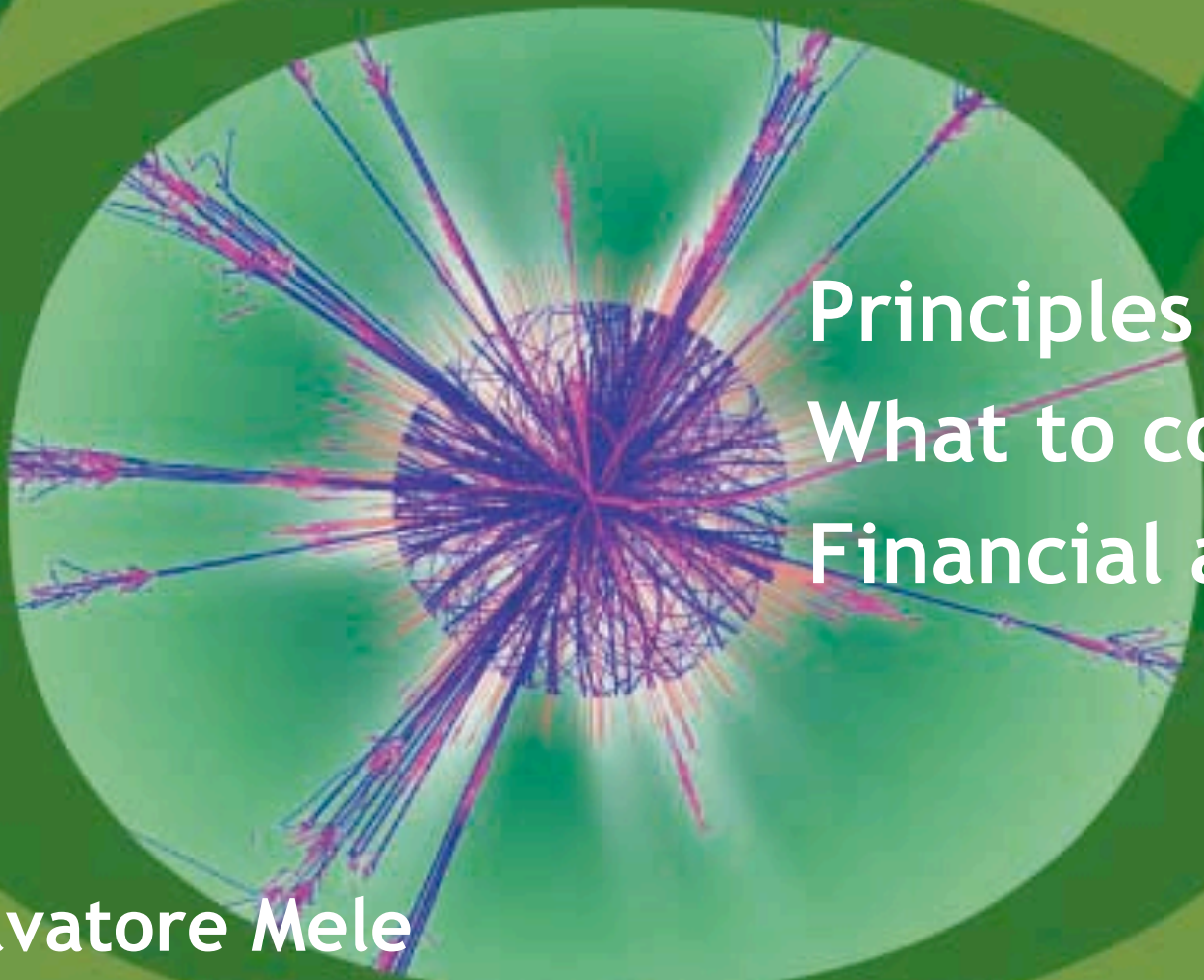
The SCOAP^3 Model



Principles of the model
What to convert?
Financial aspects

Salvatore Mele
CERN
For the SCOAP^3 Working Party

CERN - March 14th 2007

Towards the SCOAP^3 consortium

- Tripartite task force of funding agencies, publishers and authors indicated sponsoring as a way to achieve Open Access publishing in HEP
- European stakeholders charged a Working Party to propose a blueprint for a sponsoring consortium: SCOAP^3 Sponsoring Consortium for Open Access Publishing in Particle Physics

