



Workflow at IPAC'25

Presented by

David Button on behalf of IPAC'25

dbu@ansto.gov.au

Science. Ingenuity. Sustainability.

Big thank you to the NSRRC LOC Team



IPAC 2025 Development Contributions



Multiple Affiliation Support
in Indico and Proceedings
Production

CatScan Integration into Indico
Workflow

Maintenance and
improvements to Reference
Search and Generation Tool

Hosting of JACoW Team
Meeting 2023

Basic LaTeX CatScan Checks
and Reports

Support attendance of
Indico and Software
Developer to IPAC'25

IPAC 2025 Proceeding Office Taiwan



Chief Editor:

David Button

ANSTO



Local Team :

Ping-Shun Chuang
Nuan-Ya Huang
Yung-Sen Cheng
Chin-Kang Yang

NSRRC	Editor	Experienced
NSRRC	Editor	Experienced
NSRRC	Editor	Experienced
NSRRC	Presentation	Improving

International Team :

Adriana Rossi
Akihiro Shirakawa
Ana Štajminger
Charline LeCourtilet (IPAC'26)
Cynthia Duarte
Darren Hunter
Dong Eon Kim
Guillaume Lalaire (IPAC'26)
Ivan Andrian
Jan Chrin
Jana Thomson
Joele Mira
Johan Olander
Josh Peters
Julien Pivard (IPAC'26)
Kritsada Kittimanapun
Lu Li
Magdalena Montes
Maurizio Montis
Michel Succar
Narender Kumar
Nicolas Delerue (IPAC'26)
Petr Anisimov
Raphael Mueller
Ruth Rudolph
Staffan Benedictsson
Stefano Deiuri
Takashi Kosuge
Thakonwat Chanwattana
Volker RW Schaa

CERN	Editor	Trainee
KEK	Editor	Experienced
ELI Beamlines Facility	Editor	Trainee
GNAIL	Editor	Trainee
TRIUMF	Author Reception	Improving
CLSI	Editor	Improving
Postech	Editor	Experienced
GNAIL	Editor	Improving
Elettra	Editor	Experienced
PSI	Editor	Experienced
TRIUMF	Author Reception	Experienced
iThemba LABS	Editor	Experienced
ESS	Editor	Experienced
ANSTO (Contractor)	Software Dev	
GNAIL	Editor	Trainee
SLRI	Editor	Experienced
IMPCAS	Editor	Experienced
SLAC	Author Reception	Experienced
INFN-LNL	Editor	Experienced
CERN (Indico)	Indico Developer	
Liverpool University	Editor	Improving
GNAIL	Editor	Trainee
LANL	Editor	Experienced
GSI	Editor	Experienced
DESY	Presentations	Trainee
MAX IV	Editor	Trainee
Elettra	Editor	Experienced
MAX IV	Presentations	Experienced
SLRI	Editor	Experienced
GSI (Retired)	Editor	Experienced

Team Composition	35.3
Chief Editor	1
Trainee Editors	6.3
Improving Editors	3
Experienced Editors	17
Author Reception	3
Trainee Presentation	1
Presentation	2
Tools Support (Indico/CatScan/Ref)	2

Note: IPAC'24 Team Size 39

Region Representation		
Asia	11	
Europe	19	
North America	5	

Gender	
Female	10
Male	26
Not Specified	0



Note: 3 trainees self supported accommodation and per-diem

Proceedings Office Activities

- Paper Editing
- Author Reception
- Title Author Check
- Quality Assurance
- Presentation Management
- Slide Editing

Suggested Staffing

Role	IPAC'24	IPAC'25
Editor in Chief	1	1
Editor + QA	27	21
Presentation Management	4	3
Author Reception	4	3
Support/Development	2	2
	38	30
Reduction		21%
IT Support	1	1

Estimated Paper Processing Power = papers per day x editors x workdays
= 5.5 x 21 x 8
= **924**

Estimation of Papers

■ IPAC'24

- Initial Abstracts = 1,691 including 43 invited Abstracts
- Final Papers Published 1,050
- USA very expensive
- VISA and travel issues may have also resulted in lower attendance.

