

# USGS MAGNETIC OBSERVATORY OPERATIONS: STATUS AND PLANNED IMPROVEMENTS

CAROL A. FINN, Alan M. Berarducci

Geomagnetism Program, U. S. Geological Survey, PO Box 25046, MS 966, Denver, CO, USA, [cafinn@usgs.gov](mailto:cafinn@usgs.gov)

The U.S. Geological Survey (USGS) Geomagnetism Program currently operates 14 magnetic observatories across the United States and its territories, covering a wide range of latitude and longitude. We present an outline of facility renovation plans that are designed to ensure the long-term operations of USGS observatories. This includes construction of a new primary sensor building at Barrow, Alaska in 2009. We assess and present results on absolute baseline quality at USGS observatories and methods for monitoring and improving real-time and definitive data quality. Over the past few years, baseline stability has been improved through improved temperature control, facility improvement, and increased monitoring. We review USGS data acquisition and transmission improvements, including validation of a one-second data product and improved data availability and timeliness through redundant systems. We show examples of real-time USGS web pages and describe plans for web-based data downloads. Efforts continue to calibrate magnetometers and develop the next-generation calibration system. Operations are being modified to accommodate development of a real-time Dst product. In order to better focus on key observatory priorities, the USGS recently decided to close the Del Rio, Texas observatory in an effort to concentrate limited resources on the remaining observatories. Issues and strategies for coping with the twin challenges of stagnant funding and rising operational costs are discussed.

Observatory, data-quality, operations

Carol A. Finn, Geomagnetism Group Leader, U. S. Geological Survey, PO Box 25046, MS 966, Denver, CO, USA, tel: (303) 273-8475, fax: (303) 273-8506, e-mail: [cafinn@usgs.gov](mailto:cafinn@usgs.gov)