

Within-the-hour variability: levels and their probabilities

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Abstract

The study of foF2 data measured every 5-min and of TEC measurements made every 10-min shows that the within-the-hour variability is different in the two parameters. Deciles of this variability for foF2 and for TEC are determined together with the probabilities of exceeding a given level of variability. Furthermore, considering hourly values, it is found that the variability in TEC is like an «intrinsic noise» throughout the day of the order of less than 5% of the hourly value; but at sunrise and often at sunset large values take place. A seasonal dependence is evident. Besides, a within-the-hour variability in foF2 is always present with large values at sunrise or sunset depending on the season, and also during disturbed ionospheric conditions.

Keywords

ionospheric variability;radio wave propagation;space and satellite communications

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References

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
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