

**Network for the Detection of Atmospheric Composition Change
2011 NDACC Symposium
An International Symposium Celebrating 20 Years of Global Atmospheric Research
Fostered by NDACC/NDSC Observations
7-10 November 2011 – Reunion Island, France**

Monday, 7 November 2011

- **Welcome and Introductions 8:30 – 9:00 am**
- **Oral presentations 9:00 am – 4:00 pm**
- **Lunch will be served at the conference site 12:00 – 1:30 pm**
- **Poster session 4:00 – 5:30 pm**
- **There will be an optional excursion to the 'Saga du Rhum' museum in Saint Pierre after the poster session. There will be a small additional cost for this activity. Details will be provided as they become available.**

Session 1 – Satellite Calibration, Validation, and Intercomparisons – P. K. Bhartia and Stuart McDermid, Session Co-Chairs – 9:00 am – 12:00 pm

Session ID	Title	Presenter
<i>Oral Presentations</i>		
1-2	The Network for Detection of Atmospheric Composition Change and the NASA atmospheric satellite program	Ken Jucks
1-3	Twenty years of NDACC support to satellite missions: Achievements and new challenges	Jean-Christopher Lambert
1-4	Variability and trends in stratospheric ozone since 2002 from the GOMOS/ENVISAT V6 reprocessing and comparison with NDACC ozone lidars	Alain Hauchecorne
1-5	The VALID-2 project: Using NDACC lidars for the validation of satellite-retrieved ozone and temperature profiles	J.A.E. van Gijssel
1-6	Long-term stability of twelve satellite limb ozone profilers with respect to NDACC and GAW ground-based networks	Daan Hubert
1-7	SAOZ total ozone column measurements: Application of the new NDACC settings and comparisons to correlative ground-based and satellite observations	Florence Goutail
1-8	The Measurements Of Humidity in the Atmosphere and Validation Experiments (MOHAVE) 2009 Campaign	Thierry Leblanc

Session ID	Title	Presenter
<i>Poster Presentations</i>		
1P-1	Intercomparison of polar ozone profiles monitored by IASI/MetOp sounder with ground-based NDACC observations	TBD (for Julien Gazeaux)
1P-2	Ozone profile validation from GOME-2 on MetOp-A with lidars and microwave radiometers from the NDACC network	Lucia Kins
1P-3	Mutual consistency of vertical ozone profile data records from twelve satellite limb sounders using NDACC as a ground reference	Daan Hubert
1P-4	Intercomparison between Aura MLS and ground-based millimeter-wave observations of stratospheric ozone and HNO ₃ from Thule (76.5° N, 68.7° W)	Irene Fiorucci
1P-5	New NDACC recommendations for the retrieval of total ozone columns from ground-based zenith-sky UV-visible observations	Francois Hendrick
1P-6	Assimilation of stratospheric ozone GOMOS data with the isentropic transport model MIMOSA: Comparison between sub-optimal Kalman filter and kriging	Charles Cot
1P-7	Comparisons of the SMILES (Superconducting Submillimeter-Wave Limb-Emission Sounder) Level 2 product with other satellite observations	Akira Mizuno (for Masato Shiotani)
1P-9	Sixteen years of temperature profiling with the NDACC stratospheric ozone lidar at Lauder, New Zealand	J.A.E. van Gijsel
1P-10	Comparison between ground-based and satellite measurements of atmospheric water vapor at Observatoire de Haute-Provence in France	Alain Sarkissian

Session 2 – Polar Chemistry and Ozone Loss – Neil Harris and Markus Rex, Session Co-Chairs – 1:30 – 3:50 pm

