

SCOAP3

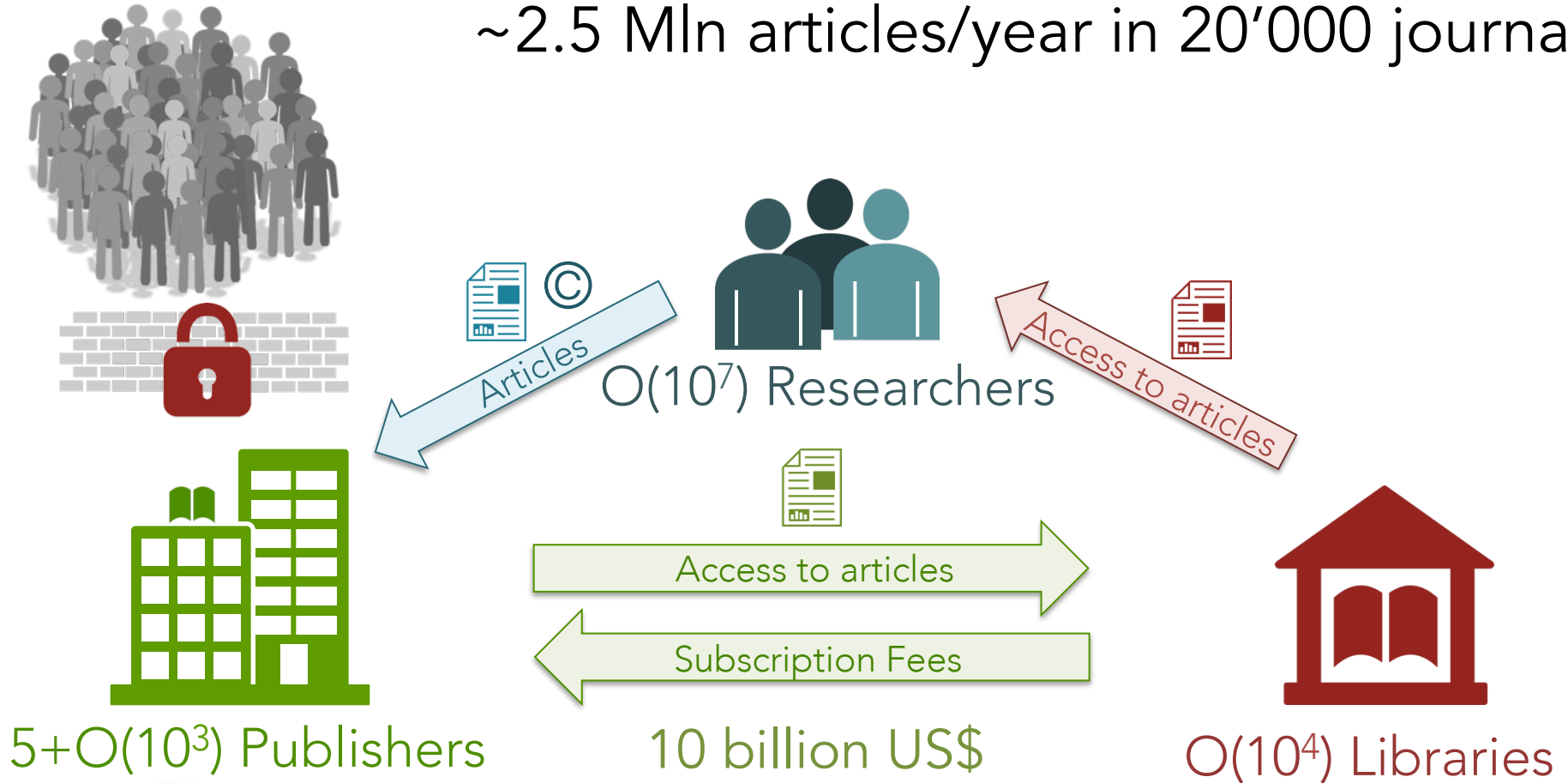
Sponsoring Consortium Open Access Publishing Particle Physics

Accomplishments and plans



Scientific Publishing Subscription Model

~2.5 Mln articles/year in 20'000 journals



'I set up a perpetual financing machine through advance subscriptions as well as the profits on the sales themselves. It is a cash generator twice over ... If Pergamon could win the trust of scientists it could establish the standard journal in each specialization, and that would give it a series of publishing monopolies ... scientists are not generally as price-conscious as other professionals, mainly because they are not spending their own money.'

Robert Maxwell ~1953, quoted in
D. Carrigan, *Journal of Scholarly Publishing* 27 (1996) 218

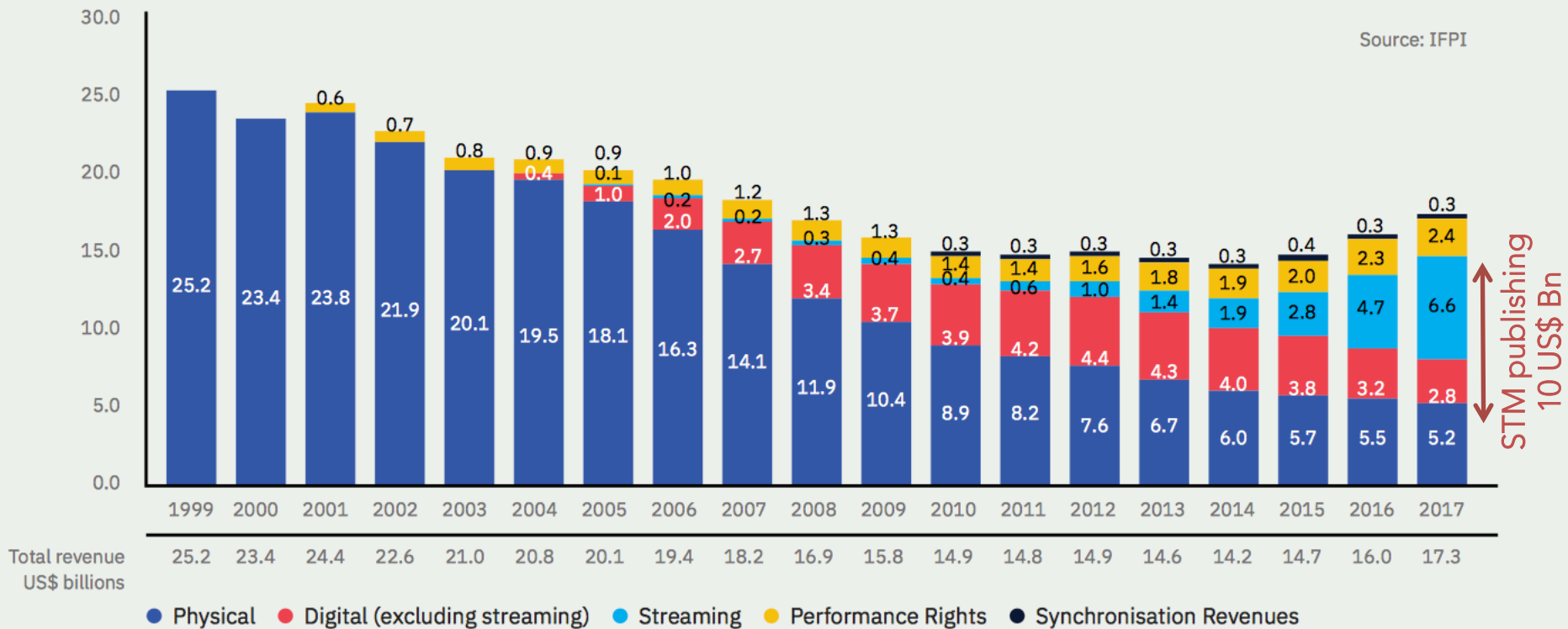
Size of the industry:
https://www.stm-assoc.org/2018_10_04_STM_Report_2018.pdf

