

Colloquium on Open Access (OA) Publishing in Particle Physics
7-8 December 2005
CERN

Minutes
by Joanne Yeomans, CERN Library
on behalf of the Organising Committee

First day : AB Auditorium (6-2-024)

Presentations' Chair : Ken Peach - John Adams Institute for Accelerator Science

Robert Aymar - Director General of CERN

Welcome and introduction

Aymar welcomed the participants to the meeting. He described CERN's long-standing practice of making its research papers freely available and gave his full commitment to finding solutions for widening access to future research results. He stressed that the focus of the meeting should be on the practical and asked that the outcome should avoid being an agreement of principles but should be an agreement on some concrete action.

Apologies were received from stakeholders who could not be present including CNRS, BMBF, NIKHEF and MPI, but messages of strong support had been received from them.

Walter Erdelen – Assistant Director-General for Natural Sciences, UNESCO

UNESCO's approach to Open Access and public domain information

Erdelen spoke about the UNESCO commitment to support open access and open source software which would give access to new research and technology and so contribute towards bridging the digital divide. The commitment is based on the WIPO treaty of 1996. He also spoke of the importance of the WSIS in helping to bridge the knowledge divide.

Hans F. Hoffmann – CERN

Open Access in WSIS

Hoffmann put the OA movement into further context as a global movement with a short report based on CERN's participation in the World Summit on the Information Society in Tunis. He reported the worldwide support for the principles of open access and how poorer countries were able to cheaply set up their own OA journals and repositories and so participate more fully in research developments.

[presentation: [ppt](#) | [pdf](#)]

Alma Swan - Key Perspectives Ltd. UK

Open Access: what has been going on?

Swan provided a thorough overview of OA publishing – the history of CERN's interest, author support, how it is affecting the process of scholarly communication and being developed by publishers and repository managers, the evolving policies which are driving change and OA's effect on impact measures and copyright ownership.

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Andrew le Masurier - Particle Physics and Astronomy Research Council, UK

Open access publishing: a funding agency perspective

Le Masurier spoke on behalf of funding agencies and was able to report the agreement (on the 2nd December) of the RCUK policy on Open Access and the areas needing future investigation which give rise to concern for the UK funding agency. He explained the policy which is to encourage institutions to require their staff to deposit in institutional archives, to require deposition in any appropriate subject archive and also to fund the article fee for open access publishing by its researchers.

[presentation: [ppt](#) | [pdf](#)]

Martin Blume – Editor-in-Chief, American Physical Society

Open Access : what is it and can we get there from here?

Blume represented publishers' points of view and showed that although publishing companies can take steps to make their content more available (through flexible rights management), to move to full open access they must recover certain costs by some method. The subscription model is tried and tested - moving to a different model requires some cautiousness and in the meantime APS, at least, will continue to strive to improve access for all readers.

Blume stated that based on calculations of current income divided by articles published, the cost of an APS article was \$1900. His key message was that scientific publication is not a theoretical exercise but an experimental art therefore if we want to see if a new model works, we have to try it out.

[presentation: [pdf](#)]

Ruth Jones - British Library

The challenges of digital preservation to support research in the digital age

Jones stunned the audience with her first statement: if we are discussing the difference between OA journals and traditional journals then with regards archiving we can say they are equal: the archiving of both is terrible! National Libraries are at the forefront of long-term (centuries-long) archiving and she detailed some of the British Library's activities in this area. Although the idea of OA which allows multiple copies to be stored around the world is a good step forward, it is not a solution for very long-term access. With publishing now becoming completely electronic, it is the libraries that are still charged with their traditional task of archiving the materials and there continues to be a huge cost for doing this.

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Rudiger Voss – CERN

CERN Open Access publishing in the LHC era : a physicist's view

Voss described how particle physicists rely primarily on preprints, with a small number of key journals providing version-of-record archives, some of which cannot be afforded by all institutions. He listed the OA journal options for HEP and explained why long project lifetimes meant that this moment prior to the LHC start-up was the crucial time for making a change. Preparations for the first instrumentation papers are already considering the OA options very seriously. He identified the key aspects of publishing that need to be retained, such as peer-review, but also identified areas where change is

required to move forward, especially the local customs and habits connecting publishing and career progression.

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Round Table

Chair: Matthew Cockerill - BioMed Central

Each panellist presented in five minutes their concrete ideas for a transition towards OA publication. This was followed by an open discussion.

Guido Altarelli - CERN [presentation: [doc](#) | [pdf](#)].

