# A NICER Legacy: Neutron Stars, Black Holes, and Time-Domain Astronomy

Joint Space-Science Institute meeting, Annapolis, MD
November 2–4, 2026

## Monday, 2 November 2026

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| 9:00–9:45am | Zaven Arzoumanian & Keith Gendreau | Overview of NICER |
| **NEUTRON STAR RADII AND DENSE-MATTER EOS** | | |
| 9:45–10:15am | Slavko Bogdanov | NICER neutron star radius measurements |
| 10:15–10:30am | **POSTER LIGHTNING TALKS** | |
| 10:30–11:00am | **COFFEE** | |
| 11:00–11:30am | Jaki Noronha-Hostler | Implications of NICER radii for nuclear physics |
| 11:30–11:45am | Alex Dittmann | The Latest Neutron Star Mass and Radius Measurements using NICER Data |
| 11:45am–12:00pm | Paul Ray | A NICER Catalog of X-ray Emission from Rotation-Powered Millisecond Pulsars |
| 12:00–12:30pm | Alice Harding | Implications of NICER observations for pulsars |
| 12:30–2:00pm | **LUNCH** | |
| 2:00–2:15pm | Wynn Ho | The most sensitive gravitational wave searches of young X-ray pulsars enabled by NICER |
| 2:15–2:30pm | Anu Kundu | Multipolar Magnetic Field Modelling of NICER Millisecond Pulsars |
| 2:30–2:45pm | Constantinos Kalapotharakos | From Pulse Profiles to Pulsar Physics: Neural-Network Inference Across X-rays and Gamma Rays |
| 2:45–3:00pm | Greg Olmschenk | Accelerating Pulsar Parameter Estimation Using Convolutional Neural Networks |
| 3:00–3:15pm | Rishank Diwan | Study of the Timing and Mode-Changing Behavior of the Gamma-ray Pulsar PSR J2021+4026, Using NICER Archival Observations |
| **QPEs, TDEs, AND "CHANGING-LOOK" AGN** | | |
| 3:15–3:45pm | Joheen Chakraborty | Quasi-periodic eruptions: new transient probes of stars near massive black holes |
| 3:45–4:15pm | **COFFEE** | |
| 4:15–4:45pm | Muryel Guolo | Black Hole Demographics with Tidal Disruption Events |
| 4:45–5:15pm | Javier Garcia | Changing-Look AGN in the NICER Era |
| 5:15–5:30pm | Michael Nowak | NICER Observations of the 'Changing Look Seyfert' NGC 2992 |
| 5:30–5:45pm | Seth Larner | A Nicer Way to Use NICER to Characterize AGN Variability |
| 5:45–6:00pm | Bindu Rani | Unveiling the X-ray Variability of NGC 4051 with NICER |
| 6:00–6:15pm | Vishal Sudhakar | Investigating the Variability Signature of a Fluctuating Warm Corona in Active Galactic Nuclei |

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| 6:30pm | **Reception** | |

## Tuesday, 3 November 2026

### STELLAR-MASS BLACK HOLE BINARIES

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| 9:00–9:30am | Erin Kara | NICER's Revolutionary Impact on Black Hole X-ray Binaries |
| 9:30–10:00am | Jim Stone | Radiation GRMHD Models of Accreting Stellar Mass Black Holes |
| 10:00–10:15am | Oluwashina Adegoke | Accretion-Flow Evolution in Black Hole X-ray Binaries: A NICER View |
| 10:15–10:30am | Candela Bellavita | Linking the QPO lags and the radio jet in GRS 1915+105 |
| 10:30–11:00am | **COFFEE** | |
| 11:00–11:15am | Karan Akbari | Does the Wind Change, or Only the Light Falling on It? Fe XXVI Absorption through Three Heartbeat Epochs of GRS 1915+105 |
| 11:15–11:30am | Maitreya Kundu | Constraining the Focused Wind of Cyg X-1 with X-ray Spectroscopy, Timing, and Polarization Observations |
| 11:30–11:45am | Jeremy Schnittman | X-ray Variability and Polarization of Accreting Black Holes |
| 11:45am–12:00pm | Yash Gursahani | A Tale of Two Scales: The Competing Effects of Viscosity and Resistivity in Black Hole Accretion Disks |
| 12:00–12:15pm | Lizhong Zhang | Timing Reveals the Hidden Nature of Soft State Black Hole Accretion Disks |
| 12:15–12:30pm | Vera Berger | Black hole X-ray binary outbursts |
| 12:30–2:00pm | **LUNCH** | |

