**TEMPO Special Experiment Request**

The TEMPO mission will conduct standard operations consisting of East-West scans every daylight hour to measure air pollutants across a Field of Regard (FoR) covering North America. Up to 25% of TEMPO’s observing time will be dedicated for non-standard (also referred to as special) operations with even higher frequency (e.g., ≤ 10 minutes) over selected slices of the FoR. The special operations can be performed for a diversity of science experiments, including both fundamental and applied science research. A couple of focus areas of the special operations include disaster events, such as wildfires, dust storms, volcanic eruptions, and industrial accidents, in addition to various chemistry experiments aimed at further enhancing our understanding of rapidly varying emissions and air pollutants in complex environments. Coordination of science experiments for the special operations has commenced during the pre-launch phase of the mission to achieve the maximum science benefit from TEMPO data.

The purpose of this document is to specify unique and innovative science experiments for the TEMPO mission based on ideas and needs from the broader science community. Interested community members are encouraged to complete this experiment request and send to the scientific coordinators and TEMPO Principal Investigator (see footer) to be considered as a designated TEMPO experiment for special operations. After approval of your request, investigator names along with the experiment description will be added to the publicly available TEMPO Green Paper and Special Experiments Guide, unless otherwise requested by the investigators to preserve the privacy of experiment details.

1) Title:

2) Name of Investigator(s) including title/position, affiliation, and email:

*Include names of any collaborating / supporting stakeholders*

3) Description of fundamental or applied research experiment and need for special (e.g., <= 10 minute) operations. Discuss how the higher frequency data will enhance the experiment.

*Provide a private and public version of experiment description if privacy is a concern*

4) Explain potential societal benefits from the application experiment, including any specific stakeholder views:

5) List the TEMPO data products ([Data Table](https://weather.msfc.nasa.gov/tempo/expected_products.html)) needed for the experiment:

6) Is low data latency important? If yes, what is the requirement in hours or days?

*Latency - time between satellite observation and time data are made available to users*

7) Does the experiment require use of other satellite (non-TEMPO) data? If yes, what instruments and data products?

8) Area(s) of interest – specify latitude and longitude bounds:

9) Period(s) of interest (e.g., times of day, days of week, month, season, full year):

10) Desired repeat time (e.g., daily, weekly) during period of interest: