

UPDATE
October 2017

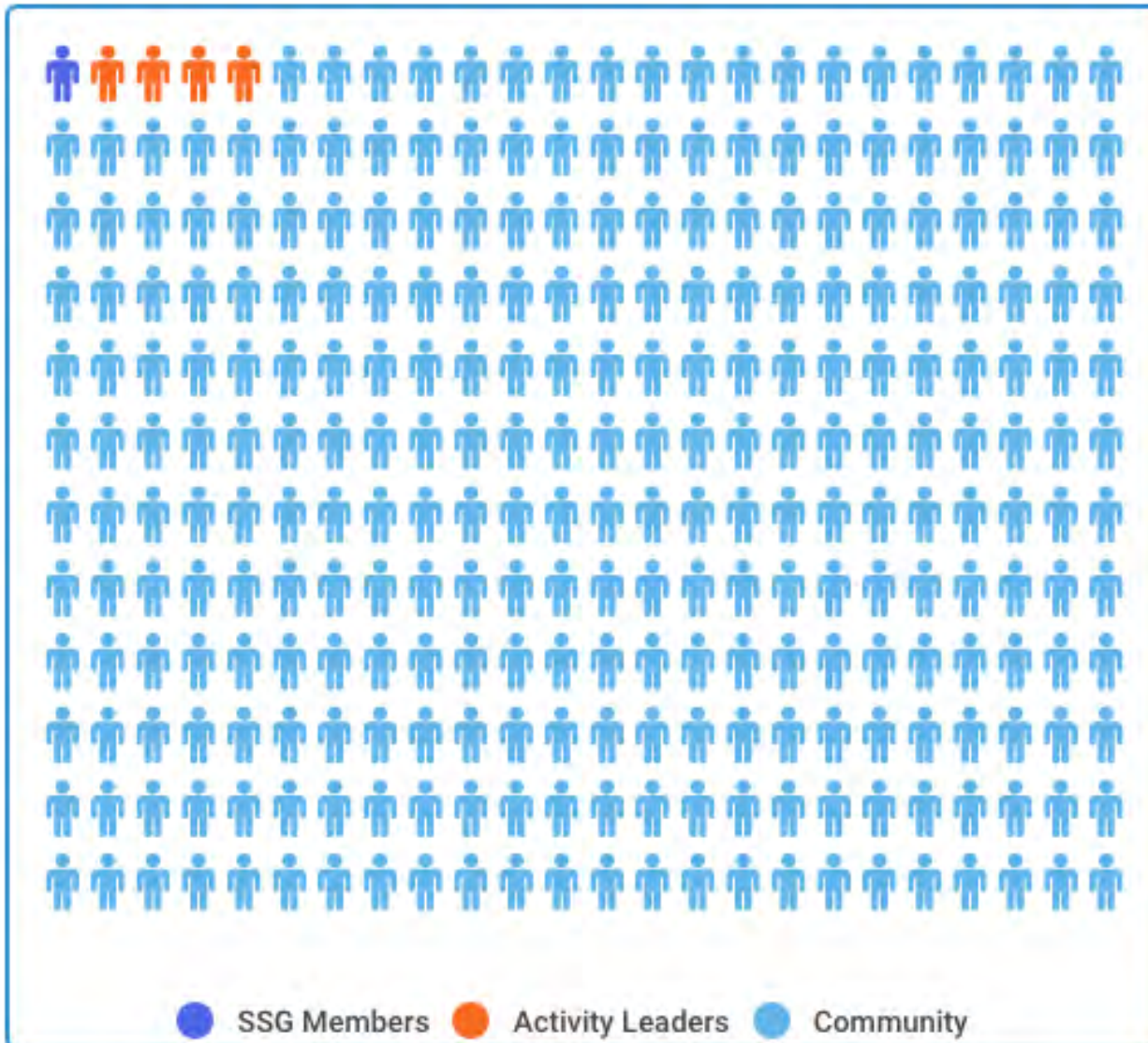


SPARC
Stratosphere-troposphere
Processes And their Role in Climate

Community



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**13 SSG
Members**

**46 Activity
Leaders**

**>3400
Community
Members**

Neil Harris
Co-Chair



Judith Perlwitz
Co-Chair



Boram Lee
WCRP Liaison

The SSG



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SPARC Office
Zurich

Until Dec 2017



New 2018 SSG members



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Wen Chen



Institute of
Atmospheric
Physics at
Chinese
Academy of
Science

Nathaniel Livesey



Jet Propulsion Laboratory

Also SPARC Activity Lead

**TUNER – Towards Unified Error
Reporting**

SPARC Office is currently in transition from Zurich to DLR, Oberpfaffenhofen, Germany

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SPARC Office @ DLR, Institut für Physik der Atmosphäre (IPA)

The SPARC International Project Office (IPO) is responsible for the coordination of scientific and administrative aspects of the SPARC project and its activities under the oversight of the SPARC Scientific Steering Group.

