



Observations of polar mesosphere summer echoes at 69° in the Arctic and Antarctica - an update

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Polar Mesosphere Summer Echoes (PMSE) have been observed for more than 30 years with 50-MHz VHF radars at various locations in the Northern Hemisphere. Continuous observations of PMSE are conducted on the northern Norwegian island of Andøya (69.3°N) using the ALWIN radar (1999–2008) and MAARSY (since 2011). The same kind of southern hemisphere PMSE measurements began in 2004 with the Australian Antarctic Division's VHF radar at Davis Station in Antarctica (68.6°S), which is at a comparable southern latitude to Andøya. Since the radars at both sites are calibrated, the received echo strength of PMSE from more than a decade of mesospheric observations on both hemispheres could be converted to absolute signal power, allowing a direct comparison of the measurements. We present a comparison of PMSE observations obtained at both radar sites during a period of 21 boreal summers (Andøya, NH) and 15 austral summers (Davis, SH) and discuss similarities and differences of seasonal and diurnal variations of PMSE occurrence frequencies and echo intensity.