NANOGRAV FALL COLLABORATION MEETING 2025

Held at the University of Montana
Missoula, MT
November 17th–19th

All times are listed in Mountain Standard Time (UTC -7 Hours)

Last updated: November 12, 2025

Monday, November 17th

Time	Session
8:45 AM - 9:00 AM	**Welcome Address** Presented by Deborah Good, Chair of the LOC
9:00 AM - 10:30 AM	**Talk Session 1:** Noise Modeling and the ISM **Chairs: Kayhan Gültekin and Jeffrey Hazboun**
Michael Lam	*Chromatic Modeling for the 20-Year Data Set*
Mercedes Thompson	*Bayesian Blocking for Dispersion Measure Binning: Tuning the Prior*
Jeremy Baier	*Gaussian Process Chromatic Noise Analysis of the NANOGrav 20 year dataset*
Anala Kavumkandathil Sreekumar	*NANOGrav 15yr dataset: DM Structure Function Analysis*
David Nice	*Flux Densities from the 15-year Data Set*
Jacob Turner	*Evaluating the Prospects of Cyclic Deconvolution in Millisecond Pulsars*
10:30 AM - 11:00 AM	**Coffee Break**
11:00 AM - 12:30 PM	**Discussion Session 1:** The 20yr Dataset **Chairs: Sarah Burke-Spolaor and Timothy Dolch** **Panel (TBC): Aaron Johnson and Michael Lam** Opening Talk: *An update on the NG20 data set* **Thankful Cromartie**
12:30 PM - 1:30 PM	**Lunch**
1:30 PM - 3:00 PM	**Talk Session 2:** Profile Analysis and Pulsar Timing **Chairs: William Fiore and Amanda Karis**
Ashley Martsen	*Pulsar Profile Variability in the NANOGrav 15yr Dataset*
Ross Jennings	*Profile-domain jitter correction methods*
Shania Nichols	*How to Train Your Pulsar: Timing J1713+0747 with Pulse Profile Components*
Abhimanyu Susobhanan	*Advances in wideband timing methods*
David Wright	*Accelerated Timing Solutions with MAP Noise Estimates*
Sophia Sosa Fiscella	*Improved Timing Precision With VLBI Astrometric Priors*
3:00 PM - 3:30 PM	**Coffee Break**

Time	Session
3:30 PM - 5:00 PM	**Talk Session 3:** Small Bodies and PTA Instruments **Chairs: Joseph Glaser and Lydia Guertin**
Jackson Taylor	*Search for Exotrojans around NANOGrav Pulsars - Final Results*
Aaron Johnson	*Asteroids Noise and PTAs*
Matthew Bartnik	*Using CHIME DM Data as Priors on NANOGrav Data*
Fengqiu Adam Dong	*Pulsar Science Beyond CHIME-o-Grav*
Georgia Lowes	*Investigating single pulses from PSR J1713+0747 with the Large European Array for Pulsars*
Pratyasha Gitika	*Tuning the MeerKAT Pulsar Timing Array*
5:00 PM - 8:00 PM	**Conference Reception** The conference reception will take place in University Center Rooms 330/331/332. A cash bar will be available and hors d'oeuvres will be served. During the reception, the planetarium film "Cosmic Clocks" will be shown in the Payne Family Native American Center Stargazing Room.

