

## Collaborations and networks

Institutions collaborating with research projects at Jungfrauoch and Gornergrat in 2018:

Institution / network	Country	Collaborating with project:
Australian Nuclear Science and Technology Organisation (ANSTO) Dr. Alastair Williams, Dr. Alan Griffiths, Dr. Scott Chambers Sydney Australia	Australia	Baseline characterization of air masses using radon-222  Department of Environmental Sciences University of Basel Bernoullistrasse 30 CH-4056 Basel
CSIRO Marine and Atmospheric Research Paul Krummel, Ray Langenfelds, Paul Steele Aspendale Australia	Australia	Isotopic composition of N <sub>2</sub> O at Jungfrauoch High Alpine Station  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
Paracelsus Medical University Prof. Dr. Josef Niebauer Salzburg Austria	Austria	Effect of aerobic capacity on the incidence and severity of acute mountain sickness after passive ascent to 3450 m  Dept. of Anesthesiology, Perioperative and General Critical Care Medicine University Hospital Paracelsus Medical University Müllnerstrasse 48 A-5020 Salzburg
Austrian Academy of Sciences Dr. Marc Lütscher	Austria	Monitoring the Jochloch cave  Schweiz. Gesellschaft für Höhlenforschung Sektion Bern CH-3000 Bern
Belgian Institute for Space Aeronomy Brussels	Belgium	Trace gas observations at Jungfrauoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf

Institution / network	Country	Collaborating with project:
BIRA-IASB Royal Belgian Institute of Space Aeronomy Dr. M. De Mazière Dr. S. Chabrilat and teams Ukkel Belgium	Belgium	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
Université Libre de Bruxelles for IASI FORLI data validation	Belgium	Atmospheric physics and chemistry  Royal Belgian Institute for Space Aeronomy (BIRA- IASB) Ringlaan 3 B-1180 Brussels Belgium
Université de Liège Institut d'Astrophysique et de Géophysique and NDACC Partners B-4000 Sart Tilman (Liège)	Belgium	Atmospheric physics and chemistry  Royal Belgian Institute for Space Aeronomy (BIRA- IASB) Ringlaan 3 B-1180 Brussels, Belgium
Université de Liège Institut d'Astrophysique et de Géophysique B-4000 Sart Tilman (Liège)	Belgium	Trace gas observations at Jungfraujoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
Université de Liège Institut d'Astrophysique et de Géophysique B-4000 Sart Tilman (Liège)	Belgium	Halogenated greenhouse gases at Jungfraujoch  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
Université Libre de Bruxelles (ULB) Dr. B. Franco Bruxelles Belgium	Belgium	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium

Institution / network	Country	Collaborating with project:
ACTRIS (Aerosol, Clouds and Trace Gases Research Network)	European network	Halogenated greenhouse gases at Jungfraujoch  Empa Laboratory for Air Pollution / Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
ACTRIS (Aerosol, Clouds and Trace Gases Research Network)	European network	Trace gas observations at Jungfraujoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
Collaboration with KNMI and S&T for the CAMS, QA4ECV and S5P Validation Server	European network	Atmospheric physics and chemistry  Royal Belgian Institute for Space Aeronomy (BIRA-IASB) Ringlaan 3 B-1180 Brussels, Belgium
Collaboration with CNR (Italy) and ECMWF for the delivery of NDACC data to the Climate Data Store	European network	Atmospheric physics and chemistry  Royal Belgian Institute for Space Aeronomy (BIRA-IASB) Ringlaan 3 B-1180 Brussels, Belgium
E-GVAP II (EUMETNET GPS Water Vapour Programme)	European network	Automated GNSS Network Switzerland (AGNES)  Swiss Federal Office of Topography swisstopo Seftigenstrasse 264 CH-3084 Wabern
EMEP (European Monitoring and Evaluation Programme)	European network	Trace gas observations at Jungfraujoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
EMEP (European Monitoring and Evaluation Programme)	European network	Halogenated greenhouse gases at Jungfraujoch  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf

