Open Access Publishing in Astronomy

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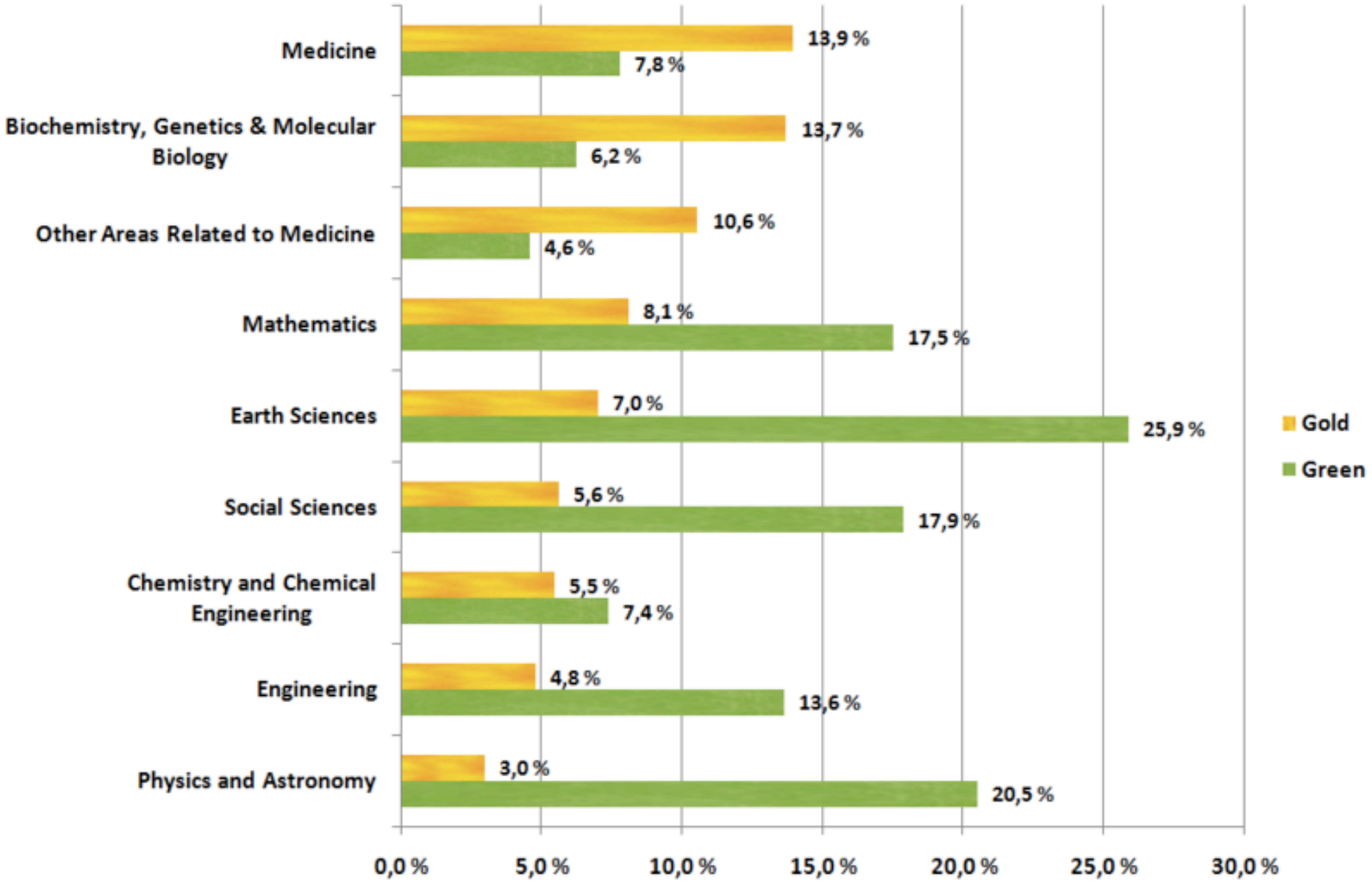
Background

- Definition
  - Open Access in scholarly literature means “immediate, free availability on the public internet, permitting any users to read, download, copy, distribute, print, search or link to the full text of these articles, crawl them for indexing, pass them as data to software or use them for any other lawful purpose...”

