

Pc5 Observations using ST-APOG mode of King Salmon HF radar Pc5 Observations using ST-APOG mode of King Salmon HF radar

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The Pc5 geomagnetic pulsation is one of the causes of enhancement of the relativistic electron enhancement in the outer radiation belt. Radial diffusion and/or drift bounce resonance driven by Pc5 geomagnetic pulsations can accelerate electrons. Therefore, to understand the generation mechanism of Pc5 and current condition for the global distribution of Pc5 is important. For these purposes, special mode of observations (ST-APOG) are being operated by SuperDARN during the conjunction of Van Allen Probes (VAP) in the field of view of the HF radars. In this special mode, we use three camping beams for high-time resolution observations for Pc5 and 2-min. scan for the global distribution of plasma convection. Based on this observations, ground-based magnetometer network, VAP, and other satellite data, we can examine the three-dimensional distribution of electromagnetic variations of Pc5. Initial results of ST-APOG mode observations by King Salmon HF radar will be reported in our presentation.

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