Institution / network	Country	Collaborating with project:
EURADOS Working group 11	European network	Influence of environmental parameters on secondary neutrons from cosmic rays at high altitudes in Alpine region  Helmholtz Zentrum München Institute of Innovative Radiotherapy Ingolstädter Landstrasse 1 D-85764 Neuherberg
European FP7 Project Real-Time Database for High Resolution Neutron Monitor Measurements (NMDB) <a href="http://www.nmdb.eu">http://www.nmdb.eu</a>	European network	Neutron monitors - Study of solar and galactic cosmic rays  Universität Bern Physikalisches Institut Sidlerstrasse 5 CH-3012 Bern
GAW-CH	European network	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
GNSS4SWEC (COST EU project)	European network	Automated GNSS Network Switzerland (AGNES)  Swiss Federal Office of Topography swisstopo Seftigenstrasse 264 CH-3084 Wabern
ICOS Integrated Carbon Observation System ICOS-RI partners and ICOS-CH partners <a href="https://www.icos-ri.eu">https://www.icos-ri.eu</a>	European network	Long-term observations of $^{14}\text{CO}_2$ at Jungfrauoch  Universität Bern Physikalisches Institut Klima- und Umweltphysik Sidlerstrasse 5 CH-3012 Bern
ICOS Integrated Carbon Observation System <a href="http://www.icos-ri.eu">http://www.icos-ri.eu</a>	European network	Trace gas observations at Jungfrauoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf

Institution / network	Country	Collaborating with project:
ICOS Integrated Carbon Observation System <a href="http://www.icos-ri.eu">http://www.icos-ri.eu</a>	European network	Halogenated greenhouse gases at Jungfraujoch  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
ICOS Integrated Carbon Observation System <a href="https://www.icos-ri.eu/">https://www.icos-ri.eu/</a>	European network	Continuous measurement of stable CO <sub>2</sub> isotopes at Jungfraujoch, Switzerland  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
ICOS Integrated Carbon Observation System ICOS-RI partners and ICOS-CH partners <a href="https://www.icos-ri.eu/">https://www.icos-ri.eu/</a>	European network	Flask comparison on Jungfraujoch  Max Planck Institut für Biogeochemie Hans Knöll Str. 10 D-007745 Jena
ICOS Integrated Carbon Observation System partners <a href="https://www.icos-ri.eu/">https://www.icos-ri.eu/</a>	European network	High precision carbon dioxide and oxygen measurements at Jungfraujoch  Universität Bern Physikalisches Institut Klima- und Umweltphysik Sidlerstrasse 5 CH-3012 Bern
IG3IS (Integrated Global Greenhouse Gas Information System)	European network	Halogenated greenhouse gases at Jungfraujoch  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
Microarctic: Microorganisms in a warming Arctic (EU Horizon 2020)	European network	Characterization of permafrost microbiome  Swiss Federal Research Institute WSL CH-8903 Birmensdorf
RINGO (Readiness of ICOS for Necessities of integrated Global Observations)	European network	Continuous measurement of stable CO <sub>2</sub> isotopes at Jungfraujoch, Switzerland  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf

Institution / network	Country	Collaborating with project:
RINGO (Readiness of ICOS for Necessities of integrated Global Observations)	European network	Trace gas observations at Jungfraujoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
Virtual Alpine Observatory (VAO)	European network	Influence of environmental parameters on secondary neutrons from cosmic rays at high altitudes in Alpine region  Helmholtz Zentrum München Institute of Innovative Radiotherapy Ingolstädter Landstrasse 1 D-85764 Neuherberg
University of Helsinki Department of Physics Prof. M. Kulmala Helsinki, Finland	Finland	The Global Atmosphere Watch Aerosol Program at Jungfraujoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland
INRA (Institut national de la recherche agronomique) Dr. C.E. Morris Pathologie vegetale Montfavet France	France	Ice nucleating particles and ice multiplication at moderate supercooling  University of Basel Department of Environmental Sciences Bernoullistrasse 30 CH-4056 Basel
LATMOS France (SAOZ) F. Goutail, J.-P. Pommerau, A. Pazmino	France	Atmospheric physics and chemistry  Royal Belgian Institute for Space Aeronomy (BIRA-IASB) Ringlaan 3 B-1180 Brussels Belgium
ECAC and TROPOS Prof. A. Wiedensohler Dr. T. Müller Dr. S. Mertes Leipzig, Germany	Germany	The Global Atmosphere Watch Aerosol Program at the Jungfraujoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland

