

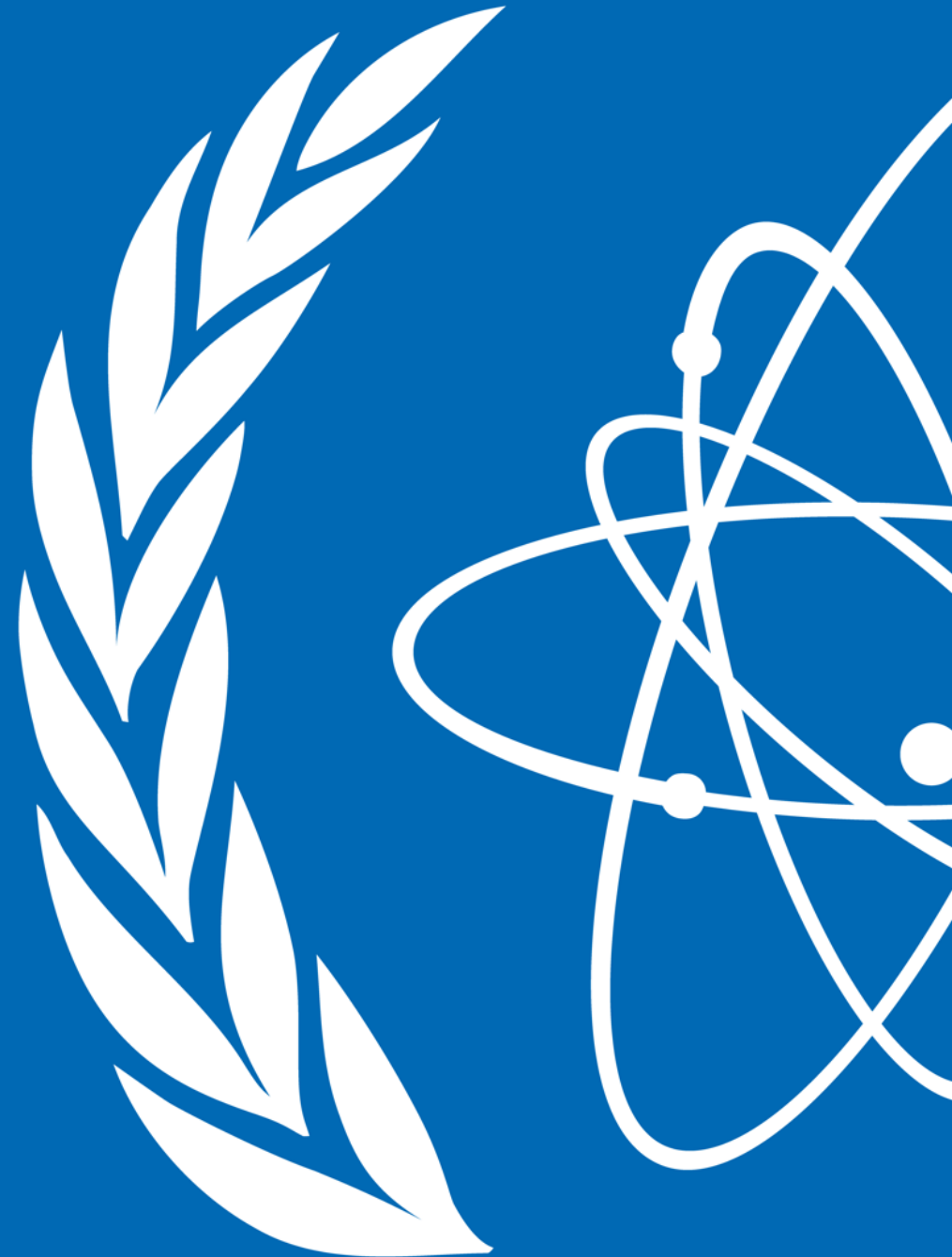
# The NDS Infrastructure for FAIR Data

---

Ludmila Marian, Scientific Data Manager @ NDS

TM on Nuclear Data Retrieval, Dissemination and Data Portals

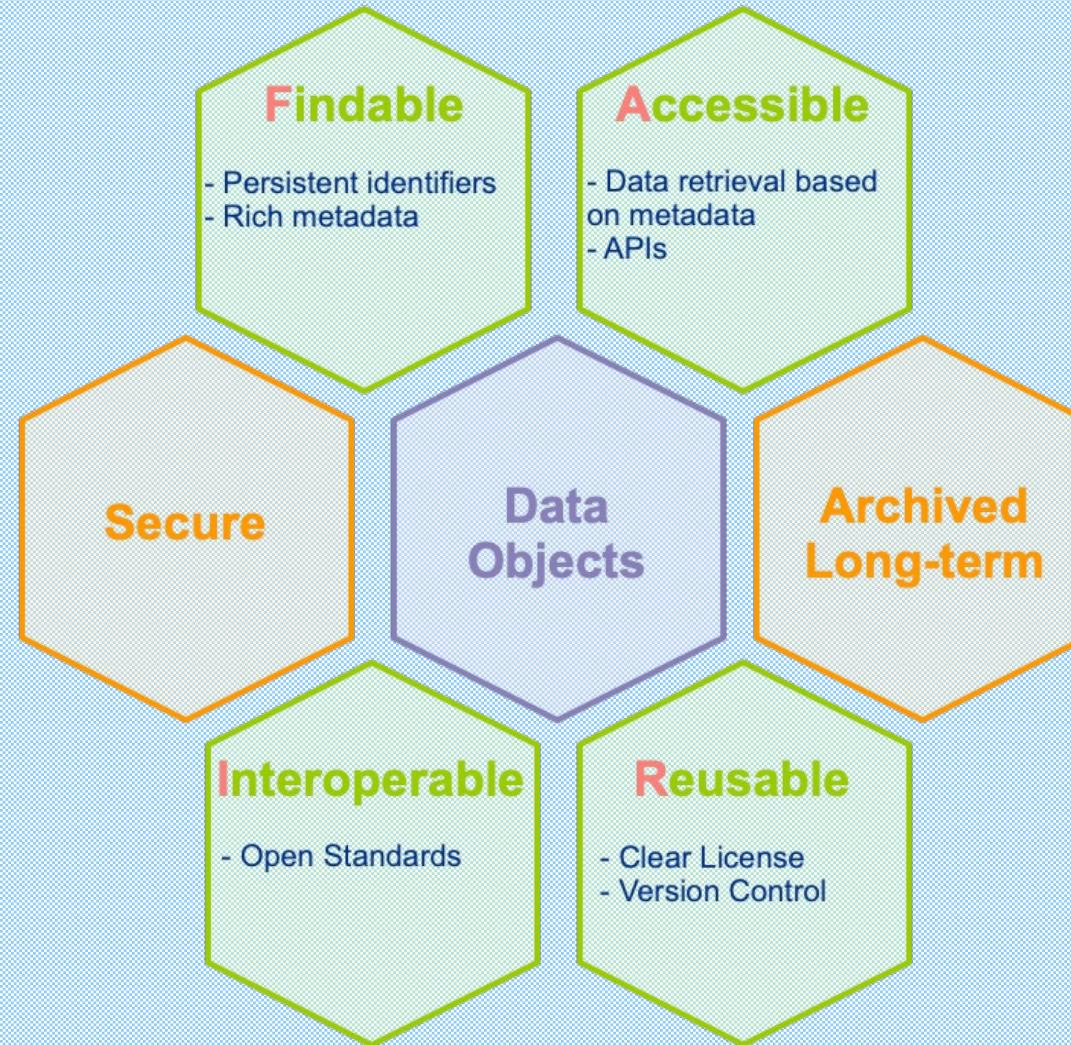
12<sup>th</sup> of November, 2024





# FAIR principles

# Infrastructure for **FAIR** Data



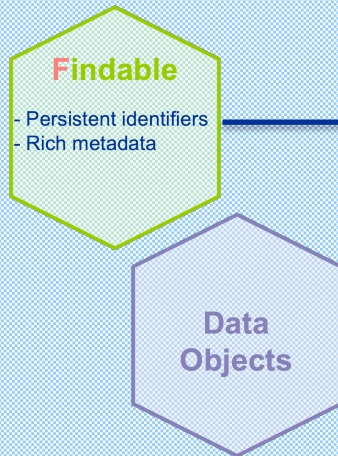
# Infrastructure for FAIR Data

At every level of the infrastructure



Digital archival system to be implemented by the IAEA – Archives and Records Management Section