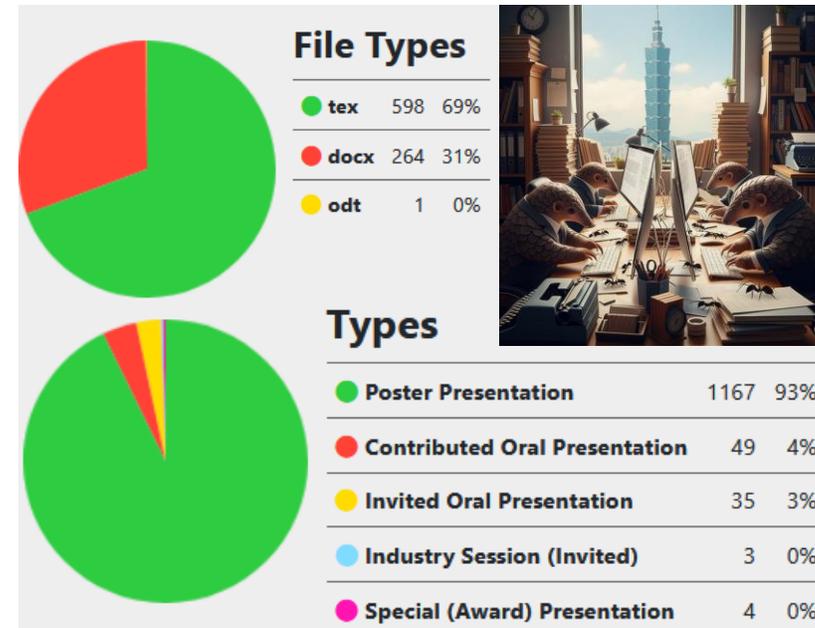
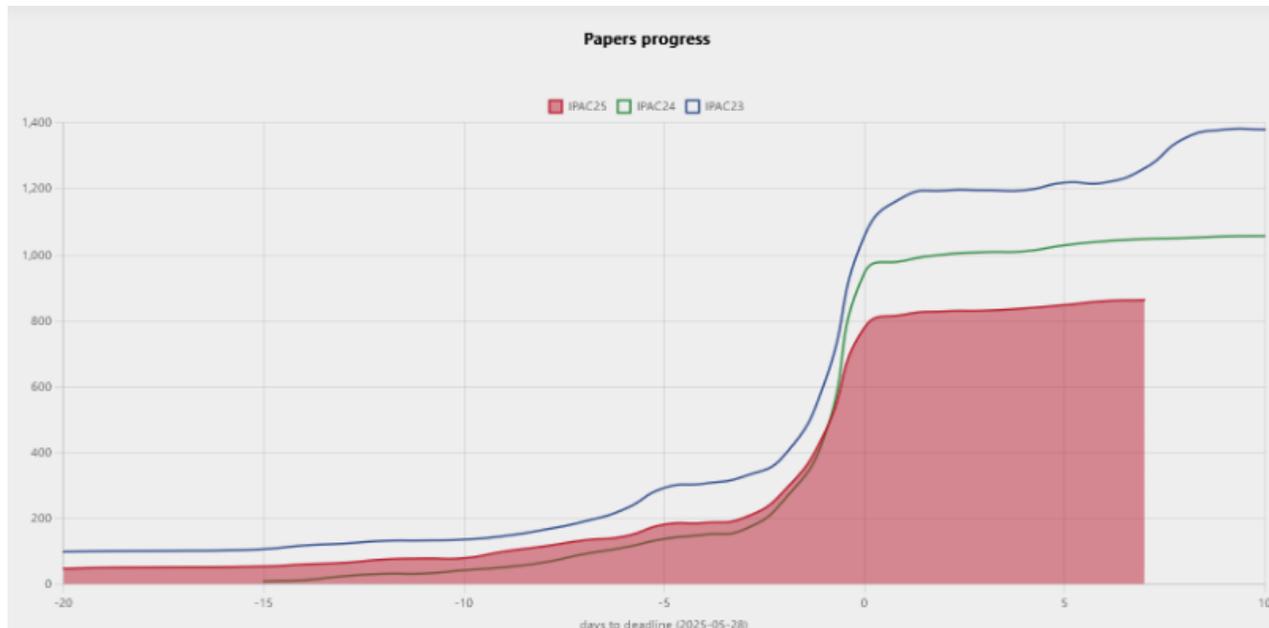
■ IPAC'25

- Great degree of uncertainty, what is the LOC thinking?
- 10th December Abstract Submissions Deadline
- Historically there is a 20% reduction in submitted abstracts, IPAC'24 saw a 38% reduction....
- Current processing power is representing a 12% reduction on IPAC'24
- IPAC'23 saw 22% reduction, it was suggested the 38% was due to some countries unable to travel to USA

