

ENDF Web interface to radioactive decay data. Status of MyENSDF tools and EXFOR-NSR PDF database.

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Part I.

**ENDF Web interface
to radioactive decay data.**

ENDF radioactive decay data: MF8/MF457

1. Radioactive decay data in ENDF Web database retrieval system

##	#MAT	Format	Library (data source)	Notes
1)	979	ENDF-6	ENDF/B-VI	
2)	3821	ENDF-6	ENDF/B-VII.1	
3)	3822	ENDF-6	ENDF/B-VIII.0	<i>ENDF/B-VIII, USA, 2018</i>
4)	85	ENDF-6	IRDF-2002	
5)	<u>122</u>	ENDF-6	<u>*IRDFF-II-aux</u>	<i>IRDFF-II auxiliary files, 2019</i>
6)	2345	ENDF-6	JEF-2.2	
7)	3852	ENDF-6	JEFF-3.1	
8)	3852	ENDF-6	JEFF-3.3	<i>JEFF-3.3, Europe, 2017</i>
9)	<u>4071</u>	ENDF-6	<u>*JENDL-5</u>	<i>JENDL-5, Japan, December-2021</i>
10)	2993	ENDF-6	JENDL/DDF-2015	<i>JENDL Decay Data File 2015 (Japan)</i>
11)	3875	ENDF-6	UKDD-12	
12)	<u>4035</u>	ENDF-6	<u>*UKDD-2020</u>	<i>UK Decay Data Library, 2020</i>
13)	223	LARA	DDEP-2017	<i>data provided by DDEP http://www.lnhb.fr/nuclear-data/nuclear-data-table/</i>
14)	<u>3191</u>	LARA	<u>*ENSDF/LiveChart</u>	<i>data generated by M. Verpelli from "ENSDF 202111"</i>

Legend. *Recently added data

2. Online tools:

1) output to JSON, html-comparison, plot (+comparison)

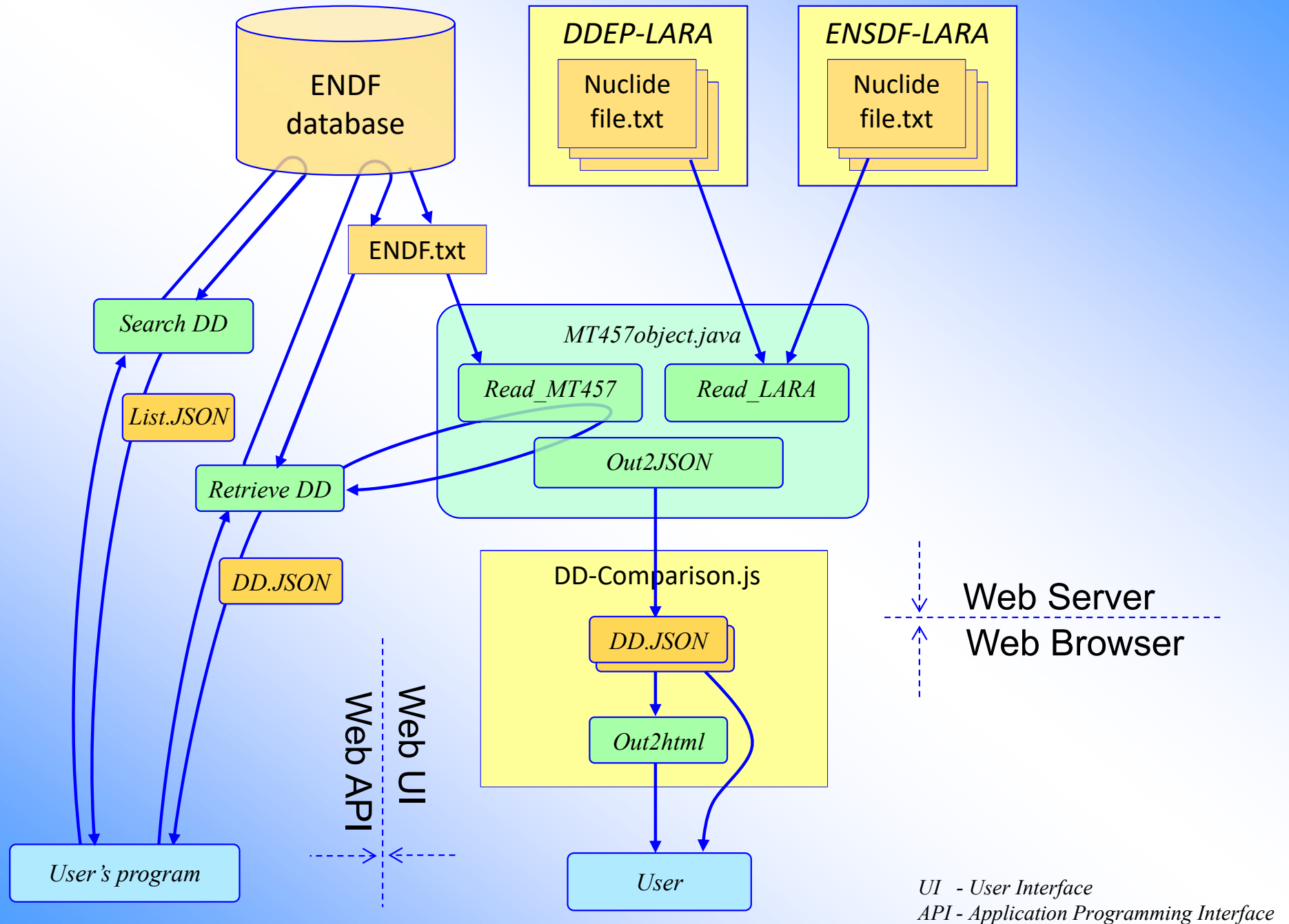
2) API for remote Web search and downloading (JSON)

```
get: https://nds.iaea.org/exfor/servlet/E4sSearch2?Reaction=decay&Target=Eu-152*&json
parse JSON filtering Targ and LibName to get SectID from {"Targ":"EU-152M","SectID":14369132,"LibName":"JENDL-5"}
get: https://nds.iaea.org/exfor/servlet/E4sShowDecayData?Sect=14369132&json
```

