SPARC Data Assimilation (DA) Workshop
and
SPARC Reanalysis Intercomparison Project (S-RIP) Workshop-

October 17-21, 2016
Victoria, BC, Canada

Monday, October 17, 2016: SPARC DA workshop

0830-0900 Arrival, registration
0900-0920 James Anstey and Quentin Errera: Greetings and Introduction

Theme - Representation of the stratosphere-mesosphere in models and analyses
Chair: Simon Chabrillat and TBD

0920-1005 David Kuhl (invited): Middle Atmosphere Operational Data Assimilation with the Use of Ensembles
1005-1035 John McCormack: Analysis and Validation of Winds from High Altitude Meteorological Analyses during Northern Hemisphere winters of 2009-2010 and 2012-2013
1035-1105 BREAK
1105-1135 Steven Eckermann: Modification and Application of the Navy Global Environmental Model (NAVGEM) to Generate High-Altitude (0-100 km) Global Atmospheric Reanalyses of the 2014 Austral Winter for the Deep Propagating Gravity Wave Experiment (DEEPWAVE)
1135-1205 Quentin Errera: Evaluation of the BASCOE CTM using data assimilation
1205-1235 Yvan Orsolini: Energetic Particle Precipitation In The Mesosphere-Lower Thermosphere In WACCM
1235-1345 LUNCH
1345-1430 Martin Charron (invited & remotely): TBD
1430-1450 All: Discussion around the theme (led by Simon Chabrillat)

Theme - Future directions (instruments, modelling, DA methods)
Chair: John McCormack

1450-1535 Nick Pedatella (invited): Ensemble Data Assimilation in the Whole Atmosphere Community Climate Model
1535-1605 BREAK
1605-1650 Emmanuel Dekemper (invited): The ALTIUS mission: status and expected performance of O3, NO2 and aerosols limb measurements
1650-1720 Moudi Igri: Main weather associated with ITCZ position as simulated by WRF-3DVar data assimilation system over West and Central Africa
1720-1740 All: Discussion around the theme (led by John McCormack)
1740 Adjourn
Tuesday, October 18, 2016: SPARC DA workshop

0830-0900  Arrival, registration

*Theme - Harmonization of long-term data record and bias correction in data assimilation*

*Chair: Kris Wargan*

0900-0945  David Plummer (*invited*): The use of re-analysis datasets to constrain the atmospheric dynamics in long-term chemistry-climate simulations

0945-1015  Gloria Manney: The MUSTARD project

1015-1045  Gabi Stiller (*invited*): The SPARC WAter Vapour A SSessmen t (WAVAS) activity, phase II: Overview and status

1045-1115  BREAK

1115-1200  Thomas von Clarmann (*invited*): The TUNER project (Towards Unified Error Propagation)

1200-1220  All: Discussion around the theme  (led by Kris Wargan)

1220-1240  Quentin Errera: Discussion on future directions of SPARC DAWG, next year’s workshop, etc.

12:40       Adjourn

Tuesday PM  Breakout session(s) and/or Group Activity (TBD)
Wednesday, October 19, 2016: SPARC DA/S-RIP joint session

0830-0900  Arrival, registration
0900-0905  James Anstey: Welcome, Local Info
Chair: Quentin Errera
0905-0920  Masatomo Fujiwara: Greetings and S-RIP Introduction
0920-0950  Jonathon Wright (invited): Chapter 2 + ACP special issue + S-RIP 2016 Report Status
0950-1020  Craig Long (invited): Chapter 3 summary
1020-1030  All: Chapter 3 Discussion (led by Craig Long)
1030-1115  POSTERS
Chair: Masatomo Fujiwara
1115-1145  Sean Davis (invited): Chapter 4 summary
1145-1155  All: Chapter 4 Discussion (led by Sean Davis)
1155-1220  Kris Wargan (invited): NASA updates
1220-1245  Rosana Dragani (invited): ECMWF updates
1245-1415  LUNCH
Chair: Gloria Manney
1415-1440  Craig Long (invited): NOAA updates
1440-1505  Yayoi Harada (invited): JRA updates
1505-1525  Toshiki Iwasaki: Impacts of low-level polar cold air outbreaks on Brewer-Dobson circulations
1525-1555  Paul Konopka (invited): How robust are stratospheric H2O trends derived from different re-analysis products?
1555-1625  BREAK
Chair: Lesley Grey
1625-1645  Thomas von Clarmann: Another Approach to the Brewer-Dobson Circulation: The Direct Inversion of the Continuity Equation
1645-1705  Tianbao Zhao: Evaluation of atmospheric precipitable water from reanalysis products using homogenized radiosonde observations over China
1705-1735  Tao Wang (invited): Lagrangian cold point temperatures and transit time inferred from a forward trajectory model
1735-1805  Peter Hitchcock (invited): Evaluating reanalyses prior to 1979 for studies of stratosphere-troposphere coupling
18:05  Adjourn & Workshop Dinner
Thursday, October 20, 2016: S-RIP workshop

