Objective:

- Results from the initial SAME tests provided the first quantitative determination of the size of smoke particulate from low-gravity sources
  - Used to define design requirements for future spacecraft smoke detectors
- Reflight will obtain particle morphology data to reduce uncertainty in size distributions
  - Explore differences between SAME and previous Shuttle experiments (Comparative Soot Diagnostics)

Relevance/Impact:

- SAME-R will provide data required for the rational development of fire particulate detectors on exploration vehicles and habitats.

Development Approach:

- SAME-R will utilize the SAME hardware currently on-orbit along with refurbished/new Sample Carousels and Thermal Precipitators and a new diagnostics unit.
- After initial setup by the crew, the experiment will utilize uplinked parameters for autonomous operations. Consumables will be periodically changed out by the crew.

Project Life Cycle Schedule

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<th>Milestones</th>
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<th>SAR</th>
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<td>Actual/ Baseline</td>
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<td>12/09</td>
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