



Open Access Publishing in Astronomy - a Snapshot

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Abstract

We present an overview of Open Access publishing in astronomy. After a brief introduction to the wide-ranging read-access and the core journals in astronomy, we provide a viewgraph of publishing options in the OA era, including Green OA, Gold OA, Diamond OA, and the Rights Retention Strategy. Pros and cons of each model are explained, and the current status of major astronomy journals is described and evaluated. In conclusion, we strongly promote the implementation of fair, transparent, collaborative, and equitable Open Access models.

Background

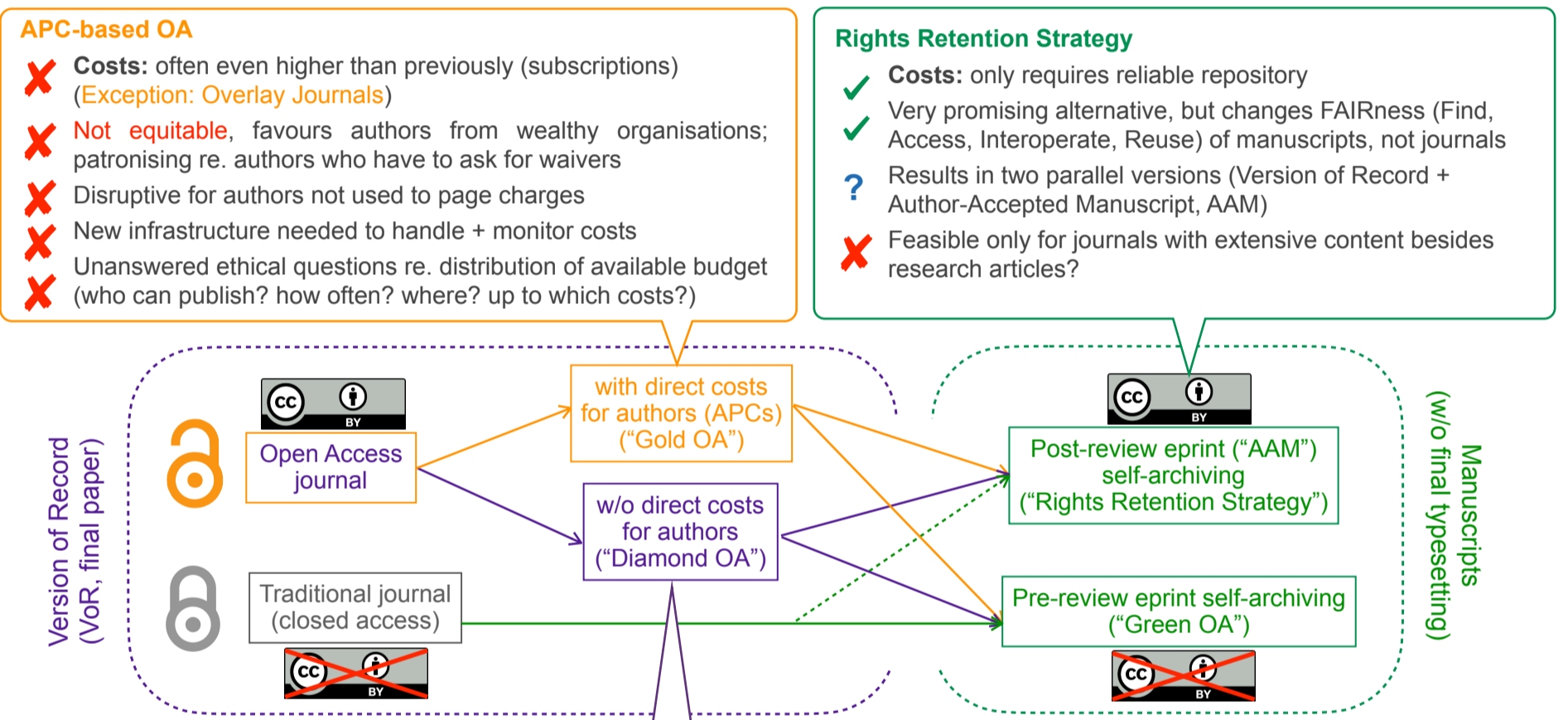
Read-Access in Astronomy

- Wide-spread use of **Green OA** (arXiv/astro-ph eprint server)
- Core journals digitised and **freely available back to vol. 1**
- Publishers provide **temporary access** to selected articles
- Free access to core journals often **one year after publication**

Core Astronomy Journals

- Only **four “core” journals** provide 35+% of refereed literature
- Governed by **Learned Societies**, published by commercial publishers
- Astronomers’ community strongly influences publishing, but **doesn’t always see need for OA** beyond status-quo
- OA solutions with **minimal researcher burden** needed

Publishing Models



Collaborative OA Models, e.g., Subscribe to Open (S2O)

Continued library subscriptions to achieve global OA; libraries have previously shown interest in content. Journals flip to OA if subscription-threshold for the year is reached.

- ✓ **Costs:** subscription fee as before
- ✓ Uses existing infrastructure (budget handling), can be implemented fast
- ✓ Is predictable and **equitable**
- ✓ Reflects specific information needs of specialised research community
- ✓ Workflow unchanged, OA achieved: **high acceptance expected**

Current Status of Core Journals in Astronomy

Regrettably, most (commercial) publishers see **APC-based OA** as the most promising option to secure their business. In astronomy, three of the four core journals (**ApJ/AJ** as of 2022 and **MNRAS** as of 2024) have chosen this path.

While **The Open Journal of Astrophysics** is also APC-based, it is an **overlay journal** and offers publishing at minimal (or no) cost.

The journal **A&A** applies the (slightly modified) pragmatic **Subscribe to Open (S2O)** model to achieve global OA, showing a strong commitment to **equitable OA**.

Among the high-impact journals, **AAAS/Science** permits the **Rights Retention Strategy** for papers of EC-funded authors and those of immediate relevance for public health, while **Nature** and **Nature Astronomy** only offer immediate posting of non-refereed versions of manuscripts.

Conclusions

A main driver of the OA movement is to enable **fair access** to publications in a **cost neutral** way. We must **avoid a new dependancy** on high-price commercial publishers and strive for **collaborative, equitable, sustainable models**.

Journals

- **Astronomical Journal (AJ)**, <https://iopscience.iop.org/journal/1538-3881>
- **Astronomy & Astrophysics (A&A)**, www.aanda.org
- **Astrophysical Journal (ApJ)**, <https://iopscience.iop.org/journal/0004-637X>
- **Monthly Notices of the Royal Astronomical Society (MNRAS)**, <https://academic.oup.com/mnras>
- **Nature / Nature Astronomy**, www.nature.com / www.nature.com/natastron/
- **The Open Journal of Astrophysics**, astro.theoj.org
- **Science**, www.science.org

