

Statistical analysis of quasi-periodic aurora and their relationship to the HF radar in the postnoon sector

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A number of quasi-periodic visible auroras have been observed in the postnoon sector by using all-sky TV cameras and meridian scanning photometers (MSP). The dynamics of quasi-periodic aurora are variable with respect to the temporal / spatial variations. Their generation mechanisms are still unclear. The field of view of the SuperDARN SENSU Syowa East radar covers over the Chinese Zhongshan Station (invariant latitude is -74.5 and $MLT=UT+1.5hr$) in Antarctica, where an all-sky TV camera and a high-speed multi-channel (427.8nm, 557.7nm, 630.0nm) meridian scanning photometer are operating. Such coordinated tools give us an important opportunity to observe quasi-periodic variations of visible aurora, which are outstanding phenomena in the dayside cusp region.