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“ANTÁRTICA Y LOS CAMBIOS AMBIENTALES GLOBALES”



ANTARCTICA AND THE GLOBAL ENVIRONMENTAL CHANGES: A BRAZILIAN RESEARCH NETWORK

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Since 2002, one of the main efforts of Brazil in Antarctica has been an interdisciplinary research network supported by the Brazilian National Research Council for Scientific and Technological Development (CNPq) and the Ministry of Environmental. It aims to characterise, monitor and model atmosphere–cryosphere–geospace–ocean interactions on the quadrant 60-67°S, 50-65°W, looking for relationships with extra-polar processes that affect directly South America. This Antarctic area has shown some of the strongest and fast signals of environmental changes for the last 40 years. The study also aims to reconstruct the history of climatic variability along the last 300 years. Seven Brazilian groups form the network, cooperating with 15 national research institutions and 16 international ones, including several groups from Argentina and Chile, and its is divided in 3 scientific areas: 1) Geospace and environmental impact; 2) High Latitude Oceanography and 3) Cryosphere–Troposphere interactions.

Fieldwork included several oceanographic cruisers in the Bransfield and Gerlache straits to launch dozens of drift buoys and collection of zooplacton/ictioplacton. Distribution and population density of humpback whale was also kept during these cruisers in the Bransfield. Glaciological investigations include: 1) Survey and monitoring of four ice caps (Brabant, Joinville, King George and



Nelson islands); environmental interpretation of the James Ross Island ice core. The network has kept, at the Brazilian Station Comandante Ferraz, a long standing monitoring of VLF waves to study TRIMPI events. A project to monitor the depletion of stratospheric ozone and UV-B radiation (from the Antarctic Peninsula to Brazil) is also supported by this network. An OH aeroluminescent imager spectrometer was placed at Ferraz for measuring mesosphere temperature.