

# SPARC Report to the Working Group on Numerical Experimentation (WGNE)

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# SPARC Report to WGNE

## Meeting Updates

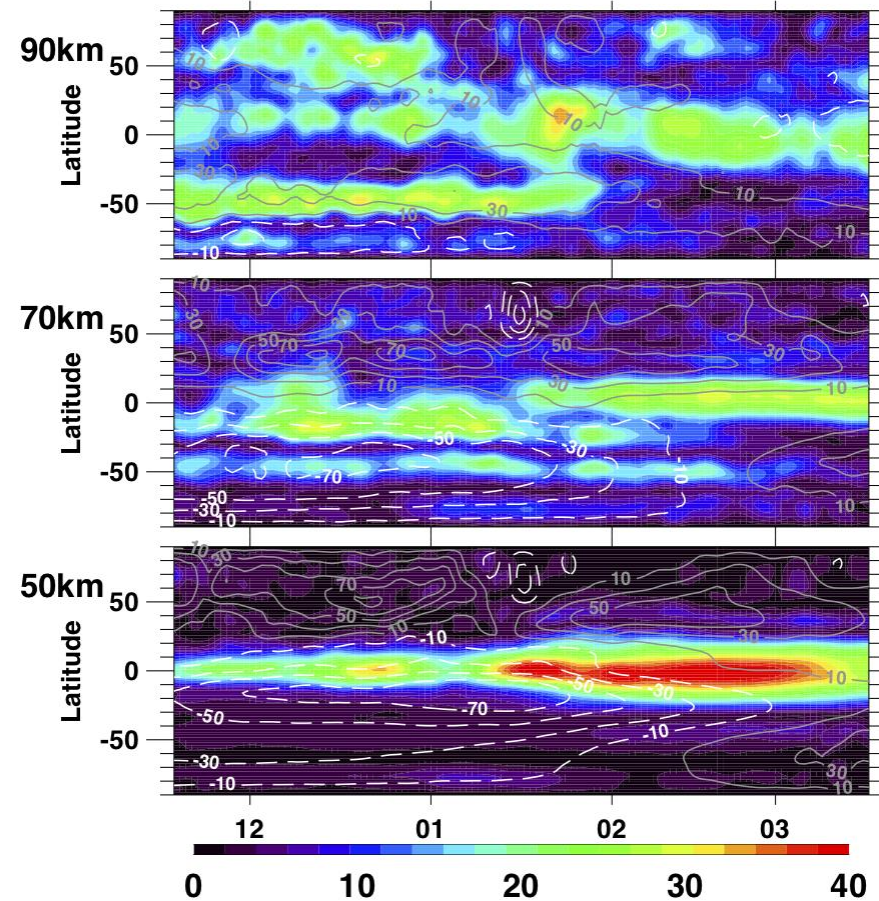
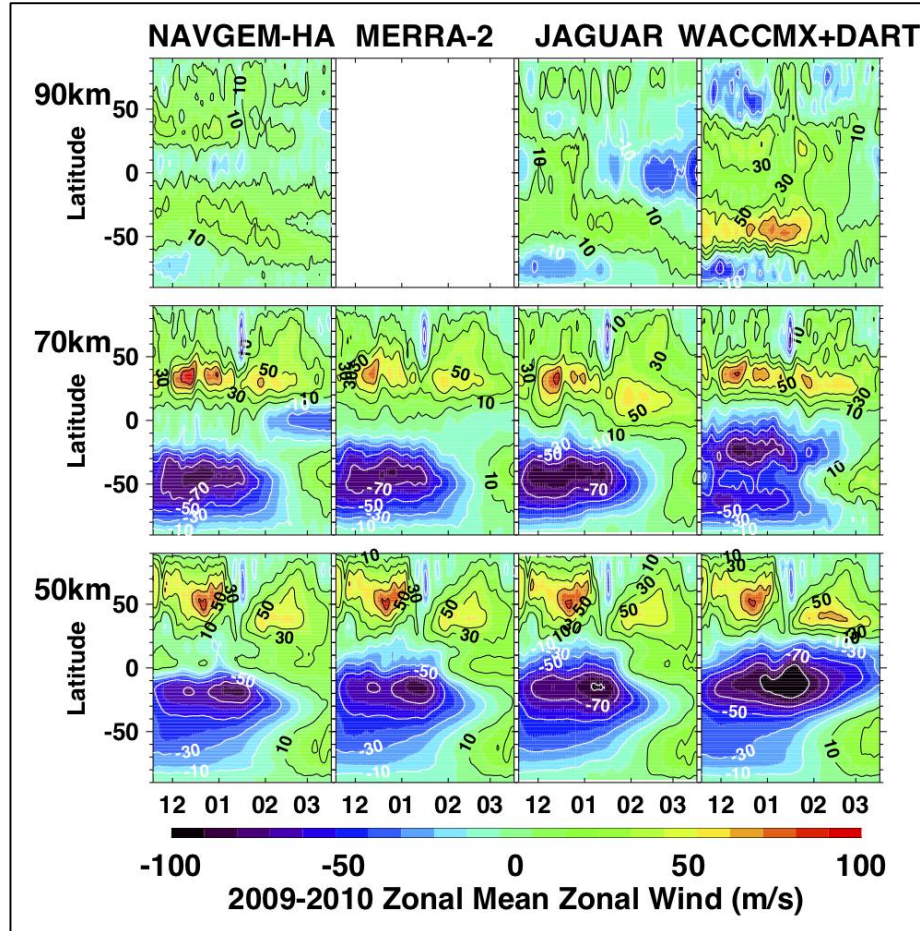
- **Virtual Tri-MIP-Athlon** meeting postponed to winter 2020/21 Zoom meeting (online)
- **3rd International Workshop on Stratospheric Sulfur and its Role in Climate (SSiRC)** meeting postponed to early 2021, Leeds , UK
- **Gravity Wave ISSI Team meeting** meeting postponed - new date TBA Berne, Switzerland
- **QBO@60 – Celebrating 60 years of discovery within the tropical stratosphere** meeting postponed to the week of 5-9 July 2021 Met Office, Exeter, UK
- **11th Quadrennial Ozone Symposium** postponed 3 - 9 October 2021, Seoul, South Korea
- **2nd Climate Observation Conference** 12–14 October 2021, Darmstadt, Germany (GCOS/WCRP)

