

## **Prospects for Terahertz Radio Astronomy from Northern Chile**

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The terahertz (THz) frequency range (1-3 THz = 100-300 microns) provides an important window on the far-infrared Universe. Recent studies of the transmission spectrum of Earth's atmosphere reveal that windows centered at 1.03 THz, 1.3 THz, and 1.5 THz become significantly transparent from high altitude (> 5000m) sites in northern Chile. We are currently building a small radio telescope antenna in order to assess the feasibility of ground-based THz astronomy. The antenna, an 800 mm diameter paraboloid, has a surface accuracy of 3  $\mu\text{m}$  rms and a beam width of about 1 arcminute at 1.5 THz. It will be coupled to HEB receivers, also under development at SAO. Initial astronomical tests will be carried out in the 850 GHz and 1.03 THz atmospheric windows. Receivers for the two higher frequency bands are currently under development and are expected to be deployed towards the end of 2002.

A number of atmospheric transmission spectra will be presented and the current status of the project will be reviewed.