Contributors to the SCOAP^3 Working Party:

CERN: R.Hanania, P.Igo-Kemenes, T.Lagrange, C.Lindqvist, S.Mele, J.Vigen, R.Voss, M.Wilbers, J.Yeomans

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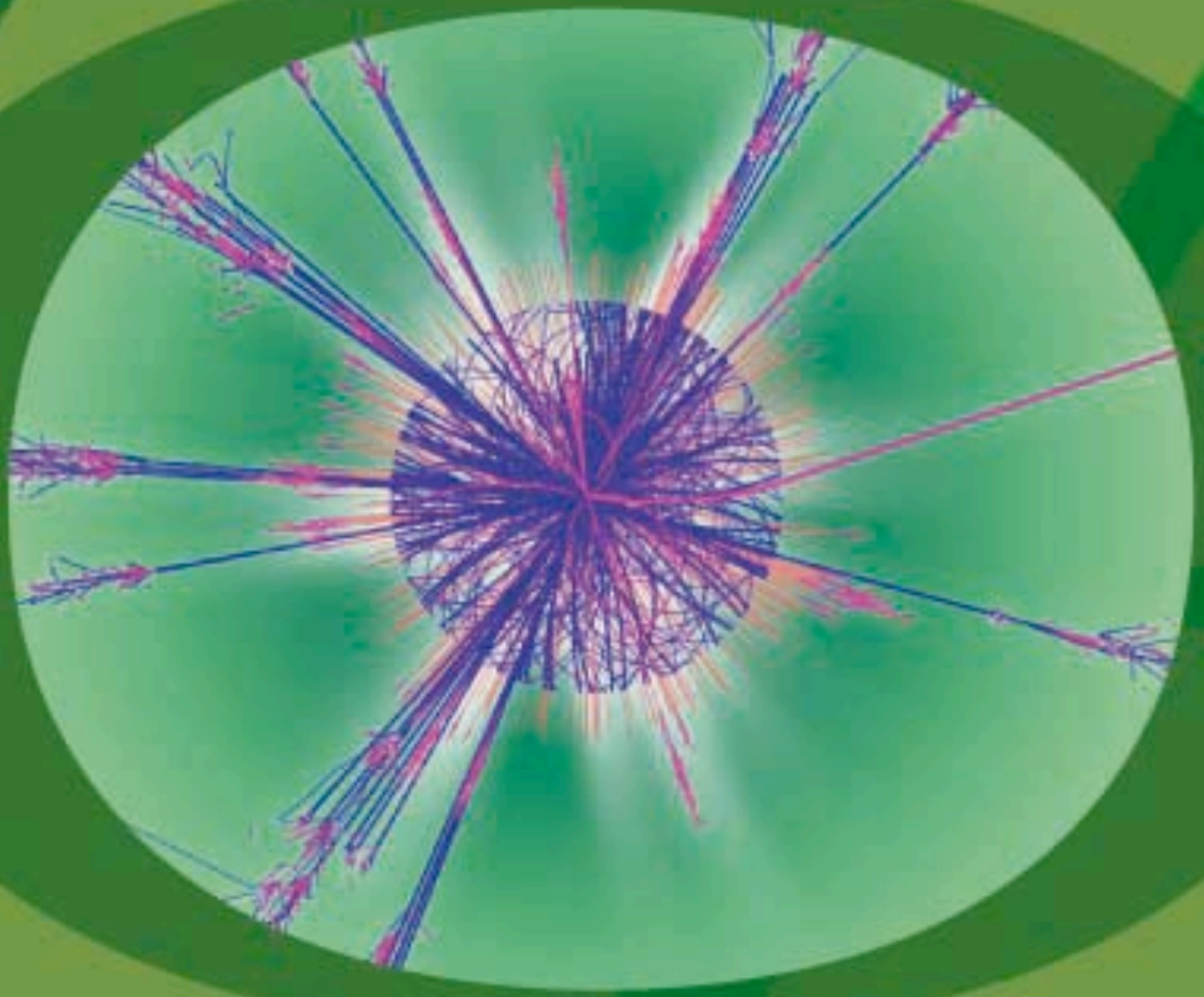
Principles of the model