Institution / network	Country	Collaborating with project:
Institute of Meteorology and Climate Research IMK Karlsruhe Institute of Technology Dr. T. Blumenstock and team Karlsruhe Germany	Germany	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
Johann Wolfgang Goethe Universität Frankfurt am Main Institut für Atmosphäre und Umwelt Prof. J. Curtius Frankfurt am Main, Deutschland	Germany	The Global Atmosphere Watch Aerosol Program at Jungfraujoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland
Max-Planck Institute for Biogeochemistry Hans Knöll Str. 10 D-007745 Jena Germany	Germany	Continuous measurement of stable CO <sub>2</sub> isotopes at Jungfraujoch, Switzerland  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
Max-Planck-Institut für Chemie Biogeochemistry Department Dr. U. Pöschl Mainz	Germany	The Global Atmosphere Watch Aerosol Program at Jungfraujoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland
Max-Planck-Institut für Biogeochemie Jena	Germany	High precision carbon dioxide and oxygen measurements at Jungfraujoch  Universität Bern Physikalisches Institut Klima- und Umweltphysik Sidlerstrasse 5 CH-3012 Bern
Max-Planck-Institut für Chemie Particle Chemistry Department und University of Mainz Dr. J. Schneider Prof. S. Borrmann Mainz	Germany	The Global Atmosphere Watch Aerosol Program at Jungfraujoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland

Institution / network	Country	Collaborating with project:
SFC Energy AG Eugen-Sänger-Ring 7 D-85649 Brunenthal	Germany	Performance of Methanol fuel cells in alpine environments  armasuisse Science & Technology Test Centre Feuerwerkerstrasse 39 CH-3602 Thun Switzerland
University of Bremen Dr. J. Notholt M. Palm Bremen Germany	Germany	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
Universität Darmstadt Institut für Mineralogie Prof. S. Weinbruch Darmstadt, Germany	Germany	The Global Atmosphere Watch Aerosol Program at Jungfraujoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen, Switzerland
University Hospital Heidelberg Prof. Dr. em. Peter Bärtsch	Germany	Effect of aerobic capacity on the incidence and severity of acute mountain sickness after passive ascent to 3450 m  Dept. of Anesthesiology, Perioperative and General Critical Care Medicine University Hospital Paracelsus Medical University Müllnerstrasse 48 A-5020 Salzburg
University Hospital Heidelberg Prof. Dr. Heimo Mairbörl	Germany	Effect of aerobic capacity on the incidence and severity of acute mountain sickness after passive ascent to 3450 m  Dept. of Anesthesiology, Perioperative and General Critical Care Medicine University Hospital Paracelsus Medical University Müllnerstrasse 48 A-5020 Salzburg



Institution / network	Country	Collaborating with project:
ACE-FTS satellite team	International network	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
AGAGE (Advanced Global Atmospheric Gases Experiment)	International network	Halogenated Greenhouse Gases at Jungfraujoch  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf Switzerland
Both the UV-Vis and FTIR observations contribute to the international Network for the Detection of Atmospheric Composition Changes (NDACC)	International network	Atmospheric physics and chemistry  Royal Belgian Institute for Space Aeronomy (BIRA-IASB) Ringlaan 3 B-1180 Brussels, Belgium
Global Atmosphere Watch (GAW)	International network	Trace gas observations at Jungfraujoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf Switzerland
Global Atmosphere Watch (GAW)	International network	Halogenated greenhouse gases at Jungfraujoch  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf Switzerland
Global Atmosphere Watch (GAW)	International network	Continuous measurement of stable CO <sub>2</sub> isotopes at Jungfraujoch, Switzerland  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf Switzerland

Institution / network	Country	Collaborating with project:
Global Atmosphere Watch (GAW)	International network	High precision carbon dioxide and oxygen measurements at Jungfraujoch  Universität Bern Physikalisches Institut Klima- und Umweltphysik Sidlerstrasse 5 CH-3012 Bern
Globalview	International networks	High precision carbon dioxide and oxygen measurements at Jungfraujoch  Universität Bern Physikalisches Institut Klima- und Umweltphysik Sidlerstrasse 5 CH-3012 Bern
GTN-P (Global Terrestrial Network for Permafrost)	International networks	Long-term permafrost monitoring in the Jungfrau East ridge  WSL Institute for Snow and Avalanche Research SLF Flüelastrasse 11 CH-7260 Davos Dorf, Switzerland
Collaboration with the OMI, TROPOMI (S5P), MetOp GOME-2 and IASI satellite communities	International networks	Atmospheric physics and chemistry  Royal Belgian Institute for Space Aeronomy (BIRA-IASB) Ringlaan 3 B-1180 Brussels, Belgium
IG3IS (Integrated Global Greenhouse Gas Information System)	International networks	Trace gas observations at Jungfraujoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf Switzerland
NDACC (Network for the Detection of Atmospheric Composition Change, <a href="http://www.ndacc.org">http://www.ndacc.org</a> )	International network	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium

