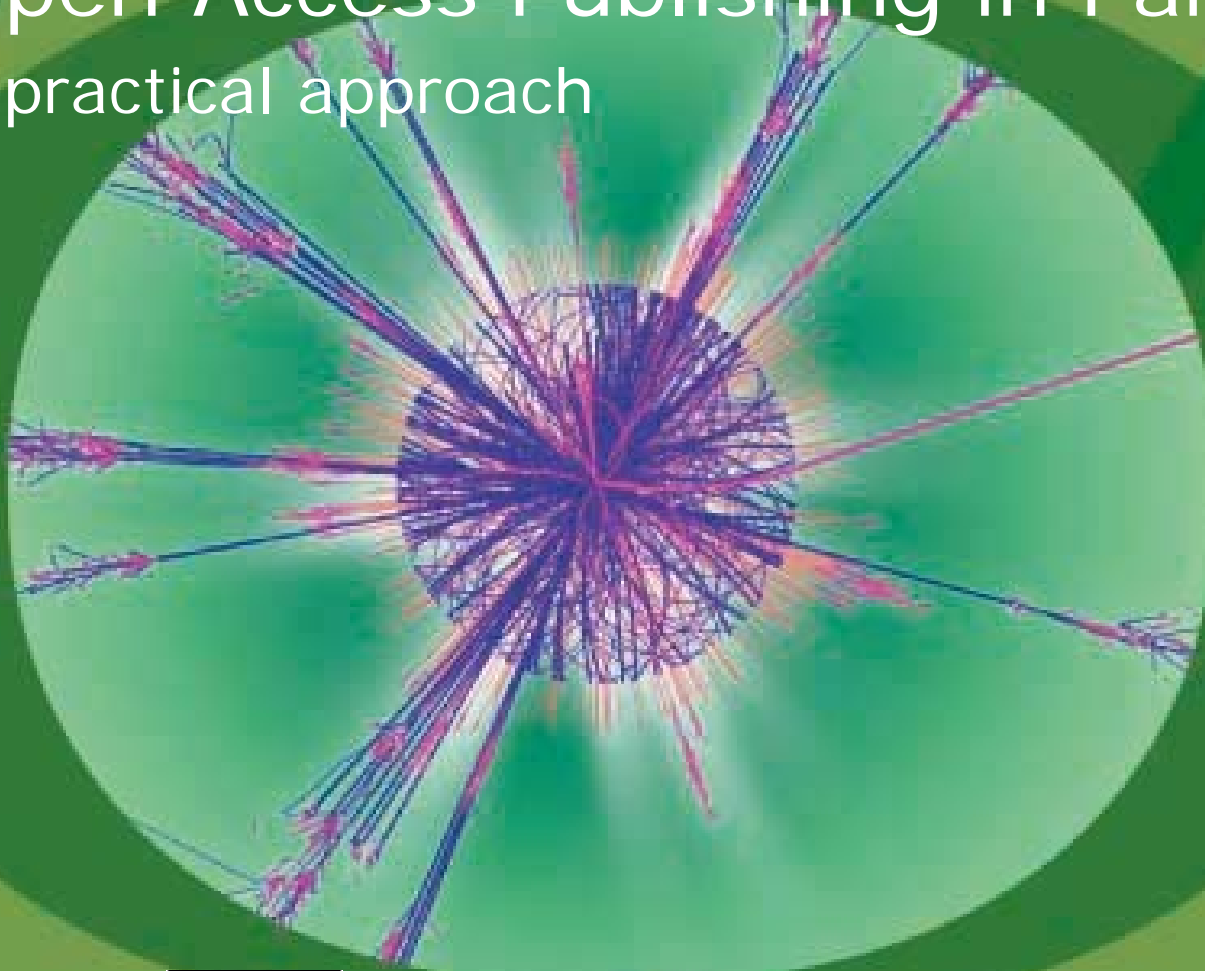


# Open Access Publishing in Particle Physics

## A practical approach



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# Mandate

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- Successful “Colloquium on Open Access Publishing in Particle Physics” held at CERN on 7-8 December 2005 ([www.cern.ch/open-access](http://www.cern.ch/open-access))
- Set up Task Force to
  - study and develop sustainable business models for OA publishing for existing and new journals and publishers in particle physics, focused mainly on a sponsoring model;
  - make results available to the Colloquium participants before end of March 2006

