



UNIVERSITÉ  
DE GENÈVE



Fonds national  
suisse



ICRC 2025  
The Astroparticle Physics Conference  
Geneva July 15-24, 2025

*A public event jointly organized by IUPAP, the Swiss Physical Society, the University of Geneva and CERN  
with the participation of ESA and the support of the Swiss National Fund*

*within the context of the International Cosmic Ray Conference 2025*

at CERN, Science Gateway  
Saturday 19 July - from 16:00 to midnight

English and French (simultaneous translation)

## BACKGROUND

On Saturday 19 July, celebrate the 56th anniversary of the Moon landing with STELLAR, a summer science festival at CERN's Science Gateway. It's your chance to meet astronauts, Nobel Prize winners and other world-class scientists. Discover with them how astrophysics and particle physics are shaping the future, from exploring the Universe to transforming our daily lives in a surprising range of diverse fields including healthcare and climate modelling, disaster relief, transportation and global safety. Celebrate with us with live music and stellar hands-on activities for all ages.

## PROGRAMME

16:00 – 16:10 **Welcome Address**

*Fabiola Gianotti (CERN)*

16:10 – 18:20 (en/fr) **SESSION 1 EXPLORING THE INVISIBLE UNIVERSE**

*moderated by Clara Nellist (particle physicist, ATLAS experiment -LHC)*

- 16:10 AMS, a CERN experiment in space  
*Samuel Ting, Nobel Laureate*
- 16:45 From fundamental particles to Gravitational Waves  
*Barry Barish, Nobel Laureate*
- 17:20 The elusive neutrino  
*T. Kajita Nobel laureate*
- 17:55 Panel discussion and Q/A: The contribution of particle accelerators to understand the invisible universe  
Discover how to hunt the invisible cosmos, from dark matter to gravitational waves, high energy cosmic rays and other unsolved mysteries of our Universe and the central role particle physics in this quest

18:20 – 19:00 **Intermezzo Galactico: face to face encounters with the Nobels and the Astronauts, exploration of the hands-on activities and live music**

19:00 – 20:50 (en/fr) **SESSION 2: GALACTIC EXPLORATION: FROM EXOPLANETS TO HUNTING THE INVISIBLE UNIVERSE**

Showcase of the most recent research in our quest to understand the galaxies and the exoplanets and their technological applications.

- 19:00 – 20:00 (en) **Future Instruments to Hunt the Invisible**  
*P. Caraveo (INAF), C. Nellist (CERN), T. Montaruli (University of Geneva)*  
*Moderated by P. Catapano*  
With the participation of ESA astronaut [Meganne Christian](#) and [Ilya Bodo](#) and [Joe Baines-Holme](#) from the Ice Cube experiment at South Pole Station, Antarctica.
- 20:10 – 20:50 (fr) **Les Exoplanètes et Au-Delà : Une Quête Collaborative Entre Science et Société**  
*M. Mayor (Nobel Laureate, University of Geneva), ESO ELT Telescope in Chile (online)*  
*Moderated by Galactic Chloe*  
Swiss astronomer Michel Mayor will give an introduction to the discovery of the first exoplanet, for which he and his PhD student D. Queloz were awarded the Nobel Prize for physics in 2019.

Followed by Q/A and a remote connection with [ESO scientists based at the Chilean ELT \(Extremely Large Telescope\) site](#) where the largest land-based telescope is being built.

**20:50 – 21:30 *Intermezzo Galactico: meeting of the speakers, exploration of the hands-on activities and live music***

**21:30 – 23:15 (en/fr) PART 3: (inter)STELLAR DREAM: SEIZING THE OPPORTUNITIES OF SPACE EXPLORATION**

The Grand Finale of STELLAR will be a call for action, on how the present and future of space exploration can guide and inspire our societies, young and old, to reach for the stars and explore our universe together.

- **21:30 – 22:00 (en) Survive and Thrive in Space: a Beginner's Guide**

*P. Nespoli (ESA), Amalia Ballarino (CERN)*

*Moderated by P. Catapano*

Astronaut Paolo Nespoli will share insights about his over 300 days in space aboard the ISS, including tips about how to make the Earth's orbit a livable, safe and comfy place. A Senior scientist and superconductivity expert Amalia Ballarino, will present CERN's developments in superconductivity and its applications, including new shields to protect astronauts from cosmic radiation during deep-space missions.

- **22:00 – 22:30 (en) Back to the Moon: The LUNA Experience**

*M. Maurer (ESA)*

*Moderated by Arnaud Marsollier (CERN)*

Keynote of ESA Astronaut Matthias Maurer, sharing insights about future plans for humankind to fly back to the Moon, and the meaning of this for the future of space exploration.

- **22:30–23:15 (fr) Astronaute, Astronome... Décrochons la Lune, Décrochons le Nobel: Mode d'Emploi !**

*M. Christian (ESA), Michel Mayor (UNIGE)*

*Moderated by Galactic Chloe*

Discussion with Meganne Christian (ESA reserve astronaut), and Nobel Laureate Michel Mayor, on how they became astronauts and Nobel Prize Winners, aimed at inspiring the young generation

**23:15 – 00:00 *Live music on the Piazza and poetic footage of the first Moon landing***