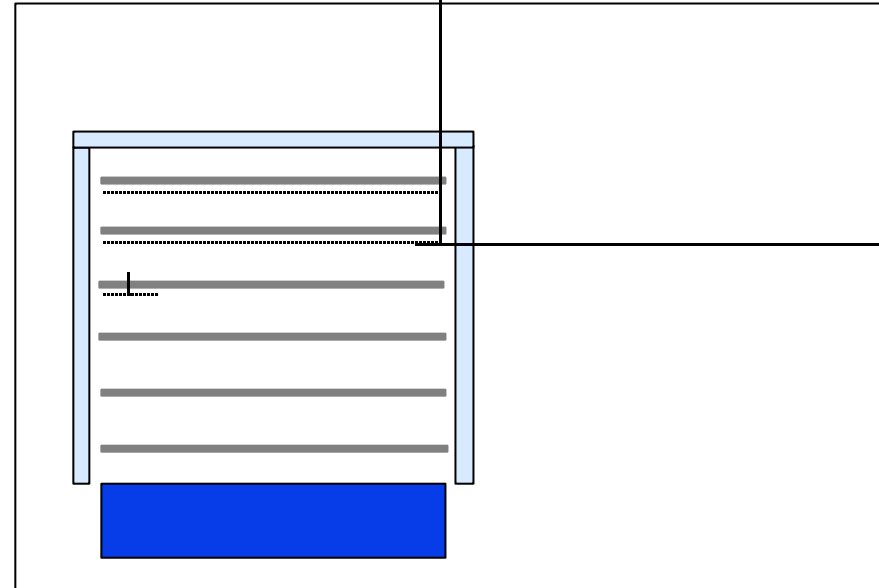


Detector Technology: X-ray vs. Gamma-ray

GLAST Large Area Telescope (LAT) Design

Instrument

Pair-conversion telescope



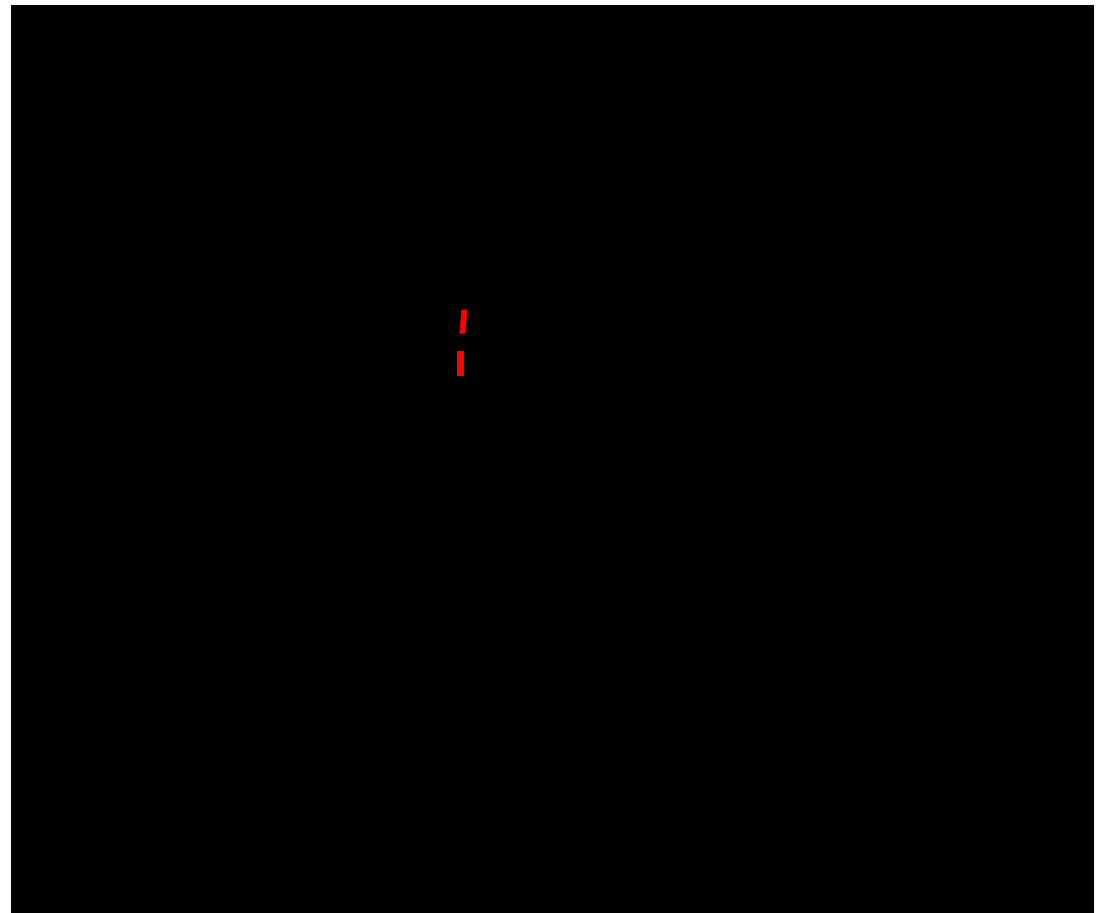
