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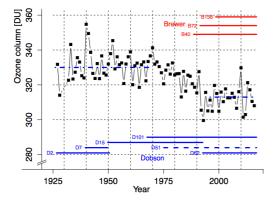
SPARC eNews Bulletin September 2017

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News & Announcements

Call for SPARC SSG nominations closes soon

SPARC leadership is composed of experts from around the world who dedicate their time to SPARC's international activities. These include the SPARC Scientific Steering Group (SSG), who serve to guide SPARC's scientific focus. SPARC is now accepting nominations (or self-nominations) for SSG membership to serve from January 2019 - December 2021 (initial three-year term can be extended by two additional years). If you are interested please complete the online form available here. The deadline for nominations is 30 September 2017.



Join the discussion: Continuing the world's longest time series of total column ozone

measurements in the Swiss Alps

The Arosa site is well known in the ozone community for its continuous total ozone column observations recorded since 1926. Originally based on Dobson sun spectrophotometers, the site has been gradually complemented by three automatic Brewer instruments, in operation since 1998. To secure the long term ozone monitoring in this Alpine region and to benefit from synergies with the World Radiation Center, the feasibility of moving this activity to the nearby site at Davos (aerial distance of 13 km) has been explored. Join the discussion on the paper by <u>Stuebi et al. published in Atmospheric Measurement Techniques</u>.

AGU Fellows 2017: Joan Alexander awarded fellowship

Each year since 1962, the American Geophysical Union (AGU) has elected as Fellows members whose visionary leadership and scientific excellence have fundamentally advanced research in their respective fields. This year, 61 members will join the 2017 class of Fellows. Joan Alexander, a previous SPARC Cochair, has been recognised for her contributions by this prestigious award. Find more details and the full list of fellows.



Symposium dedicated to the 30th Anniversary of the Montreal Protocol

The International Ozone Commission is organising a symposium endorsed by SPARC from 19-20 September 2017 in Paris, France, to celebrate the 30th anniversary of the Montreal Protocol as an exceptional international cooperation for the protection of the ozone layer. Find <u>more information here</u>.

Early-Career Researchers Symposium and SPARC Workshop on WCRP Grand Challenges and Regional Climate Change

Some of SPARC's research is directly linked to the WCRP Grand Challenges, including those on "Clouds, Circulation and Climate Sensitivity", "Weather and Climate Extremes", "Melting Ice and Global Consequences", "Near-term Climate Prediction", and "Carbon Feedbacks in the Climate System". This SPARC workshop, held in Incheon, South Korea, from 18-20 October 2017, aims to identify SPARC-related research topics of relevance to Asia and to bring international and Asian scientists, including early-career researchers, together for active interactions and collaborations. A limited amount of travel support is available. Register and find more information.

Expert review still open: IPCC Special Report on Global Warming of 1.5°C

The First Order Draft (FOD) of the IPCC Special Report on Global Warming of 1.5°C, will be available for expert review from 31 July to 24 September 2017. The expert review of the FOD is a key element of the IPCC assessment process. The purpose of this expert review is to help ensure that the report provides a balanced and comprehensive assessment of the latest scientific findings. An online registration process has been developed and is open for prospective expert reviewers until 18 September at www.ipcc.ch/apps/comments/sr15/fod/register.php

25 years of international SPARC research: Anniversary event in Zurich, Switzerland

Founded in 1992 largely in response to concerns about the consequences of stratospheric ozone depletion, SPARC has evolved into a major international research coordination hub for atmospheric sciences. On 1 December 2017, SPARC will celebrate its 25th anniversary and, after six years of

operation in Zurich, the move of its international project office from ETH Zurich to the German Aerospace Center (DLR) in Oberpfaffenhofen - its fourth destination after Paris, Toronto and Zurich. More information and registration on the website.



Save the dates: SPARC General Assembly 2018

The 6th SPARC General Assembly will be held in Kyoto, Japan, from 1-5 October 2018. General Assemblies are opportunities for SPARC to take stock of what has been achieved, where gaps in SPARC's research portfolio lie, and to define where SPARC needs to be moving to remain responsive to the needs of both its members and the users of SPARC research products. Further information will soon be made available on the <u>SPARC General Assembly 2018 website</u>. The General Assembly is being held back-to-back with the 14th iCACGP/15th IGAC International Science Conference in Takamatsu, Kagawa, Japan from 25-29 September 2018. <u>More information can be found here</u>.

