



Swift Data Centres in the UK & Italy

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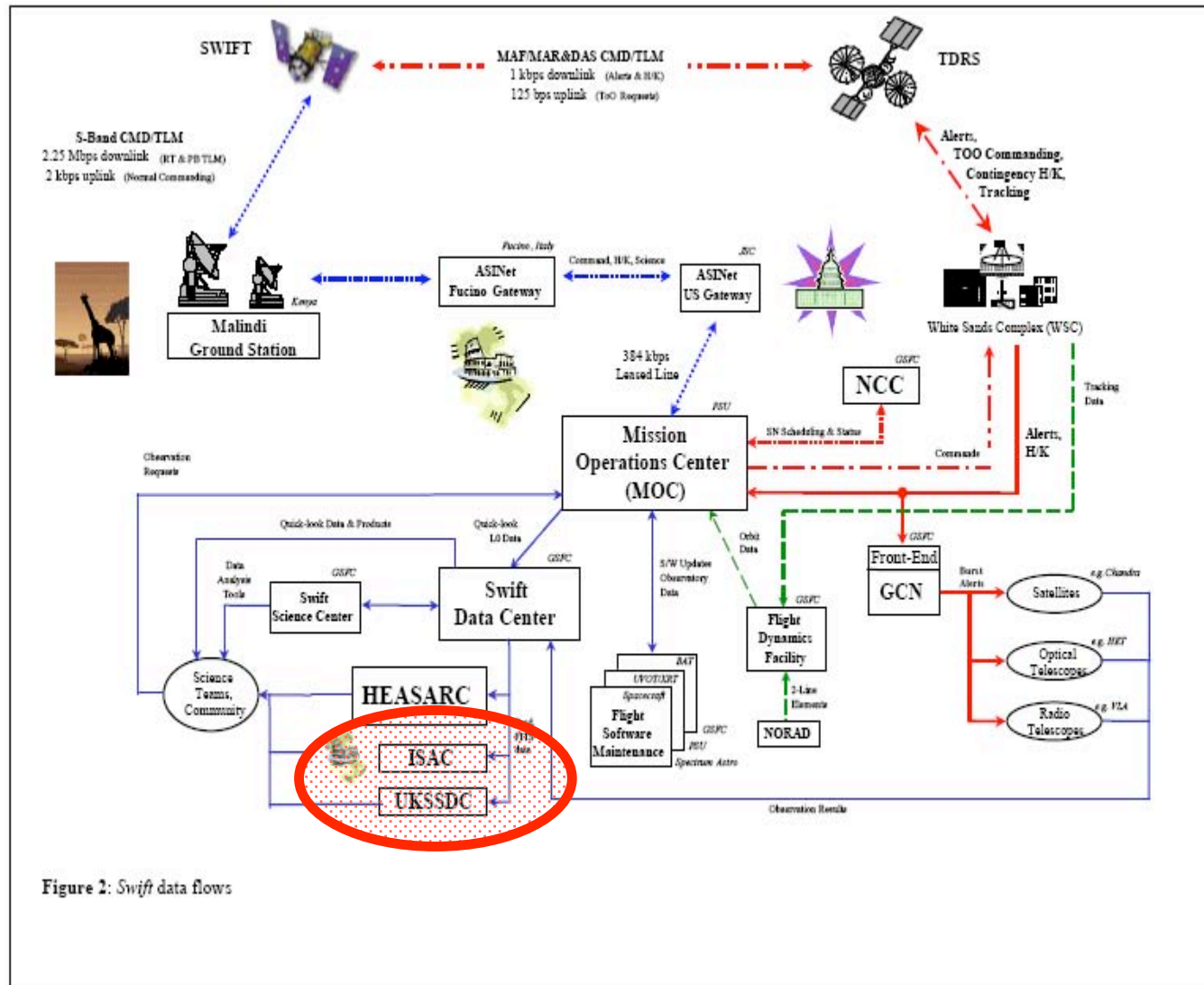


European Swift Data Centres

- Sited in major partner institutes:
- **UK – University of Leicester**
 - Also responsible for XRT camera & other XRT subsystems
- **Italy – ASI Science Data Centre, Frascati & Osservatorio Astronomico di Brera, Milan**
 - ASI have provided Malindi ground station & XRT software. OAB responsible for XRT mirror system
- Both also have post-launch roles in XRT sustaining engineering and calibration, and are providers of burst advocates



