

# Reforming the publishing model

An opportunity to convert high quality  
subscription journals to Open Access

Robert Aymar, Director-General, CERN

Establishing a sponsoring consortium for Open Access publishing in particle physics  
CERN, 3rd November 2006



# A concerted move to OA

## Making the record of science available

### Scientific results

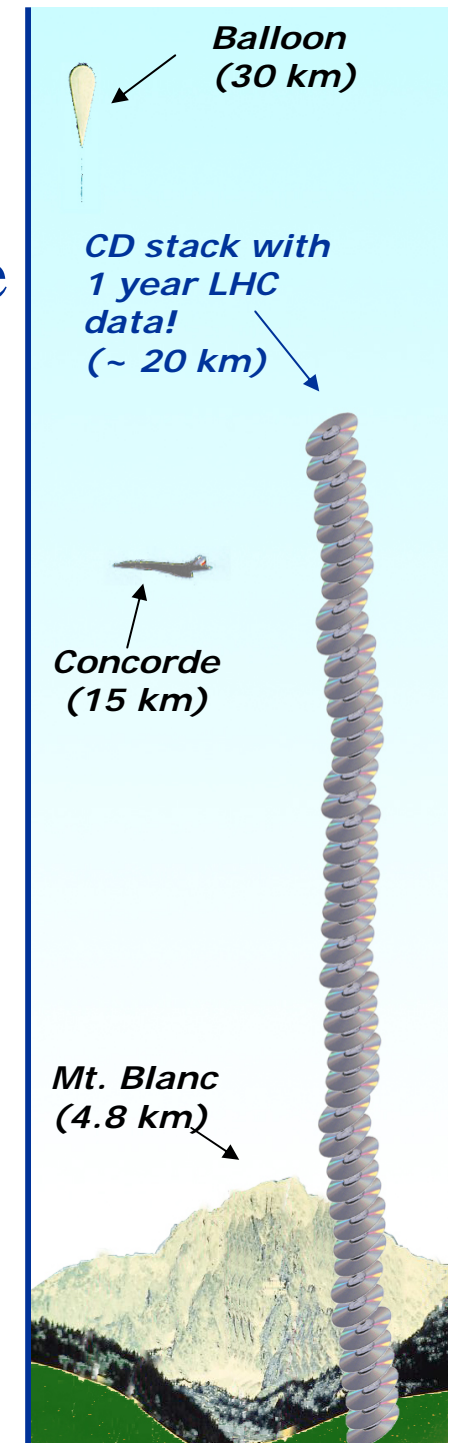
- Data (still impractical due to quantity and complexity)
- Notes and reports
- Published papers and articles

### Information provision

- Ensuring immediate free access from the publishers' site
- Ensuring free access for future generations through libraries

### Free access

- The CERN Convention (1953) contains what is effectively an early Open Access manifesto:
  - “... the results of its experimental and theoretical work shall be published or otherwise made generally available.”
- Vast free distribution of large quantities of preprints and reprints for 40 years prior to the electronic era
- All conditions to convert the high impact journals to Open Access are present

