

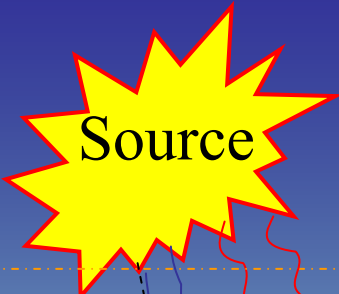
Scineghe09



Aldo Morselli
INFN Roma Tor Vergata

Scineghe09
Assisi, 9 /10/ 2009

Astroparticle Physics



creation
acceleration
injection

MAGIC
HESS
VERITAS

Cosmic rays:
about 10 Myears
in the Galaxy
(6-7 g/cm²)

further
acceleration?

Propagation

Cosmic Rays

Modulation

Fermi
PAMELA
AGILE
AMS

KASCADE Grande
DECOR
AUGER

ARGO-JBJ
Milagro -> HAWC
LHAASO

NEMO
ANTARES
IceCube

Space experiments ~ 400 km

Direct detection

Atmosphere

40 km

23 X₀

Balloons ~ 40 km

~3 g/cm² residual atmosphere

Extensive Air Shower
Detectors

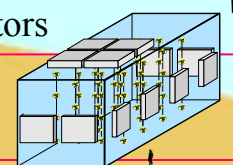
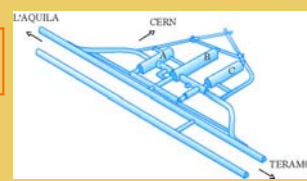
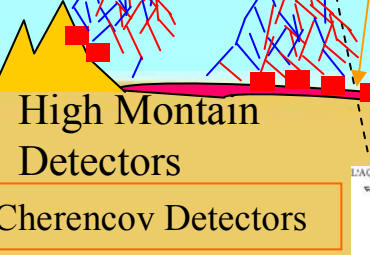
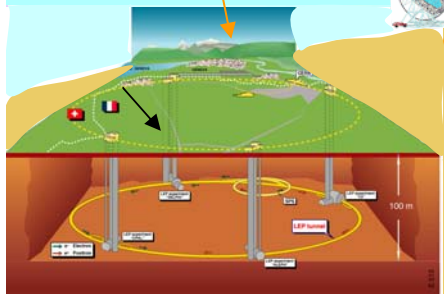
Particle
Astrophysics
Experiments