Global Music Report 2018

ANNUAL STATE OF THE INDUSTRY

GLOBAL RECORDED MUSIC INDUSTRY REVENUES 1999-2017 (US\$ BILLIONS)

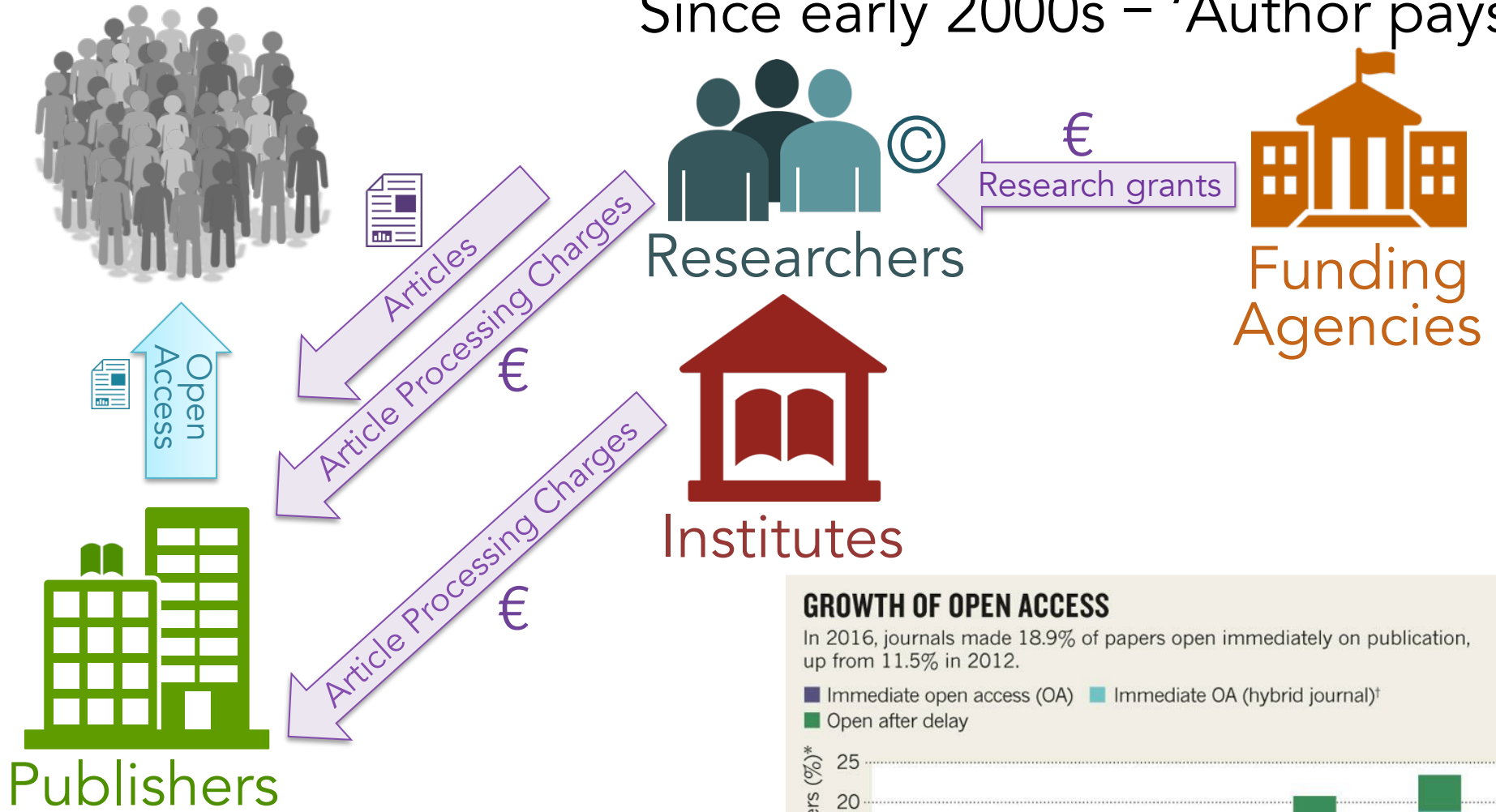
Source: IFPI



Scientific journal publishing revenues > music streaming + digital sales

(most common) Open Access publishing model

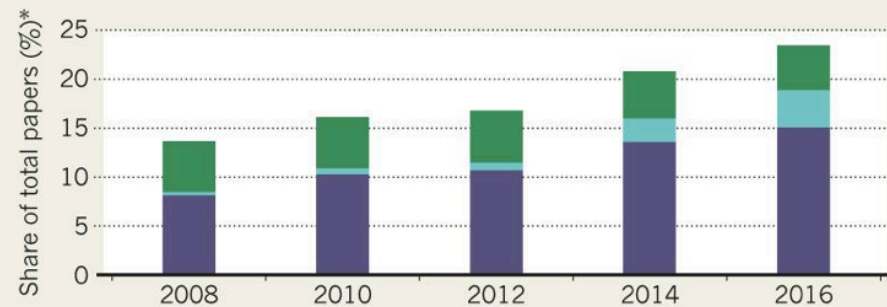
Since early 2000s – 'Author pays'



GROWTH OF OPEN ACCESS

In 2016, journals made 18.9% of papers open immediately on publication, up from 11.5% in 2012.