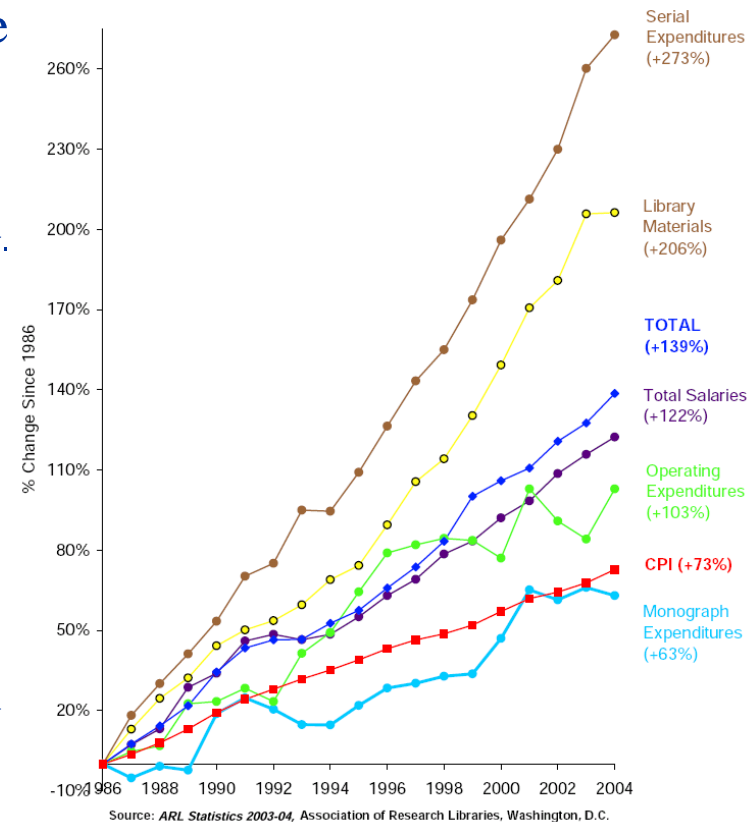




# The rise of the OA debate (I)

## Reminder of why we are here

- Ever-rising costs over the last decades, always beyond inflation rate, should not be allowed to continue
  - Society publishers estimate that the real publishing costs, including peer-review administration and simple copy editing, are in the range of \$1,000 - \$1,500
  - Through the subscription model it is estimated (Rubinstein) that some publishers collect as much as \$16,000 per article
- Technology challenged the old publication model. The subscription model was assumed to be based on costs related to printing and bulk shipping of paper – electronic publishing requires a model based on making quality assured information available

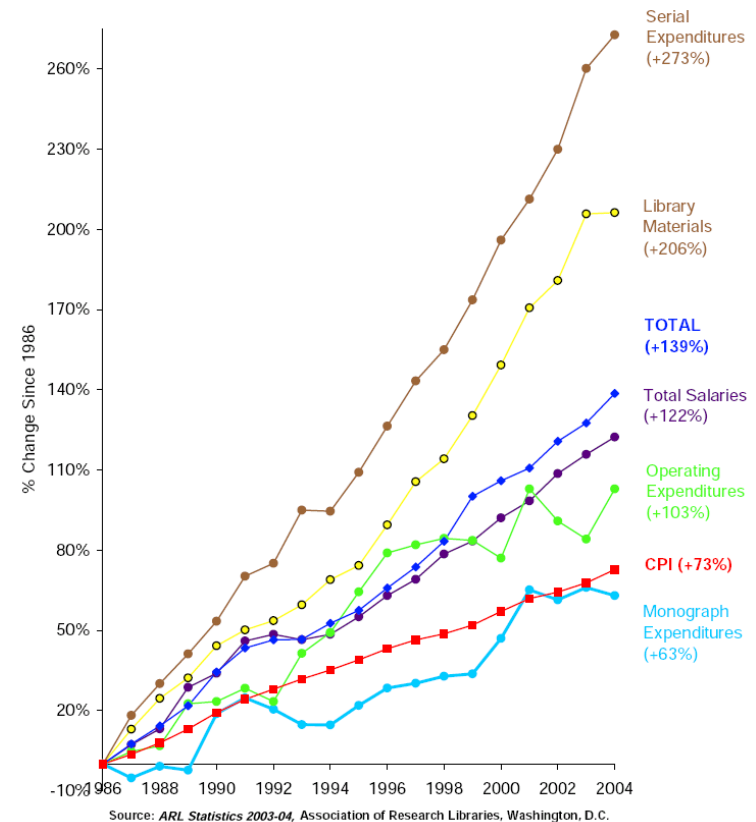




# The rise of the OA debate (II)

## Reminder of why we are here

- The traditional copyright transfer agreement appears to many authors as a hindrance, a new approach to copyright management is needed
- Via the Web, authors can reach readers without going through a publisher, equally readers can get access to information without having to rely on journals and libraries. To improve efficiency we should aim for a system maximizing the audience as well as ensuring the quality of the material made available
- Open Access Publishing was never a moral question, but publicly funded research should be made freely available to anyone interested





# Defining a few concepts (I)

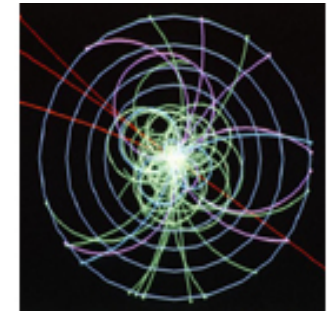
## The two routes to Open Access

*“The green road”* – Self-Archiving – potential version problems

- The immediate way to Open Access though without peer review
- Particle physics is leading the world
- CERN mandates its researchers to self-archive their scientific output