Session ID	Title	Presenter
<i>Oral Presentations</i>		
2-1	Monitoring and understanding polar stratospheric ozone: A short historical overview and results from the ongoing project RECONCILE	Marc von Hobe
2-2	Arctic ozone profiles as seen by GOMOS	Johanna Tamminen
2-3	Highlights of atmospheric composition measurements at Canada's Polar Environment Atmospheric Research Laboratory	Kimberly Strong
2-4	Probing the Antarctic ozone hole with NDACC total ozone column observations in 1989-2010	Jayanarayanan Kuttippurath
2-5	<i>In situ</i> measurements of polar stratospheric ozone from long duration balloons during Concordiasi	Linnea Avallone
2-6	Variation of chlorine species related to Antarctic ozone hole observed by ground-based FTIR at Syowa Station, Antarctica	Hideaki Nakajima
2-7	Total atmospheric bromine, chlorine, and fluorine trends and age of the air from the NOAA GMD cooperating network	James Elkins
<i>Poster Presentations</i>		
2P-1	Winter to winter variability of chlorine activation and ozone loss as observed by ground-based FTIR measurements at Kiruna since winter 1993/94	Thomas Blumenstock
2P-2	Measurements of the winter stratospheric structure and composition from the NDACC station at Thule, Greenland: Long-term evolution and the exceptional winters of 2008-2009 and 2010-2011	Alcide di Sarra
2P-3	Atmospheric research at Eureka in Canada's high arctic	James Drummond
2P-4	Stratospheric ozone observations at Sodankylä	Rigel Kivi
2P-5	Balloon observations of water vapor and aerosols in the Arctic polar stratosphere in summer 2009 and springs 2010 and 2011	Gwenael Berthet
2P-6	Interannual variability of ozone loss in the Arctic and Antarctic polar vortex using 20 years of NDACC ozone measurements	Florence Goutail
2P-7	Analysis of the Antarctic ozone holes from 2003 to 2011 using data from NDACC and GAW	Geir Braathen
2P-8	First ozonesonde measurements at Kerguelen Island (49.2°S 70.1°E 29masl): Radiosondages Ozone Complementaires aux Kerguelen (ROCK) campaign 2008-2009 (Polar International Year – IPEV)	Francoise Posny
2P-9	Arctic ozone hole 2011: Ozone measurements from Greenland	Niels Larsen

Tuesday, 8 November 2011

- Oral presentations 8:30 am – 3:15 pm
- Lunch will be served at the conference site 12:00 – 1:30 pm
- Poster session 3:30 – 5:00 pm

Session 3 – Tropical and Subtropical Observations and Analyses – Karin Kreher and Jean-Pierre Pommereau, Session Co-Chairs – 8:30 – 10:10 am

Session ID	Title	Presenter
<i>Oral Presentations</i>		
3-1	The atmospheric observatory of Reunion Island and the Maïdo facility	Robert Delmas
3-2	A SHADOZ Ozone Climatology in the Aura Era: Tropospheric and lower stratospheric profiles with total ozone comparisons to OMI	Anne Thompson
3-3	Tropopause characteristics and variability from 11-year SHADOZ observations in the southern tropics and sub-tropics	Anne Thompson (for Sivakumar Venkataraman)
3-4	Tropospheric Ozone Observations and analysis in the South-west of Indian Ocean (Reunion and Kerguelen Islands)	Jean-Luc Baray
3-5	The African tropical belt: Widening and positive trends of ozone as seen by MOZAIC routine <i>in situ</i> airborne measurements	Jean-Pierre Camas
<i>Poster Presentations</i>		
3P-1	Classification of ozonesonde profiles from the SHADOZ stations at Ascension and Natal using self-organizing maps	Anne Thompson
3P-2	Ozonesonde measurements at La Reunion Island NDACC-SHADOZ station: 21.0°S 55.5°E 8 masl, measurement period 1992 to 2011	Francoise Posny
3P-3	Watukosek tropospheric ozone characteristics based on long-term data observation and its comparison to the OMI satellite data	Ninong Komala
3P-4	Tropical waves in the south west Indian Basin during TC season 2008	Fabrice Chane Ming
3P-5	Characteristic of gravity waves generated by the intense tropical cyclone Ivan (2008) in the UT/LS: Observations and numerical study	Chouaïbou Ibrahim
3P-6	An Antarctic polar filament observed by GOMOS/ENVISAT during spring 2004: Isentropic transport over a southern subtropical station, Irene (South Africa)	Nahoudha Mzé
3P-7	Raman lidar and sodar measurements in the state of Sao Paulo, Brazil	Gerhard Held

Session 4 – Water Vapor – Nik Kämpfer and Holger Vömel, Session Co-Chairs – 10:40 am – 12:00 noon

