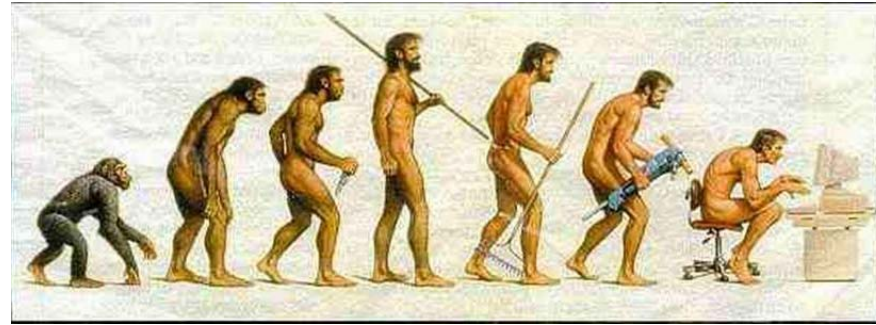


The Evolution History of Michael Gustafsson



Padova

timeline

Big Bang

Stockholm University (2000-2008):

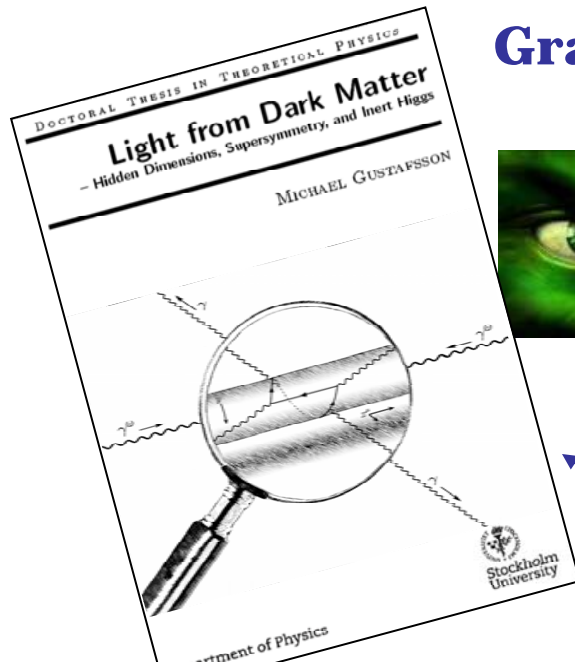
Undergraduate Studies:
Physics & Mathematics

October 2008
postdoc Padova
(Antonio Masiero)

Graduate Studies:

Dark matter phenomenology

Under the supervision
of **Lars Bergström**



Collaborators

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DM Centre/Copenhagen:

Jesper Sommer-Larsen

CERN & King's College:

Malcolm Fairbairn

LAPP/Annecy, France:

Pierre Salati

Kaluza-Klein Dark Matter

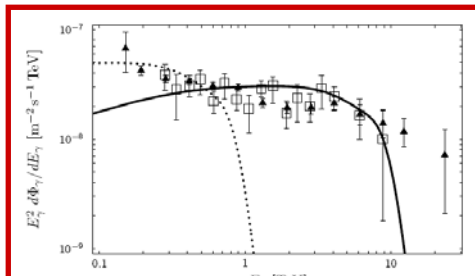
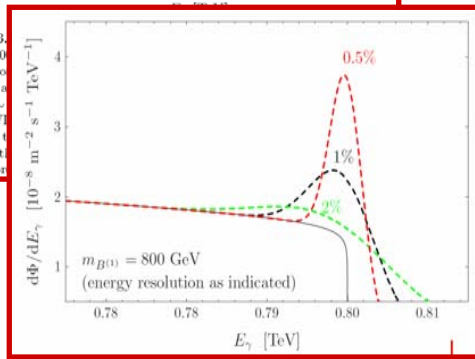
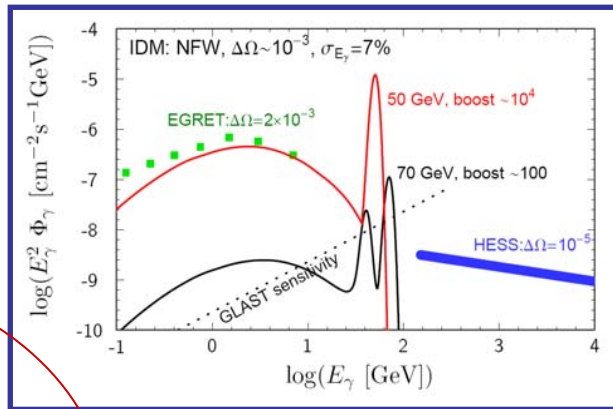


Figure 6: angles: 20 a region of 0.8 TeV, a factor $b \sim 9$ TeV W^\pm given by 1000. Bot 15%, app



