

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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### Register to the 2023 Joint Annual Meeting SPS and ÖPG

The next SPS Annual Meeting will be organized jointly with the Austrian Physical Society (ÖPG), and it will take place from **September 4 to September 8, 2023, at the Physics Department of the University of Basel**. The **deadline for the [abstract submission](#) is May 1, 2023**. The registrations are open until August 15, 2023.



Do not hesitate to join the meeting and encourage your colleagues to do the same! The Annual Meeting is also an excellent occasion for graduate students and postdocs to present their work.

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### Ilaria Zardo and Monika Ritsch-Marte awarded with the EPS Emmy Noether Distinction 2022

On March 16, 2023, the European Physical Society announced that the [2022 Emmy Noether Distinction](#) that has been awarded to **Monika Ritsch-Marte for the Full Career** and **Ilaria Zardo for the Mid-Career**.



Monika Ritsch-Marte is a physicist at the Institute of Biomedical Physics, Dept. of Physiology & Medical Physics, Medical University of Innsbruck (Medizinische Universität Innsbruck), Austria. She was awarded the prize *“for exceptional contributions to optical microscopy and manipulation methods and for the promotion of women’s careers in physics .”*

On top of her outstanding career and her groundbreaking contributions in the field of optical imaging and manipulation and non-linear microscopy, she gave exceptional contributions to the promotion of physics and women in science. She was the first woman president of the Austrian Physics Society in 2007 and 2008, and in 2008 she started the successful series of [“Lise Meitner Lectures”](#).

Ilaria Zardo is an Associate Professor in Experimental Physics at the Physics Department

of the University of Basel, and she was awarded "for her contributions in the methodology of characterizing nanoscale materials and the consequent discovery of their new functional properties."

*Ilaria Zardo's* pioneering work on the tailored nanostructures has led to a better understanding of thermal properties of nanomaterials, which is key to the development of phonon-based devices. Alongside her scientific career, she is extremely active in the promotion of female role models in science, she is an excellent teacher, mentor, and coordinator, and she is a very active member of the board of the Swiss Physical Society.

Congratulations to both Prof. Ritsch-Marte and Prof. Zardo for this great achievement.

*Image: To the left Prof. Monika Ritsch-Marte and to the right Prof. Ilaria Zardo. Credits: . Monika Ritsch-Marte and Ilaria Zardo.*

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## Finals of the Swiss Physics Olympiads

On March 18 and 19, 2023, 28 high-school students met at the Kantonsschule of Aarau for the [Swiss Finals of the Physics Olympiads](#). They have been busy for a full weekend on solving problems, making calculations and experimenting. The meeting in Aarau was the third phase of a journey that started with 838 participants in the first round and 135 in the second one from which 28 have been selected. The participants in the last round trained a lot for this meeting and even had the opportunity to take part in a dedicated training weekend at EPFL in February.



At the end of the meeting 5 people won the bronze medal, 5 people won the silver medal and 5 people won the gold medal:

- Adrian Serrano Capatina, Ecole Internationale de Genève (GE)
- Piranavan Subaharan, Kantonsschule Schaffhausen (SH)
- Daniel Gonzalez Filipov, Institut Florimont (GE)
- Bruno Pontecorvo, Institut International de Lancy (GE)
- Kodai Tsutsui, Ecole Internationale de Genève (GE)

Piranavan Subaharan and Adrian Serrano Capatina received the special award of the Swiss Physical Society.

The five gold medal winners won a ticket to Tokyo to take part in the International Phase of the Olympiads (IPhO) in Tokyo in July.

Congratulations to all the participants! And good luck to the students representing Switzerland at the European and International phase of the competition.

*Image: from left to right Kodai Tsutsui, Piranavan Subaharan, Adrian Serrano Capatina, Daniel Gonzalez Filipov, and Bruno Pontecorvo. Credits: Swiss Physics Olympiads.*

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## The Geneva Observatory took part in the Geneva Book Fair

Between March 22 and March 26, 2023, astrophysicists from the astronomy department of the University of Geneva met the visitors of 2023 [Geneva Book Fair](#) to celebrate the **250<sup>th</sup> anniversary of the Geneva Observatory**.



