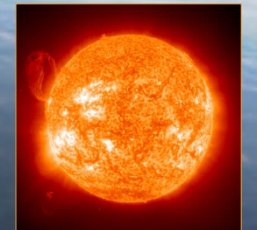


Introduction to S-RIP 2017 and 13th SPARC DA

Quentin Errera and Masatomo Fujiwara



S-RIP

1. Introduction to S-RIP

- The goals of S-RIP are:
 - to create a communication platform between SPARC-related researchers and the reanalysis centres
 - to better understand the differences among current reanalysis products and their underlying causes
 - to provide guidance to reanalysis data users by documenting the results of this reanalysis intercomparison in peer reviewed papers and two SPARC S-RIP reports
 - **The interim report, under revision**
 - **The full report, in 2018/19**
 - ... with these activities ... to contribute to future reanalysis improvements

Table: List of global atmospheric reanalyses currently available.

| Reanalysis Centre (Contacts for S-RIP) | Name of the Reanalysis Products |
|--|--|
| ECMWF (R. Dragani) | ERA-40, ERA-Interim, (ERA-20C), (CERA-20C) |
| JMA (Y. Harada) | JRA-25, JRA-55 |
| NASA (K. Wargan) | MERRA, MERRA-2 |
| NOAA/NCEP (C. Long, W. Ebisuzaki) | NCEP R-1, NCEP R-2, CFSR |
| NOAA & Univ. Colorado (G. Compo, J. Whitaker) | (20CR) |

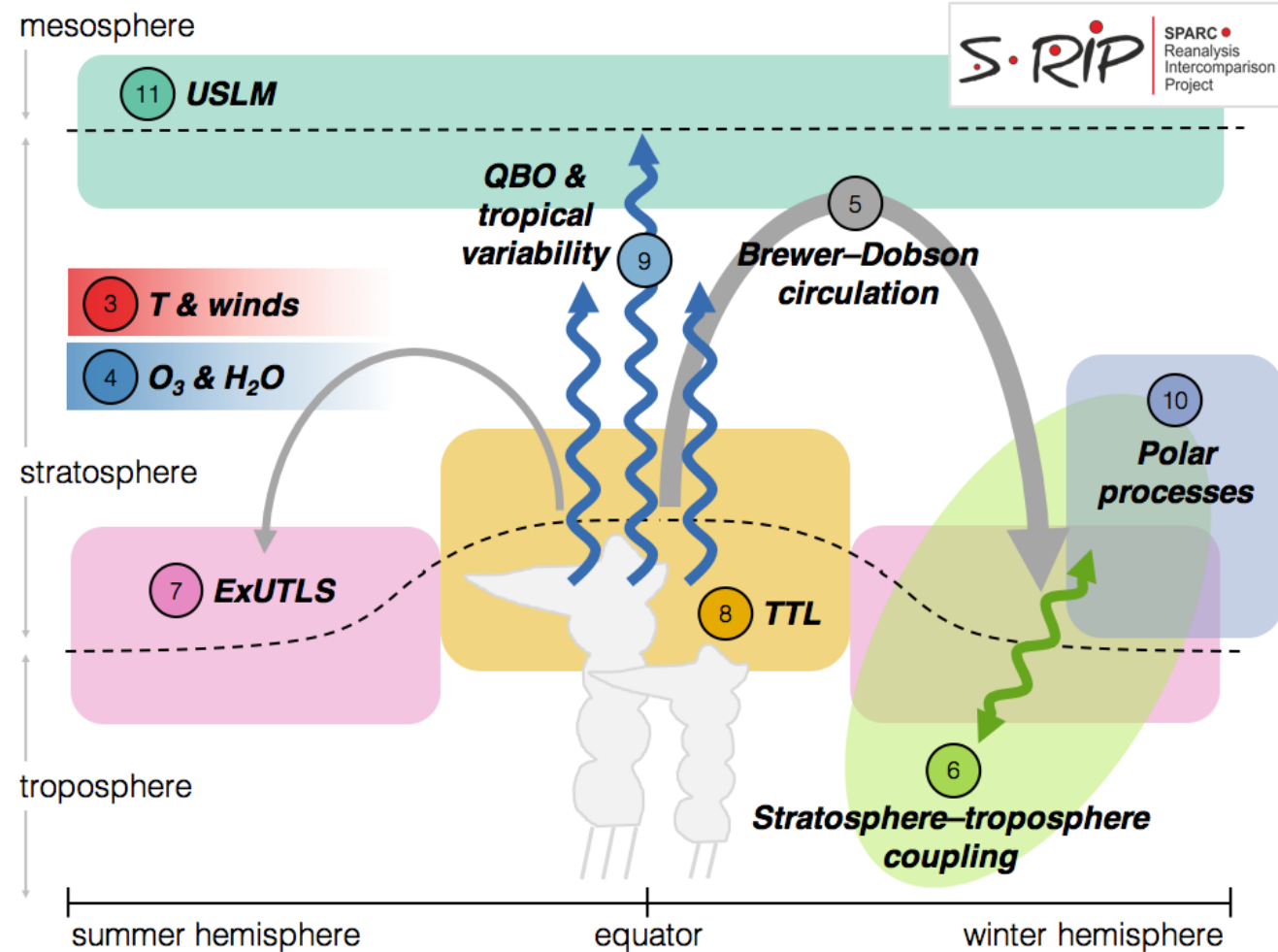
Notes:

- ERA-20C, CERA-20, and 20CR: The “surface-input” reanalyses (surface obs. only assimilated)
- The JRA-55 family also includes
 - “JRA-55C” (conventional obs. only assimilated)
 - “JRA-55AMIP” (no obs. assimilated; SST specified)

Notes on planned new products (will NOT be covered in the Full Report): ERA5 (1979– (Q2 2018), 1950– (Q1 2019); JRA-3Q (2022); CRA40 (?)

