

Unravelling the Universe with Pulsar Timing Arrays

Thursday, 30 November 2023 - Saturday, 2 December 2023

University of Pittsburgh

Book of Abstracts

Contents

Intro to PTAs	1
Modeling Pulsar noise and predicting Pulsar TOA	1
Searching for GW bursts in PTAs	1
SMBHB formation and merger at high redshift	1
SMBHB merger at low redshift	1
Multi-messenger science with supermassive black hole binaries.	1
Astrophysics from nanohertz GW	1
NANOGrav 15 yrs stochastic GW analysis	1
Neutron star equation of state with pulsars	2
Observability of Dark Matter Substructure with Pulsar Timing Correlations	2
Domain Walls	2
Cosmological Phase Transition at PTA	2
Relic gravitational waves and primordial magnetic fields	2
Tests of GR	2
NANOGrav tests of new physics	3
Sub-Nanohertz Gravitational Waves with PTAs	3
Future of NANOGrav and other PTAs	3
Welcome	3
NANOGrav tests of new physics	3

Morning Early / 302

Intro to PTAs

Corresponding Author: ptbaker@widener.edu

Morning Early / 303

Modeling Pulsar noise and predicting Pulsar TOA

Corresponding Author: ross.jennings@mail.wvu.edu

Morning Late / 304

Searching for GW bursts in PTAs

Morning Late / 305

SMBHB formation and merger at high redshift

Corresponding Author: nianyic@andrew.cmu.edu

Afternoon Early / 306

SMBHB merger at low redshift

Corresponding Author: sean.mcwilliams@mail.wvu.edu

Afternoon Early / 307

Multi-messenger science with supermassive black hole binaries.

Afternoon Late / 308

Astrophysics from nanohertz GW

Corresponding Author: lzkelly@berkeley.edu

Morning Early / 309

NANOGrav 15 yrs stochastic GW analysis

Corresponding Author: vigeland@uwm.edu

Morning Early / 310

Neutron star equation of state with pulsars

Corresponding Author: emmanuel.fonseca@mail.wvu.edu

Morning Late / 311

Observability of Dark Matter Substructure with Pulsar Timing Correlations

Corresponding Author: harikrishramani@gmail.com

Morning Late / 312

Domain Walls

Corresponding Author: yangbai@physics.wisc.edu

Afternoon Early / 313

Cosmological Phase Transition at PTA

Corresponding Author: kosowsky@pitt.edu

Afternoon Early / 314

Relic gravitational waves and primordial magnetic fields

Corresponding Author: tinatin@andrew.cmu.edu

Afternoon Late / 315

Tests of GR

Corresponding Author: alexander.saffer@mail.wvu.edu

Afternoon Late / 316

NANOGrav tests of new physics

Corresponding Author: kboddy@physics.utexas.edu

Morning Early / 317

Sub-Nanohertz Gravitational Waves with PTAs

Corresponding Author: asafjeffdror@gmail.com

Morning Late / 318

Future of NANOGrav and other PTAs

Corresponding Author: mclaughlin.maura@gmail.com

Morning Early / 319

Welcome

Morning Early / 320

NANOGrav tests of new physics

Corresponding Author: kboddy@physics.utexas.edu