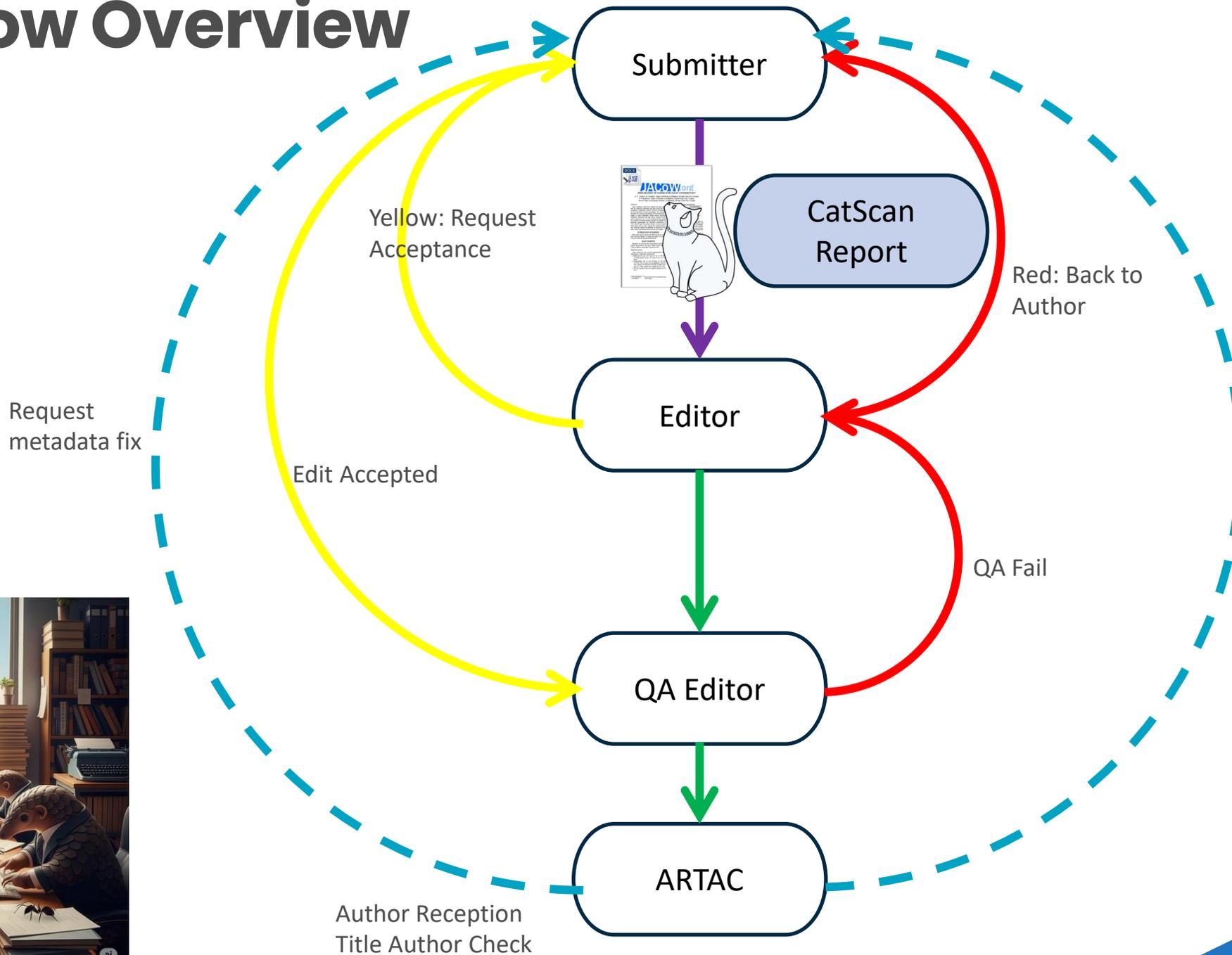
Thinking about your Workload

- Challenges with Predictability of Submission Numbers

	Initial Abstracts	Published Papers	Reduction
IPAC'23	2,270	1,402	38%
IPAC'24	1,691	1,050	38%
IPAC'25	1,735	≈ 870	49%



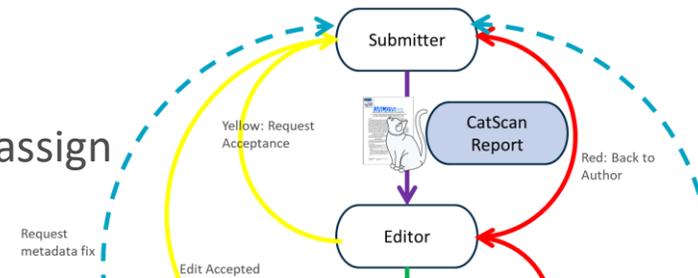
Workflow Overview



Early Red Dotting

CatScan Stats

Assign, Judge, then Unassign



R # [redacted] June 2025 00:35 Hide

BibTeX file (only for LaTeX papers) PDF Source Files

No files uploaded

MOPB005.pdf MOPB005.docx

Supporting files for papers

MOPB005_Figure5.png
MOPB005_Figure1.png
MOPB005_Figure2.png
MOPB005_Figure6.png
MOPB005_Figure3.png
MOPB005_Figure4.png

TC06: Reference or Reference formatting incorrect (missing, multiply defined, wrong order, indentation, hyperlink, inconsistent, wrong, incomplete) Download ZIP

TC09: Equation/Eq., Figure/Fig., Table wrongly used in text (lower case, abbreviated, period missing), bad placement

CatScan JACoW left a comment · 3 June 2025 00:36

CatScan has been checked for common formatting problems. See CatScan Report

Please attempt to resolve any errors that were found. You can re-check your paper using CatScan before re-submitting.

Cat Scan

JACoW.org

Validator Resources

Report for MOPB005.docx

Cat Scan Word Validator - Help and Usage Guidelines

Score



Show all scores

Errors

Warnings

Figures

Help

Rules for Figures

Use Breakdown for Figures

No.	Caption	Unique	References	Text
1	Figure 1:	✓	• Fig. 1 • Fig. 1	Figure 1: Overview SLS 2.0 ring and key components.

