

Multi-source ingestion of publisher articles The SCOAP3 repository experience

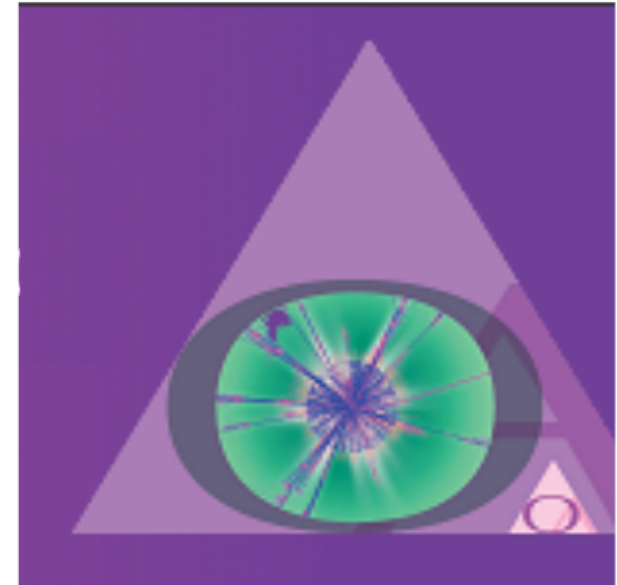


Wojciech Ziótek & Samuele Kaplun
CERN, SCOAP3

Open Repositories, Helsinki 2014

AGENDA

- SCOAP3
 - What is it?
 - How does it work?
- Mission of the repository
- Software
 - Software base
 - Content ingestion
 - Compliance checks
 - Future development
- Summary