Pillars of the SCOAP^3 model

- Free online journals for anybody, anywhere, anytime
- Convert in an economically sustainable way existing high-quality peer-reviewed journals to Open Access
- Do not ask individual authors to pay to publish
- Avoid “paying twice” for Open Access and subscriptions
- Federate HEP funding agencies worldwide to share costs by re-directing journal subscriptions money
- SCOAP^3 as a single commercial partner for publishers
- Generate medium- and long-term savings through negotiating power, author awareness and encouraging competition among journals

Roles in the SCOAP^3 model: publishers

- Publishers are thought of as “service providers” and are charged with the “quality-assurance” service of peer-review.
- Publishers receive articles as they do now, process articles as they do now, but make the final version available Open Access in a SCOAP^3 database.
- Publishers receive financial compensation by SCOAP^3 for this quality-assurance service.
- Publishers may sell additional *premium* services to interested libraries and/or authors (paper journals, reprints, color pages, databases, e-mail alerts...).
- Most publishers ready to enter negotiations provided long-term funding is available for SCOAP^3

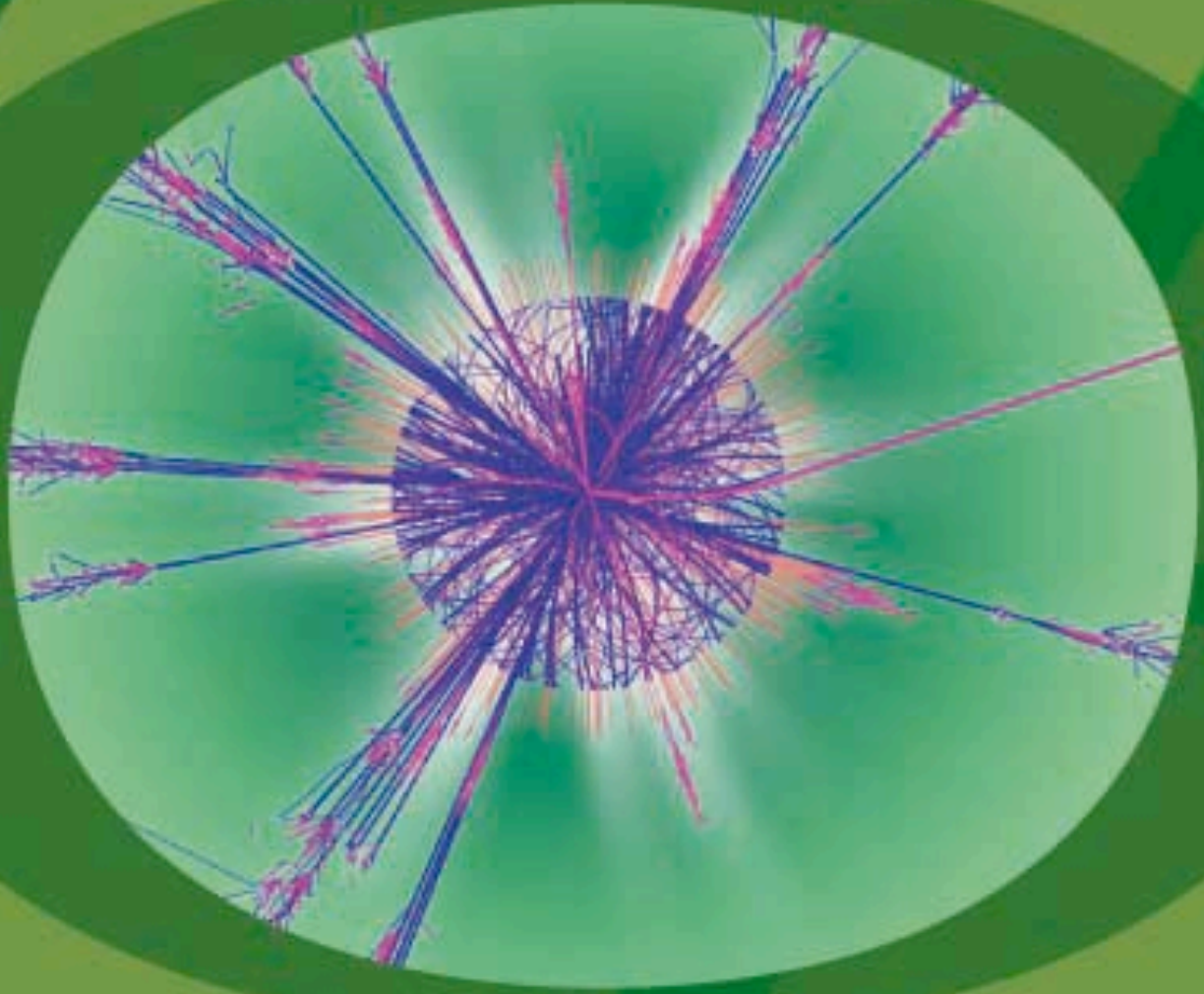
Roles of authors and funding agencies

- Authors will read OA articles without restrictions and will not have to pay to publish their articles.
- Funding agencies organise on a country-by-country base the transfer of subscription money to SCOAP^3.
- Funding agencies engage their authors towards an Open-Access-aware publication culture.
- Funding agencies and libraries will reduce costs, as Open Access will be eventually cheaper than subscriptions:
  - One commercial partner: less administration
  - No access control: less administration
  - Cut non-essential services (no paper,...): obviously cheaper
  - Stimulate competition: reduce prices

Operation of the SCOAP^3 consortium

- Follow the blueprint of large scientific collaborations.
- Funding agencies worldwide pledge funds towards the SCOAP^3 operation.
- CERN places a tender for the peer-review quality-assurance and Open Access dissemination services on behalf of SCOAP^3.
- Funding agencies worldwide commit to SCOAP^3 through a Memorandum of Understanding.
- Operate on a sliding three-year window.
- Funding agencies oversee SCOAP^3 operation.

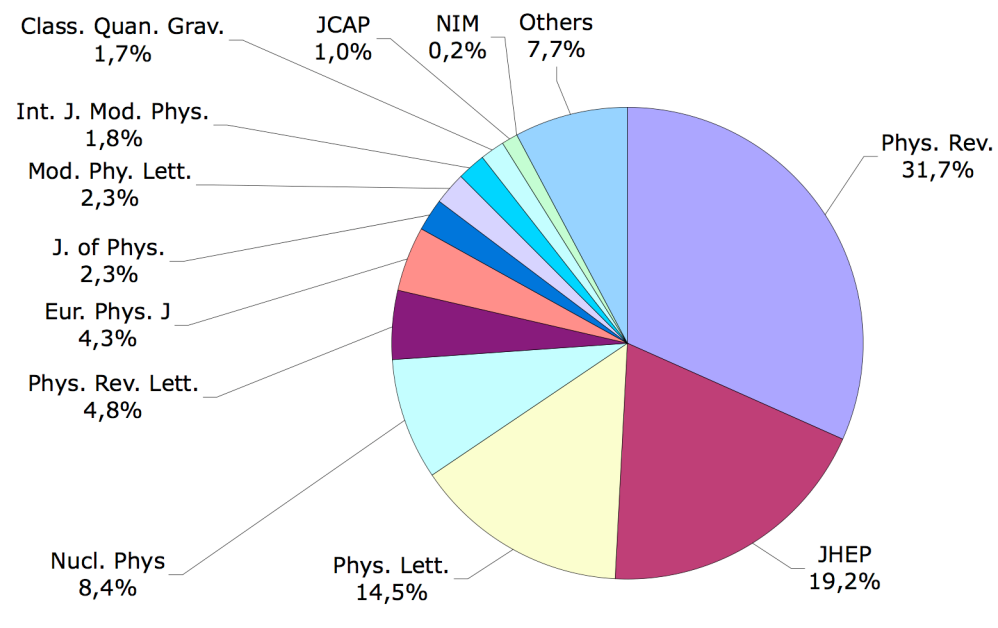
What to convert?