IPO @ IPA



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SPARC Office

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Coordinating Project Scientist

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email: office@sparc-climate.orgmareike.kenntner@dlr.de**Winfried Beer**

Follow SPARC on

**Mareike Kenntner**

Mareike graduated as physicist at Heidelberg University while undertaking research for airborne optical spectrometry. Her PhD-project was carried out at DLR-IPA applying micro-wave remote sensing aboard the German research aircraft HALO. She gained experiences abroad during international field campaigns in Brazil, Malaysia and New Zealand. During her studies she had spent extended periods in New Zealand and the United States. Mareike is providing a tight coordinating link between the scientific planning facilitated by the SPARC Office and the necessary administrative tasks.

**Brigitte Ziegele**

Brigitte has broad and year-long experiences regarding office management in a research institute with multi-faceted administrative tasks. For a number of years she took care of the regular office duties of an editor of the Journal of the Atmospheric Sciences. At the SPARC Office she provides much of the administrative backbone for the planning and execution of SPARC meetings from the scale of specialist workshops via the annual Scientific Steering Group meetings to the quadrennial General Assemblies, always tuned-in with the relevant staff of the World Meteorological Organization in Geneva.

**Hans Volkert**

Hans has been a senior scientist at the DLR-IPA for many years. After graduation as meteorologist at Free University of Berlin he obtained a PhD in atmospheric physics from University of Munich. He undertook mesoscale modelling studies, was engaged with international field experiments and served as associated editor for various research journals. The organization of conferences (also for WMO) led to his service as Secretary-General of IAMAS for an 8-year period. He regards the direction of the SPARC Office team as a rewarding service for the benefit of the international and German parts of the WCRP communities.

**Winfried Beer**

Winfried takes care of much of the computing infrastructure at DLR-IPA, including software solutions and hardware requirements for web-hosting. The SPARC Office team can directly tap his broad personal knowledge for the move of the SPARC web-portal from Zurich to Oberpfaffenhofen and its further development.

Themes

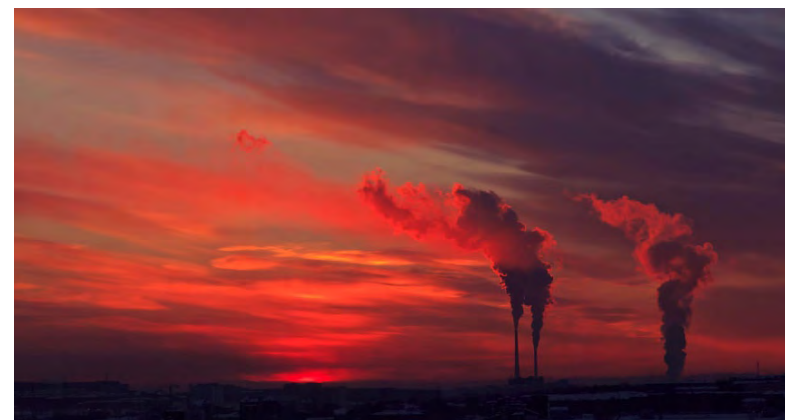


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Atmospheric Dynamics + Predictability



Chemistry + Climate



Long-term Records for Climate Understanding



THEMES

Chemistry & Climate

Atmospheric Dynamics & Predictability

Long-term Climate Records

ACTIVITIES



SPARC SSG25 Meeting in Incheon, Republic of Korea, 16-18 October 2017



- Update from WCRP
- Activity Reports
- Space Agency Reports
- Updates from Partner Projects (CLIVAR, GAW, IGAC)
- Capacity Development Report
- Discussion on Future Directions of SPARC



SPARC Reanalysis Intercomparison Project (S-RIP) – Progress Report –

Presented by: Michelle L. Santee
Jet Propulsion Laboratory, California Institute of Technology, USA

Masatomo Fujiwara¹, Gloria L. Manney^{2,3}, Lesley J. Gray^{4,5},
and the S-RIP team

