indefinitely away, but with only a small flux in it. These two types of flux rope ejections may account for the different types of CMEs.

■ Session : 고층대기
4월 29일(수) 14:40 - 15:55 제2발표장

[ATM-01] Diurnal Variations of Sporadic Meteor Flux Observed by SKYiMet Meteor Radar

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Meteors are the important source of metallic atoms in the ionosphere. The sporadic meteors penetrating in 80-100 km altitudes provide a long term effect on the metallic ion layer formations. Earlier studies have shown that the sporadic meteor flux is not constant throughout the globe. However, recent studies showed that they are not random, but follow certain periodic diurnal and seasonal pattern. For a better understanding of meteor origin, it is important to know precisely the global annual, seasonal and diurnal variation of meteor flux. In the paper we study the diurnal variation of meter flux rate at different latitudes using observations from Thumba, India, Darwin, Buckland Park, Davis. We observed a secondary peak occurring at 0300 LT in addition to a morning peak occurring at 0600 LT at Thumba. At other latitudes only one peak occurring at 0600 LT is observed. Interestingly, this secondary peak has a clear seasonal variations. In summer (winter), the primary (secondary) peak is larger than the secondary (primary) peak. However, the primary and secondary peaks are comparable in equinoxes. Comparing with the observations from low to high latitudes, we conclude that the secondary peak is strongly limited in the region of the equator. We suggest that the secondary peak could be due to sporadic meteor sources located around apex, which may not be associated with Helion and Antihelion sources.

[ATM-02] On the Seasonal Variation of Meteor Decay Times Measured by a Meteor Radar at King Sejong Station(62°S, 58°W), Antarctica

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A meteor radar, installed at King Sejong Station (KSS), Antarctica in February 2007, has been detecting numerous meteors more than 18,000 per day. Meteors entering the earth's atmosphere reveal much information on the atmosphere through the process of interacting with the increasingly dense air molecules, especially the altitude region between 70km and 100km. Meteor decay times measured by a meteor radar have been used to infer the atmospheric temperature and pressure under the assumption that diffusion is the only process for decay of meteor echo signals. However, meteor decay times measured over KSS decrease with decreasing altitude below 80~85 km, clearly opposite behavior to the diffusion assumption for meteor decay. The monthly averaged height profiles of meteor decay times show a maximum at 80~85km, which appears at higher altitude during southern summer season than winter. This feature was previously attributed to additional removal of meteor trail electrons by icy dust particles in the cold mesosphere. Models of meteor decay time with dust particles (Havnes and Sigernes, 2005; Younger et al., 2008) predict shorter decay times for weak echoes than strong echoes, which was supported by some of previous observations (Ballinger et al., 2008; Singer et al., 2008). However, our measured meteor decay times are generally shorter for strong echoes than for weak echoes in the altitude region of about 70~90km. In addition, height profiles of meteor echo power and SNR (signal-to-noise ratio) show steep decreases below 80~85km, indicating fast extinguishing mechanism of meteor trails even in the beginning stage at the low altitudes. These characteristics found in our data may imply fast removal of plasma/electrons other than absorption by dust particles. We will discuss about other possible mechanisms related with D-region chemistry.

[ATM-03] Differences between the TOPEX/Jason and GPS TEC measurements

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The TEC data obtained from the TOPEX/Jason and GPS satellites have been extensively utilized for the various studies on the ionosphere due to their unprecedented temporal and spatial coverage. The TOPEX/Jason