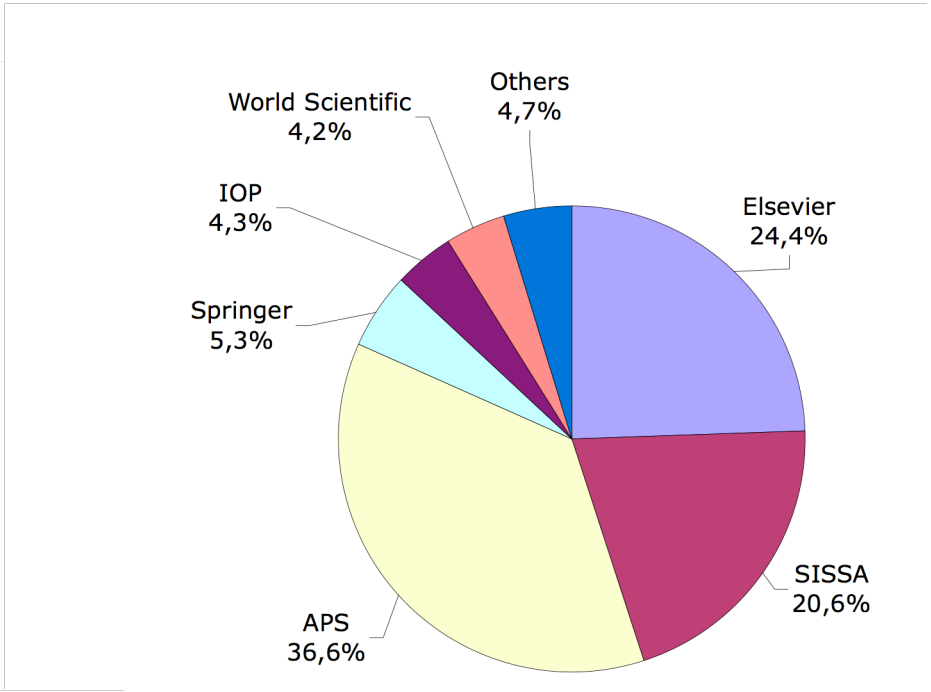


The HEP publishing landscape

S.Mele *et al.* JHEP 12(2006)S01 arXiv:cs.DL/0611130

5016 articles submitted to arXiv:hep in 2005 and published in peer-reviewed journals



