

- **Date sent:** 29 October 2021, 17:30
- **From:** Nanda Rea
- **To:** Division D High Energy Phenomena and Fundamental Physics
- **Subject:** IAU Division D (High energy phenomena and fundamental physics) Newsletter - November 2021

IAU Division D Newsletter, November 2021

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- * NASA Selects Gamma-ray Telescope to Chart Milky Way Evolution

NASA has selected a new space telescope proposal that will study the recent history of star birth, star death, and the formation of chemical elements in the Milky Way. The gamma-ray telescope, called the Compton Spectrometer and Imager (COSI), is expected to launch in 2025 as NASA's latest small astrophysics mission.

The Compton Spectrometer and Imager (COSI) is a soft gamma-ray survey telescope (0.2-5 MeV) designed to probe the origins of Galactic positrons, uncover the sites of nucleosynthesis in the Galaxy, perform pioneering studies of gamma-ray polarization, and find counterparts to multi-messenger sources. COSI's compact Compton telescope combines improvement in sensitivity, spectral resolution, angular resolution, and sky coverage to facilitate groundbreaking science. More information on COSI here:

<https://cosi.ssl.berkeley.edu/> .

You can find the NASA Press Release here:

<https://www.nasa.gov/press-release/nasa-selects-gamma-ray-telescope-to-chart-milky-way-evolution>

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* IAU WG for professional-amateur relations in astronomy

The IAU earlier in 2021 established a new EC working group for professional-amateur relations in astronomy, for short, the Pro-Am WG. This WG has a dozen members around the world, and currently has Prof Aniket Sule (India) and Prof John Hearnshaw (New Zealand) as co-chairs.

See https://www.iau.org/science/scientific_bodies/working_groups/330/ for more details.

One of the aims of the Pro-Am WG is to foster research collaborations between amateurs and professionals. We plan to promote and support the IAU programme ‘Meet the IAU Astronomers!’, which connects IAU members with amateur astronomer groups and the public through talks and meetings on astronomical research topics. We will also discuss with amateur societies the importance of pro-am collaborations and how amateurs can be involved, and the importance of astronomy for society, among other topics. Furthermore, we plan a pro-am workshop involving amateur and professional astronomers every two years. So there are many exciting and interesting developments to look forward to.

We are seeking to expand the membership of the WG. We envisage two categories of new members.

- A small number of new members (perhaps 3 or 4) who will join the present members to form an Organizing Committee of the WG. The OC will hold regular meetings, probably every 2 or 3 months by Zoom. We are looking for a representative, well-balanced and diverse group to complement the existing OC members, taking into account, gender, geographical location and age bracket of the OC membership.
- We seek to have a wider membership at large, comprising (IAU Members or IAU Junior Members), being those interested in fostering pro-am relations, participating in any events such as the pro-am workshops, to receive any further messages about Pro-Am WG activities, and to contribute to new initiatives and policies of the WG from time to time. We welcome many new WG members to join us in this category.

In the first category (that is, further members of the Pro-Am WG OC) we especially seek to appoint a Pro-Am WG OC Secretary. This would be a voluntary position of someone on the OC who would be involved with the WG activities at a management level, including a survey of amateur astronomers world-wide. The OC Secretary would collate and keep track of correspondence between the WG and amateur astronomical societies in many countries of the

* IAU PhD prizes

Applications are open for the IAU PhD Prize which recognises outstanding scientific achievement in astrophysics around the world. Each IAU Division has, once a year, the opportunity to award its own prize to the candidate it feels has carried out the most remarkable work in the previous year (i.e. a PhD Thesis which has been defended between the 16 December in the previous year, and 15 December this year).

Deadline: December 15, 2021.

https://www.iau.org/science/grants_prizes/phd_prize/

* IAU Scientific Meetings 2023

Applications are open to propose IAU Scientific Meetings during 2023. The programme of IAU scientific meetings (Symposia, Focus Meetings, Division Meetings, Regional Meetings) is one of the most important means by which the IAU pursues its goal of promoting astronomy through international collaboration. A large fraction of the Union's budget is devoted to the support of these IAU scientific meetings.

