

1116-55-2452

Chi-Kwong Fok* (ckfok@ntu.edu.tw), 2F of Astronomy-Mathematics Building, No. 1, Sec. 4, Roosevelt Road, Taipei, 10617, Taiwan, and **Jeffrey Carlson**. *Equivariant formality and K-theory of compact homogeneous spaces*. Preliminary report.

Let G be a compact connected Lie group and K its connected Lie subgroup. In this talk we will first introduce equivariant formality in K-theory, which is shown to be equivalent to equivariant formality in equivariant cohomology. We will then consider the problem of determining if G/K , with K acting on it by left translation, is equivariantly formal. Using K -theory, we will sketch a more uniform proof of the recent result that G/K is equivariantly formal if it is a generalized symmetric space. We will also give some sufficient conditions for G/K to be equivariantly formal which can be verified using Macaulay2 and SAGE. (Received September 22, 2015)