

OA synergies: Repositories for High Energy Physics

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OA synergies: Repositories for High Energy Physics

- Current State of HEP Repositories
- Current Synergies with OA
- What OA can do for future repositories

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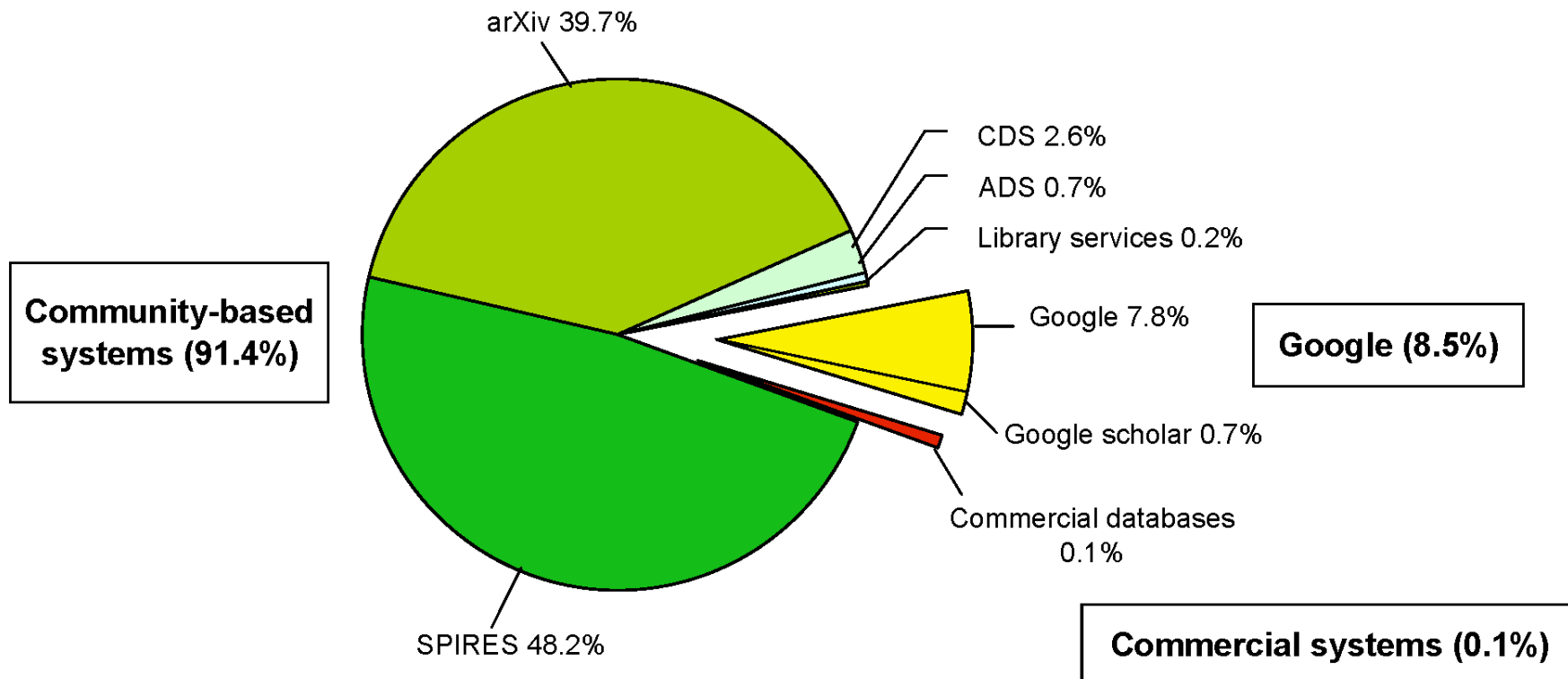
SPIRES-HEP

- Provides essentially 100% coverage of HEP literature
- Portal for fulltext from arXiv, institutional repository, conference site, and/or journal
- Tracks citations and other metadata
- Project of DESY, Fermilab, and SLAC libraries
 - Cooperation from arXiv, all publishers, other resources

Survey

- Over 2000 physicists surveyed in May 2007

Which HEP information system do you use the most?

