

Dear Reader,

This Newsletter is intended for all SPS members, researchers, industries, students, interested specialists and physics friends. Feel free to share this Newsletter within your community, and follow this [link](#) if you want to add a person to our mailing list.

If you wish to give your contribution with news or suggestions, please do not hesitate to contact me at: [margherita.boselli@cern.ch](mailto:margherita.boselli@cern.ch)

Kind regards,

*Margherita Boselli*

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## WHAT'S UP IN SWITZERLAND?

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### Physics in Advent 2022 is starting

**Physics in Advent** is a special and unique Advent calendar, where young researchers, school classes and anyone interested can try out 24 physics puzzles and experiments at home or in the classroom. Each day between December 1 and December 24 a video clip of an experiment is published. The participants can answer the questions on the website and watch a video of the solution the day after.



Prizes can be won by pupils between the ages 11 to 18 years from all over the world, individually, as school classes or even as whole schools. Swiss pupils are encouraged to take part because the Swiss Physical Society gives out prizes in its own Swiss national drawing. The Swiss prizes are sponsored by the Swiss Physical Society, the Swiss Academy of Sciences and [Supermagnete.ch](http://Supermagnete.ch). You are still on time to [register](#).

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### Beamline for Schools 2023

**Beamline for Schools (BL4S)** is a physics competition organized by [CERN](#) and [DESY](#) open to teams of high school students from all around the world. The participants are invited to propose an experiment that can be realized at the test-beam facility of a particle accelerator. A jury of experts will select the three best proposals in spring 2023 and the winners will spend two weeks at CERN or DESY to perform their experiment with the support of a team of scientists.



In 2023, BL4S is celebrating its 10th edition. Do not hesitate to share the news with potential participants and to support young students willing to take part in it. **Pre-registrations** are open on the BL4S website. Pre-registered teams can take part in a series of online events and virtual visits organised by CERN and DESY. The deadline to send an experimental proposal is **April 12, 2023**. Do not miss this unique opportunity to get in touch with physics research.

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## New edition of the Swiss Cherenkov Telescope Array Observatory

The third edition of the **Swiss Cherenkov Telescope Array Observatory (CTAO) Day** will be held at the University of Zürich on **December 14 and 15, 2022**.

This event will gather together the Swiss research institutes involved in the construction of the CTA Observatory. CTAO has been selected as project relevant to Switzerland in the Roadmap for large Research Infrastructures of the State Secretariat for Education, Research and Innovation (SERI). Four work packages are run by Swiss institutes and financed by SERI under two performance agreements.



All CTAO collaborators are invited to join the discussions and provide their inputs, the agenda of the event and the registration is available [here](#).

[The Cherenkov Telescope Array Observatory](#) is composed of two arrays of telescopes of three different sizes located in the Observatory Roque de los Muchachos in the La Palma Canadian Island and at Paranal, ESO, Chile. The goal of the project is to unveil the mysteries of the highest-energy sky in gamma rays.

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## Italy and Switzerland: together in space

The Italian government has established the **National Day of Space Research on December 16** to commemorate the launch of the S.Marco 1 satellite on December 15, 1964.



The Italian Embassy in Bern intends to promote an initiative to celebrate the third edition of the Italian National SpaceDay in Switzerland, aiming at showing the strong ties between the two countries and reinforce further the support to the collaboration in science and technology.

The celebration is composed by two events: a public event with the participation of Swiss and Italian astronauts, Swiss and Italian Space Agencies, Large space companies and university spin-offs; and a technical workshop on space technologies developed at the [Swiss Plasma Center of EPFL](#) and at CERN, concluded by a round table on space sustainability and the role of Academia and private companies.

More details are available [here](#).

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## The Swiss Quantum Initiative

The [Swiss Quantum Initiative](#), launched on November 24, aims to further strengthen the Swiss leading position in the fields of quantum research, technology and application. It is coordinated and led by the [Swiss Quantum Commission](#), a group of leading experts in the field, that will start its work at the beginning of 2023. It is hosted by the Swiss Academy of Sciences SCNAT, mandated by the Swiss Confederation.



The Commission pursues four areas of action:

1. focus research funding by defining the framework for competitive calls subsequently conducted by the Swiss National Science Foundation SNSF;
2. nationally coordinate development of infrastructures and platforms for the transfer of knowledge and technology;
3. develop attractive curricula and evaluate measures to meet the high demand for specialists;
4. strengthen international partnerships.

More information are available [here](#).

*Image: Stockfoto.*

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# WHAT'S UP IN EUROPE?

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## ESA selected the new generation of astronauts

On November 23 ESA, the European Space Agency, presented the [17 new astronaut candidates](#) selected from more than 22 500 applicants from across its Member States. In this new 2022 class of ESA astronauts are five career astronauts, 11 members of an astronaut reserve and one astronaut with a disability.



Switzerland is very well represented among the selected astronaut candidates. The Swiss [Marco Alain Sieber](#) is part of the five career astronauts. Marco has a PhD in Medicine from the University of Bern and he is part of the Swiss Special Forces Commando at the Swiss Army. The Belgian [Raphaël Liégeois](#), another career astronaut, has been working as a Research and Teaching Fellow at the University of Geneva and at EPFL. Finally, the Polish [Sławosz Uznański](#), working at CERN since 2011, is part of the Astronaut Reserve selection.

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The Swiss Physical Society (SPS) unites persons interested in physics from university, schools, research, development and industry. The SPS promotes the scientific exchange of ideas in Switzerland and with its international environment.

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