Joint Pulsar Studies with the FAST Radio Telescope and the Fermi LAT

Monday 10 October 2022 16:00 (15 minutes)

The Five-hundred-meter Aperture Spherical radio Telescope (FAST) is a Chinese megascience facility built by the National Astronomical Observatories (NAOC) of the Chinese Academy of Sciences (CAS). Completed in 2016, FAST is the world's largest single-dish radio telescope, and is currently operating as an international facility, with regular proposal calls open to observers from around the world. In December 2017, an MOU between FAST and the Fermi LAT Collaboration was signed, with the goal of sharing expertise and resources in the interest of facilitating joint pulsar studies with both observatories. This has led to a number of discoveries, including PSR J0318+0253, the high-energy MSP with the faintest ever detected radio pulsations. Indeed, the superb sensitivity of FAST has enabled the deepest radio searches to date of a number of systems suspected of hosting pulsars, in some cases revealing previously undetected radio pulsations. In addition, the Commensal Radio Astronomy FAST Survey (CRAFTS) has led to the discovery of more than 170 new radio pulsars, some of which have subsequently been shown to be gamma-ray emitters. In this talk I will summarize some of the key results from the FAST/Fermi-LAT collaboration, and give an update on the status of various ongoing observing proposals.

Track

Pulsars

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