

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)

Poster Session (P)

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53RD SOUTH AFRICAN NATIONAL ANTARCTIC EXPEDITION (SANAE) AND DENEL
SPACETEQ SCHOOL OUTREACH PROGRAM

Abstract

The South African National Space Agency (SANSA) operates Weather infrastructure at the SANAE IV base. Each year SANSA sends 2 overwintering engineers (spend 14 months in Antarctica) and 4-5 Space Science (Engineers or scientists) volunteers for the 3 month relief voyage to Antarctica. The 53rd Antarctic expedition marked a milestone for SANSA, a new High frequency digital radar system was installed at the South African Antarctic research base, SANAE IV. The new radar system forms part of the Super Dual Auroral Radar Network (SuperDARN) an international network of over 30 radars used to monitor the dynamics of space weather. The SANSA team also performed routine maintenance on other equipment used to monitor space weather. Antarctica is the ideal position to conduct space weather research due to the earth's magnetic field lines converging at the south pole. Monitoring Space weather is important as it impacts many technological systems including Global Positioning System (GPS), spacecraft orbits, power distribution, surveillance radar, High Frequency communications and transpolar aviation. The overall program and expedition will be presented.