High Montain
Detectors

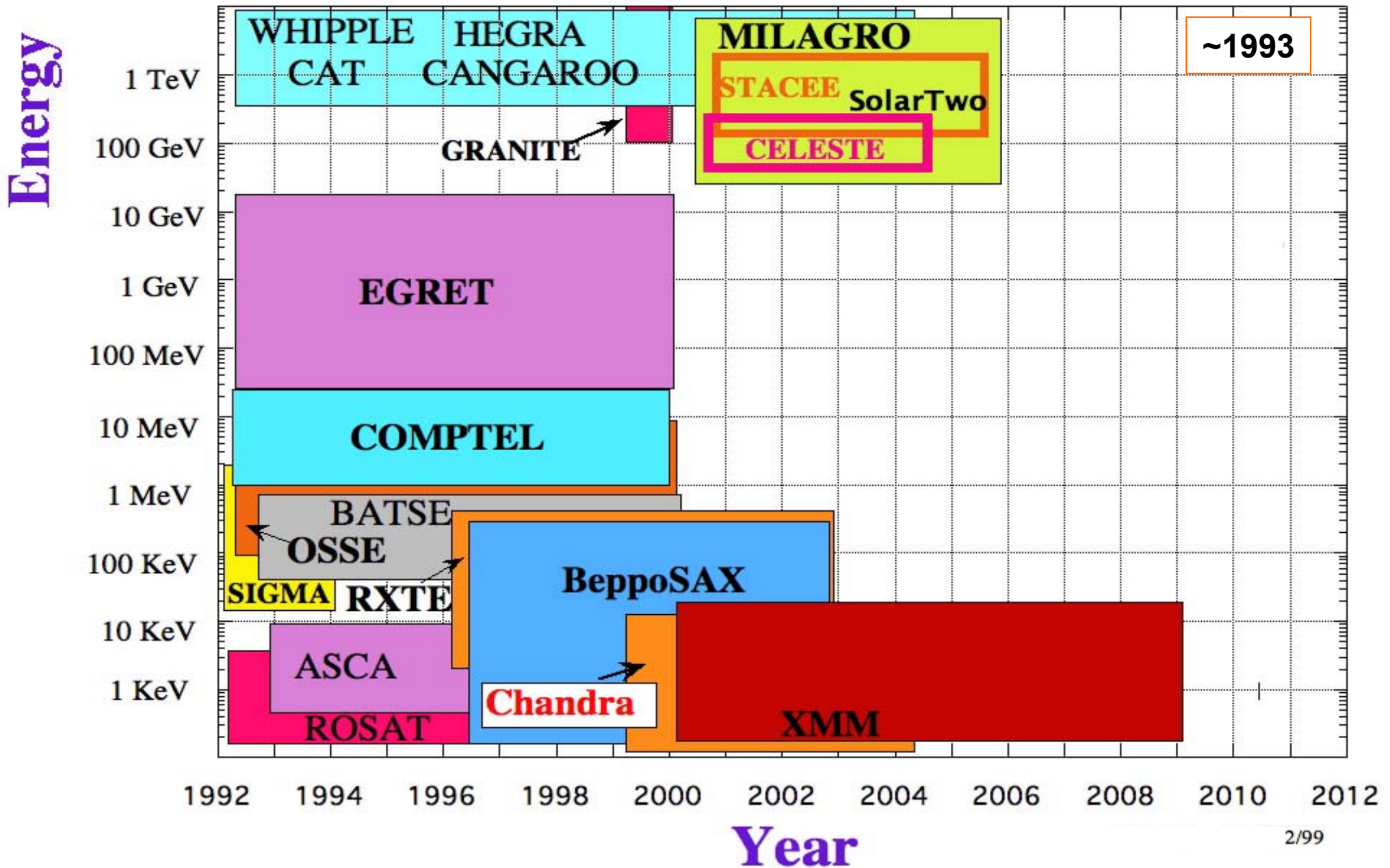
Cherencov Detectors

Particle Accelerators

Underground, Under-ice, Underwater

