

Iniziativa Specifica TPPC

(Theoretical Particle Physics and Cosmology)



Sezione di Pisa

Sezione di Firenze

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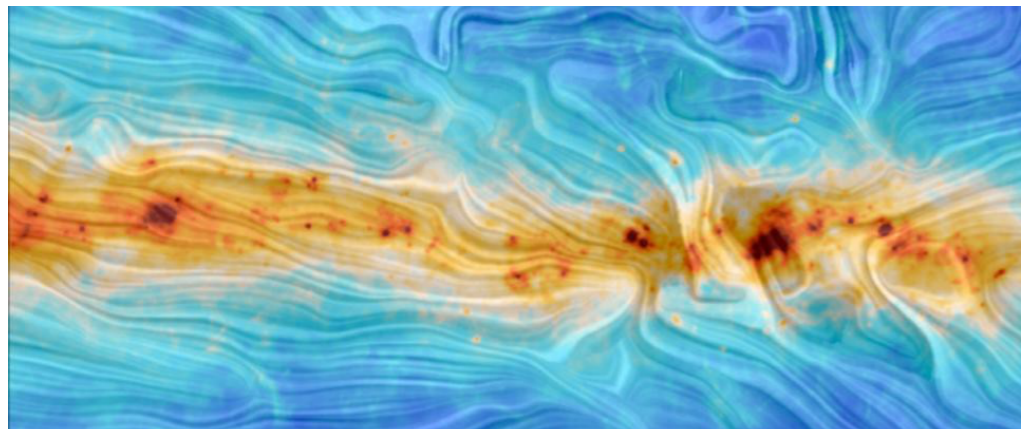
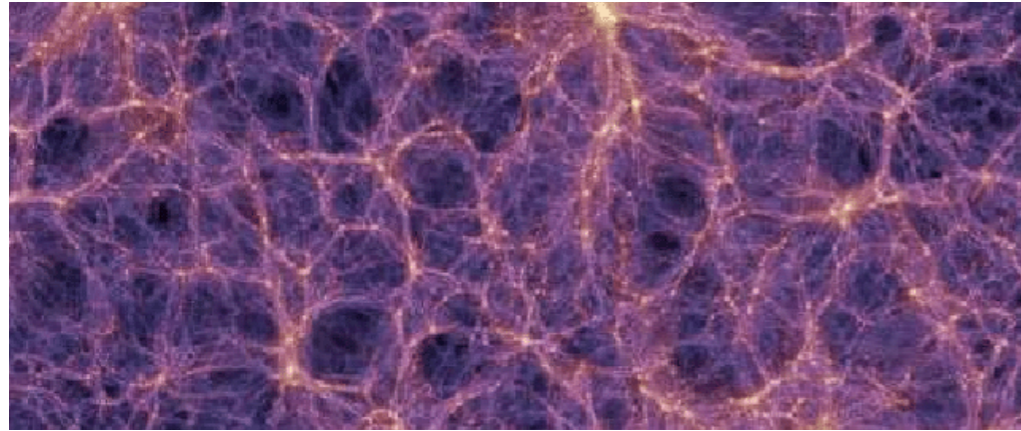
Keywords: Beyond the Standard Model – collider physics – flavour physics
dark matter – astro-particle physics – early universe – gravitational waves

Linee di ricerca

$$\mathcal{L} = D_\mu \phi^\dagger D^\mu \phi - \mu^2 \phi^\dagger \phi - \lambda |\phi^\dagger \phi|^2$$

↙ Doublet

$$\mathcal{L} = \partial_\mu \Phi^\dagger \partial^\mu \Phi - \mu^2 \Phi^\dagger \Phi - \lambda (\Phi^\dagger \Phi)^2$$



Beyond the Standard Model

- ◆ SM extensions at and above the TeV scale
- ◆ Experiments at intensity frontier and light new particles
- ◆ Flavour physics

Collider Phenomenology

- ◆ LHC physics and future colliders
- ◆ Precision measurements and collider searches through machine learning

Dark Matter

- ◆ DM models in gauge theories and beyond
- ◆ Indirect and direct detection experiments
- ◆ Light DM and axions

Gravity and Cosmology

- ◆ Gravitational waves from BSM physics
- ◆ Compact mergers and weakly coupled new physics

FTE e richiesta finanziaria

Personale TPPC di Pisa

Membri permanenti:

Roberto Contino (SNS) [al 90%]

Dario Buttazzo (INFN)

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Richiesta fondi missioni per il 2022

$14.3 \text{ FTE} \times 1.8 \text{ k€} = 25.7 \text{ k€}$