

Joint SPARC Workshops on Data Assimilation and Stratospheric Winds *Sept. 12-15, 2005*

Banff, Alberta, Canada

Workshop Programs

Updated: August 15, 2005

The location for all presentations is the

Professional Development Centre Room 103 (BP Canada Energy room)

SPARC-DA3 sessions: Starts 9:00 am on Monday September 12, 2005
Ends 9:00 pm on Wednesday September 14, 2005

SPARC-Winds sessions: Starts 9:00 am on Wednesday September 14, 2005
Ends 5:30 pm on Thursday September 15, 2005

Day 1: Monday September 12, 2005

9:00 am *Welcome from Environment Canada*

9:10 am Goals of the SPARC Data Assimilation workshop - **Alan O'Neill** (DARC)

9:30 am Issues in Middle Atmosphere Data Assimilation – **S. Polavarapu** (MSC)

10:00 am Stratospheric Data Assimilation at the Met Office – **D. Jackson** (Met Office),
R. Swinbank, M. Keil, A. Bushell, and Hazel Thornton

10:30 am COFFEE BREAK AND POSTERS

POSTER: Multiple Satellite Ozone Data Assimilations in the NCEP Global Forecast System – **Shutai Zhou** (NCEP)

POSTER: Chemical Hindcast experiments using a GCM – **M. Parrington** and **P. Braesicke** (Cambridge U)

11:00 am Assimilation of Multiple Ozone Sources into the NCEP

Global Forecast System – **Craig S. Long** (NCEP), **Shuntai Zhou, Lawrence E. Flynn, Trevor Beck, and Alvin J. Miller**

11:30 am Assimilation of MLS and OMI Ozone Data – **I. Stajner** (GMAO), **K. Wargan, L.-P. Chang, H. Hayashi, S. Pawson, L. Froidevaux, and N. Livesey**

12:00 pm LUNCH

1:30 pm DISCUSSION: SPARC and the International Polar Year

2:30 pm Assimilation of MLS Data with ECMWF System – **A. O’Neill** (DARC)

3:00 pm A Generalized Innovation Operator for the Assimilation of Integral Measurements – **Yves J. Rochon** (MSC) and **Saroja Polavarapu**

3:30 pm COFFEE BREAK AND POSTERS

4:00 pm Comparison of Initialization Methods for a Climate Assimilation Run - **David Sankey** (U Toronto), **Shuzhan Ren**, **Saroja Polavarapu**, **Yves Rochon**, and **Yan Yang**

4:30 pm Tackling Stratospheric Humidity Assimilation – **Hazel Thornton** (Met Office), **David Jackson**, and **Richard Swinbank**

5:00 pm Control of the Tropical Tropopause and Vertical Transport across it- **Murry Salby** (U Colorado) and **Patrick Callaghan**

5:30 pm *End of day 1*

Day 2: Tuesday September 13, 2005

9:00 am Chemical-Dynamical Coupling in Data Assimilation – **R. Menard** (MSC), **D. Fonteyn**, **S. Chabrilat**, **P. Gauthier**, **M. Charron**, **A. Robichaud**, **Y. Rochon**, **J. C. McConnel**, and **J. W. Kaminiski**

9:30 am – Ozone data assimilation based on GOME, SCIAMACHY and OMI data – **B. Bregman** (Royal Netherland Meterological Institute)

10:00 am The SACADA System for New Operational 4Dvar Chemistry Data Assimilation – **H. Elbern** (U Cologne) and **J. Schwinger**

10:30 am COFFEE BREAK AND POSTERS

POSTER: A Fast Stratospheric Ozone Chemistry Scheme and its Potentials for Data Assimilation – **M. Bourqui** (McGill University)

POSTER: Lidar and Radar observations UT/LS Dynamics Over Tropical and Sub-tropical Stations – **J. Rao** (Indian Institute of Tropical Meteorology)

11:00 am Stratospheric Impacts of the Autumn 2003 Solar Storms – **Y. J. Orsolini** (NILU), **G. L. Manney**, **M. L. Santee**, and **C. Randall**

11:30 am Assimilation of Odin/SMR Data into a High Resolution Eulerian Transport Model - **John Rösevall** (Chalmers U, Sweden) and **Donal Murtagh**

12:00 pm LUNCH

1:30 pm Ensemble filtering using a 3d chemical-dynamical middle atmosphere model - **Tomoko Matsuo** (NCAR), **Jeffrey Anderson**, **Dan Marsh**, and **Anne Smith**

2:00 pm Choosing Meteorological Variables to be Assimilated into CTM Driven GCM for Ozone Re-analysis – **K. Miyazaki** (Tohoku U, Japan), **T. Iwasaki**, **K. Shibata**, **M. Deushi**, and **T. Sekiyama**