European Swift Data Centres





European Swift Data Centres

The basic idea

- Data centres provide identical set of core Swift data products from each instrument and are updated simultaneously as data is ready

Rationale

- Distributed data provision reduces load on US data centre at HEASARC
- Local data provision improves delivery to local community
- Local timezone helpdesk
- Foster national Swift exploitation



European Swift Data Centres

- Both sites make use of GSFC-provided Data Transfer System for automatic data transfer from SDC at GSFC as soon as data is ready
- Each site uses a local variant of the GSFC database population scripts to ingest data into its own preferred relational database management system
- Each site may provide its own user interface for data access



UK Swift Science Data Centre

<http://www.swift.ac.uk>

- Recently funded for ~3 yrs, with expectation of continuation
- J Osborne – lead
- 2 full-time scientist/programmers + 1 full-time system manager/programmer
- Based on LEDAS heritage
- Required to achieve integration with UK VO (AstroGrid)

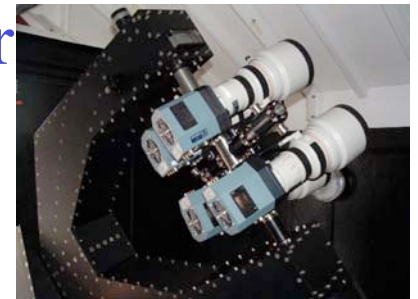


UK Swift Science Data Centre



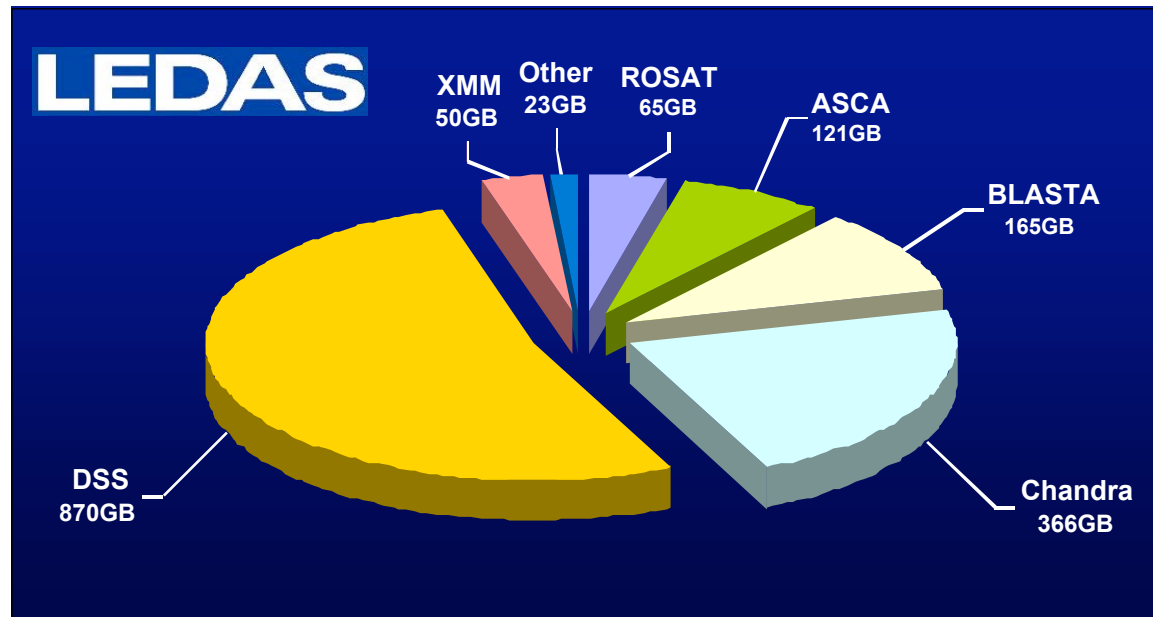
- LEDAS hosts XMM, Chandra, DSS-2, other high energy mission data (and related catalogues from HEASARC)
- Currently preparing for AstroGrid VO interoperability and initial WASP ar