3) Links to LiveChart and DDEP


4) Link from LiveChart (by M. Verpelli)

ENDF DD interface: implementation and data flows



ENDF online: search decay data

<https://www-nds.iaea.org/endl/>

Standard Request Examples: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#)  Go to: [Advanced Request](#); [ENDF-Explorer](#)

Examples of requests:

- [1](#) Cross section: MF3
- [2](#) Angular distributions: MF4
- [3](#) Energy distributions of secondary particles: MF5
- [4](#) Product energy-angle distributions: MF6
- [5](#) Cross sections for production of radioactive elements: MF10
- [6](#) Search for production cross section (MF6/MT5/Law=0) [Photo](#) [PD](#)
- [7](#) Covariances of neutron cross sections: MF33 [Li-6\(n,t\)](#)
- [8](#) Covariances for production of radioactive nuclei: MF40
- [9](#) Covariances for energy distributions of secondary particles: MF35
- [10](#) Search for decay data in the ENDF files (NSUB=4)
- [11](#) Differential data for ion beam analysis (IBA-EVAL); [7Li\(p,p\)](#)
- [12](#) Search for "smooth" photon interaction cross sections: MF23
- [13](#) Fission product yield /MF8/: [Ind.](#) [Cum.](#)
- [14](#) He-4 production cross section from $n \rightarrow {}^7\text{Li}$
- [15](#) Radioactive decay data [N-16](#) [Y-88](#) [Y-98](#) [Pm-148M](#) [Th-230](#)

Libraries: All Selected [Check](#) [Reset](#)

- [Major Libraries](#)
 - 1) ENDF/B-VIII.0 (USA,2018)
 - 2) JEFF-3.3 (Europe,2017)
 - 3) JENDL-5 (Japan,2021)
 - 4) JENDL-4.0u2 (Japan,2012)
 - 5) CENDL-3.2 (China,2020)
 - 6) BROND-3.1 (Russia,2016)
 - 7) TENDL-2019 (TALYS, 2019)
- [Special Libraries](#)
 - [Archival](#)
 - [Derived](#)
- [IAEA Project Libraries](#)

Options: Sort by: Reactions Evaluations

Clone Request: [EXFOR](#) [CINDA](#) Feedback: [Comments/Questions?](#)

Parameters: [Submit](#) [Reset](#)

Target **Nuclide(s)**

Reaction >>

Quantity >>

[More Parameters...](#)

[Submit](#)

JSON output for MF8:MT457

1) BR-88(DECAY,CAY),RNP MT=457 MF=8 NSUB=4
MF8: [RNP] Radioactive decay data MT457: [DECAY] Radioactive decay data.
1 ENDF-6 Interpreted js plot ENDF/B-VIII.0 Lab=BNL Date=20111222 Conversion from ENSDF

