultural Organization (UNESCO) was formed to focus on enhancing technology applications for water resources management. The IAEA announced a need to “*develop a methodology and monitoring network for isotopes*” with the fundamental goal of improving our understanding of hydrology in river basins. Since then, many studies have incorporated isotope tracers to elicit understanding of the connectivity between meteorology, hydrology and geology, or earth system science. Canadian researchers are leaders in using isotope tracers in global and catchment-scale studies to examine change related to climate and land-use factors. Establishment of national and regional-scale tracer networks have progressively advanced research initiatives, and have enabled the coupling of isotope measurements to hydrometric observation. The goal of this session is to provide a forum for multi-disciplinary discussion on the recent applications of isotope tracers in hydrology and earth-system-science, with the specific goal of fostering new and unique collaborations. We encourage contributions relating to the use of isotopes as tracers of earth-system-science including hydrometeorological, hydrogeological, and hydrological applications. Submissions focusing on all spatial and temporal scales, field or laboratory studies, coupled modelling approaches, and various temporal scales are invited.

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