Communications systems for remote Polar GNSS station operation (paper, 2007)

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Communications systems for remote Polar GNSS station operation

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I. Introduction

Emerging polar geophysical networks will enable the collection of critical new data sets to address many fundamental questions about the nature and behavior of the crust and mantle beneath Antarctica and Greenland, and their relationship to ice sheet dynamics and climate. It has long been recognized that major advances in addressing many compelling questions in polar geoscience require continuous recording of Global Navigation Satellite System (GNSS) and seismic data at stations that can operate autonomously for a period of two or more years (e.g., Workshop on Antarctic Neotectonics, 2001; Workshop on Structure and Evolution of the Antarctic Plate, 2003). This chapter addresses communication systems for bringing remote polar network GNSS data to the Internet. While the focus is on communications related to GPS systems, the communication strategies are similar for GNSS applications also utilizing GLONASS (and future Galileo) signals.

[See attached .pdf file for more.]

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