

# Scientific Objectives of SPARC\* and the Value of Data Assimilation

\*Stratospheric Processes and their Role in Climate:  
a project of the World Climate Research Programme

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## Aim of SPARC

- To bring stratospheric expertise to bear on scientific issues concerned with **climate processes** and **climate prediction**;
- for the benefit of
  - World Climate Research Programme
  - WMO/UNEP Ozone Assessment
  - IPCC
  - Space Agencies



## SPARC

### Stratospheric Processes and their Role in Climate

- Research project (est. 1992) of the WCRP.
- Focuses on role of stratospheric dynamical, chemical and radiative processes of the troposphere-stratosphere system:
  - Influence of stratosphere on climate
  - Physics & chemistry of ozone depletion
  - Stratospheric variability and monitoring
  - Changes in UV radiation



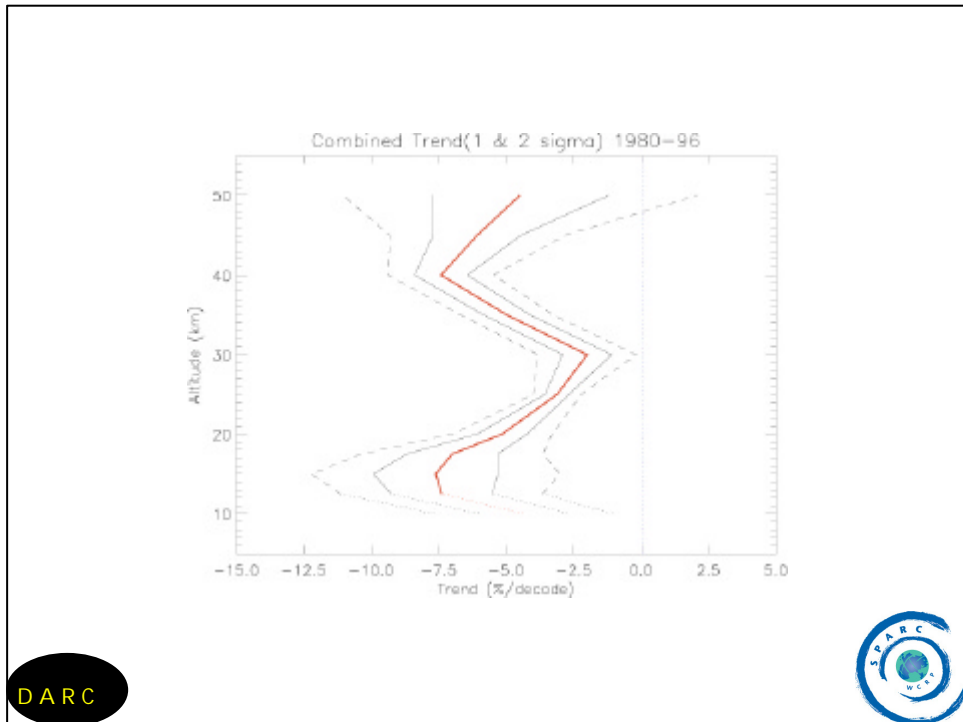
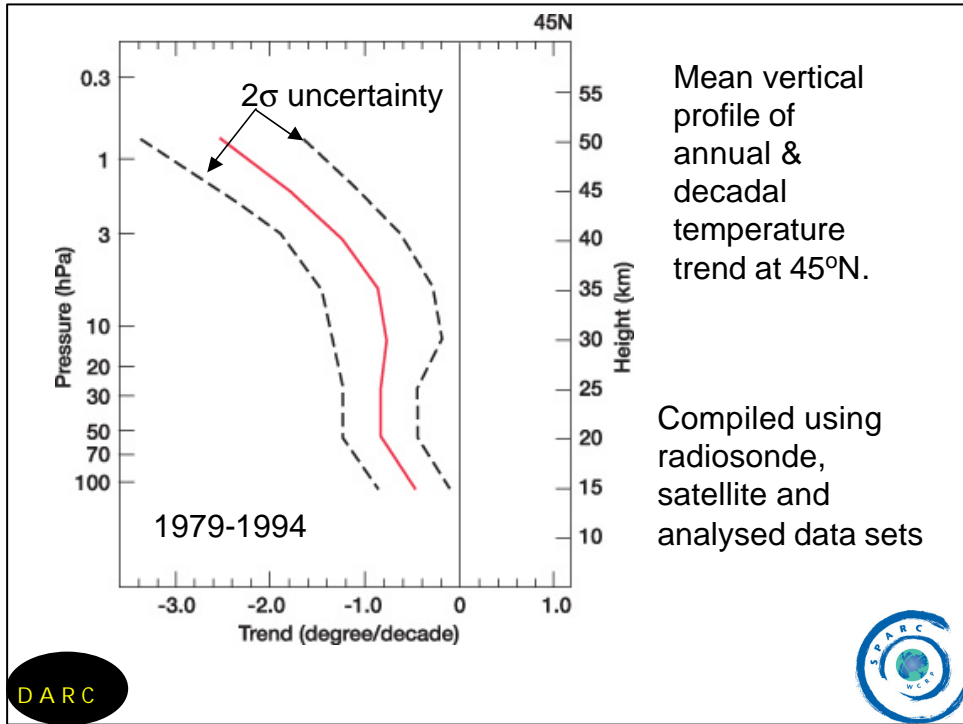
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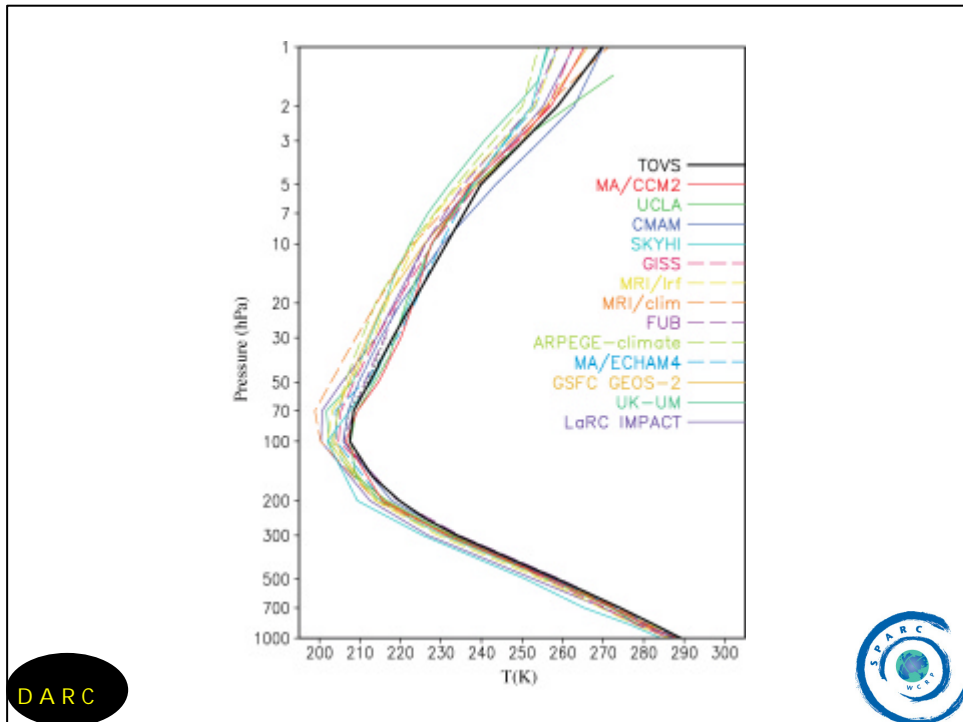
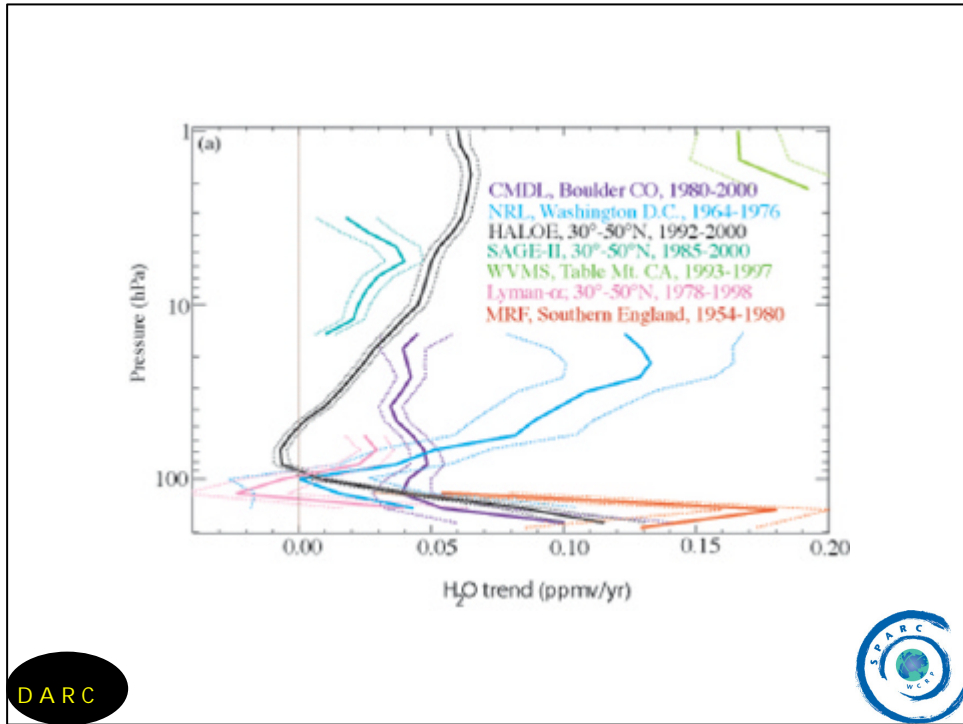
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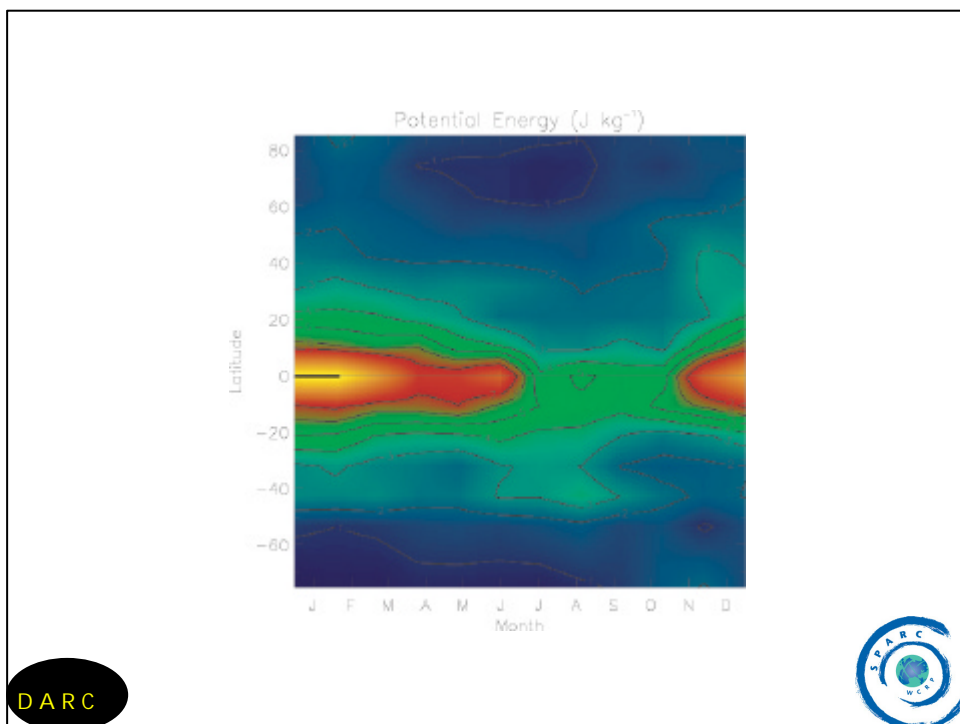