- Immediate open access (OA)
- Immediate OA (hybrid journal)†
- Open after delay



*From Scopus database. †Subscription journals with OA option.

©nature



Council of the European Union

The transition towards an Open Science system
- Council conclusions (adopted on 27/05/2016)

AGREES to further promote the mainstreaming of open access to scientific publications by continuing to support a transition to immediate open access as the default by 2020, using the various models possible and in a cost-effective way, without embargoes or with as short as possible embargoes, and without financial and legal barriers, taking into account the diversity in research systems and disciplines, and that open access to scientific publications should be achieved in full observance of the principle that no researcher should be prevented from publishing; INVITES the Commission, Member States and relevant stakeholders, including research funding organisations, to catalyse this transition

Scientific publishing is a rip-off. We fund the research - it should be free

George Monbiot

Those who take on the global industry that traps research behind paywalls are heroes, not thieves

International edition
The Guardian

Thu 13 Sep 2018 06.00 BST

No deal, no review

#nodealnoreview

STATEMENT SIGN FAQ REQUESTS NEWS BLOG CONTACT

NO TO ELSEVIER'S UNFAIR DEALS

Since November 2016, more than 2700 members of the academic community in Finland have signed tiedonhinta.fi online petition which called for fair pricing for academic journal subscriptions and increased open access in the ongoing negotiation with international publishers. More than two thirds of those who signed the petition were prepared to abstain from editorial and reviewer duties in journals whose publishers are unwilling to meet the demands of the Finnish negotiators. It's time to stand by that commitment: no deal, no editing and reviews.

CONFIRM/JOIN THE BOYCOTT

The Economist

Topics

Current edition

More

Scientific publishing

European countries demand that publicly funded research be free

The S-Plan diet

Print edition | Science and technology >

Sep 15th 2018



MANY scientists have championed the idea that publicly funded research should be available to all and not locked away in pricey journals. Although this "open access" ethos has become more

nature

NEWS · 19 JULY 2018

Dutch publishing giant cuts off researchers in Germany and Sweden

Negotiations with Elsevier have stalled over open-access deals.

Elsevier last week stopped thousands of scientists in Germany from reading its recent journal articles, as a row escalates over the cost of a nationwide open-access agreement.



ICU

FOLLOW US

New international investigation tackles 'fake science' and its poisonous effects

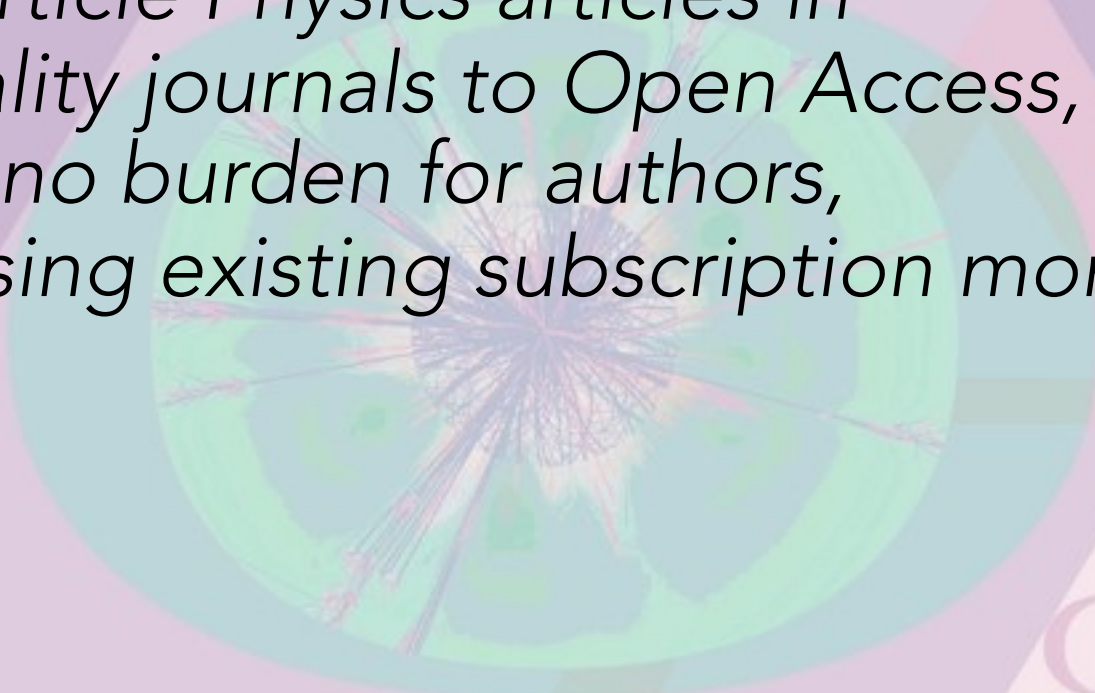
Hundreds of thousands of scientists worldwide have published studies in self-described scientific journals that don't provide traditional checks for accuracy and quality, according to a new journalistic investigation.

Dozens of reporters from media outlets in Europe, Asia and the United States have analysed **175,000 scientific articles** published by five of the world's largest pseudo-scientific platforms including India-based Omics Publishing Group and the Turkey-based World Academy of Science, Engineering and Technology, or Waset. In addition to failing to perform peer or editorial committee reviews of articles, the companies charge to publish articles, accept papers by employees of pharmaceutical and other companies as well as by climate-change skeptics promoting questionable theories.

