PRINCIPAL INVESTIGATOR MICROGRAVITY SERVICES (PIMS) SURVEY

The purpose of this survey is to help PIMS better assess the principal investigators and project scientists acceleration data support needs and how best to meet them. Please take a moment to fill out this survey as best as you can.

Name : _____

Title and Experiment Affiliation : _____

Address : _____

_____

_____

Email : _____

Experiment name : _____

Ascent Flight/Descent Flight : _____

Affiliation (e.g. GRC, MSFC, ESA) : _____

Experiment Information

1. Please briefly describe the scientific objective of your experiment (include specific scientific discipline, key principals under investigation, etc…):

2. Does your experiment or supporting equipment have any frequency sensitivities? If yes, please elaborate.

3. Does your experiment or supporting equipment have any directional sensitivity? If yes, please elaborate.

4. Does your experiment or supporting equipment contain rotating equipment that may disturb the microgravity environment? For example, fans, centrifuges, pumps.

5. Please describe the typical operating scenario for your experiment. For example, multiple "experiment runs" lasting 20 minutes per run, a few "experiment runs" per day, or "experiment runs" requiring 3 weeks for processing a single test sample. Please provide as much detail as possible, describing daily and weekly activities.

6. Can you suspend/pause your experiment operation to avoid acceleration disturbances?

7. Can you modify your operation in response to real-time observation of acceleration data?

8. Do you desire acceleration data collection throughout your experiment operations? Are there critical experiment operations for which acceleration data collection is highly desired or required?

Acceleration Data Support

1. Is near real time acceleration data support required? Is post-experiment (offline) acceleration data support required? Are both required?

2. For near real time support, how quickly is access to the data required (seconds, minutes)? In what format is the acceleration data required (data files, data plots, etc.)?

3. For offline support, how quickly is access to the data required (while still on orbit, post experiment operations, post increment operations)? In what format is the acceleration data required (data files, data plots, etc.)?

Questions from the original survey draft that should be tabled until face to face meetings with PI's

1. Do you know the reference frame (axes) for your experiment? If so, please state them.

Discussion of the various reference frames for presenting the acceleration data would be better left for the face to face discussions.

2. Is there a SAMS Sensor Enclosure located in your assigned facility?

We should provide them this information in response to their survey inputs. If one is not located in the facility, our response would be to provide them with the nearest location of an accelerometer and the limitations of such an arrangement for obtaining the true acceleration levels at their experiment location.

3. What frequency range of data is of interest to you (what is the cut-off frequency)?

We should provide them recommendations for supporting the requirements they specify when discussing frequency sensitivities.

4. Would you like PIMS to process the acceleration data for you? If yes, specific whether you want real-time display option or off-line display or both?

Already answer now in previous questions.

5. What type (s) of data plots would you like to get from PIMS, if such support is required? Please make selection from the chart below.

Eliminate the chart from this initial survey. We should recommend to them a set of data plots for satisfying their requirements. During face to face discussions, we can give detailed plots explaining the virtues and limitations of the various plot options.

6. Is there any specific data plot you would like to have in order to better characterize your experiment, but is not listed on the chart below? If so, describe amply the specific data plot you would like to have and state how it (they) would be better suited for your experiment.

This will come out of face to face discussions.

7. What is the high frequency of interest to your experiment or supporting equipment?