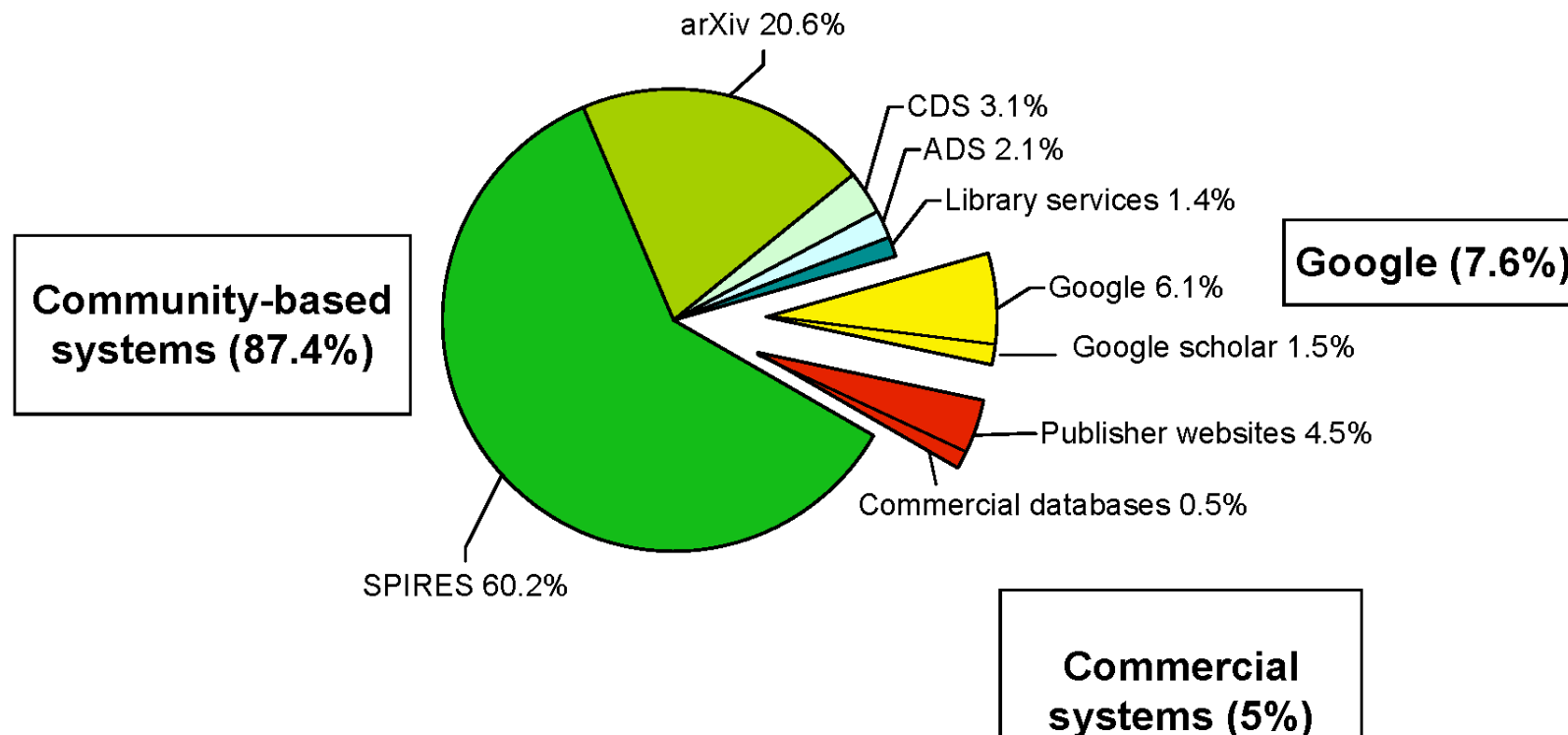


Community Services!