AGU sessions of interest to SPARC scientists

The following sessions may be of interest to SPARC researchers: Long-term Ozone Trends and Estimation of their Associated Uncertainties (A062, primary convener is Irina Petropavlovskikh); Observations and Modelling of the Upper Troposphere and Lower Stratosphere (A076, Troy Thornberry); Impacts of Stratospheric Ozone on Climate (A049, Julie Arblaster); Progress in Reanalysis: Development, Evaluation and Application (A083, primary convener is Jan Dominik Keller); Stratospheric Chemistry-Climate Interactions (A097, session conveners are Antara Banerjee, Gabriel Chiodo, and Alison Ming). Find more information on AGU, which is being held from 11-15 December 2017 in New Orleans, Louisiana, USA.

Nominations open for International Prize for Model Development and for International Data Prize 2017

WCRP and the World Weather Research Programme are seeking nominations for the <u>International Prize</u> <u>for Model Development 2017</u>, awarded annually for an outstanding contribution to weather and climate model development by an early- to mid-career researcher. In addition, WCRP together with the Global Climate Observing System are seeking nominations for the <u>International Data Prize 2017</u>. The prize is awarded annually to an early- to mid-career researcher for his or her outstanding contribution to the Earth system science community. Nominations for both prizes close on **1 October 2017**.

Latest SPARC Publications

SPARC Newsletter No. 49: July 2017

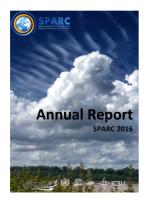
The July 2017 edition of the newsletter is now available

online: www.sparc-

climate.org/publications/newsletter/SPARC_newsletter_No49







SPARC Report No. 8: The SPARC Data Initiative - Assessment of stratospheric trace gas and aerosol climatologies from satellite limb sounders

The 8th SPARC science report edited by M. I. Hegglin and S. Tegtmeier is available at

 $\underline{www.sparc\text{-}climate.org/publications/sparc\text{-}reports/sparc\text{-}report-}\\ \underline{no8}.$

SPARC Annual Report 2016

Updates on the status of research and coordination in SPARC's 15 ongoing activities and the scientific plans of six emerging activities as well as SPARC's connections with other groups and communities are laid out in the <u>SPARC Annual Report 2016</u>.

Journal Special Issues

JGR Joint Space Weather and Atmospheres Special Issue Open for submissions.



<u>Chemistry-Climate Modelling Initiative - Joint Special Issue in ACP/AMT/ESSD/GMT</u> Open for submissions.



<u>SPARC Reanalysis Intercomparison Project - Special Issue in ACP/ESSD</u> Open for submissions.

<u>Water Vapour Intercomparison II (WAVAS-II) - Joint Special Issue in ACP/AMT/ESSD</u> Open for submissions.

Early Career Opportunities

SPARC encourages early career scientists to join the Young Earth System Scientists (YESS) community. YESS unifies early career researchers in an influential network and communication platform to promote local and global exchange across multiple disciplines related to Earth system sciences. Find more information on opportunities for young scientists and about YESS' future vision.



Training schools:

• The <u>GOTHAM summer school</u> will be held from 18-22 September in Potsdam near Berlin, Germany.

Open position:

• Project Scientist at SPARC International Project Office, Oberpfaffenhofen, Germany

More resources:

Find exciting vacancies regularly posted at www.sparc-climate.org/vacancies and ideas on how to get involved in SPARC at www.sparc-climate.org/get-involved.

Upcoming SPARC Meetings

<u>Training School on Stratosphere-Troposphere</u> Interactions

2 – 5 September 2017 Cape Town, South Africa

Workshop on the Measurement of Stratospheric Aerosol

6 – 8 September 2017 Boulder, CO, USA

FISAPS, QBOi, and SATIO-TCS Joint Workshop

9 – 14 October 2017 Kyoto, Japan

25th SPARC Scientific Steering Group Meeting and <u>SPARC Local Workshop</u> 16 – 20 October 2017 Seoul, South Korea <u>S-RIP 2017 Workshop</u> 23 – 25 October 2017

Reading, UK

SPARC Data Assimilation Workshop

25 - 27 October 2017

Reading, UK

SOLARIS-HEPPA Working Group Meeting

6 – 9 November 2017

Paris, France

<u>UTLS Workshop: "The UTLS: Current status and emerging challenges"</u>

5 - 8 February 2018 Mainz, Germany

Find all SPARC meetings

Upcoming SPARC-related Meetings

IAPSO-IAMAS-IAGA Conference: Good Hope for

Earth Sciences

27 August – 1 September 2017

Cape Town, South Africa

COSPAR Symposium 2017

18 – 22 September 2017 Jeju-do, South Korea

Symposium for the 30th Anniversary of the

Montreal Protocol

19 - 20 September 2017

Paris, France

HAPS4ESA: Towards an ESA stratospheric High

Altitude Pseudo-Satellites (HAPS) Programme

9-10 October 2017

Noordwijk, The Netherlands

Find more SPARC-related meetings

Find more meetings organised by the WCRP

community

5th International Conference on Reanalysis

(ICR5)