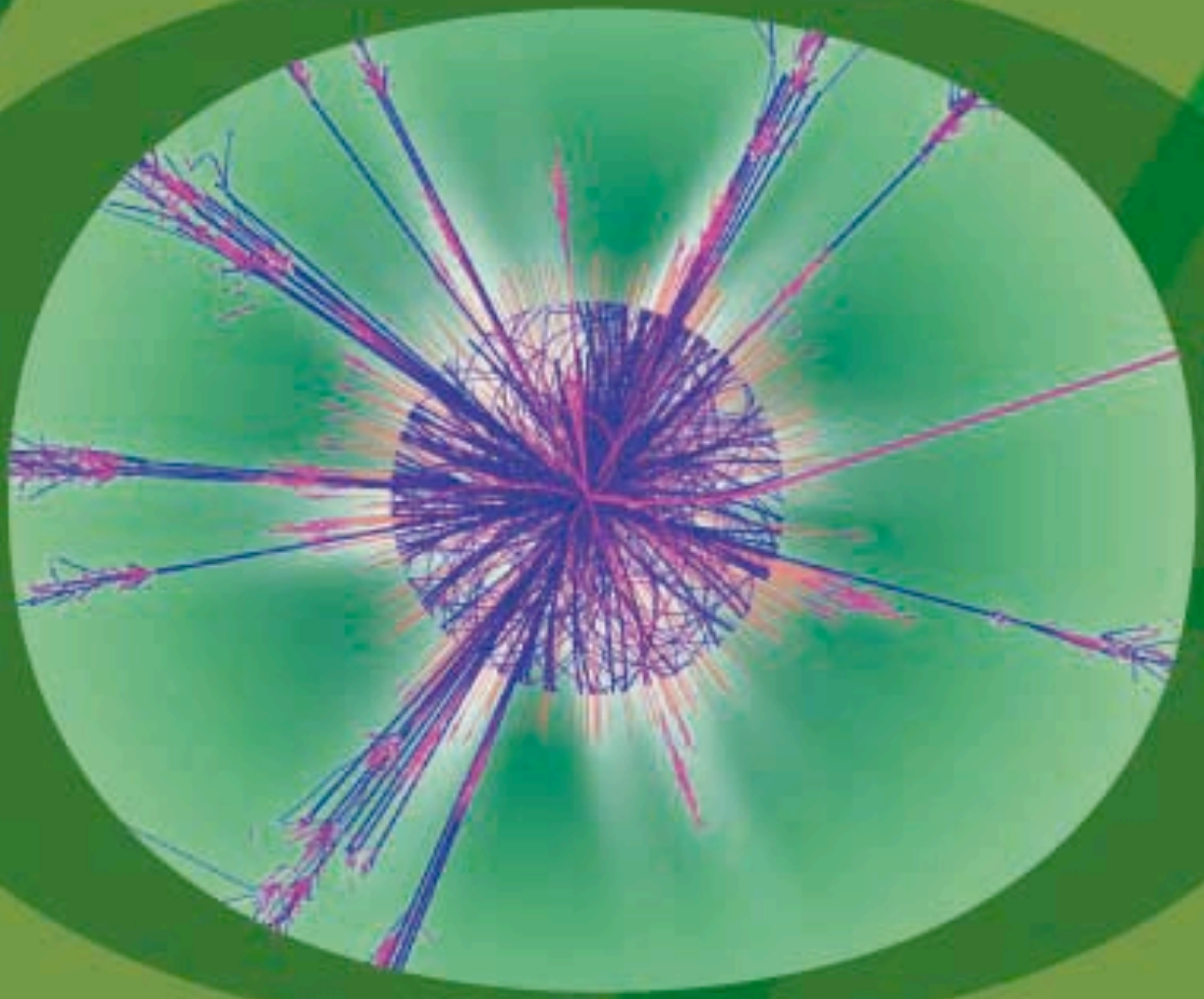


90% of articles are in theory and by less than 3 authors
83% of articles published in 6 leading journals
87% of articles published by four publishers
57% of articles by not-for-profit (nor-for-loss) publishers

Towards Open Access journals

- Six journals cover 83% of the arXiv:hep preprints
- Five “core” journals: PRD, JHEP, PLB, NPB, EPJC
  - Carry a majority of HEP content
  - 10%-30% Nuclear Physics and Astroparticle Physics
  - Aim to convert them entirely to Open Access
  - Reduce prices of “packages” accordingly
- One “broadband” journal: PRL
  - 10% of HEP (including Nuclear and Astroparticle Physics)
  - Sponsor the conversion to OA of this fraction
  - Reduce subscription price accordingly
  - Similar approach for NIMA and JINST (23% and 50% HEP)
- SCOAP^3 is not limited to this initial set of journals but open to all high-quality HEP journals!

