

NSD Staff Meeting



Tuesday Oct 7, 2025, 11:00 AM → 12:00 PM US/Pacific

50A-5132 (Sessler Conference Room)

Julian Kahlbow

11:00 AM → 11:05 AM **Announcements**

Speaker: Julian Kahlbow

⌚ 5m



11:05 AM → 11:15 AM **Safety Minute**

Speaker: Jeffrey Bramble (NSD)

⌚ 10m



11:15 AM → 11:25 AM **Community Minute (CSC): LBNL Reuse Initiative**

Speaker: Tom Gallant (LBNL)

⌚ 10m



11:25 AM → 11:45 AM **Science Talk: "Project 8: Attowatts and Atomic Tritium for Neutrino Mass"**

Speaker: Alec Lindman

⌚ 20m



+ **Coffee, Tea, Cookies at NSD Office Suite with Speakers**

Staff Meeting Resources

- Feedback + Talks: jkaulbow@lbl.gov (Office: 88-211)
- Indico page with schedule and slides
- Announcements + Safety Minute +
Community Minute (Stewardship / Outreach Committee) +
Science Talk +
Cookies & Coffee



NSD COLLOQUIUM

Dr. Ryosuke Ota

Hamamatsu Photonics and UC Davis

Ultrafast timing in gamma-ray detection for positron emission tomography

Positron emission tomography (PET), widely used for cancer diagnosis, is among the most powerful imaging modalities owing to its high sensitivity and quantitative accuracy. PET relies on coincident detection of a pair of electron-positron annihilation gamma-rays and can further benefit from time-of-flight information between gamma-rays, which improves signal-to-noise ratio of PET images or reduces the radiation dose administered to patients. Therefore, ultrafast gamma-ray detection is of central importance in PET detector research. In this talk, I will present research I am conducting on ultrafast gamma-ray detectors, both at Hamamatsu Photonics and UC Davis. Topics will include Cherenkov radiator- and scintillator-integrated microchannel plate photomultiplier tubes achieving coincidence time resolutions below 50 ps full width at half maximum, silicon photomultipliers combined with nanophotonics-based technology for high photodetection efficiency and fast timing response, a proposal for high spatiotemporal PET detector module, and deep learning-based signal processing techniques aimed at elucidating underlying physics of PET detectors.

**Tuesday,
October 14,
2025**

Where?

50A-5132 (Sessler)

When?

11am: Coffee, Tea
and Cookies

11:30am: Colloquium

Zoom Link and More Details?

Visit

[https://nsd-
colloquium.lbl.gov/](https://nsd-colloquium.lbl.gov/)



NSD Colloquium

Date: Tuesday, Oct 14, 11:30 am
Room: Sessler
Speaker: Dr. Ryosuke Ota (Hamamatsu Photonics and UC Davis)
Title: Ultrafast timing in gamma-ray detection for positron emission tomography

Date: *Thursday*, Nov 13, 11:30 am
Room: Sessler
Speaker: Prof. Laura Fabbietti (TU Munich)

HIT Seminar

Date: Oct 14, 4 pm
Room: 70 - 228
Speaker: Shengli Huang (Stony Brook University)
Title: Ultrafast timing in gamma-ray detection for positron emission tomography

Research Progress Meetings (RPM)

Date: Oct 14, 4 pm

Room: Sessler

Speaker: Tim Nelson (SLAC)

Title: ?

Date: Oct 16, 4 pm

Room: Sessler

Speaker: Chuan-Hong Liu (LBNL)

Title: Nonequilibrium Quasiparticles in Superconducting Quantum Bits

PSA AI/ML Seminar

Date: Oct 16, 11 am

Room: Sessler

Speaker: ?