    (Scholarly Publishing and Academic Resources Coalition (SPARC), http://www.arl.org/sparc/openaccess/)
  - publicly funded research should be available for all
- History
  - increasing interest since 1990s
  - fast rising journal subscription prices: “serial crisis”
  - availability of internet access
- Two ‘flavors’
  - Green OA: self-archiving (e.g., arXiv/astro-ph, PubMedCentral, homepages)
  - Gold OA: OA publishing (pure or ‘hybrid’ OA journals)

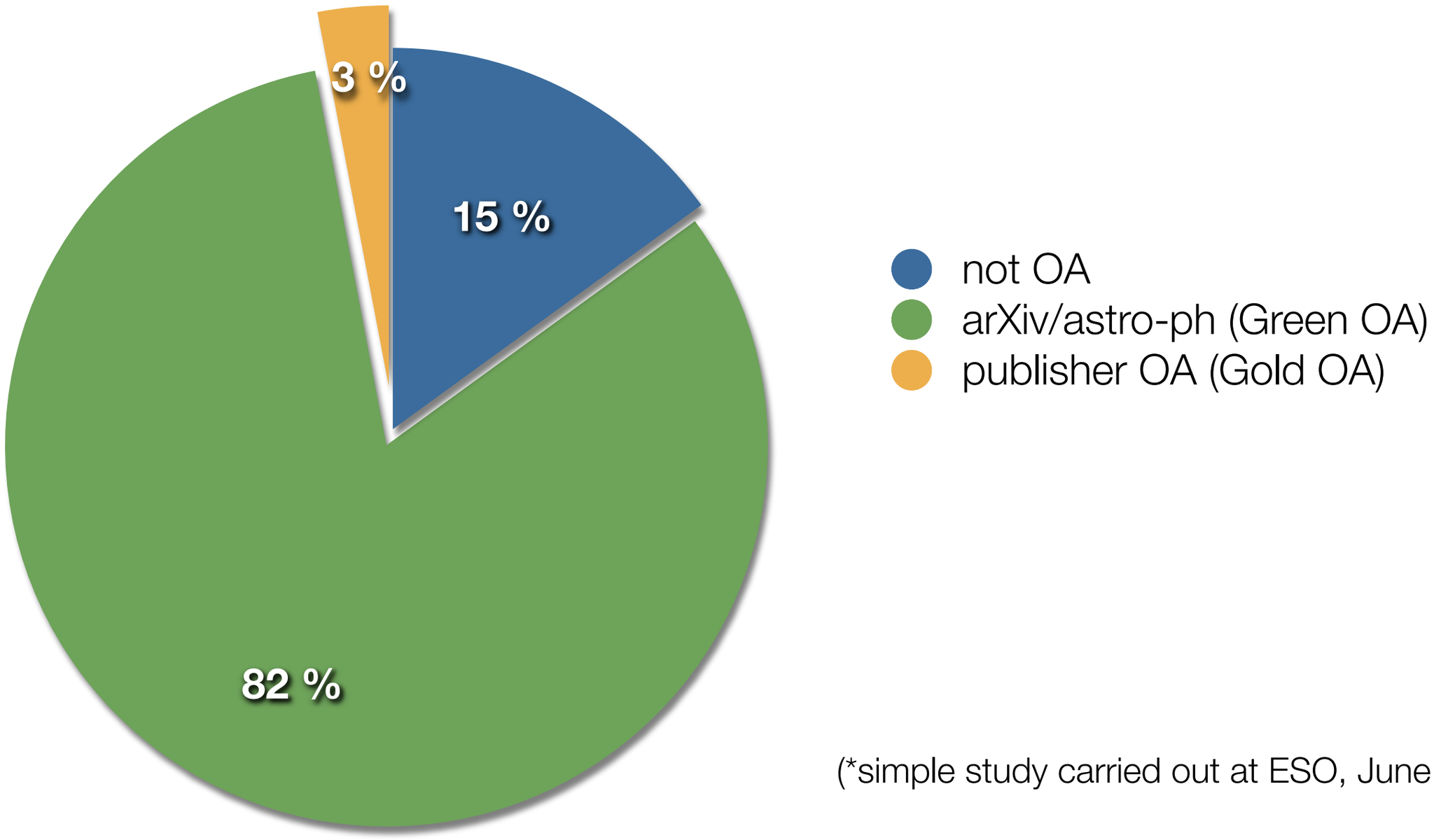
OA adoption rates of refereed papers, 2008