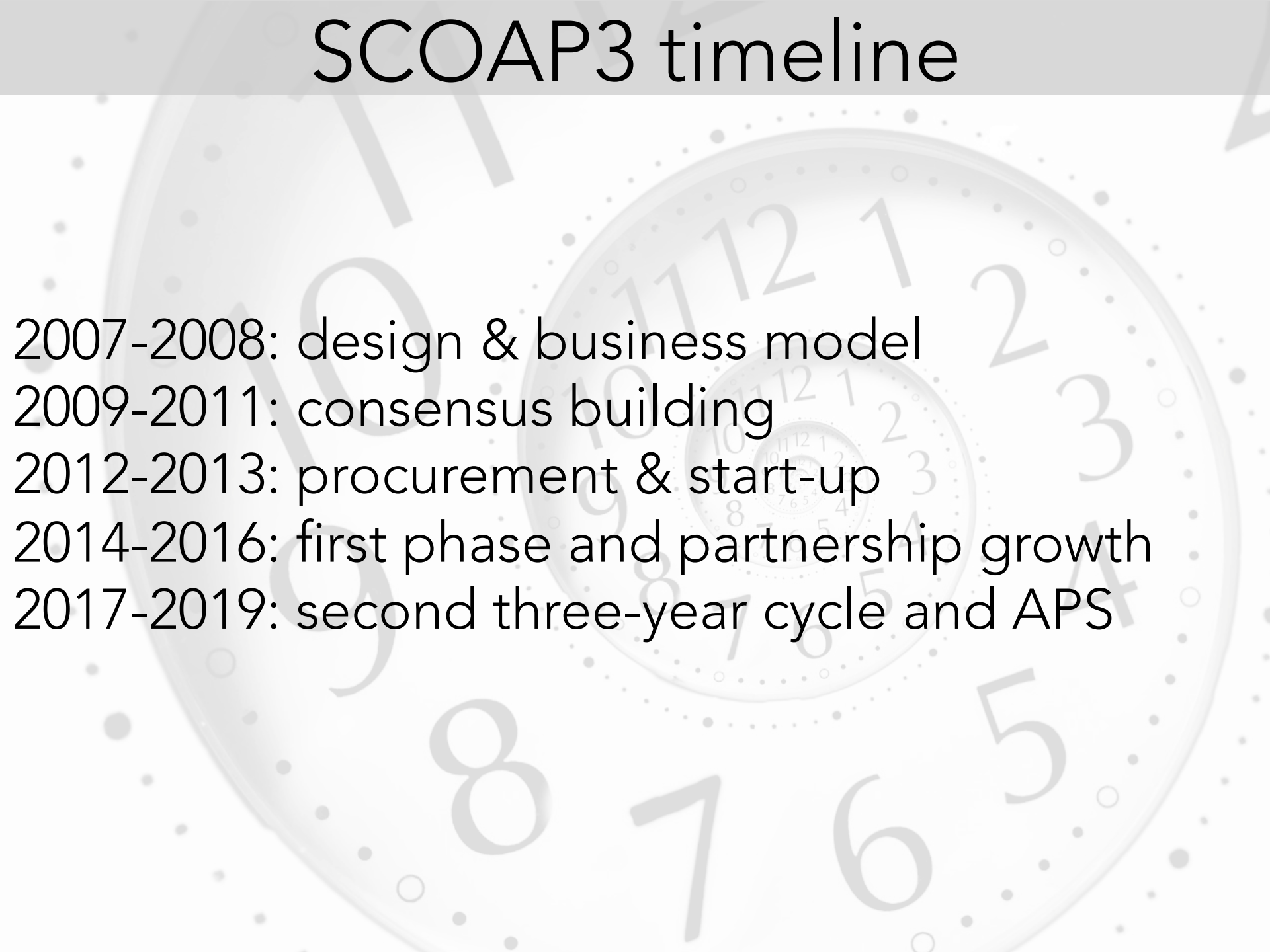
SCOAP3.org

Sponsoring Consortium for Open Access Publishing in Particle Physics

*A global consortium to convert
Particle Physics articles in
high-quality journals to Open Access,
at no burden for authors,
mostly re-using existing subscription money*

A large, semi-transparent green circular graphic in the background contains a complex particle physics detector visualization, likely a bubble chamber or cloud chamber, showing numerous tracks of ionizing particles originating from a central point and spreading outwards. The background of the slide is a light purple color with large, faint geometric shapes: a large triangle and a smaller triangle in the bottom right corner containing a stylized 'O' logo.

SCOAP3 timeline

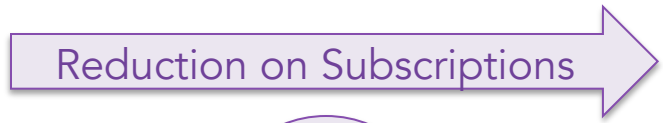
- 
- 2007-2008: design & business model
 - 2009-2011: consensus building
 - 2012-2013: procurement & start-up
 - 2014-2016: first phase and partnership growth
 - 2017-2019: second three-year cycle and APS

SCOAP³ (since 2014)

10 MCHF for 7'000 HEP OA articles/year



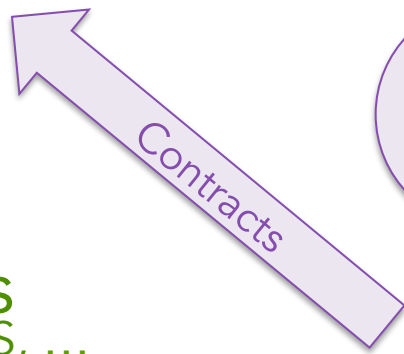
50K Researchers



3'000 Libraries
44 countries



12 Funding Agencies



for the benefit of SCOAP³



7 Publishers

Elsevier, Springer, APS, ...



Accomplishments of SCOAP3

- Articles & journals
- Authors
- Multilateral HEP-style solution
- Value for money
- Downloads, dissemination
- Open Access context













Accomplishments of SCOAP3

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SCOAP3 journals – 90% of High Energy Physics articles since 2018

Publisher	Journal		2014-2016	2017-2019(*)
 2018-2019 only	Physical Review C	Partly OA	-	~200
	Physical Review D	Partly OA	-	~4,000
	Physical Review Letters	Partly OA	-	~550
	Nuclear Physics B	Full flip	1,008	~900
	Physics Letters B	Full flip	2,654	~2,700
	Advances in HEP	Partly covered	512	~250
 	Chinese Physics C	Partly OA	91	~250
	J. Cosmology & Astropart. Phys.	Partly OA	654	-
	New Journal of Physics	Partly covered	25	-
	Acta Physica Polonica B	Partly covered	56	~50
 	Progress in Theor. & Exp. Phys.	Partly covered	255	~250
 	European Physical Journal C	Full flip	1,830	~3,000
	Journal of HEP	Full flip	6,283	~6,300
Total:			13,368	~18,450

