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About determination of velocity of coordinates' change of the permanent GPS stations on the territory of Ukraine

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With increase of amount of the permanent stations and accordingly by more prolonged temporal series, the use of EUREF network for the study of tectonic deformations and other geodynamics processes on the territory of Europe became possible. In 2000 the special project "EPN time series monitoring" was created, the task of which above all was monitoring of the weekly combined solutions and analysis of temporal series of coordinates with the purpose of grant to the EPN stations proper kinematic information. The primary purpose of the given work was determination of velocity of coordinates' change of the Ukranian permanent stations, which are not the constituents of EPN network and are not engaged in a project, which the estimate of movement of the stations. The approximate value of velocity can be defined for the stations after the NNR-NUVEL-1A geophysical model of the movements of tectonic plates. Received value of velocity after the model NNR-NUVEL-1A will differ from received EPN on certain value. We will receive the probable value of velocity of coordinates' change of the stations, entering the corrections to the value of the velocity calculated after the NNR-NUVEL-1A model. The approximate value of velocity of coordinates' change , obtained by means of the model NNR-NUVEL-1A was used in the calculations. The most probable values of velocities are calculated for six Ukrainian permanent stations (SULP, CRAO, GLSV, POLV, UZHL, MIKL) by the EPN centers of analysis and for 17 stations which operate on the territories of neighboring countries. Our researches showed a practical possibility of determination of velocity of coordinates' change of the station by means of the geophysical model of tectonic plate movement with precision 1-2 mm.