

41st SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The
Next Steps (A4)
SETI 1: SETI Science and Technology (1)

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RECENT OBSERVATIONS AND NEXT STEPS FOR SETI PROGRAMS AT THE SETI INSTITUTE

Abstract

Recent SETI activity is enabled by the SETI Institute's own Allen Telescope Array, a 42-dish interferometer in Northern California operating from 1-10 GHz. In this paper I will review results from observing campaigns past, present and future, using this telescope. We demonstrate features of interferometry that allow for novel and more efficient paths to radio SETI. Results include a targeted search of stars known to have exoplanets with particular focus on a small subset (around 100) of exoplanets in or near the habitable zone. In 3 years we intend to observe all the Kepler planetary candidates and many more exoplanets in a nearly continuous frequency range from 1-8 GHz. Meanwhile, a non-targeted or "blind" survey is begun near the galactic center, where the stellar density is high. These campaigns use the SonATA discovery system which is optimized for targeted searches and leverage interferometry for RFI rejection. We are now building a new system where interferometry is leveraged for very wide solid angle SETI surveys that is to run side by side with the current SonATA analysis.