<http://www.ledas.ac.uk>





UK Swift Science Data Centre



DSS: Digitised Sky Survey

Chandra: Chandra Public Archive

XMM: XMM Serendipitous Source Catalogue (1XMM) archive

ASCA: ASCA Science Archive

ROSAT: ROSAT Public Archive

BLASTA: Large catalogues (including GSC, 2MASS)

Other: Other mission archives, including Ginga, Einstein

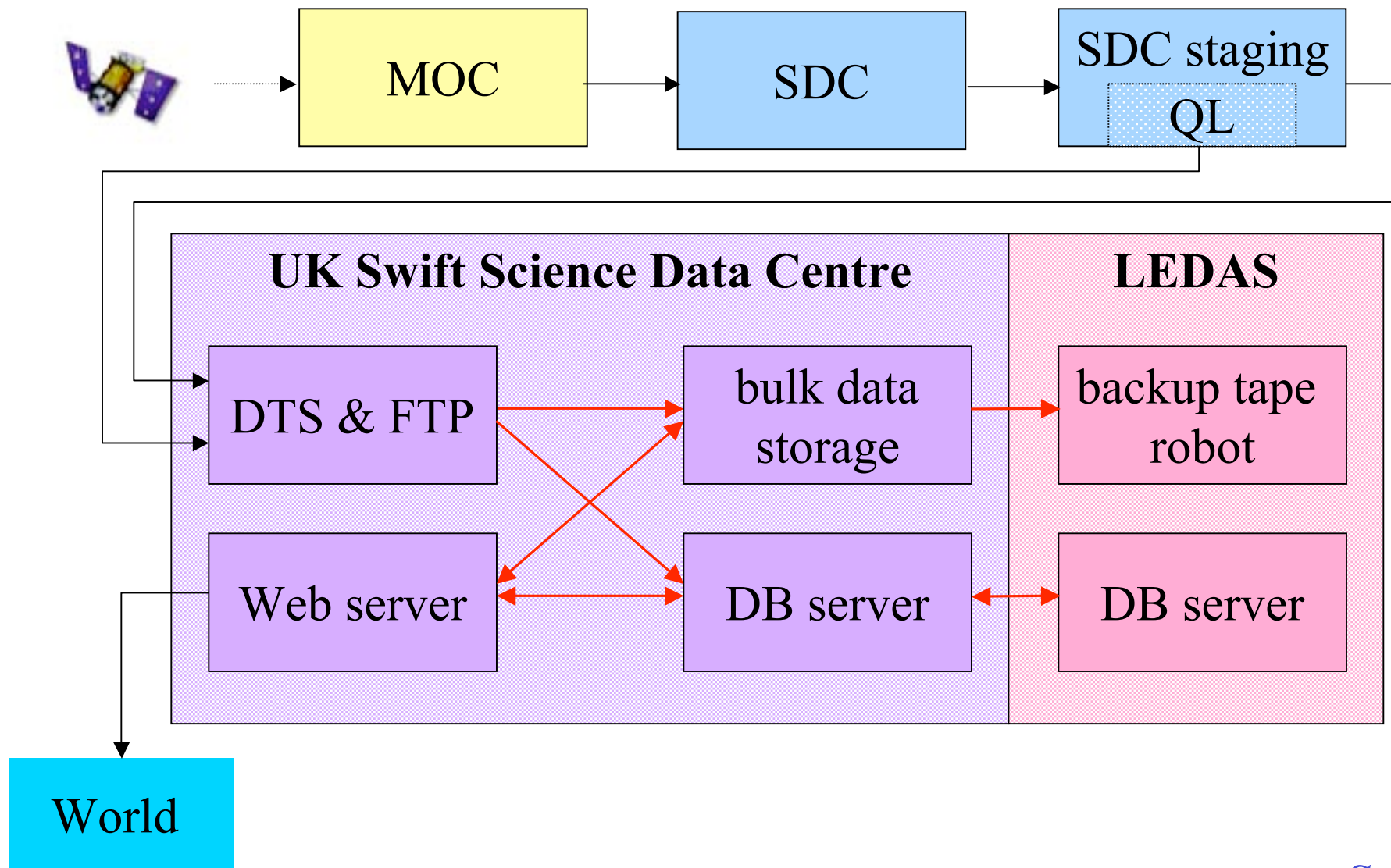


UK Swift Science Data Centre

- 4 dual XEON CPUs, 8TB RAID IDE disks, Gigabit network, UPS
- Architecture designed for maximum availability system, with multiple failure modes covered