*“The golden road”* – Open Access Publishing – ensuring quality

- Transition barriers (publication fees + subscriptions)
- Provides an excellent framework for libraries to fulfil their archival role





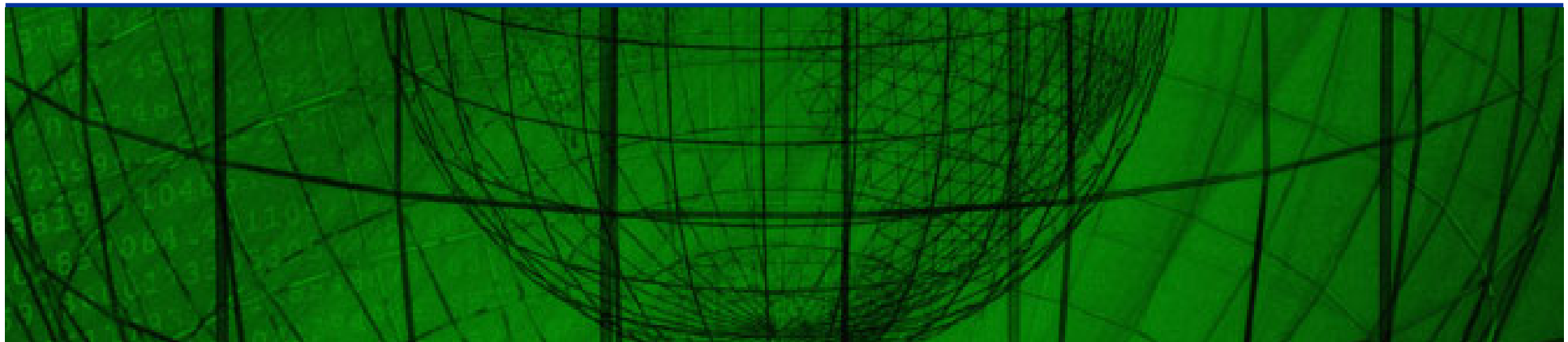
## Defining a few concepts (II)

### Hybrid models - a tool for the transition to OA?

- Most publishers have launched a hybrid model
- Initially very sceptical, but ...
- So far low take-up due to lack of paying mechanisms – cannot be used as a proof that authors are not interested in OA Publishing
- Publishers are dependent on a safe transition - a whole business is at stake
- Augmented cash flow towards the publishers is not thought acceptable

Peter Suber offers an excellent overview of the models

- [Nine questions for hybrid journal programs](#) (SPARC OA Newsletter, 9/2/06)







# Roles in scientific research

- Research funding agencies/governments
  - Huge interest in good dissemination of research
  - Do not budget publishing with research. Option of OA Publishing should change this
- Researchers
  - The key players. Have so far ignored rising journal costs. But are showing interest
- Publishers
  - Were initially reluctant, but OA Publishing can be a viable business if it is global
  - Continue to ensure quality
- Librarians
  - Are likely to be just as necessary in an Open Access world to facilitate access
- The public
  - The ultimate payers ... Who else has more right to read?

