

# Resource-centric Access to the Virtual Observatory

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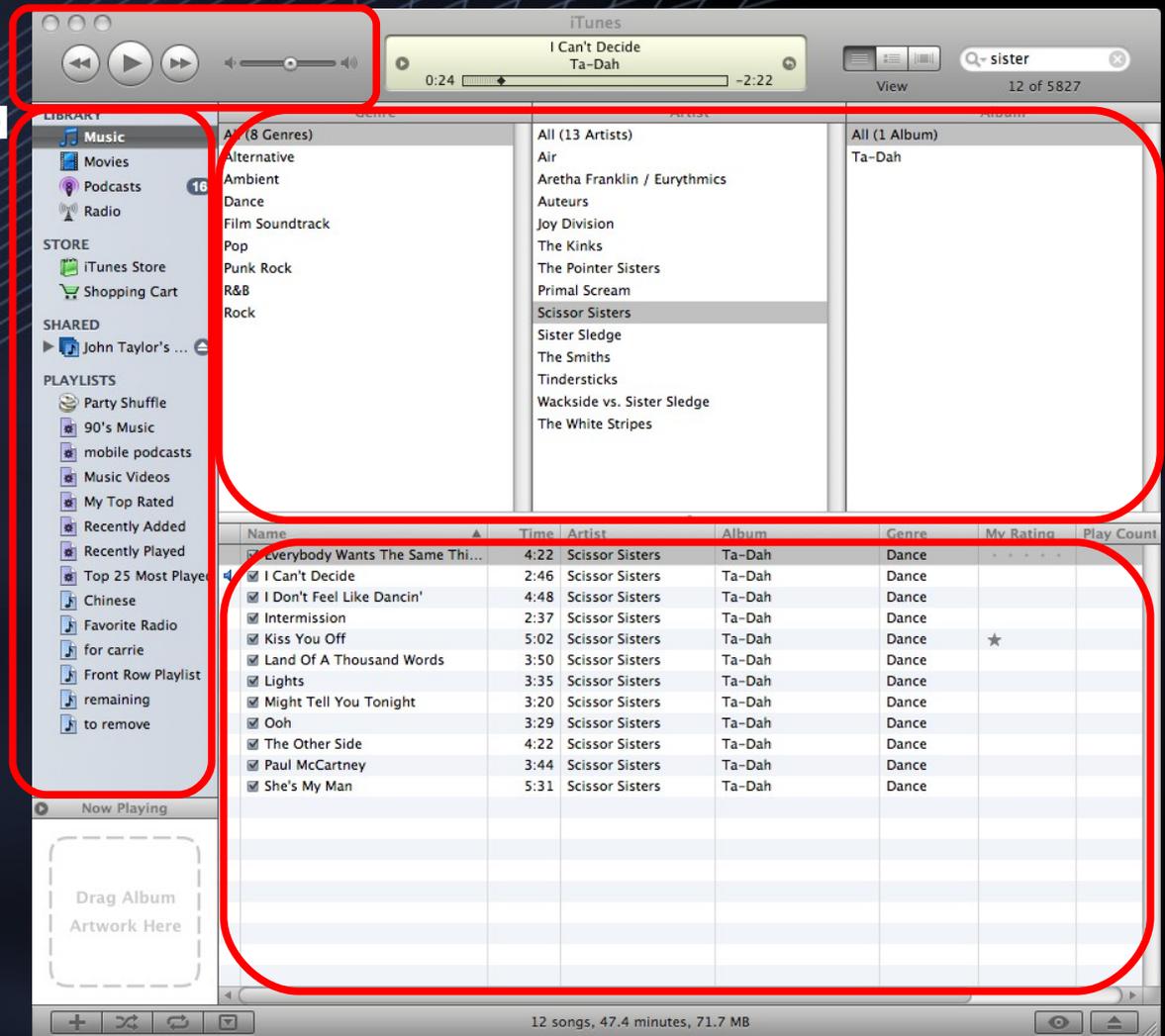


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# iTunes

- Browse a collection
- Incomplete Metadata
- Select subset
- Filter
- View
- Use



# VO Explorer

- Browse a collection
- Incomplete Metadata

- Select subset
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VO Explorer

86 resources

Content - Subject Coverage - Waveband Authority

unknown agn bl\_lac\_objects clusters\_of\_galaxies galaxies globular\_clusters interstellar\_medium photometry:wide-band polarization positional\_data

euv gamma-ray infrared millimeter optical radio uv x-ray

CDS NED nasa.heasarc ned.ipac

Atlas of Quasar Energy Distributions (Elvis+ 1994) - Optical continuum measure...  
Atlas of Quasar Energy Distributions (Elvis+ 1994) - Radio fluxes  
Atlas of Quasar Energy Distributions (Elvis+ 1994) - Starlight Template  
BVR/K Photometry for the field of 4U 0142+61 (Hulleman+, 2004) - BVRI photo...  
Catalogue and Bibliography of UV Cet stars (Gershberg+ 1999) - Coordinates, p...  
Catalogue and Bibliography of UV Cet stars (Gershberg+ 1999) - Data form opti...  
Catalogue and Bibliography of UV Cet stars (Gershberg+ 1999) - Full references  
Catalogue and Bibliography of UV Cet stars (Gershberg+ 1999) - Keywords ass...  
Catalogue and Bibliography of UV Cet stars (Gershberg+ 1999) - Non-optical d...  
Catalogue and Bibliography of UV Cet stars (Gershberg+ 1999) - References by...  
Catalogue of ISM content of normal galaxies (Bettoni+, 2003) - New catalogue of...

