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New non-gauge interaction and astrophysical manifestations using in heat installation and spacecraft motion

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The results of experimental investigations of new non-gauge interaction (using high current magnets, torsion and piezo resonance balances, changes in the rate of β - decay of radioactive elements etc.) are presented. The physical nature of the new force, in accordance with the Byuon theory (BT) (non-gauge theory of the formation of physical space and the world of ultimate particles on the basis of unobservable objects named "byuons" which contain a new fundamental vector constant-cosmologic vector potential A_g) is showed. It was shown that ultimate particle mass ($\Delta mc^2 \approx 33$ eV) is in part, proportional to the modulus of summary potential A_Σ ($A_\Sigma \leq A_g = 1.95 \times 10^{11}$ G cm). Variation in the modulus due to other field potentials (ΔA_Σ) should lead to the emergence of new natural force that is nonlinear and nonlocal and can be represented by a series in terms of ΔA_Σ . The first term of the series in terms of ΔA_Σ has the form $\sim \Delta A_\Sigma \cdot \partial \Delta A_\Sigma / \partial x$, where x is a spatial coordinate in three dimensional space. The new interaction and BT explains the origin of dark energy as a cause of receding galaxies with acceleration (byuon energy), nature of gamma-rays bursts and many other appearances in astrophysics. In this report, we shall discuss the heat installations which use byuon energy for heating water. The experiments were carried out in Italy (2012-2014) and Russia (2015-2016). For realization of the new force action (ΔA_Σ), we used a gravitation potential. The results of the experiments showed that the ratio between the heat energy output and the electric energy input can be more than 1. The report showed a practical use of new force for spacecraft motion (the terrestrial experiments, movie).

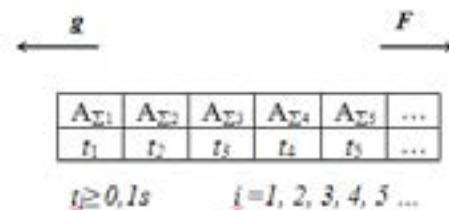


Figure 1: The diagram of the summary potential A_Σ change in the process when matter flies away from the SN explosion for the non-gauge force action realization; g is the gravitation field action direction; F is the non-gauge force action direction; $A_{\Sigma i} = A_{\Sigma i+1} \cdot t$ - time.

Recent Publications:

1. Baurov Yu A and Malov I F (2017) The nature of gamma-ray bursts in the framework of the byuon theory. Phys Aston Int J 1(6):1/5-5/5.
2. Baurov Yu A (2017) New non-gauge interaction, byuon energy and its using in heat installation. Experiments. Bull. Rus. Acad. Sci.: Physics 81(6):759-762.
3. Baurov Yu A (2016) Standard leptons and the next lepton in the byuon theory. Bull. Rus. Acad. Sci.: Physics 80(5):594-597.
4. Baurov Yu A, Sobolev Yu G and Meneguzzo F (2015) Fundamental experiments for revealing physical space anisotropy and their possible interpretation. Bull. Rus. Acad. Sci.: Physics 79(7):935-939.
5. Baurov Yu A and Malov I F (2010) On the nature of dark matter and dark energy. J. Mod. Phys.1:e17-e32.

Biography

Yuriy A Baurov received his PhD in 1978. He worked at Cent. Res. Inst. for Mach. Eng., Korolev town, Russia from 1972 till 2012. He has published six books on Fundamental Physics. In 2004, he was elected as a Fellow of Academy Cosmonautics Russia and also listed as one of the Most Outstanding Scientists of the Planet in 2000.

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