# Membership

Tripartite group: authors, publishers funding agencies:

- Members:
  - Daniele Amati (SISSA)
  - Martin Blume (APS)
  - Enzo De Sanctis (INFN)
  - Gregor Herten (IUPAP C11)
  - Leif Jonsson (Lund)
  - François Le Diberder (IN2P3)
  - Claus Montonen (EPS)
  - Jan Velterop (Springer)
  - Rüdiger Voss (CERN/Chair)
- Expert:
  - Frederick Friend (JISC)
- Observer:
  - Yves Dumont (EU)
- Secretariat:
  - Jens Vigen
  - Joanne Yeomans
  - Anne Gentil-Beccot
  - Tullio Basaglia
  - (all CERN Library)

# The particle physics publications landscape

- The CERN Convention (1953) is an early Open Access manifesto:
  - “... the results of its (i.e. CERN’s) experimental and theoretical work shall be published or otherwise made generally available.”
- Particle physics has been an important promoter of the preprint culture
- Particle physicists were among the first to fully embrace the Open Archive movement (arXiv.org)
- > 90% of relevant papers appear in ~ 10 journals (excluding review journals)
- Peaceful coexistence, but journals increasingly relegated to version-of-record archives

# The Task Force vision of OA

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- The long-term goals:
  - Access on the Internet for all readers at any time and with no restrictions
  - Access for authors with no financial barriers
  - Authors retain copyright
  - Affordable for the community
- This cannot be achieved overnight: transition period and transition scenario needed

# Key working hypotheses

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- Focus on sponsoring to overcome practical & psychological hurdles of (traditional) publication charges
- Focus on “particle physics only” journals
- Focus on existing, established, high-profile journals to make model attractive to authors
  - ... but leave room for new players!
- Support  $> 1$ , better 3, 4 or more journals:
  - Stimulate competition
  - Give authors a choice
  - Maintain high peer review and editorial standards

# Procedure

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- Questionnaire sent to ~ 20 publishers for ~ 40 different titles, including all “core” HEP journals, some lesser ones, some “large bandwidth” journals
- Key questions:
  - Number of papers received/published p.a.
  - Cost per article published
  - Experimental/theory content
  - Origin of papers (by lab/country)
  - Are you ready for transition to OA ???
- Thanks to all who replied!

# Disclaimer

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- Some publishers have been very cooperative in providing financial details of their operations on condition that they remain confidential
- We will probably produce a report in two versions:
  - “full” – list of recipients to be agreed by task force and with publishers
  - “light” – for general distribution, will contain no (or anonymized?) financial data
- Cannot disclose some details here...



# Overview of replies

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- **Positive** replies from
  - APS for Phys. Rev. D, PRST-AB
  - SISSA/IOPP for JHEP, JCAP, JINST
  - Springer for Eur. Phys. J. C
  - ... plus some more
  - one candidate for new journal (BioMed Central)
- Some **negative**...
- Have not heard from some publishers - but we have replies from the important ones

# Initial conclusions

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- With one notable exception, positive response from key publishers/journals in particle physics
- Sponsoring all “OA ready” journals would cost 5 – 6 M€/year
- Minimum budget to start a full-size OA exercise: 3 M€/year
- May seem a lot, but... compare to traditional journal subscriptions integrated over particle physics institutes!

