NATIONAL ACADEMIES Sciences Engineering Medicine

Board on Physics and Astronomy

2025 Spring Meeting of the

Committee on Atomic, Molecular, and Optical Sciences (CAMOS)

May 19-20, 2025
Hybrid Meeting
In Person at the Academies NAS Building, Washington, DC
Online via Zoom and Livestream

MONDAY, MAY 19, 2025

OPEN SESSION

Public livestream viewable on event page:
https://www.nationalacademies.org/event/45032_05-2025_committee-on-atomic-molecular-and-optical-sciences-2025-spring-meeting

9:40 AM	**Welcome and Meeting Objectives** (*5 mins)*	**Mette Gaarde and Prem Kumar** CAMOS Co-Chairs
9:45 AM	**Session 1: AMO and Astronomy** *(2 hours)*	
	Atomic Spectroscopy at NIST: Experiment and Modeling for Astrophysics and Astronomy *(20 min presentation, 10 min Q&A)*	**Yuri Ralchenko** NIST
	Laboratory Astrophysics & New Astronomical Facilities: Maximizing the Return on Investment *(20 min presentation, 10 min Q&A)*	**Randall Smith** Center for Astrophysics
10:45	*Break (15 minutes)*	
11:00	**Resume Session 1**	
	[TBD Title: Interface of AMO Science and NASA] (20 min presentation, 10 min Q&A)	**Dan Sirbu** *(remote)* NASA Ames
	Panel discussion (30 min Q&A)	
12:00 PM	*Working Lunch with participants*	
1:00 PM	**Session 2: Quantum Sensing** *(2 hours)*	
	Quantum Diamond Sensors — Best of Both Worlds *(20 min presentation, 10 min Q&A)*	**Ron Walsworth** University of Maryland
	[TBD Title: NV Sensing and Sensing Techniques for Quantum Materials] *(20 min presentation, 10 min Q&A)*	**Amir Yacoby** Harvard University
	Quantum Sensors (QS) for Space Science: An NESC Perspective *(20 min presentation, 10 min Q&A)*	**Upendra Singh** NASA Langley Research Center
	Panel discussion (30 min Q&A)	
3:00 PM	*Break, adjourn open session*	

(Day 2 schedule information on next page)

TUESDAY, MAY 20, 2025

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9:25 AM	**Welcome back**	**Mette Gaarde and Prem Kumar** CAMOS Co-Chairs
9:30 AM	**Session 3: Agency Updates**	
	AFOSR Update *(40 min presentation + 20 min Q&A)*	**Boyan Tabakov** *(remote)* AFOSR
10:30 AM	**Quantum Technology for NASA Science** *(30 min presentation + 20 min Q&A)*	**Carolyn Mercer** NASA Science Mission Directorate
11:20 AM	*Working Lunch* (60 minutes)	
12:20 PM	**Lunchtime Science Keynote** (*25 min presentation + 15 min Q&A)*	**Waseem Bakr *(remote)*** Princeton University
1:00 PM	**Deployable Quantum Clocks and Sensors** *(25 min presentation, 15 min Q&A)*	**Jamil Abo-Shaeer *(remote)*** Vector Atomic
1:40 PM	**Public Session Closeout Discussion** *(20 min)*	**All speakers and attendees**
2:00 PM	*Break, adjourn open session (15 mins)*	

IMPORTANT NOTES

Presenters:

- Please do not include ITAR-controlled or sensitive information in your presentation.
- A National Academies Board staff member will ask you to sign a form before the meeting allowing us permission to use your likeness and presentation for our livestream video, which will be posted on our Board website after the meeting. Please get in touch with us before the meeting if you have any concerns about this usage.

THANK YOU ALL FOR YOUR COOPERATION, AND WE LOOK FORWARD TO A SUCCESSFUL MEETING.