



## **Ionosphere vertical TEC calculated from GNSS receiver data in Lisbon: comparison with observations**

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We present the results of the analysis of the reliability of ionosphere TEC values produced by the GNSS receiver installed at the Lisbon airport (Portugal), since 2015. The installed equipment is a NovAtel EURO4 with a JAVAD Choke-Ring antenna. The installed firmware (SCINDA) is specific for scintillation detection.

We did a comparison of the SCINDA line-of-sight TEC values with the observed vertical TEC data collected (using ionosonde) by the Ebro Observatory in Spain, and with the vertical TEC values produced using the software developed in the Royal Observatory of Belgium. The differences between the ionosonde-based and GNSS-based TEC and sources of these differences are discussed. In this study special attention was paid to the epochs accompanied by significant Space Weather events strongly affected the ionosphere and the quality of the GNSS positioning.