DP2 fluctuations of the ionospheric electric field observed by the FM-CW HF radar at low latitudes

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DP2 type fluctuations of the vertical drift velocity of the plasma at the low latitude ionosphere were observed by the FM-CW HF radar at Sasaguri, Fukuoka, Japan. DP2 type fluctuations were observed at both the dayside and the nightside hemisphere. These fluctuations correlated with the DP2 type magnetic variation observed at the dayside dip equator. Therefore, it seems that the observed vertical drift of the plasma at the low latitude ionosphere was caused by the penetration of the dawn to dusk polar electric field.