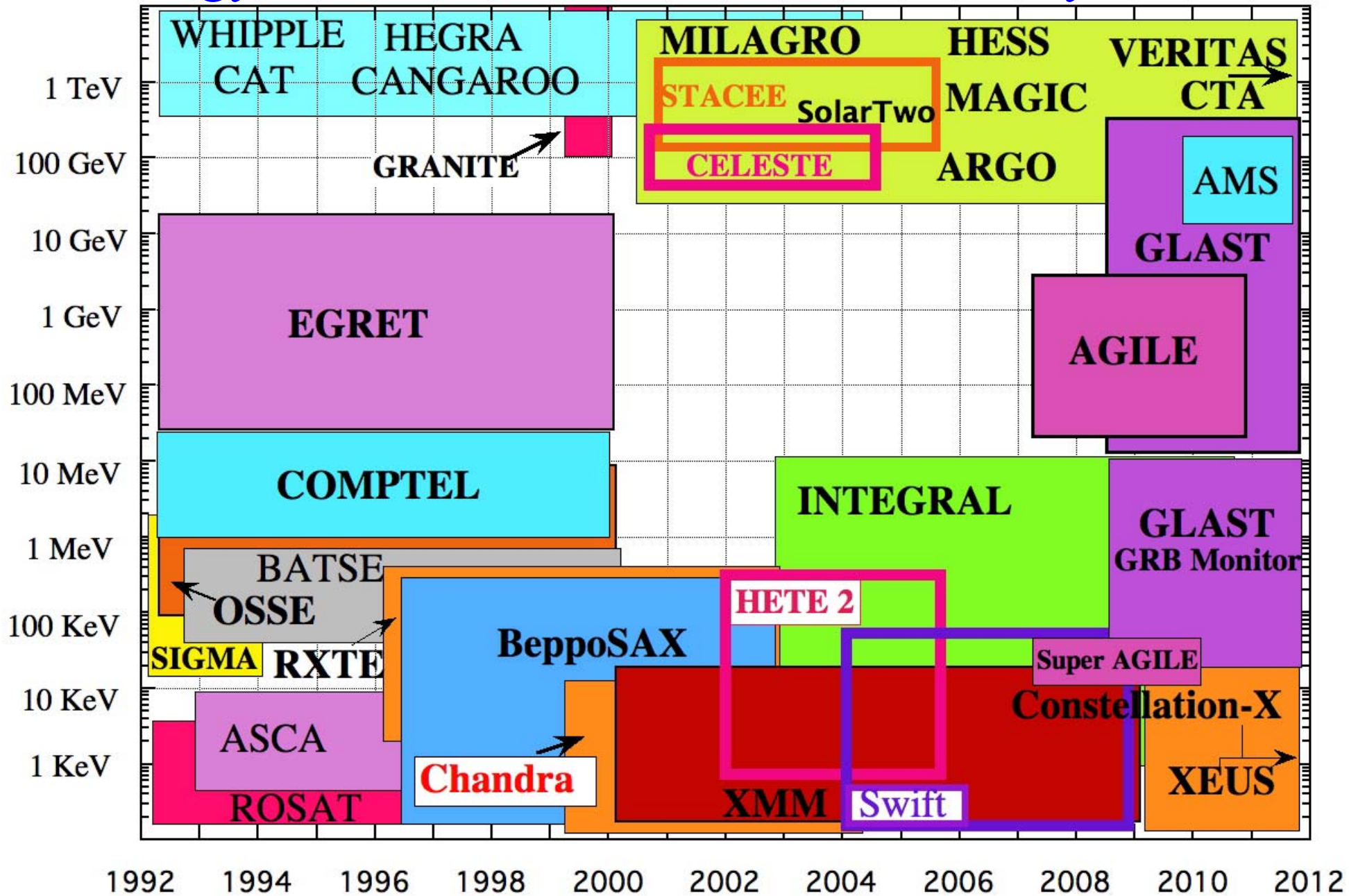


High Energy Gamma Experiments Experiments



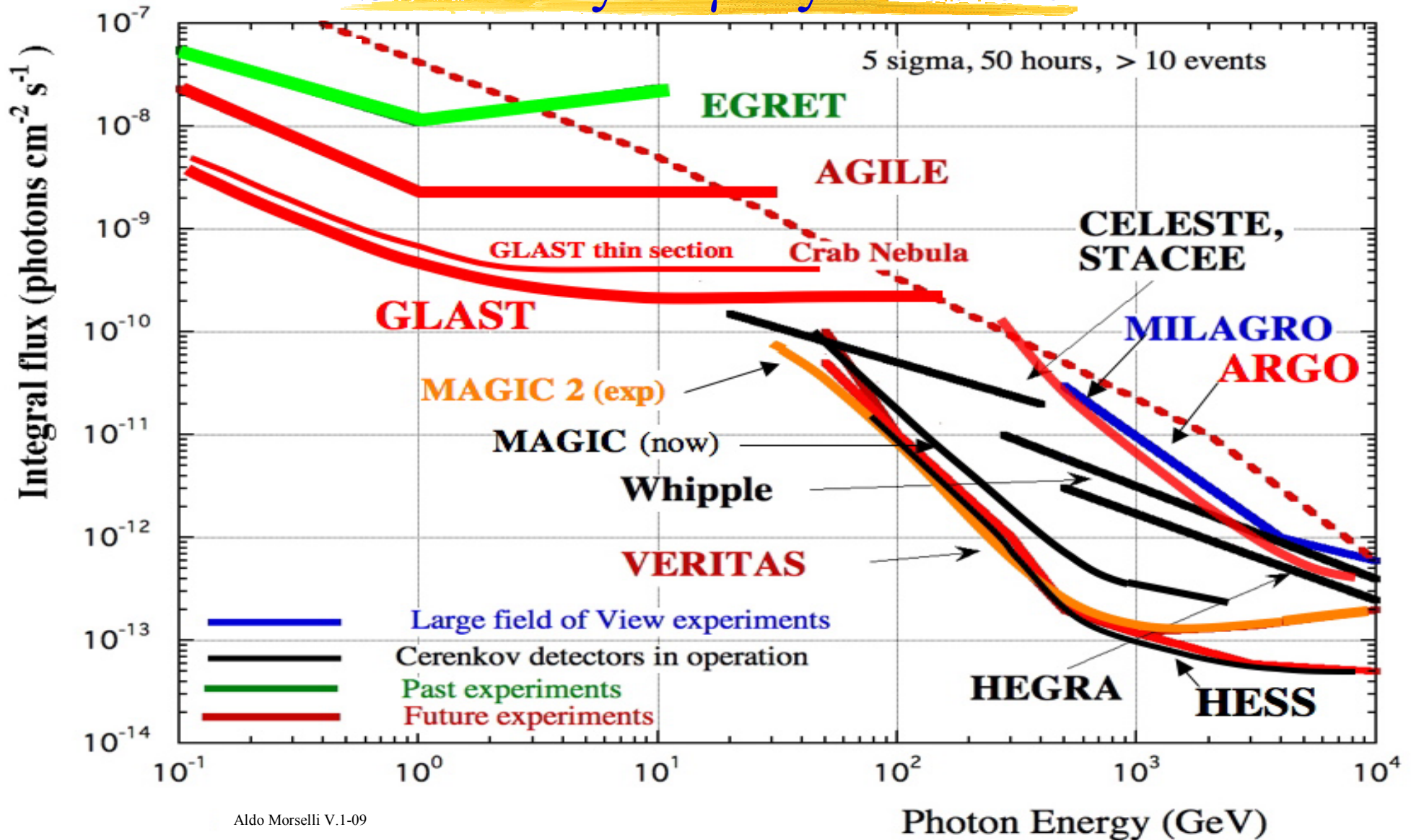
Energy versus time for X and Gamma ray detectors

