**Stratosphere-troposphere Processes And their Role in Climate: Looking ahead**

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This poster describes the new Implementation Plan of Stratosphere-troposphere Processes And their Role in Climate (SPARC). SPARC is one of the four core projects of the World Climate Research Programme (WCRP). Its overall challenge is to promote and coordinate cutting-edge international research activities on how chemical and physical processes in the atmosphere interact with climate and climate change. Historically SPARC concentrated on the role of the stratosphere in climate, but it now includes foci throughout the atmosphere in recognition of the latest research, which clearly calls for a “Whole Atmosphere” approach. Furthermore, the interdisciplinary nature of climate research has led SPARC to develop collaborations with other WCRP core projects and working groups in support of the WCRP Grand Challenges.

The SPARC Scientific Themes define the breadth and foci of the project’s work and form the foundation on which individual SPARC Activities are based. The themes for SPARC’s new Implementation Plan are (1) Atmospheric Dynamics and Predictability, (2) Chemistry and Climate, and (3) Long-term Records for Climate Understanding.

The ideas developed in the new Implementation Plan are described in this poster, with a clear emphasis on how it interacts with the Global Climate Observing System. SPARC has a long history of evaluating data sets of particular atmospheric importance, and it has produced international assessments of quantities such as ozone, water vapour and temperature.