日本の雷活動に見られる27日周期変動について

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27-day variation of lightning activity in Japan

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We report our preliminary results on the frequency analysis of lightning activity in Japan. Previous studies have shown that there is a component of 27-day solar rotational period in lightning activities at around the maxima of the 11-year solar activity cycles (Sato et al., 2005; Muraki et al., 2005). Also, it has been reported that cumulus cloud activities around the western Pacific Ocean has a frequency component of 27-day solar rotational period near the solar cycle maxima. Associated with solar rotations and the migration of solar active regions, Total Solar Irradiance (TSI), UV, Galactic Cosmic Rays (GCRs) and solar wind toward the Earth varies in time. We discuss the possible relations of the 27-day lightning cycles to such solar related parameters.