

SPARC Activity Report 2018

(Data Assimilation Working Group)

I. Achievements and Plans

** What has your activity achieved over the past year? Have you completed any major deliverables e.g. reports or reviews or reached any major milestones? (This material will be incorporated into the Annual Report).*

In fall 2017, we had a workshop at ECMWF (Reading, UK) on October 23-27. As with the previous three workshops, the DAWG workshop was held in conjunction with the S-RIP workshop during the same week. Days 1 and 2 were dedicated to S-RIP, days 4 and 5 to DA and day 3 was a joint session of both activities. More information about the 2017 DAWG workshop may be found at the workshop website: <https://events.oma.be/indico/event/18/>

During the meeting, DAWG members identified four themes to focus on during the next four years, as proposed in the DAWG Implementation Plan 2018. These themes are:

- Theme 1. Advocating for Future Limb Sounders in Support of SPARC
- Theme 2. Chemical DA and Reanalysis, including inter-comparison of Chemical Reanalyses
- Theme 3. DA and Reanalysis for the Upper Stratosphere/Mesosphere
- Theme 4. New DA Methods and Techniques for the Stratosphere

DAWG received 2000 CHF from WCRP/SPARC to support the meeting. This money was shared with S-RIP (who received the same amount) to support the travels.

** What does your activity plan to do over the coming year? What deliverables (e.g. reports, review papers) do you plan to complete? (This material may also be incorporated into the Annual Report).*

- Annual workshop (date and time to be decided).
- We expect that the themes will produce papers but most likely not before 2020.

II. Resources

** What workshops have you planned for the coming year and what level of WCRP/SPARC funding do you require to support those workshops? For what do you intend to use any allocated funding? (This information will guide the allocation of SPARC travel support over the coming year).*

- The next DAWG workshop is planned for sometime in 2019, details will be discussed during the DAWG side meeting at the upcoming General Assembly.
- Funding would be appreciated to support travel of early career scientists and/or scientists from developing countries.

** What funding proposals does your activity have in the works? What resource issues is your activity facing? Is there anything that the SSG can do to help? What funding opportunities*

could SPARC be pursuing? (The information you provide here will guide the discussion at the SPARC SSG meeting).

No funding proposals are in the works. One resource issue is flat or decreasing government funding for climate research overall (at least in US) which is not unique to this activity. Another issue more related to DAWG is one of perception. For example, many consider the issue of ozone depletion “solved” and so interest (and funding) has waned for the stratosphere in general, and for observations/assimilation/modeling of key constituents such as ozone, water vapor, and ozone depleting chemicals with large greenhouse gas potentials. As a result, we are faced with possible observation gaps in key areas in the near future as current satellite missions (e.g., Aura MLS) come to an end. This is something we hope to address with Theme 1, and possibly Theme 2 by identifying key science questions that need to be addressed. Another example is perceived lack of awareness of SPARC research activities within parts of the climate modeling and NWP communities. Fostering greater interaction between SPARC DAWG and groups such as CLIVAR and WGNE would help, possibly through SSG’s help with organizing joint workshops or advocating for special sessions at international meetings. It’s difficult to identify specific funding sources for SPARC to pursue, but greater interaction between these communities may foster collaborations that lead to pursuit of new funding opportunities.

III. WCRP Communications †

** What are the data issues/needs for your activity? (This information will be communicated to the WCRP Data Advisory Council).*

Well, there is a need for future limb sounding instruments but I guess WCRP Data Advisory Council is aware of that.

** What are the modelling issues/needs for your activity? (This information will be communicated to the WCRP Modelling Advisory Council).*

IV. SPARC Programmatic Issues

** To which other SPARC or WCRP activities does your activity connect? Should you be thinking about joint workshops? Can the SSG do anything to help foster better connections between your activity and other SPARC/WCRP activities? (This will also guide the discussion at the SPARC SSG meeting).*

DAWG and S-RIP are well connected and have done four joint workshops. For the coming years, DAWG is looking for more connection with other SPARC activities, in particular for theme 1 and 2.

** Has your activity contributed in any way to SPARC’s capacity development effort? Is there any way the SSG capacity development group can help you to do more?*

** Is there anything else that the SSG can do to assist your activity in any way? (This will also guide the discussion at the SPARC SSG meeting).*

** Please also take this opportunity to revisit the material published for your activity on the SPARC web page. (Please communicate any required changes to the SPARC Project Office).*

[†] Issues/needs in this context refers especially to those that may require WCRP engagement beyond SPARC.