

PHAROS Conference 2020: The multi-messenger physics and astrophysics of neutron stars



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The Thousand Pulsar Array programme on MeerKAT

Friday 3 April 2020 11:00 (15 minutes)

I will present initial results from the Thousand Pulsar Array (TPA) program on the MeerKAT interferometer. The TPA is a 5 year project which observationally aims to (a) observe more than 1000 pulsars to obtain high-fidelity pulse profiles, (b) observe some 500 pulsars over multiple epochs, (c) observe long sequences of single-pulse trains from several hundred pulsars. The scientific outcomes from the program will include determination of pulsar geometries, the location of the radio emission within the pulsar magnetosphere, the connection between the magnetosphere and the crust/core of the star, tighter constraints on the nature of the radio emission itself as well as interstellar medium (ISM) studies. Early results look extremely promising!

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