Links to JSON

```
{ "format": "Endf_MF8_MT457-v0.1",  
  "now": "2021-03-10T16:49:06.595Z",  
  "program": "EndfSect457, by V.Zerkin, IAEA-NDS, ver.2021-01-08",  
  "id": "8931886"  
  , "dataType": "Radioactive decay data", "datTyp": "e6mt457"  
  , "Library": "ENDF/B-VIII.0", "EDATE": " EVAL-NOV05", "AUTH": " Conversion from ENSDF"  
  , "HSUB1": "----ENDF/B-VIII.0", "MAT": 852, "NSUB": "4", "Nucleus": "Br-88"  
  , "MF": 8, "MT": 457, "ZA": 35088, "AWR": 87.16876  
  , "T12s": 16.29, "dT12s": 0.06, "T12": 16.29, "dT12": 0.06, "uT12": "s"  
  , "Ebeta": 1702.089, "dEbeta": 50.94862, "uEbeta": "keV"  
  , "Egamma": 3133.758, "dEgamma": 57.90383, "uEgamma": "keV"  
  , "Ealpha": 16.32917, "dEalpha": 0.0, "uEalpha": "keV"  
  , "Spin": 2.0, "Parity": "minus", "LISO": 0, "LIS": 0  
  , "nDecayModes": 2, "nRadTypes": 5  
  , "DecayModes": [ { "i": 1, "RTYP": "1", "txRTYP": "Beta-"  
    , "DecayQ": 8975.33, "dDecayQ": 4.106, "uDecayQ": "keV"  
    , "Branching": 0.9342, "dBranching": 0.0018 }  
  , { "i": 2, "RTYP": "1.5", "txRTYP": "Beta- --> n"  
    , "DecayQ": 1922.25, "dDecayQ": 3.18, "uDecayQ": "keV"  
    , "Branching": 0.0658, "dBranching": 0.0018  
  }  
]  
  , "RadTypes": [ { "i": 1, "STYP": "0", "txSTYP": "Gamma"  
    , "AveDecayEne": 3133.8, "dAveDecayEne": 57.904, "uAveDecayEne": "keV"  
    , "DiscreteSpectrum": { "Normalization": 1.0, "dNormalization": 0.0  
    , "nPts": 146, "PtsTyp": "line"  
    , "PtsUnit": [ { "E": "keV", "dE": "keV", "RI": "no-dim", "dRI": "no-dim" } ]  
    , "Pts": [  
      { "i": 1, "E": 125.9, "dE": 0.3, "RI": 3.35E-4, "dRI": 1.3631E-4, "RTYP": "1" }  
      . . . . .  
      { "i": 15, "E": 775.28, "dE": 0.06, "RI": 0.67, "dRI": 0.05, "RTYP": "1"  
      , "RICC": 9.27E-4, "dRICC": 1.3E-5, "RICK": 8.22E-4, "dRICK": 1.2E-5, "RICL": 8.88E-5, "dRICL": 1.3E-6 }  
      . . . . .  
      { "i": 146, "E": 7000.0, "dE": 0.6, "RI": 0.002948, "dRI": 2.9799E-4, "RTYP": "1" }  
    ]  
    , "Legend": [  
      { "RICC": { "any": "Total internal conversion coefficient" } }  
      , { "RICL": { "any": "L-shell internal conversion coefficient" } }  
      , { "RICK": { "any": "k-shell internal conversion coefficient" } }  
      , { "RTYP": { "1": "Beta-" } }  
    ]  
  }  
}
```

JSON

ENDF online: comparing decay data

ENDF Data Selection

Retrieve Selected Unselected All

Sorted by: [Reactions] Reorder by: [Libraries] View: basic extended:get MAT, PEN, GND

1) BR-88(DECAY,CAY),RNP MT=457 MF=8 NSUB=4

MF8: [RNP] Radioactive decay data MT457: [DECAY] Radioactive decay data.

1	<input checked="" type="checkbox"/>	ENDF-6	Interpreted	js	plot	ENDF/B-VIII.0	Lab=BNL Date=20111222	Conversion from ENSDF
2	<input type="checkbox"/>	ENDF-6	Interpreted	js	plot	ENDF/B-VII.1	Lab=BNL Date=20111222	Conversion from ENSDF
3	<input checked="" type="checkbox"/>	ENDF-6	Interpreted	js	plot	JEFF-3.3	Lab=HAR+WIN Date=291117	A.L. NICHOLS
4	<input type="checkbox"/>	ENDF-6	Interpreted	js	plot	JEFF-3.1	Lab=HAR+WIN Date=261107	A.L. NICHOLS
5	<input checked="" type="checkbox"/>	ENDF-6	Interpreted	js	plot	ENDF/B-VI	Lab=INEL,LANL Date=19910612	C.W.REICH,T.ENGLAND
6	<input type="checkbox"/>	ENDF-6	Interpreted	js	plot	JEF-2.2	Lab=NEADB Date=930715	CONVERSION OF ENSDF
7	<input type="checkbox"/>	ENDF-6	Interpreted	js	plot	UKDD-12	Lab=HAR+WIN Date=261107	A.L. NICHOLS

Select data

JSON

Output Data

Format	Data (Size)
ENDF	Text (177Kb) ZIP (27Kb)

Radioactive decay data MT457(3):

- parallel plain text[0][1][2],
- comparison + selective plotting:[go]

ENDF Radioactive decay data /MF8.MT457/

by V.Zerkin, IAEA-NDS, 2020-2022, ver.2022-02-10

Show all spectra. low-intensity lines ($\leq 1\%$).
 / data for plotting. data in %: using normalization:

#1.ENDF/B-VIII.0 #2.JEFF-3.3 #3.ENSDF-2021

#1.	ENDF/B-VIII.0	Br-88	#2.	JEFF-3.3	Br-88
Nucleus:	Br-88	ZA=35088	Nucleus:	Br-88	ZA=35088
Library:	ENDF/B-VIII.0	NSUB=4 MAT=852	Library:	JEFF-3.3	NSUB=4 MAT=858
AUTH:	Conversion from ENSDF		AUTH:	A.L. NICHOLS	
EDATE:	EVAL-NOV05		EDATE:	EVAL-OCT97	
Half life:	16.29 ± 0.06(s)		Half life:	16.5 ± 0.1(s)	
AWR:	87.16876		AWR:	87.1688	
Isomer number:	LISO=0		Isomer number:	LISO=0	
Level number:	LIS=0		Level number:	LIS=0	
Spin & Parity:	2-		Spin & Parity:	2-	
Ebeta:	1702.089 ± 50.94862 (keV)		Ebeta:	1706 ± 35 (keV)	
Egamma:	3133.758 ± 57.90383 (keV)		Egamma:	4609 ± 70 (keV)	
Ealpha:	16.32917 ± 0 (keV)		Ealpha:	8.0682 ± 0.965745 (keV)	
Decay modes:	2		Decay modes:	2	
Radiation types:	5		Radiation types:	5	

Legend

#Left	#Right	Ratio of values
Value1	Value2	Value2==Value1
Value1	>Value2	Value2 > Value1
Value1	\Value2	Value2 < Value1