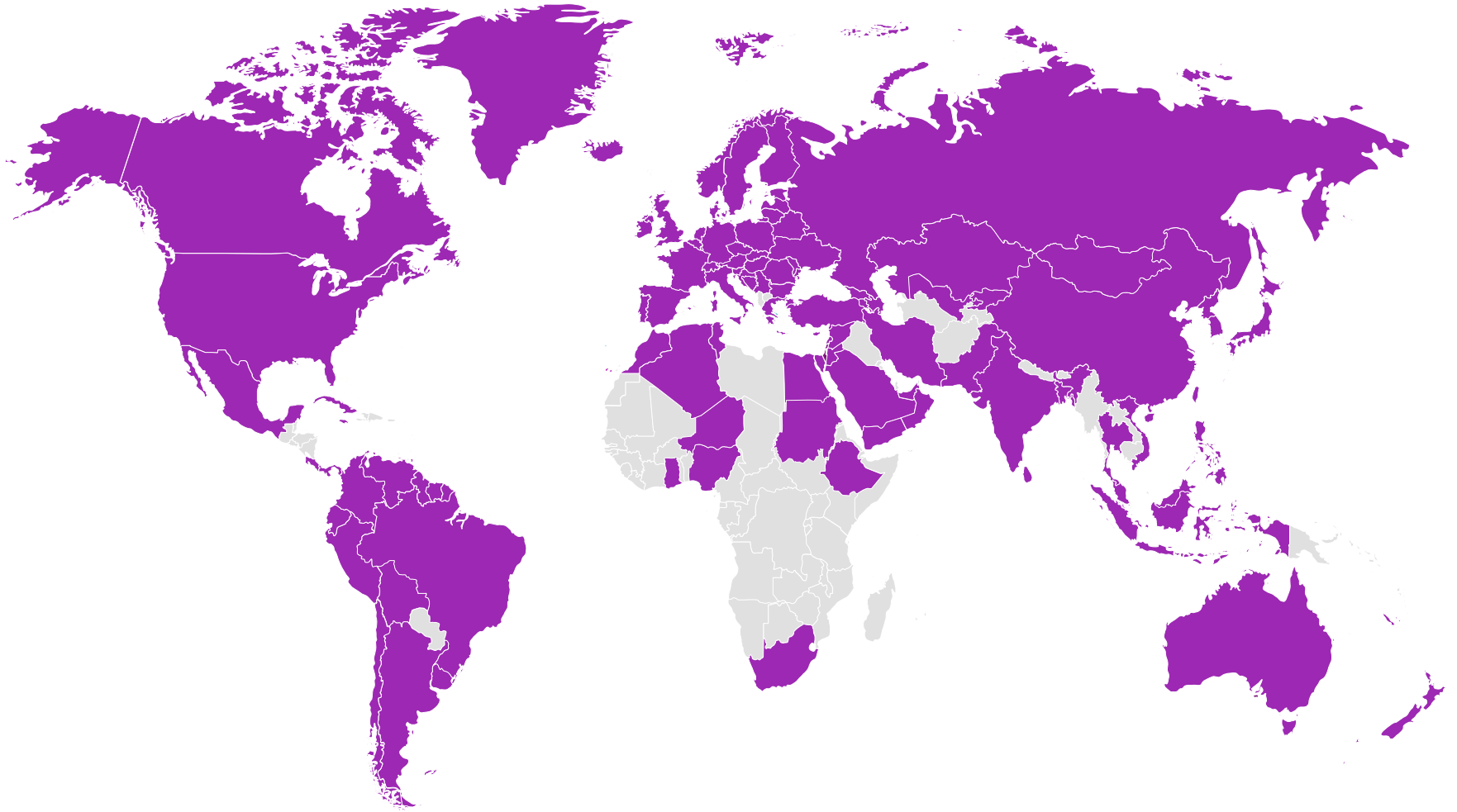
(*) 2019 article numbers are estimates from recent growth rates

Accomplishments of SCOAP3

- Articles & journals
- **Authors**
- Multilateral HEP-style solution
- Value for money
- Downloads, dissemination
- Open Access context



All HEP authors benefit from SCOAP³

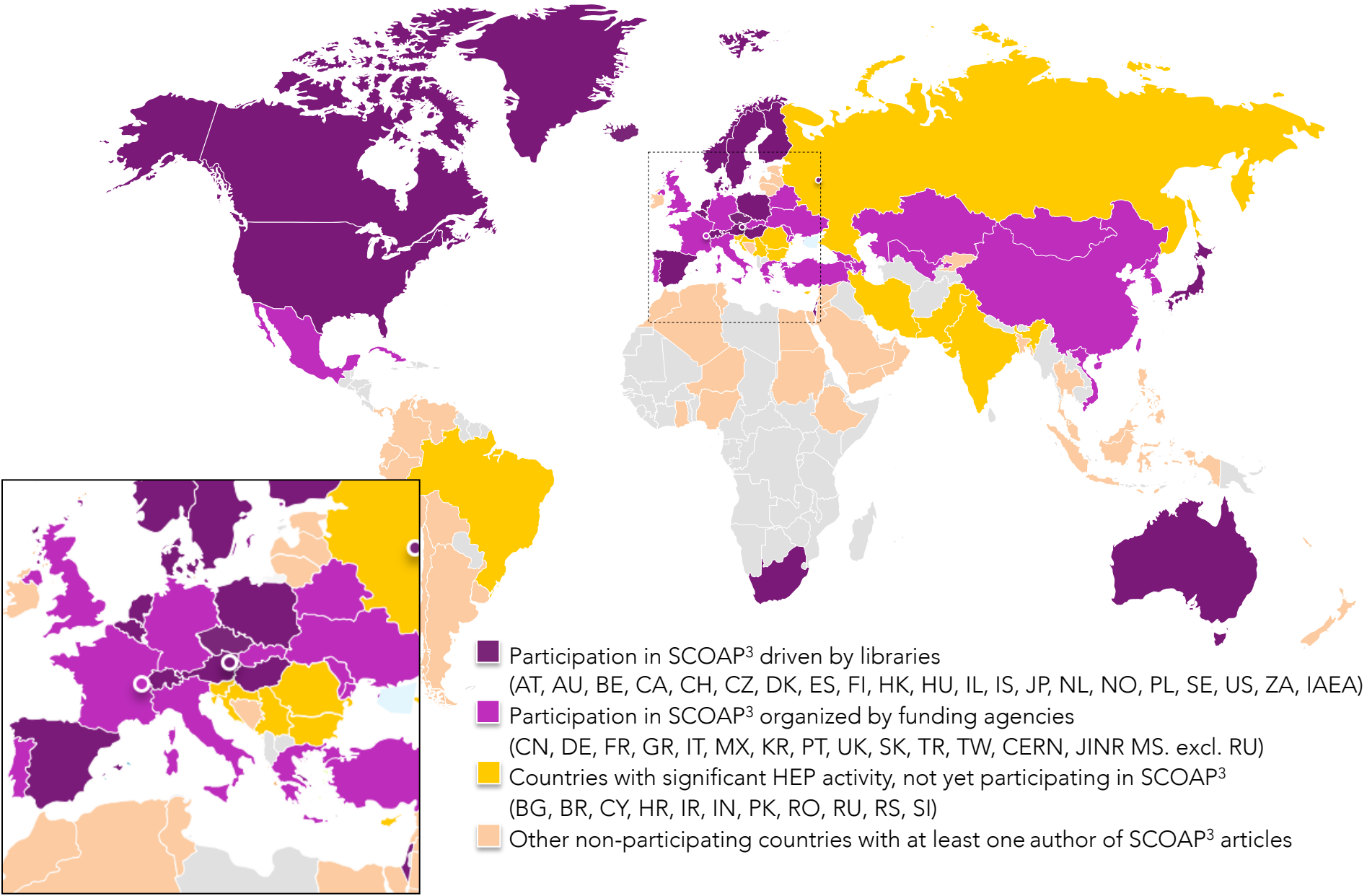


Accomplishments of SCOAP3

- Articles & journals
- Authors
- **Multilateral HEP-style solution**
- Value for money
- Downloads, dissemination
- Open Access context