1. Introduction to S-RIP

| | Chapter Title | Chapter Co-leads |
|----|---|--|
| 1 | Introduction | Masatomo Fujiwara, Gloria Manney, Lesley Gray |
| 2 | Description of the Reanalysis Systems | Jonathon Wright, Masatomo Fujiwara, Craig Long |
| 3 | Climatology and Interannual Variability of Dynamical Variables | Craig Long, Masatomo Fujiwara |
| 4 | Climatology and Interannual Variability of Ozone and Water Vapour | Michaela Hegglin, Sean Davis |
| 5 | Brewer-Dobson Circulation | Thomas Birner, Beatriz Monge-Sanz |
| 6 | Stratosphere-Troposphere Coupling | Edwin Gerber, Patrick Martineau |
| 7 | Extratropical UTLS | Cameron Homeyer, Gloria Manney |
| 8 | Tropical Tropopause Layer | Susann Tegtmeier, Kirstin Krüger |
| 9 | QBO and Tropical Variability | James Anstey, Lesley Gray |
| 10 | Polar Processes | Michelle Santee, Alyn Lambert, Gloria Manney |
| 11 | Upper Strato. Lower Mesosphere | Lynn Harvey, John Knox |
| 12 | Synthesis Summary | Fujiwara, Manney, Gray |



Note: The Interim Report only covers Chapters 1 – 4.

SPARC DA

The SPARC Data Assimilation Working Group (DAWG)

- Discussion forum for data assimilators, data providers, modellers and users of data assimilation products that focus on the SPARC themes
- This is done throughout organization of workshops
- DAWG is not an oriented report activity
- Two recurrent themes of past DAWG meeting became SPARC independent activities: SNAP and S-RIP
- **Future vision of DAWG mostly rely on the themes proposed for future workshops**
- **John McCormack is new co-chair since 2017**

*This was the case since SSG asks DAWG
an implementation plan in 2016*

- John McCormack became new co-chair
- SPARC DAWG 2017 Implementation Plan request by SSG
 - DAWG will have a lifetime of 4y renewable after review by DAWG leaders, SSG and DAWG community
 - Review time will coincide with SPARC GA
 - For 2019-2022, **DAWG will establish a list of science-related goals and desired outcomes (themes)** to be approved by the SSG
 - Outcomes: workshop organization , SPARC emerging activities, **publications, datasets**

- DAWG workshops attract less participants from y to y. We have been trying to attract more researchers in DA development to join DAWG. This has been difficult.
- Partly due to lack of new instrument dedicated to the study of the stratosphere
- Partly due to other workshops/initiatives happening at the same time that draw away regular SPARC-DAWG attendees
- The future of DAWG will be discussed during this workshop based on:
 - inputs from other SPARC activities (session of Thursday PM)
 - future of S-RIP (and SNAP?)

Themes of SPARC DA Workshop

- Joint session with S-RIP
- Development of new observing systems for the middle atmosphere and Observing System Simulation Experiment (OSSE)
- Stratospheric DA in support of assessing trends in the state of the Upper Troposphere Lower Stratosphere (UTLS)
- New DA techniques and applications for stratospheric data sets
- SPARC Activity Updates

Expected output of the SPARC DA workshop

- Workshop summary in SPARC Newsletter
- Try to identify goals/themes for 2019-2022
- Try to identify ways to achieve goals
- Team members and/or theme leaders?
- How to raise the visibility/awareness of DAWG

Meetings

Meetings in 2018

- SPARC General Assembly (GA), Kyoto, Japan, 1–5 October, 2018
- No S-RIP or DAWG workshop in 2018
- S-RIP/DAWG participants are encouraged to submit their abstract to GA



Save the dates

Early-bird registration closes: **30 June 2018**

Standard registration closes: **31 August 2018**

SPARC General Assembly, Miyako Messe, Kyoto, Japan: **1-5 October 2018**

<http://www.sparc-climate.org/meetings/general-assembly-2018/>

Note:

2018 joint 14th **iCACGP** Quadrennial Symposium/15th **IGAC** Science Conference (<http://icacgp-igac2018.org/>)

25 – 29 September 2018, Takamatsu, Japan

(You can easily travel from Takamatsu to Kyoto e.g., by train.)

Meetings in 2019

- Most likely a DAWG (and perhaps S-RIP?) meeting/workshop in 2019
- We are looking for volunteers to host