UK Swift Science Data Centre





UK Swift Science Data Centre

Added value

In addition to provision of core archive data, the latest calibrations & software and a helpdesk function, the UKSSDC aims to provide:

- Swift quick-look data
- Swift data analysis workshops
- Faulkes Telescopes spectrograph GRB data



UK Swift Science Data Centre

- 2-m robotic Faulkes Telescopes in Maui & Siding Spring, Australia
- Each has a 4₊ resolution spectrograph designed for prompt GRB follow-up



First (solar) spectrum at FT-N in Aug





UK Swift Science Data Centre

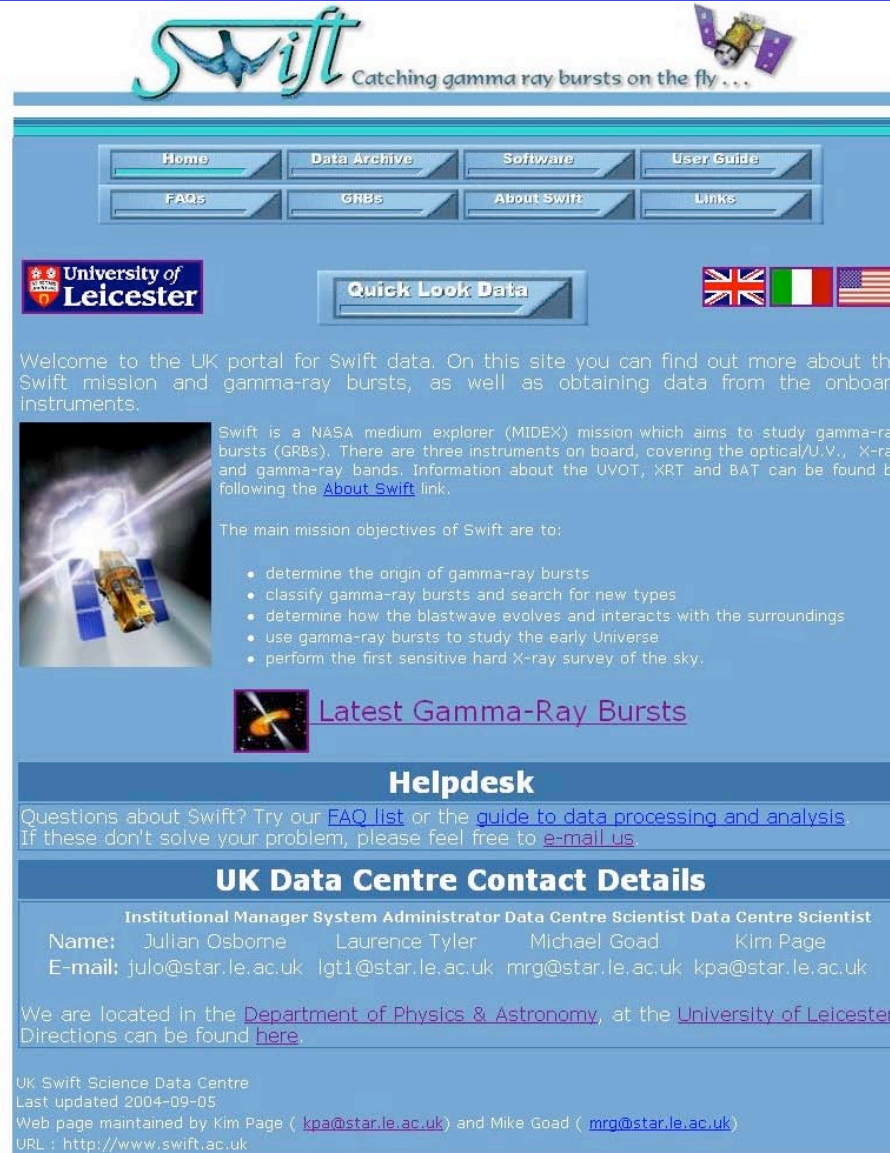
UKSSDC has

- Successfully taken part in the End-to-End Mission Readiness Test
- Established Swift database tables
- Performed long-term soak test of DTS, monitoring US-UK network throughput
- Initial web site