- Commercial services irrelevant to HEP
- Google relevant but not large
- SPIRES+arXiv are the real tools of communication in this field
 - We can do it better because we are tailored to the specific needs of HEP

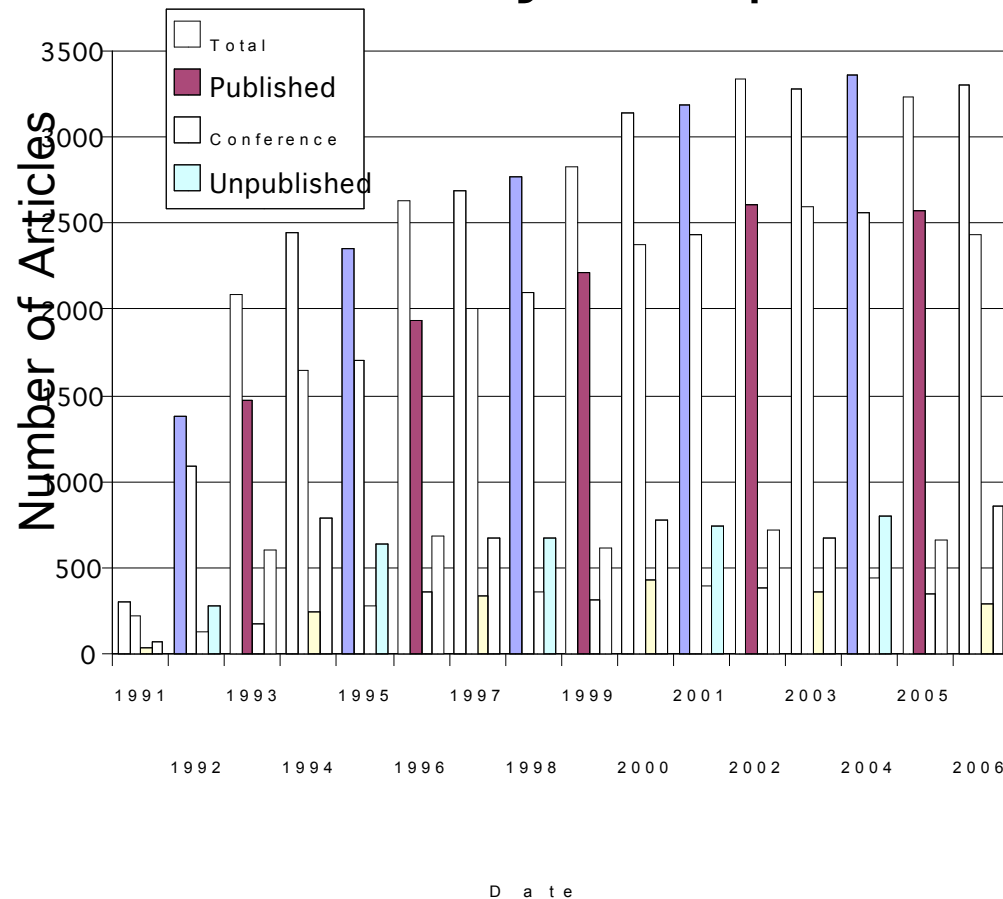
Repositories are THE access point

Which system do you use the most to find articles of which you know the reference?



Green OA in HEP

A History of hep-th



- arXiv is busy
 - ~94% of papers published in Phys. Rev. D after 1995 were submitted to arXiv
- But authors still publish!
 - 75% of hep-th papers (prior to 2007) have been published
 - Preliminary Data

In an OA Context

- HEP is very mature
 - Disciplinary repository is the primary access point for research
 - Nearly 100% Green OA
- Leads to questions
 - How does having a ~100% OA field affect Journals?
 - Can we build an even better repository?

