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Two-dimensional Total Electron Content (TEC) map has been used for revealing characteristics of meso-scale ionospheric disturbances, such as Equatorial Plasma Bubble (EPB) and Travelling Ionospheric Disturbances (TID). We have developed high-resolution TEC map and started "Dense Regional And Worldwide International Networks of GNSS-TEC observation (DRAWING-TEC)" project (<http://seg-web.nict.go.jp/GPS/DRAWING-TEC/>). The DRAWING-TEC project aims to expand the high-resolution TEC observation area by sharing TEC data in the newly standardized GTEX format. The project also provides regional and global maps of absolute value of TEC, de-trended TEC with 60-min window, and Rate of TEC change Index (ROTI). As of 2013, regional maps are produced over North America and Europe in addition to Japan. The spatial resolution of TEC maps of North America and Europe is 0.15 deg x 0.15 deg with a 5x5 pixel smoothing. The temporal resolution of these maps is 30 seconds. These regional maps are powerful tools for studying characteristics of EPBs and TIDs. We compared the regional TEC map with the 630 nm airglow image obtained by ISS-IMAP/VISI. The preliminary results of the comparison will be shown in the presentation.

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