Global Trends in Physics Publishing

Background and Developments

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Executive Publisher – Surfaces and Interfaces

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Presentation

- About Elsevier
- Scientific Publishing
  - General Background
  - General Trends
  - Trends from Japan

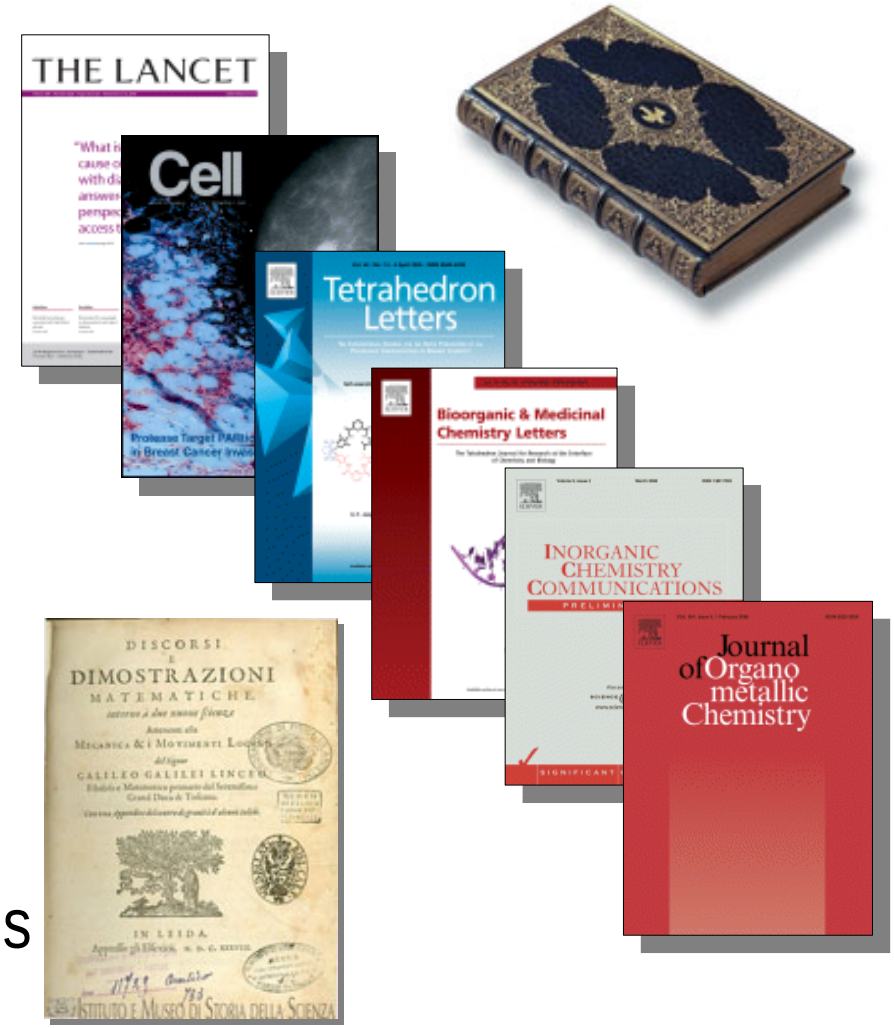
ABOUT ELSEVIER

About Elsevier

- *House of Elzevir* founded 1580
- Elsevier as publishing house established 1880

NOW

- 2600 journals
- 250,000 articles a year
- 9.7 million articles on ScienceDirect, going back to 1823 (The Lancet)
- half a billion downloads a year by 10 million users (over 1 billion downloads since launch)



Galileo's ***Discorsi e Dimostrazioni Matematiche (1638)***

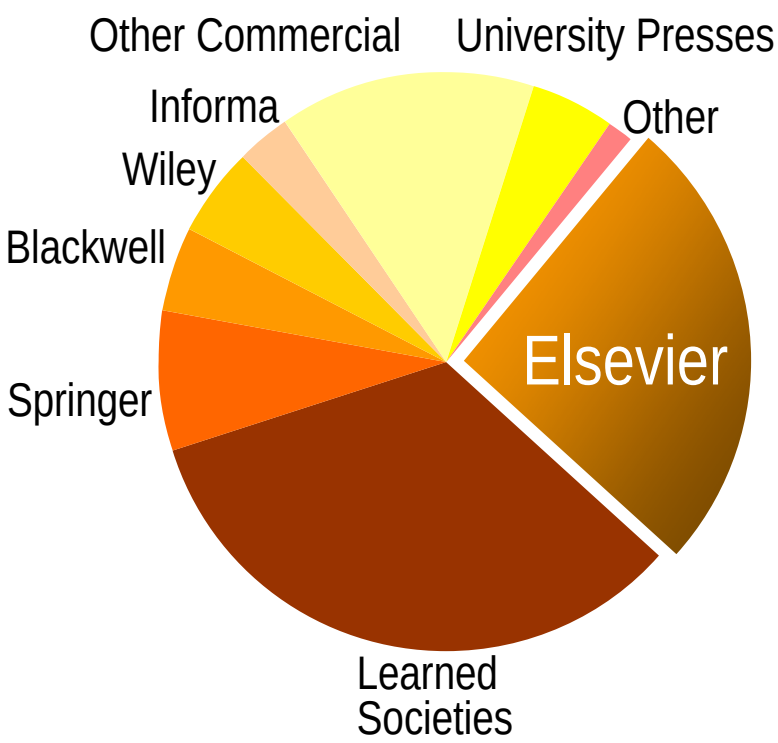
SCOPUS

SCIRUS for scientific information only

ScienceDirect

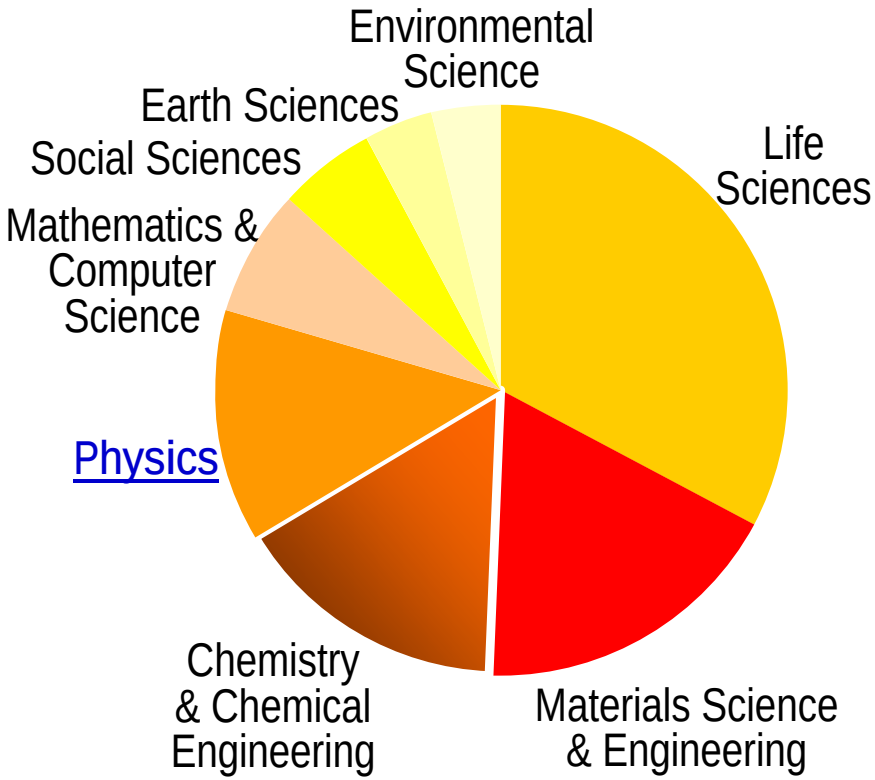
Elsevier and Scientific Publishing

All scientific research articles



1.2 million English language research articles published globally each year

Elsevier – by disciplines



250,000+ English language research articles published with Elsevier every year

Elsevier: Portfolio Overview

2000+ journals, around 1400 listed in ISI
Accessed by 10 million researchers globally
All journals available on ScienceDirect

2200+ new titles published every year
Imprints: Saunders, Mosby, Academic Press, Focal Press, …
6000 books online via ScienceDirect, including 51 MRWs and 300+ book series

Scopus: >18,000 journals abstracted
ScienceDirect: over 1 million downloads per day from 2007
CrossFire Beilstein & Gmelin Databases, and now Reaxys
Ei: over 5,000 journals and conference proceedings indexed

SCIENTIFIC PUBLISHING

Why have Scientific Publishing ?