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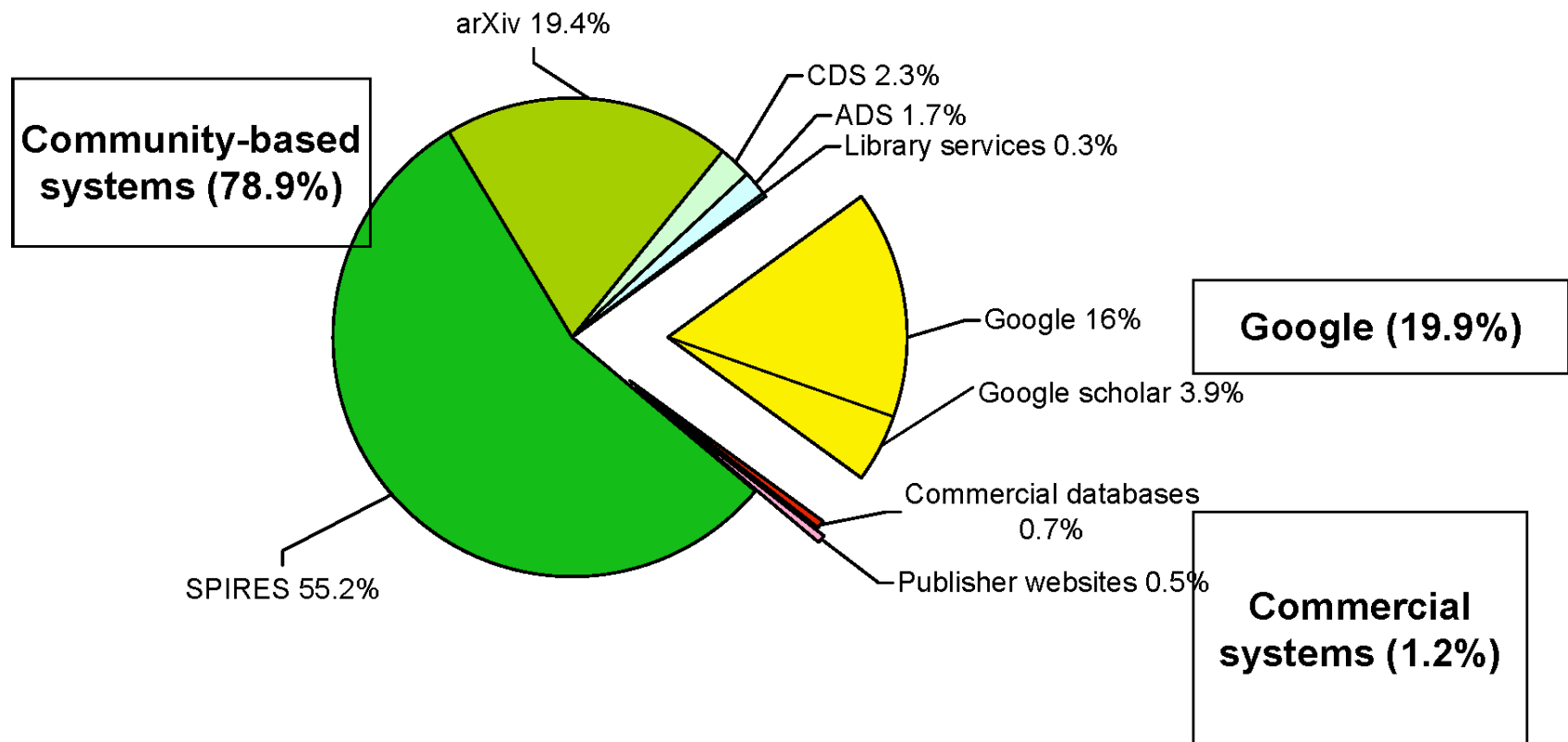
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Why OA?

- SPIRES is unrelated to SCOAP3
- ...but SPIRES can help understand HEP scientists and their relationship to literature
- ...and why a new publishing model might make sense in HEP
 - Indeed SPIRES data is what got me involved in the first place

In Physicists' Own Words

Which system do you use the most to find articles on a given subject?



