

ISIM Team Flight Software Development Team (FSDT)

Background:

The NGST consists of three major systems: the Optical Telescope Assembly (OTA), the Spacecraft Support Module (SSM), and the Integrated Science Instrument Module (ISIM). The ISIM is a distributed system consisting of a cryogenic instrument module that is interfaced to the OTA and a data system located in the SSM. This distributed ISIM system and associated GSE will be designed, developed and integrated at GSFC and delivered by GSFC to the NGST Prime Contractor as flight qualified GFE.

Phase A Charter:

The ISIM team will charter a Flight Software Development Team (FSDT) to perform Phase A development of the ISIM flight software. The FSDT lead will report to the ISIM systems engineer. During Phase A, this group will carry primary responsibility for development of:

- ISIM software architecture
- All ISIM software ICDs
- ISIM software development schedule and ROM cost
- Supporting documentation for science instrument procurement and other NGST solicitations

Consistent with the overall ISIM Phase A Statement of Work,

<http://ngst.gsfc.nasa.gov/cgi-bin/pubdownload?Id=225>

the FSDT will develop two ISIM software solutions that are separately optimized for each Phase A prime contractor as well as for ground system and mission operations requirements. The goals of this optimization are to maximize the science capability of NGST while minimizing total life cycle cost. Successful optimization of interfaces between the ISIM, and prime contractor systems will be evaluated as an important aspect of the prime contractor's accommodation of the ISIM system.

It is anticipated that the FSDT will continue through launch to fully design, develop, test and deliver the ISIM flight software and associated GSE software to the NGST Project. A FSDT Phase E sustaining engineering role is also anticipated.