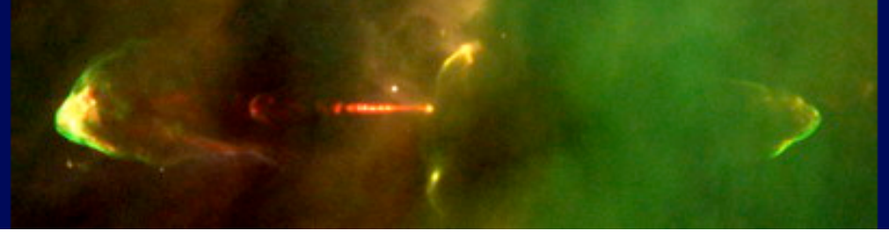
Björk et al. (2010). "Open Access to the Scientific Journal Literature: Situation 2009". PLoS ONE 5 (6): e11273. DOI:10.1371/journal.pone.0011273

A&A, AJ, ApJ/ApJS, MNRAS, PASP in Jan. 2012*

- 785 articles on ADS: 25 OA @ publisher (A&A Letters), 643 @ arXiv/astro-ph
- 85% available (Green or Gold OA)



(*simple study carried out at ESO, June 2012)



Conventional Model

Authors
- research results
- manuscripts

↓

Copyright
- typically signed over to publishers

↓

Journals: legacy journals
- peer-review
- copy-editing
- distribution
- recognition
- preservation

↓

Access
- subscriptions: immediate access
- delayed OA: e.g., after 1-3 yrs
- partial OA: e.g., certain A&A sections

⋮

“Green OA”
- eprint servers: manuscripts; no archiving

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Access
- immediate free access for everyone

ESO
European Organisation
for Astronomical
Research in the
Southern Hemisphere

ESO Libraries Resources

ESO - Reaching New Heights in Astronomy

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Journals: legacy ('hybrid') + **OA journals**
- **peer-review ?** (1)
- copy-editing
- distribution
- **recognition ?** (2)
- preservation

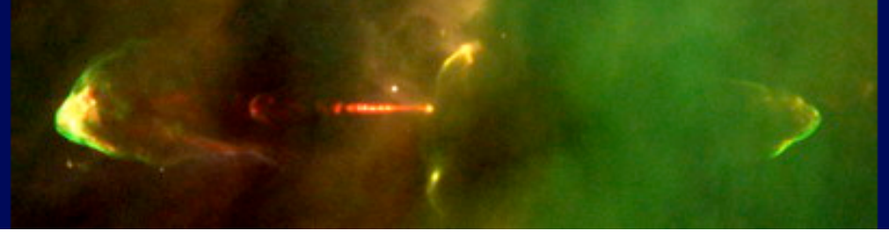
direct costs

↓

Access
- immediate free access for everyone

Why is the OA model attractive for publishers?

- Immediate income
  - author-pays model, no necessity to sell subscriptions
- Production and maintenance costs relatively low
  - in most cases e-only
- OA is ‘en vogue’
  - OA advocates, librarians, scientists have created a lot of attention
  - access seems to be more important than all other publishing issues (actual costs, authenticity, quality, ethics, preservation, sustainability...)



Why is the OA model attractive for authors?

- Fast availability
  - articles are accessible immediately upon publication
- Copyright
  - authors retain the right to further use their publications
- OA mandates
  - institutional or government policies demanding public availability of research results (after X months)
- High acceptance rates
  - temptation to publish a manuscript that would otherwise not be submitted
- Maximum visibility / accessibility
  - increased downloads (and increased citations?)

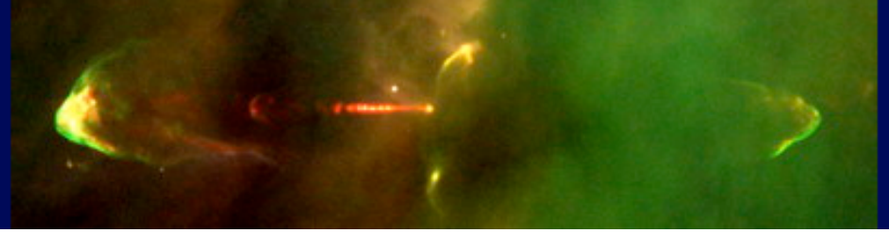
Issues with (some) OA publishers

1. Peer-review

- same quality standards as for legacy journals should apply
- pre-publication peer-review

  ➡ list of journal editors and reviewers

  ➡ DOAJ (Directory of Open Access Journals), www.doaj.org



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DOAJ DIRECTORY OF OPEN ACCESS JOURNALS

But it's not easy...