UKSSDC will go live in Swift verification phase



UK Swift Science Data Centre



The screenshot shows the website interface for the UK Swift Science Data Centre. At the top, there is a navigation menu with buttons for Home, Data Archive, Software, User Guide, FAQs, GRBs, About Swift, and Links. Below the menu is the University of Leicester logo and a 'Quick Look Data' button. The main content area features a welcome message, a description of the Swift mission, and a list of mission objectives. There is also a section for 'Latest Gamma-Ray Bursts' and a 'Helpdesk' section. At the bottom, contact details for the UK Data Centre are provided, including names, email addresses, and location information.

Swift Catching gamma ray bursts on the fly ...

Home Data Archive Software User Guide
FAQs GRBs About Swift Links

University of Leicester Quick Look Data

Welcome to the UK portal for Swift data. On this site you can find out more about the Swift mission and gamma-ray bursts, as well as obtaining data from the onboard instruments.

Swift is a NASA medium explorer (MIDEX) mission which aims to study gamma-ray bursts (GRBs). There are three instruments on board, covering the optical/U.V., X-ray and gamma-ray bands. Information about the UVOT, XRT and BAT can be found by following the [About Swift](#) link.

The main mission objectives of Swift are to:

- determine the origin of gamma-ray bursts
- classify gamma-ray bursts and search for new types
- determine how the blastwave evolves and interacts with the surroundings
- use gamma-ray bursts to study the early Universe
- perform the first sensitive hard X-ray survey of the sky.

[Latest Gamma-Ray Bursts](#)

Helpdesk

Questions about Swift? Try our [FAQ list](#) or the [guide to data processing and analysis](#). If these don't solve your problem, please feel free to [e-mail us](#).

UK Data Centre Contact Details

Institutional Manager System Administrator Data Centre Scientist Data Centre Scientist

Name: Julian Osborne Laurence Tyler Michael Goad Kim Page
E-mail: julo@star.le.ac.uk lgt1@star.le.ac.uk mrg@star.le.ac.uk kpa@star.le.ac.uk

We are located in the [Department of Physics & Astronomy](#), at the [University of Leicester](#). Directions can be found [here](#).

UK Swift Science Data Centre
Last updated 2004-09-05
Web page maintained by Kim Page (kpa@star.le.ac.uk) and Mike Goad (mrg@star.le.ac.uk)
URL : <http://www.swift.ac.uk>



Italian Swift Archive Centre

<http://www.asdc.asi.it>

P Giommi – lead



ISAC – Italian Swift Archive Centre

is hosted by

ASDC – ASI Science Data Centre

while

OAB – Osservatorio Astronomico di Brera

provides serendipitous XRT source catalogue



Italian Swift Archive Centre

ASDC is the home of the BeppoSAX archive

- Future missions to be included:

2004	Swift
	Mars Express (Marsis)
	Pamela (TBC)
2005	AGILE
2006	GLAST



Italian Swift Archive Centre



- [ISAC Documentation](#)
- [Swift project main pages](#)
- [Swift XRT simulator](#)
- [Malindi ground station](#)
- [Preliminary Data Archive](#)
- [ASDC main page](#)



Italian Swift Archive Center ISAC

Swift is a MIDEX Gamma Ray Burst mission led by NASA with participation of Italy and the UK.

Italy contributes to the mission providing

- **The XRT X-ray mirror**
- **The Malindi ground station**
- **XRT data reduction and analysis software**

The Swift data will be available to the scientific community through data centers in the USA, Italy and the UK.

The Italian Swift Archive Center (ISAC) will serve the local community.

ISAC has *two components located at the ASI Science Data Center (ASDC) and at the Brera Observatory*. ISAC at ASDC will be the main interface to the Italian users.