ENDF comparing decay data

ENSDF/LiveChart-2022

DDEP-2017

ENDF Radioactive decay data /MF8.MT457/

by V.Zerkin, IAEA-NDS, 2020-2022, ver.2022-02-10

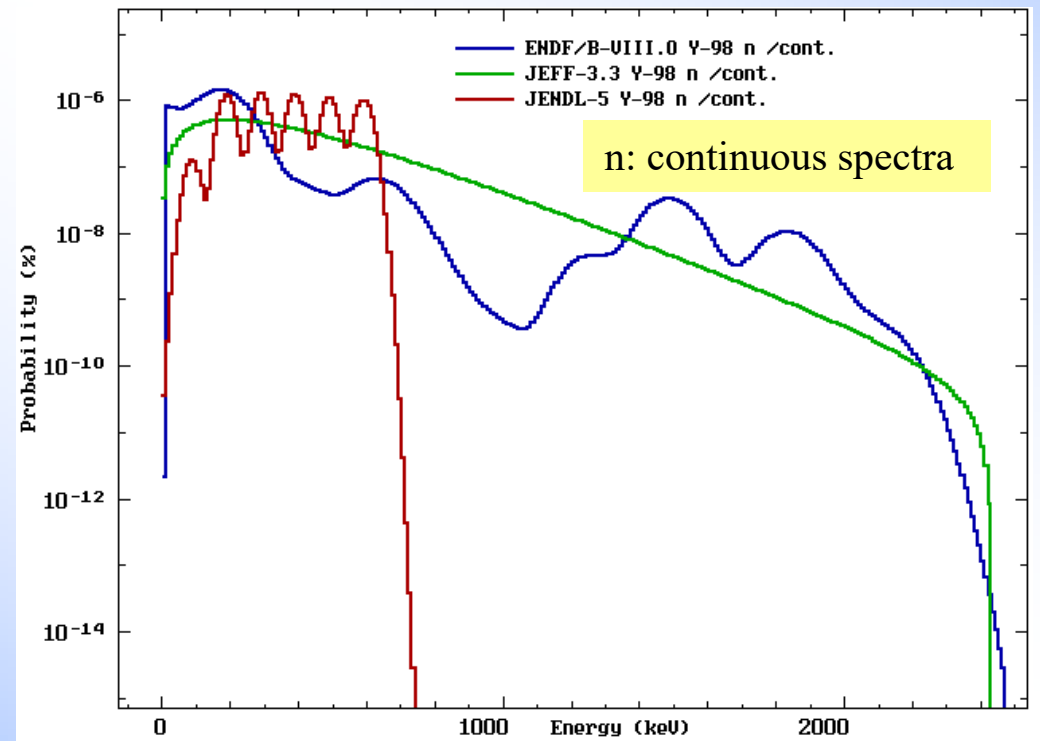
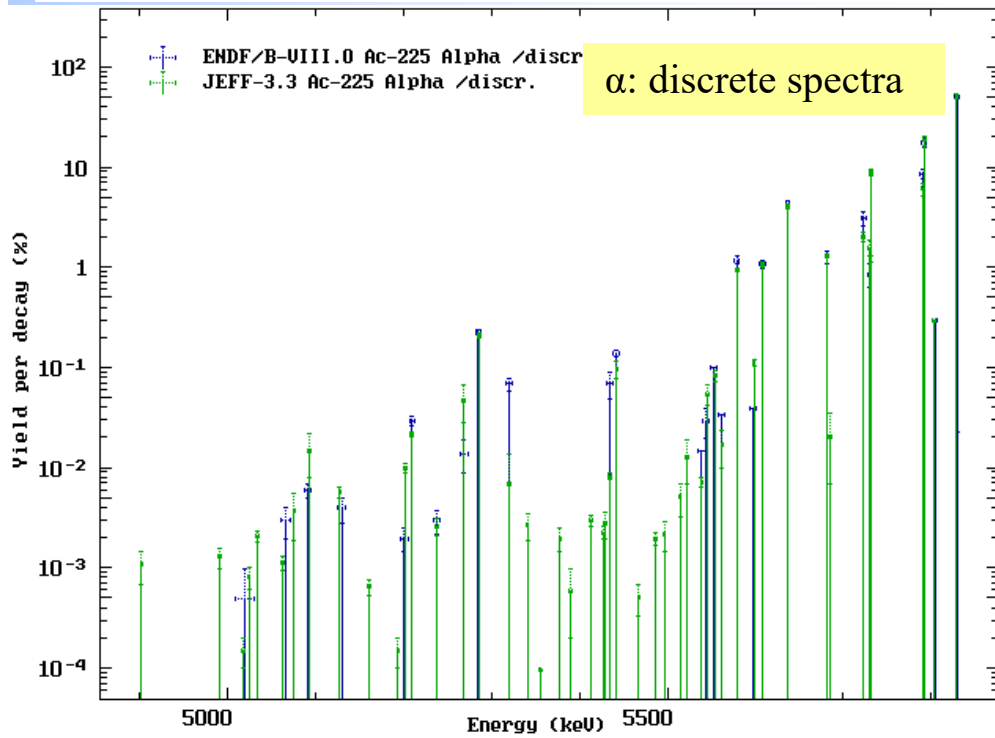
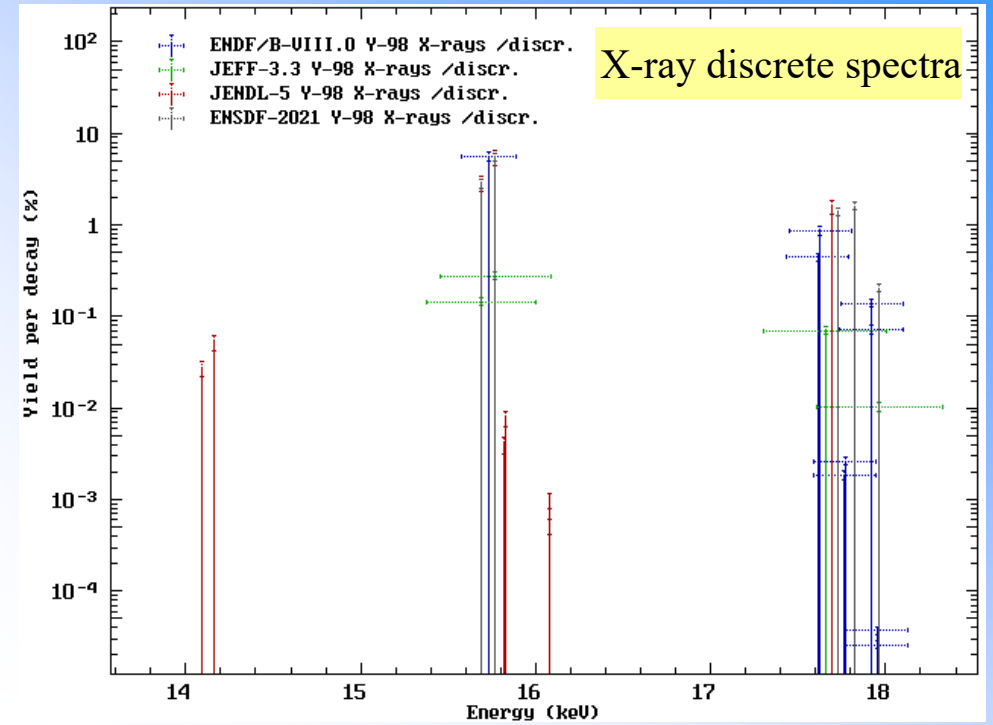
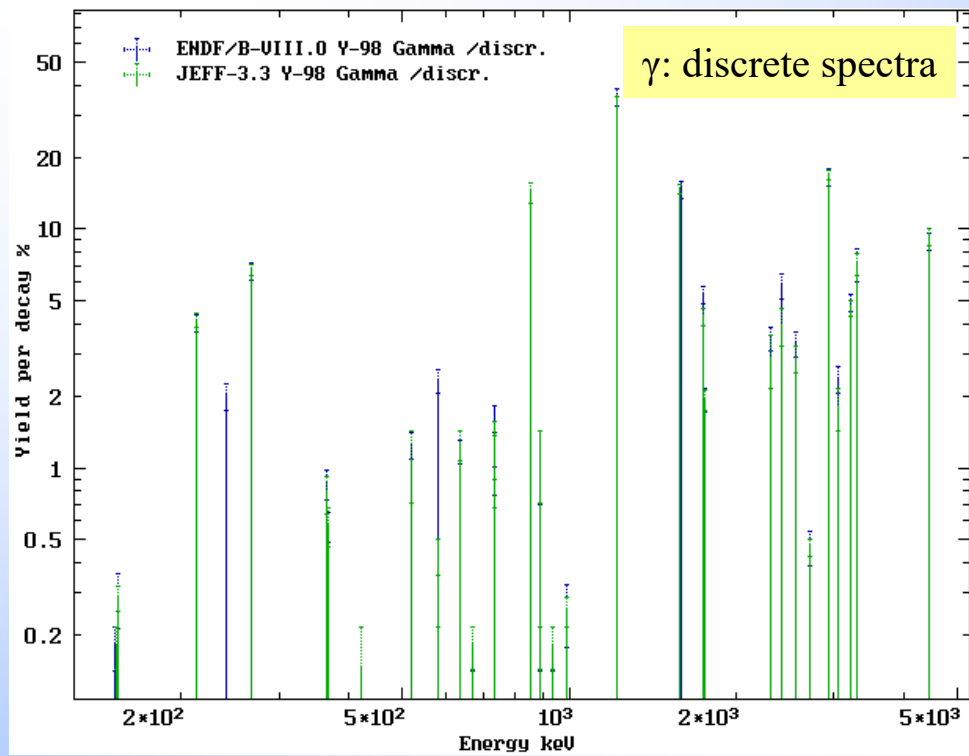
Show all spectra. Hide low-intensity lines ($\leq 1\%$).

