

Bern, 29 September 2016

Supplementary information

Current Swiss space research projects

A non-exhaustive selection of current space science projects supported by the Swiss National Science Foundation.

Exploring planets and moons

- Axel Murk (University of Bern) is developing an optical instrument for the JUICE mission to study Jupiter's moons (p3.snf.ch/project-165744)
- Nicolas Thomas (Bern) is enhancing data analysis by producing in the lab analogues of extra-terrestrial bodies investigated by the probes (p3.snf.ch/project-165684)
- Peter Wurz (Bern) builds spectrometers similar to Rosina for missions to the Moon, Mercury and Jupiter's moons (p3.snf.ch/project-165570)
- Martin Rubin (Bern) is in charge of the project studying the data gathered by Rosetta on Chury (p3.snf.ch/project-165869)

Understanding our Sun

- Samuel Kruecker (FHNW) is building the X-ray camera Misolfa to study solar flares (p3.snf.ch/project-163377)
- Werner Schmutz (PMOD Observatory in Davos) is developing highly accurate radiometers on board the Norwegian satellite NORSAT-1 to measure the total solar irradiance (p3.snf.ch/project-162926)

Hunting for gravitational waves

- Domenico Giardini (ETH Zurich) is developing front-end electronics for the LISA Pathfinder spacecraft (p3.snf.ch/project-162449)

Calibrating GPS

- Rolf Dach (University of Bern) is studying the effect of solar radiation pressure on the trajectories of GPS and Glonass satellites (p3.snf.ch/project-153429)

Tracking space debris

- Thomas Schildknecht (University of Bern) is installing new sensors at the Zimmerwald observatory to better track space debris (p3.snf.ch/project-164020)

Looking for life

- Andreas Riedo (University of Leiden, NL) is developing spectrometry techniques for probes to detect traces of extinct life forms (<http://p3.snf.ch/project-165378>)

Finding new Earths

The National Centre of Competence in Research NCCR “Planets”, coordinated by the universities of Bern and Geneva, is developing new tools for the study of planets outside our solar systems. (nccr-planets.ch).

- Bruno Chazelas (University of Geneva) has produced the optical bench for the Cheops satellite.
- Francois Wildi (Geneva) has produced the most stable light source in the world to calibrate Cheops instruments.
- Nicolas Thomas (Bern) has created the 3D camera Cassis on board Exomars, which will reach Mars this October.

Improving Earth observation techniques

- Gregoire Mariethoz (University of Lausanne) is merging satellite data and ground-based LIDAR measurements to reach centimetre resolution in topography (p3.snf.ch/Project-159756)
- Alain Geiger (ETH Zurich) is using GPS-like data to analyse snow-packs and glaciers (p3.snf.ch/project-156867).

Links

- Swiss Committee on Space Research: <http://spaceresearch.scnatweb.ch/>
- SERI Space: <https://www.sbf.admin.ch/sbf/en/home/topics/space.html>
- Swiss Space Association: <http://www.srv-ch.org/en/>