# Infrastructure for FAIR Data

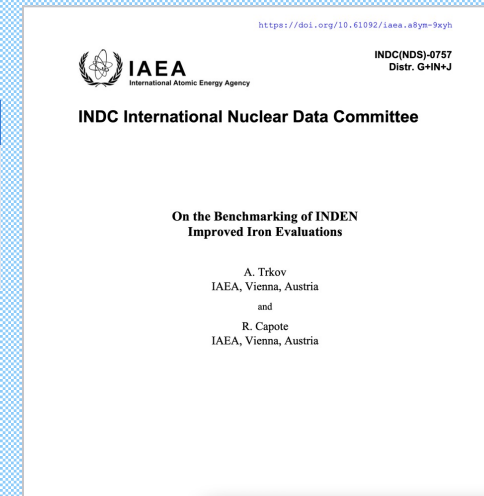


- DOI Assignment

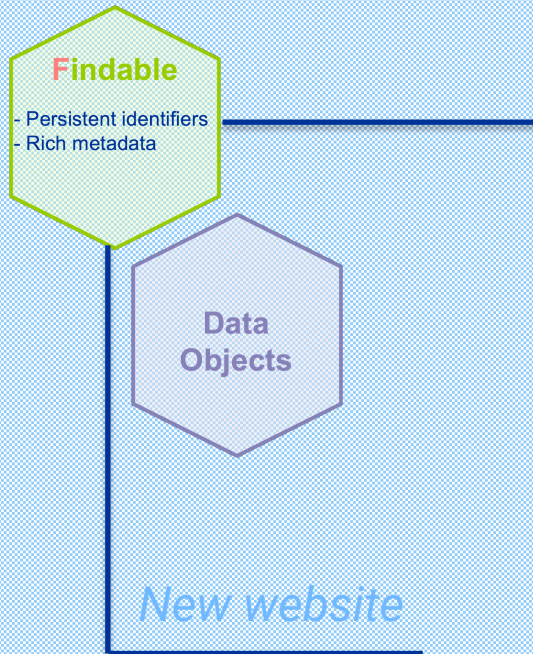
- Started with INDC Reports
  - 172 DOIs assigned so far, on-going for the backlog.
- EXFOR Master File
  - 9 DOIs assigned for current and past yearly versions.



International Atomic Energy Agency Nuclear Data Services Section Données Nucléaires, AIEA	
<b>Relevant Links</b>	
NDS Home	
Publications Home	
Conference Proceedings	
IAEA NDS series	
INDC series	
NDS staff publications	
Technical	
<b>Title</b>	On the Benchmarking of INDEN Improved Iron Evaluations
<b>Author</b>	A. Trkov, R. Capote
<b>Date</b>	May 2018
<b>DOI</b>	10.61092/iaea.a8ym-9xyh
<b>Last viewed</b>	1-Jun-2024
<b>Full text</b>	3.3 M (Ctrl-L for full view)



# Infrastructure for FAIR Data



- **DOI Assignment**

- **Started with INDC Reports**
  - **172 DOIs** assigned so far, on-going for the backlog.
- **EXFOR Master File**
  - **9 DOIs** assigned for current and past yearly versions.



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<https://doi.org/10.61092/iaea.a8ym-9xyh>

**IAEA**  
International Atomic Energy Agency

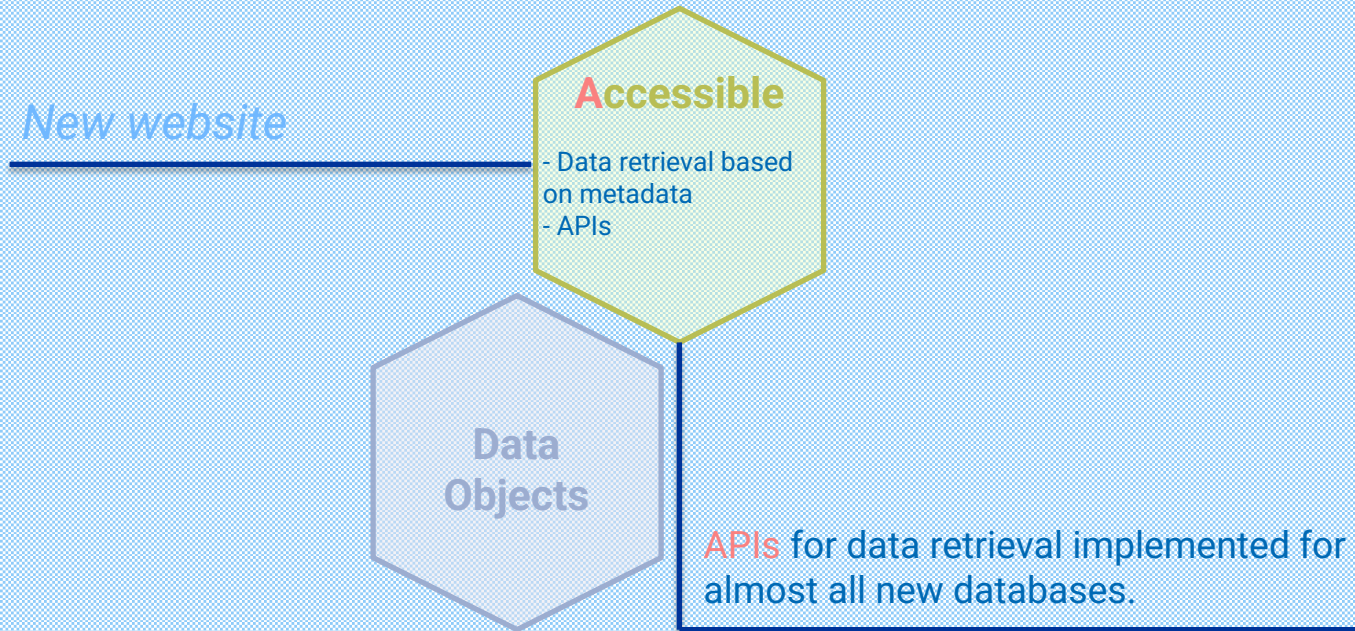
**INDC(NDS)-0757**  
Distr. G+IN+J

**INDC International Nuclear Data Committee**

**On the Benchmarking of INDEN  
Improved Iron Evaluations**

A. Trkov  
IAEA, Vienna, Austria  
and  
R. Capote  
IAEA, Vienna, Austria

# Infrastructure for FAIR Data



# APIs - examples

## Stopping Power

Home Search Data

This is the new website for the Stopping Power Database. The legacy website is still available for a limited time [here](#).

## Electronic Stopping Power of Matter for Ions

This collection of stopping power measurements includes data published as early as 1928 by Rosenblum, and it is continuously updated. The collection, originally created and maintained by [Helmut Paul](#), considers any ion and target combination that is measured and published, including solids (amorphous or polycrystalline), gases, element compounds, new materials such as polymers, oxides, silicates, and also biological targets. It deals with the electronic stopping power, assuming that nuclear stopping is subtracted or is negligible.

Since 2015, the Stopping Power Database is maintained by the Nuclear Data Section (IAEA), Dr. Claudia Montanari (Universidad de Buenos Aires-CONICET) is responsible for the compilation of data and the update of the database. Articles about the database can be found in [Literature](#).

### Query the database

The database can be queried either by Ion, or by Target, or by Ion and Target. Querying by Ion will retrieve a summary of the information available for that Ion. Querying by Target will retrieve a summary of the information available for that Target. By querying or selecting a specific Ion-Target pair you can access all the datapoints available for that specific pair, both as a plot and as downloadable files.

Search by Ion or Target 🔍

The database can also be queried by Author. Querying by Author will return the list of all the publications available in the database for that Author.

