

DIVISION J

GALAXIES AND COSMOLOGY

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PRESIDENT
VICE-PRESIDENT
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Kim-Vy Tran
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DIVISION J COMMISSIONS

Div. J / Commission J1

Galaxy Spectral Energy Distributions
(Inter-Division D-G-H-J)

Div. J / Commission J2

Intergalactic Medium
(Inter-Division B-H-J)

Div. J/ Commission J3

Galaxies at the Epoch of Reionisation

Div. J / Commission X1

Supermassive Black Holes, Feedback
and Galaxy Evolution
(Cross-Division D-J)

Div. J / Commission H4

Stellar Clusters
throughout Cosmic Space and Time
(Inter-Division G-H-J)

Annual REPORT 2023–2024

Division J continues to promote research, education and outreach on topics related to the physics of the Universe and of galaxies beyond the Milky Way. The main themes of the Division are: physics and content of the Universe, evolution of structures, formation and evolution of galaxies, spatially resolved galaxies, science and data analysis methods for extra-galactic and cosmological surveys.

To date, Division J has 3968 active members, of which 391 are junior members. The scientific goals of the Division continue to be supported by its previous Commissions: Inter-Division D-G-H-J Commission J1 “Galaxy Spectral Energy Distributions”, Inter-Division B-H-J Commission J2 “Intergalactic Medium”, Commission J3, “Galaxies at the Epoch of Reionisation” as well as by the Cross-Division D-J “Supermassive Black Holes, Feedback and Galaxy Evolution”, and the affiliated Inter-Division G-H-J Commission H4 “Stellar Clusters throughout Cosmic Space and Time”.

The President Kim-Vy Tran continues to organise monthly videoconference meetings for the Division J Steering Committee (SC) to work on planning IAU events, coordinating with the IAU Executive Committee, and reviewing proposals. The President maintains and distributes relevant documents to the SC members for providing feedback and editing as needed. The combination of video meetings with shared folders and email ensures timely communications for the SC members who are spread across multiple timezones.

A major activity during late 2023 to 2024 is preparing for the 2024 General Assembly. Division J aims to showcase the links between the African multi-wavelength astronomy community and the global network of current and future observatories. The Division J program will encourage dialogue and cooperation between African astronomers and their international peers, with a focus: 1) How multi-wavelength observations reveal the physical processes that shape galaxies and the multi-phase medium throughout cosmic history; 2) The latest results and prospects from all-sky surveys with missions such as EUCLID, Vera Rubin, and Roman; and 3) The scientific frontiers in Infrared/Submillimeter astronomy beyond JWST and ALMA.

All Div J SC members helped review the GA abstracts with Cristina Popescu, Kim-Vy Tran, and Lucia Marchetti co-chairing the selection for the Division Days. With nearly 200 submitted abstracts, the number of available slots for oral presentations was oversubscribed by about six. The co-chairs are now preparing the program for the Division Days that includes four invited speakers.

Division J SC members also are helping support two symposia and two

focus meetings by serving on the respective their Science Organising Committees. The Div J members are Barbara Catinella on *Neutral hydrogen in and around galaxies in the SKA era*, Lucia Marchetti on *All-inclusive AGN*, Denis Burgarella and Laurence Tresse on *The first chapters of our cosmic history with JWST*, and Cristina Popescu on *Measures of Luminous and Dark Matter in Galaxies Across Time*.

Another major activity in the first quarter of 2024 was reviewing the applications for the IAU PhD prize, and the SC had the honor of considering 11 truly outstanding candidates for Division J. We strongly encourage all students to consider applying for the PhD prizes. As with every year, selecting a single winner is nearly impossible. The Division J SC uses a selection rubric focused on scientific excellence demonstrated by research publications and letters of support. Using a rubric to ensure a consistent approach to evaluating each nominee on their research excellence and impact, the SC selected the Division J PhD prize winner and honorable mention for 2023. The 2022 and 2023 PhD prize winners for Division J will present at the 2024 General Assembly.

Within all the activities of Division J, we reaffirm commitment to the IAU values and oppose any forms of discrimination or harassment. We strive to foster a welcoming culture that represents and celebrates our diverse global community. We look forward to furthering astronomy for all during the next triennial.