

50th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) –
The Next Steps (A4)
SETI 2: SETI and Society (2)

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A STUDENT-LED SURVEY OF THE GALACTIC PLANE FOR TECHNOSIGNATURES

Abstract

Since 2012, students have been using the Goldstone Apple Valley Radio Telescope (GAVRT) to conduct a Search for Extraterrestrial Intelligence (SETI) campaign of the Galactic plane at frequencies of about 8.5 GHz. This search is guided by the assumption that a narrow-band radio signal from a fixed location in the sky, occurring across multiple observation periods, is unlikely to be caused by a natural source. Student-written reports of GAVRT spectral data identify interference, noise, and candidate signals. We present an initial analysis (interpretation, calibration, and uncertainty calculation) of these report data. Based on the initial assumption, we searched the report data for similar signals occurring during different observation periods within the same region of sky. No such signals were found. However, our analysis reveals patterns in the distribution of interference and candidate signal frequencies. The non-randomness of these patterns suggests that these interfering radio sources are non-trivial and may be able to be identified upon further examination.