VIRTUAL ASTRONOMICAL OBSERVATORY

VO-IRAF Integration

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VO/IRAF Integration

Goals and Motivation

- Provide seamless integration of a familiar desktop system with remote data and services.
- Increase VO uptake by making VO capabilities available in familiar tools already used by many astronomers.
- Augment understanding of data from traditional observatories by providing easy access to related data.
- Allow powerful web-based tools to be easily used with desktop data.
- Serve as test bed system for future Desktop Integration efforts within VAO development.

VO/IRAF Integration

What it Provides:

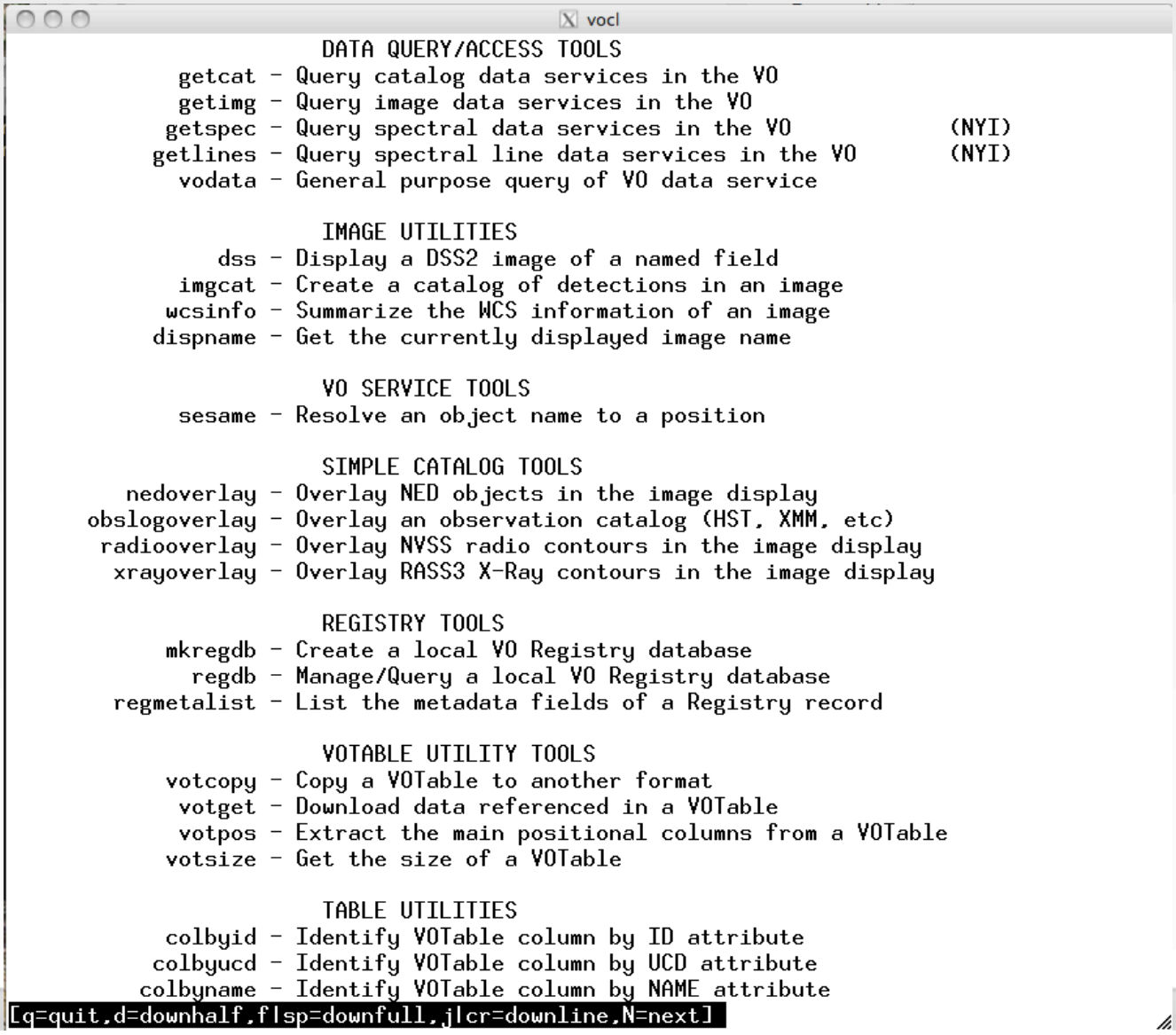
- All tasks are able to access remote data referenced by a URL
  - static images resulting from a VO image query
  - catalog data returned by a dynamic VO query
  - VOSpace access is planned
- All tasks are able to use the VOTable XML format where appropriate
  - transparent use of tabular data
- Enhanced @-file capabilities
- SAMP integration in the IRAF CL to allow interoperability with other VO tools (Topcat, Aladin, etc)
- New CL functions / tasks to access VO Registry and Data Services
  - All image and catalog services, some spectra
  - Advanced data access planned for Year 2
- Toolbox and science applications built on the above