- Communication of research results and discoveries between scientists
- Sounds straightforward…

Why have Scientific Publishing ?

- Certification
  - assuring quality and accuracy of published research (through peer review)
- Registration
  - attributing who conducted the research
- Dissemination
  - making the information available, worldwide
- Achiving
  - ensuring content available “in perpetuity”

Why have Scientific Publishing ?

- Certification
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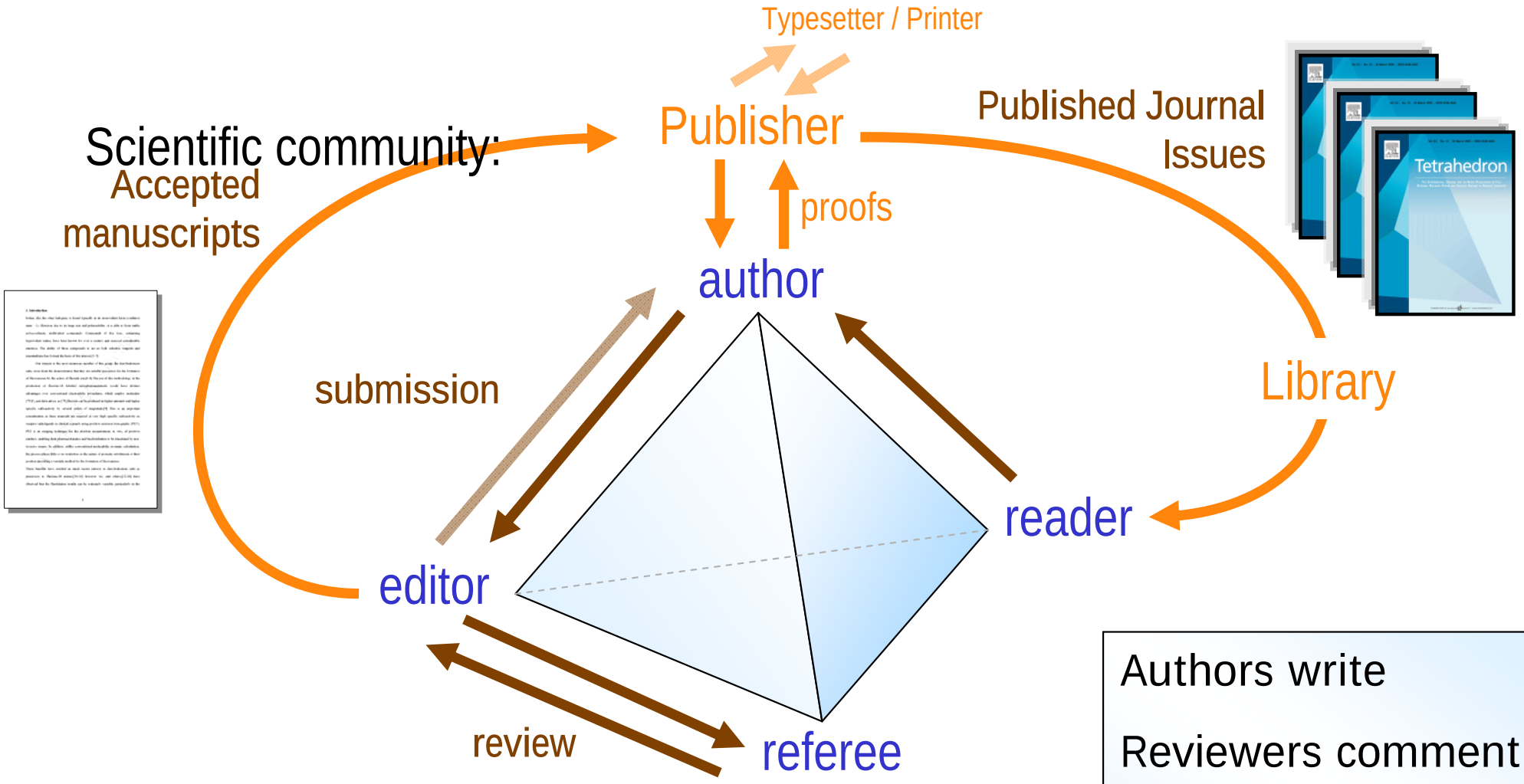
Author Needs

- Dissemination
  - *making the information available, worldwide*
- Achiving
  - ensuring content available “in perpetuity”

