

BRINGING LAB ANALYTICAL DATA FOR ASTROMATERIALS TO THE PLANETARY DATA

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The Astromaterials Data System (AstroMat) is a comprehensive solution to the management, archiving, and dissemination of laboratory data of astromaterials samples. AstroMat preserves the 'data legacy' of the astromaterials collections at JSC, making these data easily accessible to scientists in a way that enables novel approaches to mining and analyzing the data. Astromaterials Data System's services promote creation of new knowledge and maximizes the scientific return of NASA's investment into sample return missions, sample curation, and data acquisition on these samples. AstroMat's public interface contains two main components: AstroSearch and AstroRepo. AstroSearch is a comprehensive search application where users can discover astromaterial data. Users can search, extract, and integrate data across publications. Data is findable by mission, collection, analysis methods, and other variables, and available for customizable download. AstroRepo, or Astromaterials Data Repository, is a repository of user submitted astromaterials data. AstroRepo welcomes contributions of a broad range of extraterrestrial data, including but not limited to, compositional data for samples of lunar rocks, meteorites, minerals, melt and fluid inclusions, and more; geochemical synthesis datasets; geochronological data; petrographic descriptions of samples; kinetic data from geochemical and petrological experiments. All of AstroMat's content will be archived in the Planetary Data System, the mapping of AstroMat metadata to the PDS4 has been completed.