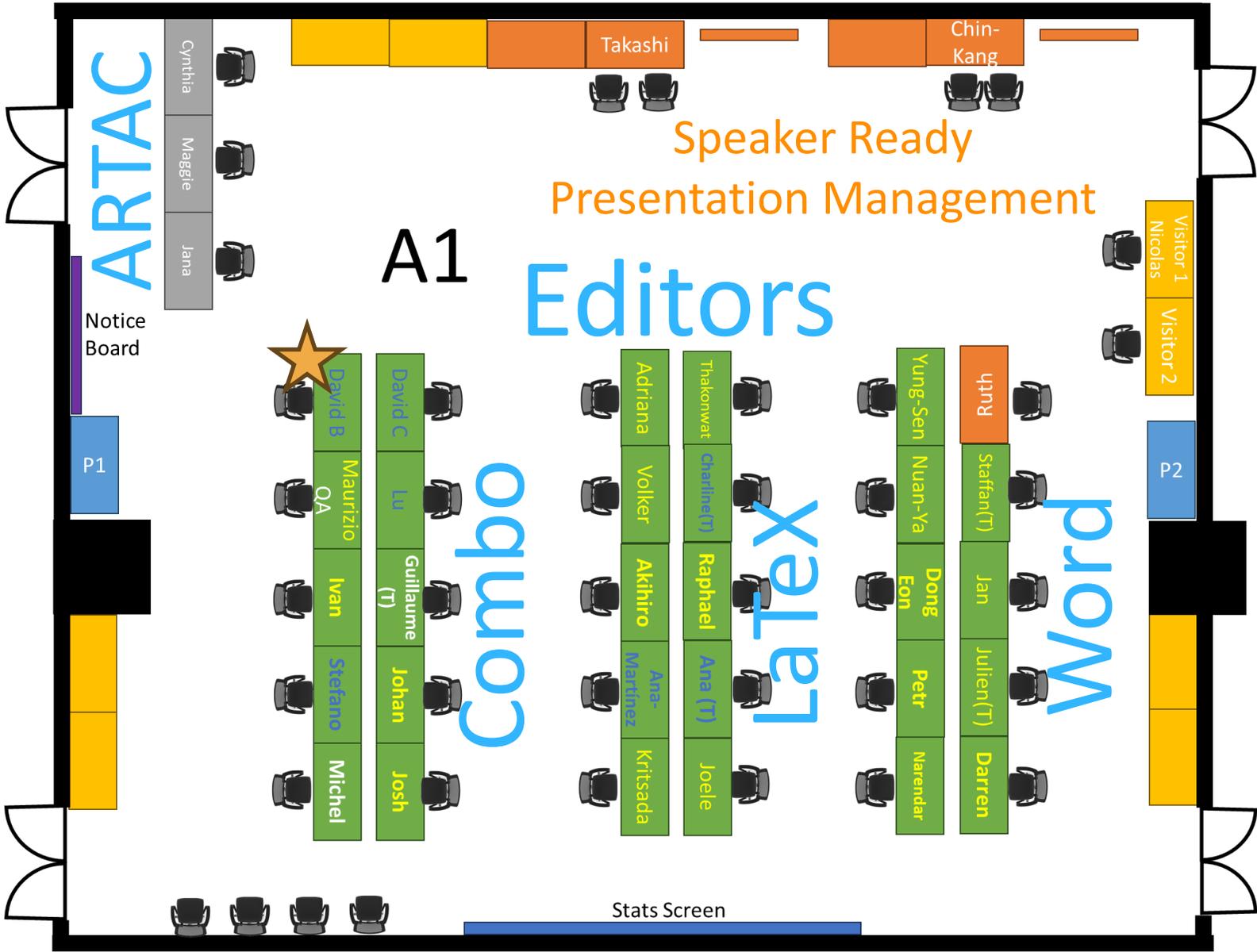
Word

- 42% of Word contributions replied with uploads to the CatScan Editor resolving 4,636 errors

LaTeX

- 38% of LaTeX contributors replied with upload to the CatScan resolving 1,053 errors

Proceedings Office Layout



Pick-up a Paper *(Thanks Ivan)*

Get next paper



Filter

Enter

ID	CODE	TITLE	REV.	STATUS	EDITOR
5	MOYA1	This is a proposal for an invited oral presentation: Edited by Admir		Not submitted	
8	MOXA1	Third invited oral presentation proposal on 2 March	2	Rejected	
9	TUYB1	This is another dummy submission		Not submitted	
	MOXA2	This is the first dummy invited oral proposal using Tracks instead of		Not submitted	
	WEXA2	The JACoW collaboration enters a new phase with Indico	2	Ready for review	
	WEYAA1	soccermatrix joins forces with the COVAX initiative	2	Ready for review	
18	WEXA3	ALBA CONTROLS SYSTEM SOFTWARE STACK UPGRADE	3	Needs submitte...	



Note 1: Filters must be set for the type of source file you are processing.

Note 2: LaTeX able editors asked to only work on tex documents initially, otherwise Word editors will be depleted early.

Note 3: The traps of working on your own colleagues' papers.

<https://ipac-docs.jacow.org/PaperEditing/Editor/assign/>

PAPER

Overall document

Add item to group

- Crop paper first with Acrobat menu tool
- External margins
- Columns separation (toggle on/off column guides)
- Number of pages (+1 only for references)
- Fonts Embedded (except Type 3)

First page

Add item to group

- Authors' list: font - institute - grouping
- Title: All caps centered except sym
- Footnotes: email optional. Check position + margins + size

Headings (no numbering)

Add item to group

- SECTION HEADING
- Subsection Heading
- Third Level Heading (inline)

Main text

Add item to group

- No Hyperlinks.
- Figure/Fig./Table together with number

Figures

Add item to group

- Unique + sequential numbering.
- Caption below image
- Figure X: Sentence case
- Centered text (single line) or justified (multi-line).
- Referenced in text (sequential).

Tables

Add item to group

- Unique + sequential numbering..
- Caption above table
- Table X: Title Case (if Possible)
- Centered text (single line) or justified (multi-line)
- Referenced in text (sequential)..

Equations

Add item to group

- Inside margins
- Unique + sequential numbering (optional)

References

Add item to group

- Unique + sequential numbering...
- Well aligned ([9] vs [99])
- Referenced in text (sequential)...
- No Hyperlinks..
- doi://10.12345/fancy-123: JACoW conferences: must have - journals + books nice to have
- Journal names + Proceedings in italics
- Check with RefDB/DOI.org/google search

Printed version corresponds with screen

Edit!



New Word Template & PDF Generation

Native JACoW Page Size
(Width A4, Height US Letter)

Generation of PDF using integrated Acrobat Ribbon in Word

[A SHORT DOCUMENT IN JACoW STYLE*]

A. N. Author¹, B. Coauthor^{1,2}, C. Contributor²
¹Name of Institute or Affiliation, City, Country
²Name of Institute or Affiliation, City, Country

Abstract
 The abstract acts as a stand-alone entity and, as such, should not include citations. Any acronyms should be expanded on their first occurrence, both in the abstract and in the rest of the paper.

Table 1: Table Heading

Column 1	Column 2 [mm]	Column 3 [GeV]
Attribute A	100.2	137.0
Attribute B	20.3	9.1

MANUSCRIPTS

This short document exemplifies the use of the JACoW formatting style in Microsoft Word, thereby highlighting the most salient features of the JACoW template. It is provided principally to facilitate authors in expediting a correctly formatted JACoW manuscript in Word. It is expected that authors will have already familiarized themselves with the contents of the "Preparation of Papers for JACoW Conferences" document, available from the JACoW website.

Bulleted Lists
 A list has left (0.33 cm) and hanging (0.36 cm) indentations:

- Item one.
- Item two.
- Item three.

Figure Captions
 Figure captions are placed below the figure and centered if on one line (Fig. 1) but justified if spanning multiple lines (Fig. 2).

Figure 1: A one line figure caption is centered.

Figure 2: A lengthy figure caption that spans multiple lines is justified.

Note the colon ":" after the figure number and the period "." at the end of the caption.

Table Headings
 Tables should be neatly formatted with a heading placed above the table, and centered if on one line, as in Table 1, but justified if spanning two or more lines. A description of the table contents should be confined to the text of the paper and not in the table caption.

Equations
 Equations should be indented and centered, as far as is possible:

$$C_B = \frac{h^2}{3e_0 m c} = 3.54 \mu\text{eV} \quad (1)$$

Units
 Units should be written using the standard, roman font, not the italic font, as shown in Eq. (1). An unbreakable space should ideally precede a unit. Some examples are: 3 keV, 100 kW, 7 μm .