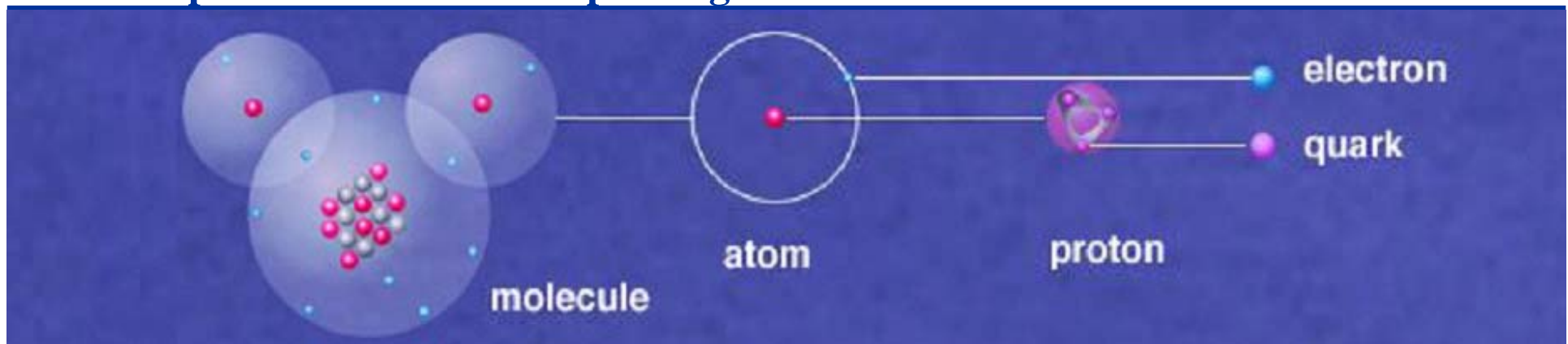




# The publications landscape

Notes, reports, preprints, peer reviewed articles

- Particle physicists have promoted the preprint culture for 50 years, were among the first to fully embrace the Open Access movement (arXiv.org)
- We have almost complete Open Access in particle physics through preprints, but the published peer-reviewed literature still remains behind toll barriers
- Peaceful coexistence, but journals increasingly relegated to quality controlled versions-of-record
- **National and academic libraries ensure access to the paper collections and should continue to play this role for electronic resources**
- **To ensure the continuation of peer review, the publishing model must be adapted to the electronic paradigm**







A highly complex move with many parties involved, but ...

- **With the first LHC papers in the pipeline, the time is ripe to move to OA**
- **All parties seem to be ready**
- **Preprinted literature was converted years ago**
- **Quality assurance is essential**
- **Journals should come on board**
- **All players must do what they are best at**

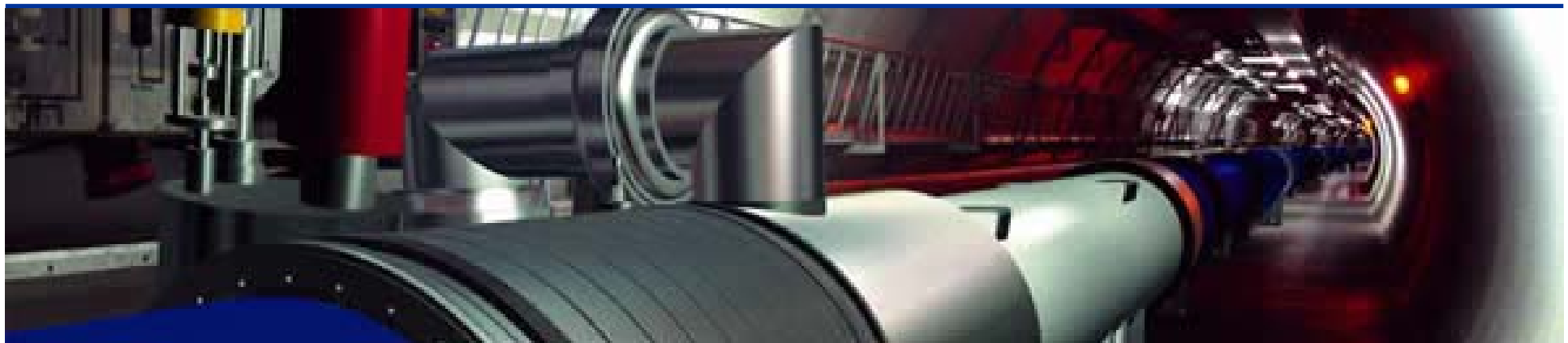
The ATLAS detector under construction in the LHC tunnel