SCOAP³ partnership today, 44 countries, 3 IGO



Achievements of SCOAP3

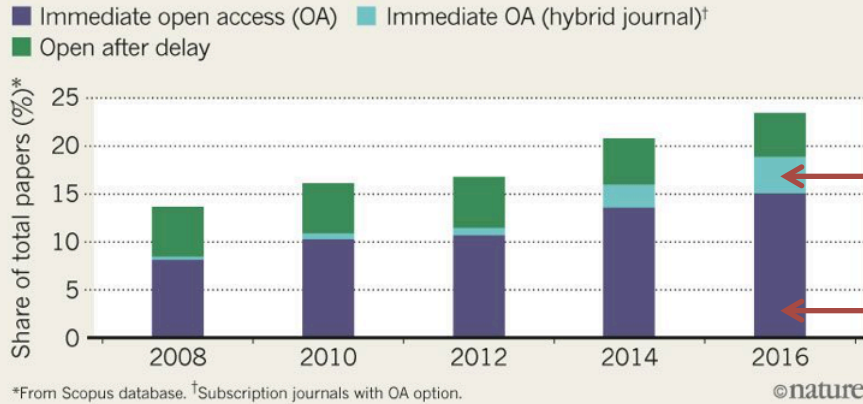
- Articles & journals
- Authors
- Multilateral HEP-style solution
- **Value for money**
- Downloads, dissemination
- Open Access context



SCOAP3 investment per article vs. other initiatives

GROWTH OF OPEN ACCESS

In 2016, journals made 18.9% of papers open immediately on publication, up from 11.5% in 2012.



Average 'Article Processing Charge' for OA articles in 'closed' journals: **2.5 k€**

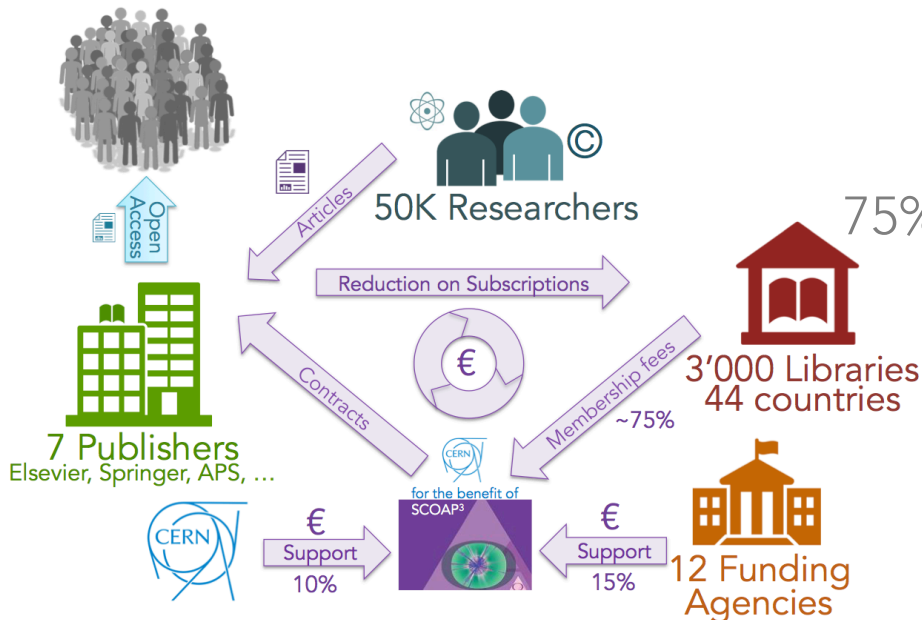
Average 'Article Processing Charge' in entirely 'open' journals: **1.5 k€**

Data from 135 institutes, 4 funding agencies, 10 countries: <https://intact-project.org>

Average SCOAP3 Investment Per Article in 2014-2016: **1.0 k€**

75% of funds are 're-directed' subscriptions: SCOAP3 fresh-funds per article: **250€**

SCOAP3 data: <https://doi.org/10.3390/publications6020015>

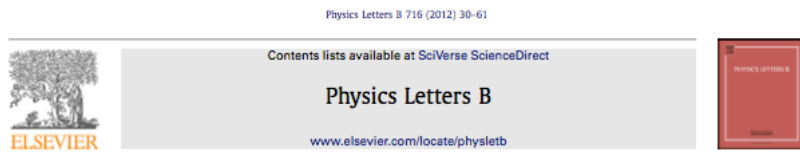


Achievements of SCOAP3

- Articles & journals
- Authors
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- Value for money
- **Downloads, dissemination**
- Open Access context



97% of HEP journals' content posted as 'preprints' on arXiv.org



Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC[☆]

CMS Collaboration^{*}

CERN, Switzerland

This paper is dedicated to the memory of our colleagues who worked on CMS but have since passed away. In recognition of their many contributions to the achievement of this observation.

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ABSTRACT

Results are presented from searches for the standard model Higgs boson in proton-proton collisions at $\sqrt{s} = 7$ and 8 TeV in the Compact Muon Solenoid experiment at the LHC, using data samples corresponding to integrated luminosities of up to 5.1 fb^{-1} at 7 TeV and 5.3 fb^{-1} at 8 TeV. The search is performed in five decay modes: $\gamma\gamma$, ZZ, WW^* , $\tau^+\tau^-$, and $b\bar{b}$. An excess of events is observed above the expected background, with a local significance of 5.0 standard deviations, at a mass near 125 GeV, signalling the production of a new particle. The expected significance for a standard model Higgs boson of that mass is 5.8 standard deviations. The excess is most significant in the two decay modes with the best mass resolution, $\gamma\gamma$ and ZZ; a fit to these signals gives a mass of $125.3 \pm 0.4(\text{stat.}) \pm 0.5(\text{syst.}) \text{ GeV}$. The decay to two photons indicates that the new particle is a boson with spin different from one.