Session ID	Title	Presenter
<i>Oral Presentations</i>		
4-1	A five-year water vapor Raman lidar climatology (3-20 km) at the JPL Table Mountain Facility, California	Stuart McDermid
4-2	Long-term ground-based microwave measurements of middle atmospheric water vapor from NDACC sites	Gerald Nedoluha
4-3	Water vapor measurements in the UTLS at 936 nm by stellar occultations with GOMOS/ENVISAT and comparison with NDACC data	Jean-Loup Bertaux
4-4	Temporal structures in middle atmospheric water vapor observed by an NDACC radiometer at northern mid-latitudes	Dominik Scheiben
<i>Poster Presentations</i>		
4P-1	Three years of measurements with the mobile ground-based water vapor radiometer MIAWARA-C	Corinne Straub
4P-2	Tropospheric temperature and water vapor observed by the 60- and 183-GHZ radiometer HAMSTRAD at Dome C, Antarctica	Philippe Ricaud
4P-3	The development of a new 22 GHz microwave spectrometer for monitoring middle atmospheric water vapor at polar latitudes	Pietro Paolo Bertagnolio
4P-4	Preliminary water vapor lidar measurements at Lauder, NZ during the TOPOL-2 campaign	Thomas McGee
4P-5	On the way to combined DIAL and Raman lidar sounding of water vapor at Zugspitze	Thomas Trickl

Session 5 – Tropospheric Observations and Analyses – Martine De Mazière and Anne Thompson, Session Co-Chairs – 1:30 – 3:15 pm

<i>Oral Presentations</i>		
5-1	Time-series of biomass burning products from ground-based FTIR measurements at Reunion Island (21°S, 55°E) and comparisons with the model IMAGES	Corinne Vigouroux
5-2	New results on validation of EOS-Aura OMI NO ₂ data using ground-based NO ₂ measurements at Zvenigorod, Russia	Aleksandr Gruzdev
5-3	Correlating boundary-layer NO ₂ with column measurements: Observing ground-level NO ₂ from space	Travis Knepp
5-4	MAX-DOAS observations and retrievals: From marine halogen oxides emissions to air quality studies	Karin Kreher
5-5	Is there a hole in the global OH shield over the tropical western Pacific warm pool?	Markus Rex

Session ID	Title	Presenter
<i>Poster Presentations</i>		
5P-1	Towards global routine measurements of high-resolution <i>in situ</i> NO ₂ profiles	Ankie Piters
5P-2	On the use of the MAXDOAS technique for the validation of tropospheric NO ₂ column measurements from satellite	Michel Van Roozendael (for Gaia Pinardi)
5P-3	Two sites in Central Mexico: IR Solar absorption measurements	Michel Grutter
5P-4	Ozone tropospheric and stratospheric trends (1995-2011) at six ground-based FTIR stations (34°S to 79°N)	Corinne Vigouroux
5P-5	Comparison of NDACC column CH ₄ observations with 3-D model results from the Transcom-CH ₄ study	Martyn Chipperfield (for Chris Wilson)

Wednesday, 9 November 2011

- Excursion to the future Mäido Atmospheric Observatory in the morning
- Lunch will be served at the conference site 12:00 noon – 1:30 pm
- Oral presentations 1:30 – 4:30 pm
- Poster session 4:40 – 6:00 pm
- Banquet 8:00 – 11:00 pm – Participants will have an opportunity to return to their hotels between the poster session and the banquet

Session 6 – Stratospheric Composition and Long-Term Trends – Jim Elkins and Jean-Christopher Lambert, Session Co-Chairs – 1:30 – 4:30 pm

<i>Oral Presentations</i>		
6-1	Constructing a long-term ozone climate data record (1978 – 2010) from v8.6 SBUV/2 profiles	Jeannette Wild
6-2	SPARC/IO3C/WMO-IGACO assessment of past changes in the vertical distribution of ozone	Neil Harris (TBC)
6-3	Consistency of the ten years (2001-2011) Odin SMR and OSIRIS stratospheric ozone time-series (2001-2011) with long-term NDACC observations	Jo Urban
6-4	Relative drifts and stability of satellite and ground-based stratospheric ozone profilers at NDACC lidar stations	Sophie Godin-Beekmann
6-5	Temperature trends derived from lidar and satellite series	Philippe Keckhut
6-6	Comparisons of long-term stratospheric nitric acid and hydrogen fluoride variations using satellite and ground-based measurements	Lucien Froidevaux
6-7	Trend analysis of stratospheric BrO using long-term ground-based UV-visible observations	Michel Van Roozendael
6-8	Trend analysis of stratospheric NO ₂ above Jungfraujoch (46.5°E, 8.0°E) using long-term ground-based UV-visible, FTIR, and satellite nadir observations	François Hendrick

