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## Timekeepers of the Universe: The recent gravitational wave observation by PTA and PBH.

*Wednesday, 19 June 2024 09:40 (10 minutes)*

The recent data releases by multiple pulsar timing array (PTA) experiments show evidence for Hellings-Downs angular correlations indicating that the observed stochastic common spectrum can be interpreted as a stochastic gravitational wave background. We study whether the signal may originate from gravitational waves induced by high-amplitude primordial curvature perturbations. Such large perturbations may be accompanied by the generation of a sizeable primordial black hole (PBH) abundance. We discuss in which scenarios the inclusion of non-Gaussianities in the computation of the abundance can lead to a signal compatible with the PTA experiments without overproducing PBHs. The talk is based on these papers:

<https://inspirehep.net/literature/2759520>

<https://inspirehep.net/literature/2672979>

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