Inert 'Higgs' Dark Matter



Supersymmetry Dark Matter

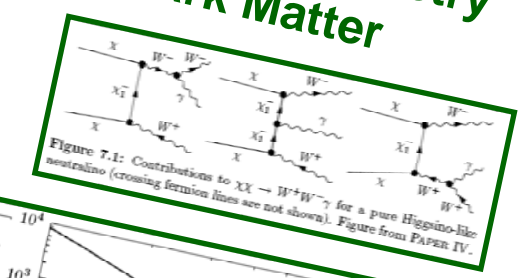
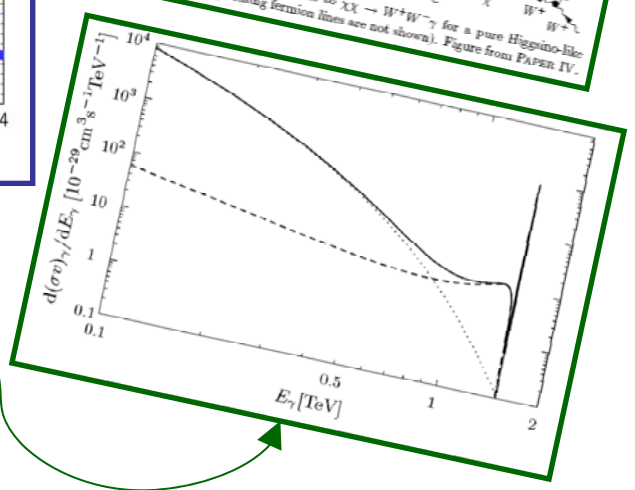


Figure 7.1: Contributions to $\chi\chi \rightarrow W^+W^-\gamma$ for a pure Higgsino-like neutralino (crossing fermion lines are not shown). Figure from PAPER IV.



Gamma Ray Signals

N-body simulations - Baryonic effects on DM

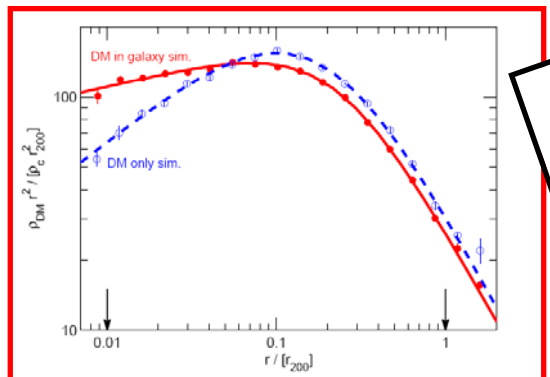


Figure 2.1: Dark matter density for a galaxy simulation including baryons (solid line) compared to an identical simulation including dark matter only (dashed line). A clear steepening in the dark matter density of the central part has arisen due to the presence of a baryonic galaxy.

Extra Dimensional Cosmology

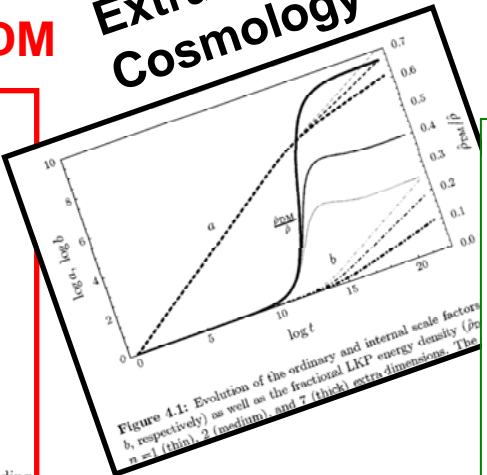


Figure 4.1: Evolution of the ordinary and internal scale factors a , b , respectively as well as the fractional LKP energy density ρ_{LKP}/b^3 for $n=1$ (thin), 2 (medium), and 7 (thick) extra dimensions. The

On the DM interpretation of the Egret diffuse gamma excess

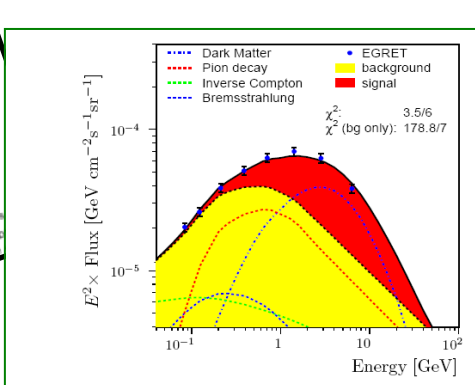


Figure 9.2: Fit of the shapes of background and dark matter annihilation signal to the EGRET data in the inner part of the galactic disk. The

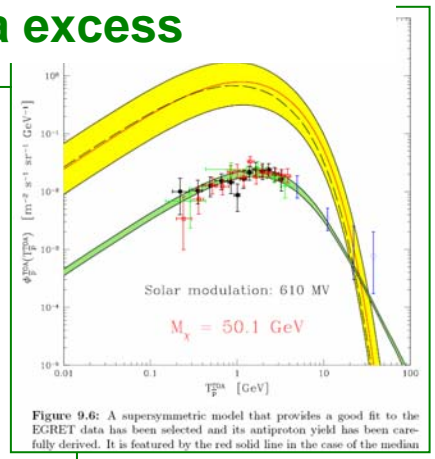


Figure 9.6: A supersymmetric model that provides a good fit to the EGRET data has been selected and its antiproton yield has been carefully derived. It is featured by the red solid line in the case of the median

What's it all about!?

Me

Steen