Main events

Swift is scheduled for launch on October 7, 2004

[Swift arrives at KSC launch site on July 29, 2004](#)

[Versione Italiana](#)



Italian Swift Archive Centre

ASDC Multi-Mission Interactive Archive



BeppoSAX NFI XMM-Newton Chandra ROSAT
BeppoSAX WFC EXOSAT ASCA Einstein Swift

Search Type
Coordinates
Time
Parameter
Class

Enter source name or RA,DEC(*)

Name Resolver: LOCAL SIMBAD NED
(*
(e.g. NGC4151 or 12 10 32.4,+39 24 20.5 or
182.635,39.406)

Radius (arcmin)
Equinox
 2000 1950

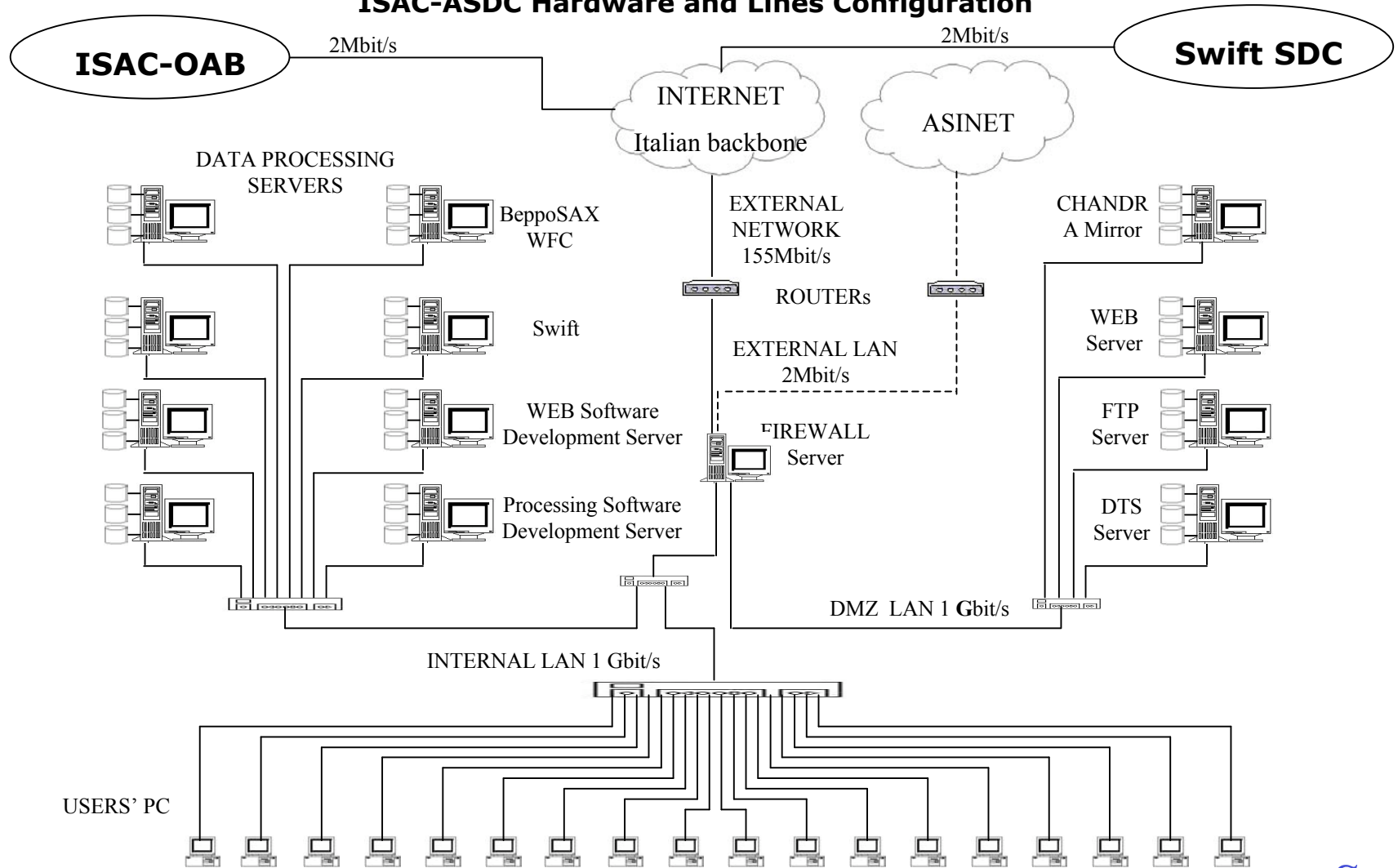
Output sorted by Max lines retrieved
 RA DEC

