

SIX WEEKS' PERIOD CHANGES IN SOLAR AND GEODYNAMIC ACTIVITY AS A POSSIBLE CONSEQUENCE OF THE IMPACT OF GRAVITATIONAL WAVE

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Abstract. The spectral analysis of the temporal sequences of daily Wolf numbers and numbers of earthquakes revealed overall ~44.3 day period of the oscillations. A similar oscillation was also revealed in the oscillation period of the Fedchenko astronomical clock used as a gravimeter. It is suggested that a permanent source

of gravitational wave (GW) can be multipole fluctuations of the black hole at the center of our galaxy. The estimates of changes in orbital parameters of the planets in the solar system due to GW do not exceed the experimental values of measurement errors. Nevertheless, one can expect of indirect effects of gravitational waves GW with a six-week duration of the period in solar activity or the geodynamic activity due to changes in the stress tensor. Selected overall ~44.3 day period of oscillation is presumably the result of the impact GW, the wavelength that covers the entire space of the solar system. On the basis of similarity, for galaxies with central black holes, the amplitude of GW are comparable with the amplitude of GW emitted by the black hole at the Galaxy center, made projections for the period of the emitted GW oscillations. The predicted oscillation period coincided with an estimate of observed period fluctuations in solar activity evaluation of ~40.5 years.

Keywords: solar activity, geodynamic activity, seismicity, periodicity, 6 weeks, Fedchenko astronomical clock, gravimeter, gravity wave.