



High Energy Education and Public Outreach

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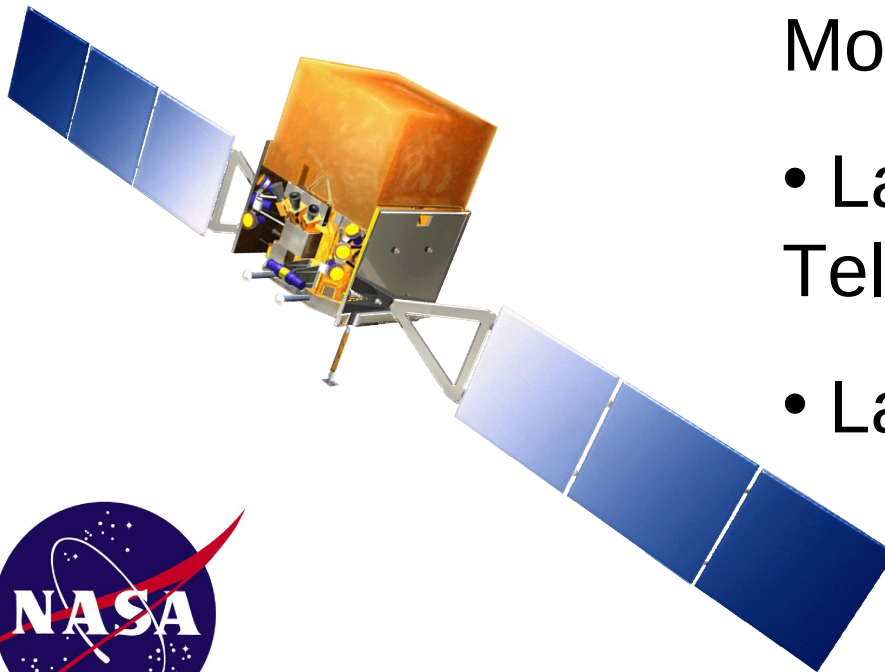


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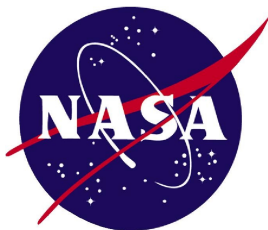


Kevin John

Gamma-ray Large Area Space Telescope (GLAST)



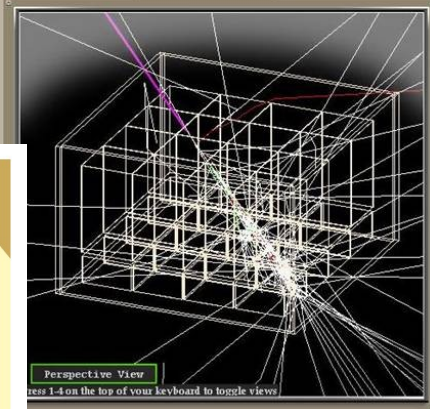
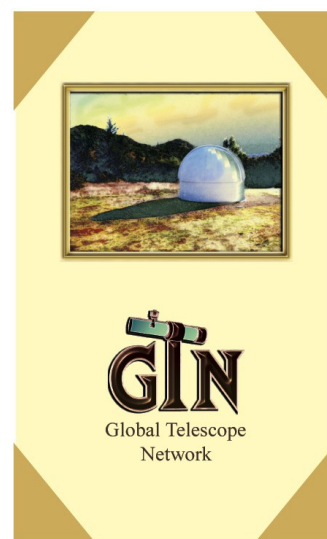
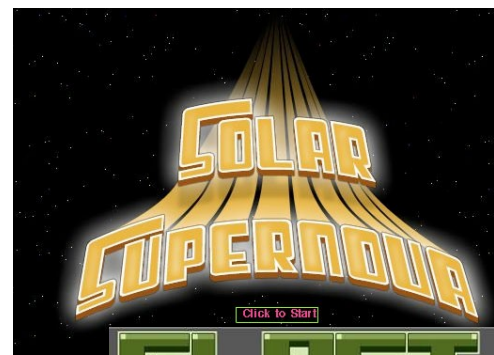
- GLAST Burst Monitor (GBM)
- Large Area Telescope (LAT)
- Launch in Fall 2007