Session ID	Title	Presenter
<i>Poster Presentations</i>		
6P-1	Assimilation of the Dobson to Brewer total ozone data series, Hradec Králové, Czech Republic, 1961-2010 – Some impacts on evaluation of long-term changes	Karel Vanicek
6P-2	Evaluation of the absorption cross section of ozone in the Huggins Band: ACSO summary	Johanna Tamminen
6P-3	Brewer Umkehr ozone profile retrievals	James Elkins
6P-4	Inexpensive stratospheric profiling as basis of stratospheric transport monitoring program	James Elkins
6P-5	New ECC ozonesonde pump efficiency measurements	James Elkins (for Bryan J. Johnson)
6P-6	Changes in the vertical distribution of ozone over Canada from ozonesondes: 1980-2010	Volodya Savastiouk (for David Tarasick)
6P-7	Transfer functions between ECC ozonesondes operated under different conditions: Results from dual flight campaigns	René Stübi
6P-8	Ozone and temperature long-term variability as observed by the JPL lidars at Mauna Loa Observatory, Hawaii, and Table Mountain Facility, California	Guillaume Kirgis
6P-9	Short-term and long-term evolution of stratospheric ozone at a northern mid-latitude station	Sophie Godin-Beekmann
6P-10	Ozone time series from GOMOS and SAGE II measurements	Johanna Tamminen (for Erkki Kyrölä)
6P-11	Ten years of global ozone profiling with limb-scattered sunlight by Odin-OSIRIS	Douglas Degenstein
6P-12	Characterization of recent advances in vertical profile retrievals from the Fourier-transform infrared spectrometers in the NDACC IRWG	James Hannigan
6P-13	Bridging the gap: Using ground-based measurements to link the HCl and HNO ₃ satellite records	James Hannigan
6P-14	Observed and simulated trends of HCl, ClONO ₂ , and HF total column abundances	Regina Kohlhepp
6P-15	BREDOM: Using MAX-DOAS measurements for long-term observations of atmospheric trace gases	Andreas Richter (for Folkard Wittrock)
6P-16	Long-term and short-term variability of NO ₂ derived from ground-based spectrometric measurements at Zvenigorod, Russia	Aleksandr Gruzdev
6P-17	ATMOSPHERE: Long-term evolution and trends in ozone, atmospheric composition, temperature, aerosols, & origin of atmospheric pollution (aerosols, clouds, water cycle) and study of key sources of satellites, space shuttle & rockets	Adil Hakeem Khan
6P-18	Overview of the NDACC-France activities within Ether facilities	Renaud Bodichon
6P-19	Long-term trends in fluorinated species: Comparison of NDACC & ACE satellite observations with a 3-D model	Martyn Chipperfield

Thursday, 10 November 2011

- Oral presentations 8:45 am – 3:50 pm
- Lunch will be served at the conference site 12:00 noon – 1:30 pm
- Poster session 4:00 – 5:30 pm

Session 7 – Interactions between Atmospheric Composition and Climate – Ronald Prinn and William Randel, Session Co-Chairs – 8:45 – 10:45 am

Session ID	Title	Presenter
<i>Oral Presentations</i>		
7-1	Advanced Global Atmospheric Gases Experiment (AGAGE): An NDACC cooperating network	Ronald Prinn
7-2	Analysis of historical grating spectra: Jungfraujoch atmospheric database extended back to 1977	Philippe Demoulin
7-3	High precision ground-based remote sensing observations of greenhouse gases within the Total Carbon Column Observing Network (TCCON)	Justus Notholt
7-4	Overview over the GCOS Reference Upper Air Network (GRUAN)	Holger Vömel
7-5	Combining NDACC data with satellite observations to constrain hydrocarbons in chemistry-climate models	William Randel
7-6	Tropical tropopause layer transport and processing of short-lived substances	Robyn Schofield
<i>Poster Presentations</i>		
7P-1	Strategy for high-accuracy-and-precision retrieval of atmospheric methane from the NDACC FTS network and intercalibration versus TCCON	Ralf Sussmann
7P-2	The vertical profiles of CH ₄ observed at Tsukuba with a Fourier transform spectrometer	Isao Murata
7P-3	Spectroscopic study of CH ₄ and CO total column amount in the atmosphere near Saint-Petersburg, Russia	Maria Makarova
7P-4	Changes in atmospheric composition discerned from long-term NDACC measurements: Tropospheric gases measured by infrared Fourier transform spectroscopy at Thule, Greenland	Michael Coffey
7P-5	Long-term trends of a dozen direct greenhouse gases derived from infrared solar absorption spectra recorded at the Jungfraujoch station	Emmanuel Mahieu
7P-6	Observation of middle atmosphere in Río Gallegos NDACC site, Argentina	Elian Wolfram
7P-7	Rayleigh LIDAR investigation of major and minor sudden stratospheric warming observed over northern hemisphere stations	Hassan Bencherif (for Sivakumar Venkataraman)

