



The Physics Observer

November 2nd, 2020

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UPCOMING EVENTS

- Monday, November 9, 2020, 4:00pm:

[Colloquium, TBA, Pri Narang \(Harvard\)](#)

- Monday, November 16, 2020, 4:00pm:

[The many faces of Dark Sectors: from Long Lived Particles at the LHC to Dark Matter and Mirror Stars, David Curtin \(U Toronto\)](#)

- Monday, November 23, 2020, 12:30pm:

[Colloquium, TBA, Tracy Northrup \(Universitat Innsbruck\)](#)

- January 25-28, 2021:

[Axions Beyond Gen 2](#)

- July 8-10, 2021:
- [Summitting the Unknown: New Physics, Celebrating the Legacy of Ann Nelson](#)

- July 11-20, 2021:

Welcome

The Physics Observer is a periodic bulletin of happenings in and around UW Physics. Our goal is to share information of notable happenings, events, and news associated with the department. Please feel free to pass this newsletter to anyone who may be interested. Readers wishing to subscribe, or unsubscribe, may do so [here](#). Previous newsletters may be found on the physics website at [The Physics Observer Newsletter](#). Information for future editions may be sent to the editor, [Alexis Hall](#).

Chair's Corner (L. Yaffe)

As I write this on the day before Halloween, we are in the midst of a scary season. Covid daily cases continue to rise, even in Washington state which had been looking pretty stable up until two weeks ago. This coming month will see the conclusion (I hope!) of a highly divisive national election, followed by Veteran's Day and Thanksgiving holidays. I appreciate the simple, non-contentious all-mail voting system which this state uses, and hope that everyone eligible to vote has already done so. I am thankful that the students, faculty, and staff of the Physics Department are coping remarkably well during these stressful times, and hope that everyone manages to stay well as we all adapt to what will likely be at least several more quarters of pandemic times.

Research Awards & Grants

- [Professor Jens Gundlach](#) received 314K from the National Institutes of Health for C19 High Accuracy Nanopore Sequencing.
- [Professor Gordon Watts](#) received 175K from Princeton University for the proposed NSF Center "Institute for Research and Innovation in Software in High Energy Physics".
- [Affiliate Assistant Professor Nathan Wiebe](#) received 100K from UC Berkeley for QLCI-CI: Present and Future Quantum Computation.

Department Resources & News

Giving for Good. UW employees are THE BEST. You are incredibly generous. Last year, you contributed \$1,971,515 million to local, national and international nonprofits. This is YOUR workplace giving campaign. You choose your favorite organization, make a gift and the world becomes a better place. It's so easy. Donate to your favorite nonprofits through [UW Combined Fund Drive here](#).

Recognize a member of our faculty or graduate student who has demonstrated excellence in teaching through the [2021 Distinguished Teaching Awards](#). Deadline to submit a nomination is **November 16th**.

Help support your student employees in their professional and academic endeavors with [this](#) list of resources. Additionally, [here](#) is a list of strategies for providing meaningful remote work opportunities for students.

Secure your personal and University data and be safe online. Remember to:

- Be aware of phishing scams
- Use strong passwords and two-factor authentication
- Back up your data

[Snowmass 2021: High Energy Physics Community Planning](#)

[SOCIAL MEDIA](#)

Instagram: @uwphysics

Facebook: Link [here](#).

YouTube: Link [here](#).

Twitter: @physicsuw

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- Safeguard UW and personal information

[UW Wellness Week Nov. 16th-20th](#). This November join The Whole U and our partners across the UW for the first UW Wellness Week. UW Wellness Week is a week full of virtual events, classes, and information sessions around total well-being. Participants will gain access to sessions covering the following topics:

- Family wellness
- Emotional wellness
- Physical health and wellness
- Financial wellness
- Environmental wellness
- Student focused resources

[Assorted Talks & Meetings](#)

As part of APS's continued efforts to better equip scientists to communicate with the public, they will be holding a third Wiki Scientist Course focused on increasing the availability and accuracy of information about quantum science on Wikipedia. Wiki Education's Wikipedia experts will guide course participants through the process of adding digestible knowledge about quantum science to Wikipedia. [APS Wiki Scientist Course](#) runs Jan 11 - Feb 15. See [here](#). Application deadline: **November 13th**.

[Funding Announcements](#)

Applications open for [Two Sigma PhD Fellowships](#). The Two Sigma PhD Fellowship supports doctoral students pursuing a PhD in a STEM field such as Statistics, Applied Mathematics, Computer Science, Physics and Finance/Econometrics at an accredited university in the United States. Applications are assessed based on the student's research proposal, publications and recommendation letters. Deadline **November 6th**. See the details of the fellowship [here](#) and [here](#).

Build your campus physics community with a [Women in Physics Group Grant](#). Awardees each receive a grant up to a total of \$1,000 to help create a new WiP group, expand an existing group, or improve sustainability within a group. Applications open for Women in Physics Group grants, see [here](#). **Deadline Nov 6th**.

[Templeton World Charity Foundation](#) has launched a new strategy to support new scientific research on human flourishing and to translate related discoveries into practical tools. Ideas solicited for the Foundation's 40M\$ Grand Challenges for Human Flourishing, see [here](#). Priority will go to interdisciplinary scientific research on humanity's cognitive, affective, social, and spiritual well-being. They are particularly interested in capacities that can be enhanced to promote human flourishing. They are committed to the use of open science practices, such as the preregistration of hypotheses, replication studies, and data sharing. **Deadline Nov 11th**.