13 - 17 November 2017

Rome, Italy

AGU, see SPARC-related sessions

11 - 15 December 2017

New Orleans, USA

AMOS-ICSHMO 2018

5 - 9 February 2018

Sydney, Australia

COSPAR 2018: 42nd Scientific Assembly of the

Committee on Space Research

14-22 July 2018

Pasadena, CA, USA

Science Updates

A selection of new science articles from the past two months of interest to the SPARC community (a SPARC Office choice)

A Case Study of Convectively Sourced Water Vapor Observed in the Overworld Stratosphere over the United States. By J.B. Smith et al. in the *Journal of Geophysical Research: Atmospheres*.

On the spatio-temporal representativeness of observations. By N. Schutgens et al. in *Atmospheric Chemistry and Physics*.

Modeling the inorganic bromine partitioning in the tropical tropopause layer over the eastern and western Pacific Ocean. By M.A. Navarro et al. in *Atmospheric Chemistry and Physics*.

<u>Sensitivity of the tropical stratospheric ozone response to the solar rotational cycle in observations and chemistry–climate model simulations</u>. By R. Thiéblemont et al. in *Atmospheric Chemistry and Physics*.

<u>Processes maintaining tropopause sharpness in numerical models</u>. By L. Saffin et al. in the *Journal of Geophysical Research: Atmospheres*.

Downward Influence of QBO-like Oscillation on Moist Convection in a Two-Dimensional Minimal Model

Framework. By H.H. Bui et al. in the *Journal of the Atmospheric Sciences*.

<u>Impact of Volcanic Aerosols on Stratospheric Ozone Recovery.</u> By V. Naik et al. in the *Journal of Geophysical Research: Atmospheres*.

The characteristics of the lower stratospheric gravity wave field above Halley (75°S, 26°W), Antarctica, from radiosonde observations. By T. Moffat-Griffin and S.-R. Colwell in the *Journal of Geophysical Research: Atmospheres*.

Mirrored Changes in Antarctic Ozone and Stratospheric Temperature in the late 20th versus early 21st Centuries. By S. Solomon et al. in the *Journal of Geophysical Research: Atmospheres*.

<u>Gravity Wave Spectra in the Lower Stratosphere Diagnosed from Project Loon Balloon Trajectories</u>. By M.R. Schoeberl et al. in the *Journal of Geophysical Research: Atmospheres*.

<u>Dynamical Heating of the Arctic Atmosphere during the Springtime Transition</u>. By X. Long and W.A. Robinson in the *Journal of Climate*.

<u>Contributions of climate feedbacks to changes in atmospheric circulation</u>. By P. Ceppi and T.G. Shepherd in the *Journal of Climate*.

<u>Connecting Tropical Climate Change with Southern Ocean Heat Uptake</u>. By Y.-T- Hwang et al. in *Geophysical Research Letters*.

The relationship between northern hemisphere winter blocking and tropical modes of variability. By G. Gollan and R.J. Greatbatch in the *Journal of Climate*.

Observational evidence of the downstream impact on tropical rainfall from stratospheric Kelvin waves. By L. Zhang et al. in *Climate Dynamics*.

<u>Assessment of NOAA NUCAPS Upper Air Temperature Profiles Using COSMIC GPS Radio Occultation and ARM Radiosondes.</u> By M.L. Feltz et al. in the *Journal of Geophysical Research: Atmospheres*.

Assessment of COSMIC radio occultation and AIRS hyperspectral IR sounder temperature products in the <u>stratosphere using observed radiances</u>. By M.L. Feltz et al. in the *Journal of Geophysical Research: Atmospheres*.

<u>Dynamics and Predictability of Downward Propagating Stratospheric Planetary Waves Observed in March 2007</u>. By H. Mukougawa et al. in the *Journal of the Atmospheric Sciences*.

Discussion papers - open for comment:

<u>Multi-model comparison of the volcanic sulfate deposition from the 1815 eruption of Mt. Tambora.</u> By L. Marshall et al. in *Atmospheric Chemistry and Physics Discussions*.

