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Abnormalities in the Low-Latitude Dayside Ionosphere. SOVIT KHADKA, ANDREW GERRARD, New Jersey Inst of Tech — The equatorial electrojet (EEJ) and equatorial ionization anomaly (EIA) are the most prominent low-latitude ionospheric phenomena during daytime. The eastward electric field is the driving force for the EEJ and upward EB plasma drift that ultimately forms the EIA via the equatorial plasma fountain during daytime at the magnetic equator. In the low-latitude ionosphere, the upward EB drift velocity plays an important role in the ionospheric plasma distributions. In general, the strength, shape, amplitude, and latitudinal width of the EIAs are affected by the eastward electric field associated with the EEJ and neutral winds. Here we discuss the abnormal features of EEJ and EIA with quantitative evidence using ground-based observations.

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