Select / unselect data for plotting. Plot data in %: using normalization:

#1. ENDF/B-VIII.0 #2. JEFF-3.3 #3. JENDL-5 #4. ENSDF-2021 #5. DDEP-2017

#1. ENDF/B-VIII.0 Y-88	#2. JEFF-3.3 Y-88	#4. ENSDF-2021 Y-88	#5. DDEP-2017 Y-88																																																																																																																																																
<p>Nucleus: Y-88 ZA=39088 Library: ENDF/B-VIII.0 NSUB=4 MAT=992 AUTH: Conversion from ENSDF EDATE: EVAL-NOV05 Half life: 106.63 ± 0.021(d) AWR: 87.15432 Isomer number: LISO=0 Level number: LIS=0 Spin & Parity: 4- Ebeta: 6.76242 ± 0.2965113 (keV) Egamma: 2694.915 ± 6.558946 (keV) Ealpha: 0 ± 0 (keV) Decay modes: 1 Radiation types: 4</p>	<p>Nucleus: Y-88 ZA=39088 Library: JEFF-3.3 NSUB=4 MAT=1000 AUTH: V.P.CHECHEV,N.K.KUZMENKO EDATE: EVAL-JUL15 Half life: 106.63 ± 0.05(d) \AWR: 87.1543 Isomer number: LISO=0 Level number: LIS=0 Spin & Parity: 4- \Ebeta: 6.44118 ± 0.292376 (keV) \Egamma: 2693.85 ± 2.83267 (keV) Ealpha: 0 ± 0 (keV) Decay modes: 1 Radiation types: 4</p>	<p>Nucleus: Y-88 ZA=39088 Library: ENSDF-2021 Livechart Half life: 106.63 ± 0.021(d) Spin & Parity: 4- Library: ENSDF 202111 by livechart20220118 LARA Nuclide; Y-88 Element; Yttrium Z; 39 Daughter(s); (B+, EC); Sr-88; 100 Q+; 3622.6 Possible parent(s); Jp; 4- Half-life (d); 106.626; 0.021 Half-life (s); 9.212E6; 1.814E3 Decay constant (1/s); 7.522E-8; 1.5E-11 Specific activity (Bq/g); 5.153E14; 1.032E11 Reference: ENSDF 201401 / Author(s) E.A. McCutchan and A.A. Sonzogni Emissions (17 lines) sorted by increasing energy Decay modes: 1 Radiation types: 2</p>	<p>Nucleus: Y-88 ZA=39088 Library: DDEP-2017 LNHB Laboratoire National Henri Becquerel Half life: 106.63 ± 0.05(d) Nuclide; Y-88 LARA Element; Yttrium Z; 39 Daughter(s); (B+, EC); Sr-88; 100 Q+; 3622.6 Possible parent(s); (B+, EC); Zr-88; 100 Half-life (d); 106.63; 0.05 Half-life (s); 9.2128E6; 0.0043E6 Decay constant (1/s); 75.237E-9; 0.035E-9 Specific activity (Bq/g); 514.87E12; 0.24E12 Reference; KRI - 2015 Emissions (13 lines) sorted by increasing energy Decay modes: 1 Radiation types: 2</p>																																																																																																																																																
#M1. Decay mode: RTYP=2 EC β+ Decay Q=3622.6 ± 1.5 keV	#M1. Decay mode: RTYP=2 EC β+ Decay Q=3622.6 ± 1.5 keV	#M1. Decay mode: RTYP=2 EC β+ Decay Q=3622.6 keV	#M1. Decay mode: RTYP=2 EC β+ Decay Q=3622.6 keV																																																																																																																																																
#R1. Radiation type: STYP=0 γ AveDecayEne=2684 ± 6.5317 keV <input type="checkbox"/> DiscreteSpectrum: 6 lines <input type="checkbox"/> plot	#R1. Radiation type: STYP=0 γ \AveDecayEne=2683 ± 2.8224 keV <input type="checkbox"/> DiscreteSpectrum: >7 lines <input type="checkbox"/> plot	#R1. Radiation type: STYP=0 γ AveDecayEne: ? <input type="checkbox"/> DiscreteSpectrum: >7 lines <input type="checkbox"/> plot	#R1. Radiation type: STYP=0 γ AveDecayEne: ? <input type="checkbox"/> DiscreteSpectrum: >8 lines <input type="checkbox"/> plot																																																																																																																																																
#R2. Radiation type: STYP=2 EC β+ AveDecayEne=0.75493 ± 0.071898 keV <input type="checkbox"/> DiscreteSpectrum: 4 lines <input type="checkbox"/> plot	#R2. Radiation type: STYP=2 EC β+ >AveDecayEne=0.7602 ± 0.03623 keV <input type="checkbox"/> DiscreteSpectrum: 4 lines <input type="checkbox"/> plot	-no-	-no-																																																																																																																																																
#R3. Radiation type: STYP=8 disc. e- AveDecayEne=6.0075 ± 0.28766 keV <input type="checkbox"/> DiscreteSpectrum: 20 lines <input type="checkbox"/> plot	#R3. Radiation type: STYP=8 disc. e- \AveDecayEne=5.681 ± 0.29012 keV <input type="checkbox"/> DiscreteSpectrum: >30 lines <input type="checkbox"/> plot	-no-	-no-																																																																																																																																																
#R4. Radiation type: STYP=9 X-rays AveDecayEne=10.89 ± 0.59683 keV <input type="checkbox"/> DiscreteSpectrum: 13 lines <input type="checkbox"/> plot Normalization: 1 ± 0	#R4. Radiation type: STYP=9 X-rays \AveDecayEne=10.839 ± 0.29943 keV <input type="checkbox"/> DiscreteSpectrum: >5 lines <input type="checkbox"/> plot Normalization: 0.01 ± 0	#R2. Radiation type: STYP=9 X-rays AveDecayEne: ? <input type="checkbox"/> DiscreteSpectrum: >6 lines <input type="checkbox"/> plot Normalization: 0.01 ± 0	#R2. Radiation type: STYP=9 X-rays AveDecayEne: ? <input type="checkbox"/> DiscreteSpectrum: >5 lines <input type="checkbox"/> plot Normalization: 0.01 ± 0																																																																																																																																																
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ENDF: decay data plot + comparison



