The Unified Astronomy Thesaurus

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The Unified Astronomy Thesaurus (UAT) is an open, interoperable and community-supported thesaurus that unifies the existing Astronomy & Astrophysics thesauri into a single, freely-available open thesaurus for astronomical objects and concepts.

Why Create a Unified Astronomy Thesaurus?

The main driver behind the creation of a single thesaurus is the wish to support semantic enrichment of the literature, but we anticipate broader use of the UAT (amongst other vocabularies) in data and service discovery applications. We also believe that the UAT will underpin and inspire a new range of cross-system data-sharing applications.

Main Project Goals

- **Open**: Anyone in the community can contribute by suggesting term additions, refinements, and revisions. The thesaurus is released under a Creative Commons license.
- **Interoperable**: The thesaurus is maintained in SKOS and will be exportable in additional file formats.
- **Community-supported:** The UAT is supported by major stakeholders in the astronomical community (including journal publishers, professional societies, and libraries, such as AIP, IoP, IAU, AAS, ADS, and the Wolbach Library).

Data Sources for the Unified Astronomy Thesaurus

The UAT builds upon several pre-existing thesauri, including the IVOA Thesaurus (which evolved from the 1992 IAU Thesaurus), the Physics Astronomy Classification Scheme (PACS), and the astronomy journal keywords. The UAT will be further enhanced and updated through a collaborative effort involving broad community participation. Towards that goal, we have already incorporated the astronomy branch of the SPIE thesaurus.

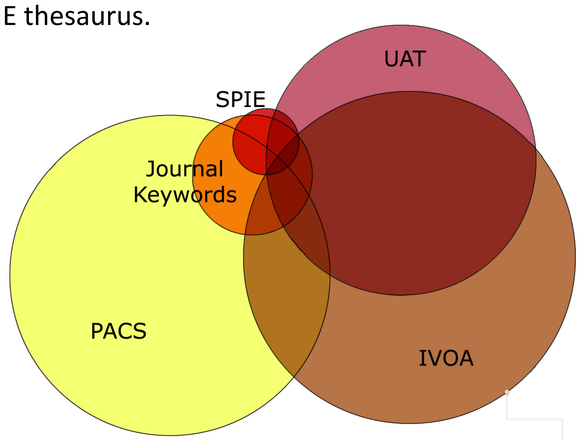

Fig 1: The UAT unifies terms from multiple thesauri.

The Structure of the Unified Astronomy Thesaurus

Total number of concepts: 1906 | **Top-level concepts:** 15 | **Depth:** Seven levels

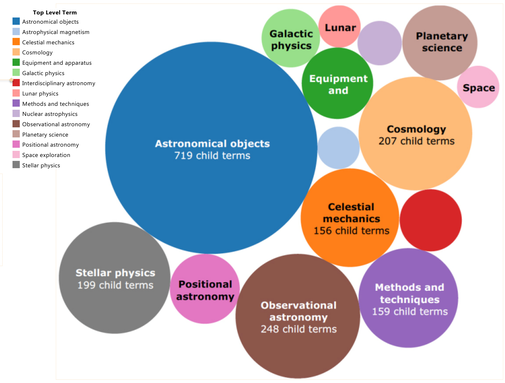

Fig 2: Representation of the top level terms in the UAT and the corresponding number of child level terms.

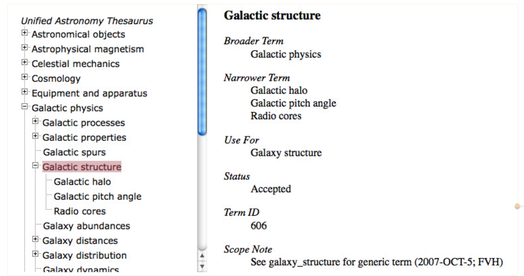

Fig 3: The UAT online browser allows users to navigate the thesaurus hierarchy, beginning with top-level terms. An alphabetical listing of all terms is also available.

Choosing Wisely: UAT System Components

Platform	HIVE	WordPress	Google Groups	Request Tracker	Thesaurus Master
Primary Purpose	Browser for UAT	Platform for UAT website, blog & news	Host discussion forums	Manage user suggestions	Manage UAT structure and generate files
Public or Private?	Public only	Public only	Public and Private	Public and private	Private only
Open Source?	Yes	No	No	Preferred	No
URL	hive.nescent.org:9090/ConceptBrowser.html	wordpress.com	groups.google.com/forum/#!forum/uat-users	N/A	dataharmony.com/products/thesaurus_master.html

Get Involved!

The thesaurus is currently in a beta stage, while we finalize how the work will be managed and distributed (this will include a SKOS thesaurus). To express your interest in contributing to the UAT or using the UAT for development purposes, join the **Google Group:**

https://groups.google.com/d/forum/uat-users

Acknowledgements

The UAT is ultimately based on the 1992 IAU Thesaurus of Shobbrook and Shobbrook, with subsequent additions from Helen Knudsen, Marlene Cummins and Liz Bryson, influence from the consensus list of journal keywords, and, in the late-2000s, updating work by Rick Hessman under the auspices of the IVOA.

Get the Thesaurus: http://astrothesaurus.org

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