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1. Introduction

The standard model (SM) of elementary particles provides a remarkably accurate description of results from many accelerator and non-accelerator based experiments. The SM comprises quarks and leptons as the building blocks of matter, and describes their interactions through the exchange of force carriers: the photon for electromagnetic interactions, the W and Z bosons for weak interactions, and the gluons for strong interactions. The electromagnetic and weak interactions are unified in the electroweak theory. Although the predictions of the SM have been extensively confirmed, the question of how the W and Z gauge bosons acquire mass whilst the photon remains massless is still open.

Nearly fifty years ago it was proposed [1–6] that spontaneous symmetry breaking in gauge theories could be achieved through the introduction of a scalar field. Applying this mechanism to the electroweak theory [7–9] through a complex scalar doublet field leads to the generation of the W and Z masses, and to the prediction of the existence of the SM Higgs boson (H). The scalar field also gives mass to the fundamental fermions through the Yukawa interaction. The mass m_H of the SM Higgs boson is not predicted by theory. However, general considerations [10–13] suggest that

m_H should be smaller than $\sim 1 \text{ TeV}$, while precision electroweak measurements imply that $m_H < 152 \text{ GeV}$ at 95% confidence level (CL) [14]. Over the past twenty years, direct searches for the Higgs boson have been carried out at the LEP collider, leading to a lower bound of $m_H > 114.4 \text{ GeV}$ at 95% CL [15], and at the Tevatron proton-antiproton collider, excluding the mass range 162–166 GeV at 95% CL [16] and detecting an excess of events, recently reported in [17–19], in the range 120–135 GeV.

The discovery or exclusion of the SM Higgs boson is one of the primary scientific goals of the Large Hadron Collider (LHC) [20]. Previous direct searches at the LHC were based on data from proton-proton collisions corresponding to an integrated luminosity of 5 fb^{-1} collected at a centre-of-mass energy $\sqrt{s} = 7 \text{ TeV}$. The CMS experiment excluded at 95% CL a range of masses from 127 to 600 GeV [21]. The ATLAS experiment excluded at 95% CL the ranges 111.4–116.6, 119.4–122.1 and 129.2–541 GeV [22]. Within the remaining allowed mass region, an excess of events near 125 GeV was reported by both experiments. In 2012 the proton-proton centre-of-mass energy was increased to 8 TeV and by the end of June an additional integrated luminosity of more than 5 fb^{-1} had been recorded by each of these experiments, thereby enhancing significantly the sensitivity of the search for the Higgs boson.

This Letter reports the results of a search for the SM Higgs boson using samples collected by the CMS experiment, comprising data recorded at $\sqrt{s} = 7$ and 8 TeV. The search is performed in

[☆] © CERN for the benefit of the CMS Collaboration.
^{*} E-mail address: cms-publication-committee-chair@cern.ch.

Browser window showing the arXiv.org page for the paper. The address bar displays arxiv.org/abs/arXiv:1207.7235. The page header includes the Cornell University Library logo and the text 'We gratefully acknowledge support from the Simons Foundation and member institutions'. The navigation bar shows 'arXiv.org > hep-ex > arXiv:1207.7235' and search options.

High Energy Physics – Experiment

Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC

The CMS Collaboration

(Submitted on 31 Jul 2012 (v1), last revised 28 Jan 2013 (this version, v2))

Results are presented from searches for the standard model Higgs boson in proton-proton collisions at $\sqrt{s} = 7$ and 8 TeV in the Compact Muon Solenoid experiment at the LHC, using data samples corresponding to integrated luminosities of up to 5.1 inverse femtobarns at 7 TeV and 5.3 inverse femtobarns at 8 TeV. The search is performed in five decay modes: gamma gamma, ZZ, WW, tau tau, and b b-bar. An excess of events is observed above the expected background, with a local significance of 5.0 standard deviations, at a mass near 125 GeV, signalling the production of a new particle. The expected significance for a standard model Higgs boson of that mass is 5.8 standard deviations. The excess is most significant in the two decay modes with the best mass resolution, gamma gamma and ZZ; a fit to these signals gives a mass of $125.3 \pm 0.4(\text{stat.}) \pm 0.5(\text{syst.}) \text{ GeV}$. The decay to two photons indicates that the new particle is a boson with spin different from one.

Comments: Submitted to Phys. Lett. B
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Journal reference: Phys. Lett. B 716 (2012) 30
DOI: [10.1016/j.physletb.2012.08.021](https://doi.org/10.1016/j.physletb.2012.08.021)
Report number: CMS-HIG-12-028; CERN-PH-EP-2012-220
Cite as: [arXiv:1207.7235](https://arxiv.org/abs/1207.7235) [hep-ex]
(or [arXiv:1207.7235v2](https://arxiv.org/abs/1207.7235v2) [hep-ex] for this version)

Submission history

From: Cms Collaboration [[view email](#)]
[v1] Tue, 31 Jul 2012 13:27:18 GMT (2076kb,D)
[v2] Mon, 28 Jan 2013 10:46:38 GMT (1508kb,D)

[Which authors of this paper are endorsers?](#) | [Disable MathJax](#) (What is MathJax?)

Link back to: [arXiv](#), [form interface](#), [contact](#).

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hep-ex
< prev | next >
new | recent | 1207