¹Hokkaido University, Japan; ²NorthWest Research Associates, USA; ³New Mexico Institute of Mining and Technology, USA; ⁴University of Oxford, UK; ⁵NCAS, UK

<http://www-mete.kugi.kyoto-u.ac.jp/SPARCjws2017/index.html>



Joint SPARC Dynamics & Observations Workshop QBOi, FISAPS & SATIO-TCS

October 9 (Mon) – 14 (Sat), 2017
Kyoto University, Kyoto, Japan

- 74 participants; 59 oral presentations, 18 posters
- 2-day plenary sessions; nearly 2-day sessions / each WS
- enough time of discussions (breakout and plenary)



October 11 (Wed) @ Hall, Kyoto U.

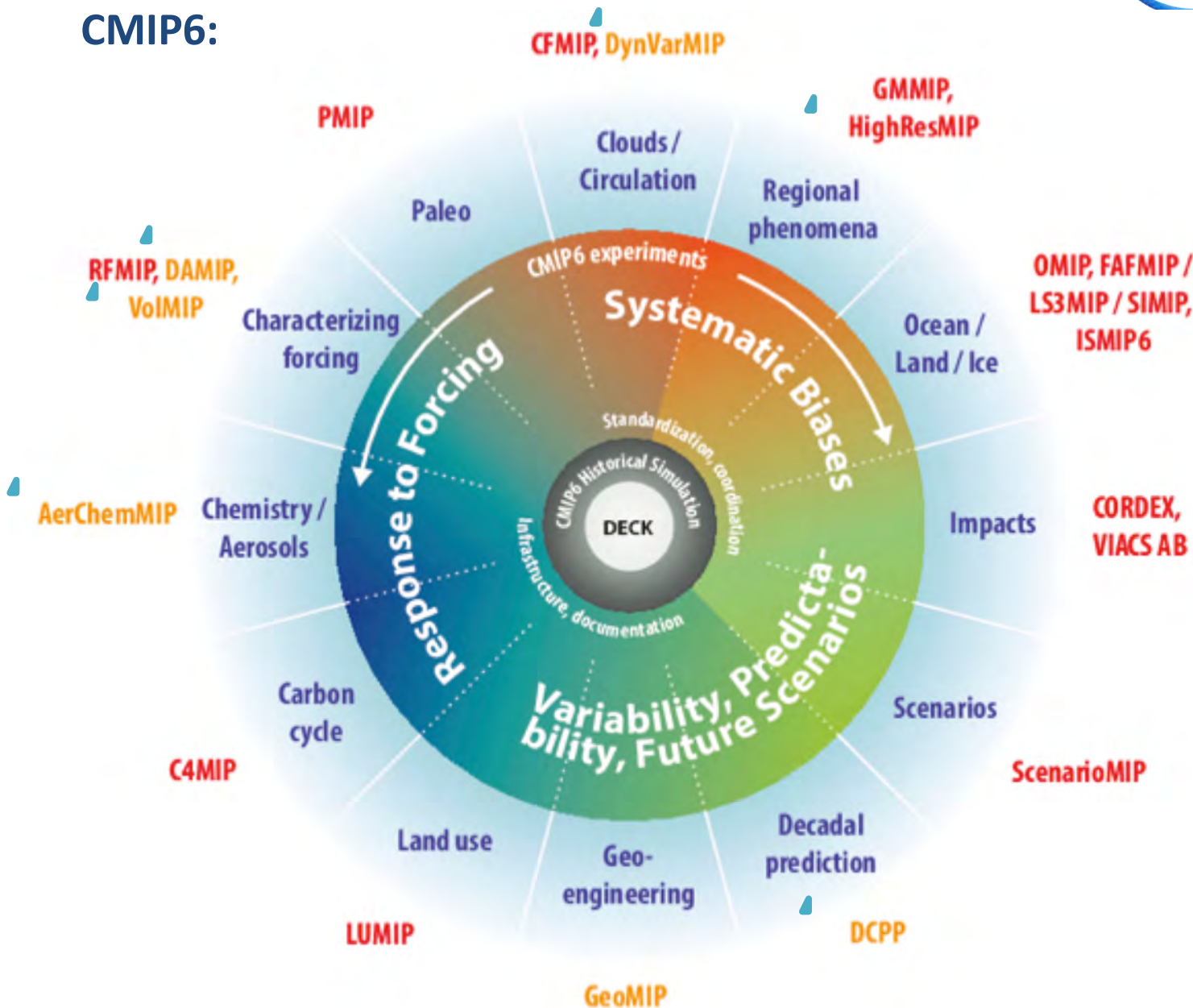
Joint SPARC Activity Workshops provide opportunities to communicate among SPARC Activities and to advance scientific understanding

