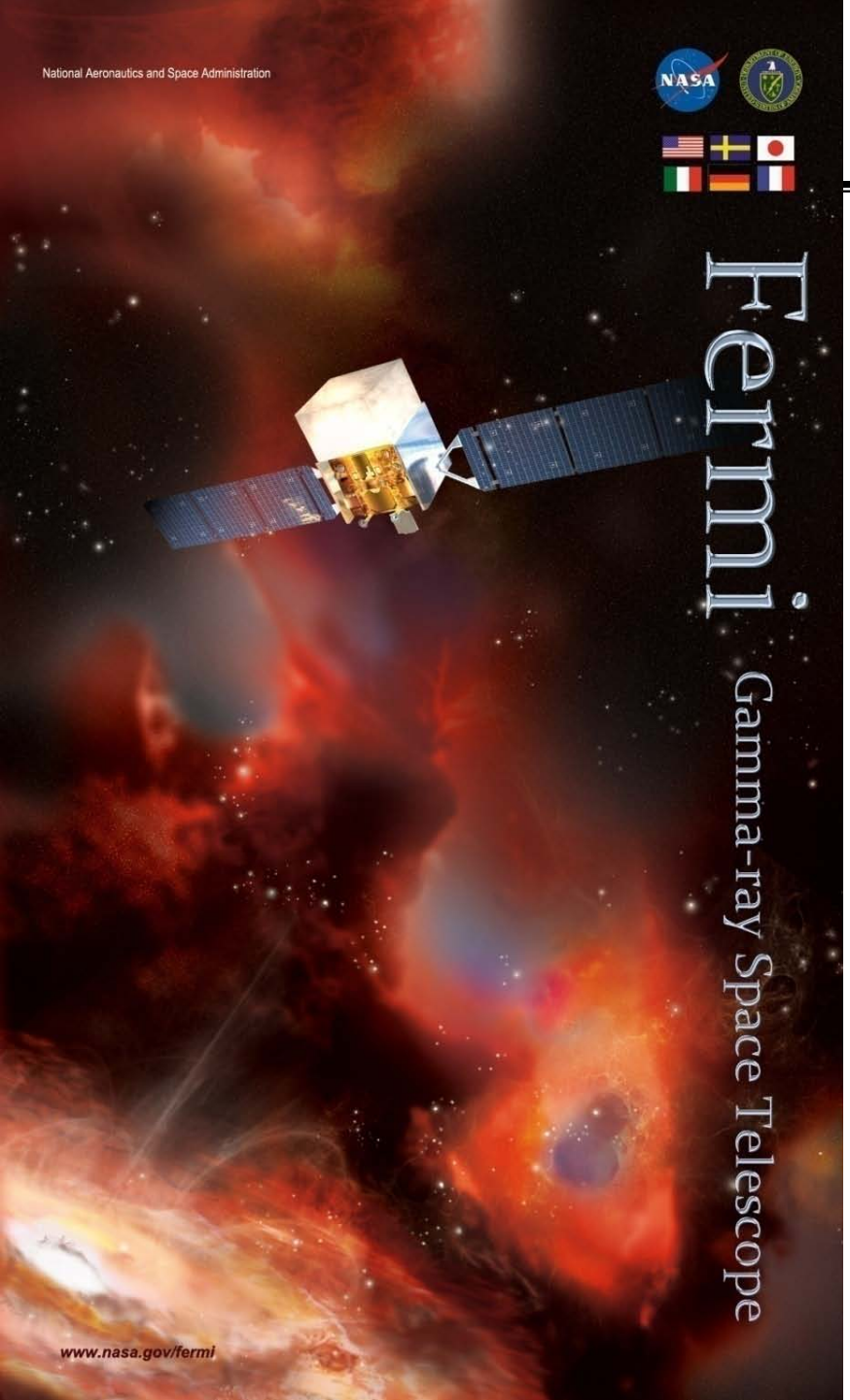


Fermi

Gamma-ray Space Telescope

International Finance Committee Meeting

Mission Status Update

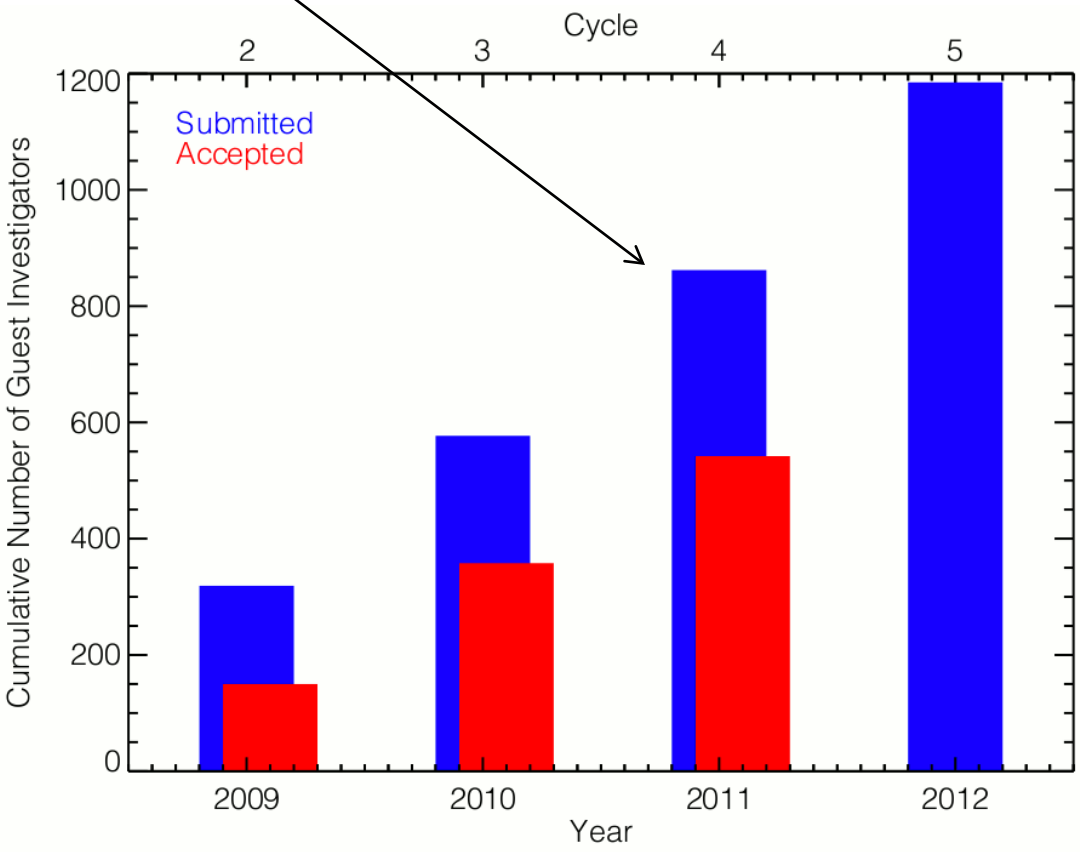