The scientists met the visitors at the stand of the University of Geneva and guided them through our understanding of the Universe. On Sunday March 26, two very interesting round tables were organized. The speakers included Michel Mayor, Nobel laureate in physics in 2019, the Swiss astronaut Claude Nicollier, and the comics authors Baptiste Lavie, Herji, and Raphael Thomas (Raf).

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## Interesting Seminar on Academic Freedom and International Cooperation

On May 26, 2023, [SCNAT](#) organizes a [seminar on Academic freedom and international Cooperation](#). The event will take place between 15h00 and 17h00 at the Kongresszentrum Kreuz in Bern. A panel of experts will discuss several aspects of the international collaborations and the effect of limited freedom on scientific research.

Do not miss this opportunity, the deadline to subscribe is **May 12, 2023**.

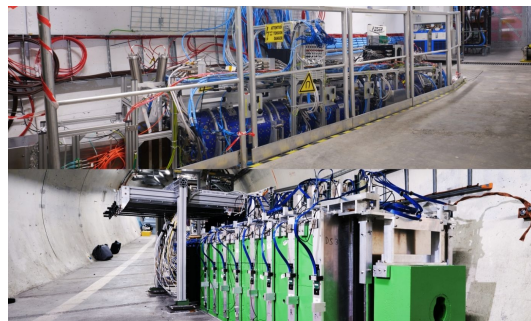
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## WHAT'S UP IN EUROPE

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### First observation of collider neutrinos at the LHC

The [FASER](#) collaboration at CERN announced at the [Rencontres de Moriond](#) last week the **first observations of collider neutrinos**. No neutrino produced at a particle collider has ever been observed, and this result paves the way to the study of neutrino interactions at very high-energy.



FASER observed muon neutrinos and candidate events for electron neutrinos. Moreover, the collaboration also presented the latest results on search for dark matter. Their measurements set limits on the previously unexplored parameter space and began to exclude regions motivated by dark matter.

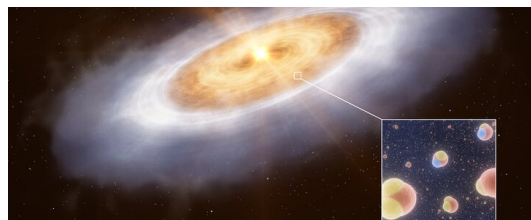
FASER is an experiment located on both sides of the ATLAS cavern and it aims to detect neutrinos and weakly interacting particles produced in proton-proton collisions in ATLAS. FASER is complemented by another experiment [SND@LHC](#). Both experiments will study neutrinos at energies in between those of fixed-target neutrinos and astrophysical neutrinos, i.e. between a few hundred GeV and several TeV.

*Image: FASER (top) and SND@LHC (bottom) detectors. Credits CERN.*

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### Astronomers find missing link for water in the solar system

On March 8, 2023, a [press release](#) from the [European Southern Observatory](#), ESO, announced a **discovery that sheds light on the path of water from a star-forming cloud to planets**. Using the [Atacama Large Millimeter/submillimeter Array \(ALMA\)](#),



in which ESO is a partner, a group of astronomers from different institutes detected gaseous water in the planet-forming disc around the star V883 Orionis. The deuterium/hydrogen ratio observed in this water was used to trace where and when the water was formed. This chemical signature, has allowed scientists to understand how water is deposited on comets from young stars. Until now, it was clear how water moved from clouds to young stars, and then from comets to planets; but the link between young stars and comets was still missing.

The discovery was made using an array of radio telescopes in northern Chile to observe gaseous water in V883 Orionis. Water is mostly gaseous in V883 Orionis due to the unusual high temperature of this star that prevents water from freezing.

The link to the research paper can be found [here](#).

*Image: artist's impression of water in the planet forming disc of V883 Orionis. Credits ESO.*

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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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