

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

Kind regards,

Margherita Boselli

WHAT'S UP IN SWITZERLAND?

Physics in Advent 2021

[Physics in Advent](#) is a special Advent Calendar for young people and anyone interested in experiencing how it is like to be a researcher. Every day, from **December 1 and December 24**, a video clip will present an experiment or a puzzle (in German with English subtitles) that the participants are invited to solve or try alone or in a group. The solutions will be published in a video on the following day.



The participation is free and open to all. Participants between 11 and 18 years old from all over the world can submit the solution to the questions asked in the video and win prizes for individuals or classes. The Swiss Physical Society is offering prizes to all pupils going to school in Switzerland.

SATW TecDay

Since 2007 the [Swiss Academy of Engineering Sciences \(SATW\)](#) organizes the TecDays, an initiative that supports technology education at secondary schools, and inspires pupils to consider a career in the MINT disciplines. During these events, students spend a day attending interactive technology and science modules which offer an insight into practical use and facilitate exciting discussion with specialists. Since their kick-off in 2007, SATW organized 77 TecDays at 57 different high schools throughout Switzerland. A true success story. Read more here ([FR/DE/IT](#)).



Opening of the Dubochet Center for Imaging Atoms

[The Dubochet Center for Imaging \(DCI\) Atoms](#), named after the 2017 Chemistry Nobel Prize laureate Jacques Dubochet, hosts the



world's most advanced cryo-electron microscopes which promises considerable advances in biomedical research thanks to the precision of the images that these microscopes can obtain. DCI is a joint platform of EPFL, the University of Lausanne and the University of Geneva, and it will contribute to include the Geneva Lake region in the list of world advanced imaging facilities.



DCI was officially [presented to the press on November 22](#), and Jacques Dubochet was present at the ceremony. Indeed, this facility makes use of the technique developed by Dubochet to stabilize the biological samples for observations. DCI has two of the most powerful life science electron microscopes in the world, temporarily based between the UNIL and EPFL campuses, in the Cubotron building, and it will be available to all researchers in the region. Two other machines are located in Geneva.

Image: Jacques Dubochet with one of the DCI's microscopes. Photo from UNIL/Fabrice Ducrest.

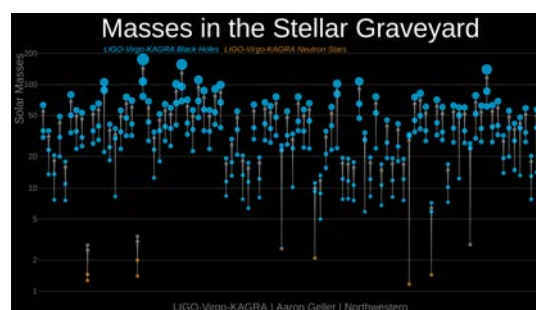
SCNAT Webinars on Gender Equality and Diversity in Natural Sciences

The Swiss Academy of Sciences unites expert societies of Natural Sciences. The members of these societies usually include professionals in research, technology and science, who are active in private and public institutions. Whilst many women study Natural Sciences, they are still widely under-represented compared to men in advanced and leading positions. The Platform Biology of the Swiss Academy of Sciences thus decided to organise a series of nine public webinars to address causes and consequences of this situation, and to propose solutions for achieving a wider diversity in science and research. The webinar series focused on the 'leaky pipeline' that stands for the decreasing proportion of women from university studies towards advanced and leading positions in research and science. Most of these Webinars are available on [the SCNAT YouTube](#) channel.



Gravitational Wave Catalog the Contribution of UZH

On November 7, 2021, the [LIGO-Virgo-KAGRA Collaboration](#) released the results of the second-half of their third observing run (O3b). This third Gravitational-Wave Transient Catalog (GWTC-3) is the largest catalog of mergers involving black holes and neutron stars released thus far and includes events released in prior observing runs. Since the last catalog release (O3a) in October 2020, an additional 35 gravitational wave events observed between November 2019 and March 2020 are reported here, bringing to 90 the total number of observed events since LIGO/Virgo operations began.



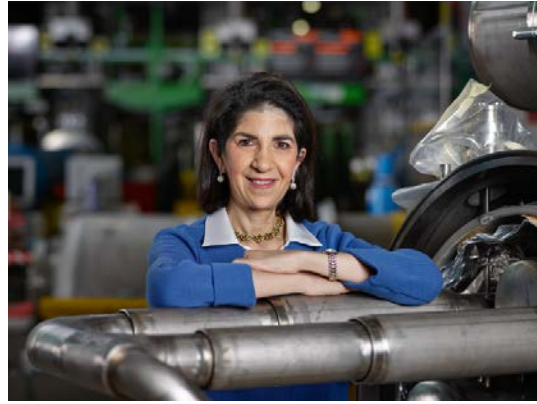
The [Gravitation & Astrophysics group at UZH](#) has been part of the LIGO Scientific Collaboration since 2017, and contributed to the results of gravitational-wave discoveries. More information on the contribution of UZH can be found [here](#).

Link to the publication: [Arxiv](#).

Image: Masses of detected LIGO/Virgo compact binaries, credits LIGO-Virgo/Aaron Geller/Northwestern.

CERN Second Environmental Report

On November 24 CERN [released its second public Environment Report](#). The report covers the years 2019-2020 when the accelerator complex was in its second long shutdown. The Organization took the opportunity of this maintenance and upgrade period to improve its environmental footprint on several levels. To ensure transparency and to demonstrate its leadership in environmental management for research organisations, the Laboratory made a commitment in 2019 to communicate on its environmental footprint every two years and in alignment with the internationally recognised GRI Sustainability Reporting Standards.



The report is available [here](#).

Image: Fabiola Gianotti, CERN Director General. Credits CERN.

WHAT'S UP IN EUROPE

Dieter W. Bäuerle Preis für Grundlagen und Anwendungen der Laser-Materie-Wechselwirkung

Die Dieter W. Bäuerle - Stiftung für Wissenschaft und Kunst schreibt den „Dieter W. Bäuerle Preis für Grundlagen und Anwendungen der Laser-Materie-Wechselwirkung“ aus. Der Preis wird an junge Wissenschaftler/innen bis zu zehn Jahre nach Abschluss der Doktorarbeit vergeben. Es sollen Forschungsarbeiten ausgezeichnet werden, die sich mit den Grundlagen und Anwendungen von Laser-Materie-Wechselwirkungen in Physik, Chemie, Biowissenschaften, Medizin und Kunst befassen. Das Preisgeld beträgt 2.500,- Euro. Bewerbungen sind bis zum 31. Jänner 2022 in elektronischer Form zu richten an den Vorsitzenden des Wissenschaftlichen Beirats der Stiftung.

More information in English are available [here](#).

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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