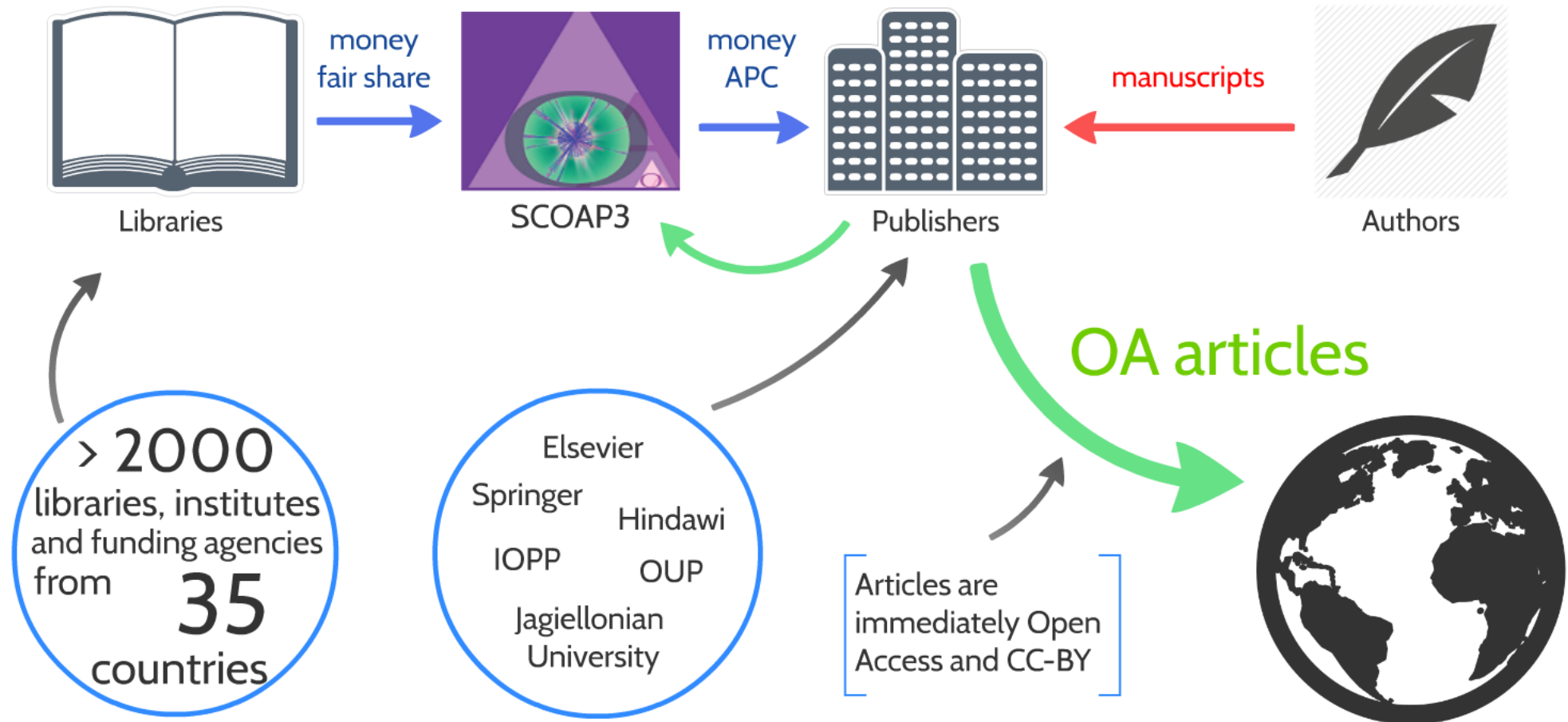


SCOAP³ – Sponsoring Consortium for Open Access Publishing in Particle Physics

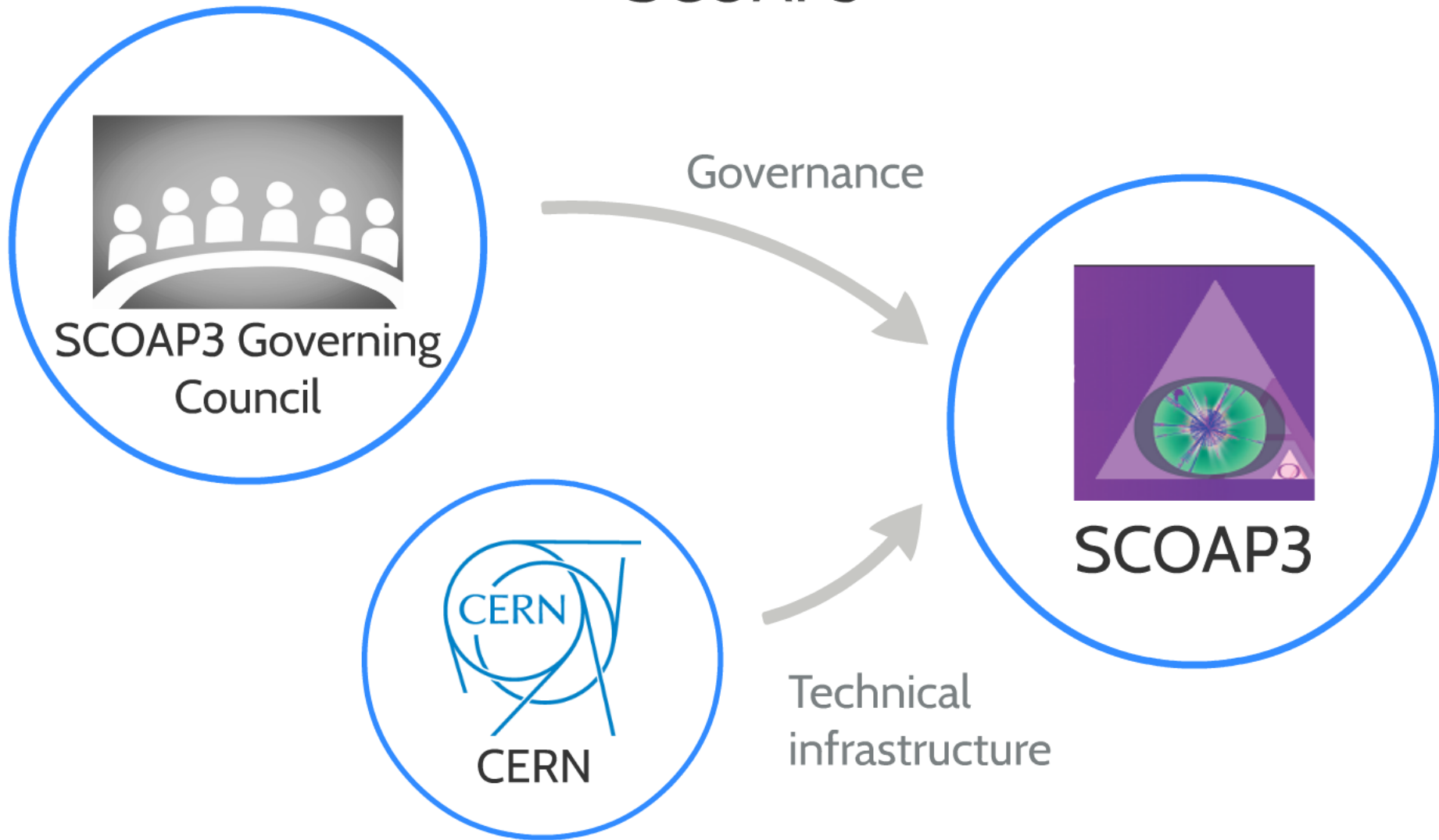
Sponsoring Consortium for Open Access Publishing in Particle Physics