Energy



Voor

Sensitivity of γ -ray detectors



Aldo Morselli V.1-09

High galactic latitudes (background $\Phi_b = 2 \cdot 10^{-5} \gamma \text{ cm}^{-2} \text{ s}^{-1} \text{ sr}^{-1} (100 \text{ MeV}/E)^{1.1}$). Cerenkov telescopes sensitivities (Veritas, MAGIC, Whipple, Hess, Celeste, Stacee, Hegera) are for 50 hours of observations. Large field of view detectors sensitivities (AGILE, GLAST, Milagro, ARGO) are for 1 year of observation.

May 21, 2003
Hotel Giò, Perugia, Italy

Perugia 2003

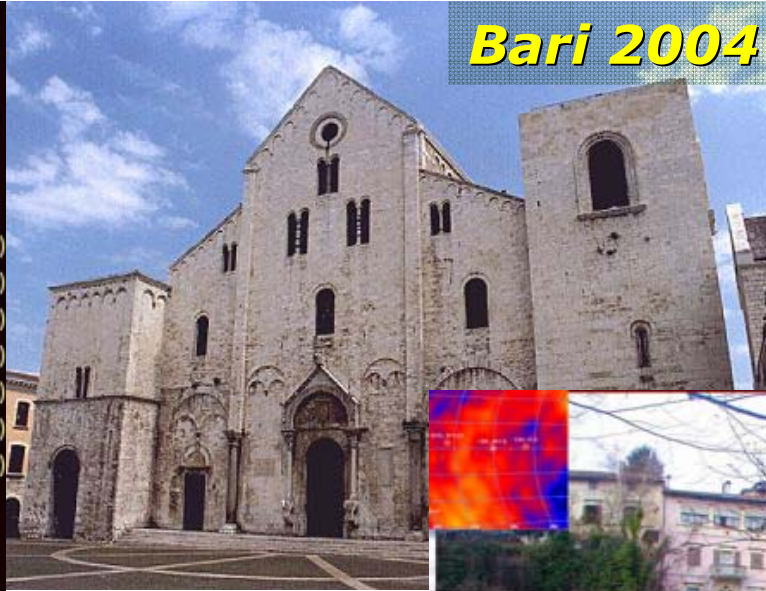
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A. De Angelis (Udine)
N. Giglietto (Bari)
F. Longo (Trieste)
P. Lubrano (Perugia - Chair)
A. Morselli (Roma2)
N. Omodei (Pisa-Siena)
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tel. 075-5847137
fax. 075-5847296

<http://www.ospg.pg.infn.it/glast/workshop03/>

Bari 2004

SciNe GHE



SciNe GHE



Udine (Cividale del Friuli) 2005

4th Workshop on Science with the New Generation of High Energy Gamma

Portoferraio, Isola d'Elba (Italy)
20-21-22 June, 2006

Scientific Secretariat

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Topics:

- Galactic variable sources
 - Pulsars, Microquasars, and SGRs
 - The multiwavelength spectrum
 - Solar Flares
- Extragalactic variable sources
 - Prompt GRB emission
 - Afterglow and long time scale
 - GRB multiwavelength observations
 - Flaring Blazars
 - AGN multiwavelength observations
- Ground & Space Based experiments
 - Observation of transient sources
 - Variability as observational tool
 - Multiwavelength observations

Elba island 2006

Padova (Abano Terme) 2008



Roma (Villa Mondragone) 2007



Announcement for SciNeGHE 2010

8th Workshop on Science with the New Generation High Energy Gamma-ray Experiments

Gamma-ray astrophysics
in the multimessenger context



TRIESTE, 8-10 September 2010

see you there !!!