SPARC's CMIP6 contributions



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CMIP6:



+ Forcing Datasets:

- Ozone
- Volcanoes
- Solar

Advancing SPARC's Whole Atmosphere Perspective through Activities

(WCRP guidance for SPARC to become the atmospheric arm of WCRP)



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Atmospheric Temperature Changes and their Drivers

- Extended scope, now from troposphere to mesosphere

SPARC/IGAC Chemistry-Climate Interactions (CCMI)

- Extended scope to troposphere (CCMVal -> CCMI)

Emerging Activities

- Stratospheric And Tropospheric Influences On Tropical Convective Systems (SATIO-TCS)
- Short-lived climate forcers (SLCF) (is evolving in liaison with IGAC and GAW)

First thoughts on new Atmospheric Dynamics Activity

- Linking atmospheric dynamics and surface extremes

We are looking for scientists (and Data Assimilation Working Group in particular) to be identifying strong science themes relevant for SPARC

This workshop is an opportunity for DA to think about merging with S-RIP community in the future on a new science theme

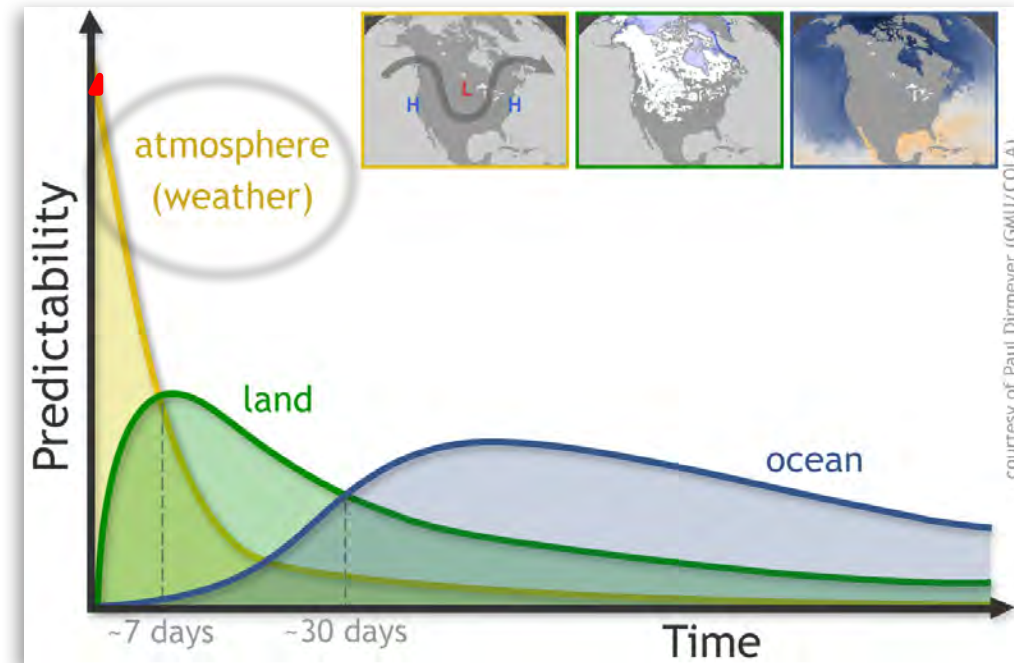
Opportunity: SPARC's contribution to WCRP/WWRP/THORPEX S2S Project



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SNAP activity is successfully contributing:

- Aim: Understanding how we can make use of coupling between the stratosphere and troposphere to improve prediction capability on sub-seasonal to seasonal timescales.