References
 In the interest of promoting complete and uniform citations, the IEEE Editorial Style for Transactions and Journals has been adopted. References [1, 2] exhibit this style. When citing a periodical, the ISO 4 standard for the abbreviation of the journal should be used. Please consult Annex B of "Preparation of Papers for JACoW Conferences" for details. The onus is on authors to pay attention to the details of the said style to ensure complete, accurate and properly formatted references. Papers published in recent JACoW proceedings have each been assigned a digital object identifier (DOI). Its insertion in a reference further facilitates the import of references into bibliographical databases and is strongly encouraged. Hyperlinks to DOIs ONLY (coloured Blue, Accent 1, 25% Darker) are encouraged. JACoW conferences that stipulate a page number limit typically exempt the reference section from this count.

CONCLUSION
 This short document exemplifies use of the JACoW format style, the parameters of which are succinctly summarized in Table 2 of the full template.

REFERENCES

[1] A. Alpha and B. T. Beta, "Novel techniques for future TeV electron accelerators", in *Proc. IPAC'23*, Venice, Italy, May 2023, pp. 57-59. doi:10.18429/JACoW-IPAC2023-PAPER01

[2] A. Alpha et al., "A new 13 GHz electron linear accelerator", *Yund. Instrum. Methods Phys. Res. A*, vol. 12, no. 6, pp. 127-136, 2024. doi:10.1016/j.nima.2024.170083

* Work supported by ... This information must be within the text and column margins.
 † email address

The screenshot displays the Microsoft Word interface with the Acrobat ribbon active. The ribbon includes options for 'Create Adobe PDF', 'Create and Share', 'Review and Comment', and 'Create and Run Action'. A 'Save Adobe PDF File As' dialog box is open, showing the file path 'David - ANSTO > IPAC25 >' and a list of files. The 'File name' field contains 'A SHORT DOCUMENT IN JACoW STYLE' and the 'Save as type' is set to 'PDF files'. The dialog also shows 'View Result' and 'Restrict Editing' checkboxes, and 'Options', 'Save', and 'Cancel' buttons at the bottom.

Figure 2: A lengthy figure caption that spans multiple lines is justified.
 Note the colon ":" after the figure number and the period "." at the end of the caption.

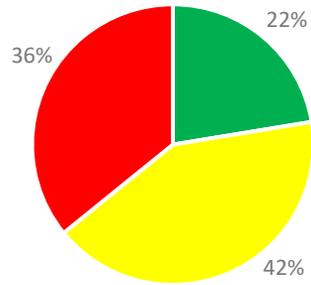
Table Headings
 Tables should be neatly formatted with a heading placed above the table, and centered if on one line, as in Table 1, but justified if spanning two or more lines. A description of the table contents should be confined to the text of the paper and not in the table caption.

[1] A. Alpha and B. T. Beta, "Novel techniques for future TeV electron accelerators", in *Proc. IPAC'23*, Venice, Italy, May 2023, pp. 57-59. doi:10.18429/JACoW-IPAC2023-PAPER01

[2] A. Alpha et al., "A new 13 GHz electron linear accelerator", *Yund. Instrum. Methods Phys. Res. A*, vol. 12, no. 6, pp. 127-136, 2024. doi:10.1016/j.nima.2024.170083

