Contribution ID: **19** Type: **not specified**

GENERALIZED SU(2) PROCA INFLATION

Friday 31 May 2019 10:00 (30 minutes)

The generalized SU(2) Proca theory is the only modified gravity theory, nowadays, able to accommodate in a natural way a configuration of vector fields which is compatible with the homogeneous and isotropic nature of our Universe. In a previous work, and employing just one of the three pieces that conform the L_4 Lagrangian, we were able to uncover a self-tuning mechanism that drives an eternal inflationary period for an ample spectrum of initial conditions. We have now included all the three pieces plus a purely curvature term proportional to the double dual Riemann tensor. A novel primordial inflationary mechanism with a graceful exit is unveiled where the mentioned self-tuning mechanism is preserved and has, again, a protagonist role. The inflationary period is long enough to solve the classical problems of the standard Cosmology. For some region of the parameter space, the action is free of tachyonic, ghost, and Laplacian instabilities. The usual naturalness problem of the primordial inflation in this scenario is, therefore, essentially absent.

Primary authors: RODRIGUEZ GARCIA, Yeinzon (UAN & UIS (Colombia)); Mr NAVARRO LEÓN, Andrés Américo (USTA & UIS (Colombia)); Dr GÓMEZ DÍAZ, Luis Gabriel (Universidad Industrial de Santander); Mr GARNICA AGUIRRE, Juan Camilo (Universidad Industrial de Santander)

Presenter: RODRIGUEZ GARCIA, Yeinzon (UAN & UIS (Colombia))

Session Classification: Cosmology