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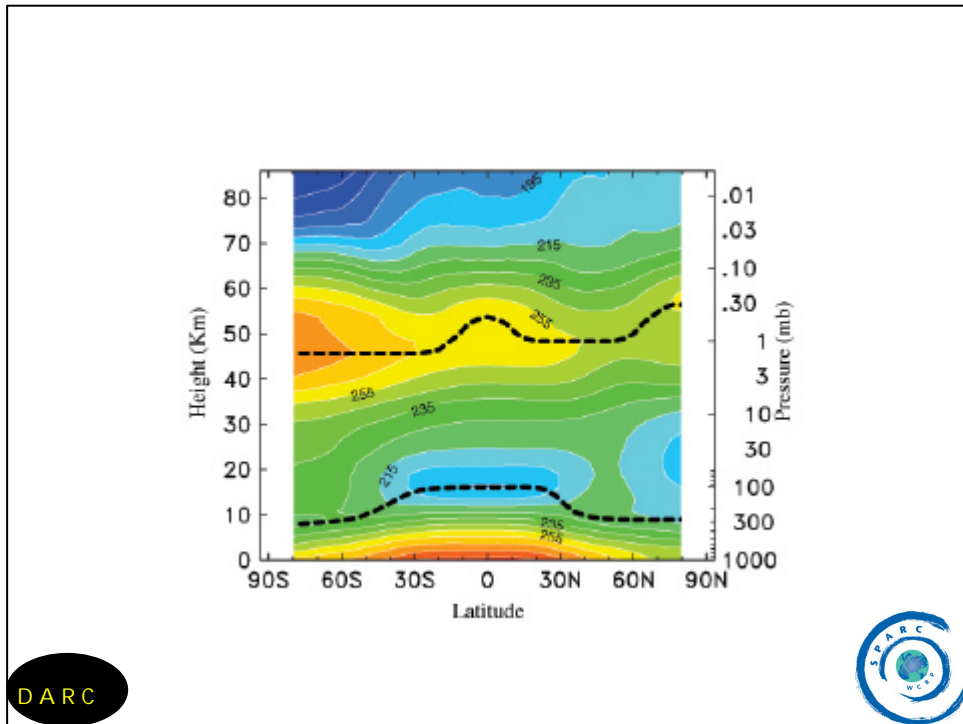
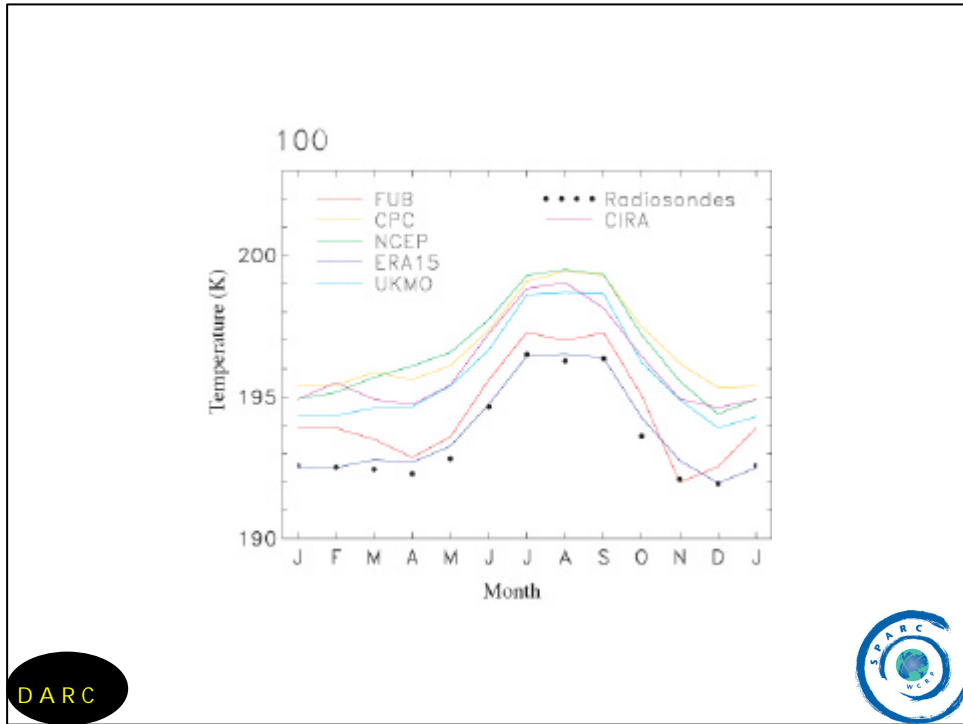
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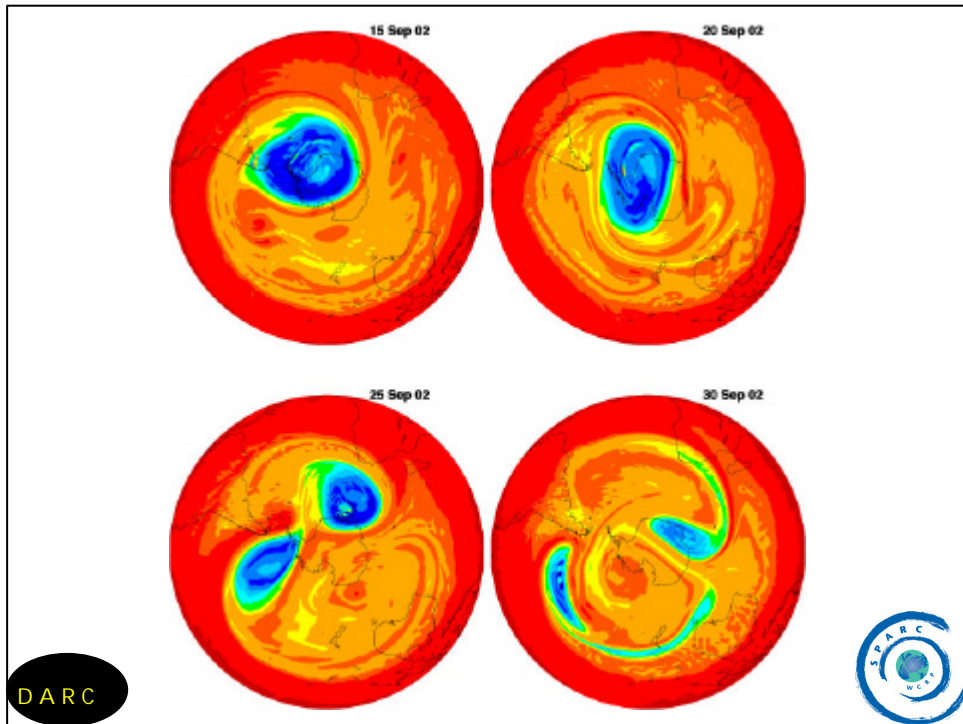
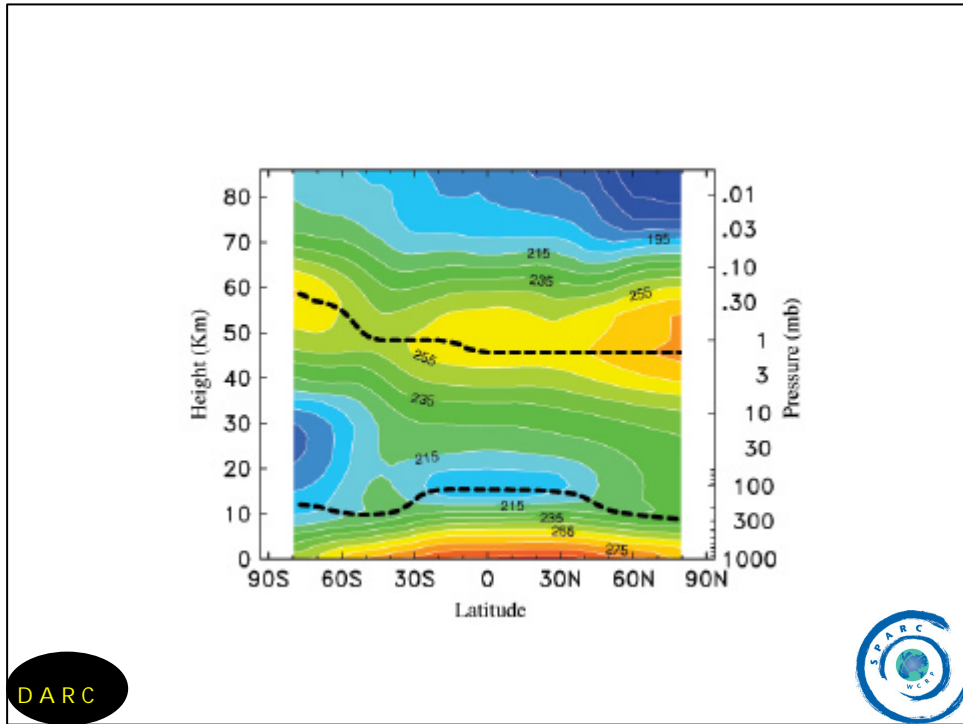


