

Surface cracks and voids seen in 400 MHz and 3 MHz radar (US-ITASE 2006)

The CRREL 400 MHz GPR crevasse-detection system used by the 2006 US-ITASE program in East Antarctica recorded the below-surface expression of firm cracks observed on the snow surface. The intersections of stratigraphic reflectors at the crack edges act as point diffractors and produce strong hyperbolae. Excavation of a number of cracks revealed that vapor transport causes some cracks to develop into large (2 m wide by 30 m deep by 100+ m long) shallow voids. The largest of the voids are also seen as point diffractors in the St. Olaf College 3 MHz deep radar data indicating that these feature may originate as crevasses.

(<http://www.stolaf.edu/other/cegsic/itase2/>)

