

The CryoNet cluster Davos – beyond exchanging data

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Global Cryosphere Watch (GCW), a cross-cutting initiative of the World Meteoro-logical Organization (WMO), aims at observing and monitoring the cryosphere and builds on existing scientific and operational networks of GCW stations. A GCW station measures at least one variable of at least one component of the cryosphere and, through the GCW data portal, provides access to well documented and standardized data in near real time to both the scientific and operational community. The alpine region around Davos (~ 300 km 2 ; elevation range 1100–3298 m a.s.l.) is home to the WSL Institute for Snow and Avalanche Research SLF. SLF operates here automated nivo-meteorological stations measuring snow and weather data as well as several manned stations for snow observations on the ground. The Weissfluhjoch Versuchsfeld located at 2536 m a.s.l. has continuous records for more than 80 years, while a new measuring site Davos Laret (1500 m a.s.l.) is being installed. The focus of this test-site lies on ground-based microwave measurements accompanied by the acquisition of in-situ data relevant to foster the understanding of interactions between microwaves and snow-covered grounds. The region further encompasses the Dischma Valley that is part of the International Network for Alpine Research Catchment Hydrology (INARCH) and where snow-vegetation interactions on steep slopes have been studied for more than 40 years at the Stillberg study-site. Most of these individual research-sites host GCW CryoNet stations and these form the GCW CryoNet cluster Davos. This presentation will focus on the added-value of such integrated clusters for interdisciplinary research, particularly on the interaction of the cryosphere with other components of the Earth system.