



ID de Contribution: 49

Type: **Oral presentation**

Invited talk - Black hole magnetospheres under the PICoscope

mardi 9 février 2021 15:30 (30 minutes)

Black hole astrophysics has taken a dramatic leap forward in recent years thanks to the detection of gravitational waves from merging stellar-mass black holes and the first image of the shadow of the supermassive black hole M87*, opening up the exciting opportunity to probe physics in curved spacetime. To this end, it is of prime importance to have an accurate description of how matter and light behave under extreme physical conditions. My work aims at understanding how particle acceleration and the emission of non-thermal radiation proceed in relativistic magnetized plasmas such as those forming around rotating black holes. In this talk, I will summarize our current efforts to reproduce a black hole magnetosphere from scratch on National supercomputers using ab-initio particle-in-cell simulations, with the ultimate goal to bridge the gap between theoretical models and observations.

Field

Compact objects (supernovae, black holes, neutron stars)

Day constraints

Auteur principal: Dr CERUTTI, Benoît (Institut de Planétologie et d'Astrophysique de Grenoble / Université Grenoble Alpes)

Orateur: Dr CERUTTI, Benoît (Institut de Planétologie et d'Astrophysique de Grenoble / Université Grenoble Alpes)

Classification de Session: Invited talk

Classification de thématique: Astrophysics