



UNIFIED ASTRONOMY THESAURUS

a community supported, open source project from the American Astronomical Society

KAILAS = Keyword AI Labeler At SciX

Version 3.0 (beta) visible in SciX (Jan. 2026)

Goals:

- ADS seeks to assign a uniform set of keywords to all astronomy papers, software, and datasets in its collections.
- Address “broken keyword” search because multiple systems have been used with limited quality control
- Supplement, not supplant, existing author or publisher assigned keywords

Technical:

- RoBERTa-based model trained on the full text of ~425,000 astronomy papers (3+ million tokens) in ADS database that have been tagged by authors/publishers with UAT keywords
- Development respects publisher agreements
- Trained model, as well as future improvements, are publicly available: huggingface.co/adsabs/KAILAS
- Version of the dataset with only titles and abstract is publicly available for academic research: huggingface.co/datasets/adsabs/SciX_UAT_keywords

KAILAS QR



KAILAS Data



KAILAS Demo

- Try model yourself (user feedback Requested during splinter)
[KAILAS Demo of UAT labelling.ipynb](https://huggingface.co/adsabs/KAILAS_demo)
- KAILAS v2 testing
 - 77 papers + 1 control by 8 experts
 - Keywords relevant 158 times (68%), potentially relevant 36 times (13%), & wrong 39 times (17%).

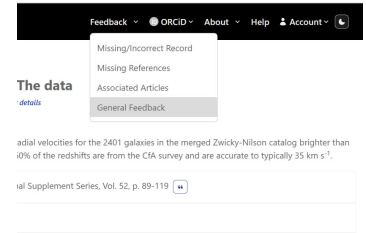




Grading KAILAS



1. For each paper you are willing to review, please search for and find the paper in the Science Explorer (www.scixplorer.org). Although you can search for KAILAS-assigned keywords using the ADS website, the ADS website does not display them on its abstract page. To review the KAILAS assignments, you need to review the abstract using the SciX interface.
2. After reading the title, abstract, keywords, and (if necessary full-text), use the Feedback dropdown menu to open a General Form in a new tab or window.
3. Please provide your name and email address in the boxes indicated.
4. In the comments box, please type “KAILAS feedback” for the first line.
5. In the comments box, please identify the paper you have reviewed by bibcode for the second line. You can copy and paste the identifier from the Abstract view.
6. Continuing in the comments box, please identify and rate each KAILAS-assigned keyword using the table below (top line of description).
7. Finally, in the comments box, type “overall” and give KAILAS an overall score using the table below (bottom line of description).
8. OPTIONAL if you are not reviewing your own paper
In the comments box, please identify and rate each standard keyword on the same scale used for the KAILAS keywords. Clearly separate these evaluations from the KAILAS evaluations in the comments box and label this set as “Standard Keywords” to distinguish it from the primary assessment.
9. When you have finished evaluating an abstract and its keywords, click submit and follow the instructions to finalize your submission.



Score	Description (Keyword/Overall)
2	Yes, I would assign this keyword. Very nice. KAILAS performed better than the original assignment.
1	Maybe, I would assign this keyword or I can see how it could be relevant. Ok. KAILAS performed about as well as the original assignment.
0	No, I would NOT assign this keyword. Disappointing. KAILAS performed worse than the original assignment.

We welcome your assessment of as many abstracts as you can review.

Please submit one review per form. We will continue to accept submissions after the meeting. Therefore, if you are looking up a paper for your research and see a keyword that does not look right or a set that looks particularly good, please drop us a line.