



European Marine Background Ice Nucleating Particle concentrations Measured at the Mace Head Station, Ireland.

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Ice formation is an important process which controls cloud microphysical properties and can be critical in the creation of precipitation, therefore influencing the hydrological cycle and energy budget of the Earth. Ice Nucleating Particles (INP) can greatly increase the temperature and rate of ice formation, but the sources and geographical distributions of these particles is not well understood. Mace Head in Ireland is a coastal site on the north eastern edge of Europe with prevailing winds generally from the Atlantic Ocean with little continental influence. Observations of INP concentration from August 2015 using the Horizontal Ice Nucleation Chamber (HINC) at temperature of -30 [U+F0B0]C are presented. Correlations between the INP and meteorological conditions and aerosol compositions are made, as well as comparisons with commonly used INP concentration parameterisations. Observed INP concentrations are generally low, suggesting that oceanic sources in this region do not contribute significant numbers of INP to the global distribution.