Institution / network	Country	Collaborating with project:
ObsPack	International network	High precision carbon dioxide and oxygen measurements at Jungfraujoch  Universität Bern Physikalisches Institut Klima- und Umweltphysik Sidlerstrasse 5 CH-3012 Bern
Satellite experiments: IASI (Infrared Atmospheric Sounding Interferometer)	International network	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
World Meteorological Organization (WMO)	International network	Halogenated greenhouse gases at Jungfraujoch  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
World Meteorological Organization (WMO)	International network	Trace gas observations at Jungfraujoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf Switzerland
Korea Polar Research Institute KOPRI	Korea	Halogenated greenhouse gases at Jungfraujoch  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
Jozef Stefan Int. Postgraduate School Grisa Mocnik Ljubljana, Slovenia	Slovenia	The Global Atmosphere Watch Aerosol Program at Jungfraujoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen, Switzerland

Institution / network	Country	Collaborating with project:
Umea University & Swedish Institute of Space Physics Dr. Carol Norberg Kiruna, Sweden	Sweden	Monitoring the Jochloch cave  Schweiz. Gesellschaft für Höhlenforschung Sektion Bern CH-3000 Bern
Abisenvironment SA Frédéric de Rutté Lonay	Switzerland	Aerosol radioactivity monitoring at the Jungfrauoch  Bundesamt für Gesundheit Sektion Umweltradioaktivität Schwarzenburgstrasse 157 CH-3003 Bern
Astronomical Institute of the University of Bern (AIUB) Sidlerstrasse 5 CH-3012 Bern	Switzerland	Stellarium Gornergrat  Center for Space and Habitability University of Bern Gesellschaftsstrasse 6 CH-3012 Bern
Astronomical Institute of the University of Bern (AIUB) Dr. Rolf Dach Prof. Adrian Jäggi Sidlerstrasse 5 CH-3012 Bern	Switzerland	Automated GNSS Network Switzerland (AGNES)  Swiss Federal Office of Topography swisstopo Seftigenstrasse 264 CH-3084 Wabern
Bundesamt für Umwelt (BAFU)/ Federal Office for the Environment (FOEN)	Switzerland	Trace gas observations at Jungfrauoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Ueberlandstrasse 129 CH-8600 Dübendorf
Bundesamt für Umwelt (BAFU)/ Federal Office for the Environment (FOEN)	Switzerland	Halogenated greenhouse gases at Jungfrauoch  Empa Laboratory for Air Pollution/Environmental Technology Ueberlandstrasse 129 CH-8600 Dübendorf
Bürgergemeinde Zermatt Bahnhofstrasse 53 CH-3920 Zermatt	Switzerland	Stellarium Gornergrat  Center for Space and Habitability University of Bern Gesellschaftsstrasse 6 CH-3012 Bern

Institution / network	Country	Collaborating with project:
CERN Radiation to Electronic working group S. Danzeca, R.G. Alia, P. Carbonez, M. Cecchetto, Ch. Cangialosi, J. Lendaro	Switzerland	High Energy Hadron Monitor test at Jungfrauoch High Altitude Laboratory  CERN TE/ABT/PPE CH-1211 Genève
CLIMARCTIC – SNF: Climate change impacts on Arctic soil and lake microbiomes	Switzerland	Characterization of permafrost microbiome  Swiss Federal Research Institute WSL CH-8903 Birmensdorf
CRYOLINK – SNF: Influence of climate change on permafrost microbiome	Switzerland	Characterization of permafrost microbiome  Swiss Federal Research Institute WSL CH-8903 Birmensdorf
Empa Laboratory for Air Pollution/Environmental Technology Ueberlandstrasse 129 CH-8600 Dübendorf	Switzerland	High precision carbon dioxide and oxygen measurements at Jungfrauoch  Universität Bern Physikalisches Institut Klima- und Umwelphysik Sidlerstrasse 5 CH-3012 Bern
Empa Laboratory for Air Pollution/Environmental Technology Dr. S. Reimann, Dr. M. Steinbacher, Dr. M.K. Vollmer Überlandstrasse 129 CH-8600 Dübendorf	Switzerland	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
Empa Laboratory for Air Pollution/Environmental Technology Dr. S. Reimann, Dr. C. Hüglin, Dr. M. Steinbacher, Ms. C. Zellweger-Fäsi, Dr. A. Fischer CH-8600 Dübendorf	Switzerland	Ice nucleating particles and ice multiplication at moderate supercooling  University of Basel Department of Environmental Sciences Bernoullistrasse 30 CH-4056 Basel
Empa Laboratory for Air Pollution/Environmental Technology Dr. C. Hüglin, Dr. S. Henne, Dr. S. Reimann, Dr. M. Steinbacher Ueberlandstrasse 129 CH-8600 Dübendorf	Switzerland	The Global Atmosphere Watch Aerosol Program at Jungfrauoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland

Institution / network	Country	Collaborating with project:
Empa Laboratory for Air Pollution/Environmental Technology Dr. S. Reimann, Dr. C. Hüglin, Dr. M. Steinbacher, Ms. C. Zellweger-Fäsi, Dr. A. Fischer CH-8600 Dübendorf	Switzerland	Baseline characterization of air masses using radon-222  University of Basel Department of Environmental Sciences Bernoullistrasse 30 CH-4056 Basel
ETH Zürich Swiss Federal Institute of Technology Institute for Atmospheric and Climate Science Prof. U. Lohmann Prof. T. Peter Universitätstrasse 16 CH-8092 Zürich	Switzerland	The Global Atmosphere Watch Aerosol Program at Jungfraujoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland
ETH Zürich Swiss Federal Institute of Technology Laboratory of Ion Beam Physics Dr. Irena Hajdas CH-8093 Zürich	Switzerland	Characterization of permafrost microbiome  Swiss Federal Research Institute WSL CH-8903 Birmensdorf
ETH Zürich Swiss Federal Institute of Technology Institute for Atmospheric and Climate Science	Switzerland	Trace gas observations at Jungfraujoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Ueberlandstrasse 129 CH-8600 Dübendorf
ETH Zürich Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie VAW Dr. Andreas Bauder CH-8049 Zürich	Switzerland	Long-term glacier mass balance of Gornergletscher in relation to ice temperature  University of Zurich Department of Geography Winterthurerstrasse 190 CH-8057 Zürich
Geologos G. Favre, geologist Geneva	Switzerland	Water cycle, Valais  Claude Bernhard Route des Croux des Raves 21 CH-1985 La Sage
Geotest Ltd. Zollikofen, Switzerland	Switzerland	Monitoring the Jochloch cave  Schweiz. Gesellschaft für Höhlenforschung Sektion Bern CH-3000 Bern

Institution / network	Country	Collaborating with project:
GSR Rhodanian Speleology Group	Switzerland	Water cycle, Valais  Claude Bernhard Route des Croux des Raves 21 CH-1985 La Sage
Haute école d'ingénierie et d'architecture Fribourg Bd de Pérolles 80 CH-1705 Fribourg	Switzerland	Stellarium Gornergrat  Center for Space and Habitability University of Bern Gesellschaftsstrasse 6 CH-3012 Bern
Hydro-Geo Environnement Ludovic Savoy Geneva	Switzerland	Water cycle, Valais  Claude Bernhard Route des Croux des Raves 21 CH-1985 La Sage
Institut für Aerosol- und Sensortechnik, Fachhochschule Nordwestschweiz, Windisch Prof. E. Weingartner	Switzerland	The Global Atmosphere Watch Aerosol Program at Jungfrauoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland
Institute of Applied Physics (IAP) University of Berne Dr. Klemens Hocke	Switzerland	Automated GNSS Network Switzerland (AGNES)  Swiss Federal Office of Topography swisstopo Seftigenstrasse 264 CH-3084 Wabern
Institute of Geodesy and Photogrammetry ETH Zürich Prof. Alain Geiger Dr. Karina Wilgan	Switzerland	Automated GNSS Network Switzerland (AGNES)  Swiss Federal Office of Topography swisstopo Seftigenstrasse 264 CH-3084 Wabern
3100 Kulmhotel Gornergrat Gornergrat 3100m CH-3920 Zermatt	Switzerland	Stellarium Gornergrat  Center for Space and Habitability University of Bern Gesellschaftsstrasse 6 CH-3012 Bern
MeteoSwiss Gilles Durieux Payerne	Switzerland	Aerosol radioactivity monitoring at the Jungfrauoch  Bundesamt für Gesundheit Sektion Umweltradioaktivität Schwarzenburgstrasse 157 CH-3003 Bern