0830-0900  Arrival, registration

Chapter 9: Thomas Birner (Chair); Luis Millan Valle and Tao Wang (Rapporteurs).
0900-0920  James Anstey, Lesley Gray: Chapter 9 Overview
0920-0945  Young-Ha Kim: Tropical stratospheric wave activity and forcing of the QBO in reanalyses
0945-1010  Kevin Hamilton: Representation of the Tropical Stratospheric Zonal Wind in Global Atmospheric Reanalyses
1010-1025  Anstey / Gray / All: Chapter 9 Discussion
1025-1110  POSTERS

Chapter 10: Thomas Birner (Chair); Alex Boothe and Peter Hitchcock (Rapporteurs).
1110-1130  Michelle Santee: Chapter 10 Overview
1130-1155  Zachary Lawrence: An Update on Reanalysis Intercomparisons of Polar Processing Diagnostics
1155-1220  Alyn Lambert (presented by Michelle Santee): Investigation of reanalysis temperatures associated with Polar Stratospheric Cloud (PSC) formation: Can the thermodynamics of supercooled ternary solutions and the ice frost point be used to provide an absolute temperature reference for reanalysis data in the polar regions?
1220-1235  Santee / All: Chapter 10 Discussion
1235-1405  LUNCH

Chapter 11: Thomas von Clarmann (Chair); Patrick Martineau and Shunsuke Noguchi (Rapporteurs).
1405-1425  Lynn Harvey: Chapter 11 Overview
1425-1450  Takatoshi Sakazaki: Intercomparison of atmospheric tides in the stratosphere and lower mesosphere
1450-1515  Toshihiko Hirooka: Climatology and interannual variability of the equatorial semiannual oscillation
1515-1530  Harvey / All: Chapter 11 Discussion
1530-1600  BREAK

Chapter 5: Thomas von Clarmann (Chair); Lynn Harvey and Yvan Orsolini (Rapporteurs).
1600-1620  Thomas Birner and Beatriz Monge-Sanz: Chapter 5 Overview
1620-1645  Gabi Stiller: Decadal changes in age of air and trace gases and their link to stratospheric circulation changes
1645-1710  Simon Chabrillat: Comparing the mean age of air in 4 modern reanalyses through offline modelling of SF6 transport
1710-1725 Birner / Monge-Sanz / All: Chapter 5 Discussion

1725-1755 General S-RIP Discussion (raise pre-planned general topics; additional topics arising during Workshop)

17:55 Adjourn
Friday, October 21, 2016: S-RIP workshop

0830-0900  Arrival, registration

Chapter 8: Paul Konopka (Chair); Yayoi Harada and Kris Wargan (Rapporteurs).
0900-0920  Susann Tegtmeier: Chapter 8 Overview
0920-0945  Jonathon Wright: An evaluation and intercomparison of tropical high clouds in reanalyses

Chapter 7: Paul Konopka (Chair); Chiaki Kobayashi and Gabi Stiller (Rapporteurs).
0945-1005  Gloria Manney: Chapter 7 Overview
1005-1050  POSTERS
1050-1115  Luis Millan Valle: Low ozone events in satellite data and reanalyses

Joint Chapter 7 & 8 Talks: Paul Konopka (Chair); Chiaki Kobayashi and Gabi Stiller (Rapporteurs).
1115-1140  Alex Boothe: Global large-scale stratosphere-troposphere exchange in modern reanalyses
1140-1205  Gloria Manney: Trends and Variability in Upper Tropospheric Jets in Reanalyses
1205-1220  Tegtmeier / All: Chapter 8 Discussion
1220-1235  Manney / All: Chapter 7 Discussion
1235-1405  LUNCH

Chapter 6: Michelle Santee (Chair); Zachary Lawrence and David Plummer (Rapporteurs).
1405-1425  Patrick Martineau: Chapter 6 Overview
1425-1450  Patrick Martineau: A comparison of the momentum budget in reanalysis datasets during sudden stratospheric warming events
1450-1505  Martineau / All: Chapter 6 Discussion
1505-1550  BREAK
1550-1635  S-RIP Chapter Summary Discussion (Brief review by chapter co-leads, with input from rapporteurs; summarize outstanding issues, status)
1635-1735  General Discussion (continued from Thurs if needed; summarize discussion results, outstanding issues)
17:35  Adjourn
Posters

Poster boards will be available during the whole week and we invite participants to display their poster during their stay.

The poster session will be held on Wednesday during the morning break.

Sean Davis: The Stratospheric Water and Ozone Satellite Homogenized (SWOOSH) database: A long-term database for climate studies

Chiaki Kobayashi: Changes in the Brewer-Dobson Circulation in JRA-55

Zachary Lawrence: Using CAVE-ART to characterize and track the evolution of stratospheric polar vortices


Kazutoshi Sagi (presented by Yvan Orsolini): Two mechanisms of stratospheric ozone loss in the Northern hemisphere, studied using data assimilation of Odin/SMR atmospheric observations

Takatoshi Sakazaki: Radiative inconsistency in the extra-tropical upper troposphere and lower stratosphere due to water vapor seen in chemistry climate models

Chunxiang Shi: CMA 40-year Reanalysis (CRA-40) Plan & Progress

Jingwei Liu: Verification and evaluation of the preliminary experimental Chinese reanalysis products

Yvan Orsolini: Duration and decay of extreme vortex events in the polar stratosphere: comparison of the ECMWF seasonal forecast model with re-analyses