Reader Needs

Research Scientists are both authors + readers of Information

Peer Review



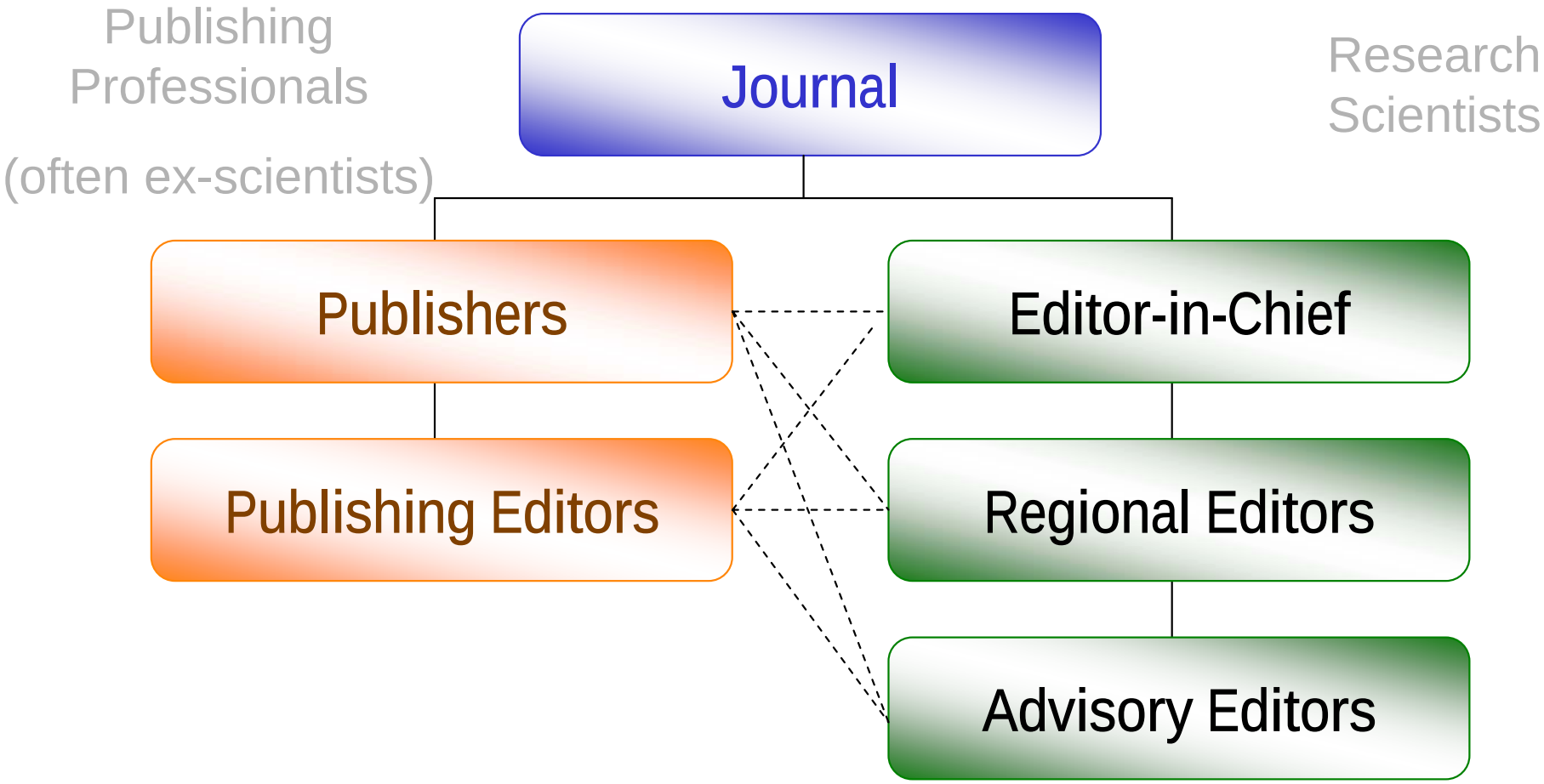
Authors write

Reviewers comment

Editors decide

Readers read

The Journal and the Scientific Community



Efficient Publication
Commercial Operation
Investment in Developments

Independent & Impartial
Scientific Assessment of Quality
Leading Specialists in Field

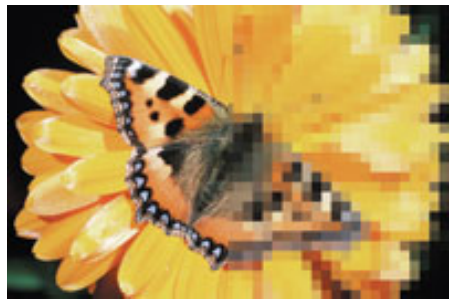
STM Publishing Industry – Overview

- Science and medical communities around the world are united through the highly organized and efficient system of STM Publishing

(STM = Scientific, Technical & Medical)

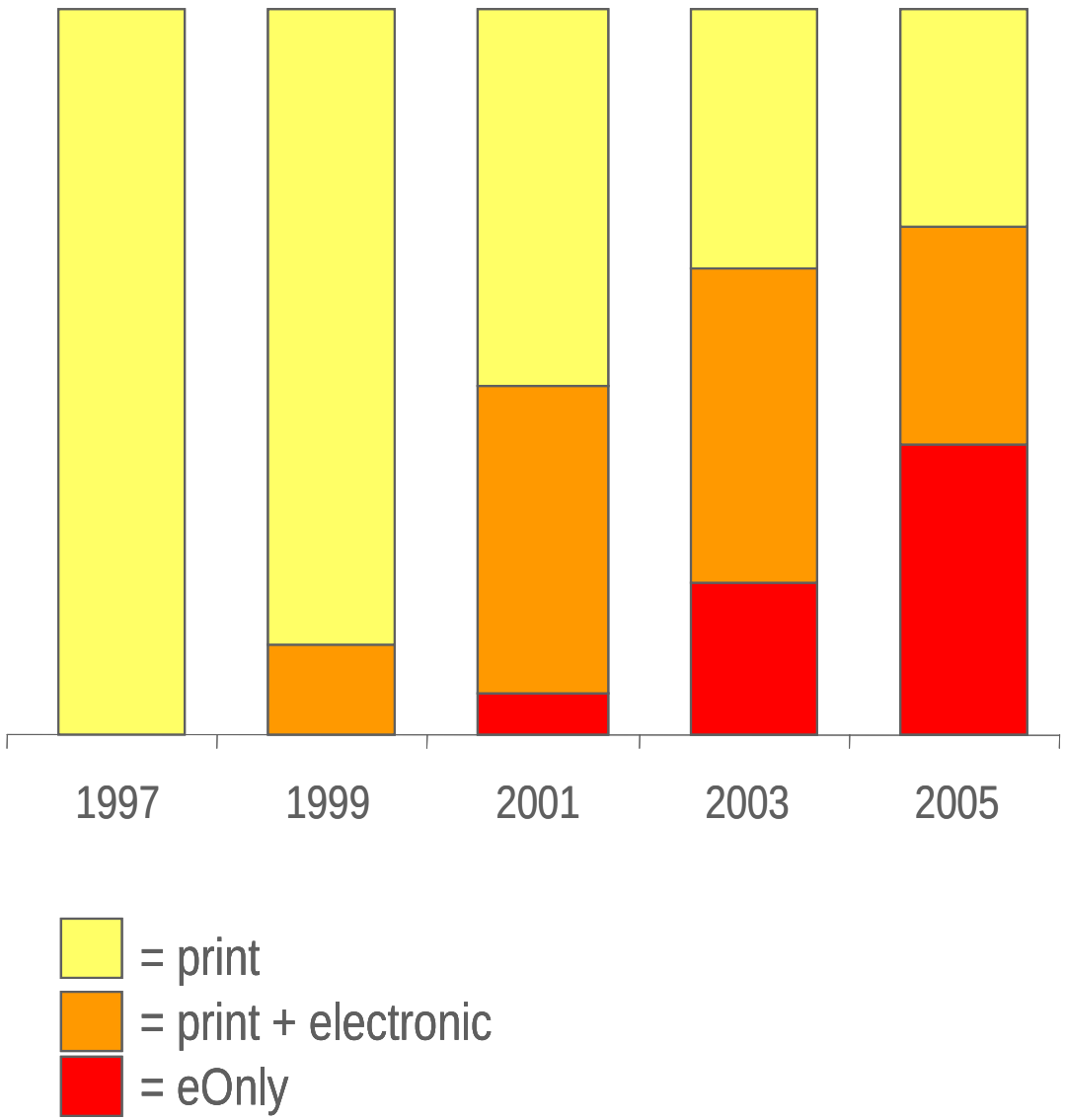
TRENDS IN JOURNAL PUBLISHING

Current Trends - Journals



- Final migration from print to online
- Greater integration and depth of content
  - Linking
  - Backfiles (archival issues online)
- Further increase in usage
- Increased speed of publication
- Greater number of submissions
- Experiments with alternative publishing models
  - Open Access / Author Pays (approx. 1% of papers)