HOW DOES IT WORK?



SCOAP3



SCOAP³

SCOAP³ – Sponsoring Consortium for Open Access Publishing in Particle Physics

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[Welcome](#) [About SCOAP³](#) [Who is SCOAP³](#) [SCOAP³ Journals](#) [News](#) [SCOAP³ Repository](#) [Contact](#)

Welcome

SCOAP³ has [started in January 1st 2014](#). These pages provide background information and news as we start operations. The first SCOAP³ articles are [already available](#) and the [SCOAP³ Repository](#) has launched in beta.

SCOAP³ is a one-of-its-kind [partnership](#) of thousands of libraries and key funding agencies and research centers in two dozen countries. Working with leading publishers, SCOAP³ is converting [key journals](#) in the field of High-Energy Physics to Open Access at no cost for authors. SCOAP³ is centrally paying publishers for the costs involved in providing Open Access, publishers in turn reduce subscription fees to their customers, who contribute to SCOAP³. Each country participate in a way commensurate to its [scientific output in this field](#). In addition, existing Open Access journals are also centrally supported, removing any existing financial barrier for authors.

As a result, articles are Open Access, the copyright stays with the authors, permissive [CC-BY](#) license allow text- and data-mining applications.

SCOAP³ is looking forward to establishing further partnerships worldwide. Scientists will freely enjoy the advantages of Open Access: their libraries and institutions [can make this happen](#).

Recent news

[SCOAP³ Repository Launches in Beta](#)

[First SCOAP³ articles available. Open Access.](#)

[SCOAP³ to start on 1 January 2014 !](#)

[SCOAP³ publishers and libraries are finalising subscription reductions](#)

[SCOAP³ moves forward.](#)

<http://scoap3.org/>

SCOAP³ repository



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- [Advances in High Energy Physics \(Hindawi\)](#) (106)
- [Chinese Physics C \(IOPP/CAS\)](#) (7)
- [European Physical Journal C \(Springer/SIF\)](#) (231)
- [Journal of Cosmology and Astroparticle Physics \(IOPP/SISSA\)](#) (91)
- [Journal of High Energy Physics \(Springer/SISSA\)](#) (821)
- [New Journal of Physics \(IOPP/DPG\)](#) (none yet)
- [Nuclear Physics B \(Elsevier\)](#) (134)
- [Physics Letters B \(Elsevier\)](#) (383)
- [Progress of Theoretical and Experimental Physics \(OUP/JPS\)](#) (27)

Welcome to the SCOAP³ repository.

