

Observation of mid-latitude sporadic E over North America by GNSS-TEC

*Takato Suzuki¹, Masato Furuya², Kosuke Heki², Jun MAEDA³

1.Hokkaido University, 2.Faculty of Science, Hokkaido University, 3.Hokkaido University Library

Maeda and Heki. (2014) succeeded in capturing sporadic E (Es) over Japan two-dimensionally, using the observation of Global Navigation Satellite System - Total Electron Content (GNSS-TEC). We aimed to capture Es over the western coast of North America where there is mid-latitude same as Japan and GNSS stations are dense.

First, we chose the dates whose critical frequencies of Es (foEs) were more than 12 MHz at Dissonde in Pt. Arguello (lat: 34.8, lon: 239.5) in the morning and noon in 2006 through 2015 from May to August. Second, we made GNSS-TEC maps.

We succeeded in capturing Es over America and indicated that a strong Es appeared also at different longitude can be captured by GNSS-TEC. Es observed this time had E-W direction slope. It is though that this reflects E-W wind shear.

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