

OPTICA

Incubator on Petahertz Electronics

12 - 14 November 2025

Hosted by:

P. Donnie Keathley, Research Laboratory of Electronics, MIT
Christian Heide, Physics & CREOL, University of Central Florida
Matthias Kling, PULSE Institute and SLAC, Stanford University

Wednesday, 12 November 2025

Afternoon **Attendees arrive in DC and check into hotel**

18:00 **Welcome Dinner**
Location TBD

Thursday, 13 November 2025

08:00 **Breakfast at Optica Headquarters**
2010 Massachusetts Ave NW

08:30 **Welcome Remarks from Optica**

08:45 **Program Overview & Goals**
Hosts

09:00 **Overview Talks**
Field sampling and Time-Domain Spectroscopy (Nick Karpowicz)
Integrated Photonics and Free-Electron Devices (Jelena Vuckovic)
Condensed Matter (P. Hommelhoff)

10:30 **Coffee break**

10:45 **Overview Talks (continued)**
Quantum (A. Leitenstorfer)
Frequency Combs and Ultrafast On-Chip/Integrated Photonics (S. Diddams)

12:00 **Lunch**

- 13:00** **Current state of petahertz electronics**
 Time-Domain Spectroscopy
- Denis Seletskiy
 - Mike Chini
 - Shawn Sederberg
 - Hanieh Fattahi
 - Konstantin Vodopyanov
- Strong-Field and Attosecond Physics
- Steve Leone
 - Paul Corkum
- 15:00** **Coffee Break**
- 15:15** **Current state of petahertz electronics (continued)**
 Theory
- Alvaro Jimenez-Galan
 - Gopal Dixit
 - Takashi Oka
 - Ofer Neufeld
- Condensed Matter Experiment
- Manuel Meierhofer
 - Matteo Mitrano
- 17:00** **Breakout Sessions/Roadmap Planning**
- 18:00** **Networking Dinner/Reception at Optica Headquarters**
 2010 Massachusetts Ave NW

Friday, 14 November 2025

- 08:00** **Breakfast at Optica Headquarters**
 2010 Massachusetts Ave NW
- 08:30** **Summaries from Day 1 Breakouts**
- 09:00** **Current state of petahertz electronics (continued)**
 Condensed Matter Experiment
- Christoph Linau
- 10:00** **Coffee Break**
- 10:15** **Current state of petahertz electronics (continued)**
 Free electrons/Quantum
- Ido Kaminer
 - Michael Krüger
 - Kenji Ohmori
 - Ricky Ang

11:15	Breakout Sessions/Roadmap Planning
12:30	Lunch
13:00	Wrap-up/Discuss Next Steps
14:00 EST	Adjourn