J. McEnery

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

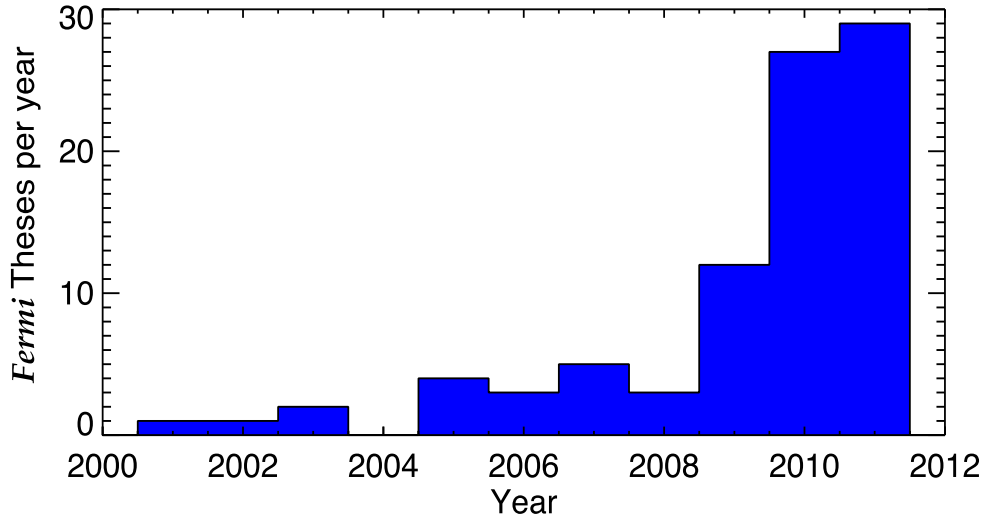
Total number of people participating in GI program continues to rise

