

**TERAHERTZ INITIATIVES AT THE
ANTARCTIC SUBMILLIMETER TELESCOPE
AND REMOTE OBSERVATORY (AST/RO)**

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The Antarctic Submillimeter Telescope and Remote Observatory (AST/RO) is a 1.7-meter diameter offset Gregorian instrument located at the NSF Amundsen-Scott South Pole Station. This site is exceptionally dry and cold, providing opportunities for Terahertz observations from the ground. Preliminary analysis of recent site testing results shows that the zenith transparency of the 1.5 THz atmospheric window at South Pole often exceeds 20% during the Austral winter. Routine observations at 810 GHz have been conducted over the past two years, resulting in large-scale maps of the Galactic Center Region and measurements of the ^{13}C line in molecular clouds. During the next two years, the observatory plans to support two Terahertz instruments:

- 1) TREND (*Terahertz Receiver with Niobium Nitride Device*—K. S. Yngvesson, P. I.), and
- 2) SPIFI (*South Pole Imaging Fabry-Perot Interferometer*—G. J. Stacey, P. I.).

AST/RO could be used in future as an observational test bed for additional prototype Terahertz instruments. Observing time on AST/RO is available on a proposal basis (see <http://cfa-www.harvard.edu/~adair/AST.RO>).