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TEC variation over Europe during the intense tectonic activity in the area of SE Turkey on February of 2023.

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This paper is one of a series of papers dealing with the investigation of the Lower ionospheric variation on the occasion of an intense tectonic activity. In the present paper, we investigate the TEC variations during the intense seismic activity in the transition between the Dead Sea fault and the East Anatolian fault (SE Turkey) on February 6th, 2023. The Total Electron Content (TEC) data are been provided by the EUREF Network. These data were analysed using Discrete Fourier Analysis in order to investigate the TEC turbulence band content. The results of this investigation indicate that the High-Frequency limit f_o of the ionospheric turbulence content, increases as approaching the occurrence time of the earthquake, pointing to the earthquake epicenter, in accordance to our previous investigations. We conclude that the Lithosphere Atmosphere Ionosphere Coupling, LAIC, mechanism through acoustic or gravity waves could explain this phenomenology.

Keywords: Seismicity, Lower Ionosphere, Ionospheric Turbulence, Brownian Walk, East Anatolian Fault.