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## **Bridging the centuries: from Arecibo to CRAFTS**

The Five-hundred-meter Aperture Spherical radio Telescope (FAST), the largest single-dish telescope ever built, has been in operation for over three years. Motivated by the great Arecibo observatory, FAST achieves the best instantaneous sensitivity in deca-centimeter bands. FAST data have resulted in more than 300 peer-reviewed publications, including high-impact results such as 9 on Nature, 2 on Science, 3 on Nature Astronomy, and cover articles on Science Bulletin and SCPMA, etc. Based on a novel high-cadence CAL injection technique, we have designed the Commensal Radio Astronomy FAST Survey (CRAFTS), which realizes, for the first time at any major facility, simultaneous data recording of pulsar search, HI imaging, HI galaxies, and transients (FRB and SETI). CRAFTS could discover  $\sim 1000$  pulsars and 0.5 million galaxies as well as obtain  $\sim 10$  billion voxels of HI images. I will discuss some of the science highlights so far, particularly how FAST observations are helping establish an evolutionary picture of FRBs and challenge the canonical picture of star formation.

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