**Implementation Plan: Proposed activity on …**

New SPARC Activities are expected to have a clear rationale and plan, including targeted deliverables, and time schedule. SPARC asks any proposed activity to prepare a brief implementation plan (this need not be more than one to three pages), to aid the scientific steering group in deciding whether the activity is suitable for this approach and priority for SPARC support.

1. **Rationale behind the activity**

What is the scientific rationale behind the planned activity? Where does SPARC’s support play an intrinsic role?

Given the importance of the UTLS for climate, there is the need to derive an approach to conduct a comprehensive intercomparison of observations from the diverse range of instrument techniques and platforms that exist.

Such an activity would yield a consolidated understanding of the quality and representativeness of different observations in the UTLS and would ideally build the basis for achieving a better understanding of UTLS composition, past long-term changes in UTLS trace gas distributions and the processes that affect them.

Two aspects will be very specific for this activity: (I) There is a focus on the composition of the UTLS region, (II) we will work towards a common metrics to compare UTLS data based on a selected coordinate system (tropopause, equivalent latitude, jet based).

The first step is to bring together communities from different platforms (remote sensing from satellite and ground, in-situ measurements from aircraft and balloons) to start talking the same language in terms of data quality, accuracy and precision. Therefore the activity is ideally placed in the SPARC context.

1. **Scientific goals and objectives**

What are the main scientific questions being addressed?

From the report:

What are the characteristics of the different instrument techniques?

How do we carry out a consistent error assessment for different instrument techniques?

How can we compare observations from different instrument techniques?

Can specific coordinate systems help to get insights in data quality and processes affecting UTLS composition?

1. **Outcomes**

What deliverables is your activity going to produce? (e.g. report, special journal issue, etc).

The activity is going to produce an approach to compare data sets based on a selected metrics focussing on the UTLS region. The activity is not aiming at providing a common data base for all species, latitudes and seasons, we will rather work towards a unified intercomparison method and compare selected data sets, which are reasonable in the specific physical context.

A common synthesized language between the communities will be developed and is required for that activity.

We will produce a white paper for the activity and write a short report.

Do we go for a special issue?

1. **Planned capacity development activities**

SPARC is placing more emphasis on capacity development and would like to see more targeted activities reaching out to grow SPARC science, particularly in developing countries. How will your activity contribute to this?

1. **Time schedule**

Please provide a rough schedule of the planned activity. Keep in mind, SPARC activities usually have a lifetime of a few years, with a specific outcome (e.g. Report) as a final product.

Working groups

Links to other projects and synergies and differentiations (What do we do differently?)