On the distortions in calculated GW parameters during slanted atmospheric soundings. By A. de la Torre et al. in *Atmospheric Measurement Techniques Discussions*.

Retrieval of ozone profiles from OMPS limb scattering observations. By C. Arosio et al. in *Atmospheric Measurement Techniques Discussions*.

Chemical and climatic drivers of radiative forcing due to changes in stratospheric and tropospheric ozone over the 21st century. By A. Banerjee et al. in *Atmospheric Chemistry and Physics Discussions*.

The Network for the Detection of Atmospheric Composition Change (NDACC): History, status and perspectives. By M. de Mazière et al. in *Atmospheric Chemistry and Physics Discussions*.

VESPA-22: a ground-based microwave spectrometer for long-term measurements of Polar stratospheric

water vapor. By G. Mevi et al. in Atmospheric Measurement Techniques Discussions.

<u>Drift corrected Odin-OSIRIS ozone product: algorithm and updated stratospheric ozone trends.</u> By A.E. Bourassa et al. in *Atmospheric Measurement Techniques Discussions*.

Sensitivity of the radiative forcing by stratospheric sulfur geoengineering to the amount and strategy of the SO₂ injection studied with the LMDZ-S3A model. By C. Kleinschmitt et al. in *Atmospheric Chemistry and Physics Discussions*.

Accuracy and precision of lower stratospheric polar reanalysis temperatures evaluated from A-train CALIOP and MLS, COSMIC GPS RO, and the equilibrium thermodynamics of supercooled ternary solutions and ice clouds. By A. Lambert and M.L. Santee in *Atmospheric Chemistry and Physics Discussions*.

<u>Intercomparison of AIRS and HIRDLS stratospheric gravity wave observations</u>. By C.I. Meyer et al. in *Atmospheric Measurement Techniques Discussions*.

<u>The Impact of Non-uniform Sampling on Stratospheric Ozone Trends Derived from Occultation Instruments</u>. By R.P. Damadeo et al. in *Atmospheric Chemistry and Physics Discussions*.

<u>Retrieving Vertical Ozone Profiles from Measurements of Global Spectral Irradiance</u>. By G. Bernhard et al. in *Atmospheric Measurement Techniques Discussions*.

Radiative effects of ozone waves on the Northern Hemisphere polar vortex and its modulation by the QBO. By V. Silverman et al. in *Atmospheric Chemistry and Physics Discussions*.

Intraseasonal to interannual variability of Kelvin wave momentum fluxes as derived from high-resolution radiosonde data. By J.P. Sjoberg et al. in *Atmospheric Chemistry and Physics Discussions*.

The SPARC water vapor assessment II: intercomparison of satellite and ground-based microwave measurements. By G.E. Nedoluha et al. in Atmospheric Chemistry and Physics Discussions.

<u>Detectability of the Impacts of Ozone Depleting Substances and Greenhouse Gases upon Stratospheric Ozone Accounting for Nonlinearities in Historical Forcings</u>. By J. Bandoro et al. in *Atmospheric Chemistry and Physics Discussions*.

<u>Age and gravitational separation of the stratospheric air over Indonesia</u>. By S. Sugawara et al. in *Atmospheric Chemistry and Physics Discussions*.

<u>First tomographic observations of gravity waves by the infrared limb imager GLORIA</u>. By I. Krisch et al. in *Atmospheric Chemistry and Physics Discussions*.

<u>The Ozone Monitoring Instrument: Overview of twelve years in space</u>. By P. Levelt et al. in *Atmospheric Chemistry and Physics Discussions*.

BrO and Bry profiles over the Western Pacific: Relevance of Inorganic Bromine Sources and a Bry Minimum in the Aged Tropical Tropopause Layer. By T.K. Koenig et al. in Atmospheric Chemistry and Physics Discussions.

<u>Chemistry-climate model simulations of the Mt. Pinatubo eruption using CCMI and CMIP6 stratospheric aerosol data</u>. By L. Revell et al. in *Atmospheric Chemistry and Physics Discussions*.

<u>Tropospheric ozone and its precursors at Summit, Greenland: comparison between observations and model simulations.</u> By Y. Huang et al. in *Atmospheric Chemistry and Physics Discussions*.

Atmospheric QBO and ENSO indices with high vertical resolution from GNSS radio occultation temperature measurements. By H. Wilhelmsen et al. in *Atmospheric Measurement Techniques*

Discussions.







Find more on the SPARC Website:

www.sparc-climate.org

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