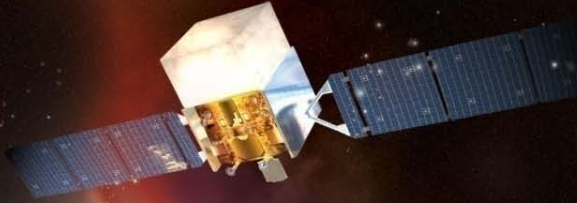




Fermi

Gamma-ray Space Telescope



Fermi

Gamma-ray Space Telescope

International Finance
Committee Meeting

Mission Status Update

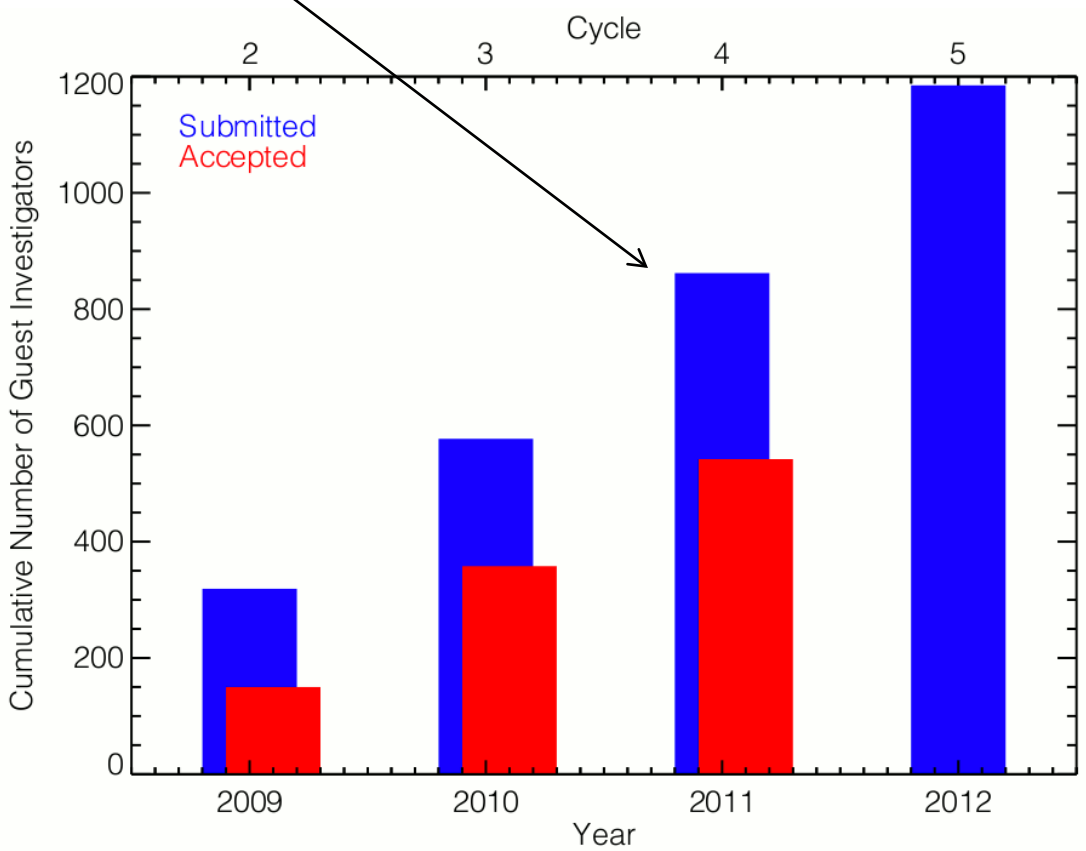
J. McEnery

Status Highlights

- **Observatory is operating smoothly, FOT continues to look for ways to improve operations.**
 - **Reaction wheel life test complete**
 - **Teardown/disassembly underway**
 - **Updated spacecraft FSW to handle reduced wheel observation modes – code and testing complete**
 - **Nadir observations**
- **Fermi sessions at AAS, AAAS, COSPAR, APS**
- **Press and outreach coordination and planning, recent releases:**
 - **Dark matter**
 - **>10 GeV Sky**
 - **Tycho SNR**
 - **Cygnus Cocoon**
- **Updates to GI program**
 - **In discussion with VERITAS and Arecibo for cycle 6**

