

## Major publications based on research work at the High Altitude Research Stations Jungfrauoch and Gornergrat in 1999 and 2000

(see also individual activity reports)

### Publications in scientific journals

Beltramanelli, Nicola: B and V photoelectric light curves and first ephemeris of NSV 11321, a new W Uma System Commissions 27 and 42 of the IAU / Information bulletin on variable stars, no. 4696; 1999. (GEOS)

Cramer, N.: Calibrations for B-type stars in the Geneva photometric system New Astronomy Reviews 43 (1999) 343-387; 1999. (Observatoire de Genève)

Nyeki, Stephan: Condensation nuclei (CN) and ultrafine CN in the free troposphere to 12 km: A case study over the Jungfrauoch high-alpine research station; Geophysical Research Letters; 26, 14, 2195-2198, July 15, 1999. (Paul Scherrer Institut)

Schüpbach, Evi: Mesoscale modelling of vertical atmospheric transport in the alps associated with the advection of a tropopause fold -- a winter ozone episode Atmospheric Environment 33, 3616, 1999. (CABO, University of Bern)

Vandenbroere, Jacqueline: NSV 13826: A beta Lyrae type eclipsing binary Commissions 27 and 42 of the IAU / Information bulletin on variable stars, no. 4726; 1999. (GEOS)

Vandenbroere, Jacqueline: NSV 5028: A new RR Lyrae type variable in Uma Commissions 27 and 42 of the IAU / Information bulletin on variable stars, no. 4815; 1999. (GEOS)

Zanis, Prodromos: On the relationship of HO<sub>2</sub>+RO<sub>2</sub> with j(O<sub>1</sub>D) during the Free Tropospheric Experiment (FREETEX '96) at the Jungfrauoch observatory (3580 m above sea level) in the Swiss Alps; J. Geophysical Res. 104, D21, 26,913-26,925, November 1999. (University of Bern)

Carpenter, L.J.: Oxidized nitrogen and ozone production efficiencies in the springtime free troposphere over the Alps; J. Geophysical Res. 105, D11, 14,547-14,599, June 16, 2000. (University of East Anglia/UK)

Forrer, J.: Variability of trace gases at the high-alpine site Jungfrauoch caused by meteorological transport processes J. Geophysical Res. 105, D10, 12,241-12,251, May 27, 2000. (EMPA Dübendorf / MeteoSuisse Payerne)

Hauck, B., Jaschek, C., 2000, "A-shell stars in the Geneva system", Astronomy & Astrophysics 354, 157 (Observatoire de Genève)

Nyeki, S.: Convective Boundary Layer Evolution to 4 km asl over High-Alpine Terrain: Airborne Lidar Observations in the Alps Geophysical Research Letters; 27, 5, 689-692, March 1, 2000. (Paul Scherrer Institut)

Streit, N.: Characterization of size-fractionated aerosol from the Jungfrauoch (3580 m asl) using total reflection X-ray fluorescence (TXRF); International Journal of Environmental Analytical Chemistry, 2000, 76, N1, pp 1-16. (Paul Scherrer Institut)

Winnewisser, Gisbert (co-author); in the following articles in The Astrophysical Journal Letters; 2000 August 20: (I. Physikalisches Institut, Universität zu Köln)

The *submillimeter wave astronomy satellite*: science objectives and instrument description.

Observations of water vapor toward Orion BN/KL.

*Submillimeter wave astronomy satellite*: observations of extended water emission in Orion.

The distribution of water emission in M17SW.

Water abundance in molecular cloud cores.

Observations of interstellar water vapor in outflow regions.

Observations of absorption by water vapor toward Sagittarius B2.

An analysis of water line profiles in star formation regions observed by the *submillimeter wave astronomy satellite*.

Water abundance and velocity structure in s140,  $\rho$  OPH A, and B335.

O<sub>2</sub> in interstellar molecular clouds.

Implications of *submillimeter wave astronomy satellite* observations for interstellar chemistry and star formation.

Large-scale <sup>13</sup>CO  $J = 5 \rightarrow 4$  and [C I] mapping of Orion A.

Extended [C I] and <sup>13</sup>CO  $J (5 \rightarrow 4)$  emission in M17SW.

*Submillimeter wave astronomy satellite* observations of the Martian atmosphere: temperature and vertical distribution of water vapor.

*Submillimeter wave astronomy satellite* observations of Jupiter and Saturn: detection of 557 GHz water emission from the upper atmosphere.

*Submillimeter wave astronomy satellite* observations of water vapor toward comet C/1999 H1 (Lee).

Zanis, Prodromos: The role of in situ photochemistry in the control of ozone during spring at the Jungfrauoch (3580 m asl) – Comparison of model results with measurements; J. Atmospheric Chemistry 37; 1-27, 2000. (University of Bern)

Zanis, Prodromos: In-situ ozone production under free tropospheric conditions during FREETEX '98, J. Geophysical Res., 105, D19, 24, 223-24, 234, 2000

Zellweger, C.: Summertime Noy speciation at the Jungfrauoch, 3580 m above sea level, Switzerland JGR: 105, D5, 6655-6667, March 16, 2000. (EMPA, Dübendorf)

#### Doctoral theses

Zanis, Prodromos: In-situ photochemical control of ozone at the Jungfrauoch in the Swiss Alps doctoral thesis; 1999. (University of Bern)

Ingold, Th.: Monitoring atmospheric parameters from ground-based remote sensing networks in Switzerland doctoral thesis; 2000. (University of Bern)

#### Press releases, presentations, and various publications

Debrunner, H.: Die Rolle der alpinen Observatorien in der Umweltforschung Vortrag anlässlich der Einweihung der Umweltforschungsstation Schneefernerhaus 12.05.1999; HFSJG

Nyeki, Stephan: New ideas in particle research / Paul Scherrer Institut at Jungfrauoch product catalog; 1999; TSI Corp., St. Paul

Richner, H. (Hrsg): Grundlagen aerologischer Messungen speziell mittels der Schweizer Sonde SRS 400 Publication Nr. 61, ISBN 1422-1381; 1999; SMA-MeteoSchweiz

Schüpbach, Evi: The long-term (1986-1996) ozone record.... Proceedings of EUROTRAC Symposium '98; WITpress, Southhampton; 1999; CABO

Paul Scherrer Institut: Annual report 1998; 1999; PSI

Müller, G.: Rundschreiben GAW-CH Nr. 5 Rundschreiben; 2000; SMA-MeteoSchweiz

Der Klimarelevanz feiner Staubpartikel auf der Spur; Presse Mitteilung 01.03.2000; Paul Scherrer Institut

Geographisches Institut Uni Bern; Jahresbericht 01.07.1999 - 30.06.2000

Bundesamt f. Gesundheit: Umweltradioaktivität und Strahlendosen in der Schweiz 1999; 2000.