

An estimation of spatial structure of the sporadic-E layer with waves of HF band

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Observation of ionospheric irregularities with HF Doppler and HF direction finding techniques have carried at Oarai Test Field of CRL. Observation has used the JG2XA(5006kHz, 8006kHz), transmitted from UEC Chofu campus. It became discriminable the Doppler frequency from sporadic-E(Es) layer from simultaneous these observation techniques. Comparison between Doppler spectrum width of reflective wave from the Es layer and fbEs showed good correlation. Spatial structure of Es layer was estimated by using Doppler spectrum width and received electric wave intensity. Result of the analysis on the Es layer observed during 0700-1000JST on AUG 22, 2003 reveals the westward motion of the layer with velocities of 61m/s, and scale of the layer was estimated to be 660km.