Growing Science Productivity

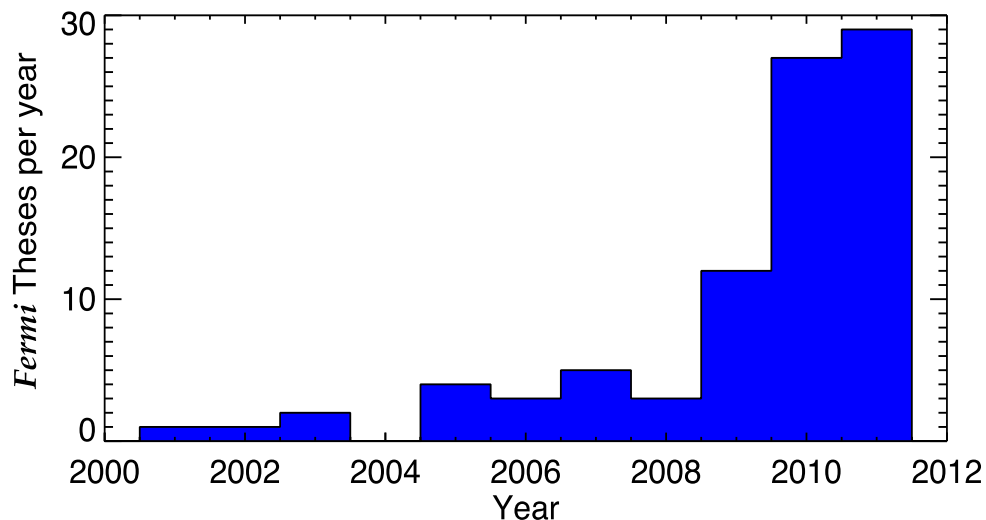
Total number of people participating in GI program continues to rise



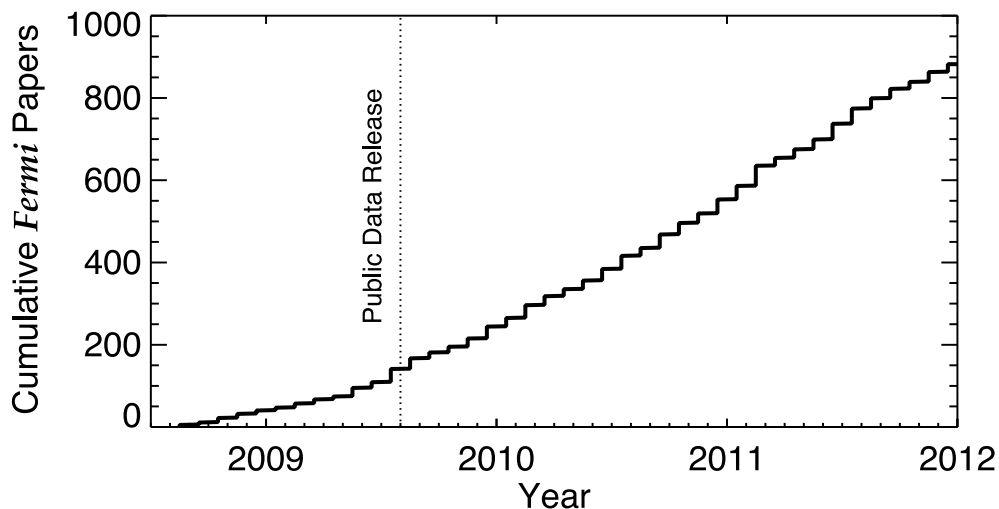
- **Fermi is a young mission!**
 - **Community of Fermi users is growing by >20% per year**

Note: These represents U.S. Fermi users only, growth of international community likely follows similar trend

Growing Science Productivity



- ***Fermi* is a young mission!**
 - Publications and PhD theses continue to rise



