

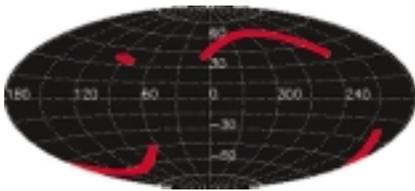
SLOAN DIGITAL SKY SURVEY
EARLY DATA RELEASE

The SDSS Early Data Release

Sky Coverage

celestial equator: 2.5 degrees wide from 23h to 4h (September 1998 runs) and from 10h to 16h (March 1999 runs)

SIRT First Look Survey field: more than 60 square degrees centered near 17h 20m +59 (April 2000 runs)



Aitoff projection in Galactic Coordinates

Within these areas, spectra of galaxies and quasars to a surface density of 100 objects per square degree

Where to Get the Data

Data and user interfaces are available at:

www.sdss.org
archive.stsci.edu/sdss
sdss.nao.ac.jp
www.sdss.mpg.de



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Data Products

The Early Data Release includes the following data products:

Image Parameters and Spectroscopic Parameters:

- image parameters and profiles of all detected objects – positions, magnitudes, sizes, shapes, etc. for more than 10 million distinct objects (300 parameters per object)
- spectroscopic parameters (redshift, line identifications, classification) for 55,000 objects (30 parameters per object, 1.6 million spectral lines in total)

Color Images and Plots of Spectra:

- three-color composite images
- flux vs. wavelength plots with lines identified and other annotations

Image Pixels and Spectroscopic Pixels:

- photometrically and astrometrically calibrated images in five wavebands (corrected frames, 0.4 arcsec pixels; binned images, 1.6 arcsec pixels)
- cut-out pixel maps surrounding each detected object (atlas images)
- maps of masked regions surrounding bright stars, bad columns, etc. (mask images)
- flux- and wavelength-calibrated spectra in the range 3900 - 9100 Angstroms; 4096 samples at R = 1800

How to Get the Data

There are three user interfaces with overlapping capabilities to handle a range of applications.

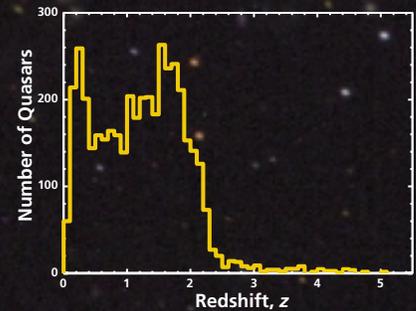
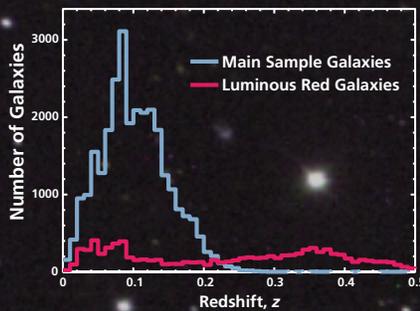
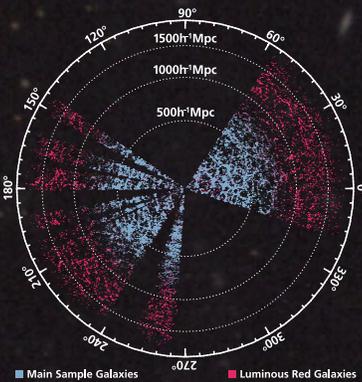
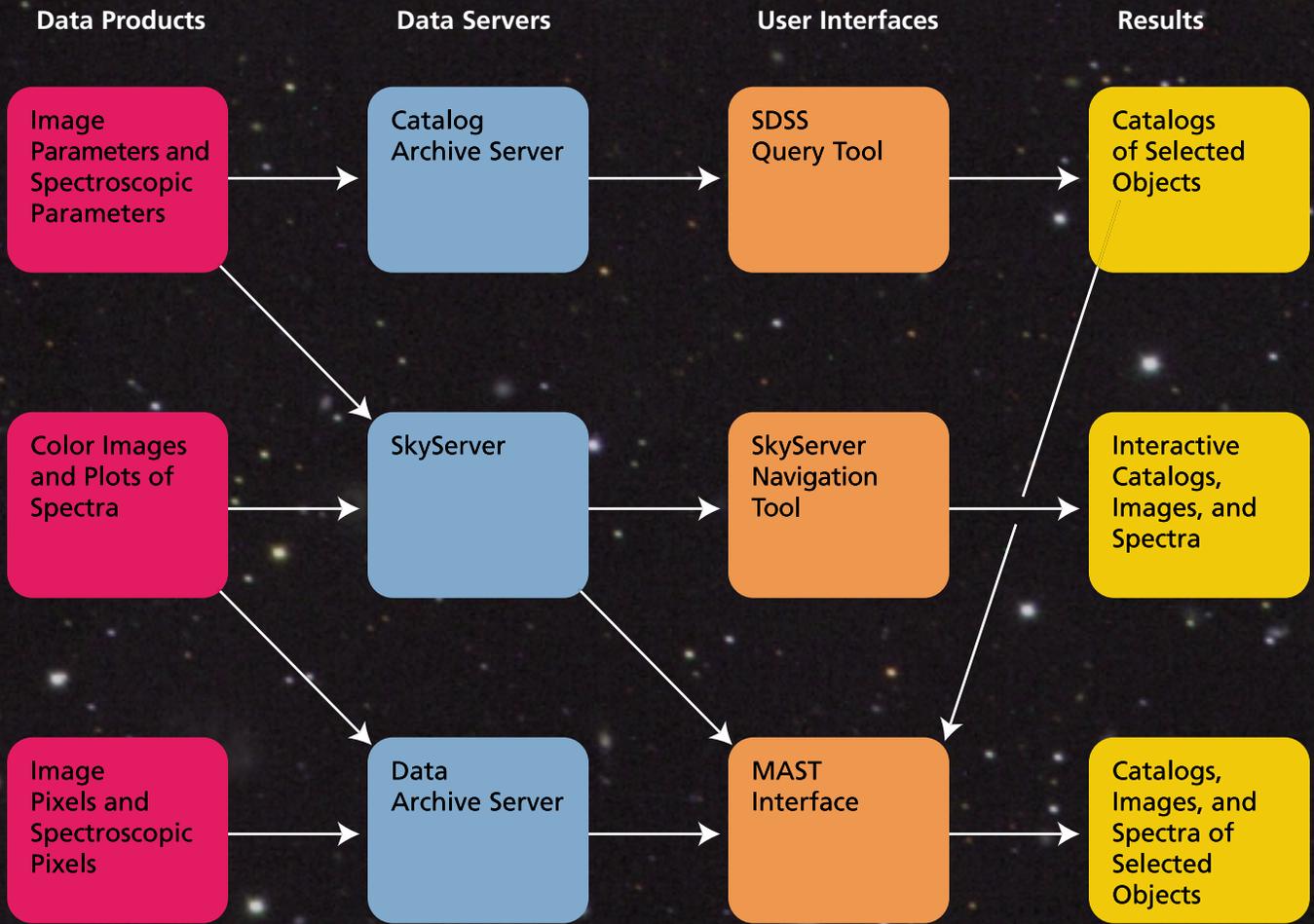
SDSS Query Tool: this application helps the user manage queries to the Catalog Archive Server, the database of image and spectroscopic parameters. It contains a simple text editor to create, modify, and save queries, as well as tools to follow the progress (and predict the time to completion) of active queries. (<http://archive.stsci.edu/sdss/sdssQT>)