### ACCRETING NEUTRON STARS, MAGNETARS AND FRBS

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| 2:00–2:30pm | Deepto Chakrabarty | NICER Observations of Accreting Neutron Stars |
| 2:30–3:00pm | Amanda Cook | Magnetars and FRBs |
| 3:00–3:15pm | Hoa Dinh Thi | Probing Magnetar Geometry, Surface Hotspots, and Strong-Field Physics with Pulsed and Polarized X-ray Emission |
| 3:15–3:45pm | **COFFEE** | |
| 3:45–4:00pm | Alex Van Kooten | Continued Activity from the Magnetar SGR 0501+4516 |
| 4:00–4:15pm | Zorawar Wadiasingh | Magnetar Fireballs and Short Bursts |
| 4:15–4:30pm | Colleen Wilson-Hodge | Synergies between Fermi GBM and NICER |
| 6:30pm | **Banquet — Buddy's Crabs and Ribs, 100 Main Street, Annapolis, MD** | |

## Wednesday, 4 November 2026

### NICER MONITORING AND IMPLICATIONS

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| 9:00–9:30am | Tom Maccarone | Science-enabling capabilities of NICER |
| 9:30–10:00am | Ethan Partington | Probing AGN Accretion Physics with Intensive NICER Monitoring Campaigns |

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| 10:00–10:15am | Mark Avara | A Magnetic Unification of Merging Supermassive Black Hole Binaries |
| 10:15–10:30am | Kaitlyn Porter | Electromagnetic Signatures of Massive Binary Black Hole Systems |
| 10:30–11:00am | **COFFEE** | |
| 11:00–11:15am | Tejas Sewak | Soft Excess Variability and a Test of X-ray Reprocessing in the AGN Mrk 359 and NGC 4051 Using Time-Resolved NICER Spectroscopy |
| 11:15–11:30am | Victor Liu | Bridging X-rays and Neutrinos with Long-Term Monitoring of AGN Coronal Emission |
| 11:30–11:45am | Chris Nagele | What simulation postprocessing can tell us about the soft X-ray excess |
| 11:45am–12:00pm | Ethan Poore | NICER Monitoring of the Candidate QPO AGN KIC 9650712 |
| 12:00–12:15pm | Jaegeun Park | Revisiting the Quiet Disk: Soft-State Variability with NICER |
| 12:15–12:30pm | Isabelle Coughlin | Testing Thin-Disk Assumptions in Black Hole X-ray Reflection |
| 12:30–12:45pm | Craig Markwardt | The Present and Future of NICER Science Analysis |

## POSTERS

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| Jack Bishop | Turbulent Evolution of Black Hole Binaries Embedded in AGN disks |
| Yaswant Sai Ejjagiri | Toward Energy-Resolved Neural-Network Emulators for Joint Inference of Neutron-Star Mass, Radius, and Multipolar Magnetic Fields with NICER |
| Austin Fomby | NICER monitoring of the X-ray variability and corona-jet connection in the radio galaxy 3C120 |
| Jeremy Hare | X-ray and IR observations of the Magnetar 4U 0142+61 |
| Erika Hoffman | Uncovering Collisionally Ionized, Relativistic, and BAL-like Outflows in MCG-6-30-15 with Chandra HETG, XRISM, and Bayesian Framework |
| Jacob Payne | Spectral analysis of millisecond pulsars to inform optical design for pulsar-informed navigation |
| Dev Sadaula | The Response of Warm Absorbers to the Variations in the Ionizing Continuum in the Active Galaxy NGC 4051 |
| James Steiner | Catching Shadows with NICER - Rocky Objects around X-ray Binaries |
| Nadia Wohlfarth | GPU-Accelerated Pulse Profile Modeling Framework for Hotspot Geometry Analysis of NICER Data |