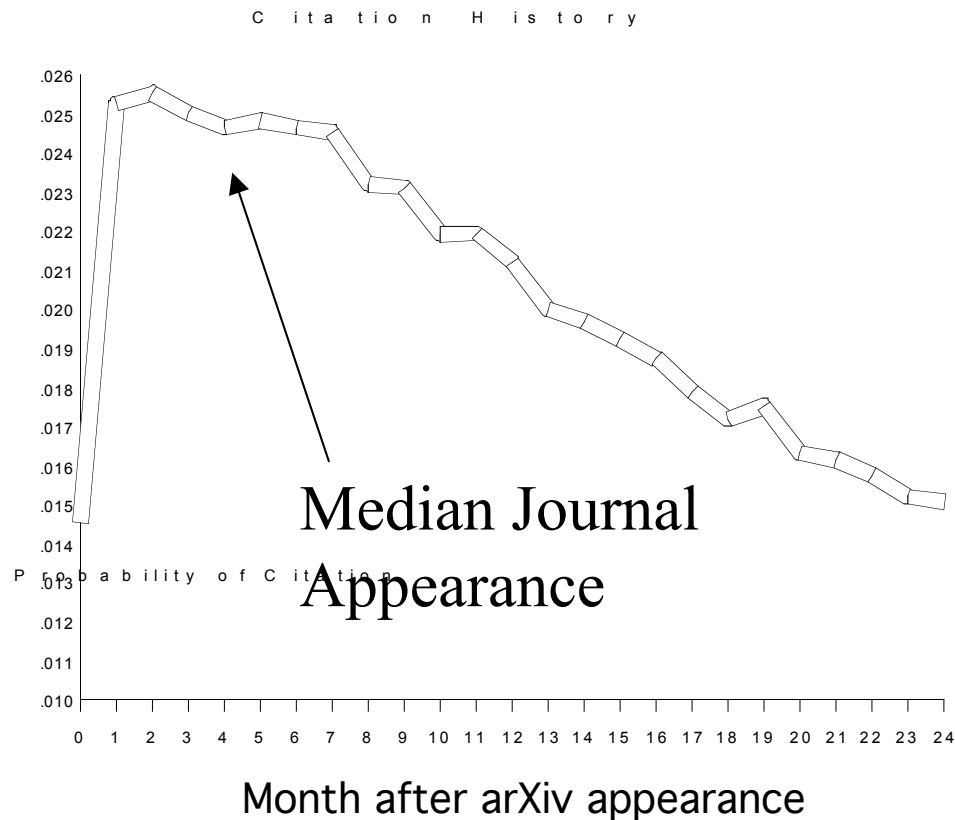
Subject searching behavior

- No libraries
- No journal websites
- Instead: Free, Global, Community Resources
 - HEP Journals make this possible by being Green OA and by helping to make repositories accurate
 - HEP Libraries make this possible by supporting repositories

Actions Speak Louder than Words

- Physicists don't look to libraries or commercial websites to find papers on a topic
 - They look to SPIRES and arXiv
- Do they look to journals before beginning work?

Citation Habits in HEP



- Median Journal Publication lag time 5 months
- Citation peak occurs after eprint release, not journal release
- Inference: HEP theorists don't wait for the journal
 - Preliminary data (SPIRES 20K articles)

When does a HEP theorist* cite a paper?