Deadline: December 1, 2021.

<https://www.iau.org/science/meetings/rules/>

* IAU Symposium 363: Neutron Star Astrophysics at the Crossroads

Remote Symposium, November 29th – December 3rd 2021

Last chance to register: <https://astromeeeting.gssi.it/>

The symposium will focus on the astrophysical implications of gravitational-wave and electromagnetic observations of neutron stars. It will discuss the status, perspectives and challenges in the blossoming era of multi-messenger astronomy in order to build a complete physical picture of neutron stars, both isolated and in binary systems. It will explore the many facets of neutron stars, from magnetars to extreme astrophysical phenomena, such as giant flares, gamma-ray bursts and kilonovae. It will include discussions on next generation facilities for multi-messenger astronomy and their associated science cases.

Supporting IAU Commission: Commission D1 Gravitational-wave astrophysics

Invited Speakers:

Felix A. Aharonian, Alessandra Corsi, Paolo D'Avanzo, Imma Donnarumma, Irina Dvorkin, Paolo Esposito, Chris Fryer, Ersin Gogus, Jeremy Heyl, Konstantinos Gourgouliatos, Michael Kramer, Paola Leaci, Samaya Nissanke, Luigi Piro, Sergei Popov, Andrea Possenti, Bangalore Sathyaprakash, Patricia Schmidt, Masaru Shibata, Bogdanov Slavko, Masaomi Tanaka, Christina Thöne, Hendrik Van Eerten, Daniele Viganò, Linqing Wen

Scientific Organizing Committee:

Marica Branchesi (chair), Gian Luca Israel (chair), Roberto Turolla (chair), Eleonora Troja (chair), Matthew Baring, Laura Cadonati, Bala Iyer, Nobuyuki Kawai, Tara Murphy, Rosalba Perna, Nanda Rea, Stephan Rosswog, Samar Safi-Harb, Dmitry Yakovlev, Silvia Zane

Proceeding Editors:

Eleonora Troja, Matthew Baring

Local Organizing Committee:

Marica Branchesi, Eliana Di Giovanni, Marco Drago, Gian Luca Israel, Andrea Maselli, Gor Oganesyan, Eleonora Troja, Roberto Turolla, Silvia Zane

* Upcoming Conferences, Meetings, Workshops

SuperVirtual 2021 - From Common to Exotic Transients

November 15-19, 2021

Virtual

<https://sites.google.com/view/supervirtual2021>

Astroinformatics 2021

November 15-19, 2021

Virtual

<https://sites.astro.caltech.edu/ai21>

Second Workshop on Astronomy Beyond the Common Senses for Accessibility and Inclusion

November 17-18, 2021

Virtual

Reproducibility and Open Science in Astronomy, ROSA2021

December 1-3, 2021

Virtual

<https://www.eso.org/sci/meetings/2021/REPRODUCIBILITY2021.html>

Science at Low Frequencies (SALF) VIII

December 6-9, 2021

Virtual

<https://salfconference.org/salfviii/>

Gravitational Wave Physics and Astronomy Workshop

December 14-17, 2021

Hannover, Germany (with remote participation option)

<https://gwpaw2021.aei.mpg.de/>

237th Meeting of the American Astronomical Society (AAS)

January 11-15, 2022

Virtual

<https://aas.org/meetings/aas237>

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If you wish to share with IAU Division D any information about matters that may be relevant to the activities of Div D Members, please send an e-mail to rea@ice.csic.es . This will appear in the next Newsletter, which will be sent out around December 1, 2021. Thank you in advance for your inputs, and best regards.

Dr. Nanda Rea, acting Scientific Secretary of IAU Division D Steering Committee
Institute of Space Sciences (ICE-CSIC, IEEC; Barcelona, Spain)