



## **Antarctic Operational Weather Forecasting; A unique Meteorological challenge.**

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Antarctica's cold, extreme, but largely pure and untouched environment, combined with its remoteness is a unique research location. This brings scientists from across the Globe to the research stations and field camps across Antarctica during the constant daylight of the "summer" season. As a result of this research significant advances have been made in the fields of climate, glaciology, meteorology, oceanography, astronomy, biology and geology, with further discoveries to come in the future. Its isolation, coupled with its extreme, highly variable weather, makes research in Antarctica a significant logistical challenge. In response to this the Met Office has developed a unique relationship with the British Antarctic Survey (one of the leading environmental research centres) over the last forty years. We have sent Meteorologist to the continent as part of the logistic team that allows for successful and efficient scientific research, as well as aviation safety. I was part of this team during the summer season of 2011. My four months on the Antarctic Peninsula gave me a special insight into living and working in polar conditions.

Accurate weather forecasts in this hostile, erratic operating environment are vital for the success of the British Antarctic Survey's scientific research. I will discuss the unique challenges of living and working in a polar environment, the extremes of weather across the Antarctic, and the provision of weather forecasting information. This will include the application of satellite imagery, the strengths and weaknesses of global and high-resolution numerical models, plus the means to visualise this to provide quality forecasts.