2:30 pm The ASSET Analysis Inter-comparison Project: Assimilation into a GCM - **William Lahoz** (DARC) and **Alan Geer**

3:00 pm COFFEE BREAK AND POSTERS

3:30 pm **DISCUSSIONS: Issues in Middle Atmosphere Data Assimilation and the Role of SPARC (Ozone Inter-comparisons; Process Oriented Diagnostics; etc.)**

5:00 pm *End of Day 2*

Day 3: Wednesday September 14, 2005

Start of SPARC-WINDS themed sessions

9:00 am *Welcome to Joint workshops-* **Ted Shepherd**

9:30 am Review and Update of Assimilated Meteorological Dataset Inter-comparisons – **Gloria L. Manney** (JPL), **Douglas R. Allen**, **Kirstin Krueger**, **Steven Pawson**, **Joseph L. Sabutis**, **Michelle L. Santee**, and **Richard Swinbank**

10:30 am COFFEE BREAK AND POSTERS

POSTER: Diagnosis of Mean-Meridional Circulation and Meridional Constituent Transport Based on Mass Weighted Isentropic Zonal Means – **K. Miyazaki** (Tohoku U, Japan) and **R. Iwasaki**

POSTER: Studies of Polar Vortex Structure with OSIRIS Ozone Maps – **W. F. J. Evans** (Trent U, NWRA) and the **OSIRIS ozone team**

11:00 am Tropical Winds in GEOS-4 Meteorological Analysis – **Steven Pawson** (NASA-Goddard), **Wei-Wu Tan**, **Ivanka Stajner**, **Gregory Gaspari**, **Stephen E. Cohn**, **Andrew Tangborn** and **Jing Guo**

11:30 pm Stratospheric Winds in ERA and NCEP-CPC Analysis - Variability associated with ENSO – **Elisa Manzini** (Istituto Nazionale di Geofisica e Vulcanologia, Italy)

12:00 pm Nudging QBO Zonal Winds in Climate Models, a test case for the Assimilation of Winds in Tropical Stratosphere – **Marco A. Giorgetta** (Max Planck Institute, Hamburg)

12:30 pm LUNCH

2:00 pm **DISCUSSION: How well do we know Stratospheric Winds?**

3:00 pm COFFEE BREAK AND POSTERS

3:30 pm ADM-Aeolus, the First Doppler Wind Lidar Sampling Vertical Profiles of the Horizontal Wind from Space - **Paul Ingmann** , **Anne Grete Straume** and the members of the **ADM-Aeolus Mission Advisory Group**

4:00 pm Development of a Sequential Estimator for Assimilation of Ground- and Space-based Mesospheric and Lower Thermospheric Winds – **Ruth S. Lieberman** (Northwest Research Associates) and **Dennis Rigglin**

4:30 pm A Data Assimilation Model for Determining the Mean State and Migrating Tide Structures in the Mesosphere and Lower Thermosphere using Satellite Measurements of Wind and Temperature – **David A. Ortland** (Northwest Research Associates)

5:00 pm *End of Day 3*

7:00 pm *Banquet – SPARC-DA3 and SPARC-Winds workshops*

End of data assimilation session

Day 4: Thursday September 15, 2005

9:00 am Dynamics of the Lower Stratosphere as observed by Long-duration Balloons – **F. Vial** (LMD) and **A. Hertzog**

9:30 am The value of direct wind measurements in the middle atmosphere – **T. Dunkerton** (Northwest Research Associates)

10:00 am Using a GCM to investigate the capability of a satellite instrument to measure wind and ozone in the stratosphere – **C. McLandress** (University of Toronto)

10:30 am COFFEE BREAK AND POSTERS

POSTER: The Waves Michelson Interferometer (WaMI) and a Middle Atmosphere Dynamics Mission – **W. Ward** (University of New Brunswick)

POSTER: High-resolution Ozone Imaging from the Geo-stationary Orbit: Potential Application to Stratospheric Wind Derivation – **Y. J. Orsolini** (NILU), **F. Karcher**, and **A. Drouin**

11:00 am Assimilation of Winds in the Tropics – use of line-of-sight wind profiles – **Erlan Kallen** (Stockholm U), **Nedjelijka Zagar**, and **Nils Gustafsson**

11:30 am Current Status of SWIFT on Chinook – **Alan Scott**, **Brian Mackay**, **Ian McDade**, **Peyman Rahnama** and **Craig Haley**

12:00 pm LUNCH

1:30 pm Do we need global observations of Stratospheric Winds? – **W. Lahoz** (DARC)

2:00 pm DISCUSSION

3:00 pm COFFEE BREAK AND POSTERS

3:30 pm DISCUSSION: Measurement Requirements/ Wrap-up of Winds workshop

5:00 pm DISCUSSION: Final conclusions and recommendations

5:30 pm *End of Day 4*

END of workshops