VO/IRAF Integration

Highlights

- Tasks take object name, position *or* image name as input
- Resources may be specified as *user-defined* alias
  - Keyword-based search capability to
  - User-managed local registry table of preferred resources
- SAMP option on tasks where appropriate
- Output tables available in a variety of formats (csv, FITS, etc)
- System file cache backs URLs

VO/IRAF Tools



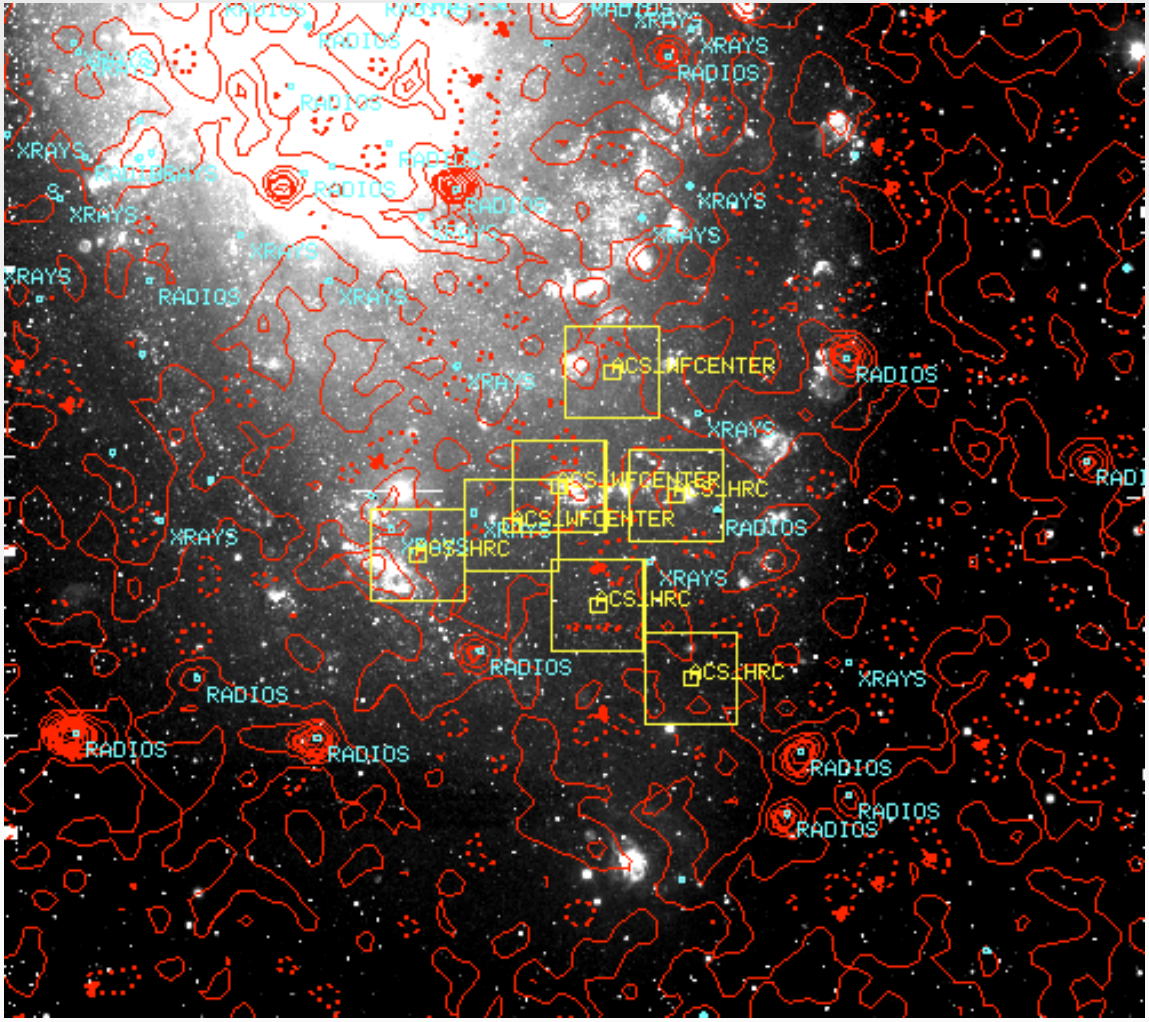
IRAF Integration: VO Package

NVSS Radio Contours

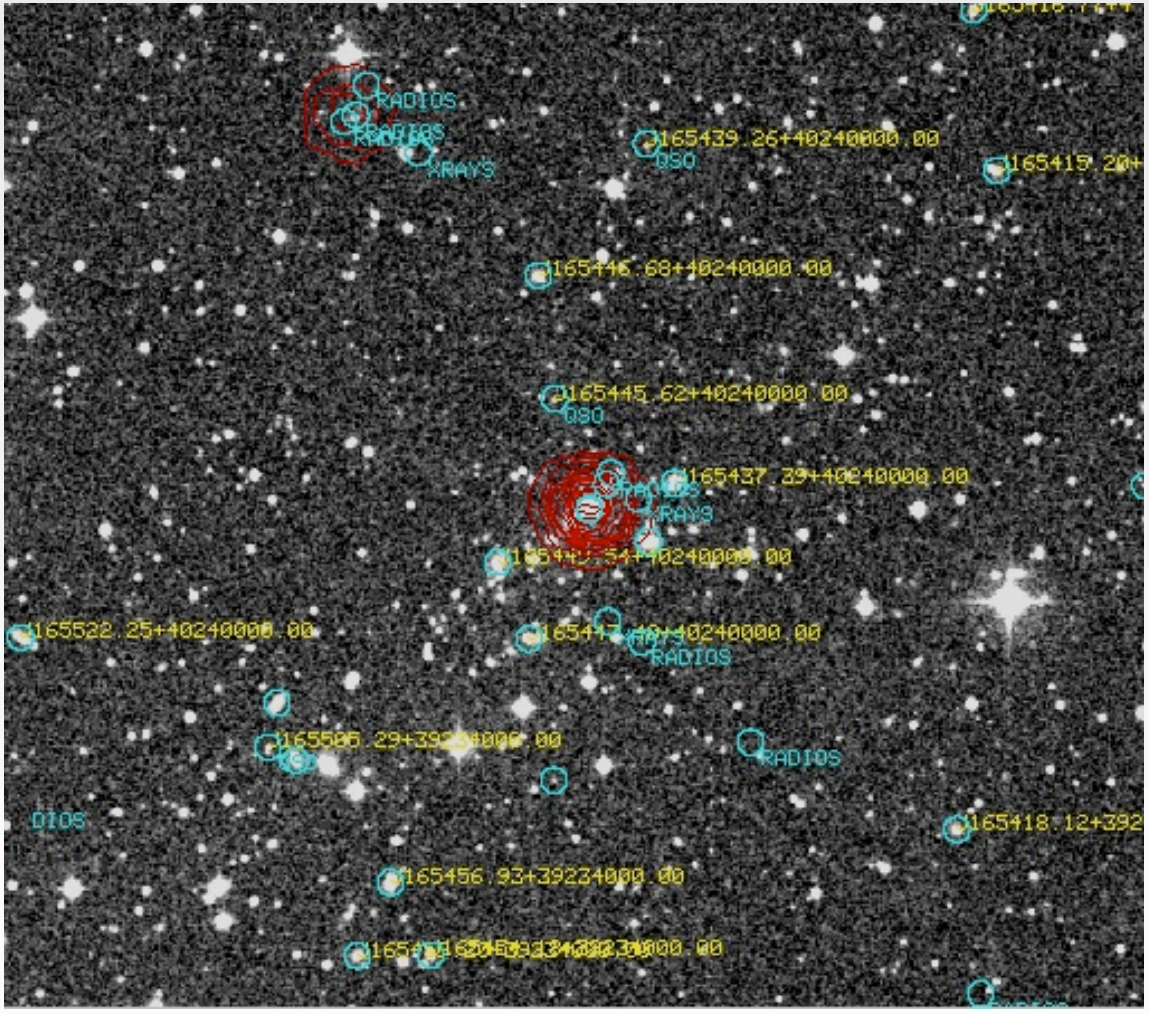
NED Catalog

NED Sources

HST Observations



IRAF Integration: VO Package



Query by Object Name

Image from DSS
Overlays as before

Abell 2235

VO/IRAF Integration

DEMO

VOClient Roadmap

- (Non-IRAF) distribution of CLI Tools in development
  - Registry, data access, name resolver, etc
  - Utility/Convenience tasks (e.g. DSS), VOTable tools, etc
  - Tasks available as high-level API methods in multi-language binding
- C++ wrappers on API to provide OO interface for SWIG bindings
- *Pythonic* interface to VOClient capabilities

- Extensions to support VOSpace, SIAv2, Time Series, etc
- Replacement VOClient Daemon to provide minimal functionality

VO/IRAF Links

IRAF v2.16 Downloads:

ftp://iraf.noao.edu/iraf/v216/PCIX

YouTube Introductions:

http://www.youtube.com/user/usvaoTV

Tucson VO-Day Presentations:

ftp://iraf.noao.edu/pub/Tucson-VO-Day/