Ludovic Ducobu (University of Mons, Belgium)
Slowly rotating neutron stars in Horndeski gravity

Abstract

I will briefly discuss Horndeski lagrangian and its properties to introduce a non-minimal derivative coupling scalar-tensor gravity model. In this model, i will construct slowly rotating neutron stars described thanks to a perfect fluid energy-momentum tensor and some equation of state. The purpose will be to show how one can constraint the free parameters of the theory to obtain realistic predictions for the mass, radius, ... of these stars.