



Mr. R. Kirton, Regional Director of B.P. (S.A.) handing over the Antarctic Medal to Dr. D. G. Torr. In front Dr. S. Meiring Naude, President of the C.S.I.R., Pretoria and, Mrs. Naude.

Photo: B.P. (S.A.)

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ANTARCTIC MEDAL, 1967

The medal of The South African Antarctic Association is awarded to DOUGLAS G. TORR, at present Research Officer with the National Institute for Telecommunication Research, Johannesburg.

He went to the South African Antarctic Base with SANAE IV as the scientist responsible for the ionospheric programme of Rhodes University. This programme was carried out enthusiastically and with great care and devotion. He brought back records containing convincing evidence that the ionosphere is much more often disturbed at SANAE than seems reasonable. Most of the time these disturbances appeared to be complete blackouts. This fact was very puzzling because it might just as well have been attributed to instrument failures. When Professor Gledhill had the opportunity to consider the data of the Alouette satellite, Doug Torr and Marsha Harding, then an M.Sc. student and now his wife, found the key to the puzzle after a very careful and penetrating survey of all the data. Thus he was not only able to solve the puzzle of the ionosphere at SANAE, but he put forward a theory, which convincingly explains the well-known peculiarities of the E and F2 layers of the ionosphere as observed in South Africa and all over the world.

Thus he could also explain puzzling anomalies in radio communication. His work, which started at SANAE, will undoubtedly benefit radio communication. His research was written up as a Ph.D. thesis ("Ionospheric effects in the Southern Radiation Anomaly"), the first Ph.D. thesis based on scientific work done at South Africa's Antarctic Base, SANAE. At least five publications have already appeared in international scientific journals with Dr. Torr as one of the authors.

He was also a distinguished member of the Antarctic team which was led by Mr. Andrew Venter in 1963. He was willing at all times to help and to do more than was required of him in the line of duty. He managed to repair the radio theodolite for the meteorologists which was not an easy task. Once he assisted Dr. Wagner during an emergency operation. On another occasion his timely action prevented a Muskeg-tractor from being destroyed by fire.

While at SANAE he mastered the Morse code. This turned out to be very helpful when he was able to keep radio contact with mountain expeditions towards the end of 1963. And, finally, he proved to be one of the best and most original cooks of the expedition.

Reply by Dr. D. G. Torr

First of all I would like to thank the Antarctic Association for this very great honour which they have bestowed on me. I would also like to thank the Department of Transport for the facilities which they have made available in the Antarctic, and Rhodes University for nominating me as an expedition member. The decision of the Department of Transport to establish a base in Antarctica has not only put South Africa in a position to partake in an international undertaking, but it also offers to South African scientists the opportunity to study phenomena which, because of the inaccessible position of the continent, could not have been studied otherwise. As Prof. King has clearly shown to us in his speech, these results inevitably tie up and lead to a better understanding of phenomena in our own country and other countries.

I would like to pay tribute to all the institutions and individuals interested and active in Antarctic research, whose combined efforts

have resulted in the success of such an undertaking. In particular I would like to mention Prof. J. A. Gledhill of Rhodes University and Prof. P. Stoker of the Potchefstroom University for their foresight and the effort they made to draw attention to the importance of conducting investigation into geophysical phenomena of the South Atlantic Geomagnetic Anomaly, or, as it is now referred to, the South African Magnetic Anomaly.

I express my sincere thanks to my fellow expedition members and in particular to our leader, Mr. Andrew Venter. I cannot say enough or give a good enough account of these men for the contribution they made to the success of SANAE IV.

Finally I want to express gratitude to my wife, my co-research worker, for her constant encouragement and help throughout the course of this research.