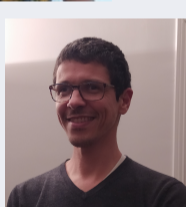


Cosmology and Gravitation

"Journée des Nouveaux Entrants" 2023, Theory, IJCLab

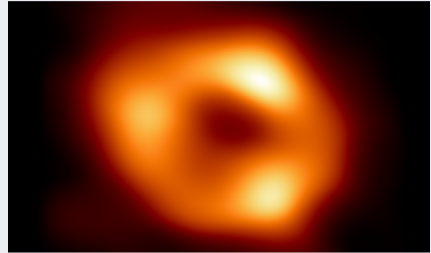
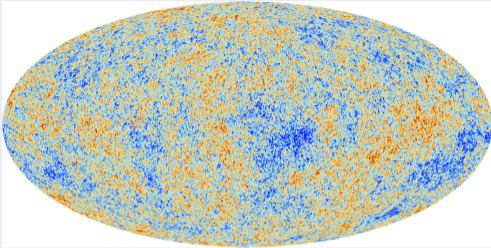
The Gravity Club



Who's who ?

- Amaury, Bartjan, **Christos**, Eugeny, Nicolas, Scott and myself (Karim)
- New members (next year hopefully) : 2 PhDs + 1 Postdoc

Gravitation at (almost) all scales

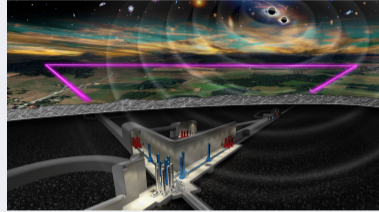
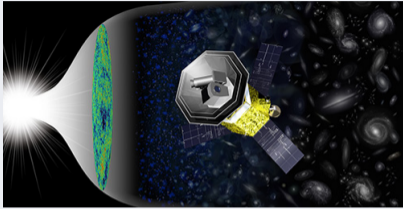


Cosmology (Pict. from Planck coll.)

- Early Universe - CMB - Large Scale Structures - Late time Cosmology

Black Holes (Pict. from EHT coll.)

- Exotic Black Holes - “Quantum” Black Holes in the Lab - GW from Binaries



LiteBIRD Collaboration (Pict. from LiteBIRD coll.)

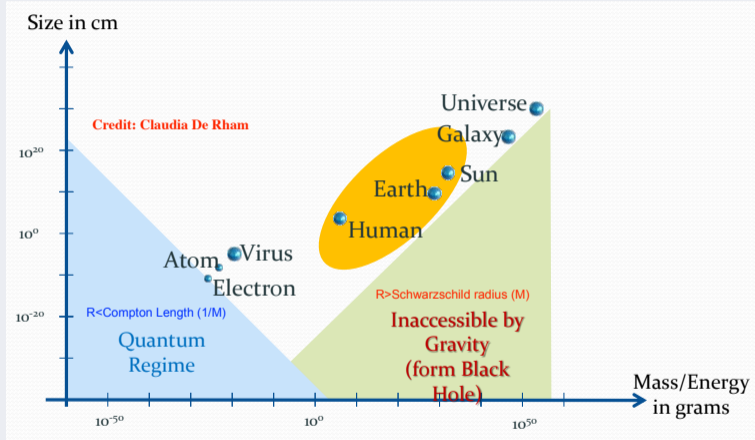
- Testing Inflation predictions with CMB Polarization (B-modes)

Gravitational Waves Detectors (Pict. from ET coll.)

- A new window in the Strong Gravity regime has just opened : deviations from GR ?

Analogues of Hawking Radiation in (Classical and Quantum) Fluids

Why do we expect deviations from General Relativity? (Credit : C. De Rham)



Deep Questions : Big-Bang and Inflation ? Cosmological Constant ? BH singularities ? Information loss paradox ?...

Thanks!
