



MEETING OF THE AMERICAN PHYSICAL SOCIETY DIVISION OF PARTICLES AND FIELDS

Contribution ID: 104

Type: Poster

New fermionic dark matters, extended standard model and cosmic rays

Monday, 31 July 2017 18:07 (1 minute)

Three generations of leptons and quarks correspond to the lepton charges (LC) in the present work. Then, the leptons have the electric charges (EC) and lepton charges (LC). The quarks have the EC, LC and color charges (CC). Three heavy leptons and three heavy quarks are introduced to make the missing third flavor of EC. Then the three new particles which have the electric charges (EC) are proposed as the bastons (dark matters) with the rest masses of 26.121 eV/c², 42.7 GeV/c² and 1.9 10¹⁵ eV/c². The RK anomaly is discussed here. And these new particles are applied to explain the origins of the astrophysical observations like the ultra-high energy cosmic rays and super-nova 1987A anti neutrino data. It is concluded that the 3.5 keV x ray peak observed from the cosmic x-ray background spectra is originated not from the pair annihilations of the dark matters but from the x-ray emission of the Q1 baryon atoms which are similar in the atomic structure to the hydrogen atom. New particles can be indirectly seen from the astrophysical observations like the cosmic ray and cosmic gamma ray [1,2].

[1] <https://www.researchgate.net/publication/314877019> .

[2] <https://www.researchgate.net/publication/314246000> .

Primary author: Dr HWANG, Jae-Kwang (JJJ Physics Laboratory)

Presenter: Dr HWANG, Jae-Kwang (JJJ Physics Laboratory)

Session Classification: Poster Session and Reception

Track Classification: Dark Matter