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Quasi-static electric fields disturbances in the upper ionosphere over zones of moderate earthquakes occurrence

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To proof the direct relationship between the quasi-static electric field disturbances and seismic activity is a difficult, but actual task of the modern ionosphere physics. The paper presents new results from the detecting of quasi-static electric field on the board of the INTERCOSMOS-BULGARIA-1300 satellite in the upper ionosphere above sources of moderate earthquakes. In the paper a methodology of satellite and seismic selecting data (World Data Center, Denver, Colorado, USA), applied in the time period 19.08 -25.11.1981, is proposed. The quasi-static electric field plays important role in the ionosphere physical processes. Some observation results in a case of small values of Kp index were used to search for a correlation between the quasi-static electric field anomalies and the seismic activity. An increase in the vertical component of quasi-static electric field is observed above earthquake sources. These ionospherical effects could be connected with appearance of sources of quasi-static electric fields of seismic origin over observational events. Our results could be used for a comparison with the same type of observational data from the ESA mission DEMETER, the future GEOSCAN projects and others, as well as for the accumulation of a large amount of satellite data for a statistical analysis of pre- and post seismic effects in the ionosphere.