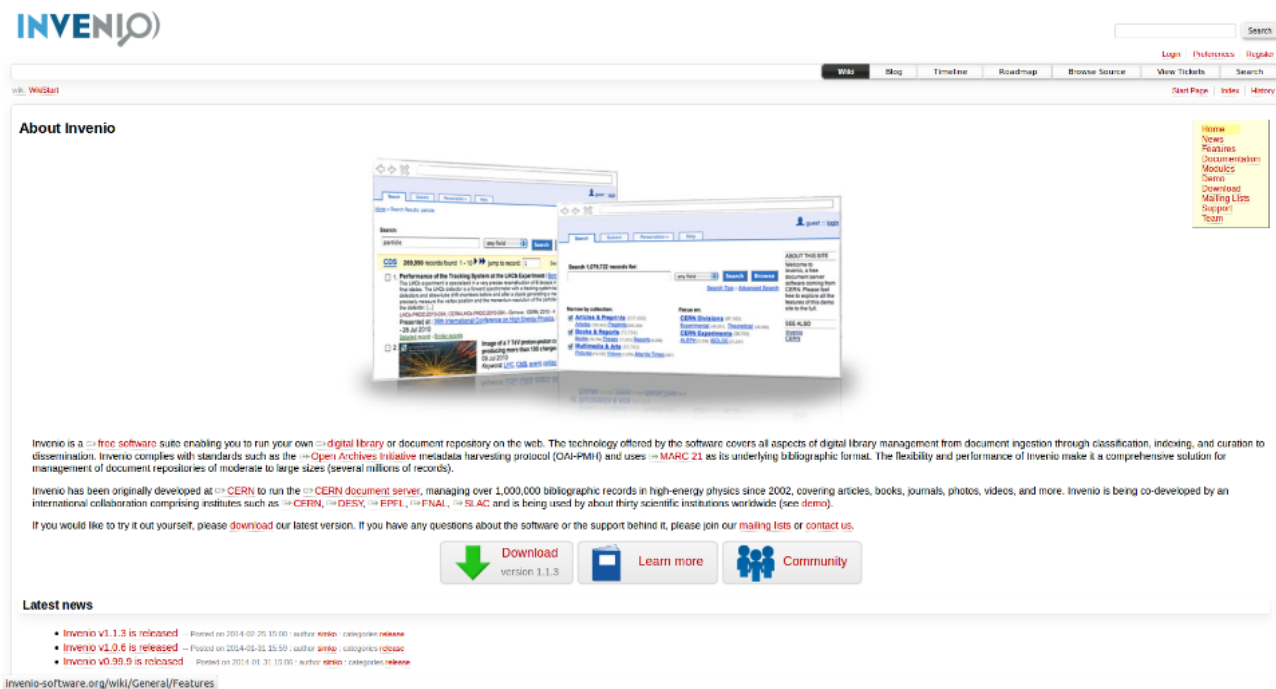
Here you can freely search, browse and of course download all Open Access articles sponsored by the international SCOAP³ initiative.

In the coming months, and as more articles become available, we will make available tailored feeds of metadata and articles. We will also provide SCOAP³ participating libraries API access.

For information on SCOAP³, and how to join, please visit scoap3.org.

