

The HALO-South Airborne Campaign

By Professor Adrian McDonald

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Host: Dr Gokul Vishwanathan

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ABSTRACT:

The HALO-South campaign brought together German and New Zealand climate researchers to make targeted measurements that will reduce uncertainties in climate models, by sampling the pristine air over the Southern Ocean. This involved the DLR HALO instrumented research aircraft flying from Christchurch International Airport in September–October 2025. During the HALO-South deployment a total of 21 research flights were completed successfully. HALO-South airborne observations were supported using ground-based remote sensing observations made at the Tāwhaki National Aerospace Centre (near Christchurch) and at the Invercargill Metservice site. I will talk about the forecasting and flight planning efforts that helped target key atmospheric phenomena and also detail some initial results.

About the Speaker:

Professor Adrian McDonald is a distinguished atmospheric scientist at the University of Canterbury in Christchurch, New Zealand. His research focuses on understanding processes relevant to the atmosphere through fundamental measurements (using a mixture of satellite remote sensing and surface observations), and the evaluation of weather and climate models. He is an experienced field researcher and has led 20 Antarctic deployments and 8 Southern Ocean voyages. He has also been involved in 11 International Field campaigns (HALO-South, ACADIA, Sea2Cloud, CAPRICORN, MARCUS, MICRE, SOCRATES, K-AXIS, AWARE, PIPERS, GoSouth) in the last 10 years.