## Some SPARC-related sessions at upcoming Fall AGU:

- **A213,223 - Atypical polar stratospheric winters in 2019 and 2020: causes and consequences**  
**A256 - Progress in Reanalysis: Development, Evaluation, and Application**  
**A049,A044 - Recent Findings from Spaceborne Observations of the Middle Atmosphere**
- **A256-01 - Overview of the SPARC Reanalysis Intercomparison Project (S-RIP) during 2013-2020**

# Data Assimilation Working Group Updates

## Intercomparison of high-altitude dynamical analyses



High altitude analyses show large “spread” in tropics

Region above 50 km is “data-poor”.

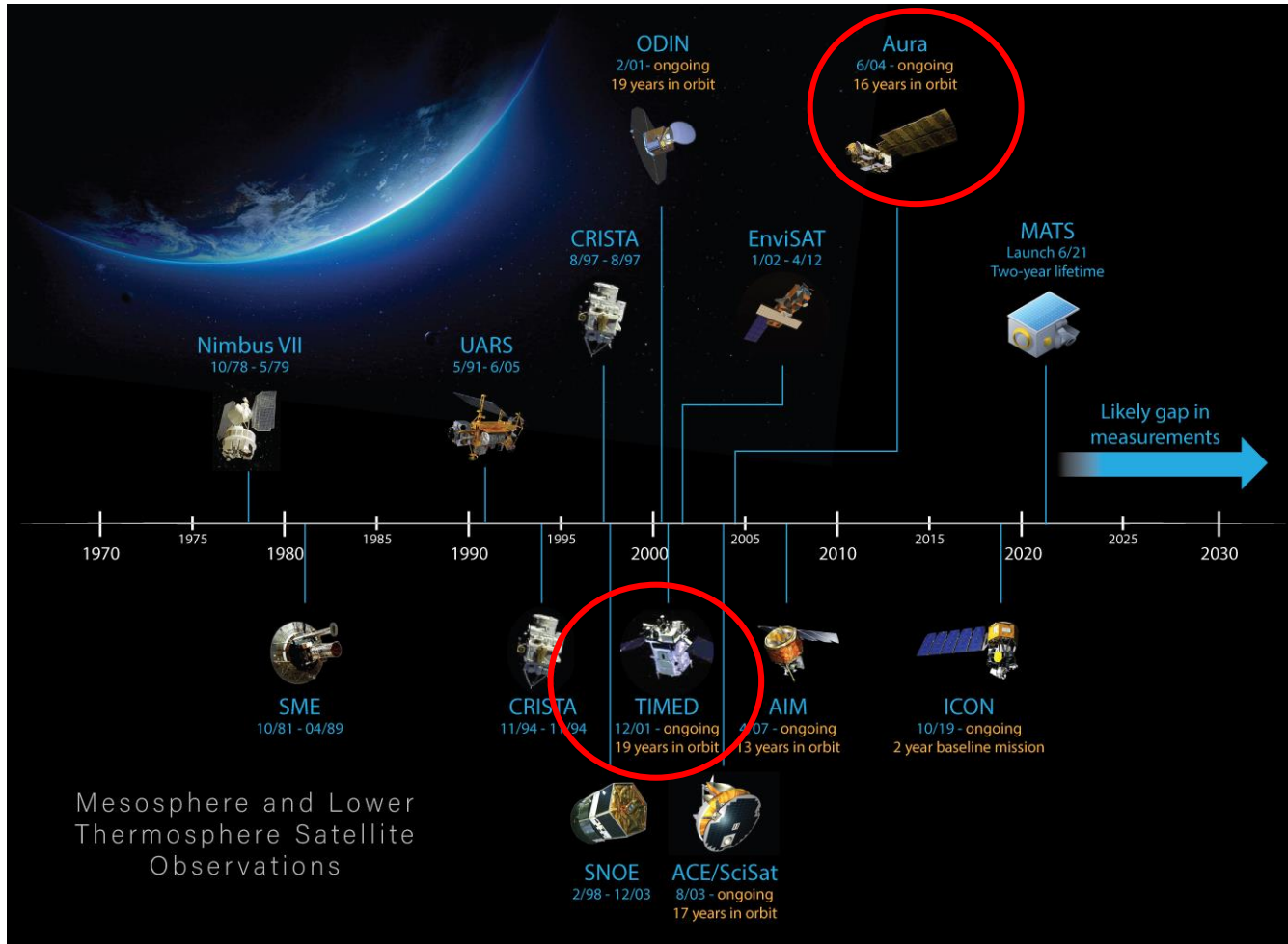
Model physics (e.g., GWD) play a large role in differences.

2009-2010 Zonal mean zonal wind inter-analysis STD DEV



# Data Assimilation Working Group Updates

## Development of future limb-sounder instrument



Aura/Microwave Limb Sounder and TIMED/SABER instruments provide observations of stratosphere, mesosphere, lower thermosphere that are vital for high altitude analyses (dynamics and chemistry).

Continuity of these observations (e.g., T, O<sub>3</sub>, H<sub>2</sub>O), in the future is uncertain.

Some upcoming missions:

- ALTIUS (ESA/BIRA) will provide high vertical resolution stratospheric ozone and temperature measurements.
- Others?

Image from Mlynczak et al. "Compelling Need for Ongoing Observation of the Mesosphere and Lower Thermosphere" submitted to EOS, October 2020.