**NanoRacks Payload Operations Data Requirements**

NanoRacks operations team needs detailed payload information and data requirements in order to develop products, procedures, and operation philosophy. This information will allow NanoRacks to effectively operate the payload, minimize crew time, and maximize mission success. Please complete the questionnaire and provide any relevant information to ensure nominal on-orbit operations.

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| **Payload Overview** | |
| Payload Name (Op Nom): |  |
| Serial Number (Special Names): |  |
| Payload POCs: | * Name (Primary):   Phone:  Email:   * Name (Backup):   Phone:  Email: |
| Science Overview/Purpose: |  |
| Targeted Flight: |  |
| Type of Payload: | Internal Platform Plug & Play Module  External Platform (NREP) Module – (Passive) / (Active)  Deploys/operates in aisle  Installs in a locker  Other: |
| **General Info** | |
| Payload dimensions: |  |
| Weight/mass: |  |
| Power: | None  5 V  28 V  120 V  Other: |
| Nominal operating temperature: |  |
| Pressure (if pressurized): |  |
| Proprietary: | No  Yes. Please provide justification: |
| **On-Orbit Storage and Installation** | |
| For items launching in cold stow:   * Will the sample require time to thaw before operations? * If operations cannot begin in time, can it live in cold stow for an extended amount of time? | No  Yes. Hours \_\_\_\_\_\_\_\_\_\_\_  No  Yes. Hours: \_\_\_\_\_\_\_\_\_\_\_ |
| Stowage requirements:  (i.e. cold stow, cooler, freezer, temperate ranges) |  |
| How long after handover/unpacking must onboard ops begin? | \_\_\_\_\_\_ days after unpacking +/- \_\_\_\_\_\_ days. |
| Are there any special activation/installation instructions? |  |
| Will the payload create: | Noise  Light  Vibration  Noticeable change in cabin temperature |
| Will video be required for any crew ops? | No  Yes   * SD or HD: * Live or Recorded: * Are there any restrictions on video distribution? |
| Will photos be required for any crew ops? | No  Yes |
| **On-Orbit Operations** | |
| Will the payload require power? | No  Yes   * Current draw: \_\_\_\_\_\_\_\_\_\_\_ |
| Will the payload create data to be downlinked? | No  Yes.   * File type: * Average file size: * Number of files generated per time: * How often should files be downlinked? |
| Does the payload appear as a drive when connected via USB? | No  Yes |
| Are any actions required or an established schedule for when the drive is available? | No  Yes. Describe: |
| If payload data is downlinked, does the payload need to retain a copy? | No  Yes |
| Will the payload require ground monitored telemetry? | No  Yes. Describe: |
| Will the payload require ground commanding? | No  Yes. Describe: |
| Will the payload require crew interaction outside of installation and removal of payload? | No  Yes. Describe: |
| Does the payload require any special configuration to operate nominally? | No  Yes. Describe: |
| Does the payload require USB comm enabled or disabled to generate experiment data? | Enabled  Disabled |
| Does the payload have any special requests or operating requirements? | No  Yes. Describe: |
| Can the payload detect any internal failures or issues? | No  Yes. Describe: |
| Does the payload have any automatic recovery functions or require any recovery actions to be performed? | No  Yes. Describe: |
| **ISS Resources:** |  |
| Will the payload require water? | No  Yes. Min/max qty: \_\_\_\_\_\_\_\_\_\_\_ |
| Will the payload require nitrogen? | No  Yes. Min/max qty: \_\_\_\_\_\_\_\_\_\_\_ |
| Will the payload require vacuum or venting? | No  Yes. Min/max pressure: \_\_\_\_\_\_\_\_\_\_\_ |
| **Contingency Operations** |  |
| Are there any impacts to power down or power cycle of the platform/rack? | No impact  Impact: |
| If the payload requires power, how long can the payload survive or operate without power? | Duration: \_\_\_\_\_\_\_\_\_\_ |
| If the payload is repowered after a power down, are there any special actions/workarounds to recover? |  |
| Are there any impacts to a loss of comm to the payload or platform? | No  Yes. Describe: |
| If a payload requires comm, how long can the payload operate without comm? | Duration: \_\_\_\_\_\_\_\_\_\_\_ |
| Does the payload have enough storage space to store files/data for an extended period including entire on-orbit life? | No  Yes.   * Storage space: \_\_\_\_\_\_\_\_\_ * Storage space in days: \_\_\_\_\_\_\_\_\_ |
| Are there any scenarios or contingency cases that the payload would have problems with? | No  Yes. Describe: |
| Can this payload/experiment be restarted? | No  Yes. Describe: |
| **On-Orbit Operations Conclusion** |  |
| Duration of on-orbit operations: | * Min: \_\_\_\_\_\_\_\_\_\_\_\_\_ * Max: \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Does the payload need to be trashed? | No  Yes |
| Does the payload need to be returned? | No  Yes   * Targeted return flight: \_\_\_\_\_\_\_\_ |
| Does the payload need to be placed in cold stowage for return? | No  Yes   * Required temperature:\_\_\_\_\_\_\_\_\_\_ |
| Does the payload require power during descent? | No  Yes   * Required power:\_\_\_\_\_\_\_\_\_ |
| Does the payload require a specific packing orientation? (X, Y, Z) | No  Yes. Describe: |
| Does the payload have any special packaging requirements/instructions? | No  Yes. Describe: |
| How long after uninstallation/packing on ISS must the payload be returned/on the ground? | No restrictions  Time period: \_\_\_\_\_\_ Days after stow +/- \_\_\_\_\_\_ days. |