

J4 Editor: A new editor for EXFOR data compilation using GUI Toolkit

A Python-based GUI to simplify the contribution to the global database

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(slightly revised by M. Aikawa for presentation)

Project Overview

Background:

- **EXFOR format** developed by IAEA is universally employed but strict and complex for new compilers.
- Manual compilation requires deep technical knowledge → barrier for contributors.

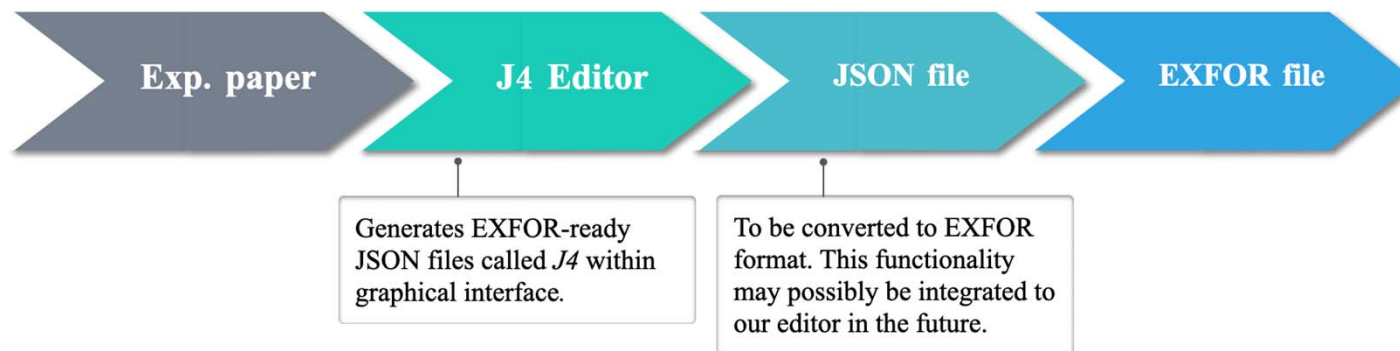
Goal:

- Lower the barrier for compilers by offering a **platform-independent GUI tool**.

Target users:

- Both experienced and **new compilers**, who may include experimental nuclear physicists and students.

→ *J4 Editor* (provisional title) is now under development



Key Features & Design Direction (demo status)



- ✓ **User-friendly GUI (PyQt):** Simplifies and integrates data compilation via guided fields.
- ✓ **EXFOR-ready flexibility:** Fields map to EXFOR structure, without severe restrictions.
- ✓ **Minimal dependency:** Written in Python – runs on Windows, macOS, Linux.
- ✓ **Paper-aware layout:** Supports direct compilation and metadata autofill.

Comparison

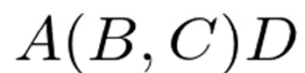
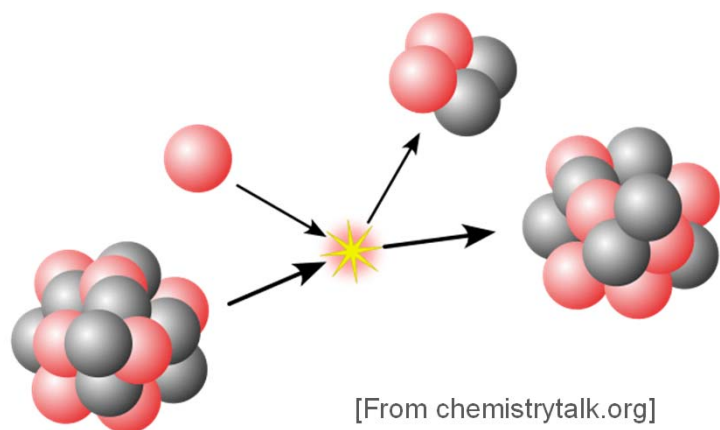
How J4 Editor contributes to the workflow:

Features	J4 Editor	HENDEL	Manual Entry
No need for EXFOR expertise	Yes	Partially	No
Format flexibility	Yes	Partially	—
Guided input	Yes	Yes	—
Open-source / Extensible	Yes	No	—

Future Roadmap

Planned Features:

- Graphical interface for more intuitive editing
- Verbose file (abstracts, author-affiliation correspondence, etc.) support
- Live EXFOR preview/export



SF1 SF2 SF3 SF4

compile

SF1

- Target information
- ...

SF2

- Projectile information
- Accelerator conditions
- ...

SF3

- Detected particles and radiation
- ...

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Look (and feel)

J4 Editor

File

J4 Editor - D/E2798

Bibliography Experiments Setup Data sets

Main New Reference  >>






CrossRef (*requires network connection, requesting may reveal your IP address)

Code: DOI:

Specification DOI: *

Title

Authors

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3.	Search institute...	 

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Code: Section B: Beam Interactions with Materials and Atoms 559 165579 2024 DOI: 10.1016/j.nimb.2024.165579 Submit

NUCL. INSTRUM. METHODS IN PHYSICS RES., SECT.B 559, 165579 (2024) DOI: 10.1016/j.nimb.2024.165579

Activation cross sections of ^7Li -induced reactions on natTi: Implications for monitor reactions

Masayuki Aikawa, Saki Goto, Damdinsuren Gantumur, Dagvadorj Ichinkhorloo, Naoyuki Ukon, Naohiko Otuka,
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