ENDF: DD plot and comparison with EXFOR

/needs development?/

Plot data in %: using normalization:

#1. **ENDF/B-VIII.0** **Br-88**

Nucleus: Br-88 ZA=35088
 Library: ENDF/B-VIII.0 NSUB=4 MAT=852
 AUTH: Conversion from ENSDF
 EDATE: EVAL-NOV05
 Half life: 16.29 ± 0.06(s)
 AWR: 87.16876
 Isomer number: LISO=0
 Level number: LIS=0
 Spin & Parity: 2-
 Ebeta: 1702.089 ± 50.94862 (keV)
 Egamma: 3133.758 ± 57.90383 (keV)
 Ealpha: 16.32917 ± 0 (keV)
 Decay modes: 2
 Radiation types:5

#M1. Decay mode: RTYP=1 β^-
 Decay Q=8975.33 ± 4.106 keV
 Branching=93.42 ± 0.18 %

#M2. Decay mode: RTYP=1.5 $\beta^- \rightarrow n$
 Decay Q=1922.25 ± 3.18 keV
 Branching=6.58 ± 0.18 %

#R1. Radiation type: STYP=0 γ
 AveDecayEne=3133.8 ± 57.904 keV
 DiscreteSpectrum: 146 lines plot

#R2. Radiation type: STYP=1 β^-
 AveDecayEne=1701.6 ± 50.949 keV
 DiscreteSpectrum: 58 end-points plot

#R3. Radiation type: STYP=5 n
 AveDecayEne=16.329 ± 0 keV
 ContinuousSpectrum: 178 plot

#R4. Radiation type: STYP=8 disc. e-
 AveDecayEne=0.50751 ± 0.084348 keV
 DiscreteSpectrum: 17 lines plot

#R5. Radiation type: STYP=9 X-rays
 AveDecayEne=4.7821e-3 ± 1.0949e-4 keV
 DiscreteSpectrum: 6 lines plot

