

What is NED?

NED is a comprehensive multiwavelength database for extragalactic objects, providing a systematic, ongoing fusion of information integrated from hundreds of large sky surveys and tens of thousands of research publications. The contents and services span the entire observed spectrum from gamma rays through radio frequencies.

As new observations are published, they are cross-identified or statistically associated with previous data and integrated into a unified database to simplify queries and retrieval. Seamless connectivity to data in NASA's astrophysics mission archives (IRSA, HEASARC, MAST), ADS, and other data centers around the world is also provided..

Objects can be queried By Name, Near Name or Position (cone search), By Reference, and By Author. Galaxy samples can be constructed By Parameter constraints on Redshift, Sky Area, Object Types, Survey Names, or Flux Density, or by Classifications and Attributes.

The LEVEL 5 Knowledgebase augments review articles in extragalactic astrophysics and cosmology with object names and graphical content within the articles linked directly to relevant database queries.

Current Holdings

206 million distinct astro-physical objects

232 million multiwave-length object cross-IDs

1.4 million object associations

5.1 million objects with redshifts

1.9 billion photometric measurements with SEDs

609 million diameter measurements

30.4 million objects linked to 90 thousand references

2.6 million images, maps and external links

553 thousand spectra

73 thousand object notes

229 thousand objects with detailed attributes

71 thousand redshift-independent distances for 15 thousand objects

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Antenna Galaxies

Image Credits:

Above (Antennae Galaxies): ESO
Front panel (M31): GALEX, NASA/JPL-Caltech

Contact Us

To submit questions or suggestions, to contribute data sets such as images or spectra, or to request access to the Beta site to help test new functionalities, please send email to ned@ipac.caltech.edu

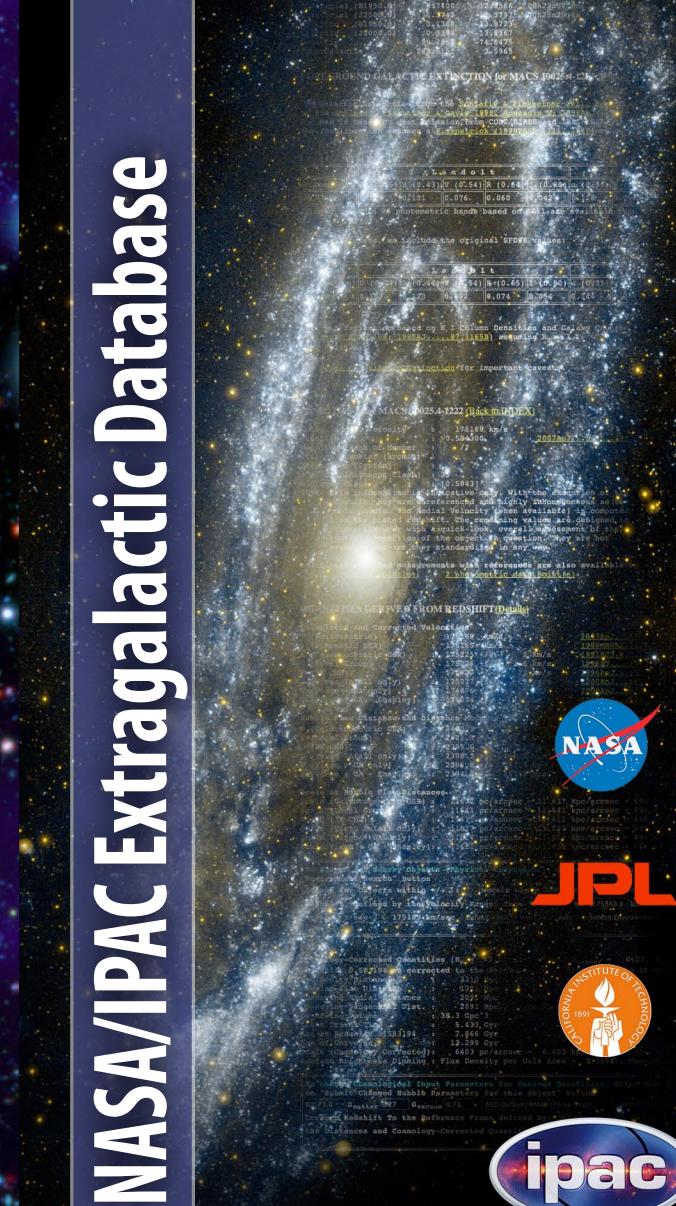
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NASA/IPAC Extragalactic Database



ned.ipac.caltech.edu

Featured Content Additions

40 million objects from the GALEX All-Sky Survey Catalog (ASC; Seibert, M. 2012), including derived cross-IDs

