

Interactive comment on “Review of variations in $M_w < 7$ earthquake motions on position and tec ($M_w = 6.5$ aegean sea earthquake sample)” by O. Yildirim et al.

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Abstract can revised as below

ABSTRACT Turkey is country located in Middle Latitude zone where tectonic activity is intensive. Lastly, an earthquake of magnitude 6.5Mw occurred at Aegean Sea offshore on 24 May 2014 at 09:25 UTC lasted about approximately 40 s. The earthquake was also felt in Greece, Romania and Bulgaria in addition to Western Turkey. In the recent years, ionospheric anomaly detection studies due to seismicity have been carried out with TEC (Total Electron Contents) computed from GNSS (Global Navigation Satellite System) signal delays and several interesting findings were published. In this

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study, both TEC and positional variations have been examined separately following a moderate size earthquake in the Aegean Sea. Then, the correlation of the ionospheric variations with the positional variation was investigated. For this purpose, a total of fifteen stations have been used four CORS-TR stations in the seismic zone (AYVL, CANA, IPSA, YENC) and IGS and EUREF stations. The ionospheric and positional variations of AYVL, CANA, IPSA and YENC stations have been examined by Bernese v5.0 software. When the obtained (PPP-TEC) values are examined, it was observed that the TEC values were approximately 4 TECU above the upper limit TEC value at four stations located in Turkey, three days before the earthquake at 08:00 and 10:00 UTC, At the same stations again, on the day before the earthquake at 06:00, 08:00 and 10:00 UTC, the TEC values were approximately 5 TECU below the lower limit TEC value. On the other hand, the GIM-TEC values published by the CODE center have been examined. At all stations, it was observed that three days before the earthquake, the TEC values in the time slices between 08:00 and 10:00 UTC, were approximately 2 TECU above, one day before the earthquake at 06:00, 08:00 and 10:00 UTC, 25 the TEC values were approximately 4 TECU below the lower limit TEC value. Again, by using the same fifteen numbers of stations, positional variation investigation before and after the earthquake has been made for AYVL, CANA, IPSA and YENC stations. As a result of the analysis made, positional displacements has been seen before and after earthquake at CANA station which is the nearest station to earthquake center. It is about 10 and 3 cm before three days and one day earthquake.

5929: “four numbers of CORS-TR stations” will be edited as “four CORS-TR stations”
5929: “positional resolution” will be edited as “spatial resolution”, “timewise resolution” will be edited “temporal resolution” 5929: Tylor will be edited “Taylor” 5930 and elsewhere: Don’t use continuous tense for understand. “it is being understood” will be edited as “it is understood”

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