

## Occurrences of ionosonde spread F and GPS phase fluctuations in Taiwan during 1994-2000

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### Abstract

This study presents the comparisons of occurrences of the ionosonde spread F and GPS phase fluctuations in Taiwan, where is the EIA (Equatorial Ionization Anomaly) crest. The instruments, an ionosonde and three GPS receivers, are setup at the north of Taiwan. The observation was taken from 1994 to 2000 when solar activity changed from minimum to maximum. In this study, the spread F is categorized into RSF (Range Spread F) and FSF (Frequency Spread F) two types, and the GPS phase fluctuations (Fp) are calculated by the formulas which proposed by Mendillo et al. (2000). The Fp is divided into three levels to represent the background noise, medium, and strong irregularities. During data processing, the season is separated into Equinox (March, April, September, October), December solstice (January, February, November, December), and June solstice (May, June, July, August).