

ACTIVITY REPORT:

SPARC Reanalysis Intercomparison Project (S-RIP)

Activity leads:

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28th SPARC SSG meeting

Part II: Activity reporting

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- The SPARC Reanalysis Intercomparison Project (S-RIP)
 - Proposed in 2011; started in 2013
 - Annual workshops with SPARC DAWG during 2014-2017; a chapter-lead meeting in 2018
 - 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 (e.g., in **the special issue of ACP/ESSD**) and the **SPARC S-RIP Report (currently in revision)**
 - ... with these activities ... to contribute to future reanalysis improvements
 - All information available at <https://s-rip.ees.hokudai.ac.jp/>



- **SPARC S-RIP Report:**
 - Nov. 2019: Report manuscripts submitted
 - Mar. 2020: review reports received
 - As of 25 Jan. 2021: revisions completed for 8 chapters (i.e., waiting for 2 (+2). . .)
 - (The COVID-19 has impacted many of the chapter leads.)

- **ACP/ESSD special issue**
 - As of 25 Jan. 2021: 47 papers
 - Deadline extended to 31 December 2021

	Chapter Title	Chapter Co-leads
1	Introduction	S-RIP and chapter leads, reanalysis centre contacts
2	Description of the Reanalysis Systems	Wright, Fujiwara, Long
3	Overview of Temperature and Winds	Long, Fujiwara
4	Overview of Ozone and Water Vapour	Hegglin, Davis
5	Brewer-Dobson Circulation	Monge-Sanz, Birner
6	Extratropical Stratosphere-Troposphere Coupling	Gerber, Martineau
7	Extratropical UTLS	Homeyer, Manney
8	Tropical Tropopause Layer	Tegtmeier, Krüger
9	QBO	Anstey, Gray
10	Polar Processes	Santee, Lambert, Manney
11	Upper Strato. Lower Mesosphere	Harvey, Knox
12	Synthesis Summary	S-RIP and chapter leads



- S-RIP is closely related to the **SPARC Data Assimilation Working Group (DAWG)** and **SPARC Network on Assessment of Predictability (SNAP)**
- There is direct interaction with **QBOi**, **DynVAR** and **OCTAV-UTLS**, as S-RIP co-leads and chapter leads are involved in leadership of those activities and those activities rely directly on results from S-RIP
- Since the reanalyses evaluated and compared by S-RIP are widely used to validate climate models, there is a direct connection between the activities of S-RIP and those of the **Chemistry-Climate Model Initiative (CCMI)**.
- There is also scope for interaction with other SPARC activities such as the **Temperature Changes activity**, the **SPARC Data Initiative (SDI)** and the **Gravity Waves activity**.
- *Leaders of these activities are also in the S-RIP Working Group, chapter leads, and/or contributors, thus enhancing opportunities for coordination and collaboration.*
- Also, Masatomo Fujiwara is the SPARC/S-RIP liaison with (and a co-chair of) the **WCRP Task Team for Intercomparison of ReAnalyses (TIRA)**.



- The SPARC S-RIP Report finalized and published as soon as possible.
- The second phase of this activity will be discussed, defined, and started.
 - Some changes are expected for S-RIP co-leads and chapter leads
 - (May have new chapters/diagnostics; close communication also with DAWG currently)
 - (Might reconsider the goals)
 - Your suggestions most welcome!



- No emerging issues now for S-RIP