Session 8 – Short-Term Ozone Variability – Sophie Godin-Beekmann and Thierry Leblanc, Session Co-Chairs – 11:20 am – 12:00 noon

Session ID	Title	Presenter
<i>Oral Presentations</i>		
8-1	Diurnal variation of ozone: What we know? What we don't? Why we need to know?	P. K. Bhartia
8-2	Diurnal cycle of stratospheric and mesospheric ozone above Bern and Payerne, Switzerland	Niklaus Kämpfer
<i>Poster Presentations</i>		
8P-1	Millimeter-wave measurements of mesospheric O ₃ diurnal variation from Thule (76.5° N, 68.7° W) and comparison with the ROSE model	Giovanni Muscari
8P-2	Ground-based network measurements of stratospheric and mesospheric ozone in the Southern Hemisphere with millimeter-wave radiometers	Akira Mizuno (for Tomoo Nagahama)
8P-3	Intraseasonal oscillations of stratospheric ozone above Switzerland	Simone C. Studer
8P-4	A new millimeter wave radiometer installed in the NDACC site of Río Gallegos, Argentina	Jscobo Salvador
8P-5	New Millimeter-wave spectroscopic radiometer in Syowa station and a study of the influence of solar activity on the polar middle atmosphere	Akira Mizuno
8P-6	Diurnal Variations of Stratospheric Ozone Measured by Ground-Based Microwave Remote Sensing at Two NDACC Sites: Results and Error Estimates	Gerald Nedoluha (for Alan Parrish)

Session 9 – Aerosols, Radiation, and Spectral UV – Darrel Baumgardner and Ken Jucks, Session Co-Chairs – 1:30 – 3:50 pm

<i>Oral Presentations</i>		
9-1	New balance of risks and benefits of UV radiation – a challenge for the NDACC?	Gunther Seckmeyer
9-2	Long-term observations of surface UV radiation in polar regions	Germar Bernhard
9-3	The Odin-OSIRIS stratospheric aerosol data product	Nick Lloyd
9-4	35 Years of stratospheric aerosol measurements at Garmisch-Partenkirchen (1976-2011)	Thomas Trickl
9-5	AERONET contributions to NDACC	Brent Holben
9-6	The NASA Micro Pulse Lidar Network (MPLNET)	Brent Holben (for Ellsworth Welton)
9-7	New instruments for <i>in situ</i> validation of passive and active remote sensor measurements	Darrel Baumgardner

Session ID	Title	Presenter
<i>Poster Presentations</i>		
9P-1	Long-term biomass burning observations in South America at the Buenos Aires lidar station	Lidia Ana Otero
9P-2	Impact of the eruption of the Sarychev volcano during the 2009 STRAPOLETE campaign	Fabrice Jégou
9P-3	Lidar observations of thin ice clouds in mid latitudes and in the tropics	Otto Schrems
9P-4	Radiative measurements at Thule, Greenland: Factors affecting the cloud-free shortwave and longwave radiative budget in the Arctic	Claudia Di Biagio
9P-5	Measurements of surface ultraviolet irradiance	Béatrice Sauvage
9P-6	Behavior of UV-B Dose, total ozone column and temperature at the Pacific seaboard of the Republic of Panama	Alfonso Pino
9P-7	Surface UV at polar and midlatitude: Ozone in the atmosphere	Adil Hakeem Khan
9P-8	An introduction to the WCRP/GEWEX Baseline Surface Radiation Network (BSRN), a new NDACC cooperating network	Martial Haeffelin
9P-9	New instruments for <i>in situ</i> validation of passive and active remote sensor measurements	Darrel Baumgardner