



Contribution ID: 136

Type: **not specified**

The Indian Pulsar Timing Array: Joining the global hunt for nanohertz gravitational waves and related sciences

Tuesday 29 August 2023 17:00 (25 minutes)

The Indian Pulsar Timing Array Consortium (InPTA) is an Indo-Japanese collaboration which does precision timing of millisecond pulsars with the upgraded Giant Metrewave Radio Telescope (uGMRT) and is part of the International Pulsar timing array since 2021. The InPTA effort stands out with its unique ability to simultaneously monitor IPTA pulsars in the L and P bands using the uGMRT. Our low-frequency radio observations allow for accurate dispersion measure estimates and enhance the precision of pulsar timing measurements by reducing systematic uncertainties and improving the overall reliability. Recently, we marked a significant milestone with the first Data Release with 3.5-year observation data of 14 milli-second pulsars, achieving comparable accuracy to other PTAs. This presentation provides a concise overview of InPTA's objectives, recent scientific results, and our ongoing contributions to the IPTA consortium.

Presenter: DESAI, Shantanu (IIT Hyderabad)

Session Classification: Parallel