Search by Author 🔍

The database can also be queried via a programmatic [API](#).

### Download the database

Download the latest version of the database in compressed format (~ 1MB):

[Download data](#) 📄

Version 2024-03 - released on 1st of March, 2024  
4,374 Experiments | 64,168 Datapoints

[Download references](#) 📄

Version 2024-03 - released on 1st of March, 2024  
734 References | 3,071 Authors

Previous releases of the database can be downloaded from the [Versions](#) page.

### Cite the database

IAEA Stopping Power Database, version 2024-03, <https://nds.iaea.org/stopping>

Reference paper:

"The IAEA electronic stopping power database: Modernization, review, and analysis of the existing experimental data" C.C. Montanari, P. Dimitriou, L. Marian, A.M.P. de Oliveira, J.P. Peralta, F. Bivort-Haiek, *Nucl. Instrum. Methods Phys. Res. B* 551 (2024) 165336, <https://doi.org/10.1016/j.nimb.2024.165336>

Ion	Target	Datapoints Measured	Experiments	Last Publication Year	Detailed Information
He	2-Butanone	18	1	1978	He He - 2-Butanone
He	3-Pentanone	54	3	1985	He He - 3-Pentanone
He	Acetaldehyde	18	1	1978	He He - Acetaldehyde
He	Acetone	18	1	1978	He He - Acetone
He	Acetylene	60	4	1984	He He - Acetylene
He	Ag	609	43	2018	He He - Ag
He	Air	118	7	2022	He He - Air
He	Al	606	44	2018	He He - Al
He	Al2O3	221	9	2012	He He - Al2O3
He	Allene	33	2	1974	He He - Allene

Electronic Stopping Power of He in Au

Energy unit:  MeV  MeV/amu Stopping unit:  MeV/cm  E-15eV cm/atom

Medium:  Solid  Gas  Liquid

Reference Id: Trz2018, Kum2018, Pr2012, Mik2009b, MK2007, Zha2005a, HY2004, Trz2002, MT1996, Ep1994a, BB1994, Sk1995, Sai1990a, De1984, Sh1984, Sa1984a, ...

Experimental Data

Reference	Author	Year	Link
Trz2018	W.H. Trzaska, G.N. Niyazheva, J. Perkowski, J. Andriejowski, S.V. Khlebnikov, E.M. Kozulin, T. Makiewicz, M. Mutterer, E.D. Savileva	2018	[csw] [ltx]
Kum2018	S. Kumar and P.K. Diwan Rad. Effects and Defects in Solids 173, 970 (2018); DOI:10.1080/10462150.2018.1513002	2018	[csw] [ltx]
Pr2012	D. Primetzhofer Phys. Rev. B86, 094102	2012	[csw] [ltx]
Mik2009b	S.N. Markin, D. Primetzhofer, M. Spitz, P. Bauer Phys. Rev. B80, 205105 (2009)	2009	[csw] [ltx]
Mk2007	S. Markin, Dissertation, Univ. of Linz	2007	[csw] [ltx]
Zha2005a	Xanwen Zhang, W.J. Weber, A. Razpet, G. Possnert (ZW5a) Nucl. Instrum. Methods B227, 479	2005	[csw] [ltx]
HY2004	J.Y. Hsu, Y.C. Yu, H. Liang, K.M. Chen, H. Nucl. Instrum. Methods B219-220, 251	2004	[csw] [ltx]
Trz2002	W.H. Trzaska, V. Lyapun, T. Alanko, M. Mutterer, J. Räsänen, G. Turin, M. Wojdyr Nucl. Instrum. Methods Phys. Res. B195, 147 (Data for Ar on Au replaced by Per5)	2002	[csw] [ltx]
MT1996	G. Martinez-Tamayo, J.C. Eckardt, G.H. Lantscher, N.R. Arista Phys. Rev. A54, 3131	1996	[csw] [ltx]
BB1994	H.I. Bab, Y.D. Bae, C.S. Kim, M.S. Kim Nucl. Instrum. Methods Phys. Res. B93, 234	1994	[csw] [ltx]
Ep1994a	Chr. Eppacher Ph.D. Thesis, Univ. of Linz, Austria, Schriften der Johannes-Kepler-Universität Linz, Universitätsverlag Rudolf Trauner (1995), and pers. comm.	1994	[csw] [ltx]

### Stopping Power Database API

As well as having access to the database through the search interface we are providing direct access to our API for programmatic use.

Ions API

- GET /api/ions
- GET /api/ions/{ion}/

Targets API

- GET /api/targets
- GET /api/targets/{target}/

Ion-Target Tuples API

- GET /api/tuples

Ion-Target Tuples Data API

- GET /api/data/ion/{ion}
- GET /api/data/target/{target}
- GET /api/data/ion/{ion}/target/{target}

Retrieves all experimental data available in the database for a given **ion** and a given **target**. Data is retrieved in their original units.

Parameters

Name Description

ion string Eic: P  
He

target string Eic: Ge  
Au

Responses

```
curl -X GET "https://nds.iaea.org/stopping/api/data/ion/He/target/Au" -H "accept: application/json"
```

```
HTTP/1.1 200 OK (application/json)
Server response
Code Details
200
Response body
{
  "ion": "He",
  "target": "Au",
  "energy": 0.001,
  "stopping": 0.001,
  "reference": "Trz2018",
  "medium": "Liquid",
  "energy_min": 0.001,
  "energy_max": 0.001,
  "stopping_min": 0.001,
  "stopping_max": 0.001,
  "reference_min": "Trz2018",
  "reference_max": "Trz2018",
  "medium_min": "Liquid",
  "medium_max": "Liquid"
}
```

Publications API

- GET /api/authors
- GET /api/authors/{author}/

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# APIs - examples

IDB

Home Search Resources About

## An International Database of Reference Gamma Spectra

IDB is a web-accessible database of reference gamma spectra for measurement of uranium (U) and plutonium (Pu) isotopic composition, developed by the International Atomic Energy Agency. The database provides access to well-characterized groups of gamma spectra curated by international experts in gamma spectroscopy to promote sustainability and maintenance of software used to determine the isotopic abundances of U and Pu.

### Search the database

The database can be queried for metadata attributes describing the spectra, including configuration and detector specifications. By selecting a set of metadata attributes, the search results will correspond to that query.

Search database

The database can also be queried via a programmatic API. Please see the [API documentation](#).

### Download the database

Download the latest version of the database (zip, ~105 MB):

Download data  
IDB-v2024-01 - released on 1st of January, 2024  
1591 spe files

All previous versions of the database can be downloaded from the [Versions page](#).

### Certificates

If a spectrum has a certificate, it can be browsed and downloaded from the [Certificate page](#).

### Cite the database

IDB Database, IAEA, 2024, <https://nds.iaea.org/idb>

© 2022-2024 IAEA. Terms of Use | Contact

### Search Datasets

This search form allows users to retrieve all datasets by default and refine their search by selecting specific metadata attributes that describe the spectra. It provides access to all available metadata attribute options, simplifying user interaction with the database.

The spectra that correspond to the search query will be listed in the results table, along with some relevant metadata. Additionally, users can retrieve all the details of a specific spectrum by clicking on its corresponding spectrum ID.

