

Research activities at the Sonnblick Observatory overview of the results of more than 40 projects

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Abstract

Research at Sonnblick at 3100m altitude goes back for more than 120 years. During this period the focus has shifted several times, with meteorology and climatology being constantly in the centre and now a basis for all research on the effects of climate change. In the last decades glaciology and geology became an additional focus because of receding glaciers and the instability of rock masses.

Air chemistry takes advantage of the unique position of the observatory in the middle of the National Park, where no local emissions disturb the back ground measurements. Several projects deal with the basic constituents like sulphur and nitrat based pollutants, other projects focus on emissions of plants which acts as precursors of the ozon concentration in the lower troposphere.

Radiation orientated programs investigate the total ozon column, via GPS and GLONASS signals the total water vapour content of the atmosphere is measured. Additional to the chemical parameters radioactivity programs focus on gamma radiation and gamma spectroscopy. Biology became an important research field with programs on lichen and other basic forms of the flora and fauna of the high alpine environment.

Last but not least a couple of art projects showed the uniqueness of the location not only to science, but also the wider context we should perceive the world.

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ZOBODAT - www.zobodat.at

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