

**R010-P15**

**ポスター 3 : 9/26 AM1/AM2 (9:00-12:30)**

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## **Schumann resonance parameters at Kuju and global lightning activity**

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The Schumann resonance (SR) is the global resonance of electromagnetic waves generated by global lightning activity. SR parameters, which are amplitude and frequency, reflect the properties of both global lightning activity and the state of the Earth-ionosphere cavity. In this study, we compared SR amplitudes with global lightning activity and examined their relationships in terms of seasonal variation.

We investigated the SR detected by an induction magnetometer at low-latitude station Kuju (KUJ; 33.06 N, 131.23 E) by comparing global lightning activity. The global lightning activity was derived from the satellite-based total lightning data obtained by the Optical Transient Detector (OTD) and Lightning Imaging Sensor (LIS). Monthly time series of flash rate were investigated in this study.

Generally, SR amplitudes in a day show peaks which correspond with the major thunderstorm centers. Lightning activity develops after a mean delay time of ~3hours with respect to the solar zenith. Thus, the lightning activities of Africa, Asia, south-east Asia, South America, and North America peak at around 15 UT, 10 UT, 08 UT, 20 UT, and 23 UT, respectively. The peak of flash rate in north America appeared in July and August. SR amplitude at 23 UT became correspondingly maximum in August. In the case of Africa, flash rate became minimum in June and July. Similarly, SR amplitude at 15 UT became smaller in June, July, and August. The feature suggests that the SR corresponds with African lightning activity. The flash rate for specific regions and SR amplitudes at specific UT showed the similar seasonal variations. We concluded that the SR amplitudes at KUJ reflects global lightning activity.