The Eric and Wendy Schmidt Observatory System Science Symposium 2026

3–5 November · Program · Subject to change

Plenary sessions | Parallel science sessions | Interactive & discussion sessions | Breaks | Social | Buses

Tuesday 3 November

7:30 & 7:45 Buses: Piazza Vittorio Veneto → Conference Venue

8:15–8:45 Breakfast (provided)

8:45–10:30 Plenary Session I: The Schmidt Observatory System

Chair: Everett Schlawin
Room: Galileo

8:45–9:00 **Stu Feldman** Welcome & Opening Remarks
9:00–9:30 **Arpita Roy** The Schmidt Observatory System — Overview
9:30–9:40 **Arpita Roy, Nicole Arulanantham** FirstLight Awards & Early Science Programs

The Lazuli Space Observatory
9:40–9:45 **Arpita Roy** The Lazuli Space Observatory: Overview
9:45–10:05 **Gabor Furesz** The Lazuli Space Observatory: Telescope & Instruments
10:05–10:20 **Thomas Wevers, Guðmundur Stefansson** The Lazuli Space Observatory: Science capabilities & public tools
10:20–10:30 **Pete Klupar** The Lazuli Space Observatory: Mission & Programmatics

10:30–11:00 Coffee break

11:00–12:00 Plenary Session II: The Deep Synoptic Array

Chair: Nicole Arulanantham
Room: Galileo

11:00–11:15 **Gregg Hallinan** The Deep Synoptic Array: Overview
11:15–11:30 **Gregg Hallinan** DSA Data Products and Key Science 1: Continuum and Polarization
11:30–11:45 **Vikram Ravi** DSA Data Products and Key Science 2: Fast Time Domain
11:45–12:00 **Fabian Walter** DSA Data Products and Key Science 3: Spectral Line

12:00–13:00 Lunch (provided)

13:00–14:30 Plenary Session III: Argus & LFAST

Chair: Gabor Furesz
Room: Galileo

13:00–13:20 **Nicholas Law** The Argus Array — Overview
13:20–13:32 **Alan Vasquez Soto** The Argus Array — Project status
13:32–13:45 **Hank Corbett** The Argus Array — Datasets and Access
13:45–14:10 **Chad Bender** The Large Fiber Array Spectroscopic Telescope (LFAST): Architecture & Facility
14:10–14:30 **Lisa Prato** LFAST Science Capabilities

14:30–15:00 Coffee break

15:00–16:30 Interactive Session I · parallel sessions

Build your own LLM agentic workflow
Chairs: Vani Mandava, Anshul Tambay, Cordero Core (UW VISS center), Everett Schlawin
Room: Galileo

A hands-on workshop on using AI coding agents in research, from first steps to practical workflows you can take home.

Future Technologies (hardware and instrumentation)
Chair: Guðmundur Stefansson
Room: Leonardo da Vinci

A forum for instrument builders, and science users. Topics include instrumentation in development, technology gaps, and promising technologies, as well as the roles of AI and philanthropy in the next decade of instrumentation.

15:00–15:10 **Gabor Furesz** Instrumentation: Setting the Stage
15:10–15:20 **Donald Figer** Future Breakthrough Technologies for Astronomical Instrumentation
15:20–15:30 **Keith Bannister** Technology development at the Australia Telescope National Facility
15:30–15:40 **Christian Schwab** Architectures for VIS and NIR high resolution spectrometers for LFAST
15:40–15:50 **Laurent Pueyo** These are not the picometers you are looking for
15:50–16:30 **Discussion & Q/A**

Broker & alert stream infrastructure
Chairs: Thomas Wevers, Jamie Kennea
Room: Artemisia Gentileschi

How alerts from the System's discovery facilities will reach the community. Spark talks cover the broker being built for the Schmidt Observatory System, the enabling infrastructure and AI tools around it, and end-to-end workflows, followed by open discussion.

