



A comparison of Polar Mesosphere Summer Echo observations from locations in the Arctic and Antarctica

Ralph Latteck (1), Kaoru Sato (2), Koji Nishimura (2), and Toralf Renkowitz (1)

(1) Leibniz-Institute of Atmospheric Physics, Radar sounding and sounding rockets, Kühlungsborn, Germany (latteck@iap-kborn.de), (2) Department of Earth and Planetary Science, University of Tokyo, Tokyo, Japan

Polar Mesosphere Summer Echoes (PMSE) are observed with 50-MHz VHF radars at various locations in the Northern Hemisphere for more than 20 years. Continuous and homogeneous observations of PMSE have been done on the North-Norwegian island Andøya (69.3°N, 16.0°E) from 1999 until 2009 using the ALWIN radar and since 2011 using the Middle Atmosphere Alomar Radar System (MAARSY) at the same location. In 2011 the PANSY radar - a Mesosphere-Stratosphere-Troposphere/Incoherent Scattering (MST/IS) radar - was installed at Syowa Station, Antarctica (69.0°S, 39.4°E) and continuous observation of PMSE were started in the austral summer period 2013/2014. Since both MAARSY and PANSY are high-power-large aperture radars mesospheric echoes are observed almost continuously during the summer seasons in the Northern and Southern Hemisphere now. We present a first comparison of PMSE observations obtained at both radar sites during a period of 6 boreal summers (Andøya, NH) and 3 austral summers (Syowa, SH) and discuss similarities and differences of seasonal and diurnal variations of PMSE occurrence frequencies and echo intensity.