

News from the dark



Welcome to Annecy!

News from the dark

Episode 6: the astroparticle picture

Focus on indirect dark matter searches, review of other topics

LAPTh, Annecy – November 22-24 2021



GaDaMa



News from the Dark 6

22–24 nov. 2021
LAPTh

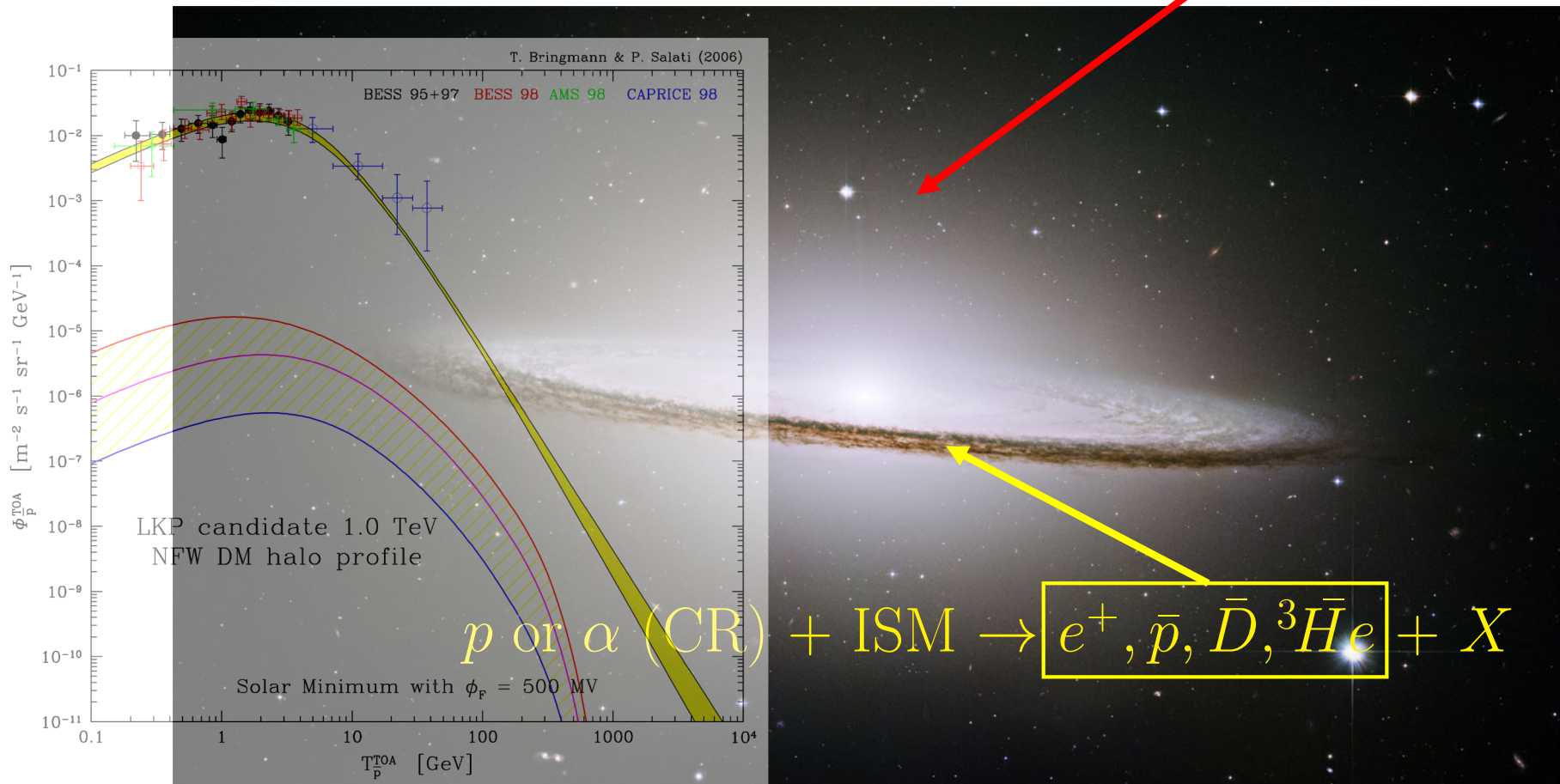
Fuseau horaire Europe/Paris

Entrer le texte à rechercher



Dark Matter particles could be the major component of the haloes of galaxies. Their mutual annihilations or decays would produce an **indirect signature** under the form of high-energy **cosmic rays**.

$$\chi + \chi \rightarrow qq\bar{q}, W^+W^-, \dots \rightarrow \gamma, e^+, \bar{p}, \bar{D}, {}^3\bar{H}e \text{ \& } \nu's$$



Outline

Monday – Particle physics

Indirect signatures of dark matter species

Anomalies in the cosmic radiations – experiments and theory

Galactic propagation of charged cosmic rays

WIMP or PBH – WIMP & PBH

Tuesday – Galactic dynamics

Stellar streams and Gaia

Dark matter inside the Milky Way and galaxies

Phase space distribution – observations and theory

subhalos – tidal stripping, distribution & detection

Wednesday – A broader view

Effective dark matter from modified gravity

Dark matter particle models – a status

Self-interacting dark matter

Cosmological tensions and dark matter