Examples of some "questionable" publishers that are listed in the DOAJ:

Advances in Astronomy DOAJ Content
ISSN: 16877969
EISSN: 16877977
Subject: Astronomy (General)
Publisher: Hindawi Publishing Corporation
Country: Egypt
Language: English
Keywords: astronomy, astrophysics
Start year: 2008
Publication fee: Yes --- Further Information
License: (cc) BY SPARC Europe

Open Astronomy Journal
ISSN: 18743811
Subject: Astronomy (General)
Publisher: Bentham Open
Country: United States
Language: English
Keywords: astrophysics, cosmology
Start year: 2008
Publication fee: Yes --- Further Information

International Journal of Astronomy and Astrophysics
ISSN: 21614717
EISSN: 21614725
Subject: Astronomy (General)
Publisher: Scientific Research Publishing
Country: United States
Language: English
Keywords: space sciences, solar and stellar physics,
Start year: 2011
Publication fee: Yes --- Further Information

Issues with (some) OA publishers (contd.)

2. Recognition

- indicators of journal quality: timeliness, content, citation analysis
  - ➡ Journal Citation Reports (JCR, impact factors), Thomson Reuters, alternatively: journals on Wikipedia
  - ➡ SciVerse Scopus abstracts and citation db of peer-reviewed literature (www.info.sciverse.com/scopus)
  - ➡ Eigenfactor/Article Influence: network analysis to evaluate influence of scholarly periodicals (eigenfactor.org)
  - ➡ OASPA (Open Access Scholarly Publishers Assoc.): Code of Conduct (oaspa.org/membership/code-of-conduct/)

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Journal	JCR	Scopus	EF / AI	OASPA
A&A	4.4	✓	0.27 / 1.47	n/a
AJ	4.5	✓	0.09 / 2.24	n/a
ApJ	6.1	✓	0.49 / 1.91	n/a
ApJL	5.2	✓	0.02 / 0.65	n/a
ApJS	15.2	✓	0.09 / 6.69	n/a
MNRAS	5.2	✓	0.26 / 1.75	n/a
Advances in Astronomy (Hindawi) [2008 -]	✗	✓	✗	✓
Open Astronomy Journal (Bentham) [2008 -]	✗	✗	✗	✗
International Journal of Astrononmy & Astrophysics (Scientific Research Publishing) [2011 -]	✗	✗	✗	✗

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  - ➡ OASPA (Open Access Scholarly Publishers Assoc.): Code of Conduct (oaspa.org/membership/code-of-conduct/)

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A&A	4.4	✓	0.27 / 1.47	n/a
AJ	4.5	✓	0.09 / 2.24	n/a
ApJ	6.1	✓	0.49 / 1.91	n/a
ApJL	5.2	✓	0.02 / 0.65	n/a
ApJS	15.2	✓	0.09 / 6.69	n/a
MNRAS	5.2	✓	0.26 / 1.75	n/a
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“Predatory publishers”

Jeffrey Beall: *“....those that unprofessionally exploit the author-pays model of open-access publishing (Gold OA) for their own profit”*

- spam sent to professional email lists to solicit articles and editors
- ‘vanity presses’ w/ basically no rejections and large # titles
- articles published w/o complete author approval
- articles published before payment terms are agreed
- errors introduced after proof-reading
- papers published w/o peer-review

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➡ Beall’s list: http://metadata.posterous.com/83235355

- **Bentham included**: ‘large number of journals (230+), vanity press’
- **Scientific Research Publ. included**: ‘China instead of US, 100+ journals from 2009 or later, extremely slow server response times’
- **Hindawi** on ‘**watchlist**’: ‘too many journals than can be properly handled (300+)’

➡ Beall’s blog: Scholarly Open Access http://scholarlyoa.com/

The case of A&A

- Currently:
  - published by EDP Sciences on behalf of European astronomers (+ Argentina, Brazil, Chile), run by Board of Directors
  - member states contribute according to their gross national products
  - authors from member states publish w/o page charges
  - substantial income through subscription fees
  - delayed OA (currently 3 years), immediate OA for certain sections
  - copyright agreement allows authors to post manuscripts on preprint servers
- If moved to OA:
  - no income from subscriptions
  - increase of author fees and/or member contributions?
- Advantages of OA publishing:
  - accelerated and free access for entire astronomy community
  - increased visibility, perhaps increased impact
  - authors retain copyright
  - preservation is taken care off by publisher

Conclusions

- OA publishing can be a good thing
- There are no easy criteria to judge the quality of a journal/publisher
- Crucial issues like actual costs, authenticity, quality, ethics, preservation, sustainability should be considered
- Be aware that there are predatory publishers
- In astronomy, a *de facto* Open Access situation can be achieved (for core journals) through “Green OA” (with known issues!)
- Gold OA brings advantages that cannot be achieved otherwise