#### Material metadata

Material Type:  U  Pu  MOX

Isotopic composition of material:

<sup>234</sup>U  <sup>238</sup>Pu  <sup>239</sup>Pu  
 <sup>235</sup>U  <sup>240</sup>Pu  <sup>241</sup>Pu  
 <sup>238</sup>U  <sup>242</sup>Pu  <sup>243</sup>Pu  
 <sup>239</sup>U  <sup>244</sup>Pu  <sup>245</sup>Pu

Form:  Compound:   
Certificate data:

#### Detector metadata

Detector Type:  Detector Geometry:   
Amplification Gain (keV/channel):  Number of channels:

#### Measurement metadata

Attenuator Material:   
Attenuator Material Thickness (mm):   Unknown

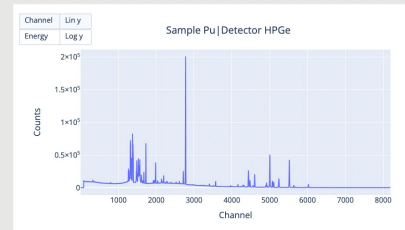
#### Spectrum metadata

Live Time (s):  0 - 424437  
Dead Time (%):  0.0 - 59.83  
Total Counts:  55820 - 1185519480  
Data Provider:

Search Reset Form

### Spectrum 489

Spectrum Data csv spe



Generate downgraded spectra

#### Metadata

Material metadata			
Isotope	Reference	Decay-corrected	
<sup>238</sup> Pu	0.0703 ± 0.0006	0.0628	
<sup>239</sup> Pu	84.3377 ± 0.0084	84.8097	
<sup>240</sup> Pu	14.2069 ± 0.0085	14.2698	
<sup>241</sup> Pu	1.0275 ± 0.0018	0.498	
<sup>242</sup> Pu	0.3576 ± 0.001	0.3597	
<sup>243</sup> Pu	0.2173 ± 0.0022	0.7419	

Detector metadata	
Reference date (UTC)	1900-01-01 00:00:00
Separation date (UTC)	1900-01-01 00:00:00
<sup>238</sup> Pu effective abundance (wt%)	14.9848 ± 0.1208
Uncertainty	2σ
Pu mass (g)	Unknown
Pu content	Unknown
Certificate file	Pu_CBNM271.pdf Page 3

Measurement metadata	
Attenuator material	Unknown

## IDB API Reference

The IDB Application Programming Interface (API) extends the capabilities of the user interface (UI) to retrieve and access the data.

### Spectrum Details by REST API

To view the spectrum details through the UI, identify it with a unique integer (id) at URL:

<https://nds.iaea.org/idb/spectra/<intid>>

To access the spectrum via the REST API, add `api` before `spectra` in the above URL:

<https://nds.iaea.org/idb/api/spectra/<intid>>

By default, the API endpoint returns the response in JSON format, which can also be specified explicitly by adding format suffixes like `format=json` in the above URL.

Example:

<https://nds.iaea.org/idb/api/spectra/12?format=json>

Response consists of the spectrum id along the spectral information and its associated metadata stored as key/value pairs, as described below:

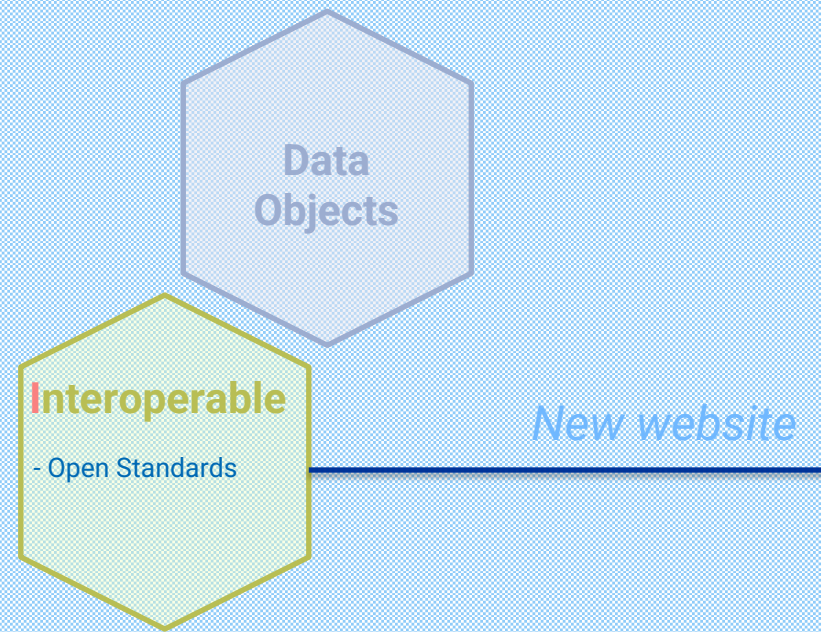
- id:** A unique integer value identifying this spectrum.
- metadata:** A JSON object contains information about the source material used for the measurement, including its composition at the time of acquisition (decay-corrected mass fractions from certificate values) and measurement configuration, e.g., detector setup, analyzer, and other electronics used, etc. It also includes metadata on spectrum such as spectrum acquisition date, live time, real time, count rate, etc., which are unique to each spectrum.
- data:** A JSON array consisting of counts per channel for this spectrum.

Example:

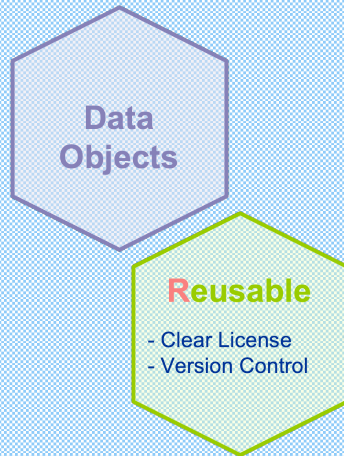
```
{
  "id": 918,
  "metadata": {
    "Material type": "Pu",
    "Material form": "Pellet",
    "Chemical compound of material": "PuO2",
    "Decay corrected mass fractions (wt%)": [
      {
        "238Pu": 0.114
      },
      {
        "239Pu": 77.004
      },
      ...
    ]
  },
  "Detector type": "HPGe",
  "Detector geometry": "Planar",
  "Detector size": "ORTEC SGD",
  "Detector FWHM (keV)": 0.8,
  "Energy range of the detector (keV)": "0-1260",
  "Source to detector distance (cm)": "Unknown",
  "Analyzer name": "DSPEC Plus",
  "Analyzer gain (keV/ch)": 0.075,
  "Number of channels": 16384,
}
```

<https://nds.iaea.org/idb>

# Infrastructure for FAIR Data



# Infrastructure for FAIR Data



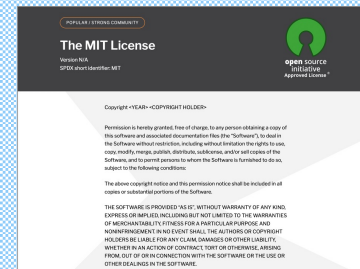
- **Open Source Licenses**

- For data libraries released as open data:  
**CC-BY-4.0 International License**



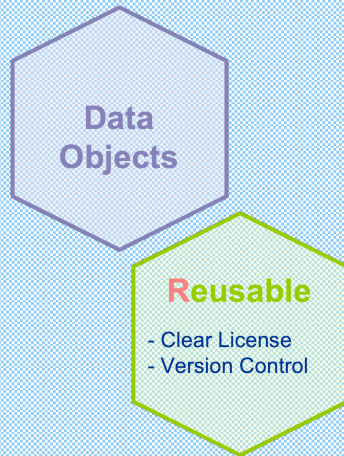
<https://creativecommons.org/licenses/by/4.0/>

- For software released as open source:  
**MIT License + disclaimer\* (for now)**



*\*Nothing in this license shall be construed as a waiver, either express or implied, of any of the privileges and immunities accorded to the IAEA by its Member States.*

# Infrastructure for FAIR Data

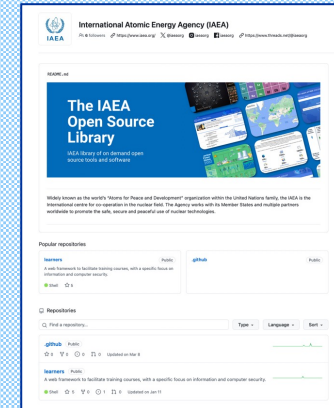


## For software: **Git-based Services**



<https://github.com/IAEA-NDS>

- IAEA-NDS contains:
  - 35 **public** repositories
  - 34 **private** repositories
- Newly created **IAEAorg** on GitHub  
(will contain a subset of NDS repositories)



- Restricted GitLab instance contains:
  - 20 **internal** repositories

# Modernizing the NDS Website

# Requirements

- Powerful **Search Engine**
- Robust and Flexible **Data Model**
- Clear **Access Management**
- Out-of-the-box support for **FAIR** principles (**Open Science** enabler)
- **Open Source**

# Requirements

- Powerful **Search Engine**
  - Robust and Flexible **Data Model**
  - Clear **Access Management**
  - Out-of-the-box support for **FAIR** principles (**Open Science** enabler)
  - **Open Source**
- **Digital Repository Platforms**
    - CKAN
    - DSpace
    - Dataverse
    - **Invenio RDM**



The turn-key research data management repository

 August 1, 2024: InvenioRDM v12.0 LTS released



Status

Follow the latest project status.



