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Open-access deal for particle physics

Consortium brokers agreement with 12 journals.

Richard Van Noorden

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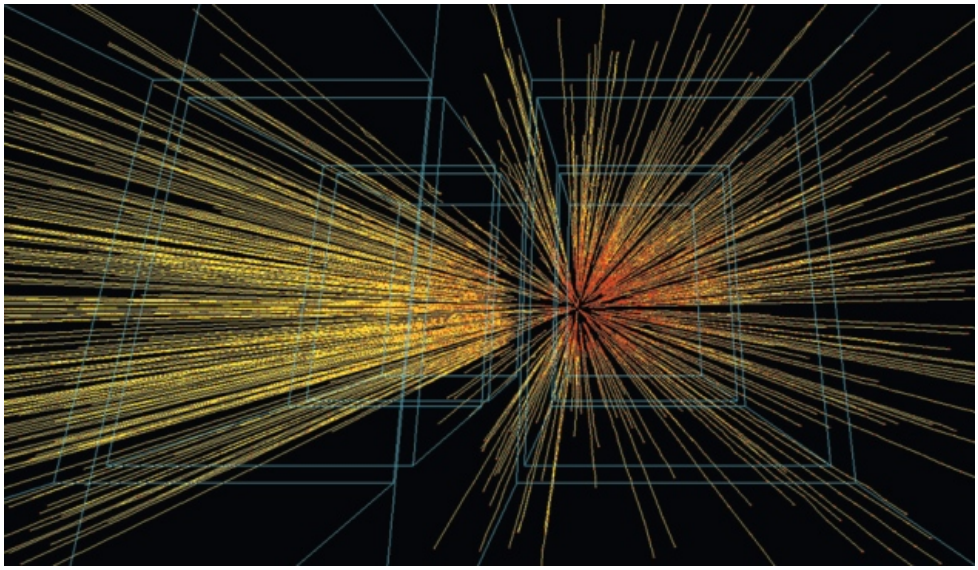

CERN

Freeview: experimental results from high-energy physics, such as this fireball of quarks and gluons, should soon be published in open-access papers.

Print

The entire field of particle physics is set to switch to open-access publishing, a milestone in the push to make research results freely available to readers.

Particle physics is already a paragon of openness, with most papers posted on the preprint server arXiv. But peer-reviewed versions are still published in subscription journals, and publishers and research consortia at facilities such as the Large Hadron Collider (LHC) have previously had to strike piecemeal deals to free up a few hundred articles.

After six years of negotiation, the Sponsoring Consortium for Open Access Publishing in Particle Physics (SCOAP^3) is now close to ensuring that nearly all particle-physics articles — about 7,000 publications last year — are made immediately free on journal websites. Upfront payments from libraries will fund the access.

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So that individual research groups do not need to arrange open publication of their work, the consortium has negotiated contracts with 12 journals (see 'Particles on tap') that would make 90% of high-energy-physics papers published from 2014 onwards free to read, says Salvatore Mele, who leads the project from CERN, Europe's high-energy physics laboratory near Geneva, Switzerland, and home of the LHC. According to details announced on 21 September, six of the journals will switch their business models entirely from subscription to open access. It is "the most systematic attempt to convert all the journals in a given field to open access", says Peter Suber, a philosopher at Earlham College in Richmond, Indiana, and a proponent of open access.

Table

Particles on tap

Twelve journals will publish all their articles in high-energy physics as open access from 2014, in return for a yearly fee. Together they published 90% of last year's articles in the field.

Publisher	Journal	No. of high-energy-physics articles in 2011	Charge per article
American Physical Society	*Physical Review C*	107	US$1,900
American Physical Society	*Physical Review D*	2,989	US$1,900
Elsevier	*Physics Letters B*	1,010	US$1,800
Elsevier	*Nuclear Physics B*	284	US$2,000
Hindawi	*Advances in High Energy Physics*	28	US$1,000
Institute of Physics/Chinese Academy of Sciences	*Chinese Physics C*	16	£1,000 (US$1,600)
Institute of Physics/DPG	*New Journal of Physics*	20	£1,200 (US$1,950)
Institute of Physics/SISSA	*Journal of Cosmology and Astroparticle Physics*	138	£1,400 (US$2,270)
Jagiellonian University	*Acta Physica Polonica B*	23	€500 (US$650)
Oxford University Press/Physical Society of Japan	*Progress of Theoretical Physics*	46	£1,000 (US$1,600)
Springer/Società Italiana di Fisica	*European Physical Journal C*	326	€1,500 (US$1,940)
Springer/SISSA	*Journal of High Energy Physics*	1,652	€1,200 (US$1,550)

Source: http://scoap3.org/news/news95.html

The consortium invited journals to bid for three-year open-access publishing contracts, and ranked them by an undisclosed algorithm that weighed their fees against their impact factors and the licences and delivery formats they offer. Under the deal, the journals will receive an average of €1,200 (US$1,550) per paper. *Physical Review D*, the journal that publishes most papers in the field, negotiated a fee of US$1,900 per article "on the principle that we should maintain our revenue", says Joe Serene, treasurer and publisher at the American Physical Society, which owns the journal. But the society's prestigious *Physical Review Letters* missed out because its bid was too high, says Serene (the journal currently charges authors $2,700 for individual open-access articles). CERN and SCOAP^3 will continue to negotiate individual open-access agreements with journals not included in the deal, and more could join when the contract is renegotiated in 2016.