<http://repo.scoap3.org/>

CODEBASE



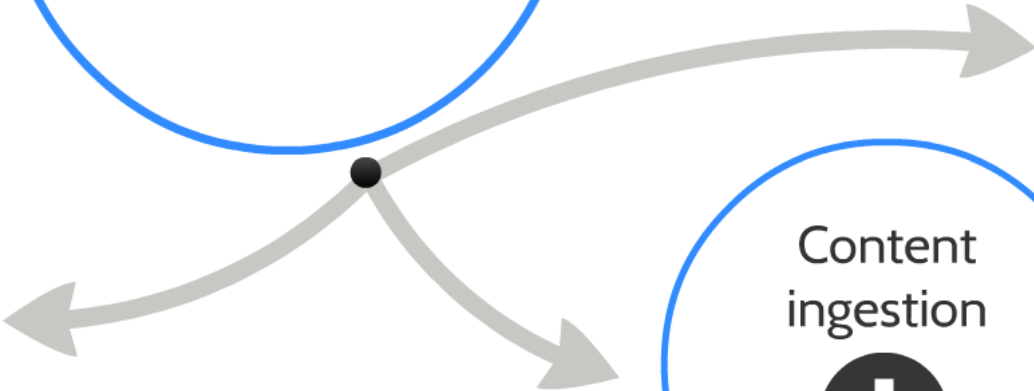
The screenshot displays the Invenio software website interface. At the top left is the Invenio logo. A navigation bar includes links for 'Web', 'Blog', 'Timeline', 'Roadmap', 'Browse Source', 'View Tickets', and 'Search'. A search box is located in the top right corner. Below the navigation bar, the page title is 'About Invenio'. The main content area features a large image of the Invenio search interface, showing search results for 'particle' and 'Search CERN 200 records for'. Below the image, there is a paragraph of text describing Invenio as a free software suite for digital library management, mentioning standards like Open Archives Initiative and MARC 21. Further down, it states that Invenio was originally developed at CERN to run the CERN document server. At the bottom of the main content area, there are three buttons: 'Download version 1.1.3', 'Learn more', and 'Community'. Below these buttons is a 'Latest news' section with three entries, each listing a version release (v1.1.3, v1.0.6, and v0.99.9) with their respective dates and authors. The URL 'invenio-software.org/wiki/General/Features' is visible at the bottom left of the screenshot.

SCOAP3 is based on Invenio Software.

