

Fine-Resolution Radar Measurements for Ice-Core Drilling Site identification Near Dome-Fuji

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As a part of a multi-national collaboration between the USA, Japan and Norway, we developed a mobile, high-performance radar system for fine-resolution measurements of ice thickness and imaging of the englacial and basal structure of the East Antarctic Ice sheet. We operated the radar near Dome Fuji during the 2018/2019 Austral Summer campaign. We performed surface-based measurements over 2,000 line-km to aid with the identification of potential drill sites for the recovery of ice samples more than 1 to 1.5 million years (1 Ma to 1.5 Ma) old in this area. In this contribution, we will present an overview of the radar system and field operations; and show the most recent radar images obtained after synthetic aperture radar (SAR) processing, precision geo-location, and systematic corrections applied to the radar data.

Keywords: Oldest Ice , Radio Echo Sounding