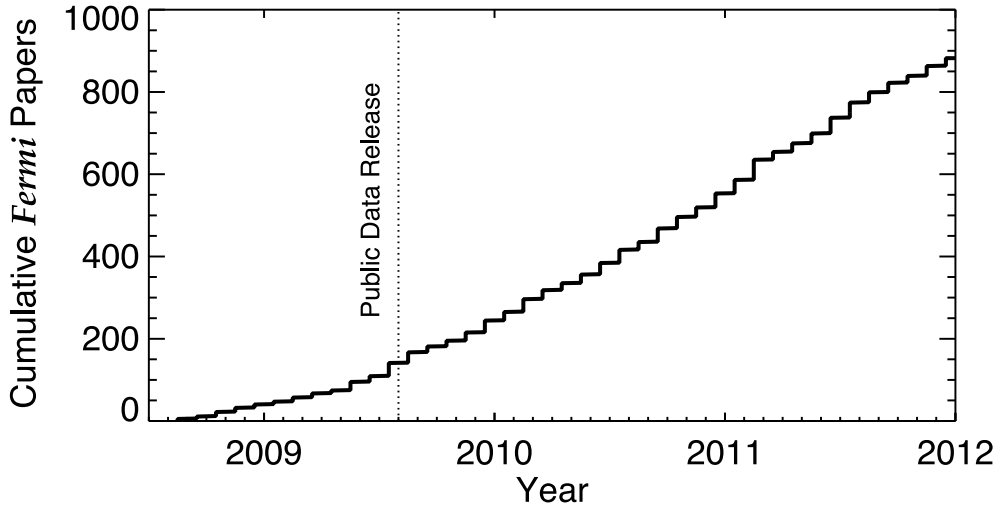


- ***Fermi* is a young mission!**
  - **Community of Fermi users is growing by >20% per year**

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

Growing Science Productivity





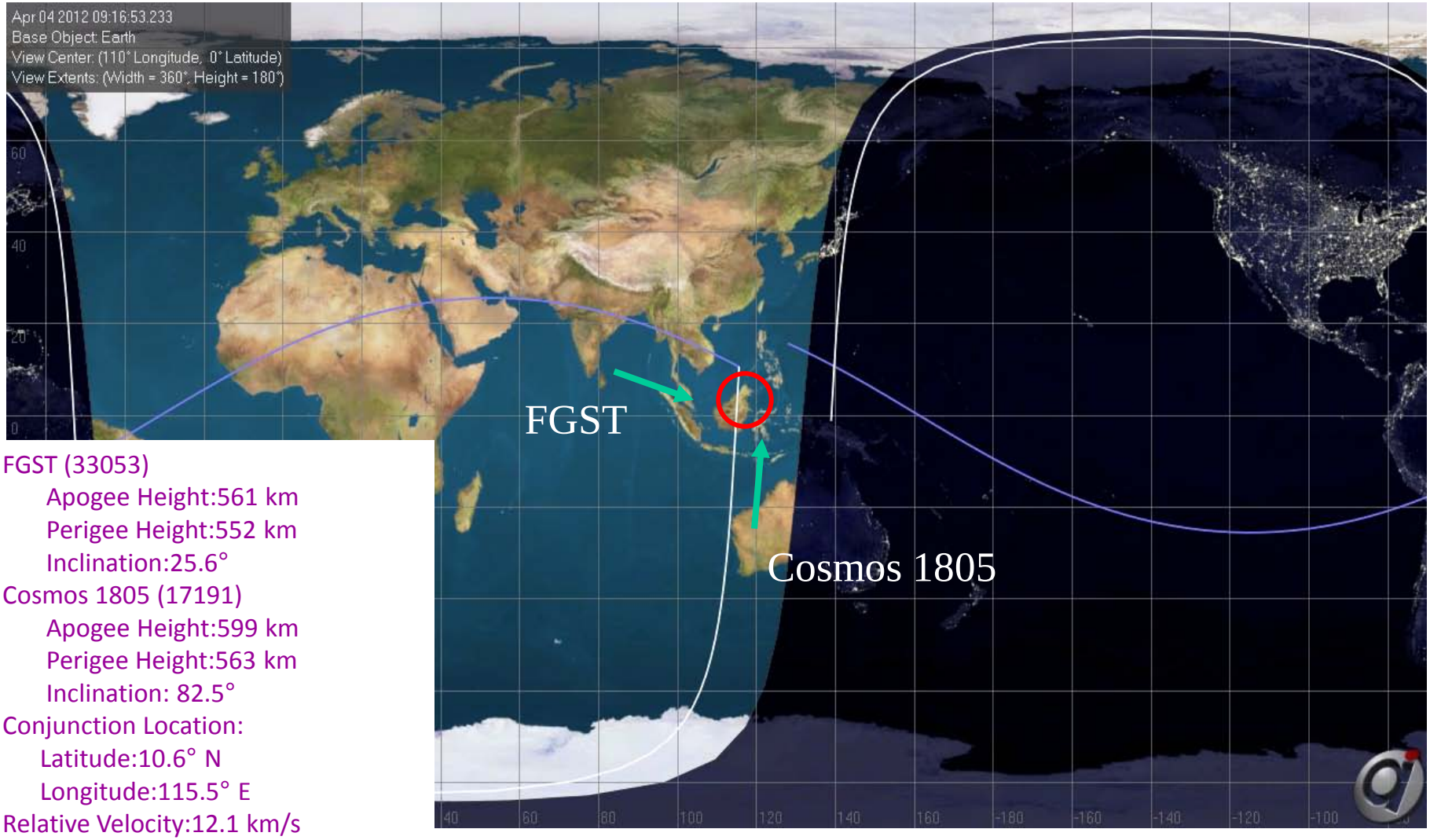
- ***Fermi*** **is a young mission!**
  - **Publications and PhD theses continue to rise**

