

Seminar “Ocean, Ice and Atmosphere”,
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Fate and capability of tritium in hydrological sciences

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Tracing hydrological processes with tritium - the radioactive H isotope - has a long application history since the 1960ies, the period when massive overground H-bombs tests were conducted. Tritium concentration in precipitation increased by several orders of magnitude, but by now are down to natural levels again.

This talk covers the production of natural tritium and its distribution. This gives some insight of atmospheric circulation as well as tritium in groundwater and ocean.

It will be shown why tritium is still a valuable tracer for a number of applications in hydrological sciences. One prerequisite is a device to detect low tritium concentrations combined with large sample throughput.

The talk will complete with further application and the combination of tritium with other tracers.