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## The UCLA Cosmochemistry Database

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The UCLA Cosmochemistry Database was initiated as a data rescue project aiming to archive a variety of cosmochemical data acquired at the University of California, Los Angeles. The database will ensure that future studies can use and reference these data in the examination, analysis and classification of new extraterrestrial samples.

The database is developed in collaboration with the Astromaterials Data System (AstroMat) that will provide persistent access to and archiving of the database. The database is a project in progress. We will continue to make additions, updates, and improvements to the database.

The database includes elemental compositions of extraterrestrial materials (including iron meteorites, chondrites, Apollo samples, and achondrites) analyzed by John T. Wasson, Paul H. Warren and their coworkers using atomic absorption spectrometry (AAS), neutron activation analysis (NAA), and electron microprobe analysis (EMPA) at UCLA over the last six decades. The team started to use INAA to analyze iron meteorites, lunar samples, and stony meteorites starting from the late 1970s [1]. Some achondrites and lunar samples were analyzed by EMPA. Some of the UCLA data have been published, but most of the data were neither digitized nor stored in a single repository.

Compositional data have been compiled by the UCLA team from publications, unpublished files, and laboratory records into datasets using Astromat spreadsheet templates. These datasets are submitted to the Astromat repository. Astromat curators review the datasets for metadata completeness and correctness, register them with DataCite to obtain a DOI and make them citeable, and package them for long-term archiving. To date, we have compiled data from 52 journal articles; each article has its own separate dataset. Data and metadata of these datasets are then incorporated into the Astromat Synthesis database.

The UCLA datasets are publicly accessible at the Astromat Repository, where individual datasets can be searched and downloaded. The UCLA cosmochemical data can also be accessed as part of the Astromat Synthesis database, where they are identified as a special 'collection'. Users may search, filter, extract, and download customized datasets via the user interface of the Astromat Synthesis database (AstroSearch). Users will be able to access the UCLA Cosmochemistry

Database directly from the home page of AstroMat (<https://www.astromat.org/>).

We plan to include EMPA data of lunar samples and achondrites, and add scanned PDF files of laboratory notebooks and datasheet binders that are not commonly published in journals. These PDF files contain information on irradiation date, mass, elemental concentrations, and classification for each iron specimen, and John Wasson's personal notes on meteorites. We will also add backscattered-electron (BSE) images, energy dispersive spectroscopy (EDS) images, and optical microscopy images.

The Astromat team is currently working to develop plotting tools for the interactive tables.

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**References:** [1] Scott E.R.D et al. (1977) *Meteoritics*, 12, 425–436.