Print to Online



Benefits

For researchers

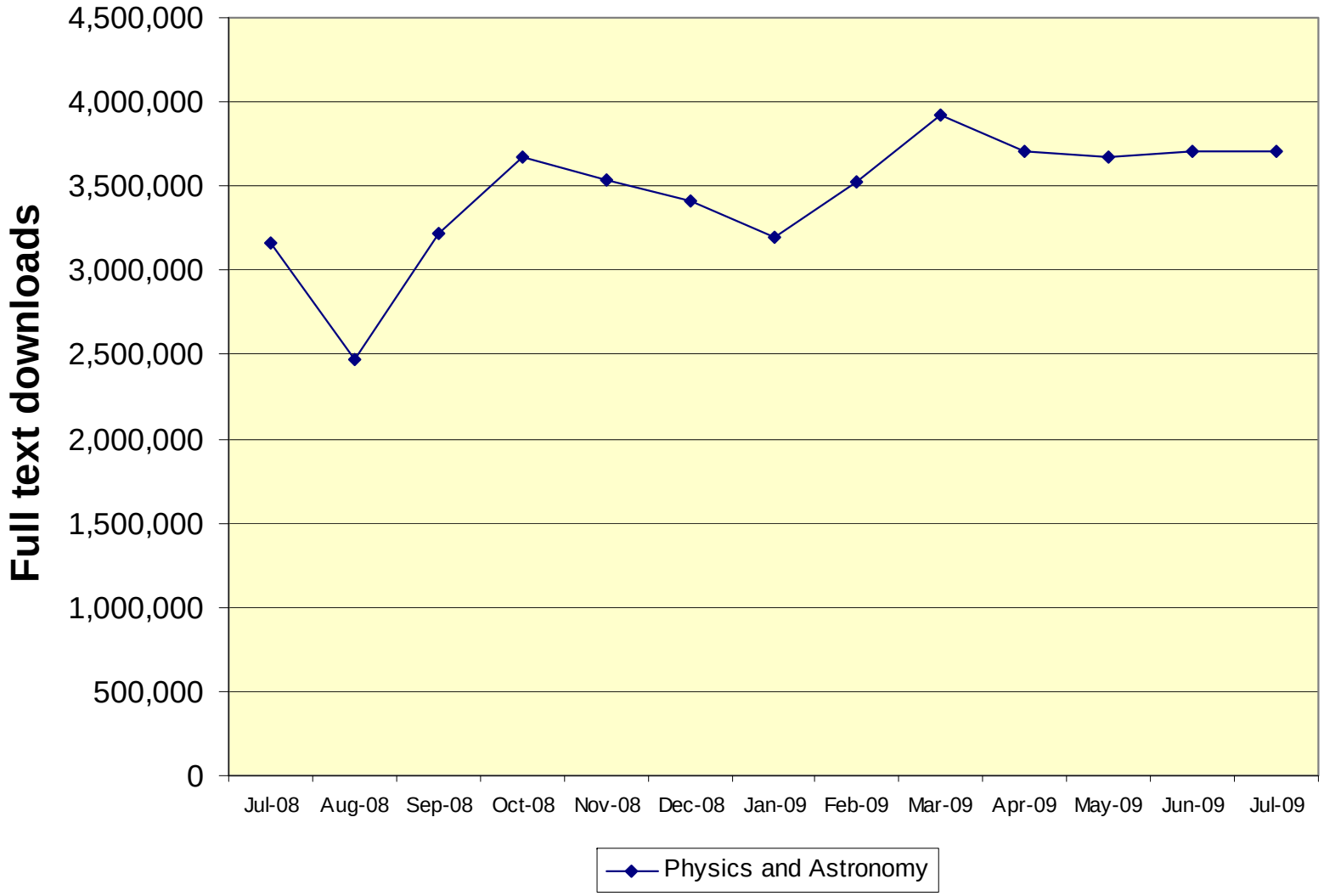
- Remote, desktop access
- Fast search
- Interlinked articles
- eFunctions, eg alerts

For librarians

- Easier collection management
- Usage data per journal
- Reduced storage space
- Staff efficiencies

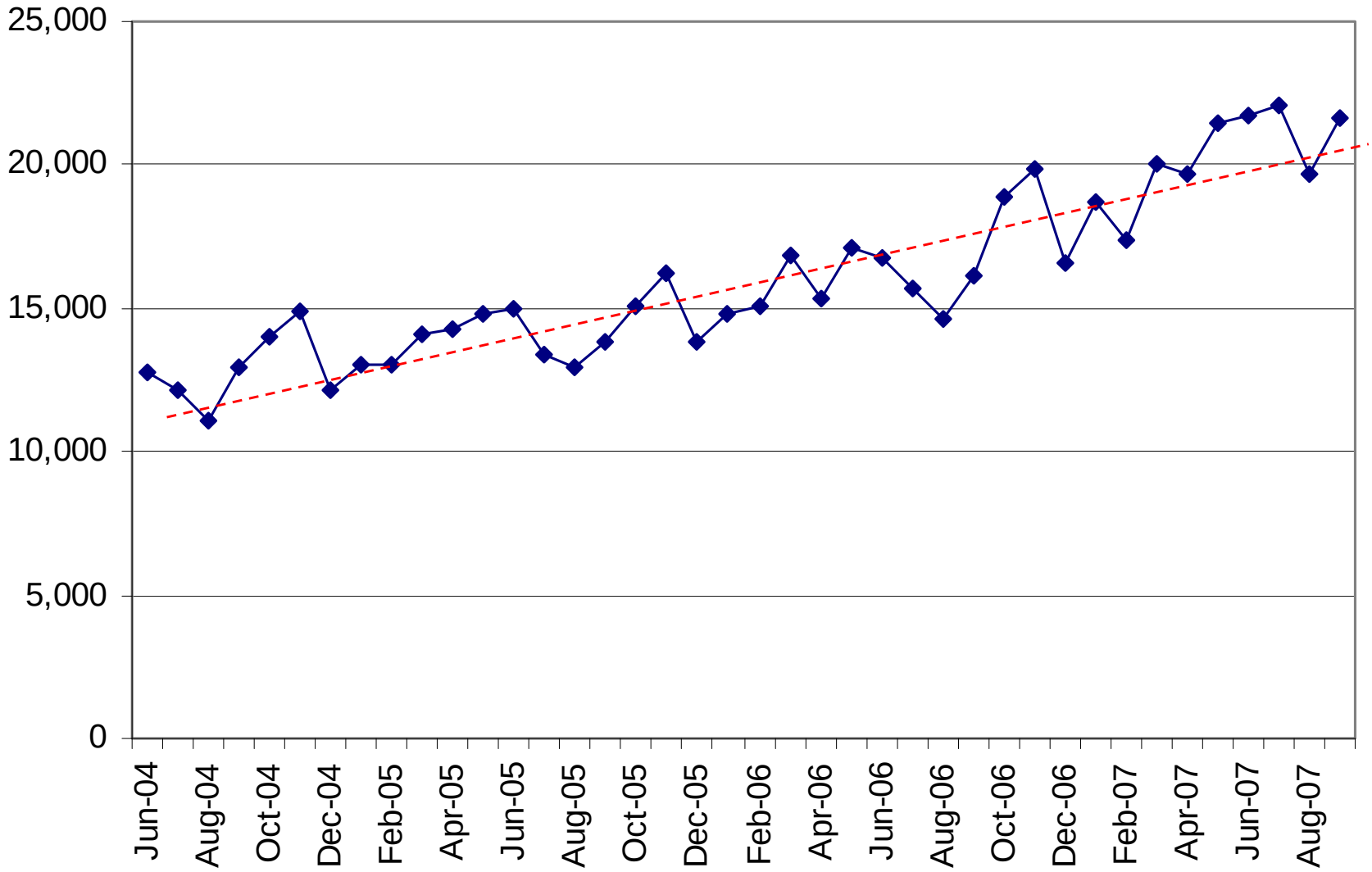
ScienceDirect Article Downloads

- ~1/2 a *billion* overall – millions of downloads every day
- 42 million from physics and astronomy – 4 downloads every 3 seconds