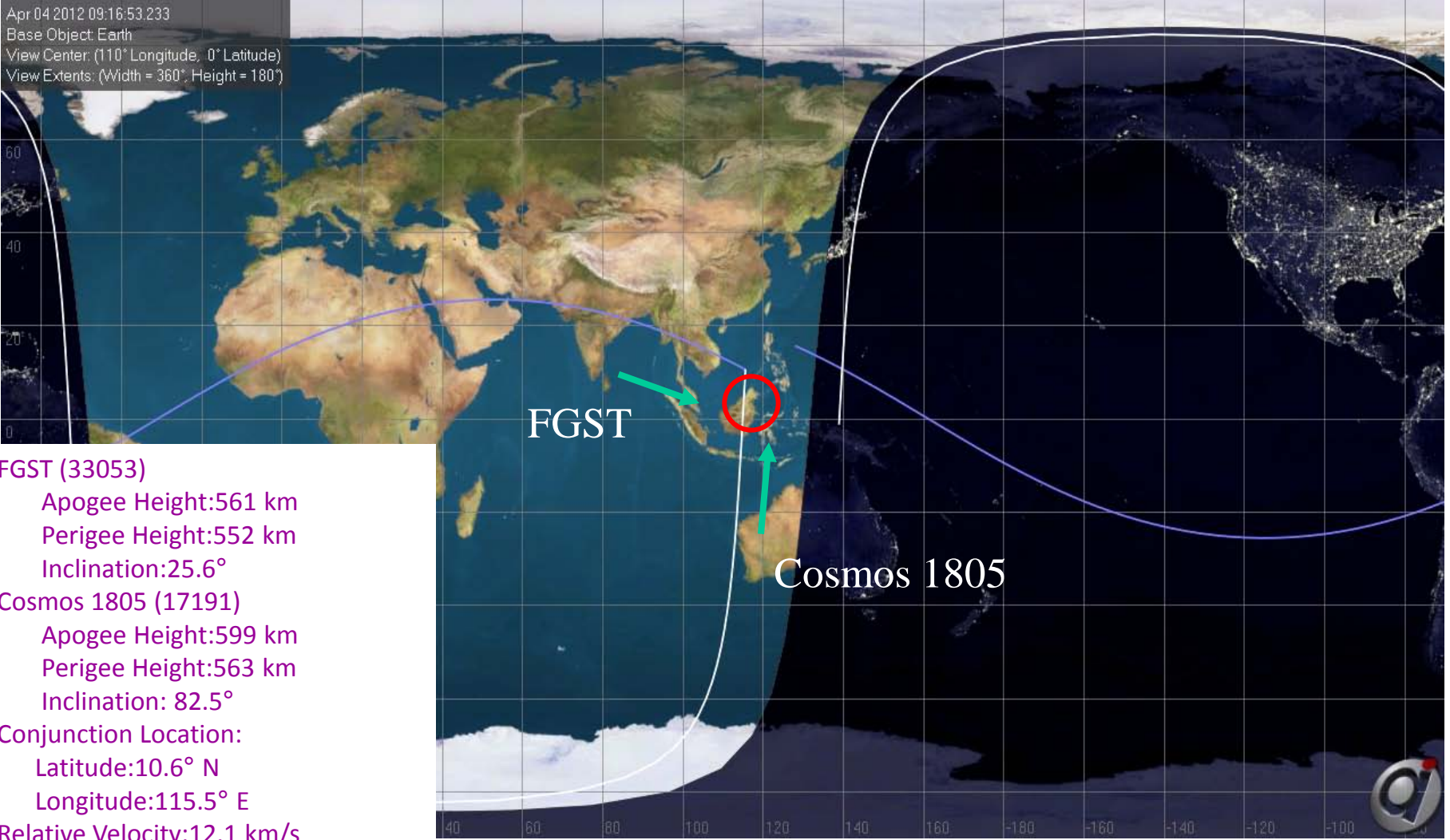
Papers search interface: http://fermi.gsfc.nasa.gov/cgi-bin/bibliography_fermi

Observations summary (since last meeting)

- **Almost exclusively in nominal data taking in survey mode**
 - **50 deg rocking angle from May 27 2009 onwards**
- **ARRs (1-2 per month)**
- **Nadir survey mode observations**
 - **3 orbits at nadir (2.75 hours before observation, modify GBM trigger config to reduce chance of false triggers)**
 - **Last nadir observation in 2011 resulted in sunpoint – root cause is due to drift in propagated attitude while the star trackers are blocked**
 - **nadir observations are now performed with a manned MOC**
- **Solar observation**
 - **2 days rocked south to improve solar coverage during a major outburst in March 8-9**
- **Pole observation for Tkr trunc tests**

