The Fractional Zener Model of the Spacetime

Viorel Laurentiu Cartas

MIAA, Down Danube University of Galati, Romania
viorel.cartas@ugal.ro

ABSTRACT

In the last decade topnotch experiments (LIGO and Gravity probe B) have putted into evidence the viscoelastic nature of the space time. In the present work we have applied the viscoelastic constitutive equations for a spcetime model, based on the fractional Zener representation, which is the most general way of thinking about materials. Dispersion and dissipation are discussed in the frame of the spacetime, considered as a viscoelastic material.