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Exploring the gamma-ray sky

Binaries, microquasars and their impact on understanding particle acceleration, relativistic winds and accretion-ejection phenomena in cosmic sources.



The sky in visible light

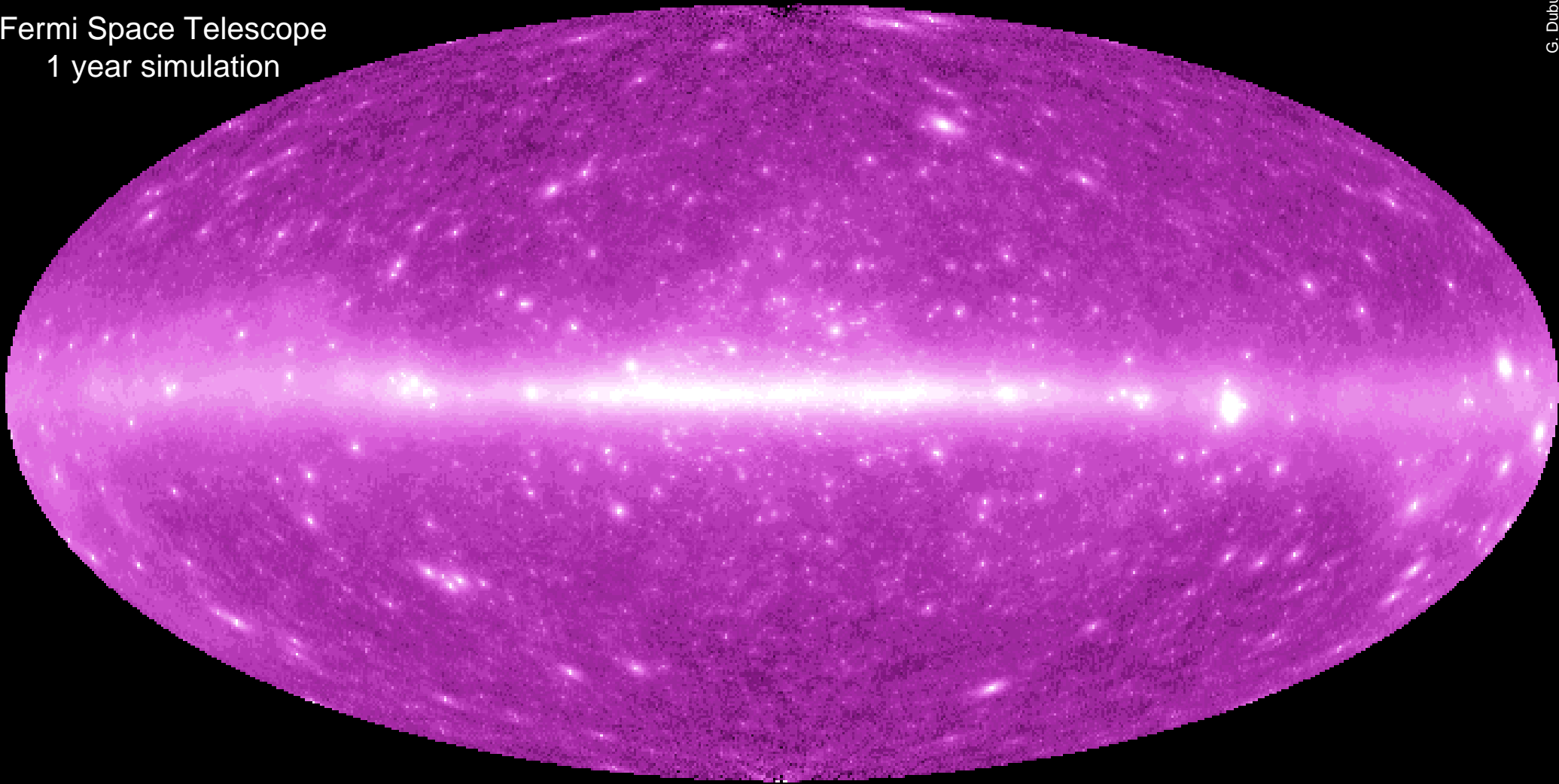


“it’s full of stars !” (and dust)...