Submit



Italian Swift Archive Centre

ISAC-ASDC Hardware and Lines Configuration





Italian Swift Archive Centre

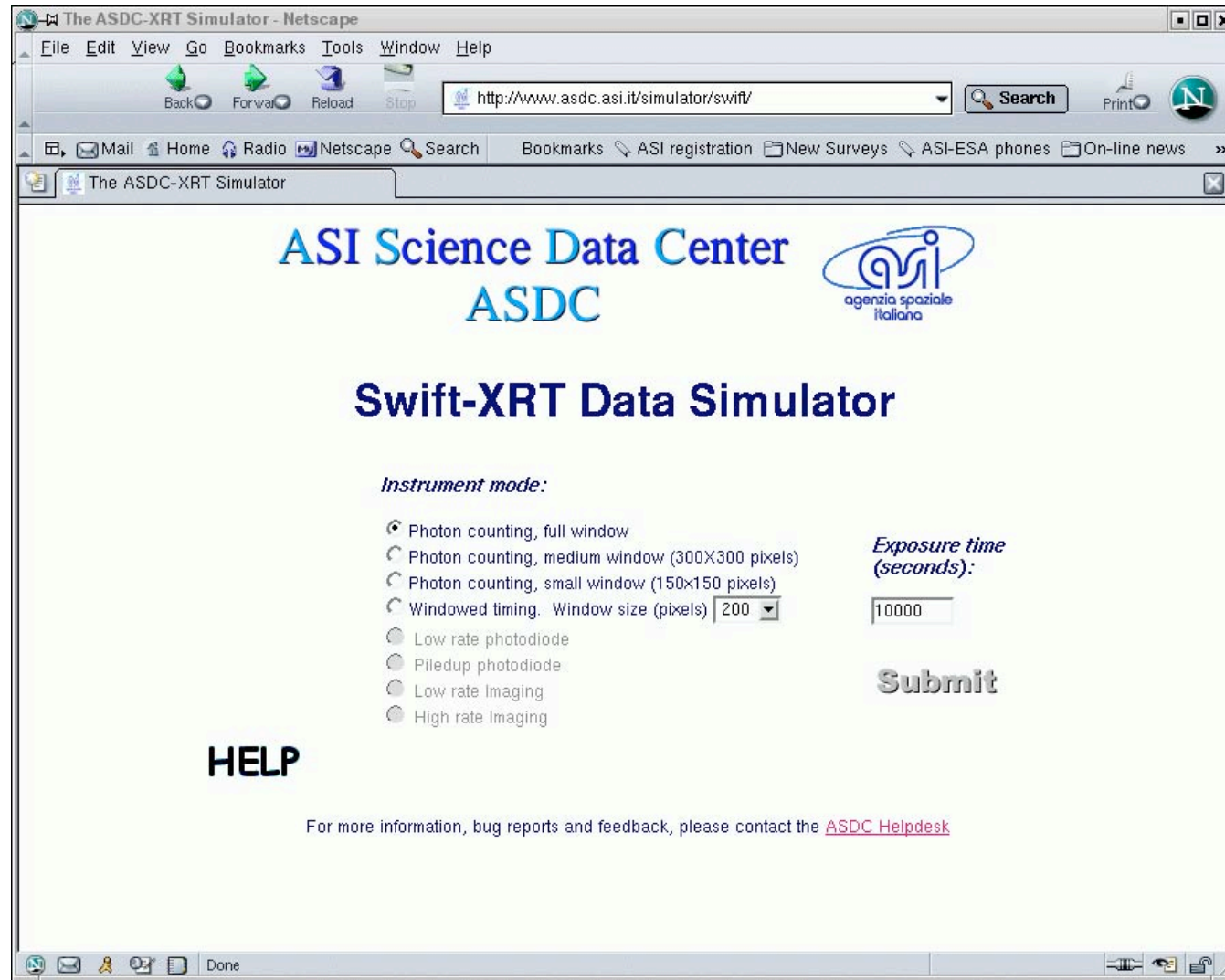
Added value (incomplete)