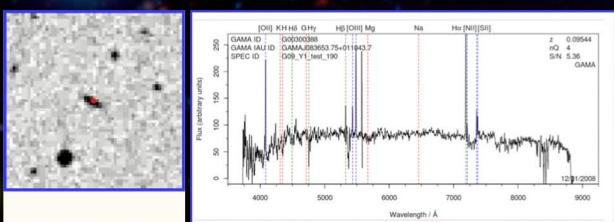
Over 1.1 million photometric redshifts from "Efficient Photometric Selection of Quasars from the Sloan Digital Sky Survey. II." (Richards, G. T. et al. 2009, ApJS, 180, 67)

14,034 visually determined Hubble Types for SDSS galaxies from "A Catalog of Detailed Visual Morphological Classifications for 14,034 Galaxies in the Sloan Digital Sky Survey" (Nair, P. B. & Abraham, R. G. 2010 ApJS, 186, 427)

15,855 spectra from "The Arecibo Legacy Fast ALFA Survey: The α_{HI} H I Source Catalog, Its Characteristics and Their Impact on the Derivation of the H I Mass Function" (Haynes, M. P. et al. 2011, AJ, 142, 170)

1278 Herschel SPIRE and PACS images from "KINGFISH -- Key Insights on Nearby Galaxies: A Far-Infrared Survey with Herschel: Survey Description and Image Atlas" (Kennicutt, R. C. et al. 2011, PASP, 123, 1347)

Thousands of New Spectra



59,615 spectra from "Galaxy and Mass Assembly (GAMA): survey diagnostics and core data release" (Driver, S. P. et al. 2011, MNRAS, 413, 971)

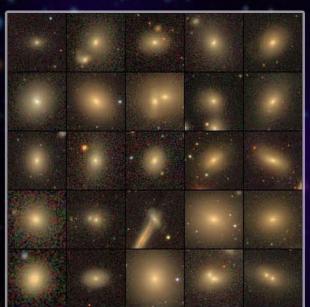
What's new in NED?

LEVEL 5 Knowledgebase

LEVEL 5 enhances review articles in extragalactic astrophysics and cosmology with links from object names and graphical content to related database queries. Recent highlights include:

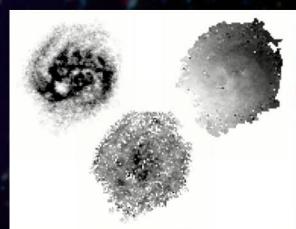
"Nonthermal Emission from Star-Forming Galaxies" (Rephaeli, Y. & Persic, M. 2013, ASSP, 34, 193; as posted at <http://arxiv.org/abs/1304.0416>)

"Chemo-dynamical simulations of dwarf galaxy evolution," Recchi, S. 2013, review article to appear in the special issue of Advances in Astronomy "Metals in 3D: A Cosmic View from Integral Field Spectroscopy" (<http://arxiv.org/abs/1310.4932>)



"Physical Properties and Environments of Nearby Galaxies" (Blanton, M. R. & Moustakas, J. 2009, ARA&A, 47, 159). Figure 13 is shown above, illustrating SDSS images of elliptical galaxies selected according to classifications in NED.

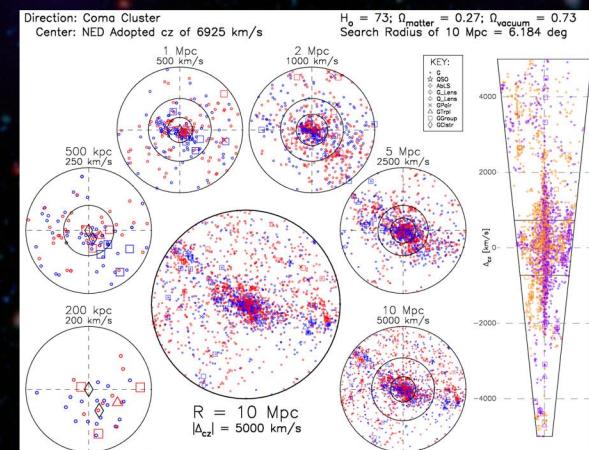
Spectral Image Cubes



FITS file data cubes for 329 H I channel maps, moment maps, velocity-flux profiles, and surface gas density profiles from "Little Things" (Hunter, D. A. et al. 2012, AJ, 144, 134). The example shown is UGC 3974.

Explore Galaxy Environments

A new service enables exploration of galaxy environments for objects with available spectroscopic redshifts in NED. Features include counts in concentric radial velocity constrained shells (0.5, 1, 2, 5, and 10 Mpc radii) around the target object (or position), color coded velocity offsets, graphics, and the ability to search for objects based on environmental parameters. Companion services provide number counts in each annulus for NED objects that lack redshift measurements, as well as the spatial distribution of individual redshift surveys in the selected region.



Example: The Coma Cluster and surrounding large scale structure.

Best Practices for Publishing Data

A new reference guide (M. Schmitz et al. 2013) is available on the website designed to assist authors with the presentation of data, thereby facilitating their efficient and accurate integration into NED.