Roadmap

See our next major milestones



Demo

Demo of InvenioRDM showing latest development state.



Forum

Join our project forum and collaborate.



Chat

Find all the partners in our official chatroom.



Code

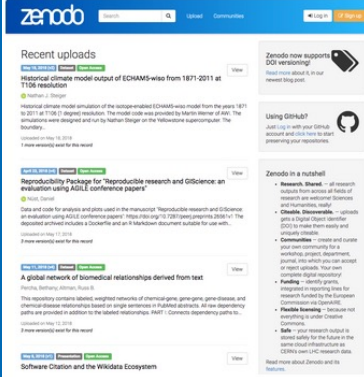
Have a look at InvenioRDM code evolution.



Brought to you by



# World-wide instances



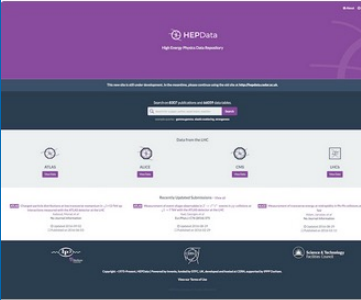
**zenodo**

Recent uploads

- Historical climate model output of ECHAM5-wiso from 1871-2011 at T106 resolution
- Reproducibility Package for "Reproducible research and GitScience: an evaluation using ADLE conference papers"
- A global network of biomedical relationships derived from text

**Zenodo** is an open home for the long-tail of science, enabling researchers to share and preserve any research outputs.

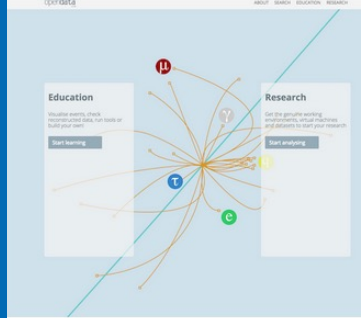
**Data**



**HEPData**

The Durham High Energy Physics Database (HEPData) has been built up over the past four decades as a unique open-access repository for scattering data from experimental particle physics. It currently comprises the data points from plots and tables related to several thousand publications including those from the Large Hadron Collider (LHC).

**Data**

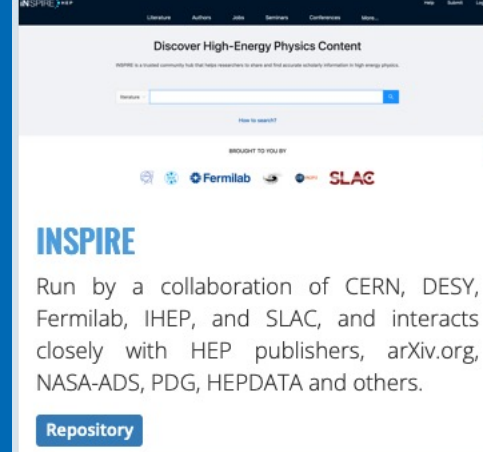


**cern**

**CERN Open Data**

Discover open Research datasets and software of LHC experiments. Visualise events and run and your own analysis.

**Data**



**INSPIRE**

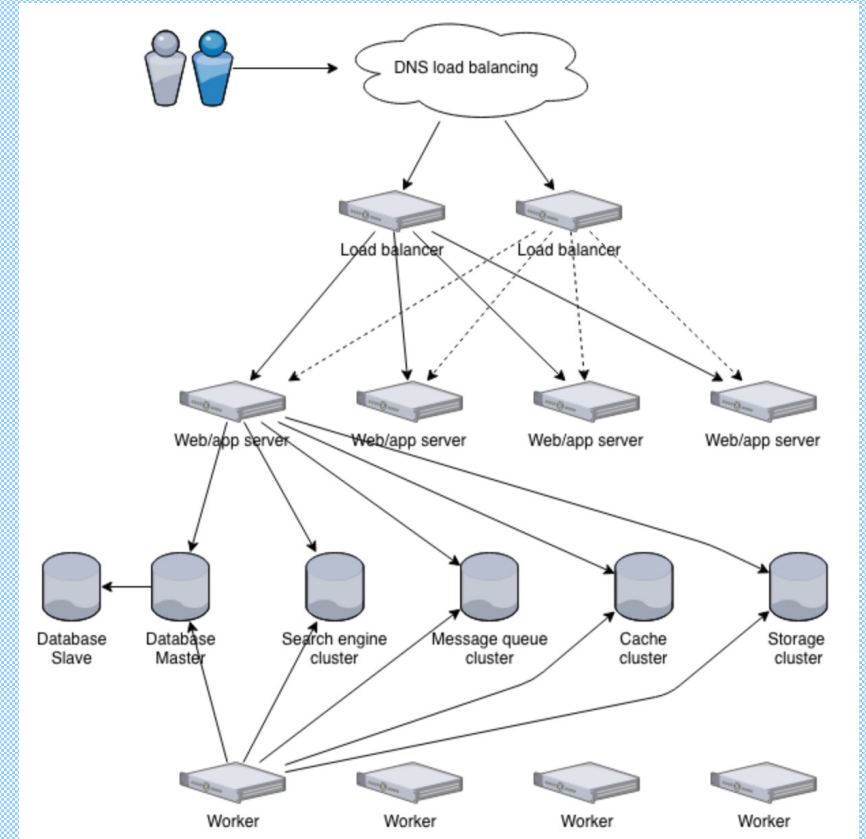
Discover High-Energy Physics Content

Run by a collaboration of CERN, DESY, Fermilab, IHEP, and SLAC, and interacts closely with HEP publishers, arXiv.org, NASA-ADS, PDG, HEPDATA and others.