Judging paper

Initial Judge Status



Green Yellow Red

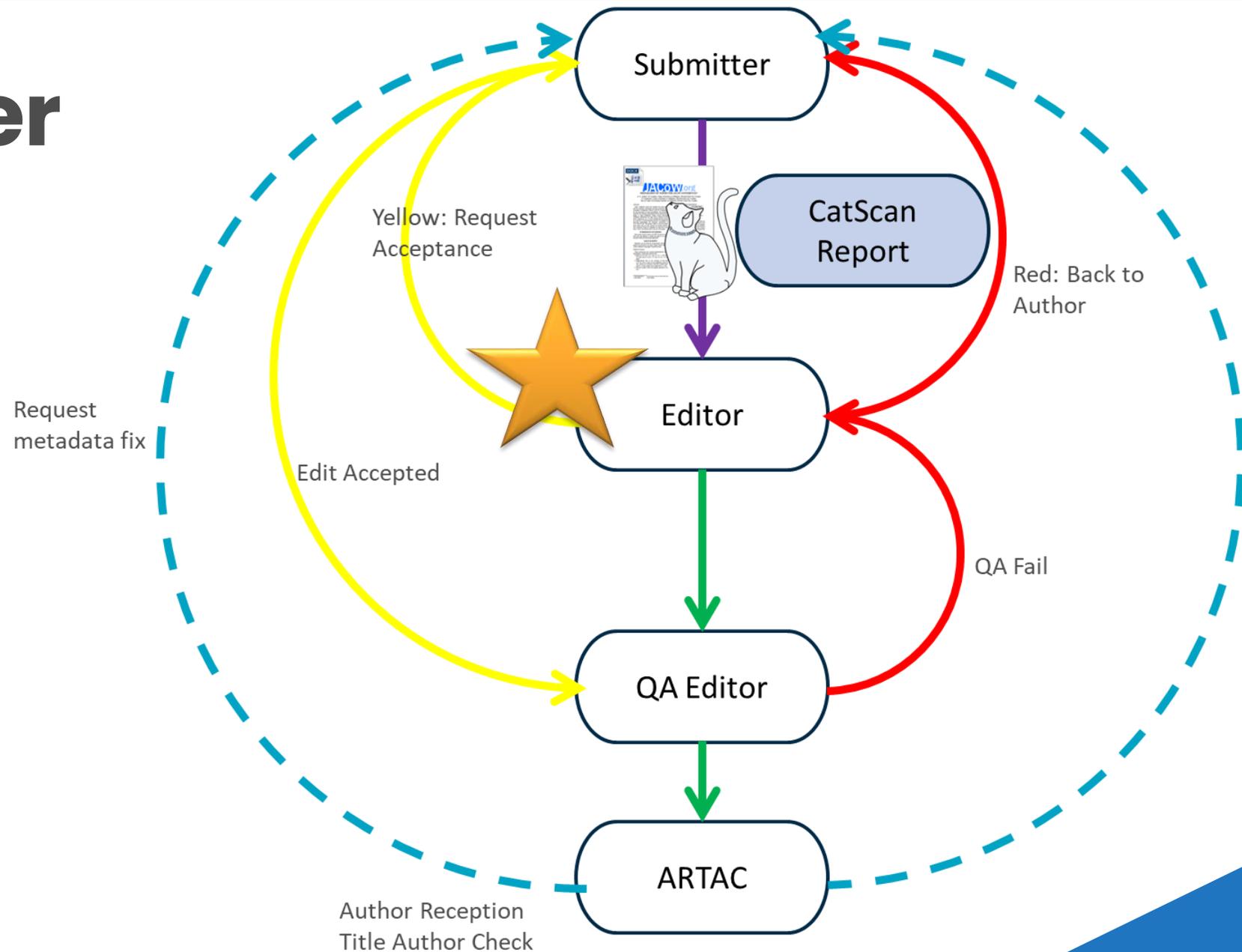
Accepted

Needs Changes

Needs Confirmation

Ready for Review

Assigned to an Editor



Paper QA

QA Editor applying filter, Tag **QA02**

List of papers

Assign ▾ Assign to myself Unassign Comment Judge ▾

Download all files Export as JSON

ID	CODE	TITLE	REV.	STATUS	Tags
18	TUYN1	Electron-Ion Collider status		Accepted	
106	WEXN1	Upgrade of KEK electron/positron Injector Linac using pulsed ...		Accepted	
176	FRZD1	Latest achievements in femtosecond synchronization of larg...		Accepted	
420	WEPB113	Design of an online adjustable waveguide coupler for the TM...		Accepted	
424	MOPB054	Evaluation of coating thickness and thermal deposited powe...		Accepted	
451	MOPB101	Bayesian optimization for the local bump injection in the HLS...		Accepted	
456	MOPS004	Longitudinal hollow electron beam		Accepted	QA01
485	TUPM095	Coherent high-harmonic generation with laser-plasma beams		Accepted	QA02
497	THPS030	Auxiliary tools for TPS operation		Accepted	QA03
499	LMPB066	Evaluation of fast algorithms to calculate dynamic and sta...		Accepted	TC00

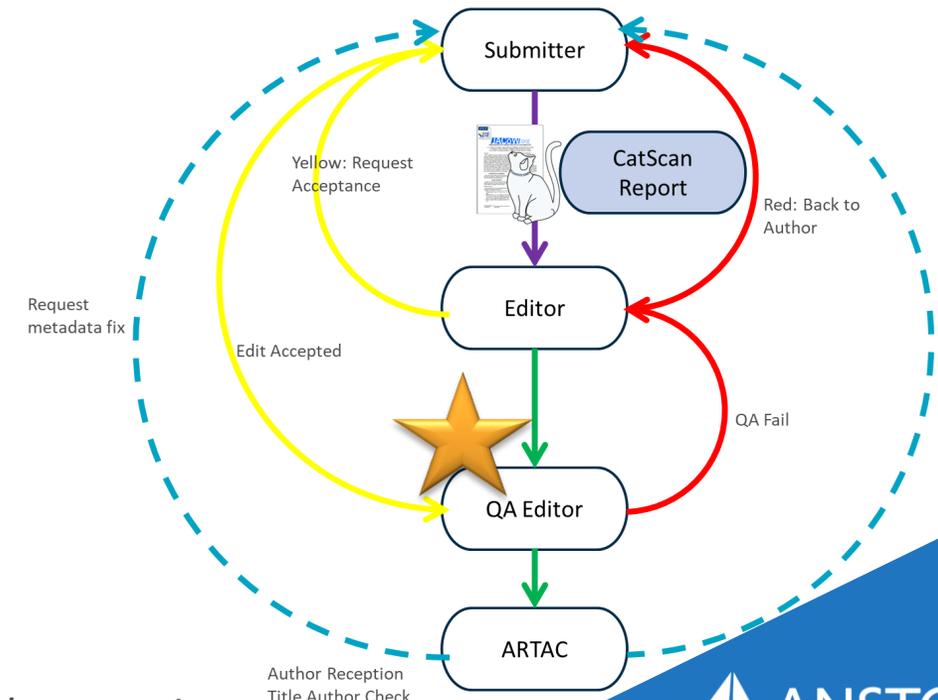
Filter: Enter #id or search string

Tags: QA02

Clear all filters

- + Editor
- + Has updates
- + Keywords
- + Session
- + Status
- + Tags
 - MP03
 - MP04
 - QA01
 - QA02**
 - QA03
 - TC00

An adjustment to only QA Editor print papers
(Prevent duplicate and missing printouts)



<https://ipac-docs.jacow.org/PaperEditing/IPACs/IPAC25/#qa-editor>

- Future feature request for cleaner concurrent QA'ing, allow greater parallel processing

Presentation Processing

(IPAC'24 Approach Adopted)

SLIDES

- Presentation managers are slides editors
- Same basic editing process
- Indico comments document the process



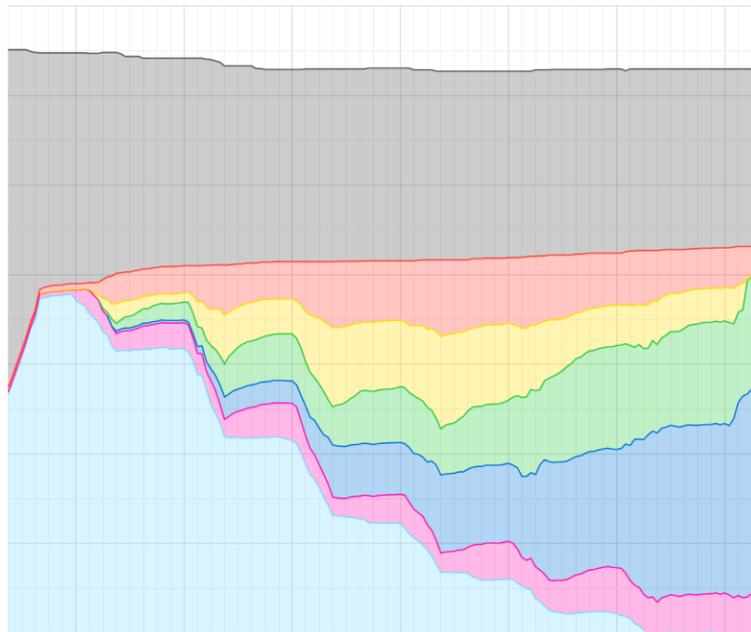
SLED

IPAC 2025 Proceeding Office Taiwan

Performance of team

IPAC25 Proceeding Office Status

15:50:21



Ready for processing

5

< 1%

Assigned to an Editor

76

Paper successfully processed

717

QA OK (-194)