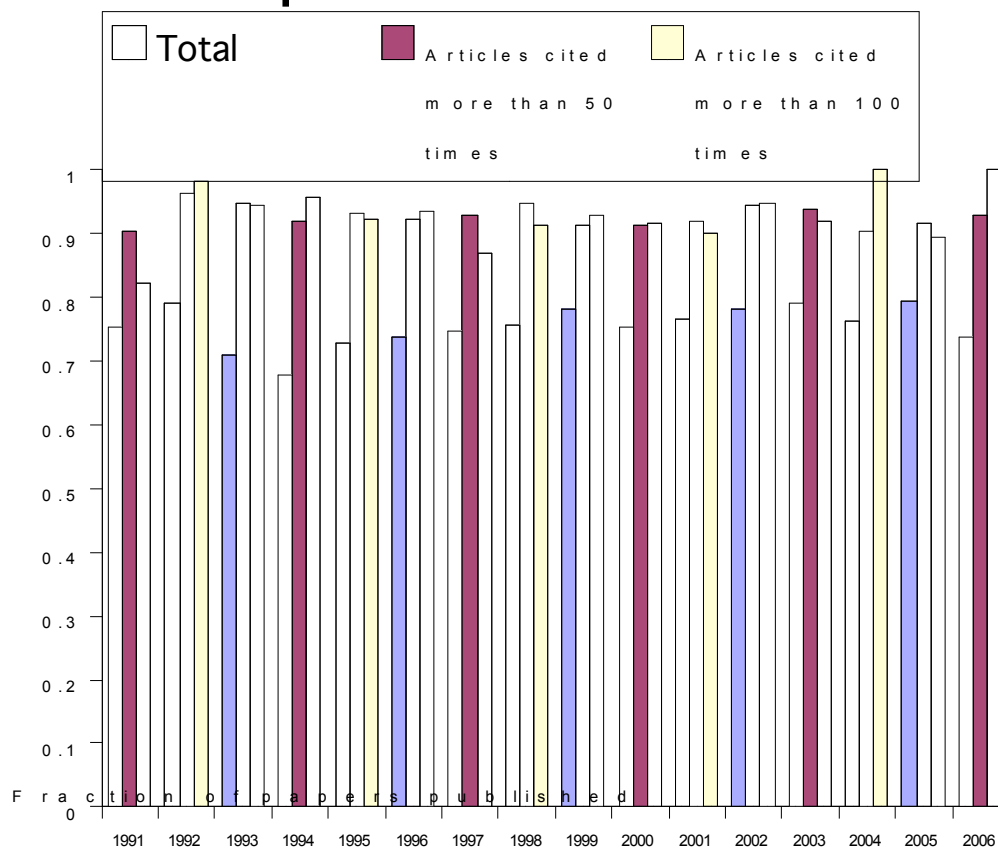
- As it appears on arXiv!
- No waiting until it appears in journals!
 - They aren't communicating via the journals

* ~90% of HEP papers are theoretical

Journals Still Very Important

hep-th papers eventually peer-reviewed

- 75% of hep-th papers (prior to 2007) have been published
- Correlation between large cite counts and publication
- Journals are still *very much* alive
 - Preliminary data



From my vantage point

- I see:
 - Scientific dialogue taking place rapidly on arXiv
 - Journals are not really used for communication within HEP
 - Instead they provide valuable peer-review services after the release on arXiv

SCOAP3 can resolve this mismatch

- Libraries pay for access to portals and papers as if their users need this to do work
- But, from Journals, HEP researchers really use:
 - peer-review services provided by the journals
 - feeds to and from SPIRES and arXiv
 - archiving, formatting, and copyediting
- Journals do a good job of providing these services
 - But they aren't what libraries explicitly pay for
 - Why not pay for what HEP actually uses?

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Can SCOAP3 help Repositories?

- I'm not an MBA or a librarian
 - I don't know if SCOAP3 makes sense for libraries and journals...
 - ...but if you (in this room) can make SCOAP3 work, it can make our current repositories even better

SPIRES' future

- We have technology and services that have served users well in the last 40 years
- We listen to users and we need to stay proactive, rather than relying on past models and past successes

Inspire Project

- CERN DESY Fermilab SLAC
 - Next-generation SPIRES
 - Publishers and other services
 - participate as partners
 - may share data openly (a la SCOAP3)
- Enabling new services
 - data mining
 - textual analysis
 - community tools

Future

- The future of HEP literature is not just the journals
- Nor is it just SPIRES or arXiv
- It is the open availability of information via community portal

Journals will provide

- Peer review
- Formatting
- Archiving
- Data feeds
- Imprimatur and distribution outside HEP
 - *SCOAP3 makes these explicit and thus protects them*

arXiv will provide

- submission – intake of papers
- immediate, lightly filtered communication

SPIRES (Inspire) will provide

- synthesis of journal, arXiv, and other sources (conferences)
- community-based analysis platform
 - references and other data
- single end user interface

Meeting the Needs of Our Community

- HEP wants its information from community, discipline-wide sources
- HEP users don't use journals as a communications medium
- HEP users want from journals
 - Peer-review, formatting
 - Distribution via community resources