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Seasonal Variations of Mid-Latitude Traveling Ionospheric Disturbances Observed in OI (630nm) Airglow Images

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Traveling Ionospheric Disturbances (TID) are one of the outstanding phenomena in the mid-latitude thermosphere and ionosphere. Recently, it has become possible to observe two-demensional pattern of TID using optical insturuments and multi-point GPS networks. However, statistical analysis using these two-demensional data has not been done yet particularly in the Japanese longitudinal sector.

Since October 1998, two all-sky imagers have observed OI (630nm) airglow emission (altitude 200-300km) at Rikubetsu (43.5N,143.8E) and Shigaraki (34.9N, 136.1E). We study seasonal variations of mid-latitude TID activity using the imaging data observed at these two sites from October 1998 to September 2000.

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