Highlights



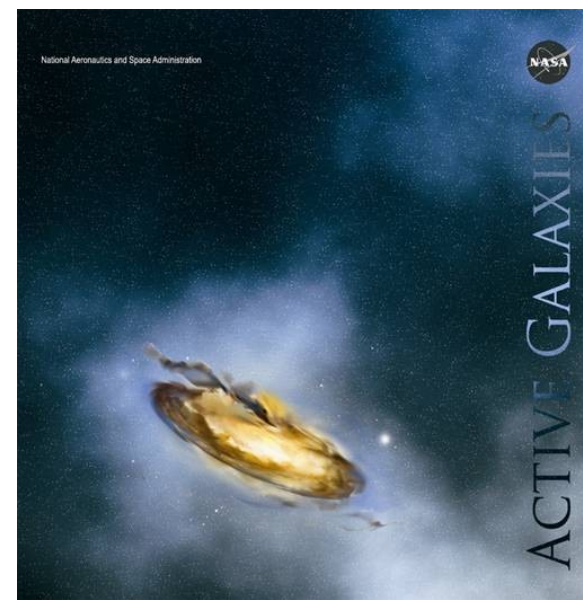
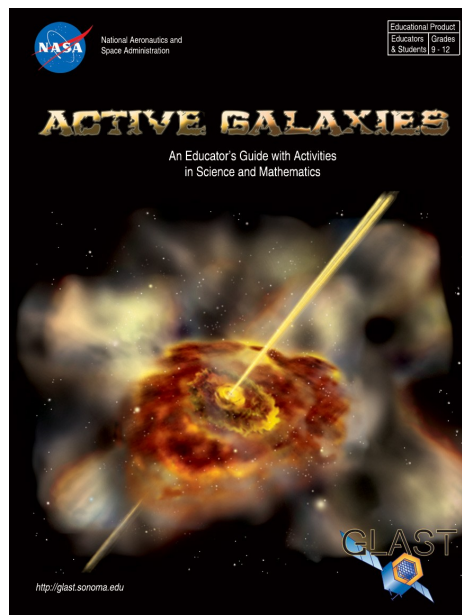
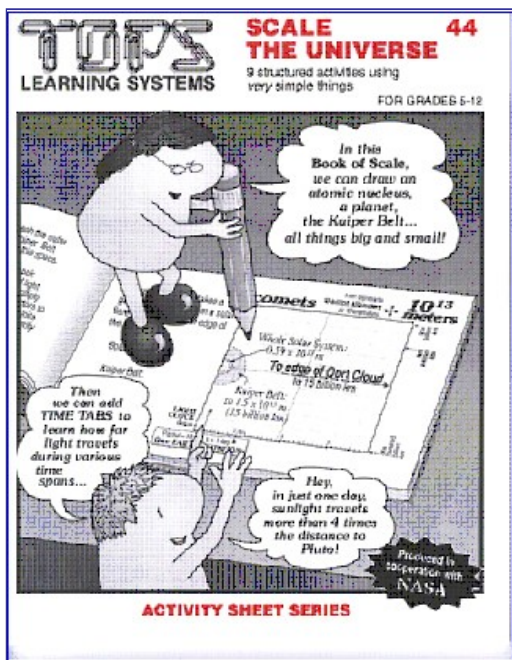
- Web-based materials
 - <http://glast.sonoma.edu>
 - New Space Mystery: Solar Supernova
 - GLAST LAT Simulator
- Global Telescope Network
 - <http://gtn.sonoma.edu>
 - Robotic observatory in partnership with California Academy of Sciences



Highlights



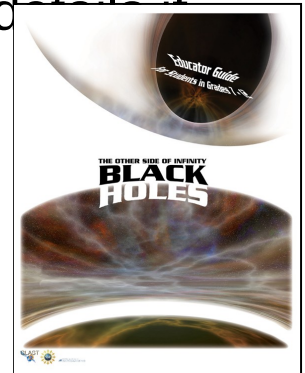
- Printed materials
 - 3 TOPS curriculum guides
 - Active Galaxy worksheet and educator's guide
 - Active Galaxy Pop-up book for younger kids



Highlights



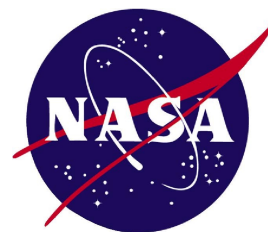
- PBS NOVA “Monster of the Milky Way”
 - Premiered 10/31/06
<http://www.pbs.org/wgbh/nova/blackhole>
 - Seeded with GLAST E/PO funds
 - Features HD simulations of black holes
 - “Black Holes: The Other Side of Infinity” planetarium show at the Denver Museum of Nature & Science and many others
 - Educator’s guide and teacher’s workshops to accompany both television and planetarium shows
 - Special free showing 2/7 at Chabot – write me for details if interested in attending