ASDC multi-mission simulator has been extended to simulate Swift XRT event lists

- Simulates columns: X, Y, PI (energy), Time
- Target + random or user sky
- Point or extended sources
- PSF a function of energy & off-axis angle
- Integrated with ASDC interactive archive

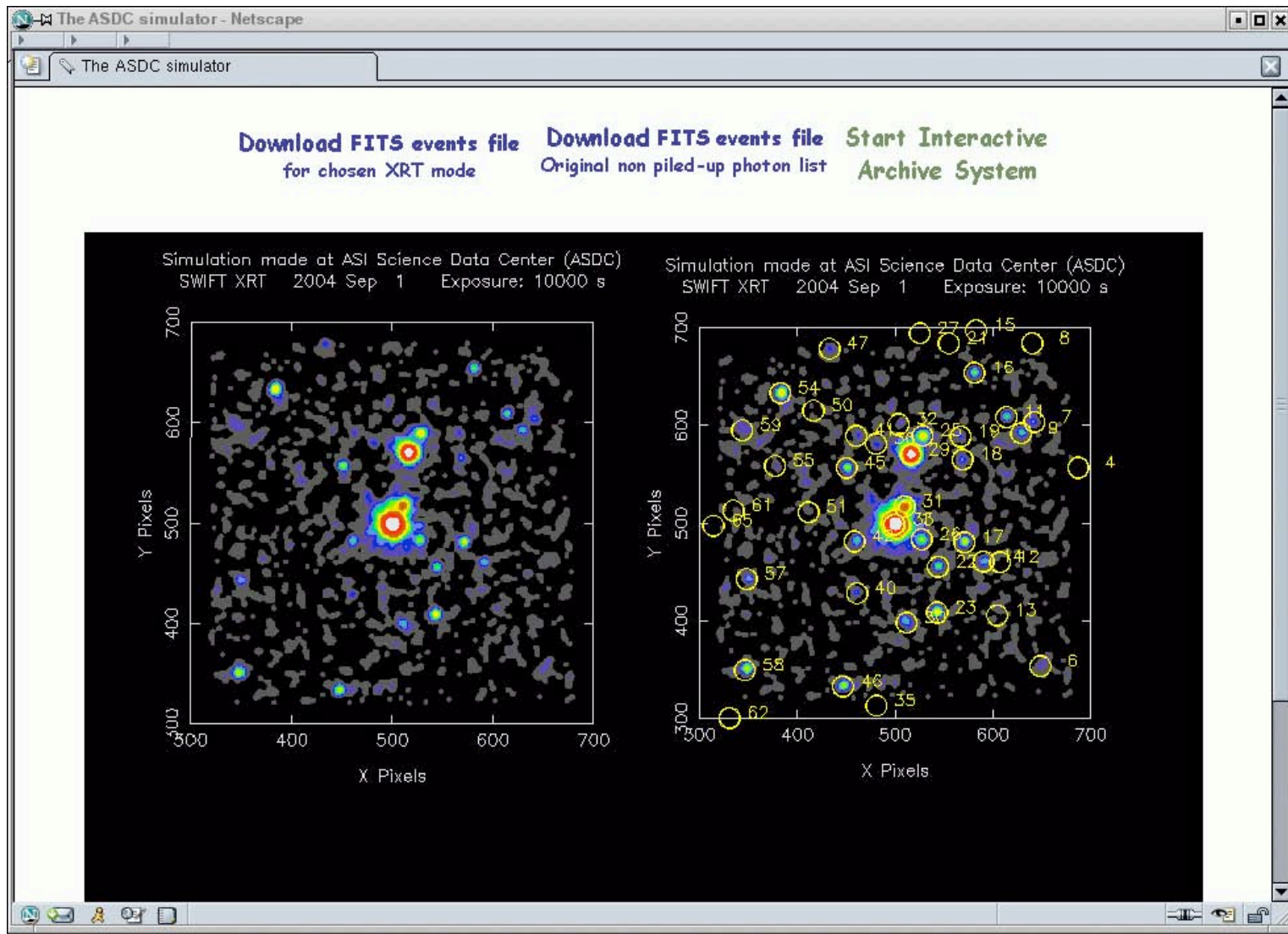


Italian Swift Archive Centre





Italian Swift Archive Centre





Italian Swift Archive Centre

