UZH Space Hub Newsletter



Dear UZH Space Hub Community

In this newsletter, we would like to show you some achievements of the UZH Space Hub that were accomplished despite these difficult times. Moreover, we would like to remind you of some interesting ESA calls for innovative solutions, where the use of Earth Observations could be fundamental. Finally, do not forget to read our monthly section *Meet a Space Scientist*, this time we will tell you more about remote sensing applied to water systems.

Have a nice read,

UZH Space Hub Team

News

4th Swiss Parabolic Flight: Large-scale Science meets

Pandemic

The 4th Swiss Parabolic Flight Campaign, organized by the Swiss Skylab foundation and the UZH Space Hub, took place in Dübendorf in June 2020, during the first wave of the Corona-pandemic. In an article, which was published by Thieme in the journal "Flugmedizin - Reisemedizin - Tropenmedizin" (FTR), Oliver Ullrich describes how the campaign was reorganized and adjusted to the necessary SARS-CoV-2 protective measures. While all parabolic flights in Europe and the US were cancelled or postponed, the 4th Swiss Parabolic Flights proved that large scale science campaigns are compatible with SARS-CoV-2 protective measures and can be conducted even in Corona-loaded times. Free access to the article is possible through the





Nominations for the Falling Walls Science

UZH Network. Photo: Regina Sablotny

Breakthroughs of the Year

Congratulations to our UZH Space Hub members, Prof. Laura Baudis and Prof. Lucio Mayer for being nominated as finalists in the Falling Walls among over 900 nominations. The Falling Walls Science Breakthroughs of the Year highlight breakthrough thinking from around the world. Watch Lucio and Laura presenting their research on black holes and dark matter respectively in the Physical Sciences Category.



Modelling planetary interiors

Last month we anticipated that our member Prof. Ravit Helled and her team published *Understanding dense hydrogen at planetary conditions* on Nature Physics Reviews. Now, you can learn more about how astrophysicists study planets' structure and how new theoretical insights and space mission data have changed the perception of the Solar system's largest planets. Scientists from the UZH, involved in the National

theoretical insights and space mission data have changed the perception of the Solar system's largest planets. Scientists from the UZH, involved in the National Centre of Competence in Research PlanetS, have reviewed the current state of knowledge. Image credit: Jos Schmidt.

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UZH students @ARIS

Last month, we supported ARIS (Akademische Raumfahrt Initiative Schweiz), a student association building sounding rockets with the aim to win the Spaceport America Cup in the highest category by 2024. Together with the UZH Space Hub, they advertised their work at Irchel Campus with the goal of motivating also UZH students to work on this exciting endeavour and to join ARIS. We are happy to say that at least four UZH students joined the students association, well done!



Sentinel-6: Ready for liftoff!

The Copernicus Sentinel-6 'Michael Freilich' is ready and its launch is scheduled for November 10, 2020 from the Vandenberg Air Force Base in California. Its mission? Mapping 95% of Earth's ice-free ocean every 10 days and providing crucial information for operational oceanography and climate studies. Its implementation is the result of a collaboration between ESA, NASA, Eumetsat and NOAA, with contribution from the French space agency CNES, a real example of international cooperation. Image credits: ESA



Events

Swiss Space Center Annual Assembly

The Swiss Space Center (SSC) Annual Assembly will take place online on December 8, 2020. As the UZH is a member of the SSC, all collaborators from UZH are welcome to join this networking event. The event includes information from the center's activities as well as a guest talk from M. Rothacher (Prof. of Mathematical and Physical Geodesy, ETH Zurich). Please let us know of your interest and we will send the connection details as soon as they will be available.

Opportunities

Space based servicesapplications addressing COVID-19 outbreak

The COVID-19 pandemic has created enormous challenges to the society and ESA would like to contribute to solutions. If you have an idea to facilitate the quick integration and deployment of concrete and sustainable solutions, which make use of space-based products and services, then apply to this ESA call. Deadline for applications is November 15, 2020.



@esa

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Responsible AgriTech

Do you have an idea to use space enabled applications for sustainable agriculture? To stimulate the development of space applications, on October 12, ESA will open the Kick-Start call in coordination with the ICT-AGRI-FOOD project. Space enabled applications can help addressing needs such as locating assets in the fields, monitoring crops status and providing reliable connectivity to farmers also in remote areas. Deadline for applications is November 27, 2020.

Image credits: HQuality

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ESA PropTech

Does your company develop services exploiting satellite data and technologies to add value to relevant stakeholders operating in Shared Economy, Investment Management & Marketing, Insurance & Urban Planning or Construction Technology & Smart Buildings? ESA's PropTech Kick-Start initiative offers support and funding for ideas in these domains. Deadline for applications is February 26, 2021.

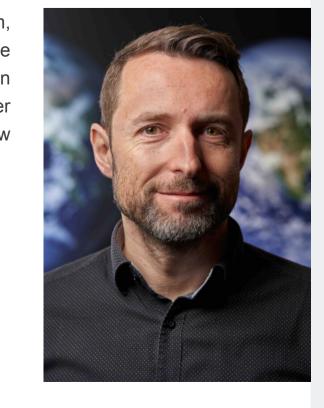
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Meet a Space Scientist

This month we have interviewed Alexander Damm, professor at the Remote Sensing Laboratories of the University of Zurich. His research focuses on applications of remote sensing techniques to study water systems on our own planet. Would you like to know

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more? Then, read the full interview!



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