15:00–15:20 **Michael Coughlin** Real-time multi-stream discovery for time-domain and multi-messenger astronomy
15:20–15:30 **Gautham Narayan** SCIMMA as connective infrastructure for the Schmidt Observatory System
15:30–15:40 **Antonella Palmese** Transient follow-up with the Schmidt Observatory System
15:40–16:30 **Discussion & Q/A**

Data to Software to Science with the Schmidt Observatory system, part 1
Chair: Nicole Arulanantham, Andy Connolly, Rachel Mandelbaum, Jeremy Kubica (LINCC team)
Room: Isabella d'Este

Scientific discovery with the System needs scalable analysis software alongside the hardware and data services. Modelled on the equivalent exercise for Rubin's LSST, this three-part series aims to identify shared computational needs across fields and use-cases, feeding into a community white paper open to all attendees.

16:30–16:40 Transition break to plenary room

16:40–17:15 Poster session lightning talks

Chair: Jamie Kennea
Room: Galileo

1 minute presentations from all poster presenters to highlight their central theme/question.

17:15 Welcome reception

18:45 / 19:00 / 19:15 Buses: Conference Venue → Piazza Vittorio Veneto

Wednesday 4 November

7:45 & 8:00 Buses: Piazza Vittorio Veneto → Conference Venue

8:30–9:00 Breakfast (provided)

9:00–10:30 Plenary Session IV: Flagship Observatory System Science & Announcements

Chair: Nicole Arulanantham
Room: Galileo

Schmidt Observatory System Program Announcements - TBA

10:30–11:00 Coffee break

11:00–12:30 Focused Science Sessions I · parallel sessions

A — Time-domain & multi-messenger astronomy I
Chair: Thomas Wevers
Room: Galileo

11:00–11:15 **Igor Andreoni** Compact objects in the Argus era: from mergers to millisecond transient discovery
11:15–11:30 **Jonathan Carney** Relativistic TDEs Without the Trigger: Optical Selection with the Eric and Wendy Schmidt Observatory System
11:30–11:45 **Kaitlyn Shin** Characterizing DSA-Discovered Fast Radio Transients with the Schmidt Observatories
11:45–12:00 **James Freeburn** A New Era of Afterglow Discovery with the Argus Array and the Deep Synoptic Array
12:00–12:15 **Hannah Gulick** Compact Object Populations in the Next Generation of Time-Domain Surveys
12:15–12:30 **Kristen Lackeos** Multimessenger Spectroscopy

B — Exoplanets & Stars I
Chair: Gudmundur Stefansson
Room: Artemisia Gentileschi

11:00–11:15 **Laurent Pueyo** Giant planets at solar-system scales in the era of precise molecular measurements
11:15–11:30 **Megan Weiner Mansfield** Precisely measuring exoplanet compositions with combined ground-based and space-based observations
11:30–11:45 **Ji Wang** On the Impact of Correlated Noise and Spectral Resolution on the Retrieval Analysis of Future Space Missions
11:45–12:00 **Everett Schlawin** Transiting Exoplanet Observations with Lazuli: Strategies and Performance Expectations
12:00–12:15 **Tansu Daylan** Mapping Other Worlds from Transits to Magnetospheres
12:15–12:30 **Joseph Callingham** Space Weather Reports of Distant Worlds

C — Precision Analysis Techniques & Calibrations
Chair: Gabor Furesz
Room: Leonardo da Vinci

11:00–11:15 **Benjamin Pope** Physical and Machine-Learned Calibration of Space Telescopes
11:30–11:45 **Leander Lacroix** PyXm: A fast, differentiable HxRG detector simulation framework for the Lazuli IFS
11:45–12:00 **Milo Langker** Spectral information in diffraction-limited images: opportunities for Lazuli
12:00–12:15 **Nour Skaf** From ground to space: focal-plane wavefront control as the common path to deeper contrast
12:15–12:30 **Hayden Greer** A Data-Driven Model of HST/NICMOS Direct Imaging & Coronagraphy

D — Cosmology & Large Scale Structure
Chair: Nicole Arulanantham
Room: Isabella d'Este