Mele says that the goal of SCOAP^3 is to switch the discipline's journals to open access without researchers noticing any effect on their grant funding or on the way they publish papers. The consortium will pay the contracts from an annual budget of €10 million, which is funded not by authors or research grants, but by pledges from more than a thousand libraries, funding agencies and research consortia across the world. In effect, existing journal subscription fees are being repurposed to provide the open-access funds.

"It is the most systematic attempt to convert all the

Before any contracts can be signed, however, publishers must reduce the price of their subscription packages to offset the income from SCOAP^3 — a complex calculation to ensure

journals in a given field to open access."

that libraries don't pay twice for the same content. Then SCOAP^3 must collect its pledges — not a foregone conclusion, as some libraries may be tempted to renege, figuring that their institution won't lose access to the free papers anyway.

Mele hopes that success could trigger a domino effect in fields such as astronomy and astrophysics. "I personally believe that once this is demonstrated to work, some variations, fine-tuning and adaptation of the idea will emerge," he says.

But Serene and others caution that SCOAP^3 may be hard to replicate. It has unique advantages in that most high-energy-physics papers are published in just a few journals, and that the field can be driven and coordinated by one central organization, CERN.

Suber notes the stark contrast between the quiet brokering of SCOAP^3 and the battles playing out over mandates for open-access publication by research funders such as foundations and government agencies (see *Nature* **486,** 302–303; 2012). "I call it the peaceful revolution," he says.

Nature **489,** 486 (27 September 2012) doi:10.1038/489486a

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The whole world of science is undergoing a big change in the two major aspects:
Its becoming more public and accessible for the general public.
Magazines and publications are getting united so they have more strength and more audience
and they are better off economically. This is exactly what we see here. Physics is only part of this whole ongoing process.
I'm sure they will succeed.
Unifying = more content = more quality. The magazine I own which is regrading running machines was a merge of two treadmill companies.

andy forseter • 2013-03-07 01:02 PM
That's awesome decision. From now on physics fans can browse the journal websites and just read all the interesting stuff. As an example, I myself love physics, but don't have the time to visit or buy such articles (work/home /kids/refrigerator blog ...). When the articles will be available I can just dedicate some time after works to read them.... Really happy to learn about it &#8211 thanks!

Pastor Jean Smith • 2013-01-31 01:30 PM
I do agree that the time to convert to Gold OA publishing affordably and sustainably will be when Green OA self-archiving in all disciplines worldwide has reached 100%.
Paster and Dr. Jean Smith
Emmanuel Baptist Church

Marcia Almeida • 2012-11-22 11:31 AM
I found this very good initiative to unify the magazines, think about it just a way with petty rivalries, and automatically will add more content
avioes a venda

Stevan Harnad • 2012-09-24 10:58 PM

SCOAP3: UNNECESSARY, UNSCALABLE AND PROBABLY UNSUSTAINABLE

Just a few more pieces of information to put the SCOAP3 initiative into context:

1. As noted, in high energy physics (HEP) most papers were already being made open access (OA) through author self-archiving (Green OA). That includes the authors' peer-reviewed versions, and has been going on since 1991 .
2. So whatever extra money is now being paid to publishers by the SCOAP3 consortium of libraries in exchange for making the publishers' version OA on the publishers' site (Gold OA), that money is certainly not being paid for providing access that was previously lacking in HEP.
3. The money for this (hybrid) Gold OA is being paid by the HEP SCOAP3 consortium of libraries from consortial library budgets &#8212 the same libraries that are also paying the same publishers the usual annual subscription fees in all fields (except if the libraries cover only HEP research).
4. So this sounds like a double-paid subsidy for something that HEP already had, done in the name of OA and perhaps also for the sake of consortial subscription price negotiations. (In other words, more for ideological reasons than research needs, or even economics.)

In my opinion, the HEP community could have done worldwide OA a greater service if it had thrown its weight behind global efforts to mandate in all other disciplines and institutions the Green OA self-archiving that HEP physicists have already been doing (unmandated) for over two decades, rather than rushing into a pre-emptive double-payment

agreement for a Gold OA that HEP does not need, in a local arrangement that is premature, obviously not scaleable, and probably not sustainable .

The time to convert to Gold OA publishing affordably and sustainably will be when Green OA self-archiving in all disciplines worldwide has reached 100% (as it has in HEP): Then no hybrid deals are needed, as libraries can cancel all subscriptions, journals can downsize to just providing peer review, and the true residual costs can be paid directly, per paper reviewed out of a fraction of the institutional subscription cancelation savings &#8212 rather than as now, in the form of SCOAP3's unscalable blanket consortial institutional "membership" fee.

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