



The Microphysics of clouds over the Weddell Sea during the Austral Summer

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Three airborne campaigns have been carried out over the Weddell Sea during the austral summer – two during 2010 and 2011 in the west close to the Antarctic Peninsula and one in the east close to the Brunt Ice shelf. The cloud microphysics at both locations are compared and the source of aerosols that are active as cloud nuclei are considered.

It is found that the difference between the two sides of the Weddell Sea is small despite the obvious difference in potential sources of cloud nuclei. It is found that in both areas a major source of cloud nuclei are air masses that have passed close to the surface of the sea ice leading to the suggestion that the sea ice is a source of nuclei.