11:00–11:15 **Tommaso Treu** Cosmology with strong gravitational lensing time delays
11:15–11:30 **Taylor Hoyt** A Return to the Optical: Accurate Cepheid Distances and H_0 with Lazuli
11:30–11:45 **Constance GANOT** Spectro-photometric standardization of type Ia supernovae
11:45–12:00 **Charlotte Ward** From the Hubble Tension to Hidden Black Holes: Time-Domain Probes of Cosmology and Episodic MBH Growth with the Schmidt Observatory System and Complementary Surveys
12:00–12:15 **Ruby Byrne** Measuring the Universe's Large-Scale Structure with the Schmidt Observatory System
12:15–12:30 **Samuel McCarty** Tracing cosmic baryons with DSA FRBs

E — External Mission & Data Synergies I
Chair: Jamie Kennea
Room: Laura Cereta

11:00–11:15 **Michael Blanton** Building Effective Large Science Collaborations
11:15–11:30 **Varun Bhalerao** Bridging the Longitude Gap: Indian Facilities as Partners for the Schmidt Observatory System
11:30–11:45 **Geoffrey Bower** ASTRON Synergies with the Schmidt Observatory System
11:45–12:00 **Ziggy Pleunis** AstroFlash milli-arcsecond localization and multi-frequency high-cadence monitoring of astrophysical transients with European facilities
12:00–12:15 **Eric Burns** The InterPlanetary Network and the Automatic Collation of High Energy Monitor Data
12:15–12:30 **Lorenzo Amati** Enhancing the Schmidt Observatory System capabilities for Multi-messenger Astrophysics and Cosmology with next-gen GRB missions.

12:30–13:30 Lunch (provided)

13:30–15:00 Interactive Session II · parallel sessions

Hands-on hackathon sessions led by members of the observatory teams. Participants will explore sample and simulated data, exposure-time calculators and simulation tools hosted in a shared JupyterHub environment with Jupyter AI capabilities to explore data products, capabilities, and start designing observing programmes and exploring capabilities.

Hackathon: Lazuli
Chairs: Gudmundur Stefansson, Mickael Rigault
Room: Galileo

Hackathon: DSA
Chairs: Gregg Hallinan, Casey Law, Thomas Wevers
Room: Artemisia Gentileschi

Hackathon: Argus
Chairs: Hank Corbett, Katie Fasbender, Gabor Furesz
Room: Leonardo da Vinci

Hackathon: LFAST
Chairs: Chad Bender, Lisa Prato, Everett Schlawin
Room: Laura Cereta

Data to Software to Science with the Schmidt Observatory system, part 2
Chair: Nicole Arulanantham, Andy Connolly, Rachel Mandelbaum, Jeremy Kubica (LINCC team)
Room: Isabella d'Este

The second session of the hands-on series, building on part 1.

15:00–15:30 Coffee break
15:00 Bus to Museo Galileo (visit starts 16:00)

15:30–17:00 Focused Science Sessions II · parallel sessions

A — Time-domain & multi-messenger astronomy II
Chair: Thomas Wevers
Room: Galileo

15:30–15:45 **Hsin-Yu Chen** From the Origins of Gold to the Age of the Universe: Gravitational-Wave Multi-Messenger Astronomy with Schmidt Observatory System
15:45–16:00 **Sarah Antier** Monitoring Fast transients sources with Schmidt Observatories and Citizen science
16:00–16:15 **Guillem Megias Homar** A Multi-Station Search for Sub-Minute Optical Bursts
16:15–16:30 **Dale (Andy) Howell** New Opportunities in the Time Domain
16:30–16:45 **Fabian Schüssler** Astro-COLIBRI: A Multi-Messenger and Transients Platform for the Schmidt Observatory System
16:45–17:00 **Leo Singer** Multi-Facility Scheduling for Time-Domain Networks and Lunar Adaptations of the Argus Array

B — Exoplanets & Stars II
Chair: Gudmundur Stefansson
Room: Artemisia Gentileschi

