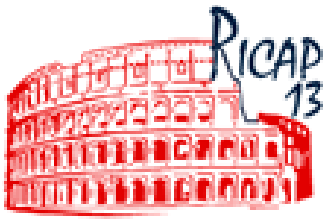

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Lorentz Invariance Violation: the latest Fermi results and the GRB/AGN complementarity

Wednesday, 22 May 2013 15:00 (15)

Because they are bright and distant, Gamma-ray Bursts (GRBs) have been used for more than a decade to test propagation of photons and to constrain relevant Quantum Gravity (QG) models in which the velocity of photons in vacuum can depend on their energy. With its unprecedented sensitivity and energy coverage, the Fermi satellite has provided the most constraining results on the QG energy scale so far. In this talk, the latest results obtained from the analysis of four bright GRBs observed by the LAT will be reviewed. These robust results, cross-checked using three different analysis techniques set the limit on Quantum Gravity energy scale at EQG,1 > 7.6 times the Planck energy for the linear dispersion and EQG,2 > 1.3x10^11 GeV for the quadratic dispersion (95% CL). After describing the data and the analysis techniques in use, results will be discussed and confronted to latest constraints obtained with Active Galactic Nuclei.

Summary

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