# Open Access Task Force

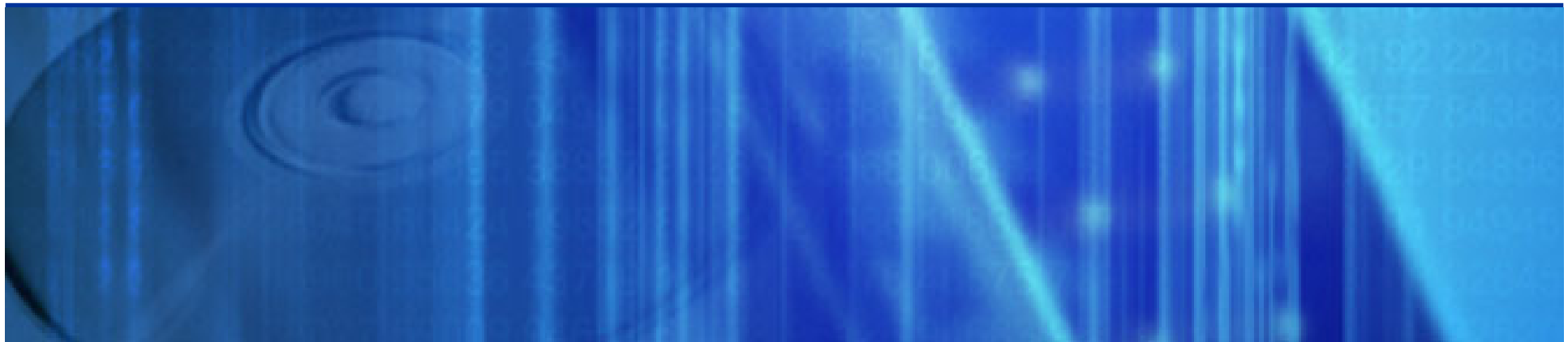
- On CERN's initiative [a tripartite colloquium](#) was organised last year, gathering together authors, funding agencies and publishers
- A Task Force was established to consider sustainable business models for OA Publishing for existing and new journals in particle physics, and focused on a sponsoring model to ensure the transition from the present situation
- The results were published in June 2006 as "[Report of the Task Force on Open Access Publishing in Particle Physics](#)"





# Conclusions of the Task Force

- Sponsoring all OA-ready journals at “list-price” would cost 5 – 6 M€/year
- Minimum budget to start a full-size OA exercise: 3 M€/year
- May seem a lot, but compare it to traditional journal subscriptions integrated over all particle physics institutes:
  - One title only: i.e.  
NIM, A+B:  $16,000\text{€}/\text{year} \times 300 \text{ LHC institutes} = 4.8\text{M } \text{€}/\text{year}!$
  - Simultaneous reduction in subscription costs
- Propose a “Sponsoring Consortium for Open Access Publishing in Particle Physics” (SCOAP<sup>3</sup>)





# Transition – no abrupt changes

- The Task Force tentatively foresees a 3-year transition period
- Publishing costs should gradually be considered as part of research costs
- Allow time for authors to adapt
- Allow time for more publishers to join
- Allow time for funding agencies to adapt; temporary support from libraries converting subscriptions to sponsorship is needed
- Contractual agreement to be established between participating publishers and the consortium to avoid double costs.
- In the end, funding agencies will be fully responsible for financing peer-reviewed publication
- Underline the potential win-win situation for all players





## From the press

- [CERN's plan to convert particle physics journals to OA](#)  
*“Note the key discovery that makes the CERN plan feasible ... the actual costs of peer review and publication are lower than the prices we currently pay for access through subscriptions.”* Open Access News, 23<sup>rd</sup> August
- [Particle Physicists Want to Expand Open Access](#)  
*“Particle physicists have come up with a novel way to promote free, immediate access to journal articles.”* Science, 1<sup>st</sup> September
- [Coalition Works to Secure Open Access to Published Research](#)  
*“That kind of coalition could be duplicated in other fields that don't have their own CERN.”* Peter Suber, director of the Open Access Project at Public Knowledge, Chronicle of Higher Education, 22<sup>nd</sup> September







# Summary

- A significant fraction of key particle physics journals is ready for a rapid transition to Open Access under a consortium-funded sponsoring model. Publishers will soon be invited to bid.
- Initial budget requirements have been identified
- Publication costs should be considered a part of research costs. Research administrators should budget for the costs of publication when research budgets are drawn up
- A sponsoring consortium will be established, it will be the negotiation partner with each publisher. Raising funds and sorting out the nitty-gritty details remain to be done
- The LHC start-up in 2007 is a unique opportunity for particle physics, however, the transition model could also be applied in other fields of science

**Publishers are still needed to ensure quality of publications**

**Libraries should remain the record keepers**

**Funding agencies have the key to a concerted move to OA**