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



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°

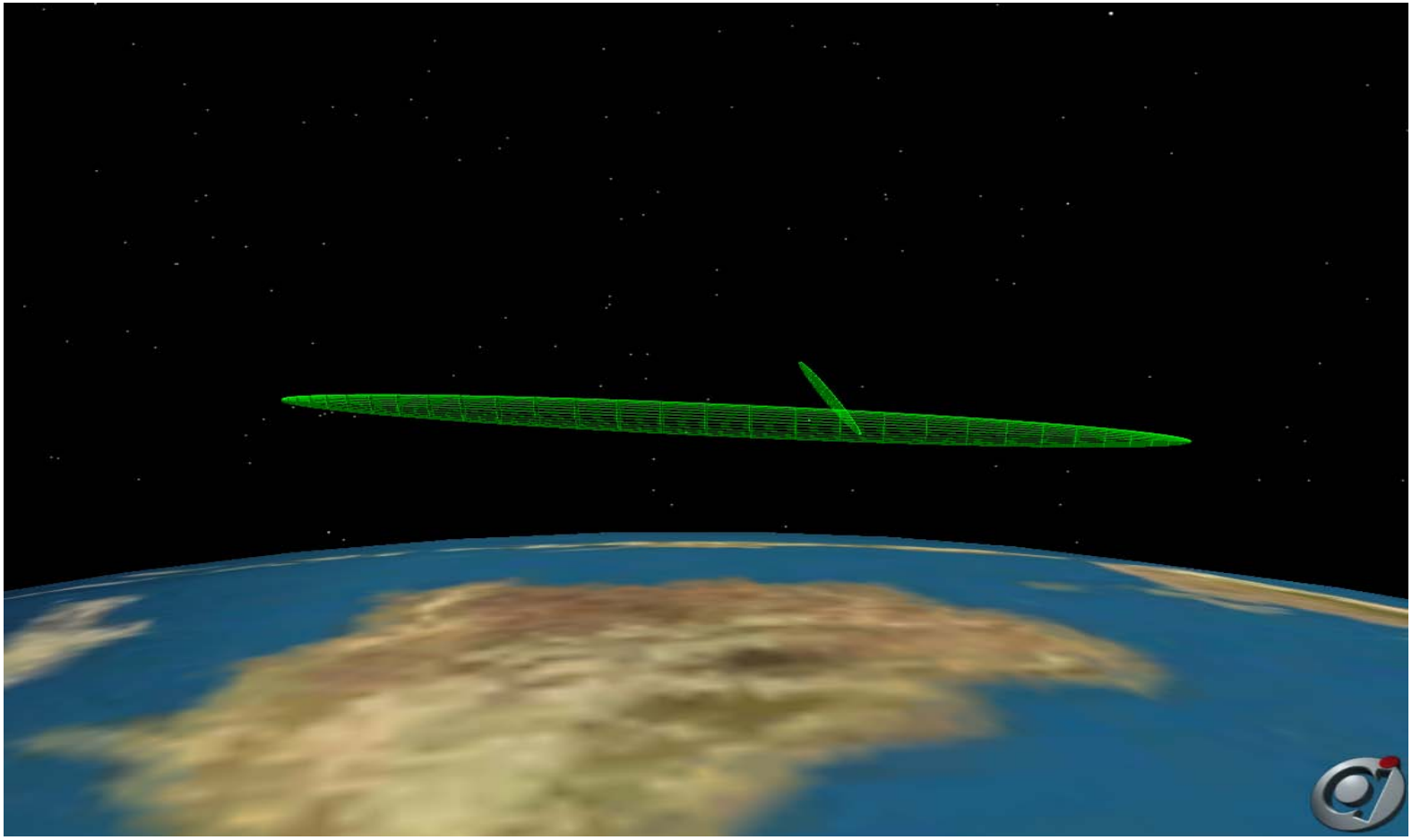
Conjunction Location:
- Latitude:10.6° N
- Longitude:115.5° E

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

Fermi Symposium

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

Fermi Summer School – May 29 – June 8