Swift GRB Mission



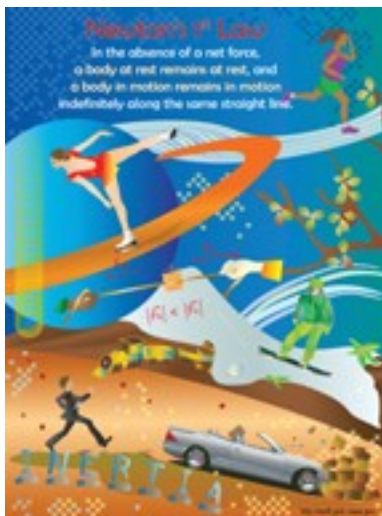
- Studies Gamma-Ray Bursts with a “swift” response
- Launched 11/20/04
- *Awarded 2007 Rossi prize by AAS/HEAD*



Highlights

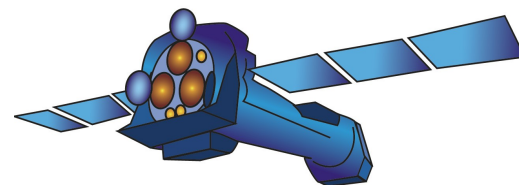


- Web-based materials
 - <http://swift.sonoma.edu>
 - Interactive skymap of GRBs
<http://grb.sonoma.edu>
- Printed materials
 - GEMS Invisible Universe guide
 - GRB wallsheet and educator's guide
 - Swift model booklet
 - Newton's Laws poster and activity set

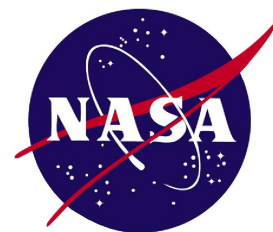


X-ray Multi-Mirror - Newton

XMM-Newton



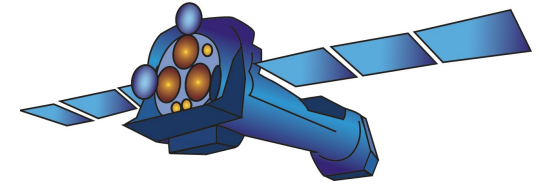
- Launched in December, 1999
- European Space Agency mission with NASA instruments and Guest Observers
- Large X-ray focusing mirror assembly
- High throughput X-ray spectroscopy



XMM-NEWTON



NASA E/PO

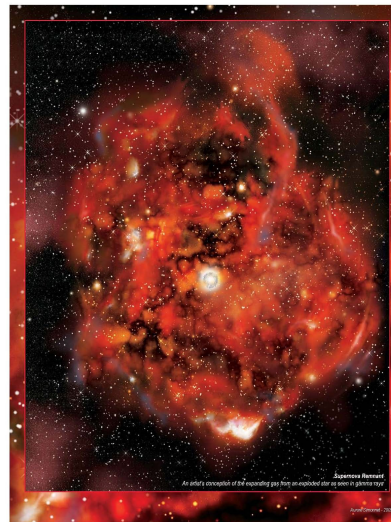


Highlights

- Web-based materials
 - <http://xmm.sonoma.edu>
 - CLEA Lab: “Dying Stars and the Birth of the Elements”
- Supernova educator’s guide in review
- Black Hole Space Rescue Game for younger kids (in both English and Spanish)

<http://spaceplace.jpl.nasa.gov/en/kids/blackhole/game.shtml>

<http://spaceplace.jpl.nasa.gov/sp/kids/blackhole/index.shtml>



Educator Ambassadors



Summer training July 2006

Highlights



- 18 Astrophysics Educator Ambassadors
- Master teachers who help review, test and disseminate Astrophysics E/PO materials
- Trained every other year at SSU
- Have trained over 35,000 teachers in workshops at national, regional and state conferences since 2002



The Future

- SSU leads outreach for SNAP (SuperNova Acceleration Probe)
 - DOE/CNES study of dark energy
 - potential NASA launch in 2013



- SSU also leads outreach for EXIST, a black hole finder experiment – fact sheet in English and Spanish



The Future

We are moving into the area of physics/astronomy educational research

- Increasing the number of STEM learners
- Increasing the number of highly qualified physical science teachers (pilot course now offered through Extended Ed)
- The effects of introducing research-based learning experiences into the classroom for high-school and community college students



For more information:

- <http://epo.sonoma.edu>
- <http://glast.sonoma.edu>
- <http://swift.sonoma.edu>
- <http://xmm.sonoma.edu>
- <http://mystery.sonoma.edu>
- <http://grb.sonoma.edu>
- <http://gtn.sonoma.edu>