The sky in high energy gamma-rays

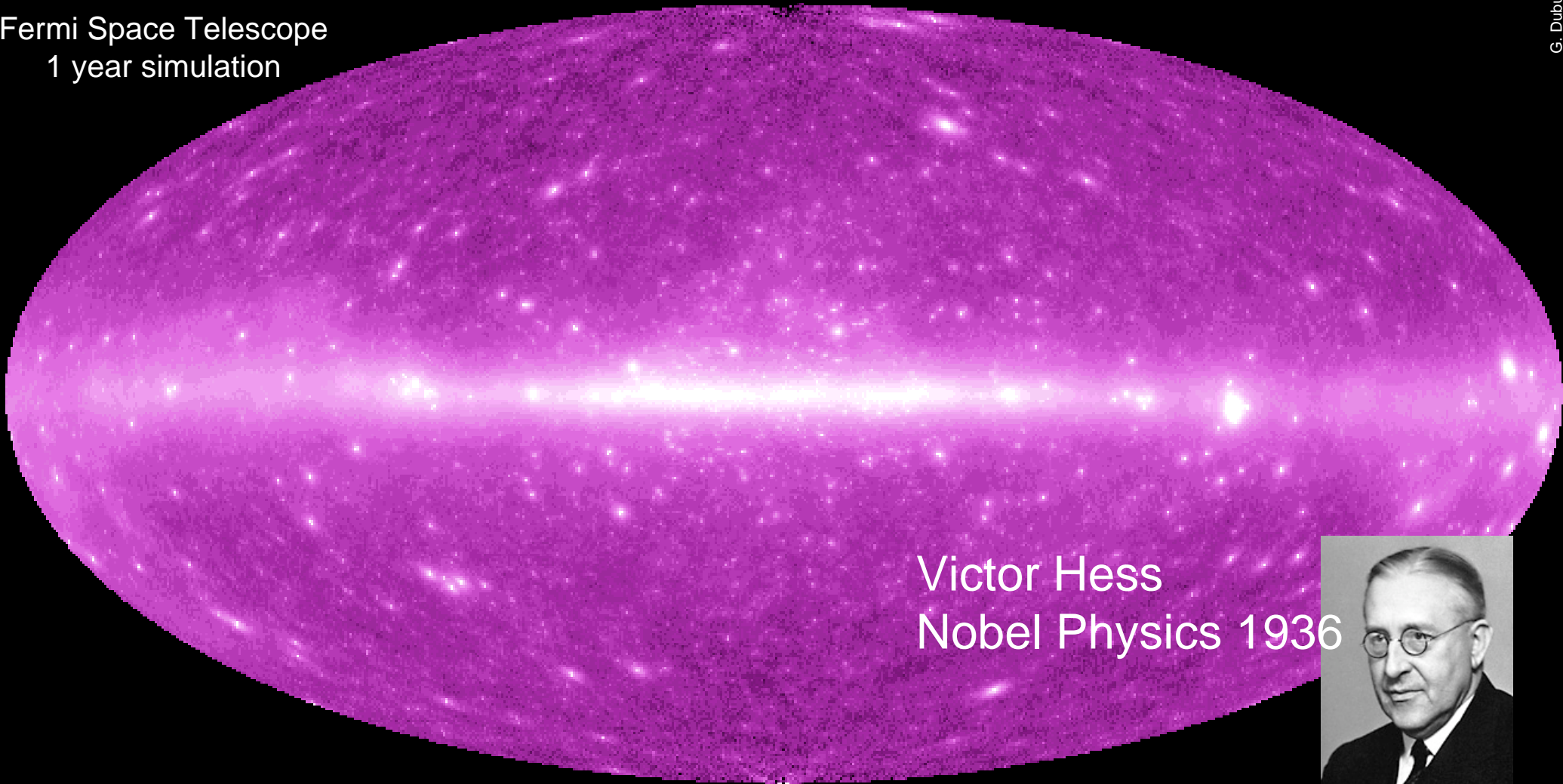
Fermi Space Telescope
1 year simulation



it's full of black holes, neutron stars and cosmic ray radiation...

