

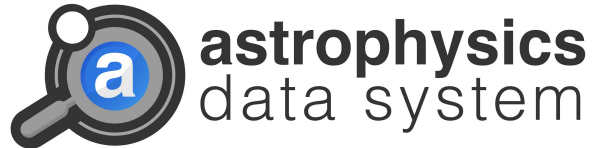
Planetary Science

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ADS Users Group Meeting - 11/2/2017

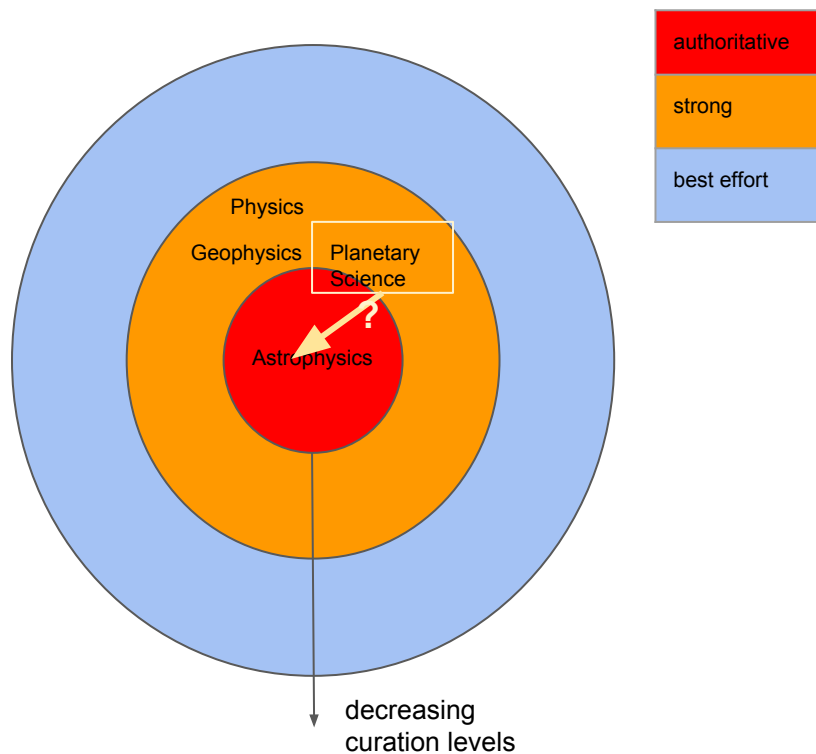


Move **Planetary Science** to “Core”?

- Preliminary analysis
- Outreach
- Outcome



Preliminary Analysis



Meaning of PS move into core collection

- Significant increase in ADS holdings
- Increase of curation level PS content
- Expansion of collaborations (PDS, ESA, NASA, ...)

Preliminary Analysis

authoritative
strong

- 161,000 unresolved citations in the refereed PS literature
 - Several 100 journals
 - Gray literature
- Envisioned work:
 - Obtain complete, full text coverage for most of this material
 - Material included in the core may result in additional material in the inner or outer rings

↓
decreasing
curation levels

Meaning of PS move into core collection

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Preliminary Analysis

authoritative
strong

- 161,000 unresolved citations in the refereed PS literature
 - Several 100 journals
 - Gray literature
- Envisioned work:
 - All new core material, including PS gray literature, will need top level curation efforts

Meaning of PS move into core collection

- Significant increase in ADS holdings
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decreasing
curation levels

Preliminary Analysis

authoritative

strong

- Improve collaboration with PDS
- ESA Planetary Science Archive
- NASA PS missions with data not in PDS
- ...

Meaning of PS move into core collection

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decreasing
curation levels

Outreach

Mailing

- Sent out two dozen RFIs - received 2 responses (Ross Beyer, Lisa Gaddis)

Personal interaction (DPS: iPoster / random / meetings with PDS & AAS)

- Broad adaptation already in PS community (even Bumblebee)
- Some: first Google Scholar, then ADS
- Biggest gaps:
 - Conference proceedings (other than SPIE, AIPC)
 - LPI workshops
 - Theses
 - Data links (e.g. most recent PDS links, USGS data)
- Feature requests:
 - Object tagging in PS publications

Outcome

Move to “core” collection - “authoritative” for Planetary Science community

Wikipedia - [Planetary Science](#):

*“Planetary science or, more rarely, planetology, is the scientific study of planets (including Earth), moons, and planetary systems (in particular those of the Solar System) and the processes that form them. It studies objects ranging in size from micrometeoroids to gas giants, aiming to determine their composition, dynamics, formation, interrelations and history. It is a **strongly interdisciplinary field**, originally growing from astronomy and earth science.[1] but which now incorporates many disciplines, including [planetary geology](#) (together with geochemistry and geophysics), [cosmochemistry](#), [atmospheric science](#), [oceanography](#), [hydrology](#), [theoretical planetary science](#), [glaciology](#), and [exoplanetology](#).[1] Allied disciplines include [space physics](#), when concerned with the effects of the [Sun](#) on the bodies of the Solar System, and [astrobiology](#).*

There are interrelated observational and theoretical branches of planetary science. Observational research can involve a combination of space exploration, predominantly with robotic spacecraft missions using remote sensing, and comparative, experimental work in Earth-based laboratories. The theoretical component involves considerable computer simulation and mathematical modelling.

Planetary scientists are generally located in the astronomy and physics or Earth sciences departments of universities or research centres, though there are several purely planetary science institutes worldwide. There are several major conferences each year, and a wide range of peer-reviewed journals. In the case of some exclusive planetary scientists, many of whom are in relation to the study of dark matter, they will seek a private research centre and often initiate partnership research tasks.”

Outcome

- Add to ADS holdings - **current & historical** / **metadata & fulltext**
 - Journals
 - Conference proceedings
 - Theses
 - Technical reports / Gray literature
- Citation coverage
 - Curation of processing reference data
 - Inclusion of additional material in “outer rings”
- Linking to data
 - Expansion of collaborations
- Additional bibliographic collections & keywords
 - E.g. collections for major planetary science missions (e.g. Cassini)
- Planetary Object index
 - Compile taxonomy of objects and use text-mining techniques to identify them in corpus
- User Interface requirements

Outcome

This is a big effort that **cannot** be supported with the current staffing levels

- Curation (*curator*)
- Domain knowledge & collaboration support (*scientist*)
- Systems development - UI, backend (*developer*)
- Indexing / taxonomy - “SIMBAD for Planetary Science”

Estimate: at least 3 FTEs are needed to support this effort

- Broad adaptation already in PS community - so: “improvement/intensification” rather than “introduction”
- Increased and still increasing PS content in core astronomy journals
- Diffusing inter-disciplinary boundaries
- Holdings expansion:
 - Mostly “earth sciences” journals and material systematically missing core-cited publications (metadata & fulltext)
 - Work with LPI to fill gaps
 - Reach out to ESA/NASA for PS mission-related gray literature
- Outreach:
 - Conference organizers in PS don’t have the ADS in mind as much as in Astronomy
 - Librarians at PS-centric institutes
 - Data repositories (e.g. ESA Planetary Science Archive)
 - Keep exhibiting (DPS, LPSC, COSPAR)