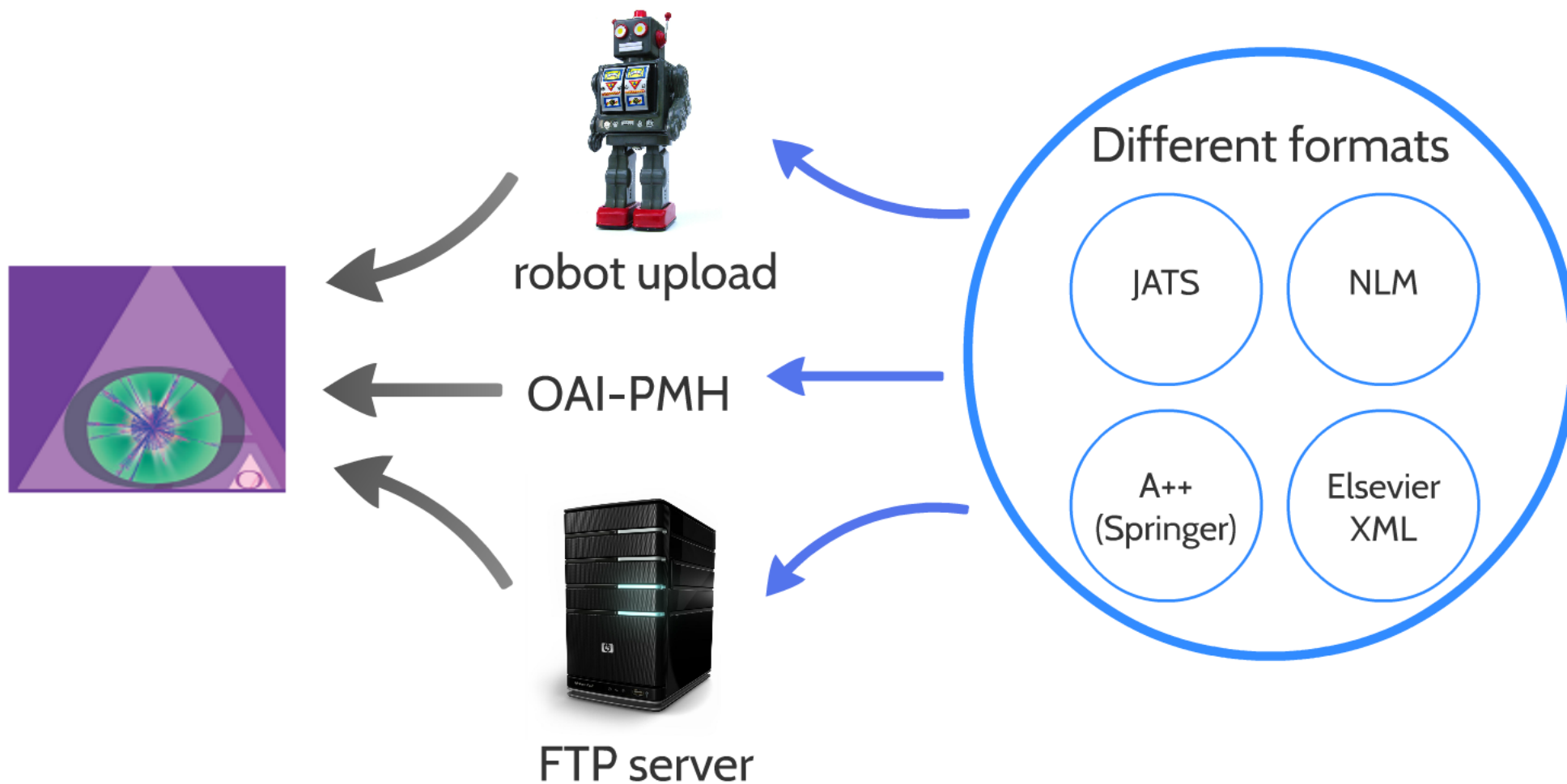
DEVELOPMENT



<https://github.com/SCOAP3>



CONTENT INGESTION



COMPLIANCE CHECKS



Integrity of delivered files

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Immediate (within 24 hours)
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Metadata

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Chinese Physics C Vol. 38, No. 1 (2014) 013103

Meson decays in an extended Nambu–Jona-Lasinio model with heavy quark flavors

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Abstract: In a previous work, we proposed an extended Nambu–Jona-Lasinio (NJL) model including heavy quark flavors. In this work, we will calculate strong and radiative decays of vector mesons in this extended NJL model, including light ρ , ω , K^* , ϕ and heavy D^* , D_s^* , B^* , B_s^* .

Key words: NJL model, heavy meson, heavy quark limit

PACS: 12.39.Fe, 12.39.Hg, 14.40.-n **DOI:** 10.1088/1674-1137/38/1/013103

1 Introduction

The Nambu–Jona-Lasinio (NJL) model [1, 2], in its original form as a pre-QCD theory, was constructed of nucleons that interact via an effective two-body contact interaction. The model was later reinterpreted as a theory of quark degrees of freedom [3, 4]. The most important feature of the NJL model is the chiral symmetry of the Lagrangian plus a chiral symmetry breaking ground state. The model was generalized to the $SU(3)_c$ case of light quark flavors in Refs. [5–9].

On the other hand, for heavy quark flavors, the chiral symmetry no longer holds. However, new important symmetries, such as the spin symmetry that was discovered in heavy (Q₁)-mesons [10], which is a consequence of the order $1/m_Q$ of the spin-spin interaction in the effective quark potential [11]. In Ref. [12], the NJL model was generalized to include heavy flavors. Both the chiral symmetry in the light meson sector and the spin symmetry in the heavy meson sector were reproduced with the vector-current interaction. The bosonization technique was used there to obtain an effective Lagrangian of the meson degrees of freedom.

However, as already shown in Ref. [5], the vector-current interaction only is not enough to reproduce the experimental masses of light vector mesons, such as ρ , K^* etc. Other chiral symmetrical interactions, such as the axial-vector-current one, are needed to get satisfactory results for the light meson sector. However, these additional interactions do not obey the spin symmetry in the heavy meson sector since they generate the incorrect spin-spin interaction that is not $1/m_Q$ suppressed.

In the above work [12], the authors just introduced two coupling constants G_1 and G_2 for the light meson sector and another different coupling G_3 for the heavy meson sector.