Institution / network	Country	Collaborating with project:
MeteoSwiss	Switzerland	Trace gas observations at Jungfrauoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Ueberlandstrasse 129 CH-8600 Dübendorf
MeteoSwiss	Switzerland	Cloud fraction determination with hemispherical sky cameras at Jungfrauoch  Physikalisch-Meteorologisches Observatorium Davos PMOD World Radiation Center WRC Dorfstrasse 33 CH-7260 Davos Dorf
MeteoSwiss Zurich and Payerne Dr. Philippe Steiner Dr. Daniel Leuenberger Dr. Alexander Haefele Dr. Rolf Rüfenacht	Switzerland	Automated GNSS Network Switzerland (AGNES)  Swiss Federal Office of Topography swisstopo Seftigenstrasse 264 CH-3084 Wabern
MeteoSwiss, Payerne Office fédéral de météorologie et de climatologie MétéoSuisse Dr. A. Haefele Dr. J. Klausen Ch. de l'Aéologie CH-1530 Payerne	Switzerland	The Global Atmosphere Watch Aerosol Program at Jungfrauoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen, Switzerland
NABEL (Swiss National Air Pollution Monitoring Network)	Switzerland	Trace gas observations at Jungfrauoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Ueberlandstrasse 129 CH-8600 Dübendorf
NABEL (Swiss National Air Pollution Monitoring Network)	Switzerland	Halogenated greenhouse gases at Jungfrauoch  Empa Laboratory for Air Pollution and Environmental Technology Ueberlandstrasse 129 CH-8600 Dübendorf



Institution / network	Country	Collaborating with project:
Oeschger Centre for Climate Change Research University of Bern Hochschulstrasse 4 CH-3012 Bern	Switzerland	Flask comparison on Jungfrauoch  Max Planck Institut für Biogeochemie Hans Knöll Str. 10 D-007745 Jena
Paul Scherrer Institute Laboratory of Atmospheric Chemistry Dr. M. Gysel, Dr. N. Bukowiecki CH-5232 Villigen Switzerland	Switzerland	Ice nucleating particles and ice multiplication at moderate supercooling  University of Basel Department of Environmental Sciences Bernoullistrasse 30 CH-4056 Basel
Paul Scherrer Institute Laboratory of Atmospheric Chemistry Dr. M. Gysel, Dr. N. Bukowiecki CH-5232 Villigen Switzerland	Switzerland	Baseline characterization of air masses using radon-222  University of Basel Department of Environmental Sciences Bernoullistrasse 30 CH-4056 Basel
Paul Scherrer Institute Laboratory of Atmospheric Chemistry CH-5232 Villigen Switzerland	Switzerland	Trace gas observations at Jungfrauoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Ueberlandstrasse 129 CH-8600 Dübendorf
PERMOS (Permafrost Monitoring Switzerland) <a href="http://www.permos.ch/">www.permos.ch/</a>	Switzerland	Long-term permafrost monitoring in the Jungfrau East ridge  WSL Institute for Snow and Avalanche Research SLF Flüelastrasse 11 CH-7260 Davos Dorf, Switzerland
PERMOS (Swiss Permafrost Monitoring Network)	Switzerland	Characterization of permafrost microbiome  Swiss Federal Research Institute WSL CH-8903 Birmensdorf
PMOD/WRC Dr. Julian Gröbner Dr. Christine Aebi Davos Dorf	Switzerland	Automated GNSS Network Switzerland (AGNES)  Swiss Federal Office of Topography swisstopo Seftigenstrasse 264 CH-3084 Wabern