GLAST Large Area Telescope (LAT) Design

Instrument

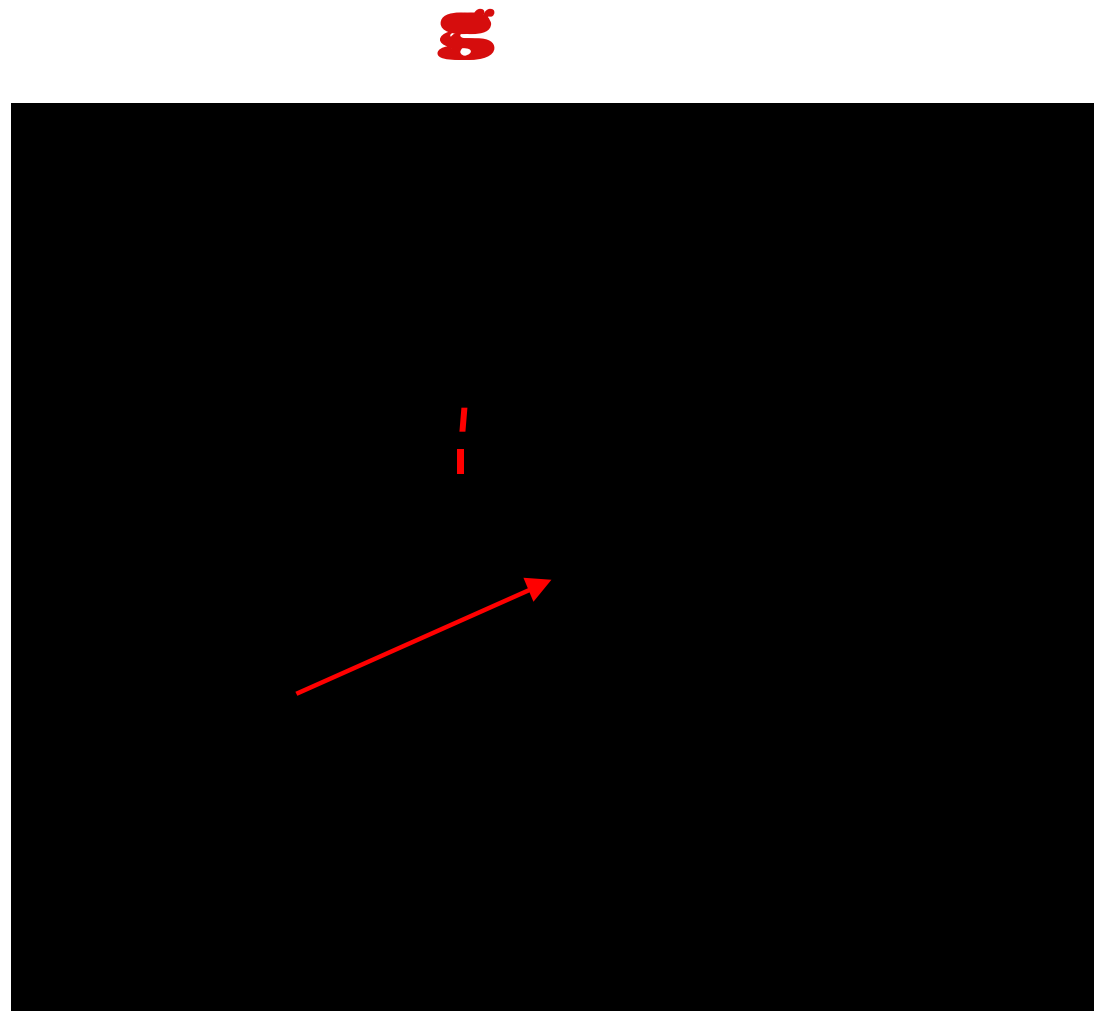
Pair-conversion telescope

g

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One of 18
Tracker
trays
(detectors top
& bottom)