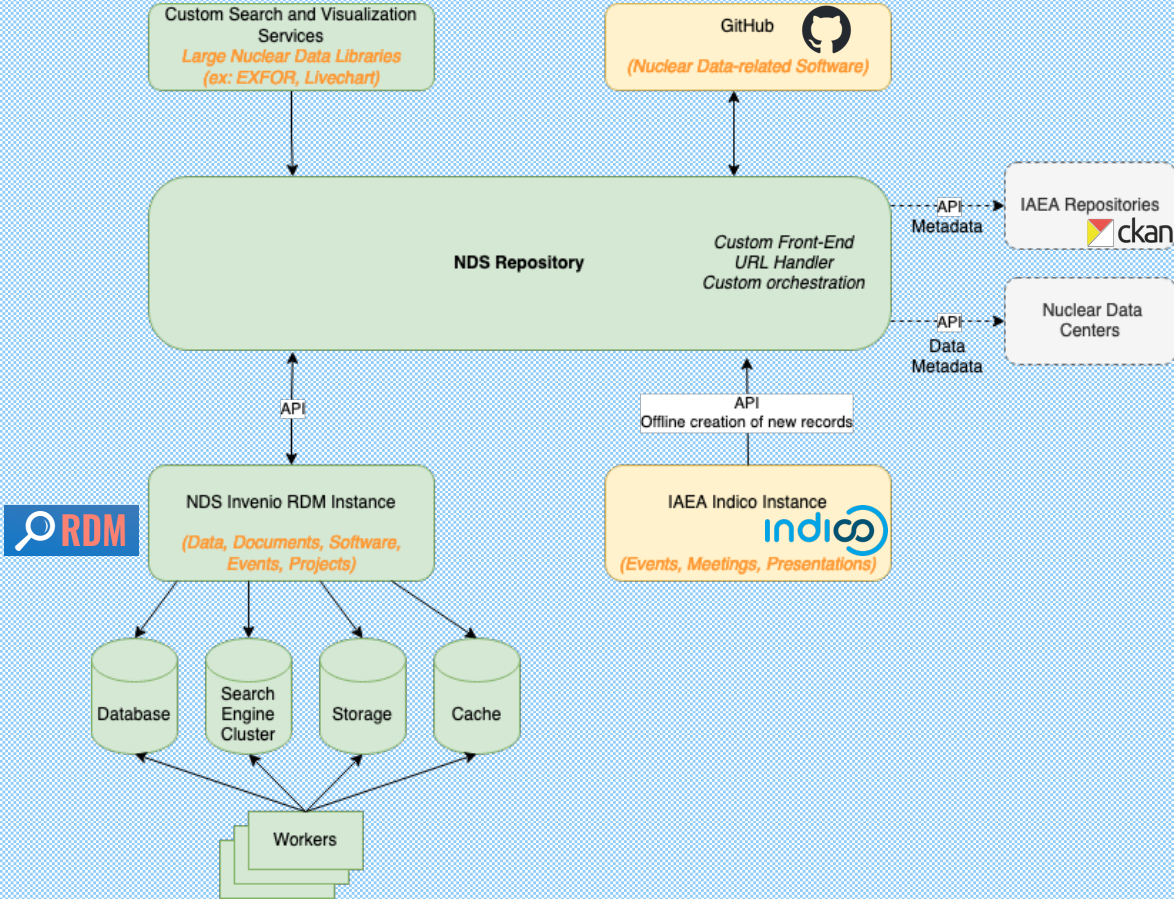
**Repository**

# Invenio Architecture

- **Load balancers:** HAProxy, Nginx or others.
- **Web servers:** Nginx, Apache or others.
- **Application servers:** UWSGI, Gunicorn or mod\_wsgi.
- **Distributed task queue:** Celery
- **Database:** PostgreSQL, MySQL or SQLite.
- **Search engine:** OpenSearch (v1 and v2).
- **Message queue:** RabbitMQ, Redis or Amazon SQS.
- **Cache system:** Redis or Memcache.
- **Storage system:** Local, S3, XRootD, WebDAV and more.



# NDS Architecture



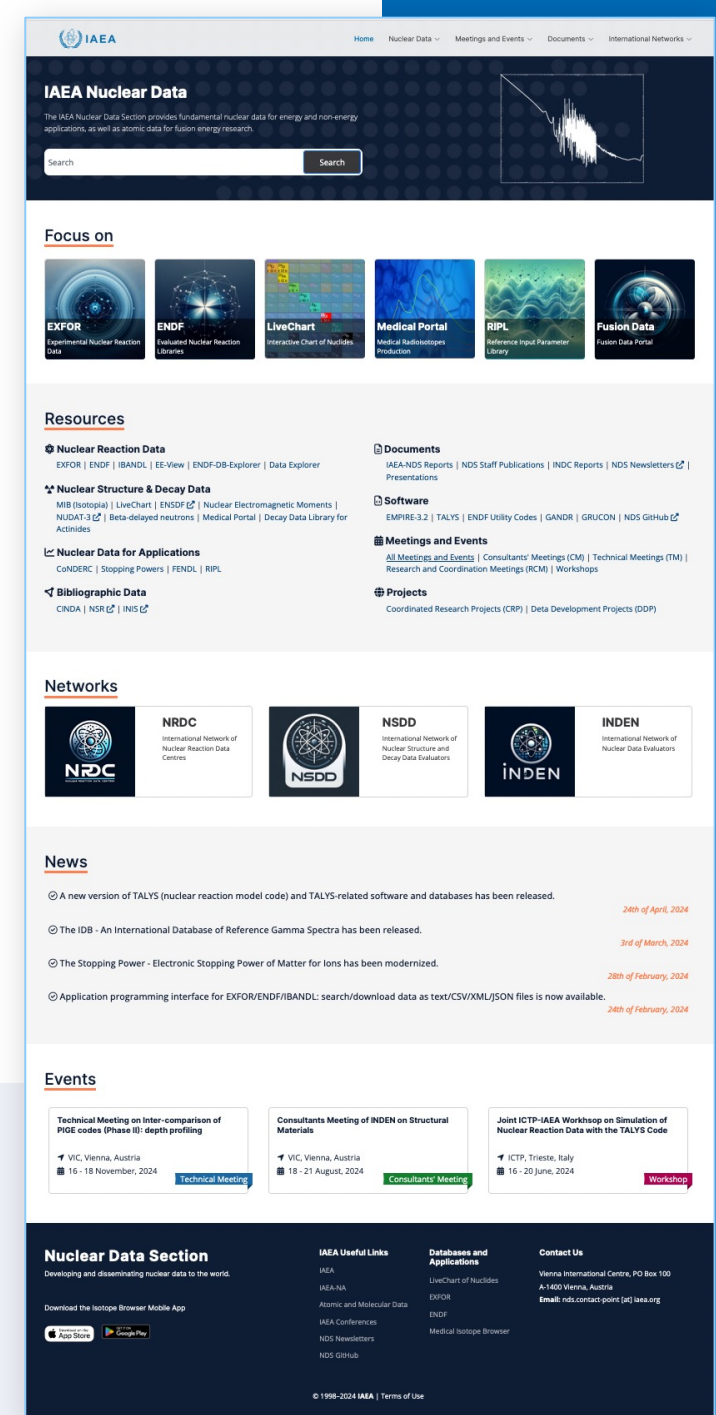


*Work in progress*

# Home Page Prototype

- Repository search (*all records described using the DataCite data model*)
- Focus on: flagship databases and services
- Resources: all categories of records
- Networks
- News
- Upcoming events

4'839 records migrated (Documents, Meetings, Presentations)



The image shows a prototype of the IAEA Nuclear Data home page. The page features a dark blue header with the IAEA logo and navigation links. Below the header is a search bar and a section titled "Focus on" with six featured databases: EXFOR, ENDF, LiveChart, Medical Portal, RIPL, and Fusion Data. The "Resources" section is organized into four columns: Nuclear Reaction Data, Nuclear Structure & Decay Data, Nuclear Data for Applications, and Bibliographic Data. The "Networks" section displays logos for NRDC, NSDD, and INDEN. The "News" section lists recent updates with dates. The "Events" section features three upcoming events with dates and locations. The footer contains the "Nuclear Data Section" description, "IAEA Useful Links", "Databases and Applications", and "Contact Us" information.

**IAEA Nuclear Data**  
The IAEA Nuclear Data Section provides fundamental nuclear data for energy and non-energy applications, as well as atomic data for fusion energy research.

Search

**Focus on**

- EXFOR: Experimental Nuclear Reaction Data
- ENDF: Evaluated Nuclear Reaction Libraries
- LiveChart: Interactive Chart of Nuclides
- Medical Portal: Medical Radioisotopes Production
- RIPL: Reference Input Parameter Library
- Fusion Data: Fusion Data Portal

**Resources**

- Nuclear Reaction Data**  
EXFOR | ENDF | IBANDL | EE-View | ENDF-DB-Explorer | Data Explorer
- Nuclear Structure & Decay Data**  
MIB (Isotopia) | LiveChart | ENSDF | Nuclear Electromagnetic Moments | NUJDAT-3 | Beta-delayed neutrons | Medical Portal | Decay Data Library for Actinides
- Nuclear Data for Applications**  
CONDERC | Stopping Powers | FENDL | RIPL
- Bibliographic Data**  
CINDA | NSR | INS
- Documents**  
IAEA-NDS Reports | NDS Staff Publications | INDC Reports | NDS Newsletters | Presentations
- Software**  
EMPIRE-3.2 | TALYS | ENDF Utility Codes | GANDR | GRUCON | NDS GitHub
- Meetings and Events**  
All Meetings and Events | Consultants' Meetings (CM) | Technical Meetings (TM) | Research and Coordination Meetings (RCM) | Workshops
- Projects**  
Coordinated Research Projects (CRP) | Data Development Projects (DDP)

**Networks**

- NRDC: International Network of Nuclear Reaction Data Centres
- NSDD: International Network of Nuclear Structure and Decay Data Evaluators
- INDEN: International Network of Nuclear Data Evaluators