73%

Please check your e-mail

6

62%

Please check your e-mail

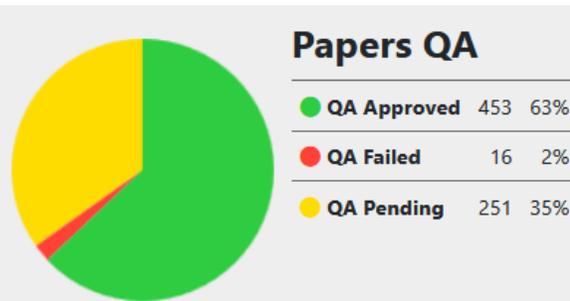
59

(91% of available)

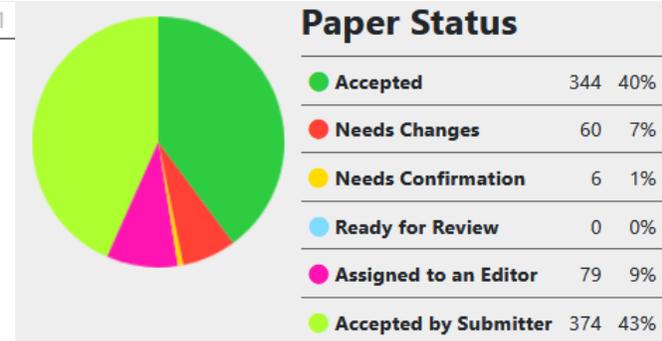
No valid files uploaded yet

396

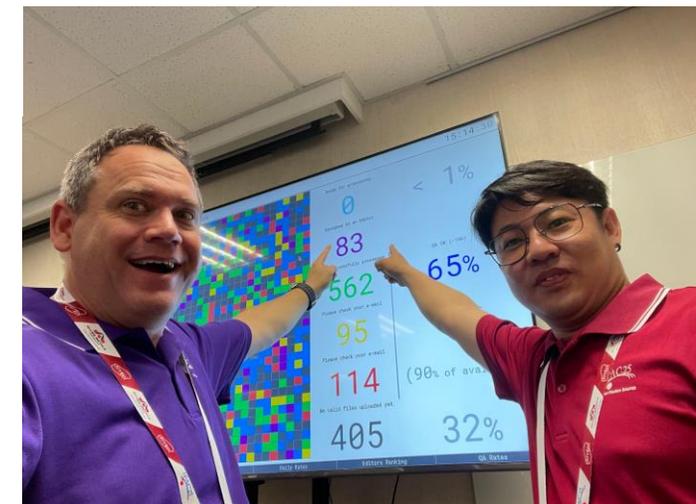
31%



As of 3:00pm



Wednesday 3:40pm



* All editors were able to have a day off

Some Points of Learning

Workflow – Roll Backs and Re-uploading as opposed to QA Failing papers

- Hang over practice from the SPMS days, familiarisation on how to allow re-uploading.
- Found that many editors were rolling back in many situations where fails are needed to allow upload again.
- QA fail papers saw many editors trying to roll-back even though QA fail had been put in place which is a “human factor”.

Printing

- Inconsistent printing practice, and not following printing instructions resulted in duplication, and absence of printed paper.
 - This led to confusion and wasted time in QA and Author Title Check.
 - Lost opportunity to process QA and Title Author.
 - Confusion and problematic bespoke systems trying to track print papers which wastes Author reception time, and can make a meal out of running tracking systems.

High Red Rates and Stockpiles of Papers

- Some editors can fail papers Red too quickly resulting in a large backlog.
- Stockpiling of papers of a particular type or particular organisation led to some editors with a big backlog.
- EiC needed to start releasing some papers from some editors who had a large stockpile to allow underutilised editors to clear the work.





QA Workflow

- Suggests
 - QA from the start as much as possible, but Chief Editor will be very busy.
 - QA Editor are the only editors who are to print papers.
 - Indico to have the ability to assign QA paper to an Editor to lock out others.
 - Workflow must enable concurrent QA editors without need to have alternative workflow management.

Missing Contribution Uploads – Email Trap

- Indico treats everything in the program including prizes etc. as a contribution. Thus, using the sends message to missing contributions is a useless feature generating heaps of confusion especially for Student Session posters as currently there is no additional filtering.
- This needs an Indico tweak to refine the feature to allow filtering include or exclude.
- Email features can be evil if not understood...



Author Reception

- Title Author Check

- Opportunities

- › Verification check points in Indico to prompt authors before upload is enabled.
 - › Email out to all contributions suggesting prior to upload deadline to request all authors to update authors and affiliations in Indico and on the papers. (Also reminded number of pages, and references only)
 - › System to manage this workflow needs to allow concurrent processing without separate paper systems.

- Permissions to change Title Authors not by default given with the role, this had to be changed under the protections I believe.

