



Contribution ID: 105

Type: **Oral presentation**

## **(Absence of) screening in gravitational-wave generation**

I will review how non-linearities can allow for screening solar-system scales from non-tensorial gravitational polarizations, focusing on the case of scalar-tensor theories with derivative self-interactions (K-essence). I will then present fully relativistic simulations in these theories in 1+1 dimensions (stellar oscillations and collapse) and 3+1 dimensions (binary neutron stars), showing how to avoid breakdowns of the Cauchy problem that have affected similar attempts in the past. I will show that screening tends to suppress the (subdominant) dipole scalar emission in binary neutron star systems, but that it fails to quench monopole scalar emission in gravitational collapse, and quadrupole scalar emission in binaries.

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