**News**

- A new version of TALYS (nuclear reaction model code) and TALYS-related software and databases has been released. *24th of April, 2024*
- The IDB - An International Database of Reference Gamma Spectra has been released. *3rd of March, 2024*
- The Stopping Power - Electronic Stopping Power of Matter for Ions has been modernized. *28th of February, 2024*
- Application programming interface for EXFOR/ENDF/IBANDL: search/download data as text/CSV/XML/JSON files is now available. *24th of February, 2024*

**Events**

- Technical Meeting on Inter-comparison of PIGE codes (Phase II): depth profiling**  
VIC, Vienna, Austria  
16 - 18 November, 2024 *Technical Meeting*
- Consultants Meeting of INDEN on Structural Materials**  
VIC, Vienna, Austria  
18 - 21 August, 2024 *Consultants' Meeting*
- Joint ICTP-IAEA Workshop on Simulation of Nuclear Reaction Data with the TALYS Code**  
ICTP, Trieste, Italy  
16 - 20 June, 2024 *Workshop*

**Nuclear Data Section**  
Developing and disseminating nuclear data to the world.

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Atomic and Molecular Data  
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NDS Newsletters  
NDS GitHub


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EXFOR  
ENDF  
Medical Isotope Browser

**Contact Us**  
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A-1400 Vienna, Austria  
Email: [nds.contact.point@iaea.org](mailto:nds.contact.point@iaea.org)

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# Meetings

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## Meetings and Events

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### Upcoming

<a href="#">16 - 18 Nov 2024</a> IAEA, Vienna, Austria	<b>Technical Meeting on Inter-comparison of PIGE codes (Phase II): depth profiling</b> <a href="#">↗</a>	Technical Meeting
<a href="#">18 - 21 Aug 2024</a> IAEA, Vienna, Austria	<b>Consultants Meeting of INDEN on Structural Materials</b> <a href="#">↗</a>	Consultants' Meeting
<a href="#">16 - 20 Jun 2024</a> IAEA, Vienna, Austria	<b>Joint ICTP-IAEA Workshop on Simulation of Nuclear Reaction Data with the TALYS Code</b> <a href="#">↗</a>	Workshop

### Past

<a href="#">16 - 18 Jan 2024</a> Vienna, VIC	<b>Consultancy Meeting on Inter-comparison of PIGE codes (Phase II): depth profiling</b>	Consultants' Meeting
<a href="#">18 - 21 Dec 2023</a> IAEA, Vienna, Austria	<b>Consultants Meeting of INDEN on Structural Materials</b>	Consultants' Meeting
<a href="#">27 Nov - 01 Dec 2023</a> Virtual	<b>Technical Meeting on (alpha,n) Reaction Nuclear Data Evaluations and Data Needs</b>	Technical Meeting
<a href="#">30 Oct - 02 Nov 2023</a> IAEA, Vienna, Austria	<b>Consultancy Meeting on Further Development of the Fusion Evaluated Nuclear Data Library (FENDL)</b>	Consultants' Meeting
<a href="#">23 - 25 Oct 2023</a> IAEA, Vienna, Austria (Hybrid meeting)	<b>CM on Thermal Capture and Gamma Emission</b>	Consultants' Meeting
<a href="#">16 - 20 Oct 2023</a> ICTP, Trieste, Italy	<b>Joint ICTP-IAEA Workshp on Simulation of Nuclear Reaction Data with the TALYS Code</b>	Workshop
<a href="#">09 - 13 Oct 2023</a> IAEA, Vienna, Austria	<b>Technical Meeting on Neutron Data Standards</b>	Technical Meeting
<a href="#">09 - 11 Oct 2023</a> IAEA Headquarters	<b>Consultant's Meeting on the Evaluation of Photon Strength Function Data</b>	Consultants' Meeting
<a href="#">20 - 22 Sep 2023</a> IAEA, Vienna, Austria	<b>CM on the Improvement of Major Actinide Evaluations</b>	Consultants' Meeting
<a href="#">29 Aug - 01 Sep 2023</a> IAEA	<b>International Nuclear Data Evaluation Network for Light Elements (INDEN-LE)</b>	Technical Meeting

[All Meetings](#)

# Meetings

- Metadata model
- ORCID

- List of all presentations

- Agenda
- List of participants
- Download | Preview

The screenshot shows the IAEA website page for a technical meeting titled "TM on Neutron Data Standards". The page includes a header with the IAEA logo and navigation links. The main content area is divided into several sections: "Versions" (showing Version v1), "Citation" (providing citation information), "Export" (with a .JSON option), "Presentations" (a list of presentation titles and authors), "Files" (a list of files for download), and "Additional details". The "Presentations" section lists various topics such as "Searches for Structure in the n-p Total Scattering Cross Section" and "Recent R-matrix Work at Los Alamos on Light-Element Standard Cross Sections". The "Files" section lists files like "meeting\_participants.csv" and "STD2022\_Adopted\_Agenda.pdf".

Strong versioning

General citation options

Integrated statistics



# Meetings

IAEA

Search records...

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Published December 18, 2023

**Consultants Meeting**

## Consultants Meeting of INDEN on Structural Materials

IAEA

**General information**

The objective of this consultants meeting is to discuss evaluation methodology, review experimental data and investigate the performance of proposed evaluations, focusing on structural materials.

This meeting is an activity organised within the International Nuclear Data Evaluation Network (INDEN), promoting knowledge exchange and collaboration with the aim of improving the quality of evaluated nuclear data.

**Practical information**

The submitted presentations can be seen in the contributions list. If you want to give a presentation, please write an email to g.schnabel@iaea.org. The agenda will be made available closer to the meeting once all presentation titles have been received.

Start Dec 18, 2023, 10:00:00 AM  
End Dec 21, 2023, 5:00:00 PM

### Presentations

Nuclear data feedback on structural, moderating and absorbing materials through the MAESTRO experimental programme in MINERVE  
Bernard, David

Some issues with the INDEN structural material evaluations  
Trkov, Andrej

Measurements and Evaluation of structural materials at RPI  
Danon, Yaron

Updates on the study of the Fe Isotopes  
Diakaki, Maria

Neutron inelastic cross section derived from gamma-production cross section (n,n') reactions and Pygmy dipole resonance  
Pronyaev, Vladimir

**JEFF-4T3 status and NEA pipeline developments**  
Foligno, Daniela

New integral experiments in Rez - focus on PFGS of  $^{252}\text{Cf}(s,f)$  and  $^{235}\text{U}(n,th,f)$   
Kostal, Michal

Lowering the ENDF-6 entrance barrier for evaluators  
SCHNABEL, Georg

The nuclear data evaluation pipeline of Uppsala University (NEPU) - addressing model defects and data inconsistencies  
GÖÖK, Alf

Accounting for model uncertainty in Bayesian evaluation of nuclear data  
Alhassan, Erwin

1 2

### Versions

Version v1	Dec 18, 2023
------------	--------------

### Citation

IAEA. (2023). Consultants Meeting of INDEN on Structural Materials.

Style: APA

### Export

JSON Export

2 VIEWS 0 DOWNLOADS

Show more details

### Technical metadata

Created July 15, 2024  
Modified July 15, 2024

IAEA

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Published December 18, 2023


**JEFF-4T3 status and NEA pipeline developments**

Foligno, Daniela

No detailed description available.

### Files

Foligno-INDEN-SM.pdf



### Files (3.7 MB)

Name	Size	Download all
Foligno-INDEN-SM.pdf #68764ed5e17a03b-6a6130e8b-e66c76987	3.7 MB	Preview Download

### Additional details

Dates: Start Dec 19, 2023, 10:00:00 AM  
End Dec 19, 2023, 10:45:00 AM

### Versions

Version v1	Dec 18, 2023
------------	--------------

### Presented at

Consultants Meeting of INDEN on Structural Materials  
December 18, 2023

### Citation

Foligno, D. (2023, December 18). JEFF-4T3 status and NEA pipeline developments.