Tuesday, November 18th

Time	Session
9:00 AM - 10:30 AM	**Talk Session 4:** GW Detection **Chairs: Paul Baker and Caitlin Witt**
Kushagra Narain Nag	*Developing a Bayesian Pipeline for MAPS with PTMCMC and bilby: From Hypermodels to Transdimensional Methods*
Robin Case	*Fixing Red Noise Fourier Coefficients For a Frequency Domain Optimal Statistic*
Shashwat Sardesai	*The Noise Marginalized Fp statistic*
Nathan Craig	*Using Eigenfunctions to Form Better Low Rank Approximations of the Covariance Matrix*
Nima Laal	*Are Pulsar Timing Arrays a Viable Probe of Supermassive Black Hole Binary Population?*
William Lamb	*Astrophysical GWBs aren't "normal"...*
10:30 AM - 11:00 AM	**Coffee Break**
11:00 AM - 11:30 AM	**Speed Networking**
11:30 AM - 12:30 PM	**Discussion Session 2:** Funding and Careers **Chairs: Laura Blecha and Deborah Good**
12:30 PM - 1:30 PM	**Lunch**
1:30 PM - 2:30 PM	**Talk Session 5:** GW Signals and STARS **Chairs: Rutger van Haasteren and Sarah Vigeland**
Alexander W. Criswell	*Echoes from the Grave: Orphaned Pulsar Terms from Massive Binary Black Hole Mergers*
Rand Burnette	*Gravitational Memory Scaling Laws: Investigating PTA Scaling*
Niccolò Veronesi	*Host galaxies of continuous waves: completeness and sky distributions*
Timothy Dolch	*The Student Teams of Astrophysics ResearcherS - Undergraduate Pathways Program*
2:30 PM - 3:30 PM	**Poster Session** (starting with one-minute lightning talks)
Sarah Burke-Spolaor	*BOBcat!*
William Fiore	*Testing GR with Wide-Binary Pulsars at CHIME*
Lydia Guertin	*The NANOGrav 15-Year Data Set: A Retrospective Analysis of Insterstellar Scintillation, Scattering, and Delay Mitigation*
Dhruva Kalyani	*Determining the Viability of a Simple Power Law in Strong Scattering Regimes with B1133+16*
Amanda Karis	*Comparison of Model-Switch Bayes Factor Estimators Using Toy Models*
Susie Paine	*Cosmic Clocks: Making a Pulsar Timing Planetarium Film*
Alexander Saffer	*Isolating Black Widow Systems*
Pranav Satheesh	*Supermassive black hole dynamics and host galaxy properties using cosmological simulations*
Meena Seth	*Hunting for Giants: A 50,000 Hour Search for Bright Radio Pulses in the CHIME/FRB Sidelobes*
Vladimir Strokov	*Hankel low-rank matrix approximation for time series denoising*
Rutger van Haasteren	*MetaPulsar*
Zachary Zelensky	*Search for Microhertz Gravitational Waves Using Binary Resonance*

Time	Session
3:30 PM - 4:00 PM	**Coffee Break**
4:00 PM - 5:00 PM	**Discussion Session 3:** The Future of NANOGrav **Chairs: Joseph Lazio and Scott Ransom** **Panel (TBC): Shami Chatterjee / Tyler Cohen and Stephen Taylor** Opening Talk: *Optimal Observing Strategies with DSA-2000* **Tyler Cohen**

Wednesday, November 19th

Time	Session
9:00 AM - 10:30 AM	**Talk Session 6:** Anisotropy and Continuous Waves **Chairs: Matt Miles and Vladimir Strokov**
Beatrice Eleonora Moreschi	*Dissecting the nanoHz gravitational wave sky: frequency-correlated anisotropy induced by eccentric supermassive black hole binaries*
Taha Moursy	*Empirical Anisotropy Sensitivity Curves and Scaling Laws*
Daniel Oliver	*Analytical Sensitivity Curves and Skymaps for PTA Stochastic Background Anisotropy*
Anjana Ashok	*A "Line"-Robust Detection Statistic for Continuous Waves*
Aiden Gundersen	*A Joint GWB + CW Analysis of the NANOGrav 15-Year Data Set*
Kyle Gersbach	*Reworking Residuals: Towards a PTA Global Fit through Residual Subtraction*
10:30 AM - 11:00 AM	**Coffee Break**
11:00 AM - 12:30 PM	**Discussion Session 4:** Planning for single source detection **Chairs: Joey Shapiro Key and Xavier Siemens** **Panel (TBC): Neil Cornish and Caitlin Witt** Opening Talk: *From Background to Brightest: Predicting the First Detectable Continuous Wave* **Emiko Gardiner**
12:30 PM - 1:30 PM	**Lunch**
1:30 PM - 2:30 PM	**Hack Session**
2:30 PM - 3:30 PM	**Hack Session**
3:30 PM - 4:00 PM	**Coffee Break**
4:00 PM - 4:45 PM	**Hack Session**
4:45 PM - 5:00 PM	**Closing Remarks**

Funding for this collaboration meeting has been provided by the National Science Foundation's Award #2020265. NANOGrav is very grateful to the University of Montana for hosting this NANOGrav Collaboration Meeting.

Special thanks to the members of the Local Organizing Committee (LOC), Scientific Organizing Committee (SOC), and Student Workshop Committee (SWC): Deborah Good (LOC Chair), Joseph Glaser (LOC), Holly Legleiter (LOC), Margaret Mattson (LOC), Mercedes Thompson (LOC), Xavier Siemens (LOC), Paul Brook (SOC Chair), Anjana Ashok (SOC), Neil Cornish (SOC), Chung-Pei Ma (SOC), Ashley Martsen (SOC), Henri Radovan (SOC), Nima Laal (SWC Chair), Subham Banerjee (SWC), Robin Case (SWC), Alexander Criswell (SWC), Emmanuel Fonseca (SWC), and Jackson Taylor (SWC).