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Report on Division D activities in 2021

Pr. Isabelle GRENIER

1. New Members:

Division D President approved the applications of Dr. Rodrigo Sacahui (Univ. de San Carlos de Guatemala) and Prof. Alessandro De Angelis (Univ. of Padua, Italy) for IAU Individual Membership, affiliated with Division D.

2. 2020 IAU PhD Prize:

Division D nominated Dr. Ziggy Pleunis for the 2020 IAU PhD Prize, who earned his PhD with the thesis "Fast radio burst detection and morphology with the CHIME telescope" based on work developed in Canada. He was selected among 18 candidates.

3. IAU Event Proposals:

The Division D Steering Committee has pre-viewed and endorsed with supporting letters the following 2023 IAU events for which Division D acts as Coordinating Division: a non-GA IAUS PI-ed by Dr. B. Vaidya and another PI-ed by Dr. G. Bruni

4. IAU meetings:

The IAU symposium IAUS 363 on "Neutron Star Astrophysics at the Crossroads: Magnetars and the Multi-messenger Revolution" was held in 2021. It was a successful meeting despite the remote mode due to the sanitary restrictions.

5. Commissions:

• Commission D1 on grav. wave astrophysics:

The community is very active. Highlights included the release of new, enlarged catalogs of LIGO/Virgo compact binary mergers, hints of a coherent low-frequency gravitational-wave signal in pulsar timing array observations, and the data release of the 2019-2020 LIGO-Virgo data. Due to the covid situation, the commission did not trigger any specific discussion or meeting in 2021.

• Commission X1 on Supermassive Black Holes, Feedback and Galaxy Evolution:

publication of the proceedings of the IAU symposium 359 "Galaxy Evolution and Feedback across Different Environments" which was held in March 2020 in Bento Goncalves, Brazil. This 494-page, 117-paper book, published by Cambridge

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University Press, summarises recent research on the formation and growth of galaxies and their central black holes, on the impact of both stellar and black-hole feedback on their host galaxies, on mechanisms for fuelling star formation and AGN, and on spatially resolved studies of the stellar and gas content, excitation and metallicity in the present-day Universe. This book provides an exceptional review of current research in this field.

6. Division D bulletins:

Monthly bulletins have regularly been issued. The steering committee has appointed a new secretary, Dr. Nanda Rea, who has taken over the preparation of the newsletter after Anna Watts and who has further improved our worldwide network to collect and circulate the information about all the science meetings proposing topics related to division D.