Details Tables

**Atlas of Quasar Energy Distributions (Elvis+ 1994) - Radio fluxes**

J/ApJS/95/1/table1,ivo://CDS/VizieR/J/ApJS/95/1/table9  
Type: TabularSkyService

We present an atlas of the spectral energy distributions (SEDs) of normal, non-blazar, quasars over the whole available range (radio to 10 keV X-rays) of the electromagnetic spectrum. The primary (UVSX) sample includes 47 quasars for which the spectral energy distributions include X-ray spectral indices and UV data. Of these, 29 are radio quiet, and 18 are radio loud. The SEDs are presented both in figures and in tabular form, with additional tabular material published on CD-ROM. Previously unpublished observational data for a second set of quasars excluded from the primary sample are also tabulated. The effects of host galaxy starlight contamination and foreground extinction on the UVSX sample are considered and the sample is used to investigate the range of SED properties. Of course, the properties we derive are influenced strongly by the selection effects induced by quasar discovery techniques. We derive the mean energy distribution (MED) for radio-loud and radio-quiet objects and present the bolometric corrections derived from it. We note

# Selecting a subset

- Describes a subset of items to search within.
- Static Lists (Playlists)
  - hand-picked items
- Smart Lists (Smart Playlists)
  - defined by rules over resource fields
  - Name, Subject, Type, Publisher, Authority, UCD, ...
  - Form-Driven or Textual
- Subsets retrieved from Registry using XQuery to standard IVOA interface.
  - Fast, handles large result sets ( < 500)
  - Caches previous queries on disk
  - I'll be talking more about this in the following Reg session

# Defining a smart list

- Clauses
- Auto-complete
- Text-Entry
- Query Size Estimator

The screenshot shows the VO Explorer interface with a search configuration window titled "VO Explorer - copy of IR Redshift". The window displays the search name "copy of IR Redshift" and a list of conditions: "Any column UCD is REDSHIFT" and "Waveband is Infrared". The "Query Text" field shows the generated query: "(ucd = REDSHIFT) AND (waveband = Infrared)". A progress bar at the bottom indicates "Matches 105 of 12322 resources".

The search named: copy of IR Redshift

Contains resources which match all of the following conditions:

- Any column UCD is REDSHIFT
- Waveband is Infrared

Query Text  
(ucd = REDSHIFT) AND (waveband = Infrared)

Matches 105 of 12322 resources

Update Cancel

# Filtering – Narrowing the subset

- Interactive Exploration
- incremental search field
- 'filter wheels' – enumerate values present in the subset
  - Subject, Waveband, Authority, Publisher, Creator
  - Type, Capability
  - UCD, Column name (fine grained)
- **Awkward** - Spatial / temporal coverage
  - not discrete values
  - needs a different approach.

# View

- Table of resources (title, last modified, VoMon status)
  - plan to make additional columns addable.
- Formatted display of a single resource
- XML Source of resource, for geeks
- Table Metadata viewer
- Plan to add a tabular presentation of resource
  - clearer where fields have been omitted.

# Use

- Bulk Query
  - for Cone, SIAP, SSAP, STAP (VOEvent) Vizier
  - it's Astroscope – query, browse, process.
- Task Launcher (for CEA)
  - still to do
- Query Builder (For DSA and TAP)
  - partly done
- On Metadata
  - open webform.
  - further information webpage
  - email curator (whinge)

# Use - Automation

- Generate scripts by combining
  - a template
  - & user's selection
  - & possibly: further user input.
- Template - (Python) Script that performs queries by calling Astro Runtime.
- Product
  - a Script that can be run external to the UI
  - Can be extended and hacked on by the astronomer.
- Simple query or extensive workflow
  - On-ramp to scripting

# Use - Import /Export

- Send resource selection by plastic message to other apps
  - VOExplorer also accepts this plastic message.
- Save resource XML to disk.
- Save resource id list to disk.
- Drag-n-drop resource id list between apps
  - (sometimes: depends on app and OS)

# Demo (Wireless Permitting)

- Fingers crossed.
- Connecting to the China-VO Registry

# Registry Resource Messaging

- VOExplorer is intentionally limited in what it does with resources
    - primary function is discovery.
    - provides simple forms, not *precision data access*.
  - So far, PLASTIC has been all about dispatch of data
  - Passing Resources is dispatch of functionality
  - 2 proposed methods of sending PLASTIC message
    - How to determine what resources are acceptable for a receiving application?
      - 1) Here's a resource - Do with it what you will – or ignore
      - 2) Use standardID of the capability / resource type as part of the message name.
- Sending app pattern-matches against message names.

# Future Plans

- Additional resource discovery mechanisms
  - reasoning / ontologies
  - tagging / folksonomies
  - popularity / recommendations
- Complete the other parts of the application suite
  - FileExplorer – common view of file/ftp/sftp/myspace/vospace.
  - Task Launcher
  - Query Builder
  - AR Dialogues
    - so functionality can be access from other applications
- **First public beta – Mid July**  
**First Release – End of August.**