ON A POSSIBLE MEASUREMENT OF THE ZERO-POINT RADIATION CONTRIBUTION TO PLANCK'S DISTRIBUTION BY THE SCATTERING OF THE LEP BEAM OFF THERMAL RADIATION

F. Cardone

Laboratori Nazionali, I.N.F.N., I-00044, Frascuti, Italy

Abstract

Following the proposal of stochastic electrodynamics [1-4] we assume the zero-point radiation to be real (in quantum electrodynamics it is considered as virtually having no energy density). In particular, resulting from the work by Boyer [4], we introduce a blackbody radiation spectrum which can be added to the zero-point radiation spectrum.

Moreover we accept the possibility of a cutoff frequency [5,6] which allows us to avoid the energy divergence implicit in the zero-point spectrum.

In this paper, using the proposed measurement of the scattering of the CERN/LEP beam from thermal radiation [7], we calculate some consequences of such a modified Planck distribution according to the previous interpretation of the zero-point radiation.