Fermi vs Cosmos 1805

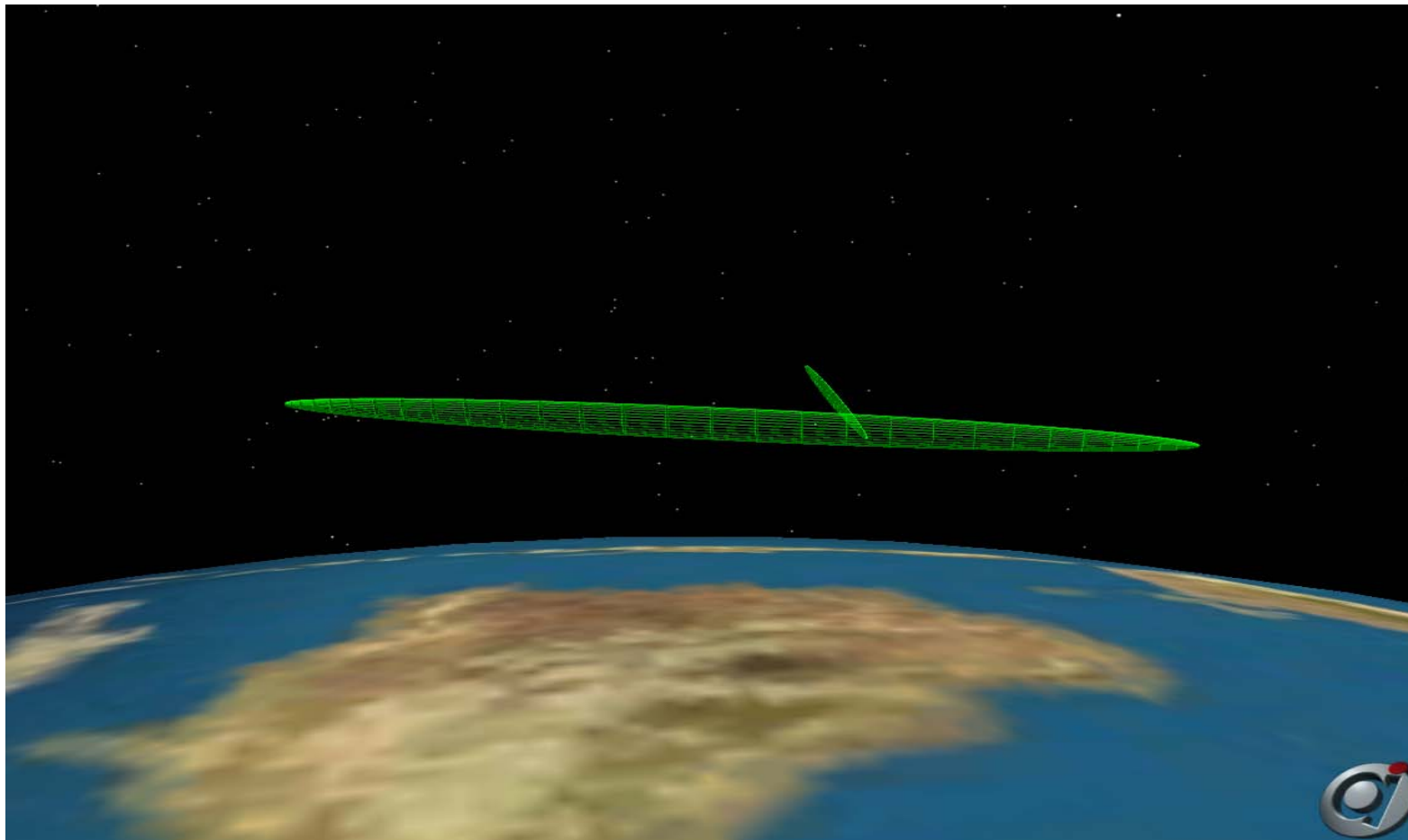
Apr 04 2012 09:16:53.233
Base Object: Earth
View Center: (110° Longitude, 0° Latitude)
View Extents: (Width = 360°, Height = 180°)



