

## A partly manned geomagnetic observatory in Antarctica provides a reliable data set

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**A b s t r a c t:** During the 1996-1997 Austral summer a new geomagnetic observatory was deployed at the Spanish Antarctic Station, Juan Carlos I (Livingston Island, South Shetland Islands). The main instrument is an Overhauser magnetometer deployed in dual axis Helmholtz coils, a  $\delta D/\delta I$  configuration. The site is only manned during the summer, but the magnetometer is left recording throughout the rest of the year. Due to the low power requirements of this instrument continuous operation can be maintained using a combination of solar cells and wind generators which charge a battery rack. This DC system has operated very reliably, providing uninterrupted 24 V at 17 W for more than three years. For the real time access to the data three options have been provided and tested during the last survey: using METEOSAT or GOES Data Collection Systems, or by retrieving the data using a modem through INMARSAT. Although absolute observations can only be made during the summer months the stability of the baselines is excellent due to the environmental conditions under which the observatory is operated.

**Key words:** remote observatories, satellite transmission, observatory practice

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