SkyServer Navigation Tool: this application enables browsing images and spectra. A clickable navigation interface takes the user to color images, and simple queries can be made by clicking on objects. Searches can be made by position, magnitude, object class, and other criteria. The SkyServer tools will be developed further to provide meaningful access to the SDSS data for the public and for educational purposes. (<http://skyserver.fnal.gov>)

MAST (Multi-mission Archive at STScI) Interface: this application provides direct access to pixel data (corrected frames, binned images, atlas images, mask images, and spectra) based on position or other identifiers. (<http://archive.stsci.edu/cgi-bin/sdss/catalog>)



The Early Data Release of the Sloan Digital Sky Survey consists of five-band images and measured parameters for all detected sources, as well as spectra, redshifts, and other spectroscopic parameters. While these data are derived from commissioning observing runs, the quality of the data and calibrations already support a wide range of scientific applications. The Early Data Release includes user interfaces to query the databases in order to access the data products.





The SDSS Collaboration, April 2001.

Funding for the Sloan Digital Sky Survey (SDSS) has been provided by the Alfred P. Sloan Foundation, the Participating Institutions (listed below), the National Aeronautics and Space Administration, the National Science Foundation, the U.S. Department of Energy, the Japanese Monbukagakusho, and the Max Planck Society.

The SDSS is a joint project of The University of Chicago, Fermilab, the Institute for Advanced Study, the Japan Participation Group, The Johns Hopkins University, the Max-Planck-Institute for Astronomy (MPIA), the Max-Planck-Institute for Astrophysics (MPA), New Mexico State University, Princeton University, the United States Naval Observatory, and the University of Washington.

The Sloan Digital Sky Survey involves the efforts of more than 100 scientists, engineers and technicians at the Participating Institutions. The data are a product of their efforts. For the Early Data Release, individuals at the Participating Institutions designed and implemented the database and query tools, and provided support for the data servers. The Early Data Release benefited significantly from help provided by the Space Telescope Science Institute in developing the web interface (archive.stsci.edu/sdss), the Microsoft Bay Area Research Center in designing the SkyServer and its interface, and the Compaq Computer Corporation in supplying computing hardware for the SkyServer and other parts of the SDSS. The content and background of the Early Data Release are described in detail in "Sloan Digital Sky Survey: Early Data Release" at http://www.sdss.org/publications/edr_paper.ps.gz



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