Style: APA

### Export

JSON Export

0 VIEWS 0 DOWNLOADS

Show more details

### Technical metadata

Created July 15, 2024  
Modified July 15, 2024

# Documents

IAEA Search records... Home Nuclear Data Meetings and Events Documents International Networks

Published August 2018 **NDS Report**

## Compilation of Nuclear Data Experiments for Radiation Characterisation (CoNDERC)

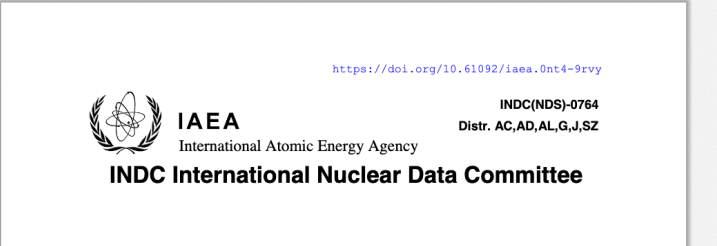
IAEA Sublet, J.-C.; Gilbert, M.

Summary report of the Consultants Meeting, 6-9 August 2018, Vienna, Austria

### Files

INDC-NDS-0764.pdf

Page: 1 of 22 Automatic Zoom



<https://doi.org/10.61092/iaea.0nt4-9rvy>

INDC(NDS)-0764  
Distr. AC,AD,AL,G,J,SZ

INDC International Nuclear Data Committee

### Files (512.6 kB)

Name	Size	Download all
INDC-NDS-0764.pdf md5:f592af3904b3c19280ca9a3195a6e0f	512.6 kB	<a href="#">Preview</a> <a href="#">Download</a>

### Additional details

**Identifiers**

NDS Report  
INDC-NDS-0764

[Jump up](#)

### Versions

Version	Published
Version v1	Aug 2018

### Meetings

**CM on the Compilation of Nuclear Data Experiments for Radiation Characterisation (CoNDERC)**

### Citation

IAEA, Sublet, J.-C., & Gilbert, M. (2018). Compilation of Nuclear Data Experiments for Radiation Characterisation (CoNDERC).

Style: APA [Export](#)

### Export

JSON [Export](#)

0 VIEWS 0 DOWNLOADS [Show more details](#)

### Technical metadata

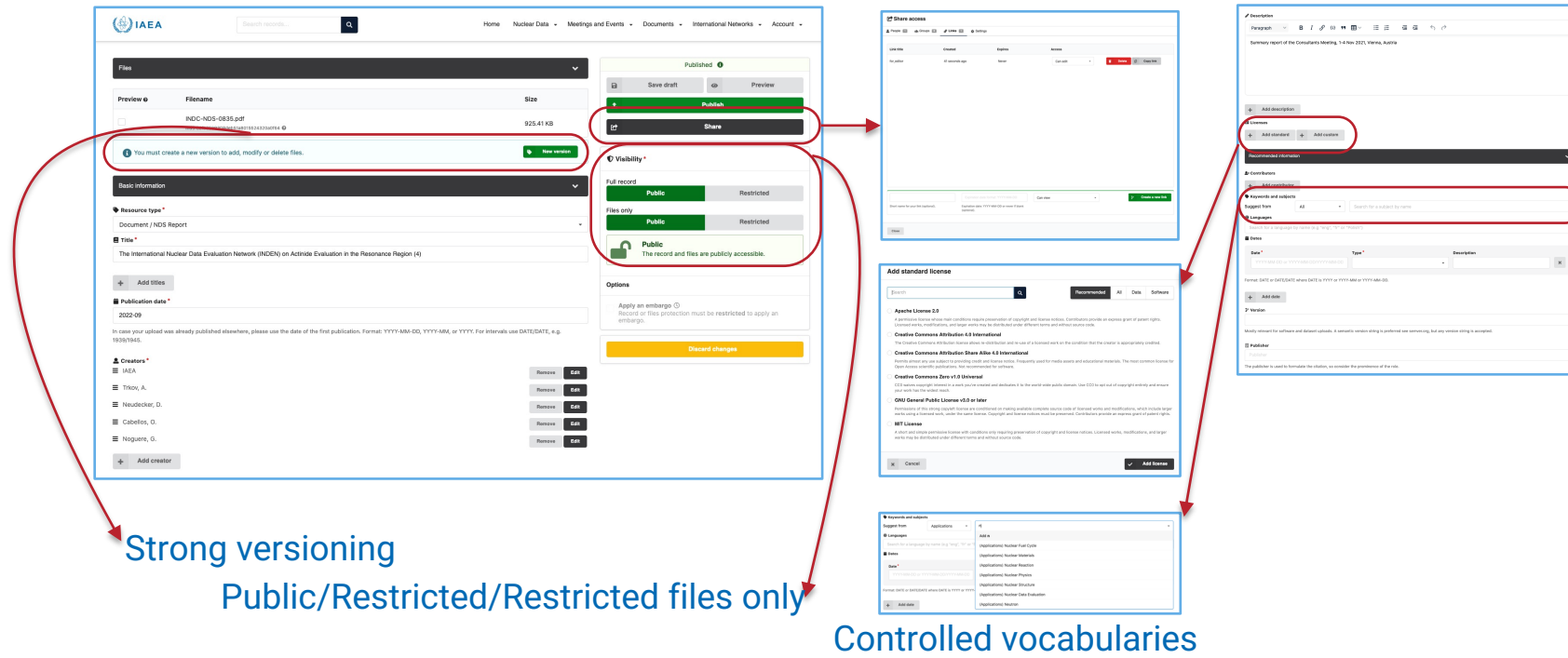
Created: June 1, 2024  
Modified: June 1, 2024

# Search

IAEA Search results page showing 51 results found. The 'Resource types' filter is highlighted with a red box. The filter includes 'Document' (3,277), 'Meeting' (130), 'NDS Report' (1,912), 'Presentation' (1,365), 'Consultants' Meeting' (51), 'Technical Meeting' (32), 'Workshop' (26), and 'Research Coordination Meeting' (21). The 'Meeting' category is selected. Below the filter, several search results are displayed, including 'Consultancy Meeting on Inter-comparison of PIGE codes (Phase II): depth profiling', 'Consultants Meeting of INDEN on Structural Materials', 'Consultancy Meeting on Further Development of the Fusion Evaluated Nuclear Data Library (FENDL)', 'CM on Thermal Capture and Gamma Emission', and 'Consultant's Meeting on the Evaluation of Photon Strength Function Data'.

IAEA Search results page showing 26 results found. The 'File type' filter is highlighted with a red box. The filter includes 'PDF' (3,306), 'CSV' (59), 'PPTX' (45), 'JPG' (7), 'DOCX' (6), 'BIN' (3), 'PPT' (3), and 'PNG' (1). The 'Workshop' category is selected. Below the filter, several search results are displayed, including 'Joint ICTP-IAEA Workshop on Simulation of Nuclear Reaction Data with the TALYS Code', 'Joint ICTP-IAEA Workshop on Nuclear Structure and Decay Data: Experiment, Theory and Evaluation', 'Joint IAEA/ICTP Virtual Workshop on Atomic Processes in Plasmas: Data-driven Research', 'Joint IAEA/ICTP Virtual Workshop on Atomistic Modelling of Radiation Damage in Nuclear Systems', and 'Joint IAEA/ICTP School on Atomic and Molecular Spectroscopy in Plasmas'.

# Add/Modify Record



# Export to JSON

Published May 1, 2023

## EXFOR/CINDA Dictionary Manual

Otuka, Naohiko

No description available

### Files

iaea-nds-0213-202305.pdf

INTERNATIONAL ATOMIC ENERGY AGENCY  
**NUCLEAR DATA SERVICES**  
DOCUMENTATION SERIES OF THE IAEA NUCLEAR DATA SECTION

Files (255.7 KB)

Name	Size	Download all
iaea-nds-0213-202305.pdf	395.7 KB	Download all

Technical metadata  
Created: July 15, 2024  
Modified: July 15, 2024

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    record: "public"
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  ▼ versions:
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    is_latest: true
```



IAEA

**Thank you!**

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[ludmila.marian@iaea.org](mailto:ludmila.marian@iaea.org)