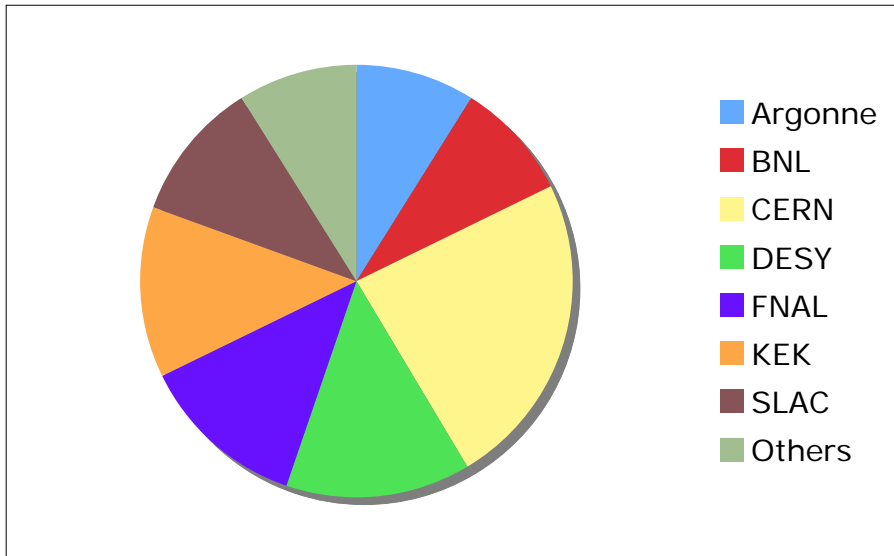
# SCOAP<sup>3</sup>

- Notwithstanding certain drawbacks, we consider sponsoring through a consortium the most promising and sustainable business model for particle physics
- Propose a “Sponsoring Consortium for Open Access Publishing in Particle Physics” (SCOAP3)
- Potential partners:
  - Funding agencies supporting particle physics
  - Major particle physics laboratories (CERN, Fermilab, DESY, SLAC, LNF [Frascati], KEK, IHEP [Beijing], ...)
  - Major author communities (big experimental collaborations)
  - Funding agencies supporting OA
  - Libraries

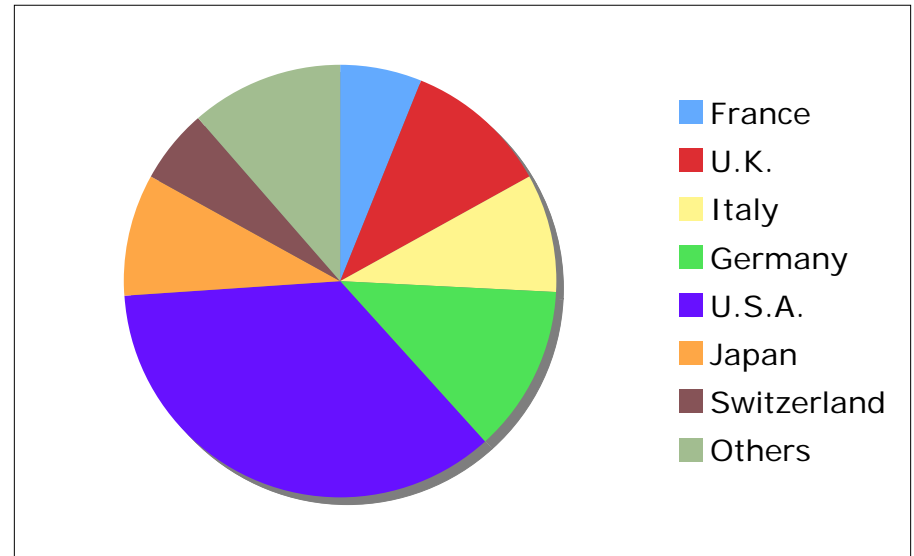
# The long-term goal

- All relevant journals in the field convert to OA – or disappear (“publish OA or perish”)
- Provide room for new journals
- Co-fund “large bandwidth” journals
- SCOAP<sup>3</sup> is supported by funding agencies based on a “fair share” principle
  - ~ 10 funding agencies provide ~ 90% of global funding for particle physics research
- The longer-term option: revert to traditional publication charges?
  - Should be cost-neutral for funding agencies
  - Too early to make a recommendation now

# Origin of published papers



Experimental papers by lab



Theoretical papers by country

- Theoretical papers are ~ 80% of the total!
- Figures preliminary, use with some care

# Transition, part 1: funders

- We tentatively foresee a 5 y transition period
- At the end, funding agencies will be fully responsible
- Transition scenario:
  - “Big labs” will have to take a lead, financially (hopefully supported by other sources) and politically, but cannot carry the full load forever
  - Work out details of the “fair share” scenario
  - Allow time for funding agencies to adapt (convert journal subscription budgets to OA sponsoring)
  - Allow time for authors to adapt
  - Allow time for more publishers to join