Applications open for [DoE funded Office of Science Graduate Student Research \(SCGSR\) awards](#). Areas of interest include Microelectronics, Data Science, Conservation Laws and Symmetries, and Accelerator Science. Funds thesis work at DOE national labs, see [here](#). **Deadline Nov 12th**.

Applications open for [Moore Foundation Fundamental Physics Innovation Awards](#). The Gordon and Betty Moore Foundation Fundamental Physics Innovation Awards hope to stimulate ideas on innovative ways in which emerging technologies can be used to address pressing problems in the physics of fundamental particles and interactions. See more info. [here](#). **Application deadline November 15th**.

[The German Academic Exchange Service \(DAAD\)](#) solicits applications from students interested in Research Internships in Science and Engineering. Programs are for both undergraduates ([here](#)) and Master's and PhD students ([here](#)) interested in an internship in Germany. **Deadline Dec 15th**.

Applications open for DoD funded Science, Mathematics, and Research for Transformation (SMART) Scholarship-for-Service program for Bachelor's, Master's, or PhD STEM students, US citizens only. Provides full tuition, summer internship, and subsequent civilian employment with US DoD. See [here](#). **Deadline Dec 1st**.

Applications open for AIP science policy fellowships. Experience a unique year in Washington, DC, working at the headquarters of the U.S. Department of State or in the halls of Congress. If you are a member of one of AIP's member societies, you may be eligible to apply, including:

- Congressional fellows (**deadline Dec 15th**), See [here](#).

Applications open for DOE Scholars Program, supporting internships for undergraduate students, grad students, and post-graduates in DOE program offices and field sites. The DOE Scholars Program is a Department-wide program designed to create a pipeline of highly qualified talent in disciplinary fields that support mission critical areas of the U.S. Department of Energy (DOE). US citizens only. See [here](#). Application **deadline January 4th**.

Job Opportunities

- Assistant Professor in Quantum Science and Technology, University of Texas Austin. Apply [here](#).
- Assistant Professor in Theoretical Particle Physics, New York University. Apply [here](#).

Selected Publications

"Determination of the helical edge and bulk spin axis in quantum spin Hall insulator WTe₂", W. Zhao, E. Runburg, Z. Fei, J. Mutch, P. Malinowski, B. Sun, X. Xu, J.-H. Chu, D. Cobden, et al., <https://arxiv.org/abs/2010.09986>.

"Dispersive coupling between MoSe₂ and a zero-dimensional integrated nanocavity", D. Rosser, Y. Liu, A. Majumdar, et al, <https://arxiv.org/abs/2010.05458>.

"Axion Dark Matter eXperiment: Detailed Design and Operations", T. Braine, C. Bartram, R. Cervantes, N. Crisosto, N. Du, L. J Rosenberg, G. Rybka, J. Yang, D. Will, et al., <https://arxiv.org/abs/2010.00169>.

"Direct Observation of Ion Micromotion in a Linear Paul Trap", L. Zhukas, M. Millican, B. Blinov, et al., <https://arxiv.org/abs/2010.00159>.

UW Coronavirus Response Information

Current UW status: Phase 2

The University of Washington's Bothell, Seattle and Tacoma campuses are in Phase 2 of the COVID-19 recovery, in accordance with [Washington's Safe Start plan](#) and the state's [Campus Reopening Guide](#).

- [Face coverings are required](#) on all campuses.
- Telework is strongly encouraged for all non-critical personnel, and all in-person work must adhere to all appropriate safety measures and unit [COVID-19 Prevention Plans](#).
- Majority of courses offered remotely. Only instruction with approved safety protocols may be offered in-person.
- Gatherings of more than five people are not permitted, with the exception of instructional sessions following approved safety protocols.

Most winter quarter courses will be offered via remote instruction. Those held in person are generally hands-on with appropriate safety measures in place. See more [here](#).

The Environmental Health & Safety Department (EH&S) prepared the following guidelines

to supplement the [UW COVID-19 Prevention Plan for the Workplace requirements](#) that specifically address hazards associated with University maintenance and repair activities. View COVID-19 Prevention for Building Maintenance guidelines [here](#).

View [Quarantine and Isolation Guidance](#) [here](#). Quarantine keeps a person who might have been exposed to COVID-19 away from others, whereas isolation separates individuals who have COVID-19 from those that do not.

Learn how [contact tracing works](#) at UW [here](#). If you have been in close contact with someone who has tested positive for COVID-19, you should quarantine for 14 days, get tested for COVID-19, and watch for COVID-19 symptoms.

All personnel must complete the [COVID-19 Safety Training: Back to the Workplace](#) before or upon returning to work on-site at a University location, even if personnel have been performing critical work on site at a UW work location. Learn more [here](#).

Review the updated definition of “[close contact](#)” [here](#). Follow all CDC recommendations if you have had close contact with someone who has tested positive for COVID-19, including a 14-day quarantine and seeking appropriate testing.

[Healthy Huskies Vending Machines](#) are stocked with PPE and sanitizers to help keep you healthy while on campus. They can be found at the Magnuson Health Sciences Center, South Campus Center, Husky Union Building, IMA, Local Point in Lander Hall, and Center Table in Willow Hall.