

How we publish our work in accelerator science and technology

Developing journals
for accelerator physics and technology

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Option 1: Publish in peer-reviewed journals for accelerator-related papers

- ❖ Prestige journals (multi-discipline):
 - Nature (mostly for “advanced acceleration”)
 - Science (mostly for “advanced acceleration” & FELs)
- ❖ High impact physics journals
 - Physical Review Letters, Reviews of Modern Physics, Reviews in Physics
- ❖ Most commonly used
 - Nuclear Instruments and Methods - A, Physical Review - Accelerators and Beams
- ❖ IEEE Transactions (derived from accelerator conferences)
 - Applied Superconductivity, Nuclear Science
- ❖ Other venues
 - J. Inst., J. Plasma Physics (JPP), J. Synchrotron Radiat. (Light sources), J. Vac. Sci. Technol., NIM-B, Rev. Sci. Inst., Science Reports (multi-discipline)
- ❖ Specialty
 - Reviews of Accelerator Science and Technology (by invitation, final issue in press)



How could these journals serve us better?

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- ❖ Mostly for NIM-A and PRAB
 - Increase rejection rates to improve average quality?
 - Decrease time to publication?
 - Decrease time to issue doi (digital object identifier) for quick citation?
 - *Why would these changes make a difference to you?*
- ❖ Are you willing to pay a premium price to publish in a prestige journal (i.e., Nature or Science)? Would you accept embargo until publication?
 - *Why?*
- ❖ Do you favor open (public) review on the web rather than conventional anonymous peer review?
- ❖ PRAB was an experiment as one of the very first Open Access journals.
 - Should our community try another new experiment in publications?

- ❖ JaCOW proceedings
 - FEL Conference, IPAC, Linac Conference, NAPAC
- ❖ Other conference proceedings
 - Cyclotron, Ion Beam, Advance Accelerator Conferences
- ❖ Should some of these have “light peer review?”
 - What would “light peer review” mean?
 - Would it be useful? To whom? Why?
 - What would be the cost?
 - How would it affect copyrights?
 - How does it affect self-plagiarism & double-publication ethics?
 - Who should the publisher be? Commercial or professional society?
 - IOP (UK) is doing a trial



Option 3: Rely on the arXiv.org

Do you get more professional credit for peer-reviews ?

- ❖ Do you submit papers first to the arXiv before sending to a journal?
 - If so in which subject area? *Physics* or *HEP-Experiment*
 - *Physics* includes: Accelerator Physics; Atmospheric & Oceanic Physics; Atomic Physics; Atomic & Molecular Clusters; Biological Physics; Chemical Physics; Classical Physics; Computational Physics; Data Analysis, Statistics & Probability; Fluid Dynamics; General Physics; Geophysics; History & Philosophy of Physics; Instrumentation & Detectors; Medical Physics; Optics; Physics Education; Physics & Society; Plasma Physics; Popular Physics; Space Physics

- ❖ Should arXiv have a separate section just for Accelerator Physics & Technology?

Option 4: Should we have a new journal for accelerator science / technology?

- ❖ Certain classes of technical work don't clear the threshold for our most commonly used journals
 - Papers from developing countries often are in this category
- ❖ Should there be a place for publishing new implementations of standard technology - often with minor modifications?
 - Elsevier started a multi-discipline gold open access journal, Methods X, for that purpose.
 - Publication fee is \$500. The papers do get a real peer review
 - The researchers do need to get some credit in their own institutions and from their own funding agencies
- ❖ Are there other types of work that would benefit from a new journal?
- ❖ Should computational accelerator science have its own journal?