The sky in high energy gamma-rays

Fermi Space Telescope
1 year simulation



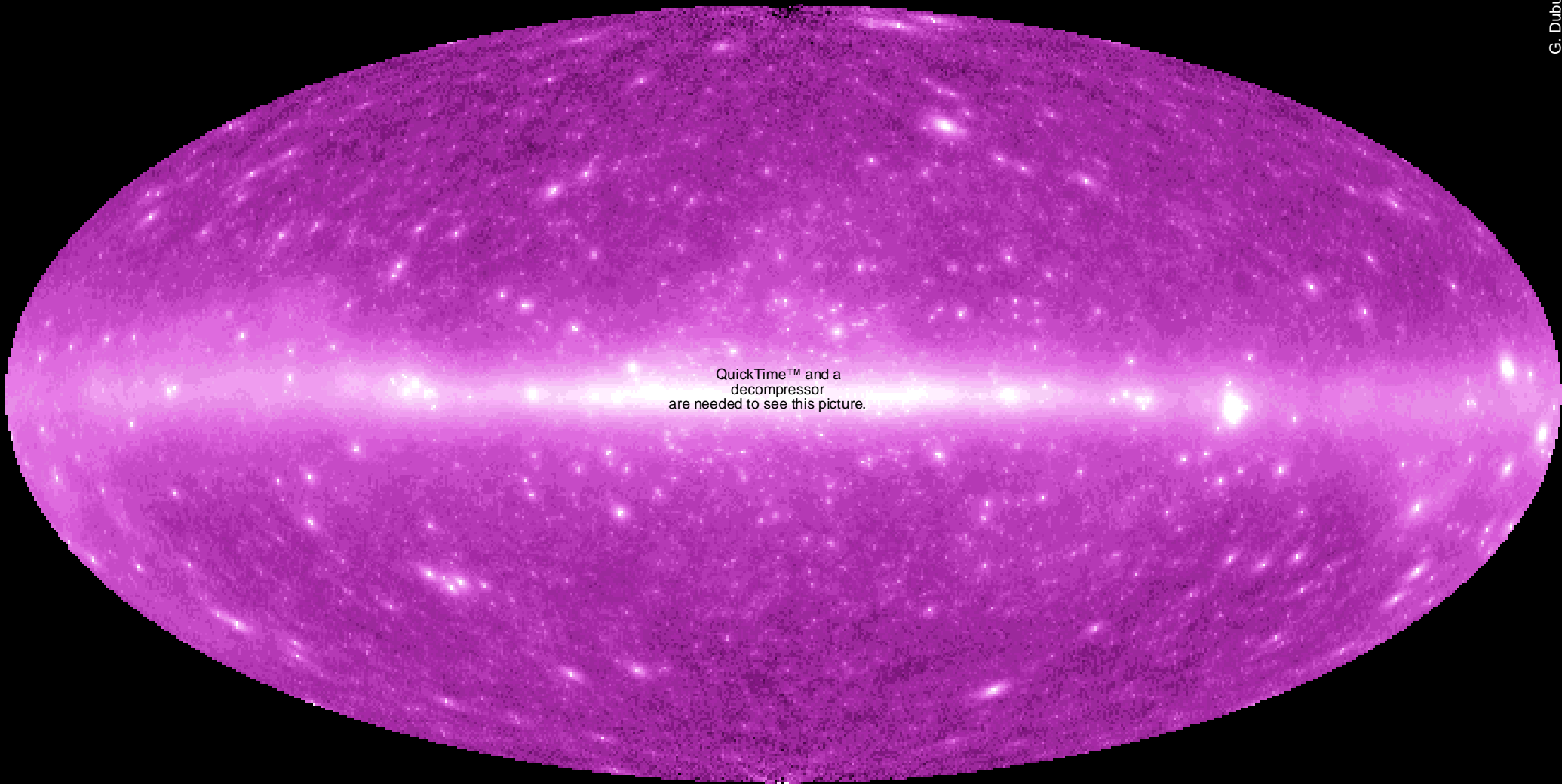
Victor Hess
Nobel Physics 1936



it's full of black holes, neutron stars and cosmic ray radiation.