- Invest in continuing R&D on a prototype journal to find solutions using electronic tools to achieve an OA journal with peer-review, high impact and at reasonable cost.
- Create a pool of journals which use the author/institute model and an association of institutions and sponsoring agencies which can provide practical support to these journals.
- As a minimum:
 - encourage authors to publish in these
 - guarantee the fees centrally and automatically
 - larger institutions negotiate an annual sum in advance.
- Gradually transfer all journal subscription fees to authoring fees but in the meantime prepare to pay more.

Daniele Amati – SISSA, Italy.

- Publishers can reduce costs by eliminating paper.
- The sponsor model is not necessarily sustainable.
- All papers are already free in arXiv so why not reject journals altogether?

Marc Brodsky – Executive Director and CEO, American Institute of Physics

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- Keep a close association with arXiv.
- Journals need a 5-7 year planning period.
- Make a minimum amount of change and use existing OA and low-cost journals to experiment with the options.
- Discourage authors from submitting to expensive journals and educate the community about the costs.

Fred Friend – Director of Scholarly Communications, UCL, and JISC Consultant, UK.

- Universities and funding agencies should make a policy commitment in favour of OA and the authors will follow.
- Find financial support for publication charges.
- Associate publication charges with research budgets. This will make the model sustainable in a way that the current subscription model is not.

Hans-Ake Gustafsson - University of Lund (ALICE experiment, CERN)

- Institutions need a publication policy to guide their authors.

Ken Lillywhite – Institute Of Physics Publishing, Business Director

- Retain toll-access for a short period of time, for example 30 days after the day of publication, before allowing free access to all papers.

Claus Montonen – Chair of Publications & Scientific Communications, European Physical Society

- Use the arXiv or other repositories to provide a one-stop-shop for particle physics.
- Build and improve these repositories using publishers to provide the refereeing and to bundle the articles into subject packages.
- Increase repository content with datasets and multimedia.
- Use blog and wiki technology to develop additional review systems.
- Create a “credit” journal where graduates can publish to gain tokens for career progression.
- Larger publishers should move out of the field as the profits existing in the peer-review/bundling role will not be sufficient.
- Stop subscribing to expensive journals.

John Poole – Chairman of the JACoW Steering Committee (Joint Accelerator Conferences Website), CERN.

- The JACoW system is used by the international accelerator community for publishing OA conference proceedings. It is offered as an option for such publication in other fields.

Michael Praszalowicz – Editorial Committee, Acta Physica Polonica, B, Poland.

- Acta Physica Polonica is an OA journal which runs successfully relying on the sales of printed copies and by sponsorship. It is proposed as an option for inclusion in future plans.

Fridger Schrempp – DESY, Germany [presentation: [pdf](#)]

- Encourage institutional repositories.
- Need several OA journal options with transparent finance scheme.
- OA options must be considered for career progression.
- Suggest indirect page charges based on the size of the institution.

Steinar Stapnes - University of Oslo (ATLAS experiment, CERN)

- Identify where the costs will come from because there is not yet an allowance included in funding agency budgets.
- Policy is needed both at CERN and at collaborating institutions in order to convince physicists.
- A high quality and stable journal is all that’s required. Journals should be ranked – good/bad/medium.

Jan Velterop – Springer Science+Business Media GmbH

- Publishers need to change from sales to service provision.
- Comparing the costs of OA publishing with current library budgets is the wrong way to think about it. The costs should relate to the costs of research.
- Libraries are not the natural customers for OA but can and should help make the transition.
- To support the developing world, a shared fund will be required.

Open discussion (summary)

Ultimately the ideal system for particle physics might be based on one or a number of repositories. These could contain the articles themselves (in a final version), areas for informal discussion, raw data, quality stamps (based on peer-review results) and online conference areas.

However, a transition to that situation is needed in the immediate future (during 2006) and that transition might be smooth or it might be a revolution. Even a smooth transition is going to require some revolutionary changes.

One such revolution might involve immediately stopping subscriptions to high-cost journals and instead supporting only those that are OA or at least low-cost. The possibility of starting new journals, or a journal just for LHC results was raised as a way to drive change.

Options for different models were discussed, perhaps combining sponsor/institutional payments with author fees and with subscription prices for print. Certainly the integrity of the peer-review system needs to be independently monitored and a few journals need to move together to offer choice and alternative systems.

If CERN, DESY, CNRS and INFN could guarantee funds for at least a two year experiment then evidence could be collected.

Author fees were seen as a barrier which might prevent authors supporting the move. They will need strong encouragement in the form of education and policy support and need to have journal options that can give high impact factors for their career progression.

It was suggested that some kind of sustainable, possibly sponsor-based model in which peer-review was the primary service ought to be made available across several titles and that support should then be requested from institutions and funders. A proposal was made to nominate a task-force, who would report within 3 months the next steps required to perform such a viable experiment which should involve only those publishers committed to make the experiment work.