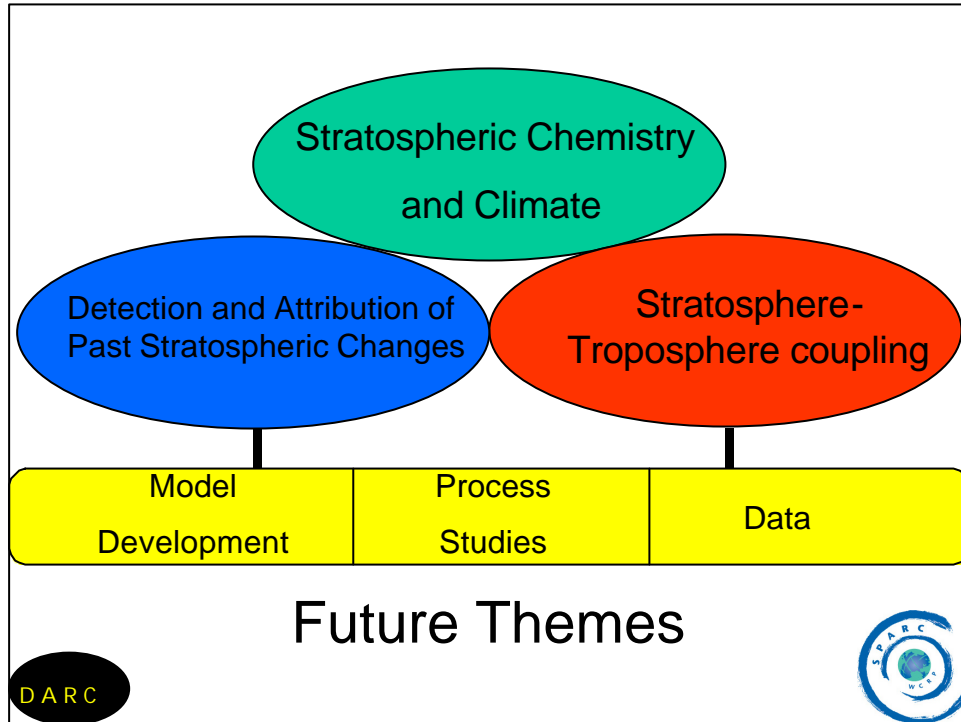










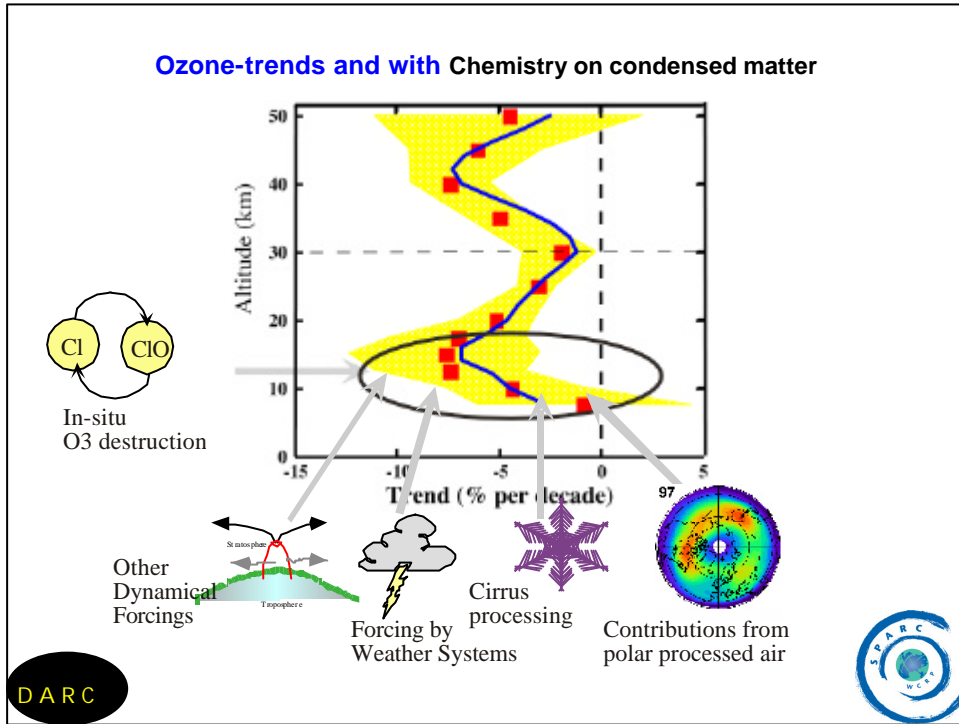


## Stratospheric Chemistry and Climate

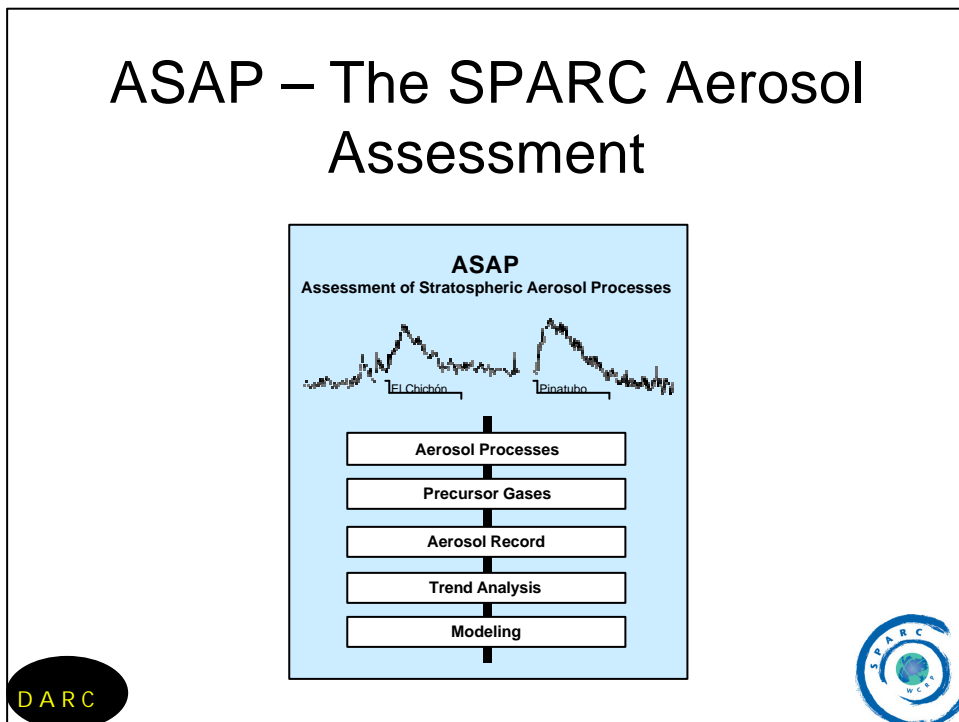
- How will stratospheric ozone and other constituents evolve?
- How will changes in stratospheric composition affect climate?
- What are the links between changes in stratospheric ozone, UV radiation and tropospheric chemistry?

