



## **Observations of ionospheric variability and storm-time variations at Nicosia**

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Continuous monitoring of ionospheric conditions is essential to modelling, specification and forecasting of the near Earth plasma environment. To that effect measurements from the new DPS-4D ionosonde over Nicosia (35.1 N, 33.4 E) and total electron content (TEC) data evaluated from the collocated GPS ground-based receiver are analysed to examine fundamental seasonal and diurnal climatology and weather affecting ionospheric F- region at this low mid-latitude location. These new multi-instrument observations cover the extreme solar minimum period of October 2008 - March 2010. They reveal that ionospheric weather variability is comparable to the ionospheric climate variability during quiet solar minimum conditions contrary to simple theoretical model predictions. The results presented and discussed in the paper raise the need for more advanced local area monitoring in order to improve ionospheric modelling beyond European mid-latitude region.