References & Citations

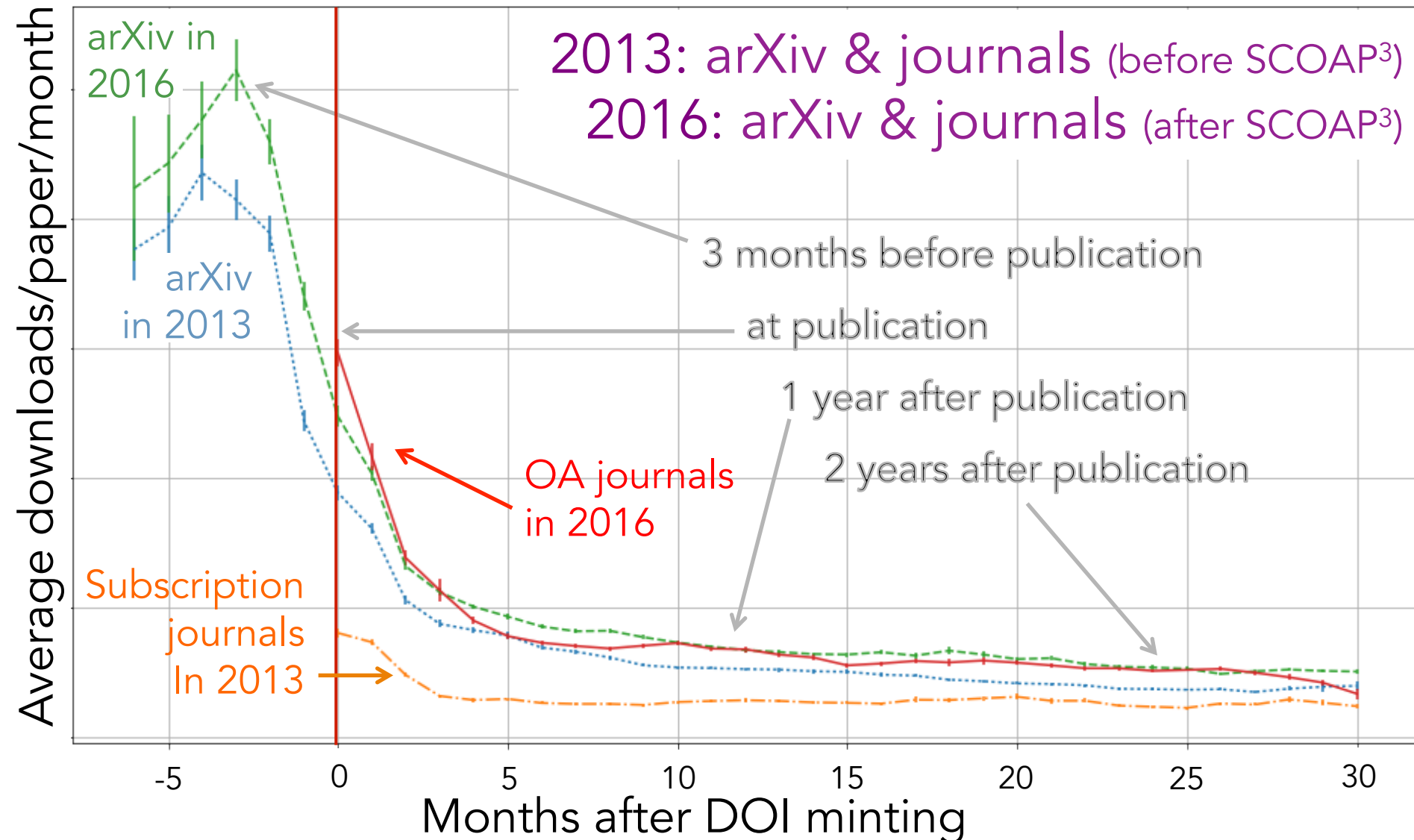
- INSPIRE HEP (refers to | cited by)
- NASA ADS

[7 blog links](#) (what is this?)

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SCOAP3 triples downloads of journal articles



Downloads 3Q13, 4Q13, 1Q16, 2Q16 on arXiv.org and publishers' platforms
50k non-Open Access articles and 8k Open Access articles
Elsevier: *Phys.Lett.B*, *Nucl.Phys.B*; Springer: *Eur. Phys. J. C*, *JHEP*

Accomplishments of SCOAP3

- Articles & journals
- Authors
- Multilateral HEP-style solution
- Value for money
- Downloads, dissemination
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TODAY'S SCHOLARLY JOURNALS OPEN, RE-USABLE, SUSTAINABLE

VISION

OA2020 is a global alliance committed to **accelerating the transition to open access**.

MISSION

We collaborate to transform the current publishing system, **replacing the subscription business model** with new models that ensure outputs are **open and re-usable** and that the costs behind their dissemination are transparent and **economically sustainable**.



Have
Impact



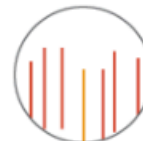
Take
Action



Create your
Roadmap



Redirect
your money



Collaborate
Advocate



Learn
more



Plan S

Accelerating the transition to full and immediate Open Access to scientific publications



The key principle is as follows:

“After 1 January 2020 scientific publications on the results from research funded by public grants provided by national and European research councils and funding bodies, must be published in compliant Open Access Journals or on compliant Open Access Platforms.”

National funders



Charitable foundations



Supported by



Supporting statements



The 10 PlanS principles

- Authors retain copyright of their publication with no restrictions. All publications must be published under an open license, preferably the Creative Commons Attribution Licence **CC BY**. In all cases, the license applied should fulfil the requirements defined by the Berlin Declaration;
- The Funders will ensure jointly the establishment of robust **criteria and requirements** for the services that compliant high quality Open Access journals and Open Access platforms must provide;
- In case such **high quality Open Access** journals or platforms **do not yet exist**, the Funders will, in a coordinated way, provide incentives **to establish** and support them when appropriate; support will also be provided for Open Access infrastructures where necessary;
- Where applicable, **Open Access publication fees** are **covered by the Funders or universities, not by individual researchers**; it is acknowledged that all scientists should be able to publish their work Open Access even if their institutions have limited means;
- When Open Access publication **fees** are applied, their **funding is standardised and capped** (across Europe);
- The Funders will ask universities, research organisations, and libraries to **align their policies** and strategies, notably to ensure transparency;
- The above principles shall apply to all types of scholarly publications, but it is understood that the timeline to achieve Open Access for monographs and books may be longer than 1 January 2020;
- The importance of open archives and repositories for hosting research outputs is acknowledged because of their long-term archiving function and their potential for editorial innovation;
- **The 'hybrid' model of publishing is not compliant with the above principles;**
- The Funders will monitor compliance and sanction non-compliance.

SCOAP³ was one of the Plan S inspirations!

“I have always been very impressed by the pioneer work of CERN in the field of Open Access. SCOAP³ served as a major source of inspiration when I developed Plan S and I am extremely grateful to Salvatore, Eckhard and Alex for their input and advice.

Plan S which is all about accelerating the transition to full and immediate Open Access to scientific publications, prescribes that the author should retain the copyright, a CC-BY type license should apply and that in case of an APC, the costs will be borne by the Funder. Publication in hybrid journals is not allowed under the plan. By respecting these conditions, SCOAP³ and its repository function in line with Plan S.”

**Robert-Jan Smits (OA Envoy of the European Commission)
Public statement e-mailed to CERN on 10 October 2018**

SCOAP3 Plans

2007-2008: design & business model

2009-2011: consensus building

2012-2013: procurement & start-up

2014-2016: first phase and partnership growth

2017-2019: second three-year cycle and APS

2020-2022: third cycle, sustainable infrastructure