Institution / network	Country	Collaborating with project:
Physikalisch-Meteorologisches Observatorium Davos (PMOD), World Radiation Center (WRC) Dr. S. Nyeki, Dr. J. Gröbner Dorfstrasse 33 CH-7260 Davos Dorf	Switzerland	Global Atmosphere Watch Radiation Measurements  Federal Office of Meteorology and Climatology MeteoSwiss Station Aérologique 1 Ch. de l'Aérologie CH-1530 Payerne
Pro Natura Zentrum Aletsch Laudo Albrecht Villa Cassel Riederalp	Switzerland	Glaciological investigations on the Grosser Aletschgletscher  ETH Zürich Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie (VAW) Hönggerbergring 26 CH-8093 Zürich
SCCER-FURIES Future Swiss Electrical Infrastructure	Switzerland	New software and fast data logger to examine and analyse energy yield data from PV at Jungfrauoch  Bern University of Applied Sciences BFH, Dept. Engineering and Information Technology (EIT) Photovoltaic Laboratory Jlcoweg 1 CH-3400 Burgdorf
Studiengesellschaft Mont Soleil Les Brenet	Switzerland	New software and fast data logger to examine and analyse energy yield data from PV at Jungfrauoch  Bern University of Applied Sciences BFH, Dept. Engineering and Information Technology (EIT) Photovoltaic Laboratory Jlcoweg 1 CH-3400 Burgdorf
Swiss GCOS office	Switzerland	High precision carbon dioxide and oxygen measurements at Jungfrauoch  Universität Bern Physikalisches Institut Klima- und Umweltphysik Sidlerstrasse 5 CH-3012 Bern
Swiss Glacier Monitoring Network (GLAMOS) <a href="http://www.glamos.ch">http://www.glamos.ch</a>	Switzerland	Glaciological investigations on the Grosser Aletschgletscher  ETH Zürich Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie (VAW) Hönggerbergring 26 CH-8093 Zürich

Institution / network	Country	Collaborating with project:
Swiss Institute of Speleology and Karst-Research Dr. Philipp Häuselmann	Switzerland	Monitoring the Jochloch cave  Schweiz. Gesellschaft für Höhlenforschung Sektion Bern CH-3000 Bern
Swisstopo Dr. A. Streilein, R. Artuso Wabern	Switzerland	Glaciological investigations on the Grosser Aletschgletscher  ETH Zürich Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie (VAW) Hönggerberggring 26 CH-8093 Zürich
Universität Basel Institut für Umweltgeowissenschaften Dr. Franz Conen Bernoullistrasse 30 CH-4056 Basel	Switzerland	The Global Atmosphere Watch Aerosol Program at Jungfraujoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland
Universität Basel Institut für Umweltgeowissenschaften Dr. Franz Conen Bernoullistrasse 30 CH-4056 Basel	Switzerland	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
Universität Basel Institut für Umweltgeowissenschaften Bernoullistrasse 30 CH-4056 Basel	Switzerland	Continuous measurement of stable CO <sub>2</sub> isotopes at Jungfraujoch, Switzerland  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
University of Basel Environmental Geosciences	Switzerland	Trace gas observations at Jungfraujoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Ueberlandstrasse 129 CH-8600 Duebendorf

Institution / network	Country	Collaborating with project:
University of Bern Physics Institute Climate and Environmental Physics Sidlerstrasse 5 CH-3012 Bern	Switzerland	Trace gas observations at Jungfrauoch as part of European Research Infrastructures  Empa Laboratory for Air Pollution and Environmental Technology Ueberlandstrasse 129 CH-8600 Duebendorf
University of Bern Physics Institute Climate and Environmental Physics Prof. M. Leuenberger Sidlerstrasse 5 CH-3012 Bern	Switzerland	The Global Atmosphere Watch Aerosol Program at Jungfrauoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland
University of Bern Physics Institute Climate and Environmental Physics Prof. M. Leuenberger Sidlerstrasse 5 CH-3012 Bern	Switzerland	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium)
University of Bern Physics Institute Climate and Environmental Physics Sidlerstrasse 5 CH-3012 Bern	Switzerland	Continuous measurement of stable CO2 isotopes at Jungfrauoch, Switzerland  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
University of Bern Physics Institute Climate and Environmental Physics Sidlerstrasse 5 CH-3012 Bern	Switzerland	Flask comparison on Jungfrauoch  Max Planck Institut für Biogeochemie Hans Knöll Str. 10 D-007745 Jena
Universität Bern Physikalisches Institut Klima- und Umweltphysik Dr. Roland Purtschert Sidlerstrasse 5 CH-3012 Bern	Switzerland	85Kr Activity Determination in Tropospheric Air  Bundesamt für Strahlenschutz Rosastrasse 9 D-79098 Freiburg

