

1139-83-262

Erik Amorim* (erik.amorim@math.rutgers.edu), Department of Mathematics, Rutgers University, Busch campus, Hill Center, 110 Frelinghuysen Road, Piscataway, NJ 08854-8019. *On the static spacetime of a point charge, assuming the Bopp-Lande-Thomas-Podolsky law of the electromagnetic vacuum.* Preliminary report.

The talk describes work in progress on the search for a static spacetime of a charged point particle whose electric field is coupled to spacetime structure via the energy-momentum-stress tensor of the Bopp-Lande-Thomas-Podolsky electromagnetic theory. Previous work by Cuzinatto et. al claims that the existence of an event horizon inevitably yields the Reissner-Weyl-Nordström spacetime. In our inquiry it is assumed that the singularity is naked, as is the case for the RWN solution of the conventional Einstein-Maxwell electromagnetism in which the mass and charge parameters have been chosen so as to correspond to the electron's properties. (Received February 19, 2018)