Abstract Submitted
for the APR16 Meeting of
The American Physical Society

Gravitational Radiation in the Relativistic Theory of Gravitation. STANISLAV FISENKO, IGOR FISENKO, Rusthermosynthesis — The notion of gravitational radiation as a radiation of the same level as the electromagnetic radiation is based on theoretically proved and experimentally confirmed fact of existence of stationary states of an electron in its gravitational field characterized by the gravitational constant K = 10^{42}G (G is the Newtonian gravitational constant) and unrecoverable space-time curvature Λ. If the numerical values of $K \approx 5.110^{31}$ Nm^2kg^{-2} and $\Lambda = 4.410^{29}$ m^{-2} , there is a spectrum of stationary states of the electron in its own gravitational field (0.511 MeV ... 0.681 MeV). Adjusting according to the known mechanisms of broadening does not disclose the broadening of the registered portion of the emission spectrum of the micropinch. It indicates the presence of an additional mechanism of broadening the registered portion of the spectrum of the characteristic radiation due to the contribution of the excited states of electrons in their own gravitational field. The energy spectrum of the electron in its own gravitational field and the energy spectra of multielectron atoms are such that there is a resonance of these spectra. As obvious, the consequence of such resonant interaction is appearance, including new lines, of electromagnetic transitions not associated with atomic transitions. The obtained results perhaps also explain the physical nature of spin as the angular momentum in its own gravitational field and the known ambiguity in the results of measuring the size of a proton by different methods.

Stanislav Fisenko
Rusthermosynthesis

Date submitted: 07 Jan 2016 Electronic form version 1.4