

NEW ASTRONOMY WINDOWS OPEN ON THE ANTARCTIC PLATEAU: THZ RADIOASTRONOMY FROM DOME A

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New technologies permit terahertz frequency astronomical observations, but only from select locations on the Earth's surface. We propose to install a terahertz-capable radiotelescope (HEAT) on the highest point of the Antarctic plateau, the best terrestrial site for such an instrument, thus opening the last remaining new astronomical window.

This talk reviews our scientific aims. These include the first terahertz imaging of molecular clouds within the Galaxy, key components in the formation and evolution of planets, stars and galaxies. By studying the most important interstellar cooling lines, we can understand the progress of star formation and galaxy evolution from the early universe to the present time.