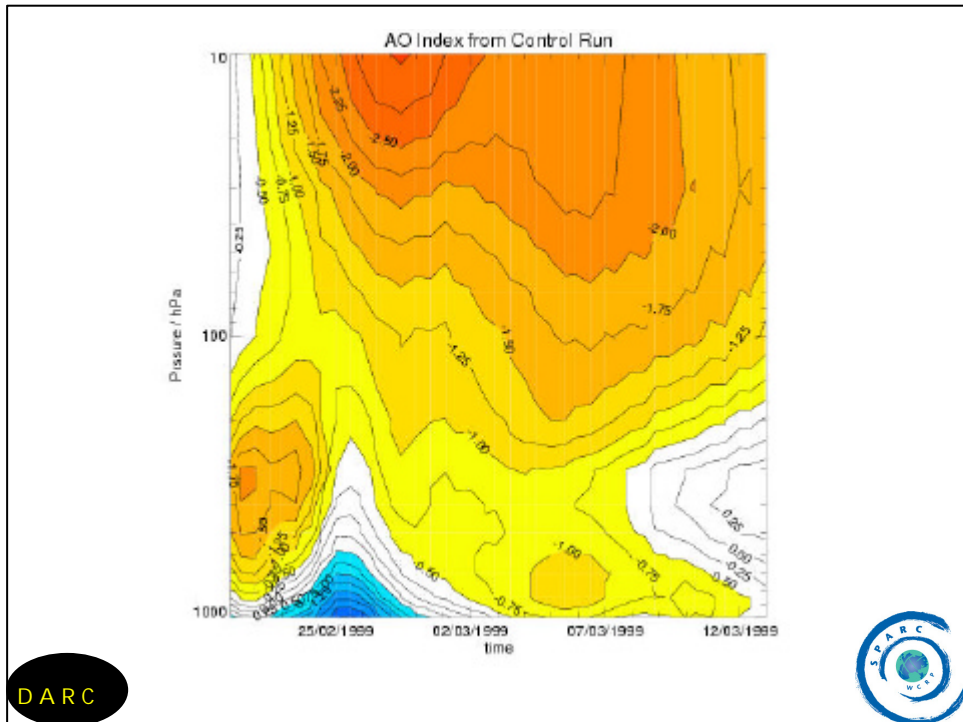
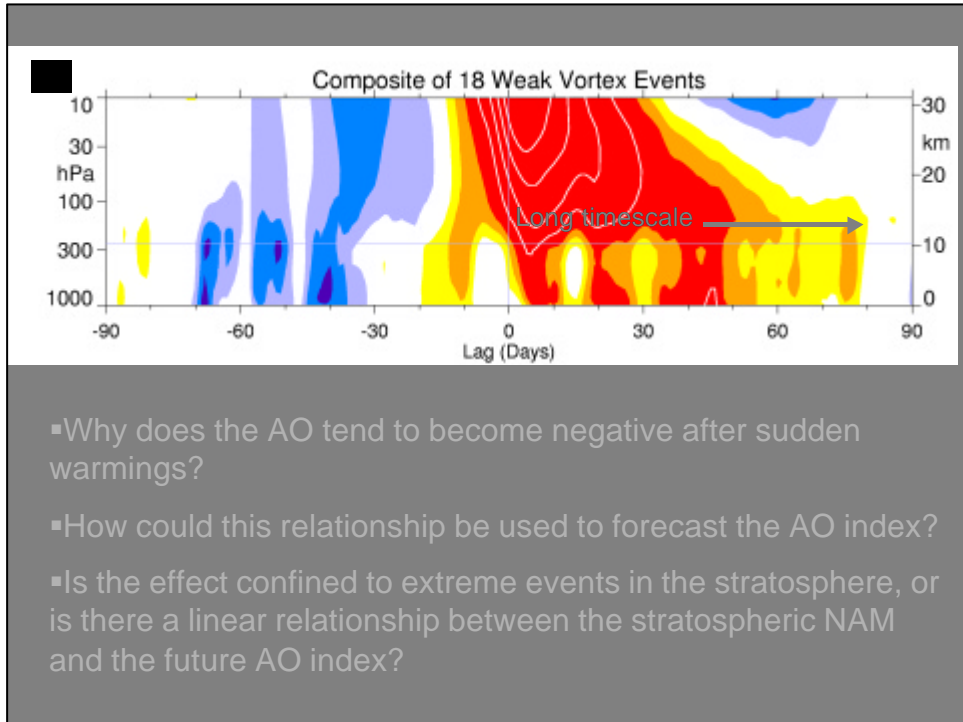


