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UPGRADES TO THE ALLEN TELESCOPE ARRAY: WIDE-BAND, WIDE-FIELD RADIO OBSERVATIONS

Abstract

The Allen Telescope Array (ATA) is a 42-element, fully steerable, interferometer located in Hat Creek, Northern California. The instrument's unique log-periodic feed design provides an impressive spectral coverage ranging from 1 to 12 GHz, making it an ideal facility for wide-band astronomical surveys. Four independent digital signal processing chains can be utilized, delivering a bandwidth of 650 MHz each, or up to 2600 MHz of instantaneous bandwidth if processed simultaneously.

In this talk, I will describe the ongoing refurbishment program of the instrument. I will also be discussing various astronomical observations that have been performed with the ATA, including that of pulsars and fast radio bursts. Moreover, I will describe planned and ongoing SETI surveys that would leverage the wide-field and wide-band capabilities of the telescope.