

Measurements of ionospheric electric field by FM-CW HF radar at the dip equator

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Perturbations of ionospheric electric field associated with DP 2 type magnetic variations are observed by the FM-CW HF radar at the dip equator station Cebu, Phillipine. Magnetic variations are also observed simultaneously by the Circum-pacific Magnetometer Network at the dayside and nightside dip equator stations.

It is difficult to observe magnetic variations associated with DP 2 variations in the nightside equator because of the depression of the ionospheric conductivity. However, perturbations of ionospheric electric field associated with DP 2 can be seen in both dayside and nightside.

Our results show that the ionospheric electric field associated with DP 2 is not zonal component but is oriented dusk to dawn (or opposite) direction in the equatorial region.

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