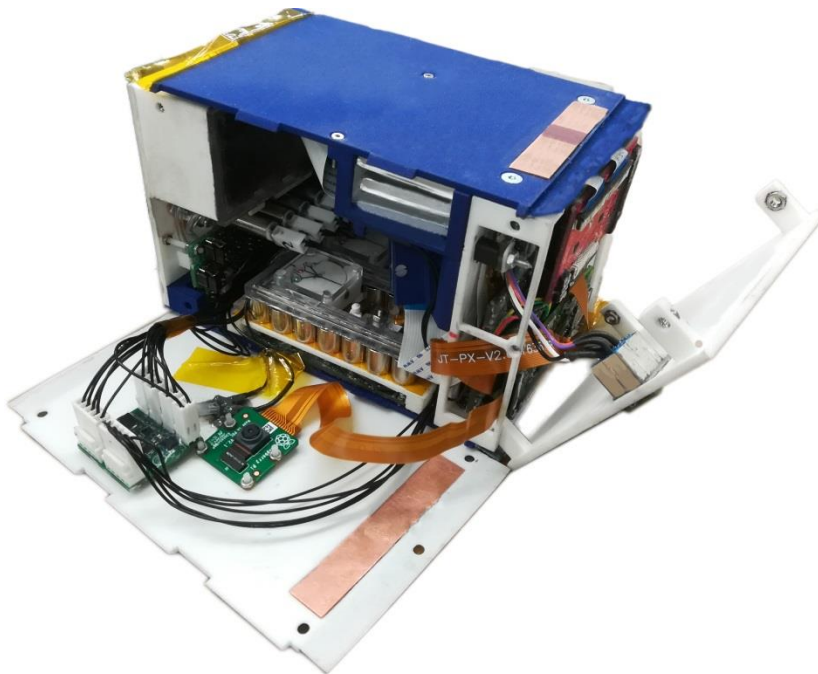




Experiment by students takes off for the International Space Station

Maintenance-free pump for long-term missions in
space



The PAPELL experiment is about a pump without mechanically moveable parts that could be realised in space as a maintenance-free pump for long-term missions. Photo: KSat

Launch will be postponed!

The PAPELL student experiment from Stuttgart will not be able to launch on May 20th, 2018 due to NASA's tightened security standards. An inspection injunction was issued all over the US because of various technical issues with Li-ion batteries in many products at the moment.

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As a consequence, additional checks of all used battery types for the PABELL experiment are much-needed. The demanded tests are very time-consuming and will therefore not be finished for the latest loading date of the unmanned supply ship. Hence, the planned start event (see below), needs to be postponed.

The next possibility for transporting the experiment will be the cargo mission SpX15 from Cape Canaveral on June 28th, 2018.

The student team KSat (student small satellite group at the University of Stuttgart e.V.) and the Institute of Space Systems at the University of Stuttgart are inviting guests to the launch event for the PABELL experiment. The rocket launch of the launcher on Wallops Island, USA is scheduled to take place on 20th May at 11.04 am (CEST) and can be observed together on the livestream. There will also be an exciting lecture program.

Time: Sunday, 20th May, from 9.30 am

Venue: Space Centre Baden-Württemberg, Media Library,

Institute of Space Systems, Pfaffenwaldring 29, 70569 Stuttgart

The PABELL experiment was developed and designed by around 30 Stuttgart students from the KSat team over a period of a year. The experiment is a technology demonstrator for a pump without mechanically moveable parts that could be realised in space as a maintenance-free pump for long-term missions. The experiment will be presented and supported at the International Space Station by the German ESA astronaut Alexander Gerst.

The aim of the experiment is to show that the maintenance-free pump can be used to transport gas (air), liquid (ferrofluid) and solid materials (spheres). For this type of pump there are various application potentials for the flight to space, from fuel supply, to thermal control through cooling hot structures through contact with cooling liquids flowing past up to the operation of a low-noise ventilation system for manned spacecraft.

Representatives of the media and interested members of the public are cordially invited to attend the event.



Along with the livestream of the launch, the guests can expect lectures on the Institute of Space Systems, about the student small satellite group at the University of Stuttgart and further experiments on the manned space flight that is to be conducted soon in space.

Program 20.05.2018

Time	Countdown	
9.30 am	t-94 min	Welcoming speech, PD Dr. Ing. Georg Herdrich
9.35 am	t-89 min	The Institute of Space Systems, PD Dr. Ing. Georg Herdrich
9.35 am	t-74 min	Photo-bioreactor – Algae at the space station, Dr.-Ing. Gisela Detrell
10.10 am	t-54 min	The student small satellite group at the University of Stuttgart, Valentin Starlinger
10.30 am	t-34 min	PAPELL – a pump without mechanical parts, Dominik Starzmann, Jan-Erik Brune
10.50 am	t-14 min	Transition to OA livestream, PD Dr. Ing. Georg Herdrich
11.04 am	t-0 min	Launch, PD Dr. Ing. Georg Herdrich
12.00 noon	t+56 min	End of the event

Livestream link: <https://www.nasa.gov/multimedia/nasatv/#public>

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