Financial aspects



The budget envelope

- PRD needs 2.7M€/year to operate (31% of arXiv:hep)
- JHEP needs ~1M€/year to operate (19% of arXiv:hep)
- A published PRD article costs APS 1500€
- 6-8 leading journals publish 5000-7000 articles a year

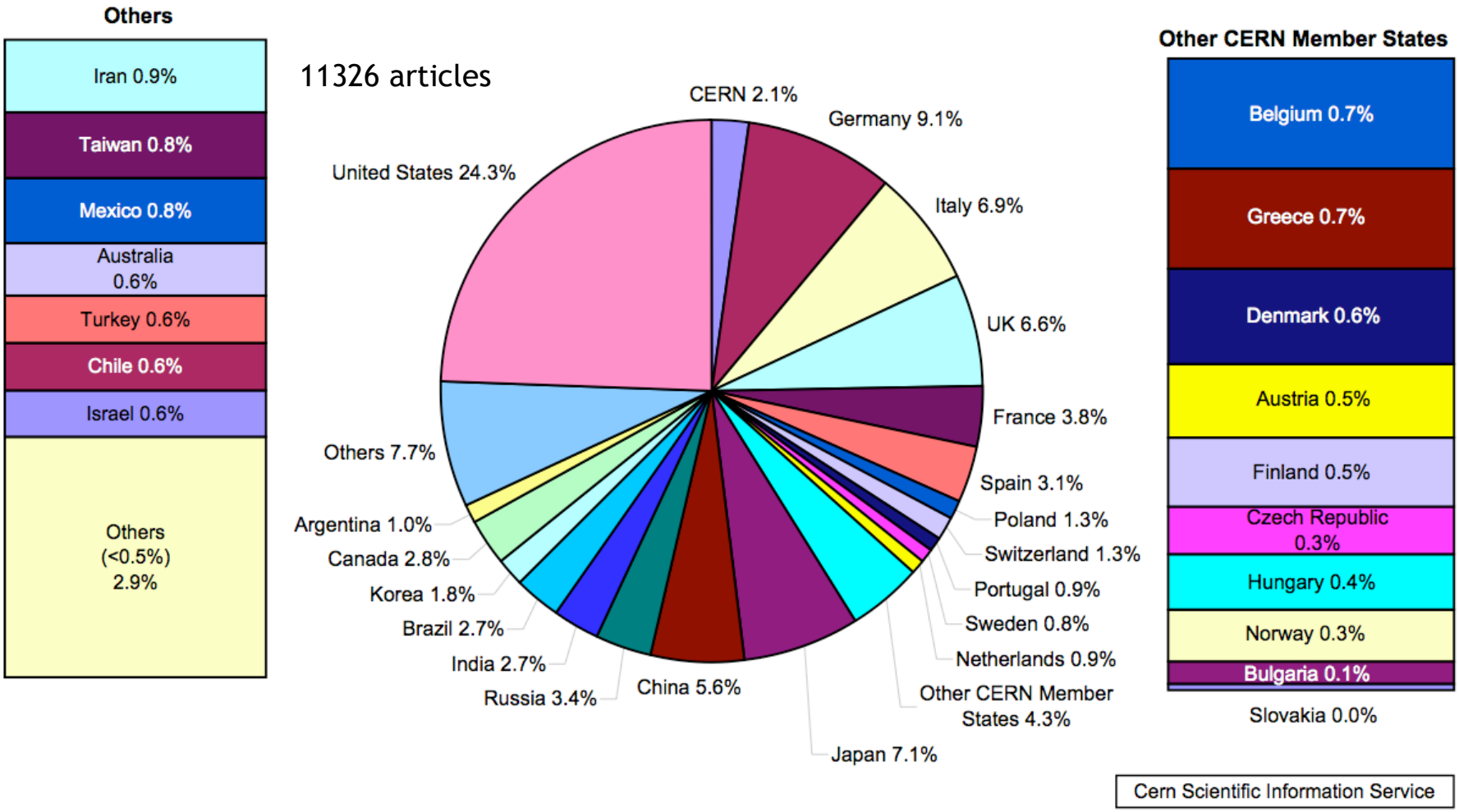
HEP Open Access price tag: 10M€/year

Nuclear Instruments and Methods in physics research A+B
List price 16k€/year
× ~300 institutes building ATLAS & CMS = 4.8 M€/year