15:30–15:45 **Shravan Hanasoge** Toward a Foundation Model of Stars and Planetary Systems
15:45–16:00 **Nicole Arulanantham** Toward Linking Disk Chemistry and Exoplanet Atmospheres with the Schmidt Observatory System
16:00–16:15 **Joe Ninan** Why do young protoplanetary disc systems undergo accretion outbursts?
16:15–16:30 **Katherine Follette** How Schmidt Observatories Can Inform the Puzzling Population Properties of Protoplanets, Planet-Forming Disks, and Planetary-Mass Companions
16:30–16:45 **Virginie Faramaz** Dust, Planets, and Habitable Worlds: Exploring Exoplanetary Systems with Lazuli
16:45–17:00 **Logan Pearce** Exoplanet Reflected Light Direct Imaging with Lazuli ExtraSolar Coronagraph

C — Precision Statistical Methods
Chair: Jamie Kennea
Room: Leonardo da Vinci

15:30–15:48 **Eric Ford** Increasing Interpretability with Physics-informed Machine Learning Models
15:48–16:06 **Tomas Budavari** Cleaner and Deeper Sky Reconstructions from Multiple Exposures: ImageMM and Beyond
16:06–16:24 **Matt O'Dowd** Mapping the Vicinity of Supermassive Black Holes
16:24–16:42 **Iliana Cortés** A machine learning algorithm to analyze broad band photometric time series of AGN
16:42–17:00 **Mickael Rigault** Simulation based inference for supernova cosmology

D - Pipelines & Data Archives
Chair: Everett Schlawin
Room: Isabella d'Este

15:30–15:45 **Robert Lupton** Lessons Learned: From SDSS to PFS and Rubin
15:45–16:00 **Steven Tingay** The Murchison Widefield Array: opportunities for collaboration based on massive data archives and new observations
16:00–16:15 **Jason Grout** Jupyter in the Age of AI
16:15–16:30 **Adam Boesky** The SpeakYSE: An Agentic LLM for Supernova Science
16:30–16:45 **Gregory Dubois-Felsmann** Lessons in multi-observatory software: reuse and reusability of the Rubin Observatory software by SPHEREx and others
16:45–17:00 **Nevan Caplar** HATS/LSDB: Scalable Cross-Match, Lightcurves, and Multi-Modal Data Access

E — Galaxies & ISM
Chair: Gabor Furesz
Room: Laura Cereta

15:30–15:45 **Stella Ocker** Unveiling the Dynamic Interstellar Medium in Real-Time
15:45–16:00 **Ryan Keenan** Preparing for Massive HI Spectral Surveys with the DSA
16:00–16:15 **W.J.G. (Erwin) de Blok** DSA Neutral Hydrogen Surveys in the Nearby Universe
16:15–16:30 **Konstantin Haubner** Galaxy dynamics in the era of the DSA: Lessons for large-sample HI kinematic modeling
16:30–16:45 **Shany Danieli** Dwarf Galaxies as Probes of Small-Scale Cosmology and Galaxy Formation with the Schmidt Observatory System
16:45–17:00 **Tirth Surti** From Faint Radio Sources to Cosmic Star Formation with the Schmidt Observatory System

17:00 Optional social activity / excursion
Buses depart Conference Venue at 17:00:
- **Museo dell'Opera del Duomo (drop-off Via dell'Oriuolo; visit starts 17:45)**
- **Osservatorio di Arcetri (visit starts 18:00; return to Piazza Vittorio Veneto at 20:00)**
- **Pasta class, Piazza Lorenzo Ghiberti 5/r (starts 18:00)**
- **No activity: bus to Piazza Vittorio Veneto**

Thursday 5 November

7:45 & 8:00 Buses: Piazza Vittorio Veneto → Conference Venue

8:30–9:00 Breakfast (provided)

9:00–11:00 Plenary Session V: Emerging Frontiers & Unique Opportunities with the Schmidt Observatory System

