

AN UPDATE ON THE BEHAVIOUR OF ATMOSPHERIC GREENHOUSE AND RELATED TRACE SPECIES IN THE SOUTHERN OCEAN AND ANTARCTIC REGION

L.P. Steele¹, R.L. Langenfelds¹, D.M. Etheridge¹, P.B. Krummel¹, C.E. Allison¹, L.W. Porter², P.J. Fraser¹, C.M. MacFarling Meure¹, C.M. Trudinger¹, T.D. van Ommen³, R.J. Francey¹

¹*CSIRO Marine and Atmospheric Research, Aspendale, Victoria, Australia,* ²*Cape Grim Baseline Air Pollution Station, Bureau of Meteorology, Smithton, Tasmania, Australia,*

³*Department of the Environment and Heritage, Australian Antarctic Division, and Antarctic Climate and Ecosystems CRC, Hobart, Tasmania, Australia*

Studies of atmospheric composition in the Southern Ocean and Antarctic region continue to reveal new findings which have a wide relevance. This presentation will show and interpret records of the major greenhouse and related trace species from a network of measurement sites across the region, with an emphasis on the most recent findings. These direct atmospheric records have been tightly linked to the much longer records, now extended back 2000 years before present, of atmospheric composition retrieved from the Antarctic firn and ice at the Law Dome site.