

APS Division of Astrophysics March 2024 Newsletter

Dear DAP members,

Please see the March 2024 DAP newsletter. It will be archived on the [DAP website](#). For questions, suggestions, feedback, please contact the DAP Executive Committee at dap-exec@googlegroups.com

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DAP Executive Committee:

Chair: **Belinda J Wilkes** (04/23–04/24), University of Bristol

Chair-Elect: **Enrico Ramirez-Ruiz** (04/23–04/24), University of California, Santa Cruz

Vice Chair: **Rebecca A Surman** (04/23–04/24), University of Notre Dame

Past Chair: **Daniel Holz** (04/23–04/24), University of Chicago

Secretary/Treasurer: **Alessandra Corsi** (04/23–04/25), Texas Tech University

Deputy Secretary/Treasurer: **Michela Negro** (04/23–04/25), Louisiana State University

Councilor: **Brian D Fields** (01/22–12/25), University of Illinois at Urbana-Champaign

Member-at-Large: **Ann Hornschemeier** (04/22–04/24), NASA Goddard Space Flight Center

Member-at-Large: **Kerstin Marie Perez** (04/22–04/24), Columbia University

Member-at-Large: **Javier Garcia** (04/23–04/25), NASA Goddard Space Flight Center

Member-at-Large: **Regina M Caputo** (04/23–04/25), NASA Goddard Space Flight Center

Early Career Member-at-Large: **Carl Fields** (04/22–04/24), Los Alamos National Laboratory

Early Career Member-at-Large: **Nicole Sanchez** (04/22–04/24), Carnegie Observatories

APS April Meeting 2024

The 2024 APS April Meeting will be held in Sacramento, California (and virtually) on April 3–6, 2024. The DAP has organized a rich and varied scientific program for the meeting, detailed below. The **DAP Business Meeting** will be held on Thursday 4th April, 6-8 PM, providing the usual refreshments and opportunities to socialize. We will have refreshments at the **Cecilia Payne-**

Gaposchkin doctoral prize session, on Wednesday April 3rd at 10:45-12:33 AM. This year the DAP is also partially supporting the activities of [astrobites](#) at the April APS meeting, so look out for their posts about our sessions!

DAP-sponsored Invited Sessions (Enrico Ramirez-Ruiz, DAP Program Chair):

Session A

A01. [Live Streamed](#) [Plenary](#) Plenary: Physics and Multi-Messenger Astronomy

Session AA

AA03. [Virtual Only](#) V: Future Prospects and Open Questions in Astrophysics

Session B

B03. Large Scale Structure and CMB

B09. [Invited](#) Cecilia Payne-Gaposchkin Doctoral Dissertation Award in Astrophysics

B15. [Mini-Symposium](#) Mini-Symposium: Connecting Nuclear Physics and Astrophysics I

Session C

C03. Dynamical Probes of Dark Matter and Cosmological Simulations

C09. [Invited](#) Measurements with Nanohertz Gravitational Waves

C12. Neutron Stars and Stellar Objects

C15. [Mini-Symposium](#) Mini-Symposium: Connecting Nuclear Physics and Astrophysics II

Session D

D03. Observing GW Sources

D09. [Mini-Symposium](#) Mini-Symposium: The Future of UHECR Instrumentation

D10. [Invited](#) The 4th Observing Run of the LIGO/Virgo/KAGRA Gravitational Wave Network

Session F

F01. [Invited](#) [Live Streamed](#) First Year Results from the Dark Energy Spectroscopic Instrument (DESI)

F03. Experimental Progress in Particle Astrophysics

Session FF

FF03. [Virtual Only](#) V: High Energy and Particle Astrophysics

Session G

G03. Particle Astrophysics and the Galactic Center

G09. [Invited](#) Hans A. Bethe Prize Session on Cosmology

G12. Modeling GW Sources

Session H

H03. Neutrino Astrophysics

H04. [Invited](#) Physical Review Invited Session: Looking Ahead as we Look Far through the JWST

H09. [Invited](#) The Future of UHECR Physics

H10. [Invited](#) Supernovae

H12. [Mini-Symposium](#) Mini-Symposium: Physics of the Cosmos

Session J

J03. Status and Prospects and Neutrino Astrophysics

J09. [Invited](#) Thorne-Żytkow Objects in the Era of Celestial Cinematography

J10. [Invited](#) Multimessenger Kilonova Astronomy

Session KK

KK03. Virtual Only V: Mini-Symposium: Cosmology and Galaxies

Session L

L03. Transients and Interacting Binaries

L09. Invited Connecting Nuclear Physics and Astrophysics

Session M

M03. Early Universe and Reionization

M09. Invited Astrophysical Implications from GW Sources

Session P

P04. GRMHD Simulations and Black Holes

P06. Mini-Symposium Mini-Symposium: Connecting Nuclear Physics and Astrophysics III

P09. Invited The Spins of Stellar-Mass Black Holes

Session R

R03. New Directions and Alternative Theories

R09. Invited LeRoy Apker Award Session

Session S

S09. Early Universe and Cosmological Models

S12. Black Hole Populations

Session T

T09. Numerical Advancements in Particle Astrophysics

T12. Signatures of Particle Dark Matter

Finalists for the 2024 Cecilia Payne-Gaposchkin Doctoral Dissertation Award in Astrophysics

We received excellent nominations for the DAP thesis prize, and the committee has selected three finalists to present at the April meeting. The finalists and their citations are below. Please join this excellent April APS meeting session to hear our finalists speak on Wednesday April 3rd at 10:45-12:33 AM. The winner will be announced at the DAP Business Meeting. For 2024, the finalists are:

- **Andrea S Biscoveanu**, *"For outstanding contributions to the astrophysical interpretation of the gravitational-wave sources discovered by LIGO and Virgo and the development of novel methods to analyze the data."*
- **Floor S Broekgaarden**, *"For foundational and groundbreaking studies of the formation and evolution of gravitational wave source populations using state-of-the-art population synthesis models that explore for the first time a broad range of stellar, binary, and cosmic evolution paths."*
- **Justin T Myles**, *"For contributions towards extracting an improved understanding of our Universe from new, large optical surveys."*

DAP Executive Committee Election Results

We are pleased to announce the outcome of the recent DAP Executive Committee election. New members of the committee are:

- Chair-line: **Scott Dodelson** (Carnegie Mellon University)
- Members-at-large: **Keith Bechtol** (University of Wisconsin-Madison) and **Naoko Kurahashi Neilson** (Drexel University)
- Early-career Members-at-large: **Cyndia Yu** (Stanford University) and **Philip Mansfield** (Stanford University)

Congratulations to these colleagues, a sincere thank you to all of the individuals who stood for election, willing to serve, and a thank you to all DAP members who voted. These new members will join the DAP executive committee starting at the April APS meeting.

We also thank our outgoing DAP Executive Committee members for their years of service:

- **Daniel Holz** (University of Chicago) has completed the four year chairline term.
- **Ann Hornschemeier** (NASA Goddard Space Flight Center) has completed two years as a member-at-large.
- **Kerstin Marie Perez** (Columbia University) has completed two years as a member-at-large.
- **Carl Fields** (Los Alamos National Laboratory) has completed two years as an early-career member-at-large.
- **Nicole Sanchez** (Carnegie Observatories) has completed two years as an early-career member-at-large.

DAP Travel Awards

The DAP offered travel grants to support the participation of graduate and undergraduate students in the April 2024 APS meeting. The amount of each grant covers travel-related expenses for students who are members of the DAP and who are presenting talks or posters in DAP-sponsored sessions.

We received an excellent set of student and postdoc travel award applications for this year's April meeting and were able to fund a total of 28 grants. Notifications were sent out to recipients, who will also be recognized at the DAP Business Meeting at the April APS Meeting in Sacramento on Thursday 4th April, 6-8 PM.

DAP Business Meeting

The DAP Business Meeting a.k.a. The Reception and Awards Ceremony at the APS April meeting is scheduled for Thursday 4th April, 6-8 PM. While you enjoy complimentary refreshments the DAP Executive Committee will give brief reports on the DAP budget and initiatives of the past year. The recipient of the Cecilia Payne-Gaposchkin Thesis Award will be announced, and the [new DAP APS Fellows](#) will be celebrated.

Other Announcements

- **Multidisciplinary Multimessenger Astrophysics Workshop:**
Louisiana State University, the DOE's Los Alamos National Lab and Center for Nuclear Astrophysics Across Messengers, NASA's Physics of the Cosmos Program, and possible

future sponsors are happy to announce the workshop Multidisciplinary Science in the Multimessenger Era. The workshop will be hosted in Baton Rouge, Louisiana, on 23-26 September 2024.

Observations of astrophysical phenomena in time-domain and multi-messenger astronomy are surpassing the fidelity of current approximate models. The goal of this workshop is to identify problems in time-domain and multi-messenger astrophysics that will most benefit from dedicated multidisciplinary studies. These cross-disciplinary studies include both combining expertise within different astrophysics disciplines as well as between physics and astrophysics fields (e.g. plasma physics and turbulence). We invite the community to review the current state of resources in the relevant fields, reporting on existing collaborations and partnerships which cross disciplines, and identify barriers to multidisciplinary research. This workshop aims to understand how their scientific return can be maximized through alignment of existing initiatives, facilities, and mechanisms and, if necessary, suggest the creation of new ones. Lastly, we ask the participants to conceive of methods to sustain growth in this area. You can sign up for updates on the conference [here](#).

This workshop is the third in a series inspired by the Astro2020 Decadal's report identification of time-domain and multi-messenger astronomy as a key priority area this decade. NASA's Time Domain and Multi-Messenger (TDAMM) Astrophysics workshop held in August 2022, which produced a white paper available [here](#), presented to NASA's APAC FACA Committee. The second was NSF's "Windows on the Universe: Establishing the Infrastructure for a Collaborative Multi-messenger Ecosystem" workshop held in October 2023, which produced a white paper available [here](#), presented to the AAAC FACA Committee which advises NSF, NASA, and DOE. This workshop aims to also respond to the long-range planning documents of other disciplines, including the 2023 Nuclear Long Range Plan, the Particle Physics Project Prioritization Panel report, and the 2020 Atomic, Molecular, and Optical Physics and 2021 Plasma Physics Decadals.

- [Central American-Caribbean bridge in astrophysics](#)
- **Latin American Conference on Astrophysics and Relativity**, National Astronomical Observatory, Bogotá, Colombia, June 24-27, 2024 (<https://lacar.webflow.io/>)
- The **X-Ray Imaging and Spectroscopy Mission (XRISM)**, an X-ray space telescope mission of the Japan Aerospace Exploration Agency in partnership with NASA, was successfully launched on September 6, 2024. The mission has released first light, is currently undergoing Performance Verification phase, and Cycle 1 call for GO proposals has been announced and is now open (<https://heasarc.gsfc.nasa.gov/docs/xrism/timelines/pvtargets.html>)
- **X-ray Astronomy Community**: please see the Chandra Director's [Letter to the Community](#) concerning the recently announced major reduction in funding for the [Chandra X-ray Observatory](#) starting in FY2025.