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CATCHING GAMMA RAY BURSTS ON THE FLY: THE SWIFT MISSION & THE REM TELESCOPE

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RESUMEN

Se presenta a los equipos del Swift y REM, y se da una breve descripción de la misión

ABSTRACT

The Swift and REM teams, as well as a short description of the mission are presented

Key Words: **INSTRUMENTATION**

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1. THE SWIFT AND REM TEAMS

Swift – Lorella Angelini (GSFC - USRA Ground System Archive), Louis Barbier (GSFC - BAT Science Electronics), Scott Barthelmy (GSFC - BAT Lead), David Burrows (PSU - XRT Lead), Patrizia Caraveo (IFCTR/CNR Milan -G. S. scientist Malindi), Margaret Chester (PSU - Ground System PSU Ops), Guido Chincarini (OAB & USMB - Italian Lead), Oberto Citterio (OAB - XRT mirror module Lead), Tom Cline (GSFC - Science Theory Team), Lynn Cominsky (Sonoma State - Public Relations Lead), Robin Corbet (GSFC - USRA Science Theory Team), France Cordova (UCSB - Science Theory Team), Mark Cropper (MSSL - UVOT Telescope), Eric Feigelson (PSU Education / Public Outreach Team), Ed Fenimore (LANL BAT Science Flight Software), Dale Frail (NRAO/VLA - Science Theory Team), Neil Gehrels (GSFC - Principal Investigator), Gordon Garmire (PSU - Science Theory Team), Paolo Giommi (BeppoSAX/SDC - Ground Italian Data Center), Scott Horner (Lockheed-M. UVOT), Kevin Hurley (UC- Berkeley Follow-up Team Lead), Keith Jahoda (GSFC - Ground System HX Survey), Francois Lebrun (CEN Saclay - BAT Detectors), Frank Marshall (GSFC - Ground System Lead), Keith Mason (MSSL - UVOT UK Lead), Peter Meszaros (PSU - Science Theory Team Lead), Richard Mushotzky (GSFC - Science Theory Team), Jay Norris (GSFC - Science Theory Team), John Nousek (PSU - Narrow-Field Instrument Lead), Bohdan Paczynski (Princeton - Science Theory Team), David Palmer (GSFC - USRA BAT SciFl.Cen.), Ann Parsons (GSFC-BAT Detector Scientist), Jacques Paul (CEN Saclay-Science Theory Team), Peter Roming (PSU-UVOT Lead), Tim Sasseen (UCSB-UVOT OM Liaison), Alan Smale (GSFC-USRA - Ground System Sci.Cen.), Luigi Stella (OAR-Science Theory Team), Gianpiero Tagliaferri (OAB - Ground System Italian Data Cen.), Leisa Townsley (PSU-UVOT Team), Jack Tueller (GSFC-Ground System HX Survey), Martin Turner (U. Leicester-Science Theory Team), Mario Vietri (URoma3-Science Theory Team), Martin Ward (U. Leicester-Ground System UK Data Center), Alan Wells (U. Leicester-XRT UK Lead), Nick White (GSFC-Science Working Group Chair), Laura Whitlock (Sonoma State - Education / Public Outreach Lead), Richard Willingale (U.Leicester - XRT Calibration), Will Zhang (GSFC-Science Theory Team).

REM Angelo Antonelli (INAF-OARoma Reduction SW), Paolo Conconi (INAF-OABrera Optics), Stefano Covino (INAF OABrera Observ. Software), Giuseppe Cutispoto (INAF-OACatania, Telescope), Emilio Molinari (INAF-OABrera Integration), Luciano Nicastro (CNR - IFCAI ROSS Red. Software), Eliana Palazzi (CNR-TESRE ROSS Science), Marcello Rodonò (INAF-OACatania Ancillary Science Resp.), Gino Tosti (Univ.Perugina ROSS Hardware), Filippo Maria Zerbi INAF-OA Brera Principal Investigator)

2. MISSION DESCRIPTION

The Swift satellite will be launched at the end of the year 2003 and it is the result of the initiative of the Goddard Space Flight Center (NASA), in the context of the MIDEX missions, in collaboration with Italy (ASI) and UK (PPARC). The spacecraft has the capability to re-point very quickly, within $\sim$ 1 minute, and the onboard instrumentation (BAT) has high sensitivity (2×10^{-8} ergs cm^{-2}) for GRBs. The XRT mirror module has been supplied by Italy (JETX spare) and the spacecraft will use the Italian Ground Station in Malindi. The UVOT has been supplied by the UK (XMM OM spare). We foresee detection of about 200 GRBs per year. The data will be public and in addition to the original list above,