Institution / network	Country	Collaborating with project:
Universität Bern Physikalisches Institut Dr. Rolf Bütikofer Sidlerstrasse 5 CH-3012 Bern	Switzerland	Influence of environmental parameters on secondary neutrons from cosmic rays at high altitudes in Alpine region  Helmholtz Zentrum München Institute of Innovative Radiotherapy Ingolstädter Landstrasse 1 D-85764 Neuherberg
University of Geneva Geneva Observatory Astronomy Department 51, Chemin des Maillettes CH-1290 Sauverny	Switzerland	Stellarium Gornergrat  Center for Space and Habitability University of Bern Gesellschaftsstrasse 6 CH-3012 Bern
University of Zurich Department of Geography Remote Sensing Laboratories (RSL) Dr. David Small Winterthurerstrasse 190 CH-8057 Zürich	Switzerland	Long-term glacier mass balance of Gornergletscher in relation to ice temperature  University of Zurich Department of Geography Winterthurerstrasse 190 CH-8057 Zürich
WSL Institute for Snow and Avalanche Research SLF Dr. Marcia Phillips Davos Switzerland	Switzerland	Characterization of permafrost microbiome  Swiss Federal Research Institute WSL CH-8903 Birmensdorf
Centre for Isotope Research CIO University of Groningen Prof. H. Chen and H. Meijer The Netherlands	The Netherlands	Flask comparison on Jungfrauoch  Max Planck Institut für Biogeochemie Hans Knöll Str. 10 D-007745 Jena
University of Amsterdam Institute for Biodiversity and Ecosystem Dynamics Amsterdam	The Netherlands	Influence of air density on dust emission from sandy soil using the PI-SWERL  Physical Geography and Environmental Change University of Basel Klingelbergstrasse 27 CH-4056 Basel
Royal Holloway University of London Prof. Euan Nisbet	UK	Isotopic composition of N <sub>2</sub> O at Jungfrauoch High Alpine Station  Empa Laboratory for Air Pollution and Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf

Institution / network	Country	Collaborating with project:
University of Bristol	UK	Halogenated greenhouse gases at Jungfrauoch  Empa Laboratory for Air Pollution/ Environmental Technology Überlandstrasse 129 CH-8600 Dübendorf
University of Leeds School of Earth and Environment Martin Chipperfield Leeds, LS2 9JT United Kingdom	UK	Atmospheric physics and chemistry  Royal Belgian Institute for Space Aeronomy (BIRA- IASB) Ringlaan 3 B-1180 Brussels Belgium
University of Leeds Dr. M.P. Chipperfield and team Leeds United Kingdom	UK	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
University of Manchester School of Earth, Atmospheric and Environmental Sciences (SEAES) Prof. H. Coe Prof. T. Choularton Manchester, UK	UK	The Global Atmosphere Watch Aerosol Program at Jungfrauoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland
Colorado State University Cooperative Institute for Research in Environmental Sciences (CIRES) Dr. J.M. Creamean Boulder, CO, USA	USA	Ice nucleating particles and ice multiplication at moderate supercooling  University of Basel Department of Environmental Sciences Bernoullistrasse 30 CH-4056 Basel
NOAA Dr. E. Andrews Boulder, USA	USA	The Global Atmosphere Watch Aerosol Program at Jungfrauoch  Paul Scherrer Institute Laboratory of Atmospheric Chemistry Forschungsstrasse 111 CH-5232 Villigen Switzerland

Institution / network	Country	Collaborating with project:
NASA JPL California Institute of Technology Dr. G.C. Toon Pasadena, CA USA	USA	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
National Center for Atmospheric Research Mr. J. Hannigan Boulder, CO USA	USA	High resolution, solar infrared Fourier transform spectrometry: application to the study of the Earth's atmosphere  Université de Liège Institut d'Astrophysique et de Géophysique Quartier Agora Allée du six Août, 19 - Bâtiment B5a B-4000 Sart Tilman (Liège), Belgium
University of Washington Prof. Dr. Erik Swenson	USA	Effect of aerobic capacity on the incidence and severity of acute mountain sickness after passive ascent to 3450 m  Dept. of Anesthesiology, Perioperative and General Critical Care Medicine University Hospital Paracelsus Medical University Müllnerstrasse 48 A-5020 Salzburg