

43rd SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The  
Next Steps (A4)  
SETI 1: SETI Science and Technology (1)

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A 1.1 TO 1.9 GHZ SETI SURVEY OF THE KEPLER FIELD: A RASTER SCAN SEARCH FOR  
NARROW-BAND EMISSION

**Abstract**

We present the data reduction process, current progress, and initial analysis of a search for narrow-band signals (width  $<5$  Hz) of extraterrestrial origin arising from the Kepler field. In early 2011 we performed a raster scan of the entire Kepler field using the Robert C. Byrd Green Bank Telescope (GBT) and the Green Bank Ultimate Pulsar Processor (GUPPI) instrument, covering a wavelength range of 1.1 - 1.9 GHz, saving all data for offline reduction and analysis. The procedures and results of a companion study with the same instrument, a targeted search for narrow-band signals from 86 Kepler stars hosting confirmed planets, was published in the *Astrophysical Journal* in 2013 (no extraterrestrial signals were found). We ultimately aim, through studies like these, to place limits on the number of intelligent and communicative extraterrestrial civilizations within the technical limitations of our experiment, acknowledging that we are probing only a very small subset of the parameter space open to us as SETI explorers.