Discussions continued freely over dinner in the Globe of Science and Innovation.

End of Day One

Second day : Conference Room (60-6-002)
Chairman: Maximilian Metzger - CERN

Leo Waaijers - SURF-DARE, The Netherlands [presentation: [ppt](#) | [pdf](#)]

In an introductory speech, Waaijers gave an overview of the key parts of the publication process and questioned which of them were needed in the future, which could, and could not, be dealt with within CERN and suggested that for the latter CERN should put out a 'call for tender'. Identifying these issues helped to set the aims into a farther-reaching context.

Fred Friend – Director of Scholarly Communications, UCL, and JISC Consultant, UK :
[presentation: [ppt](#) | [pdf](#)]

Friend presented an overview of the previous day's discussion: the accepted situation, the issues which need to be considered in possible solutions, and therefore the areas that needed further examination in the following discussion. These included:

- Funds [assuming a sponsor model] – how much can be found, where from, which journals should be supported?
- Is there a need for more choice of OA journals in particle physics? How to create this choice? Convert existing journals, or start-up totally new?
- How to encourage authors – policy, education, mandate, journal cancellation?
- Who are the important partners not present today? What/who should be the co-ordinating structure?
- For the detailed investigative work that is needed – who should perform it, how, when?
- Should there be a press statement from this meeting?

General discussion

The development of the repository is an interesting idea but one in which elements of the current publishing system, such as peer-review and prestige from the journal's impact factor, can not yet be delivered. Possible alternatives were discussed but none were considered achievable in the short time-scale necessary for the publication of the first LHC results.

Ultimately it would be useful if the 'branding' and quality control could move up a level from the individual journal to the publisher/learned society and if articles could be grouped in topics rather than based on the publisher who gave the quality stamp.

Initially, however, the community cannot be too radical as particle physicists must work in institutions where comparison measures must be available to justify their work alongside other fields.

A constant flow of funds must be identified – first for the transition and then for long term sustainability. Possibly the EU and governments could be asked to help with transition funds.

New journals might be able to more cheaply perform peer-review, technical editing, dissemination and web site development but they are more at risk when it comes to guaranteeing a high impact factor and long-term tradition.

The sponsor model seems a good option for particle physics but whether it will scale to bigger journals is not clear.

However, what is clear is that if authors have to pay directly then they will prefer to choose a (free-to-them) non-OA option. Payment therefore initially needs to be transparent to them until the system is more stable.

Previous discouraging results for OA publishers should not be taken as an indication for future measure of success as the community is only now moving towards concerted support which could mark a new era.

Conclusions: the particle physics journal options and their models need some investigation and perhaps adaptation in light of the discussion which took place. These options should then be proposed to the wider particle physics community and a measure made of the likely support. Individuals can help to spread the word and encouragement amongst the community, within their own establishment and also among those not present. CERN is willing to encourage its authors to use these journals but it needs others to join. A working group can perform the initial investigation and CERN can co-ordinate requests for financial support.

Summary : Ken Peach - John Adams Institute for Accelerator Science [presentation: [ppt](#) | [pdf](#)]

Peach summarised the key points and encouraged action so that particle physics maintains its reputation of innovation and leadership. He identified the key questions:

1. How to support current OA journals?
2. How to convert journals to OA?
3. How to convince authors to commit?

He suggested that the large laboratories were in the best position to drive change and therefore CERN should continue its central role. Two necessary steps were now to establish a working group for reporting within 3 months and to table a “position paper” to ICFA for wider community action.

Working group

Suggestions for members of the working group/task force were put forward. CERN will form from these suggestions a coherent and representative group with a clear mandate for feeding back to the group.

Closing : Robert Aymar, CERN Director General.

Aymar thanked the participants for their enthusiastic contributions to the meeting. Action in this area would benefit the whole particle physics community. The prevailing publishing system needs to continue for a transition period but the final equilibrium state might be different. The system might ultimately be supported by institutes, governments and laboratories but at the moment we need something in-between; sponsorship by large laboratories is the only way forward for a smooth transition but also education in the community so that CERN is not moving alone. We must be prudent, keep the diversity, but see how we can move forward. He proposed that contact be made with all European institutions and laboratories in order to ask for sponsorship support for the goals defined by the working group. Although we can start in Europe, contact should be made with colleagues in other continents perhaps starting by reporting progress at the next ICFA meeting due to take place at CERN.

The participants requested the issue of a press release in order to be able to report the meeting in their own countries and communities.

Comments on these minutes and corrections to joanne.yeomans@cern.ch