Chair: Thomas Wevers
Room: Galileo

9:00–9:30 Time-domain and multi-messenger astronomy
Stephen Smartt The follow up bottleneck
Samaya Nissanke The Next Decade of Gravitational Wave Detectors: Challenges and Perspectives for Multi-Messenger Astronomy
9:30–10:00 Exoplanets and Stars
Jean-Michel Desert New Worlds, New Horizons: Exoplanets in the era of the Schmidt Sciences Observatory System
Meredith MacGregor Habitability in Context: The Interconnected Evolution of Stars and Planets
10:00–10:30 Cosmology
Christopher Stubbs & Elisabeth Krause Overview of cosmological applications of the Schmidt Observatory System, in conjunction with AI and fusion with additional data sources
10:30–11:00 Forward-looking software and data infrastructure
Rachel Mandelbaum Drinking from the fire hose: enabling the astronomical community's science goals in the era of too much data
Francois Lanusse AI as Scientific Infrastructure: From Foundation Models to Research Agents

11:00–11:20 Coffee break

11:20–12:50 Interactive Session III · parallel sessions

Artificial intelligence in astronomy and science
Moderated by Arpita Roy & Carlie Wiener
Room: Galileo

Alex Szalay
Joshua Bloom
Vani Mandava
Stu Feldman

Gravitational wave & multi-messenger astronomy
Chairs: Thomas Wevers, J. Kennea
Room: Leonardo da Vinci

Discussion session on how the System should take part in multi-messenger astronomy, including the O5 era for GW, neutrinos, and beyond. Topics include coordination with gravitational-wave detectors and existing follow-up networks, and how to optimally observe EM counterparts across the System.

11:20–11:30 **Barbara Patricelli** Synergies with Gravitational Wave detectors
11:30–11:40 **Mansi Manoj Kasliwal** Discovering Multi-Messenger Signals with the Schmidt Observatory System
11:40–11:50 **Stephen Smartt** Gravitational wave follow-up in O5 and the 2030s with the Schmidt Observatory System
11:50–12:50 **Discussion & Q/A**

Solar system objects & small bodies
Chair: Everett Schlawin
Room: Artemisia Gentileschi

A forum for the small-body community on where the field is heading, its critical science questions, and the paths a coordinated observatory system could open.

11:20–11:35 **Darryl Seligman** Interstellar Object Detection and Characterization with The Schmidt Observatory System
11:35–11:50 **Gyula Szabó M** Finding the Small and Faint: from the Solar System to Other Planetary Systems
11:50–12:50 **Discussion & Q/A**

Data to Software to Science with the Schmidt Observatory system, part 3
Chair: Nicole Arulanantham, Andy Connolly, Rachel Mandelbaum, Jeremy Kubica (LINCC team)
Room: Isabella d'Este

The final session of this hands-on series.

12:50–13:40 Lunch (provided)

13:40–14:00 Plenary Session VI: Framing Future Work

Room: Galileo

Setting up the afternoon's co-working, future work and interactions: how large, community-organized observing programmes for the Schmidt Observatory System can take shape, and framing the work ahead.
13:40–14:00 **Arpita Roy**

14:00–16:00 Breakout co-working: seeding large community observing proposals · parallel sessions

Community-led working sessions to begin organizing collaborative science programmes for the System, building on the week's discussions. Identifying synergies between different fields, the most exciting science the System will enable, and crystallizing these into actionable next steps.

TDAMM community coordination
Chair: Thomas Wevers
Room: Leonardo da Vinci

Exoplanet community coordination
Chairs: Gudmundur Stefansson, Nicole Arulanantham
Room: Artemisia Gentileschi

Cosmology community coordination
Chair: Gabor Furesz
Room: Isabella d'Este

General astrophysics community coordination
Chairs: Jamie Kennea, Everett Schlawin
Room: Laura Cereta

16:00–16:15 Coffee/transition break

16:05 / 16:10 / 16:15 Buses: Conference Venue → Piazza Vittorio Veneto

16:15–18:00 Break before heading back for the Formal conference dinner

18:05 & 18:15 Buses: Piazza Vittorio Veneto → Conference Venue

18:45 Formal conference dinner

22:00 Buses: Conference Venue → Piazza Vittorio Veneto