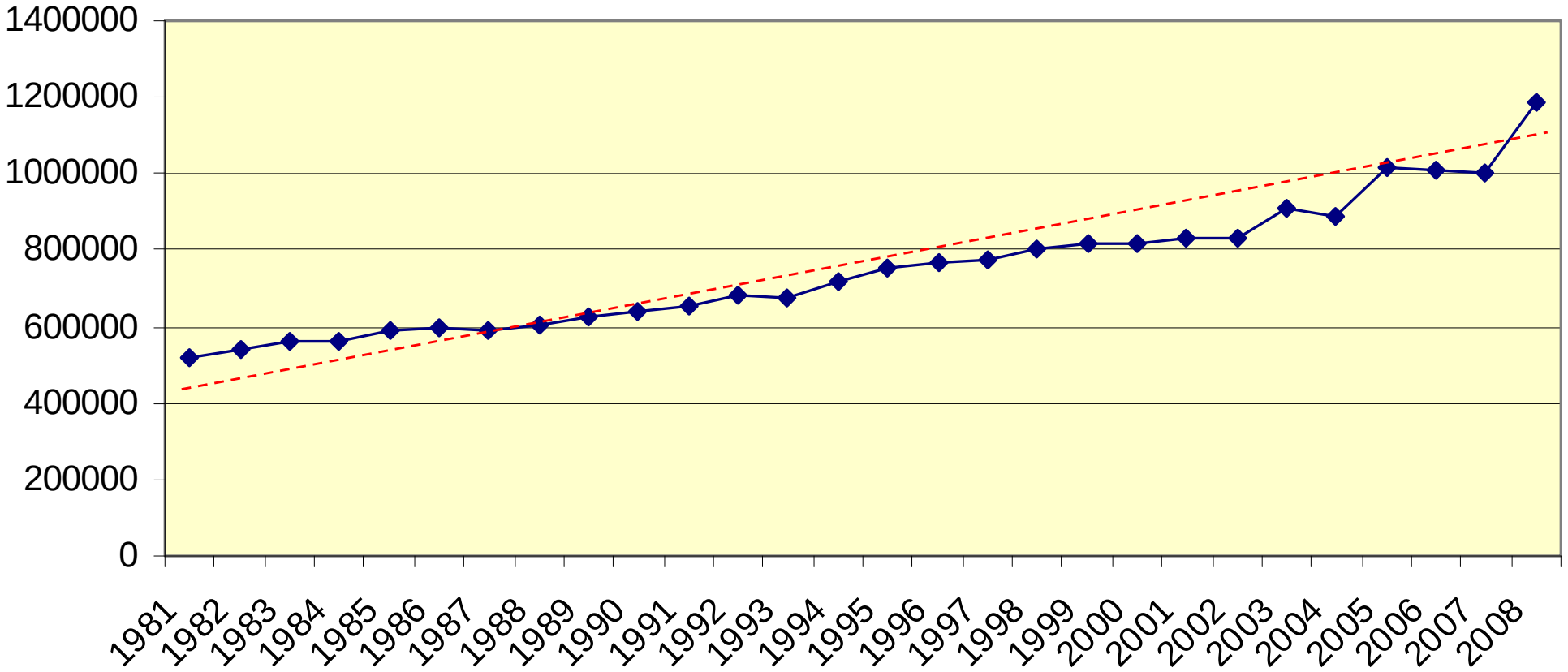


Unique Users of ScienceDirect

- Example: *Surface Science*

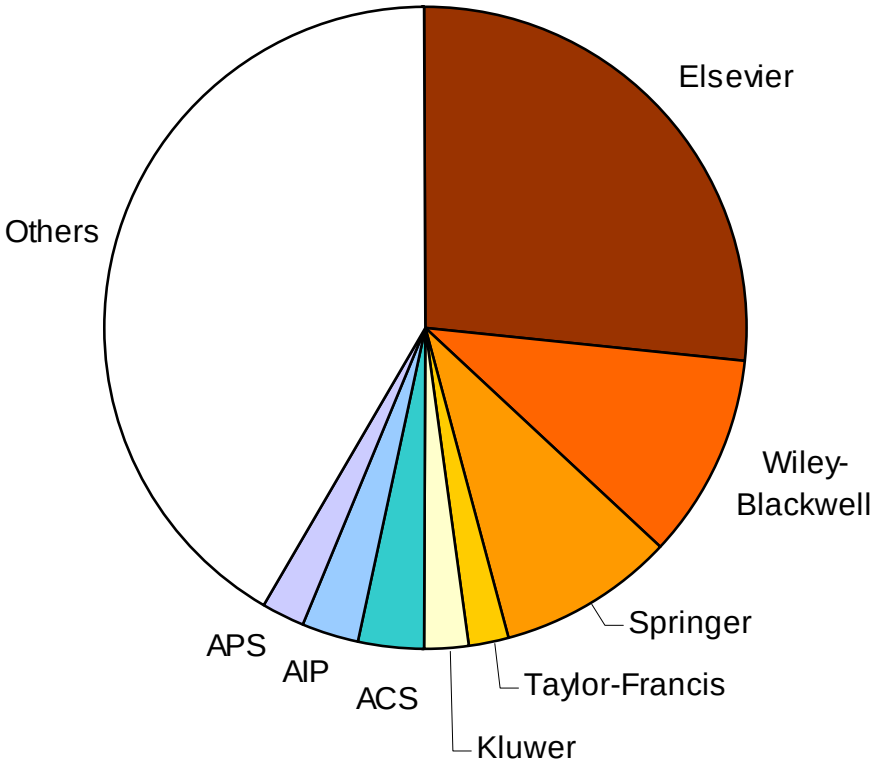


Worldwide – Articles Published



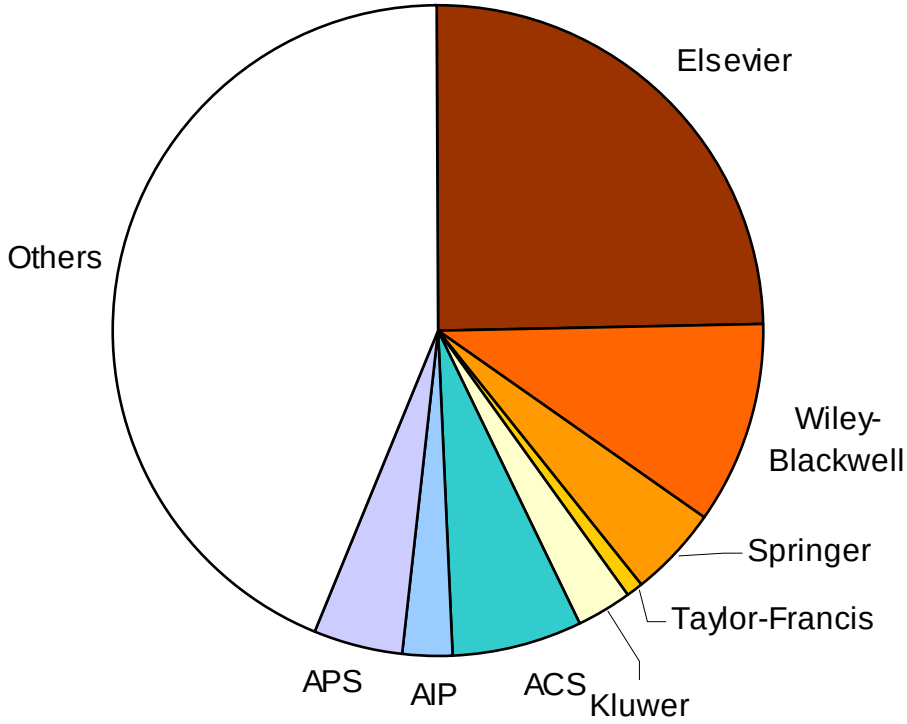
TRENDS FROM JAPAN

Japan – and Science Publishers



Article Share

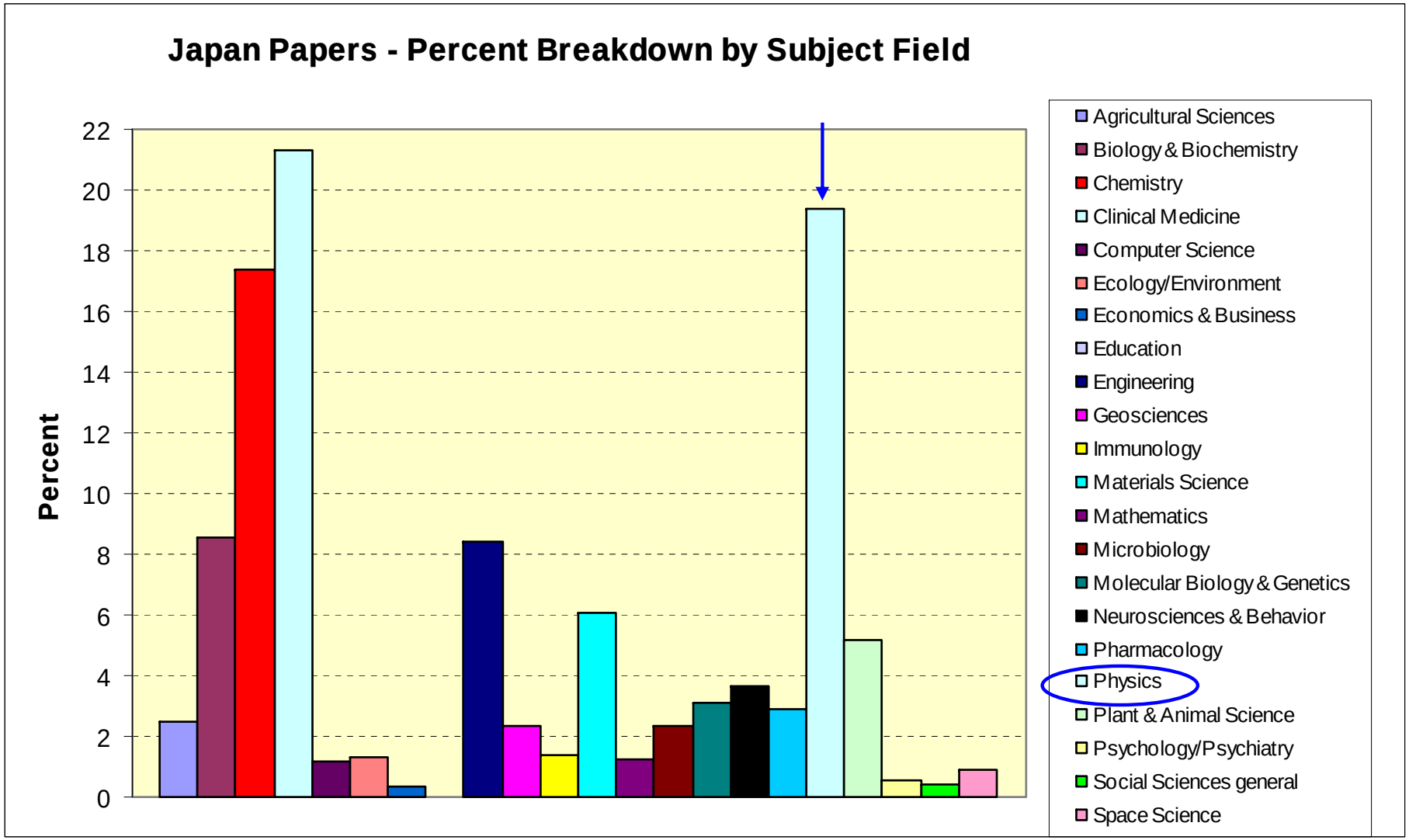
(quantity)



Citation Share

(quality?)