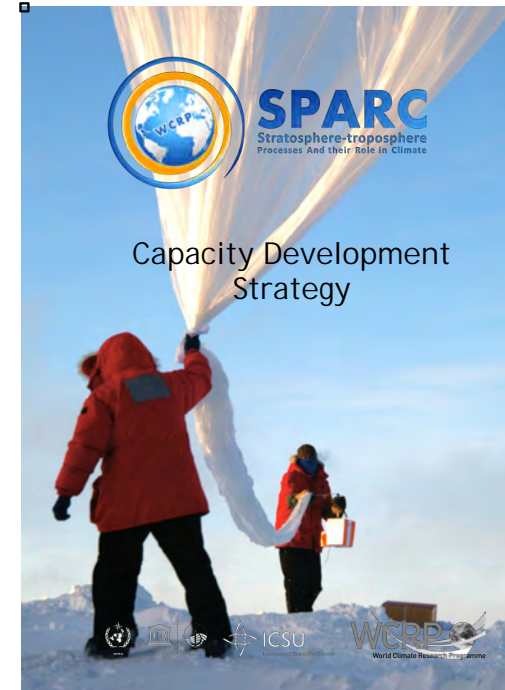


Opportunity for SPARC to collaborate across activities (including Data Assimilation Working Group) to advance our understanding of role of untapped atmospheric sources of predictability on S2S timescales.

SPARC

Capacity Development

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WMO/WCRP is under Review

JOINT SCIENTIFIC COMMITTEE (JSC)

WCRP MODELLING ADVISORY COUNCIL (WMAC)

WCRP DATA ADVISORY COUNCIL (WDAC)

WORKING GROUPS ON:

SUBSEASONAL TO INTERDECADAL PREDICTION (WGSIP)
NUMERICAL EXPERIMENTATION (WGNE)

COUPLED MODELLING (WGCM)
REGIONAL CLIMATE (WGRC)



CRYOSPHERE-
CLIMATE



OCEAN-
ATMOSPHERE



LAND-
ATMOSPHERE



TROPOSPHERE-
STRATOSPHERE



REGIONAL CLIMATE
DOWNSCALING

GRAND CHALLENGES

CLOUDS, CIRCULATION AND CLIMATE SENSITIVITY

REGIONAL SEA-LEVEL CHANGE AND COASTAL IMPACTS

CARBON FEEDBACKS IN THE CLIMATE SYSTEM

UNDERSTANDING AND PREDICTING WEATHER AND CLIMATE EXTREMES

NEAR-TERM CLIMATE PREDICTION

MELTING ICE AND GLOBAL CONSEQUENCES

WATER FOR THE FOOD BASKETS OF THE WORLD

JOINT PLANNING STAFF (JPS)

WMO/WCRP reviews:

- - Wide range of possible options from major reorganisation to continuing evolution
 - Makes longer term planning impossible
 - Any major reorganization will most likely take several years and will involve the scientific community
 - Review panel will send its report to the Sponsor's next week
 - Report hopefully available for public comments (~end of 2017)
 - WCRP leadership currently working on developing new science questions/strategic plan
 - SSG's main view is to go steadily – could involve:
 - Leaving some SSG seats empty
 - SSG will be ready for a discussion as soon as there is firm information
 - Flexible approach to final session of General Assembly

SPARC GA2018 in Kyoto

1-5 October 2018

Miyako Messe



LOC co-chairs

Kaoru Sato (U Tokyo), Masato Shiotani,
Shigeo Yoden (Kyoto U)

Dates and Venue



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- **Date: 1-5 October 2018**
(Registration starts in PM of 30 September)
- **Venue: Kyoto City**
 - **Miyakomesse** (<http://www.miyakomesse.jp/english/>)

Notes:

- after iCACGP/IGAC Science Conference at Takamatsu City on 25-29 September 2018
- In parallel with the 2018 Joint Belmont forum/JPI-Climate meeting
- Rooms available for SPARC Activity meetings (Sunday afternoon 9/30, Wednesday afternoon (10/03) and Saturday morning (10/06))



Important dates (unified with IGAC)



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- Themes of the GA will be announced soon
- Abstract submission
 - starts on ~9 January (tbd)
 - ends on 31 March
 - (ends on 16 March for travel support applicants)
- Registration
 - Early-bird registration
 - starts in the middle of April 2018 (tbd)
 - ends on 30 June 2018
 - Standard registration
 - ends on 31 August 2018
 - On-site registration is possible

Themes for the 2018 SPARC General Assembly



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Provides an opportunity to celebrate SPARC's achievements and to look to the future while building on our traditional strength:

- Climate Prediction from Weeks to Decades
- Role of Atmospheric Dynamics for Climate Variability and Change
- Connections of Atmospheric Composition and Chemistry to Weather and Climate
- Atmospheric Impacts and Interactions related to Tropical Processes
- Advances in observation and reanalysis datasets
- SPARC Science for Society

Thank You!



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