

Updates from the European Pulsar Timing Array

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Abstract

We present a status update about the European Pulsar Timing Array's (EPTA) efforts toward gravitational wave detection using pulsars. We discuss the status of each of the five radio telescopes involved in the EPTA regarding pulsar timing science: the Effelsberg telescope in Germany, the Westerbork telescope in the Netherlands, the Lovell telescope in the UK, the Nancay telescope in France, and the Sardinia Radio Telescope in Italy. We also discuss the status of the Large European Array for Pulsars (LEAP) project, which involves simultaneous observations at each of those five large telescopes and provides pulsar timing datasets with higher signal-to-noise, and as a consequence higher probability of gravitational wave detection. The LEAP array can be thought of as one large radio telescope with a diameter of 200 meters, and reaches a sensitivity similar to the planned SKA Phase 1 in South Africa.