In 2012, cosmic rays will have been a puzzle for 100 years

The sky in high energy gamma-rays



QuickTime™ and a
decompressor
are needed to see this picture.

it's (highly) variable

Entering a golden age for astroparticle physics

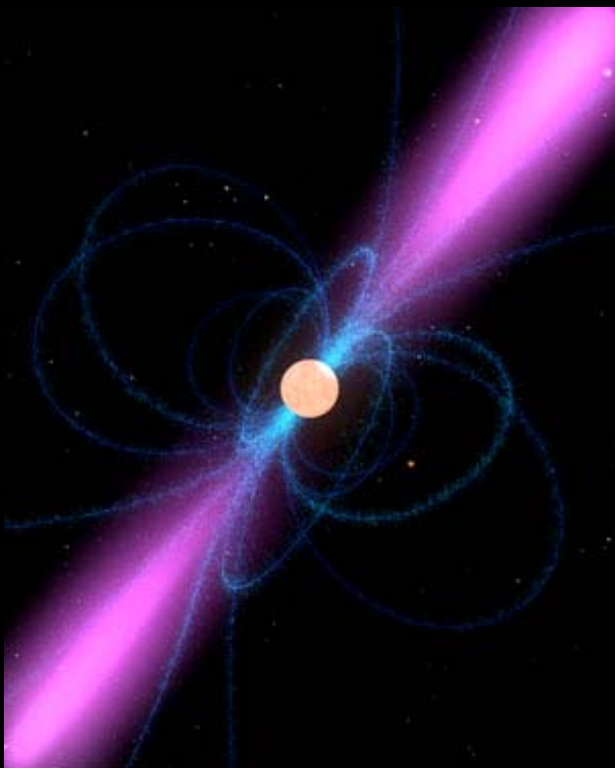


HESS (Namibia, 2002+) Descartes Prize 2006

What do γ -ray observations, using these new facilities, tell us on what happens close to neutron stars & black holes ?



FERMI (launched last june)



My career



Observations *and*



theory

My career



Observations *and*

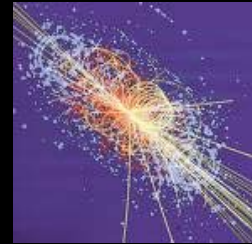


theory

CNRS permanent scientist in

astrophysics lab
and

(2006-now)

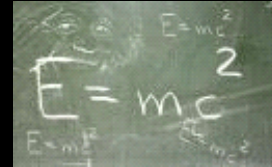


particle physics
lab (2002-6)

My career



Observations *and*

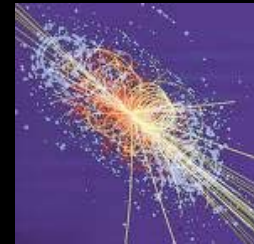


theory

CNRS permanent scientist in

astrophysics lab
and

(2006-now)



particle physics
lab (2002-6)

Experience abroad



Caltec
h
(2000-2)



Amsterda
m
(1998-2000)

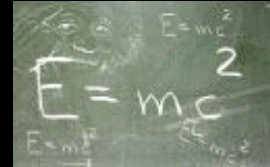


Oxford
(1995-6)

My career



Observations *and*



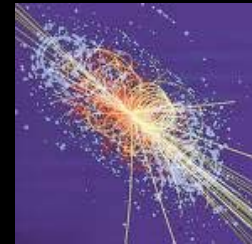
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Initial training

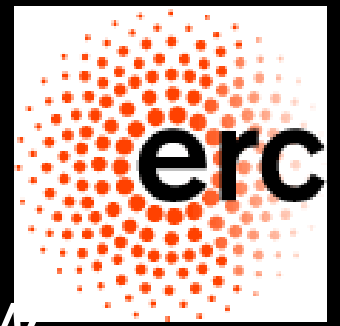


PhD
Paris
(1994-8)



MSc Ecole
polytechnique
(1991-4)

Why ERC?



- Gamma-ray observations coming in *now*
- Strong international competition.
- Requires expertise in many domains: need a team.
- ERC flexibility & funding unavailable at national level. Evaluation & recognition at international level.
- *Trust: gives young scientist a chance.*