# Transition, part 2: publishers

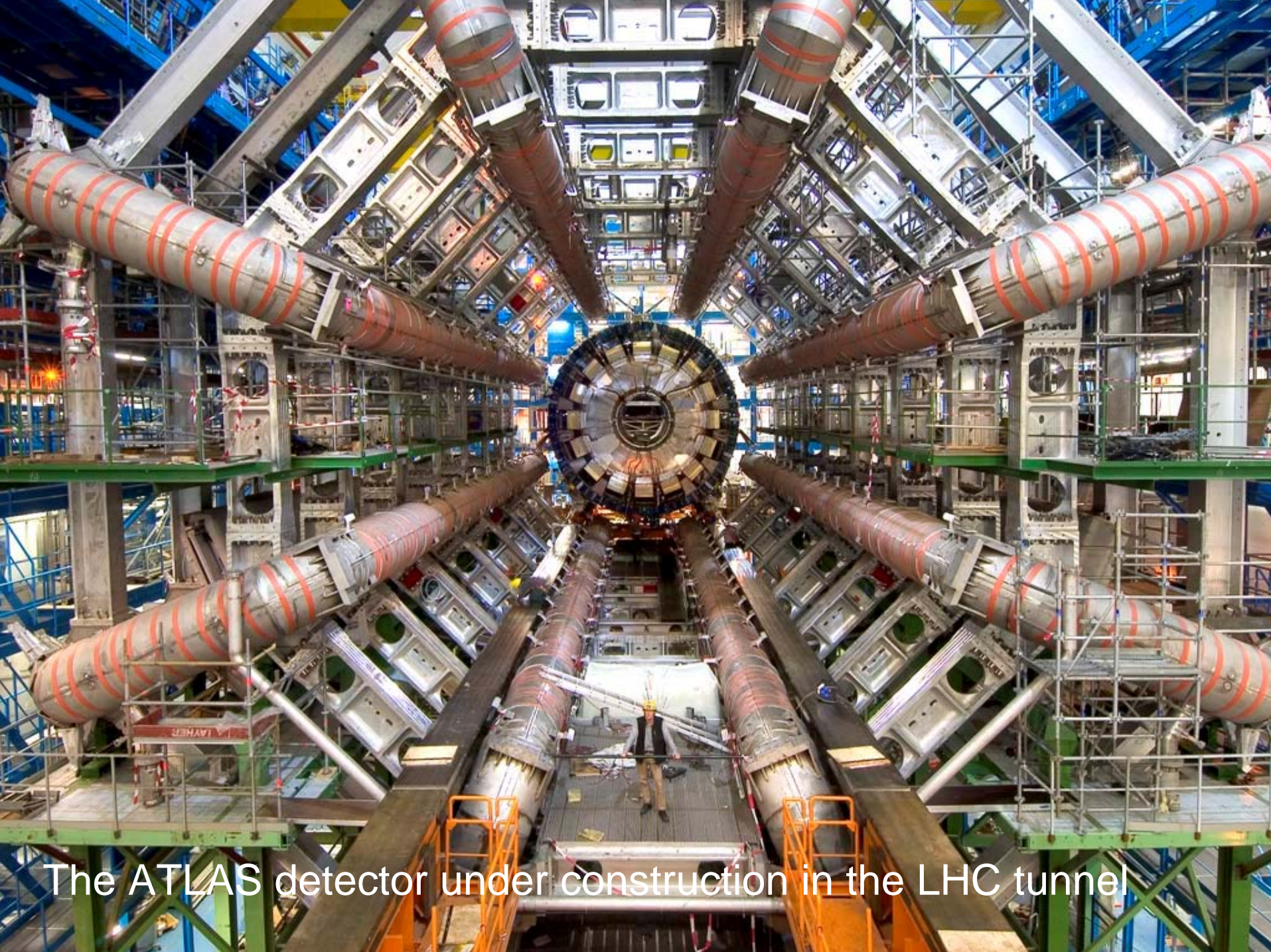
- Depending on amount and reliability of funding, not all interested publishers may be willing or able to convert their particle physics journals to full OA on short notice.
- Possible “delayed” transition models:
  - Article-by-article sponsoring (Springer “Open Choice” example)
  - Convert to OA parts of journal directly concerned with particle physics
  - Make journal OA-available after embargo period
- Conditions to be negotiated journal by journal. Journals adopting a delayed transition should commit to full OA as the long-term goal, and offer a gradual decrease of subscription price.

# Summary

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- A significant fraction of key particle physics journals is ready for a rapid transition to Open Access under a consortium-funded sponsoring model
- These journals cover ~ 50% of the original research articles (excluding instrumentation papers)
- We have identified initial budget requirements
- This is a first step: we have a daunting task in front of us to do the fundraising, and to sort out the nitty-gritty details
- The LHC start in 2007 is a unique opportunity!





The ATLAS detector under construction in the LHC tunnel