- FGST (33053)
 - Apogee Height:561 km
 - Perigee Height:552 km
 - Inclination:25.6°
- Cosmos 1805 (17191)
 - Apogee Height:599 km
 - Perigee Height:563 km
 - Inclination: 82.5°
- Conjunction Location:
 - Latitude:10.6° N
 - Longitude:115.5° E
- Relative Velocity:12.1 km/s
- Approach Angle:105.8°

Fermi and Cosmos 1805 predicted to pass within 500 m of one another

Conjunction visualization



Geometry of the close approach: the two orbits crossed each other - the separation was due to where on each orbits the satellites were -> uncertain

We performed a 1s posigrade burn to move out of the way



The poster features a composite image of the Fermi satellite in space and a coastal landscape with a waterfall. The text is overlaid on the image.


4th Fermi Symposium


28 Oct - 2 Nov 2012 Monterey, CA

The fourth symposium will focus on new scientific investigations and results enabled by the *Fermi Gamma-ray Space Telescope*, as well as mission and instrument characteristics, coordinated multiwavelength/multimessenger studies, and future opportunities.

Topics include:

- Pulsars
- Supernova remnants & pulsar wind nebulae
- γ -ray-bright binaries & novae
- Diffuse γ -ray emission
- Cosmic rays
- Active, starburst, & normal galaxies
- GRBs & other transient sources
- Dark matter & new physics
- Unidentified γ -ray sources


fermi
Gamma-ray
Space Telescope



<http://fermi.gsfc.nasa.gov/science/mtgs/symposia/2012/>

4th Fermi symposium in Monterey, California in Oct 28-Nov 2 2012.

Fermi Summer School 2012


fermi.gsfc.nasa.gov/science/mtgs/summerschool/2012/

Fermi Summer School 2012

The Fermi Gamma-ray Space Telescope has initiated an era of very broad energy coverage in the gamma-ray band. The combination of Fermi GBM and LAT provide observations of gamma-ray bursts and transients from 8 keV to >300 GeV. The combination of Fermi-LAT and ground-based gamma-ray observatories currently allows us to probe the high-energy emission from astrophysical sources over at least five orders of magnitude, including the previously unexplored territory from 10 to 100 GeV. These combinations of telescopes allow the measurement of broad-band spectra, the study of energy-dependent source morphologies, and correlated observations of time-variable sources, both within the gamma-ray energy range and with observations at longer wavelengths. These measurements provide critical diagnostics with which to identify source characteristics, particle acceleration and photon emission mechanisms. The 2012 Fermi Summer School will focus on the overlap between ground-based and space-based gamma-ray astronomy, both technically and scientifically, and will include hands-on workshops and science talks by experts in both fields. The school will be held at the [University of Delaware Conference Center](#) in Lewes, Delaware, from May 29 - June 8, 2012.

Find information about last year's school at: <http://fermi.gsfc.nasa.gov/science/mtgs/summerschool/2011/>

Material will be aimed at graduate students and recent PhDs. Topics will include space-based and ground-based instrumentation; spectral, spatial, and time-based analysis of gamma-ray data; particle acceleration and gamma-ray production mechanisms; and astrophysical source classes such as AGN, GRBs, pulsars, binary systems, supernova remnants, and pulsar wind nebulae.



Important Dates

- Application Deadline: March 15, 2012
- School: Tuesday, May 29 - Friday, June 8, 2012

Program

The 2012 instructors will be Luca Baldini (INFN/University of Pisa), Pasquale Blasi (Osservatorio Astrofisico di Arcetri), Michael Briggs (UAH), Seth Digel (SLAC/Stanford), Markos Georganopoulos (UMBC), Nepomuk Otte (Georgia Tech), and Andy Smith (UMCP). Lecturers will include Alan Marscher (BU), Trevor Weekes (FLWO/CfA), and Martin Weisskopf (MFSC).

See last year's program here: <http://fermi.gsfc.nasa.gov/science/mtgs/summerschool/2011/schedule.html>.