[1]On behalf of the Swift and REM teams listed below

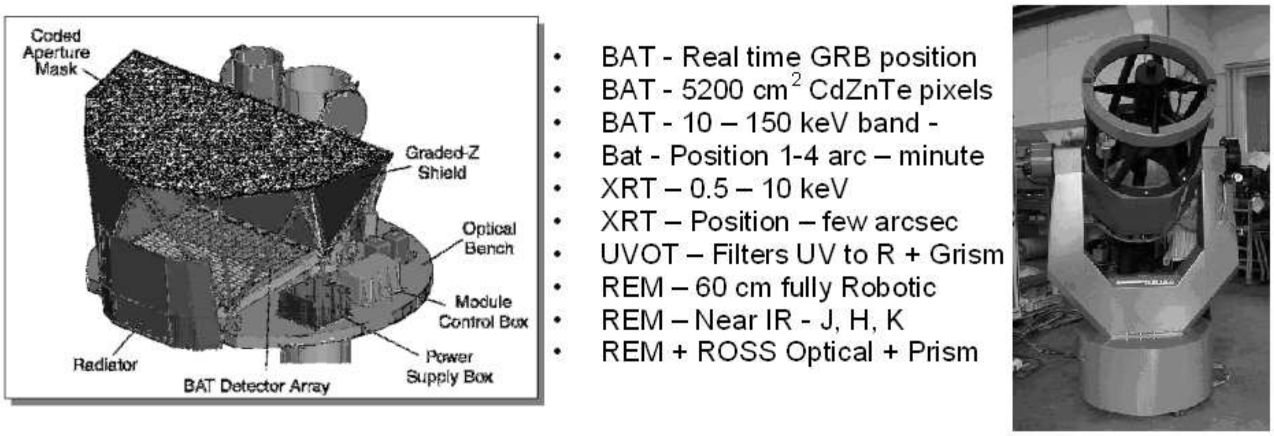


Fig. 1. Swift and REM layouts.

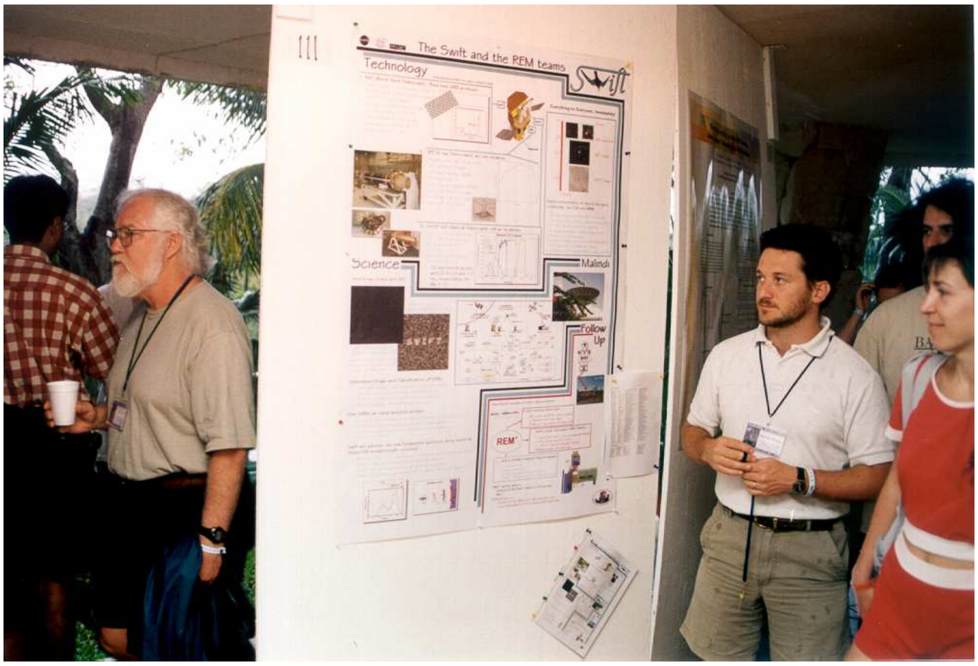
the list of scientists planning to participate to this research and being coordinated for the follow-up observations using Ground Telescopes and other satellites is very large.

REM + ROSS was born with the idea of detecting GRBs that could be obscured by dust or GRBs that are missed in the optical bands because they are at very high redshift. REM will also monitor, as will do other ground based telescopes, the detected GRBs in coordination with Swift. Also in this case the number of scientists involved is rather large. In this project some of the scientists of the Swift team also participate. The data will be public as well.

It is obviously impossible to be fair to this project and to the persons involved in the allotted space, so that the best way to get the proper information is by going to the web addresses below:

http://swift.gsfc.nasa.gov

http://golem.merate.mi.astro.it/projects/rem.



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