

Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Gravitational radiation as radiation same level of electromagnetic and its generation in pulsed high-current discharge. Theory and experiment. STANISLAV FISENKO, IGOR FISENKO, MSLU — 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 . This paper gives an overview of the authors' works, which set out the relevant results. Additionally, data is provided on the broadening of the spectra characteristic radiation. The data show that this broadening can be explained only by the presence of excited states of electrons in their gravitational field. What is more, the interpretation of the new line of X-ray emission spectrum according to the results of observation of MOS-camera of XMM-Newton observatory is of interest. The given work contributes into further elaboration of the findings considering their application to dense high-temperature plasma of multiple-charge ions. This is due to quantitative character of electron gravitational radiation spectrum such that amplification of gravitational radiation may take place only in multiple-charge ion high-temperature plasma.

Stanislav Fisenko
MSLU

Date submitted: 07 Dec 2014

Electronic form version 1.4