#PERWITASARI SEPTI^{1,2)}, 西岡 未知 ^{1,2)}, Hozumi Kornyanat^{1,2)} (¹ 情報通信研究機構, ⁽² 情報通信研究機構

Development of SEALION Equatorial Plasma Bubble Alert and Data Portal

#SEPTI PERWITASARI^{1,2)}, Michi Nishioka^{1,2)}, Kornyanat Hozumi^{1,2)} ⁽¹National Institute of Information and Communications Technology, ⁽²National Institute of Information and Communications Technology

The equatorial plasma bubble (EPB) is one of the most important features in space weather because of its significant effect on communication and navigation. Therefore, real-time information on the EPB occurrence will be useful in detecting the degradation of radio propagation conditions. SEALION is an ionospheric observation network in Southeast Asia that has been on operation since 2003. SEALION various ionospheric observation (ionosonde, VHF radar, GNSS-receivers) installed across the Southeast Asia; Chiang Mai (18.76° N, 98.93° E), Chumphon (10.72° N, 99.37° E), Phuket (7.90° N, 98.39° E), Bac Liu (9.30° N, 105.71° E), Cebu (10.35° N, 123.91° E) and Kototabang (0.20° S, 100.32° E). The real-time alert is currently based on the auto-detection of spread-F from SEALION FMCW ionosonde. The validation has been carried out with the manual scaling data and found to have >80% match. Statistical studies of the seasonal and local time variation have also been carried out and compared to previous studies, which have a good agreement. To accommodate data sharing among the ionospheric community, especially in Southeast Asia, we have also developed a data portal to access and download SEALION and ASEAN-IVO data. This portal provides ready-to-use ASCII data as well as data plots. The is planned to provide auto-scaled ionogram parameters (h'Es, h'F, foEs, and foF2), GTEX, ROTI, and S4 data. This system is planned to be open in the 2025 fiscal year. We will discuss the auto-detection development, validation, and future improvement during the presentation.