

Insights into the new tracer ^{17}O -excess: results from the Swiss precipitation network

MARKUS LEUENBERGER¹², SHYAM RANJAN¹²³, PETER NYFELER¹

¹Physics Institute, University of Bern, Bern, Switzerland,
leuenberger@climate.unibe.ch

²Oeschger Centre for Climate Change Research, University of
Bern, Bern, Switzerland

³now at: Jawaharlal Nehru University, School of
Environmental Sciences, New Delhi, India

Since 1971 water isotope measurements are being conducted by the Climate and Environmental Physics Division at the University of Bern on precipitation, river- and groundwater collected at several places within Switzerland. The water samples were stored in glass flask for later analyses with improved instrumentation. Comparison of two measurement principles, i.e. mass spectrometry and cavity ring-down spectroscopy will be shown on the same samples. The main focus will be on the report about the $\Delta^{17}\text{O}$ measurements from the high elevation station Jungfraujoch in comparison to six other locations. Correlations with temperature, relative humidity as well as trend and seasonality analyses will be presented in conjunction with water and water vapor measurements for Jungfraujoch over the last 10 years.