



Experiment Proposal Form

Your text should be intelligible to scientists of various fields and engineers with a general scientific background.

Before you submit your proposal, please ensure that you have read all available information on the Überflieger homepage.

To submit your proposal to DLR, please download the **Declaration of Participation (Teilnahmeerklärung)** for registration and this **Experiment Proposal Form (EPF)**.

Forms and additional information can be found at www.dlr.de/ueberflieger.

The completed forms have to be sent electronically before the deadline to ueberflieger@dlr.de.

Team/Short experiment name	<i>E.g. the acronym of the full experiment title</i>
Full experiment title	

Science & Organization

Team Information	
Student team leader:	<i>Include name, nationality, university, field of study, level of study (bachelor, master, diploma or PhD), academic year, date of birth and any additional team roles of the leader if applicable.</i>
Contact information of team leader:	<i>Include at least the phone number, email address and postal address.</i>
Members of your team:	<i>Include name, nationality, university, field of study, level of study (bachelor, master, diploma or PhD), academic year, date of birth, and expected team role(s).</i>

Science	
What is the scientific and/or technical objective of your experiment?	<i>This description should outline the scientific/technical question addressed, the assumptions made and the research methods chosen to solve the question. Expected results should be stated.</i>

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Why do you need the environment aboard the ISS?	<i>Clarify, why your experiment cannot be done on ground and needs the environment provided by the ISS.</i>
What environmental characteristics do you require?	<i>E.g. level of micro-gravity, temperature, pressure...</i>
Where did you get the idea from?	<i>E.g. research program at your university, already performed similar experiment, scientific publications, books, ...</i>

Describe your experiment	<i>This part should link the scientific objective(s) to the experiment itself. Explain how you are going to fulfil the scientific goal.</i>
What data do you want to measure?	
How do you want to take measurements?	

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<p>Describe the process flow of your experiment.</p>	
<p>What do you plan to do with your data after the mission?</p>	

<p>Organization of your project</p>	<p><i>How will you organize/distribute work within your team? <u>Please note that you are responsible for all aspects of your experiment (science, mechanical & electrical engineering, software, etc.)</u></i></p>
<p>Are you scientifically and technically supported by institutes and/or senior scientists?</p>	<p><i>Please indicate the name of the institute(s) and senior scientist(s). It is <u>mandatory</u> for every experiment to have someone at your university supporting you.</i></p>
<p>Do you have access to a workshop or a laboratory that meets the fabrication and testing needs of your experiment?</p>	
<p>Do you have all the material and equipment that is needed for your experiment? If not, how do you plan to obtain it?</p>	
<p>How do you plan to finance your expenses?</p>	
<p>Who else will support you (sponsors, others)?</p>	

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Outreach Program	
Describe your outreach program for before, during and after the mission.	<p><i>How are you planning to present your experiment to the public? E.g. newspaper, local radio, webpage, social media, presentation at the university, ...</i></p> <p><u><i>The execution of an outreach program is mandatory!</i></u></p>

Experimental Set-up & Technical Information

Mechanics	
Describe your experimental set-up.	<p><i>Describe and outline the preliminary set-up of your experiment. Include at least a sketch or block diagram of the experiment (CAD drawings are optional).</i></p>
Does your experiment fit into the 100 mm x 100 mm x 152.4 mm experiment container?	<p><i>Take note that the inner dimensions of the container are slightly smaller. For more details please refer to the technical drawings on the website.</i></p>
Estimate the mass of your experiment (kg).	<p><i>Do not include the experiment container in your mass budget.</i></p>

Electrics/Electronics	
Will you use the 5 V DC supplied by the USB connector of the experiment container?	
Do you have power requirements beyond the USB connector (i.e. batteries)? What are they used for?	
Estimate the electrical consumption of your experiment (Ah or Wh).	
Do you use any equipment with high inrush currents? If so estimate the current (A).	<i>E.g. Motors may need high inrush currents which exceed the nominal allowed current limit.</i>
Do you need auxiliary power before or during launch?	<i>Auxiliary power for charging or consumption before launch is not standard. Mention here whether you need auxiliary power and why.</i>
Use of uplink and downlink:	<i>Please indicate expected data rates for uplink and downlink. Please note: In addition to on-board storage, it is mandatory that you downlink housekeeping/scientific data during operations.</i>

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<p>Provide an event timeline, including the experiment actions during experiment operations such as timer or telecommand events.</p>	<p><i>Describe your event timeline from start of on-orbit operations.</i></p>
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Environmental Questions & Safety Issues	
<p>Does the experiment use wireless devices?</p>	<p><i>E.g. Wifi (WLAN), Bluetooth, infrared, data transmitters. Describe the type of devices and frequencies used.</i></p>
<p>Does the experiment create any disturbing magnetic or electrical fields?</p>	
<p>Do you expect to use high voltages in any part of your experiment?</p>	<p><i>Please indicate the voltage, its use within the experiment and any expected protection devices.</i></p>
<p>Is the experiment sensitive to light?</p>	<p><i>E.g. when you open the container.</i></p>

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<p>Is the experiment sensitive to vibrations?</p>	
<p>Does the experiment generate vibrations?</p>	<p><i>E.g. vacuum pump, rotating devices ...</i></p>
<p>Will you use any flammable, explosive, radioactive, corrosive, magnetic or organic products?</p>	<p><i>Specify any products you will use with any of these characteristics.</i></p>
<p>Will you use a laser?</p>	<p><i>Which class? Is the laser path securely contained?</i></p>
<p>Does your experiment or parts of it have to be airtight?</p>	
<p>Is your experiment or parts of it pressurized?</p>	<p><i>If yes, please provide the expected pressure level.</i></p>

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Are there any hot parts (> 50°C)?	<i>Mention any parts besides electronics that heat up.</i>
Are there any moving parts? Are the moving parts reachable?	
Is there any aspect in your experiment which you believe may be viewed as a safety risk by others (regardless of whether you will mitigate this risk in your design)?	

Additional Information	<i>Is there any information that is of importance for your proposal and not addressed above?</i>

Drawings can be inserted below or on separate sheets and can be referenced in the above table.