

The logo for SPARC-DAWG is a circular emblem with a blue outer ring containing the letters 'S', 'P', 'A', 'R', 'C' at the top and 'D', 'A', 'W', 'G' at the bottom. Inside this ring is a smaller circle with a green and blue gradient, and the letters 'W', 'C', 'R', 'A' are arranged around its perimeter. The entire logo is rendered in a light blue, semi-transparent style.

# **SPARC-DAWG: Future Directions and Next Meeting**

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*SPARC-DA workshop, Brussels, 20 June 2011*

Short term

Long term

# Next steps

1. Reanalysis intercomparison project
2. Global NWP catalogue
3. Impact of stratosphere on tropospheric medium range weather forecasts
4. Gravity wave drag intercomparison (reanalyses, diagnosis of drag, obs)
5. Interact with satellite retrieval community about DA needs
6. WMO/SPARC rolling requirements document

# Short term tasks: The way forward

- Global NWP catalogue. What exactly is needed? Who?
- Interact with satellite retrieval community on DA needs?
- WMO/SPARC Rolling Requirements document. Who? What? Timeframe?

# Long term tasks: the way forward

- Reanalysis intercomparison project
- Impact of stratosphere on tropospheric forecasts. Define expts to propose to WGNE?
- GW intercomparison. Contact Manuel Pulido.

Anything else?

# Discussion: Food for thought

- Problems of long timescales appeared at 2010 workshop. Was this an aberration or does this signal an evolution of SPARC-DAWG?
  - Assimilation of Earth rotation parameters (Lisa Neef)
  - Carbon flux estimation using ensemble Kalman filter (K. Miyazaki)
- What about data assimilation for model parameter estimation? Is this covered by NWP or WGNE? Or do we need a separate initiative on this, including long range transport and source inversion?

# Input from William Lahoz

**Themes:** consider focusing on the following:

1. The role of OSSEs in designing the future Global Observing System.
2. Monitoring the polar regions
3. Theoretical developments in data assimilation
  - This could build on current efforts to bring together notions of ensemble methods and variational methods. A focus could be the characterization of background errors. Methods to incorporate bias estimation into assimilation systems could be explored and discussed. Moving beyond "traditional" systems which are linear (or weakly non-linear) and Gaussian could be explored (e.g. particle filters).
4. Assimilation of cloud information. (Perhaps Quentin could add to this?)
  - As model resolution increases there may be a need to include clouds explicitly. PSC information could be of benefit to chemical data assimilation efforts. A proposal for a COST Action (COST actions are an EU funding mechanism for networking) recently submitted includes moving toward assimilation of information from ice clouds and PSCs.

# Next Meeting

- Location
  - Last 2 years in Europe – outside of Europe this time?
  - Gloria Manney offered to host – New Mexico (see next slide)
  - Boulder?
  - Juxtapose with Reanalysis workshop May 2012 Washington DC?
- Date
  - Late June preferred
  - Check clashes:
    - COSPAR (Mysore, India, July 14-22)
- Themes? Invited speakers?





# SPARC-DA

## workshop participants

Region	Brussels 20-22 June 2011	Exeter 21-23 June 2010	MOCA-09 19-29 July 2009	Toronto 4-7 Sept 2007	Noordwijk 2-4 Oct 2006	Banff 11-15 Sep 2005
Canada	2	5	7	20	10	13
USA	1	2	4	11	2	8
Europe	18	26 12-MetO	6	5	25	14
Asia	3	1	2	2	1	2
Africa		1				
<b>TOTAL</b>	<b>24</b>	<b>35</b>	<b>19</b>	<b>46/69</b>	<b>38</b>	<b>37</b>
D.A.		20	13	19	19	16

## SPARC-DAWG 2012?

- New Mexico Institute of Mining and Technology, Socorro, New Mexico (1 h S of Albuquerque (4000’))
- June 2012
- Attractions: Very large array facility, Bosque Del Apache Wildlife Refuge, hiking venues, Magdalena Ridge Observatory, Native American Pueblos

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