6g

Hodoscopic Imaging Array of CsI c

I

8.5 rl

Compression Cell Design

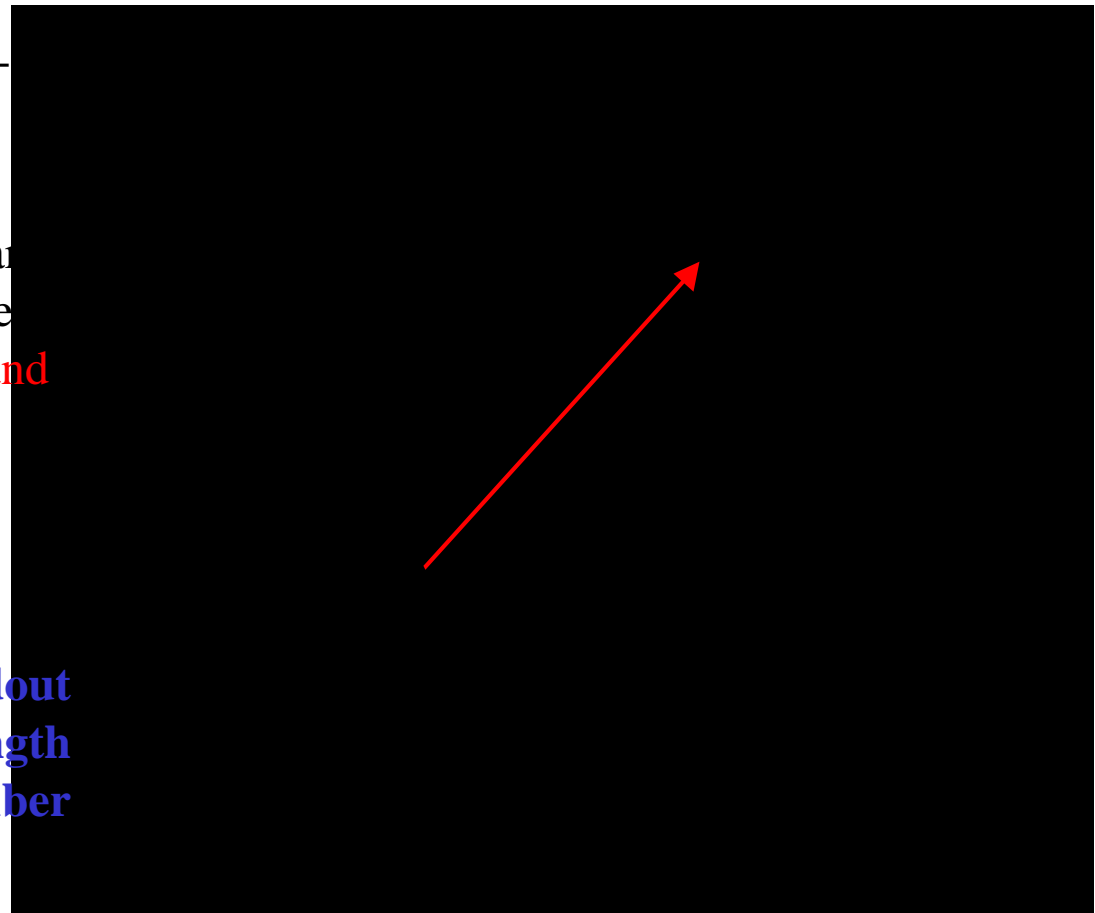
16 towers \Rightarrow modularity

height/width = 0.4 \Rightarrow large field-of-

Segmented, plastic scintillator tile array
high efficiency, low-noise, hermetic

segment ACD sufficiently and
only veto event if a track
points to hit tile

**ACD tile readout
with Wavelength
Shifting Fiber**





Map the High-Energy Universe



Alerts
Large loads
TOO commands

- What are the mechanisms of particle acceleration in the universe?
- What are the origins and mechanisms of Gamma-Ray Bursts and other transients?
- What are the unidentified EGRET Sources?
- What are the distributions of mass & cosmic-rays in the galaxy and in nearby galaxies?
- How can high-energy ~~g~~rays be used to probe the early universe?
-

Burst and transient Alerts

GRB
Coordinates
Network

GLAST LAT Science (2)

Map the High-Energy Universe





Map the High-Energy Universe



Simulated Observations of the Cygnus Region (15

