



Statistics of Whistlers Received at both Rothera and SANAE IV

B. Delpont (1,2), A. B. Collier (1,2), E. J. Koen (1,3)

(1) SANSA Space Science, Hermanus, South Africa (brettdelpont@gmail.com), (2) University of KwaZulu-Natal, Durban, South Africa, (3) Royal Institute of Technology, Stockholm, Sweden

The Automatic Whistler Detector (AWD) has for the first time made extensive statistical studies of whistler occurrence possible. Continuous whistler observations have been made at a number of locations around the globe, in some instances extending over nine years. Three statistical studies have been performed using the data from these instruments, which have provided compelling evidence for the location of the source region of whistlers received at Tihany (Hungary), Dunedin (New Zealand) and Rothera (Antarctica). Analysis of AWD data has shown that the source region of SANAE IV and Rothera whistlers are relatively close, but despite this, that Rothera recorded on average ~ 5 times more whistlers than SANAE IV. Rothera and SANAE IV are separated by ~ 3000 km, and Rothera is ~ 3 hours earlier in MLT. The sites do differ considerably in L-value, with SANAE IV at $L=4.32$, and Rothera at $L=2.71$. During a three month period in 2009 simultaneous observations were made at both SANAE IV and Rothera. Using an algorithm to identify instances where the same whistler is observed at both sites, we find that the number of these whistlers is comparatively small. However, we proceed to discuss the occurrence statistics of these multiply received whistlers, and from this we attempt to glean some information about the differences in whistler occurrence rates between the two sites.