

# ICE Cubes Service – Experiment Questionnaire

Organization	Date
Contact Person	Experiment Name
Email	Tel.
<b>Type(s) of Experiment(s):</b> <input type="checkbox"/> Fluid Science <input type="checkbox"/> Technological Demonstration <input type="checkbox"/> Biology <input type="checkbox"/> Other (please specify): .....	
<b>Power Range</b> Typical power need (long duration): ..... W            Maximum power need (peak): ..... W Power Profiles Needs <sup>1</sup> : <input type="checkbox"/> 5V@ ..... A <input type="checkbox"/> 12 V@ ..... A <input type="checkbox"/> ..... V@ ..... A	
<b>Operations/Interfaces</b> Overall duration of the experiment: ..... days Will the experiment need to be retrieved before 4 months? <input type="checkbox"/> No <input type="checkbox"/> Yes, see next page Will it require power continuously or at discrete periods? <input type="checkbox"/> Continuously <input type="checkbox"/> Periodically Approximate duration of each period (experimental session): ....hours Can temporary unplanned power cuts be accepted? <input type="checkbox"/> No <input type="checkbox"/> Yes, max duration ..... Need for special interfaces/resources (Wi-Fi, vacuum/venting) <input type="checkbox"/> No <input type="checkbox"/> Yes, see below Need of interaction from ground for: <input type="checkbox"/> Commanding <input type="checkbox"/> Monitoring <input type="checkbox"/> None Need of <u>near real-time</u> interaction for control/monitoring? <input type="checkbox"/> No <input type="checkbox"/> Yes The experiment includes interactions with the crew? <input type="checkbox"/> No <input type="checkbox"/> Yes, see description below Need for microgravity level measurements <sup>2</sup> during operations? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Nice to have Need for radiation level measurements <sup>2</sup> during operations? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Nice to have Specific temperature control limits <sup>2</sup> ? <input type="checkbox"/> No <input type="checkbox"/> Yes, range: .....<T<..... °C	
<b>Transport to the ISS</b> Do you need late access to the launcher? <input type="checkbox"/> No <input type="checkbox"/> Yes, ..... days before launch Need for upload in refrigerated or frozen conditions? <input type="checkbox"/> No <input type="checkbox"/> Yes, range: .....<T<..... °C Need for powered upload? <input type="checkbox"/> No <input type="checkbox"/> Yes, power need: ..... W Need for early retrieval from spacecraft (after docking to the ISS)? <input type="checkbox"/> No <input type="checkbox"/> Yes	
<b>Return to Ground</b> Do you need the experiment to be returned to ground? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Nice to have Need for return in refrigerated or frozen conditions? <input type="checkbox"/> No <input type="checkbox"/> Yes, range: .....<T<..... °C Need for early retrieval from return vehicle? <input type="checkbox"/> No <input type="checkbox"/> Yes	
<b>Data Delivery</b> Amount of overall generated data: ..... Mbytes            Minimum data rate need: ..... kbit/s Do you need near real-time data downlink during the experiment? <input type="checkbox"/> No <input type="checkbox"/> Yes Do you need deferred data downlink after each experiment session? <input type="checkbox"/> No <input type="checkbox"/> Yes In case of large amount of data, can you accept deferred data delivery, e.g. after some months? <input type="checkbox"/> No <input type="checkbox"/> Yes	
<b>Physical Properties</b> Indicative volume of the experiment(s): ..... cm x ..... cm x ..... cm Indicative mass: ..... kg	

<sup>1</sup> Only 5V and 12V are provided by the ICE Cubes Facility

<sup>2</sup> These features are (currently) not offered by the ICE Cubes Service

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## Complementary Information about the experiment (as available)

1. Brief description of the experimental concept and setup.

2. Brief description of the type of hardware composing the experiment. Short description of the samples, if any. Indicate the presence of chemical, biological agents or particles, which could result in hazards for the crew, in case of release.

3. Description of the expected deliverables (e.g. returned samples, data amount, data rate, others).

4. Description of the experiment process (duration, timeline, need and type of crew interaction, sample handling), requirements on storage and temperature conditioning before launch, in orbit and after return.

5. Possible consumables (gases, water, cold storage), emissions (e.g. CO<sub>2</sub>, nitrogen). Identify special resources/interfaces like e.g. Wi-Fi, Bluetooth, vacuum/venting line.

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