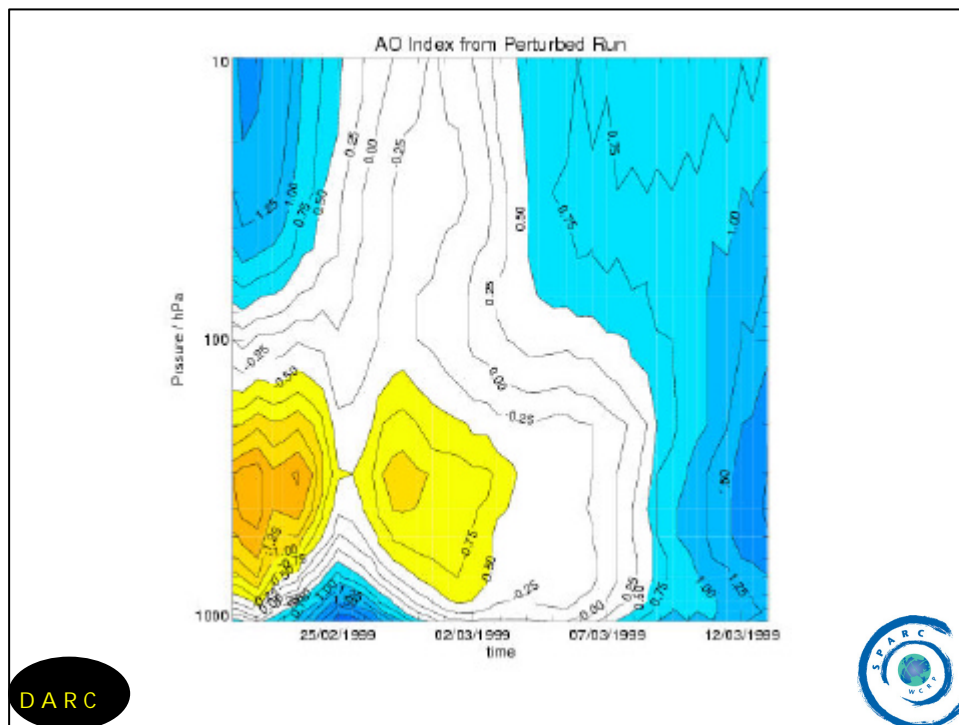




## ASAP – The SPARC Aerosol Assessment

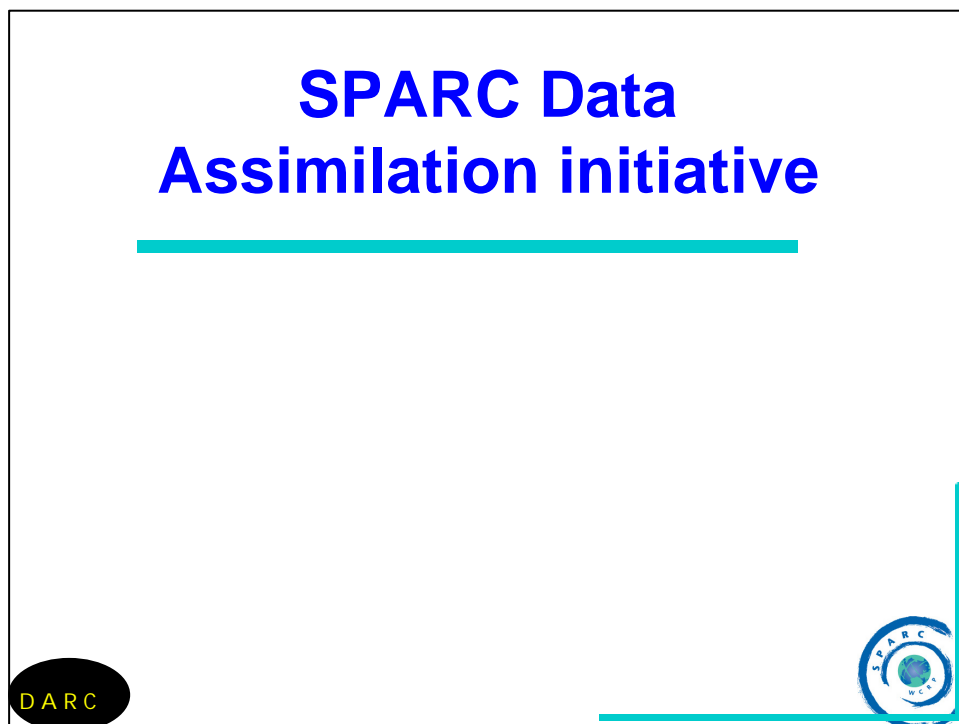






## SPARC Data Assimilation initiative

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## Data Assimilation Working Group

- Collect information on stratospheric data sets on meteorology and chemistry (quality, availability, software...).
- Process-focused quality assessments.
- Collect and document information in data assimilation systems.
- Liaise with space and other agencies on SPARC data needs.

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# End

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