In our previous work [13], we proposed a solution to extend the NJL model to comprise the heavy quark flavors. The NJL interactions were expanded with respect to $1/m_i$ of constituent quark mass m_i , just like the expansion in the heavy quark effective theory (HQET). Naturally, the vector-current interaction is dominant while other interactions, such as the typical axial-vector-current one, should be $1/m_i$ suppressed. We had performed numerical calculations for both the light and heavy meson sectors. The mass spectra fit the experimental data quite well. The decay constants of heavy mesons were smaller than the experimental values, roughly by a factor of 2.

The strong and radiative decays provide us with important information about hadron structure. Experimentally, the decay widths of light vector mesons have been well measured [14–19] and so far, some decay widths or ratios of the charmed and bottom heavy vector mesons have been reported [20–22].

Generally speaking, it is a rigid test for any model to fit the experimental values of the decay width or ratio. The most popular model for strong decay is the 3P_0 model [23, 24]. This model has been applied to a great number of decay processes [25–28]. The radiative decays, mainly the M1 transition, which takes place when one of the constituent quark changes its spin and radiates one photon, has been studied in potential quark models [29, 30] or from flavor symmetry [31]. For decays

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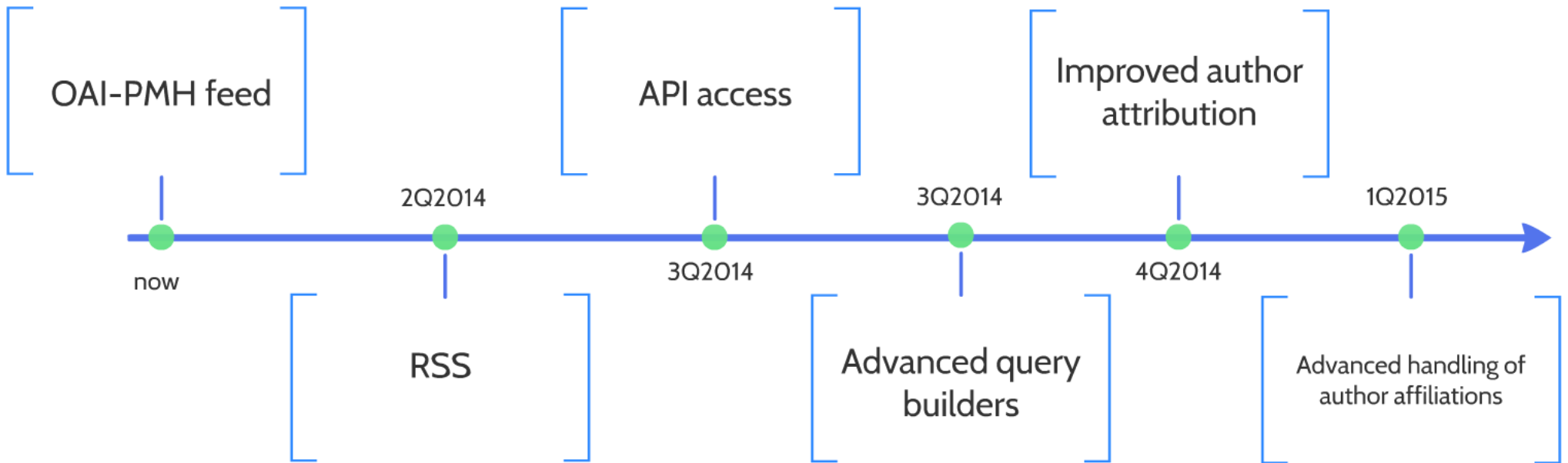
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FUTURE DEVELOPMENT



SUMMARY

- Very interesting Open Access experiment and full collaboration with 6 publishers.
- Still, very different standards and lots of hard work.
- Data cleaning and large-scale automatic checks are hard.
- Looking forward to opening OAI-PMH feeds and other services for third parties to reuse this content.

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