Snowballing of issues



Template Change

Page Size not recognised
CatScan and Cropping Script

CatScan Updated

Cropping Script Updated

1 in 8 PDF with Wrapping Error

... were discovered and resolved. When the beam current was increased to 400 mA, we encountered problems due to the beam induced heat load in two in-vacuum undulators operating at high beam current. The reasons of beam induced heat load were attributed to the impedance of deformed tapers in the cryogenic undulator and the short bunch length in TPS storage ring. The improved design of tapers solved the problem. In the phase-II beam commissioning, two KEKB-type HOM-damped superconducting RF cavities adapted for TPS [3] were installed to replace those two normal conducting RF cavities. The KEKB-type superconducting RF cavity for TPS is shown in Fig. 2. The vacuum chambers of TPS storage ring are comprised of 24 arcs and 24 straight sections. The length of each arc is 14 m which requires a large I-beam hanger to lift it. There are two bending magnet chambers in each arc [4]. When the beam current was pushed over 160 mA, an abnormal increase of

pichou@nsrc.org.tw

Cropping Script Updated

Reprocessing of around 130
IPAC'25 papers

User Errors

- During IPAC'25 there was a contribution which was renamed after files had been uploaded
- This led to the PURR tool encountering errors while trying to generate the final proceedings
- As EiC don't forget to assign all papers to yourself at the end of the conference

Visual Check of your Proceedings

Case Sensitive Searches on Final Proceedings

MHZ, GEV, MEV, KHZ, kHz, KV, KEV, TEV, etc..

MHz, GeV, MeV, kHz, kHz, kV, keV, TeV, etc...

I was able to weed out numerous missed title errors using the search on the final proceedings.

In my experience to majority of inconstancies was the treatment of sub-section heads.

16th International Particle Accelerator Conference, Taipei, Taiwan
JACoW Publishing
ISBN: 978-3-95450-248-6 ISSN: 2673-5490 doi: 10.18429/JACoW-IPAC25-TUPB052

LASER WAKEFIELD ACCELERATOR-DRIVEN PHOTONUCLEAR REACTIONS FOR THE PRODUCTION OF THE MEDICAL RADIONUCLIDE ^{67}Cu

B.-E. Bingol^{1,*}, G. Lorusso², P. Ivanov², S. Cipiccia³,
M. Wiggins¹, G. Manahan¹, E. Brunetti¹, D.-A. Jaroszynski¹

¹ Scottish Universities Physics Alliance, University of Strathclyde, Glasgow, UK
² Medical, Marine & Nuclear Department, National Physical Laboratory, Teddington, UK
³ Medical Physics and Biomedical Engineering Department, University College London, UK

Abstract
A system for producing the medical radionuclide ^{67}Cu using a laser wakefield accelerator (LWFA) is presented. This emerging method utilises ultrashort, powerful laser pulses that are focussed into a gas jet to create a plasma wake that traps and accelerates electrons to very high energies using large accelerating gradients. Accelerated electrons interact with high-Z material to produce high-energy photons, which are then used to produce ^{67}Cu via the $^{68}\text{Zn}(\gamma, p)^{67}\text{Cu}$ photonuclear reaction.

INTRODUCTION

^{67}Cu is considered an ideal radioisotope for treatment of lymphoma and colon cancer [1]. This isotope has properties similar to the clinically used ^{177}Lu , but a slightly higher emission photon energy, in addition to a conveniently short half-life ($t_{1/2}$: 62 h).

^{67}Cu is currently produced via $^{68}\text{Zn}(p, 2p)^{67}\text{Cu}$ reactions, which require medium-energy (~70 MeV) protons that are only available at limited number of facilities and often results in co-production of other Cu isotopes. Alternative methods using cyclotrons or nuclear reactors are limited by the natural abundance of target isotopes and the availability of fast-neutron reactors. The use of the LWFA for producing medical isotopes would be advantageous because of its compactness and cost-effectiveness, making its installation near hospitals easier, which would minimise transportation losses.

We present the experimental setup, maximising electron pulse intensity by optimising laser beam properties and target composition of gas jet. The gamma beam and the design of the ^{68}Zn target is optimised using FLUKA simulations. We also report on the development of detectors for online monitoring of the electron and gamma beams and produced activities of the radionuclides.

Property	Value
Pulse energy on target	up to 5.5 J
Pulse duration	25 fs
Pulse repetition rate	Adjustable, 0.33 - 1 Hz
Central wavelength	800 nm
Laser pointing stability	4 x 5 μrad rms
Laser beam profile	Round and top hat (diameter 120 mm)

The ultrashort and high-intensity laser pulses are generated by using chirped pulse amplification, where a short laser pulse is temporarily stretched, amplified, and then recompressed. The amplified laser pulse is then focused into a gas jet to ionize the gas and create plasma and ultimately the LWFA shown in Fig. 1, in which its electric and magnetic fields exert a ponderomotive force on electrons to displace them. The much heavier ions in the plasma are relatively immobile, leading to the creation of a longitudinal electric field due to charge separation between electrons and ions. This results in the formation of plasma waves, in which electrons are trapped and accelerated to very high energies, giving rise to laser-plasma acceleration.

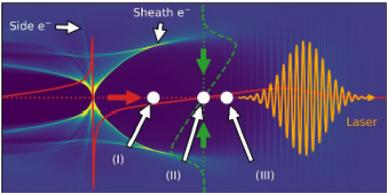


Figure 1: The schematics of the LWFA.

Coming Soon Advice on Proceedings PDF Optimisation

- IT was noticed by Volker when doing a save as of the final proceedings volume to file reduced in size saving for IPAC'25 approximately 300MB.
- Testing is currently being done to establish a stable tool and method to apply this optimisation which saves on data transfer.
- More on this to come....



Questions

Thank you

Some Aspects to Touch on

01 CatScan

CatScan was integrated into Indico posting reports of Word and LaTeX paper

EiC reviewed a sample of pre-scanned reports within final day of uploads and set obvious Red status in advance

02 Authors

Respond to CatScan feedback to self edit to a higher standard, and improve their knowledge

03 Editors

As per IPAC'24 one group all starting and mission together and finishing together

04 QA and Printing

Only when performing a QA is the paper printed, emerged as we processed papers

05 Sticking to lanes

LaTeX editor were requested to only edit tex papers from the start, as to not deplete Word editor workload by processing any type of paper

06 Author Reception

Started same time editors, initial QA to feed author reception was underpowered with some author reception switching to QA

07 Changes Updates

Indico, Templates, Tools
These had flow on impacts to discussed