



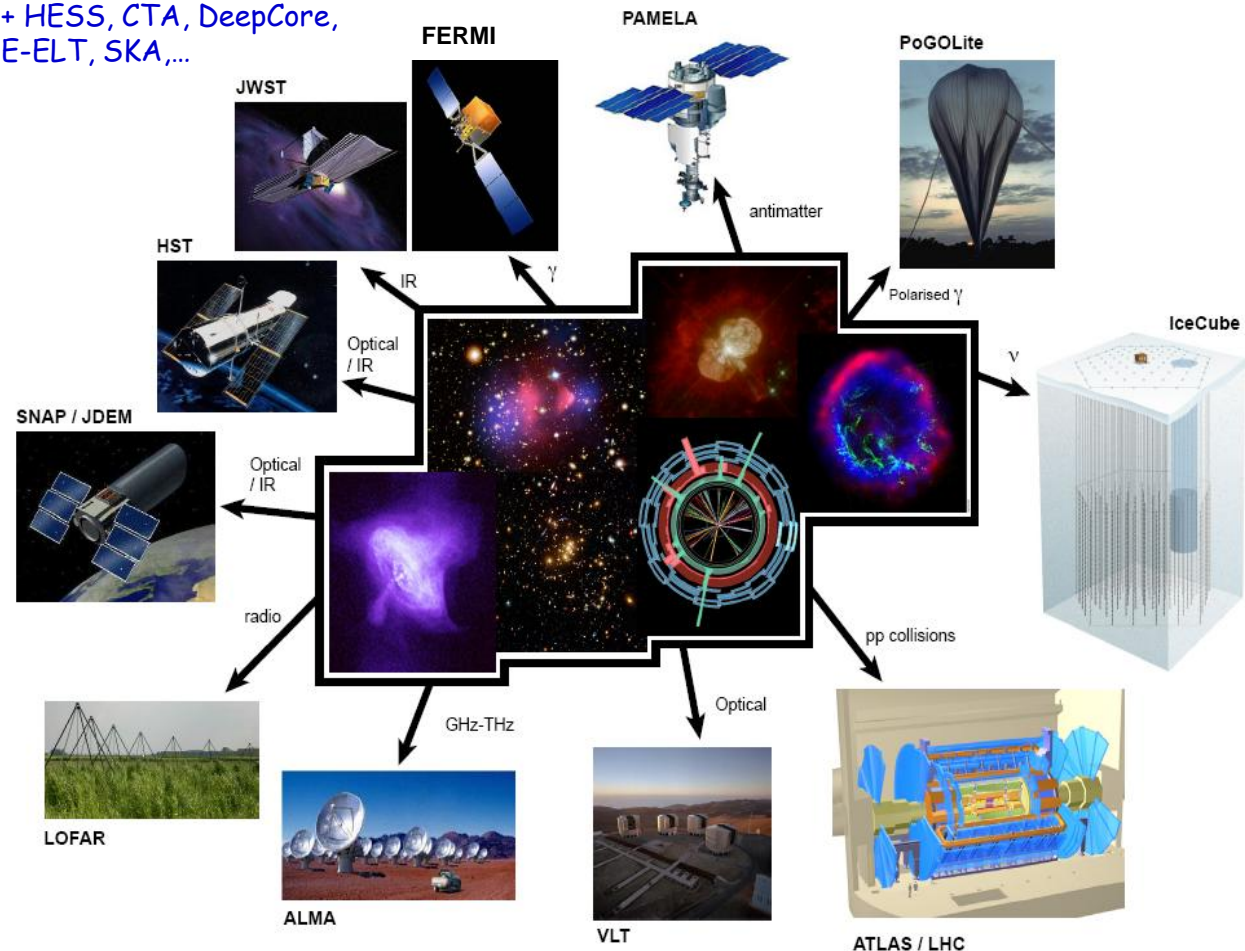
The Oskar Klein Centre for Cosmoparticle
Physics - a 10-year *Linnaeus grant* from the
Swedish Research Council (VR)

Lars Bergström, Project Leader



The Oskar Klein Centre, AlbaNova, Stockholm:
Theoretical Physics (with NORDITA as our
neighbours at AlbaNova), plus:

+ HESS, CTA, DeepCore,
E-ELT, SKA,...



Oskar Klein, 1894-1977.
Professor at Stockholm
University 1930 - 1962.
The originator of the idea
of compact, extra
dimensions (Kaluza-Klein
models).
Also: Klein paradox, Klein-
Nishina formula, Klein-
Gordon equation, Klein-
Jordan quantization, pre-
gauge theory of $SU(2)$,
Alfvén-Klein cosmology...

Themes (studied in 5 different working groups):

The proposed research is focused on three central themes in modern astrophysics, elementary particle physics and cosmology,

A. Identifying theoretically, and probing observationally, measurable quantities of **dark energy**, which can clarify the nature of this mysterious component of the energy density of the Universe.

B. Searching experimentally for particle candidates of **dark matter**, which naturally means going beyond the standard model of particle physics, and if found, determining their properties and elucidating the underlying theoretical framework.

C. Investigating the physics of extreme objects, such as **supernovae**, neutron stars, and black holes.

Main Activities

- Five working groups meeting at least once per month
- Organises Workshops, Conferences and Symposia
- Visitor's program
- Seminar program with weekly "OKC seminar & coffee"
- Outreach
- Hired 11 postdocs:

A. Cuoco (Italy) M
K. Datta (India) M
C. Finley (USA) M
J. Larsson (Sweden) F
A. Putze (Germany) F
A. Raklev (Norway) M
R. Rosen (USA) F
M. Sahlén (Sweden) M
C. Savage (USA) M
Z. Yang (China) F
M. Stritzinger (USA) M

- In the future: long-term positions