Japan – and Physics Articles

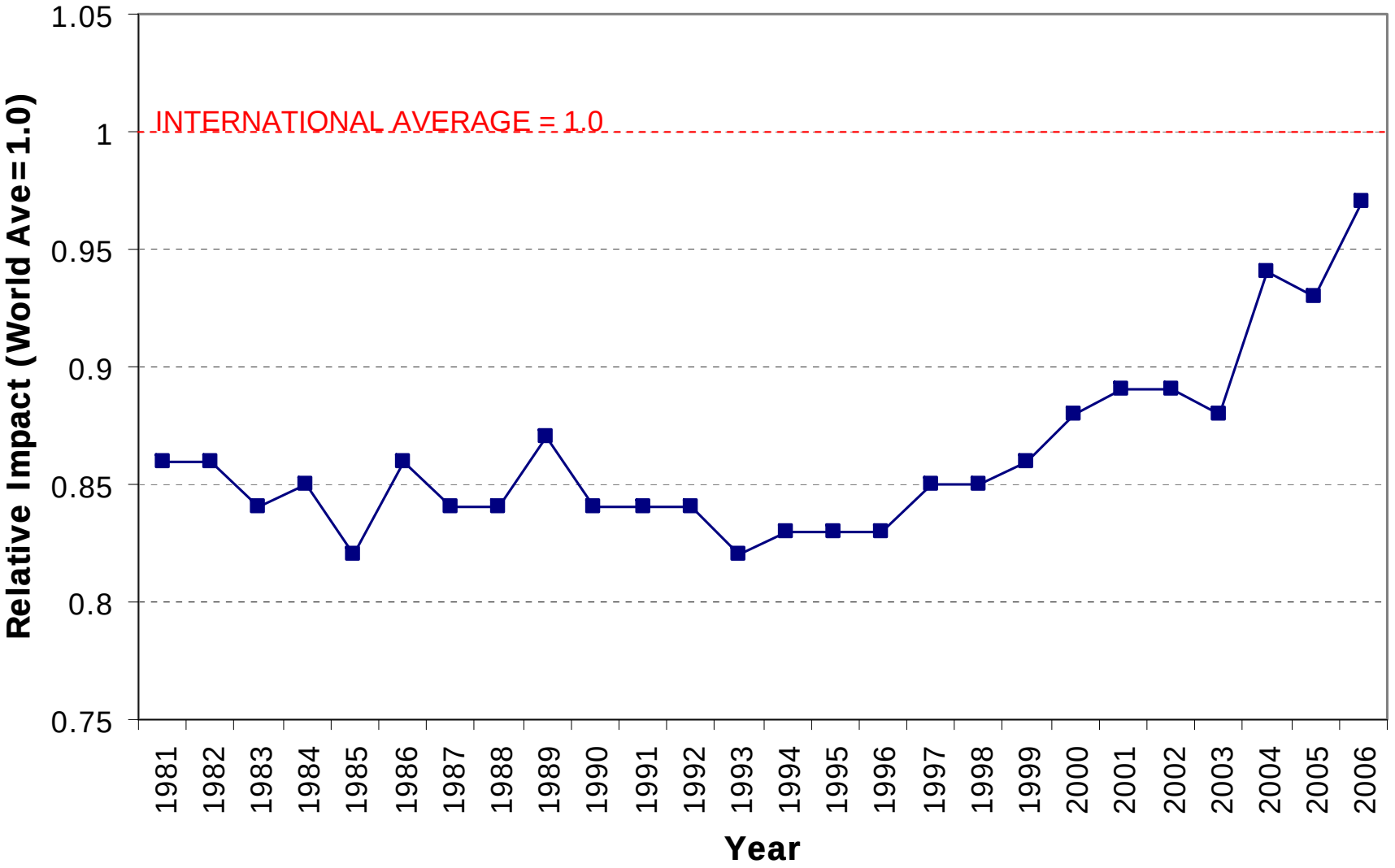


Measuring Quality of Published Articles

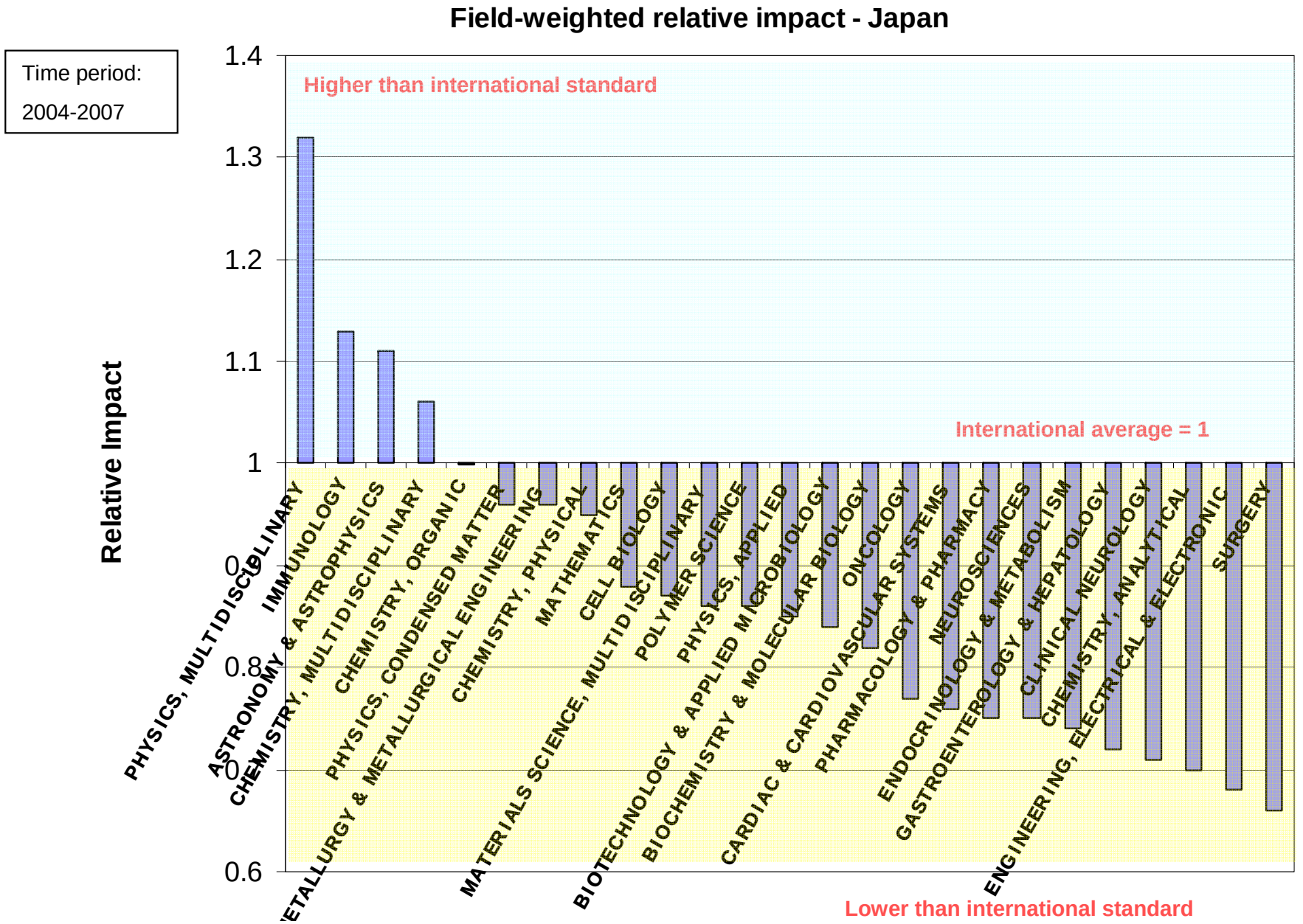
- We consider relative impact (citations) per paper:
  - If the 'world average' for citations to multidiscplinary physics papers is 2.82 over a four year period (2004-2007)
  - And the average for Japanese authored multidiscplinary physics papers is 3.72
  - Then Japanese papers in multidisciplinary physics have a 'relative impact' of 1.32 *(i.e. above the 'world average')*

- We can use this measure to look at trends: per country, per subject area, over time