SCOAP^3 financing

- SCOAP^3 exact yearly cost to be known after the tender.
- SCOAP^3 financing to be distributed according to a “fair-share” model based on the distribution of HEP articles per country, accounting for co-authorship.
- Make an allowance for developing countries who at the beginning might not contribute to the scheme.
- The model is viable only if every country is on board! Allowing only SCOAP^3 partners to publish Open Access simply replicates the subscription scheme and does not solve the problems: need to buy/read what others write.

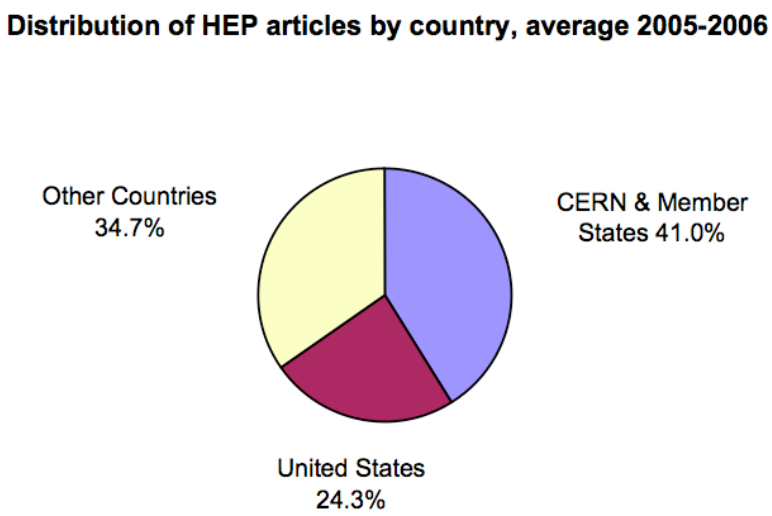
A study of PRD,JHEP,PLB,NPB,EPJC,PRL and NIMA



All of PRD,JHEP,PLB,NPB,EPJC. Only HEP fraction of PRL(11%) and NIMA(23%)
Co-authorship is taken into account on a *pro-rata* basis
by assigning articles to countries according to their number of authors.

A study of 11326 articles published in 2005 and 2006 in PRD,JHEP,PLB,NPB,EPJC,PRL and NIMA

US	24,3%
Japan	7,1%
China	5,6%
Russia	3,4%
Canada	2,8%
Brazil	2,7%
India	2,7%
Korea	1,8%
Israel	1,0%
Iran	0,9%
Taiwan	0,8%
Mexico	0,8%
Australia	0,6%
Argentina	0,6%
Turkey	0,6%
Chile	0,6%
Rest (<0.5%)	2,9%



CERN	2,1%
Germany	9,1%
Italy	6,9%
UK	6,6%
France	3,8%
Spain	3,1%
Switzerland	1,3%
Poland	1,3%
Netherlands	0,9%
Portugal	0,9%
Sweden	0,8%
Belgium	0,7%
Greece	0,7%
Denmark	0,6%
Austria	0,5%
Finland	0,5%
Hungary	0,4%
Norway	0,3%
Czech Rep.	0,3%
Bulgaria	0,1%
Slovakia	<0.1%

Conclusions: SCOAP^3 in a nutshell

- Establish Open Access in HEP publishing in a transparent way for authors.
- Convert existing high-quality peer-reviewed journals to Open Access, in a sustainable way.
- Operate along the blueprint of large collaboration.
- Generate savings through negotiating power, author awareness and competition among journals.
- Price tag of 10M€/year to be shared according to the distribution of HEP articles per country.
- The model has high potential but is only viable if every country contributing to HEP is on board!
- SCOAP^3 model could be rapidly generalized to related fields: Nuclear and Astroparticle Physics