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## PSCs in the Northern Hemisphere and Southern Hemisphere Simulated by the Global Cloud Resolving Model NICAM

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In this study, a cloud-resolving atmospheric general circulation model NICAM is applied to numerical simulations with a simple cloud microphysics scheme g98 of polar stratospheric clouds (PSCs). NICAM (Nonhydrostatic ICosahedral Atmospheric Model) is developed and being improved by Atmosphere and Ocean Research Institute, University of Tokyo and Frontier Research Center for Global Change/Japan Agency for Marine-Earth Sciences and Technology, and is installed at the high-performance computing system T2K-Tsukuba at University of Tsukuba.

PSCs are optically thin clouds which appear regularly in the winter polar stratosphere at 15 to 25 km altitudes. PSCs are divided into Type I and Type II depending on their forming temperature. Type I is called NAT (Nitric Acid Trihydrate) and appears at temperature below 189.1K (-77C) about 55hPa (19km altitudes), and Type II are ice particles that form when the temperature falls below -84C.

Keywords: NICAM, Polar Stratosphere Clouds, Cloud ice mixing ratio