Japan – all fields of research

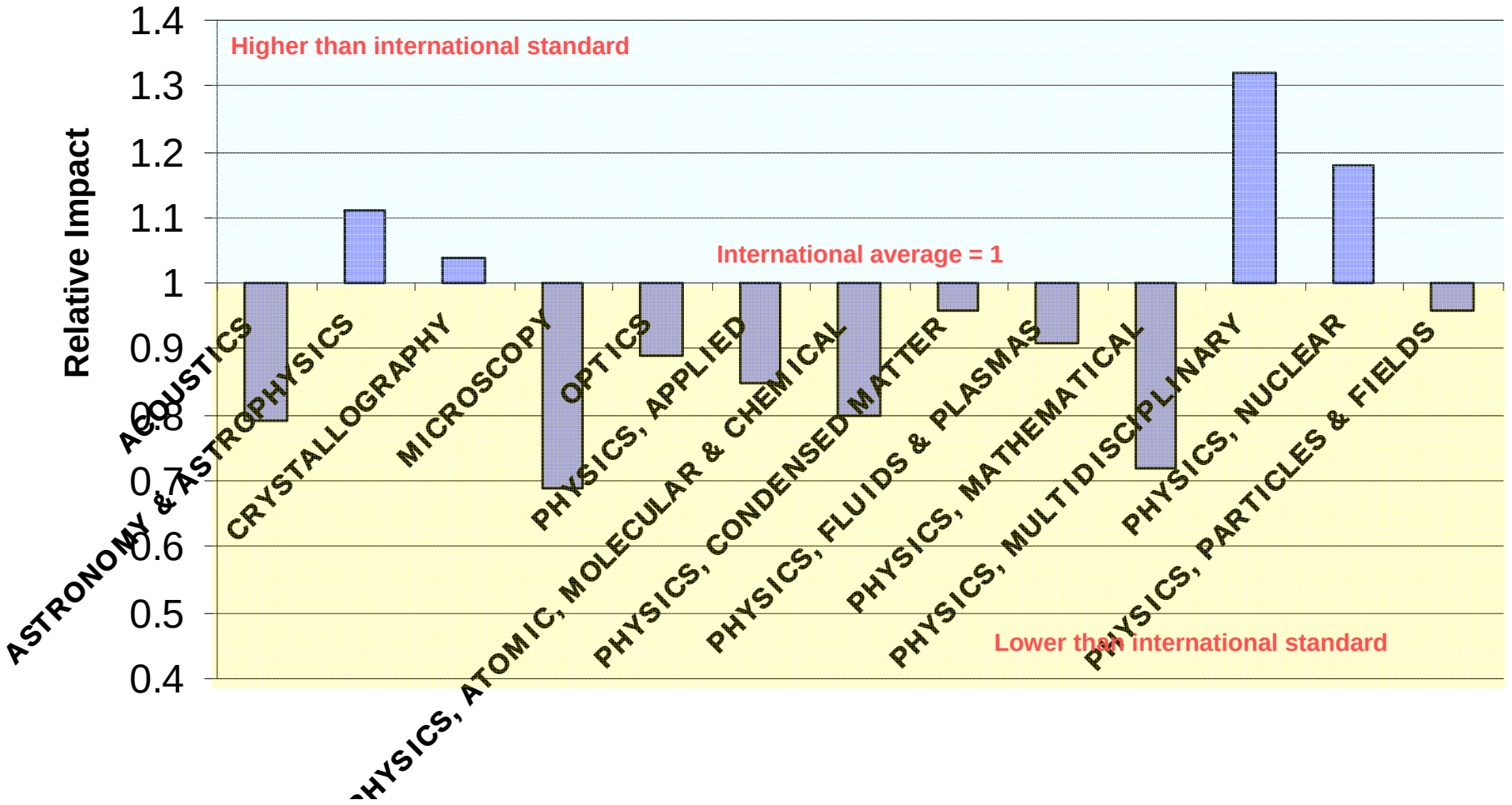


Japan – individual subject areas



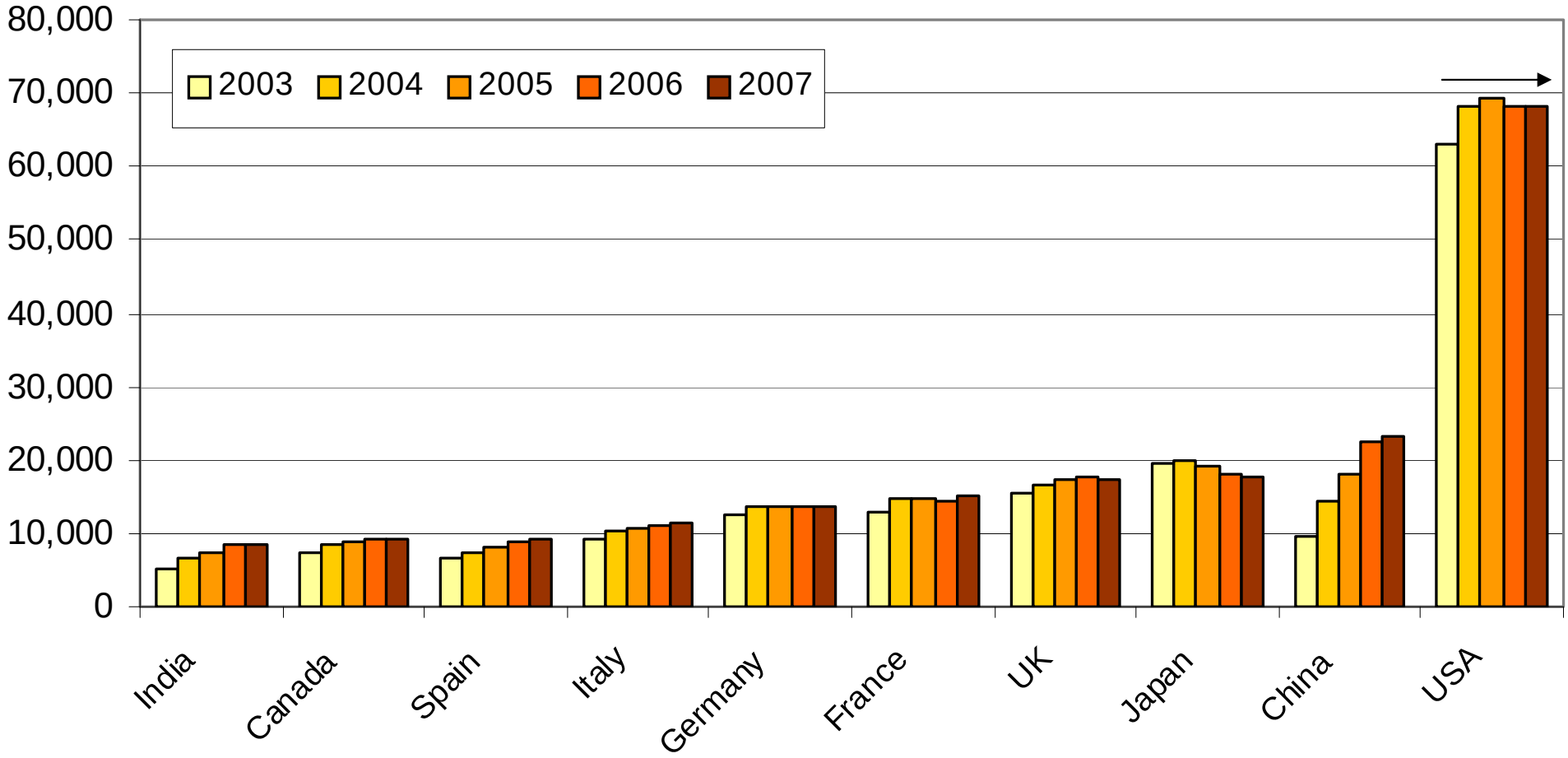
Japan – physics subdisciplines

Time period:
2004-2007



Articles Published by Elsevier

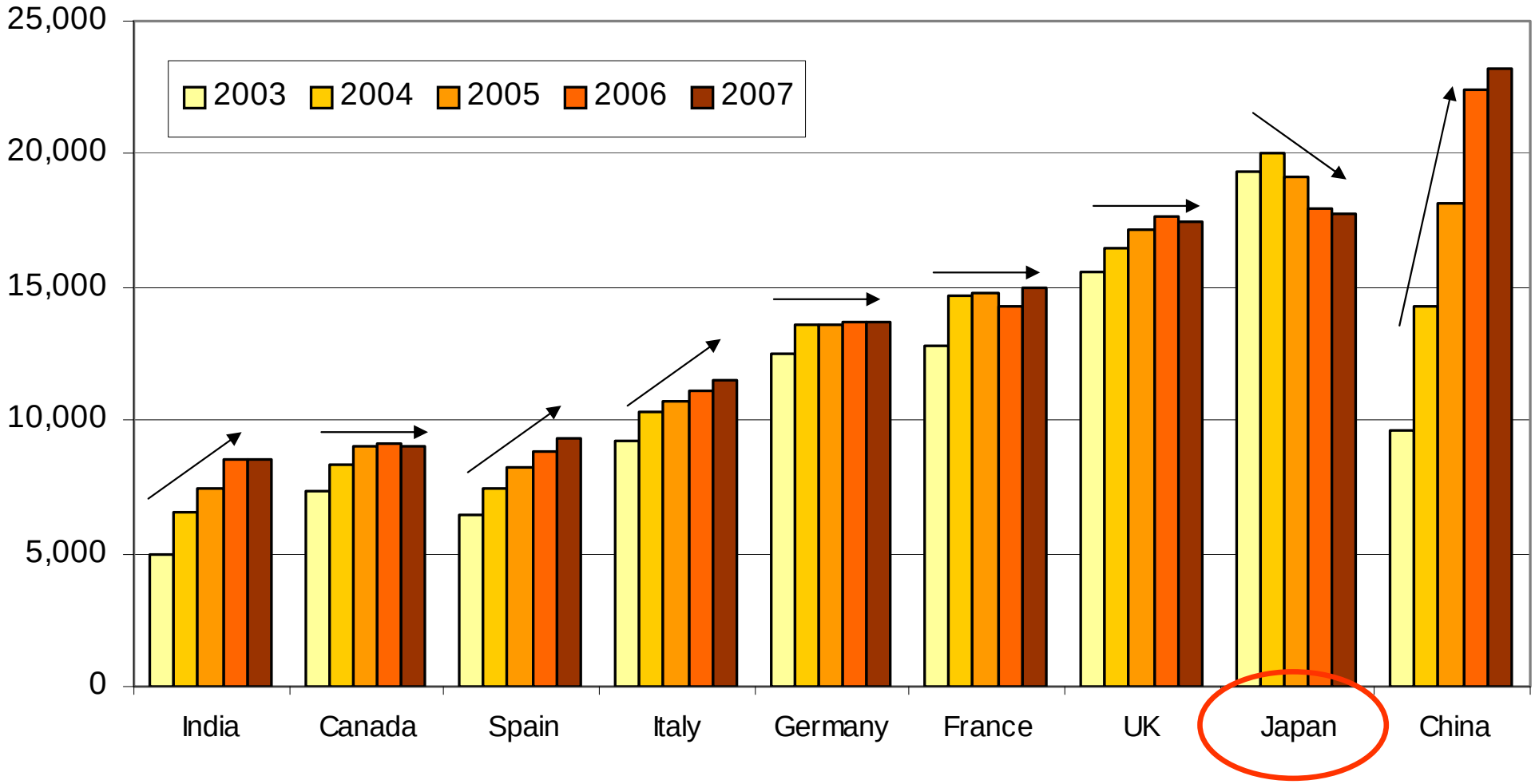
All subjects



TOP 10 COUNTRIES

Articles Published by Elsevier

All subjects



TOP 10 COUNTRIES (excluding USA)

Summary

- Overall, the quality of research papers from Japan is steadily rising
- Physics in Japan is above international standard in terms of citations, although some subdisciplines are lower
- The number of papers published by Japan has dropped slightly in recent years.

Thank you for your attention

beautiful canals

lots of bikes!

culture

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