8.4. RADIOACTIVE DECAY DATA (MT=457)

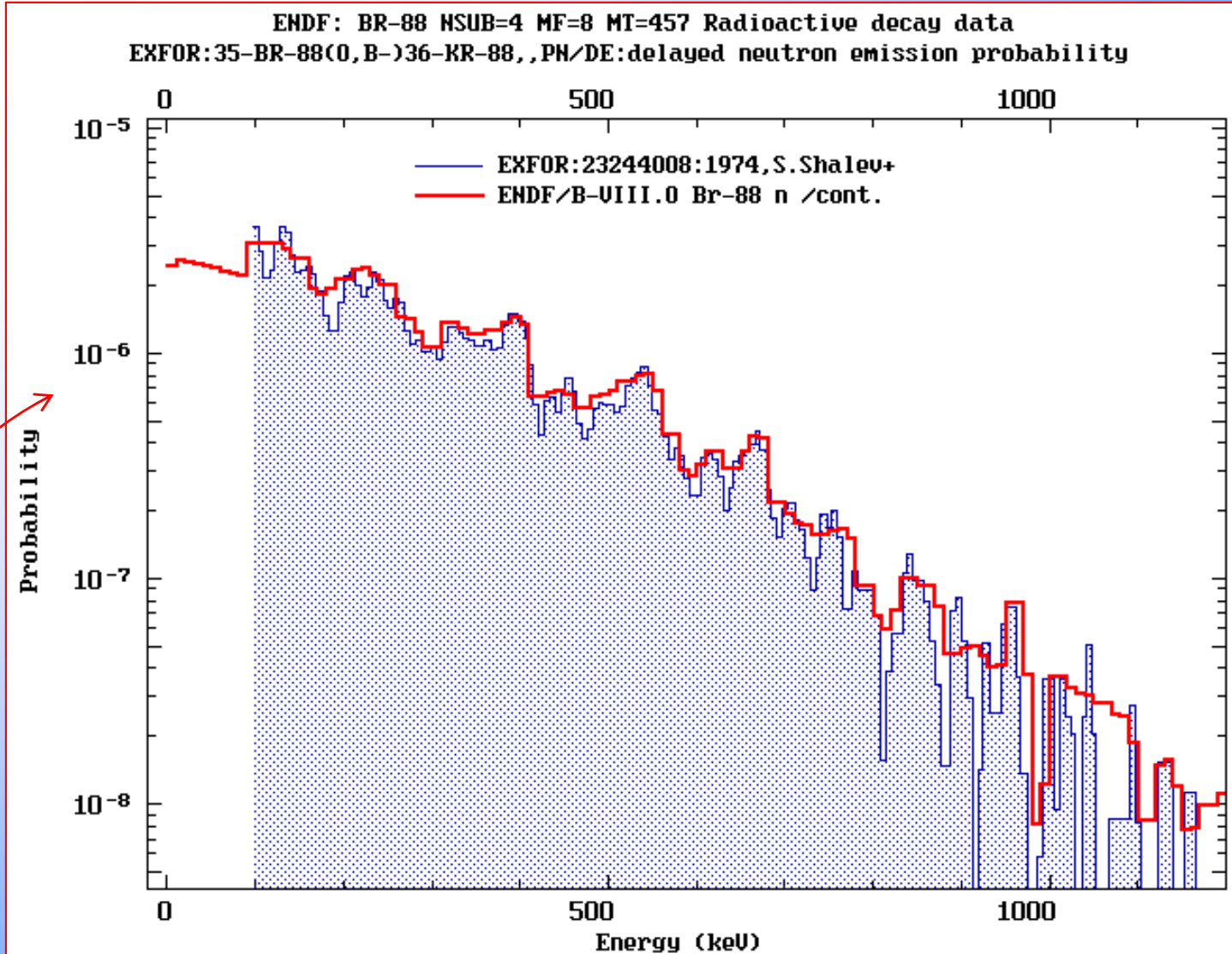
RTYP	Decay Mode
1.5	β^- ,n Beta decay followed by neutron emission (<i>delayed neutron decay</i>)

ENDF

Target Br-88
 Reaction decay

EXFOR

Target Br-88
 Reaction 0,b-
 Quantity MFQ



Part II.

**Status of MyENSDF tools
and EXFOR-NSR PDF database.**

Status of MyEnsdf tools

JAVA-NDS now can produce PDF file on Web!!!

Publication tools

(20) **JAVA_NDS** New ENSDF publication program /v-2.1, 19-Dec-2021/

The McMaster-MSU JAVA-NDS program v2.1, last update: December 19, 2021 by Jun Chen. See [\[manual\]](#)

Produces LaTeX and PDF files from your ENSDF file.

Input File:

Convert ENSDF file to LaTeX

Produce PDF file from LaTeX

[Run](#)

[\[clean\]](#)

✗	184Au.ens.java_nds.control	294	2022/03/29	17:57:57
✗	184Au.ens.java_nds.dummy.txt	5	2022/03/29	17:57:59
✗	184Au.ens.java_nds.ens	29,241	2022/03/29	17:57:59
✗	184Au.ens.java_nds.pdf	123,923	2022/03/29	17:57:59
✗	184Au.ens.java_nds.tt	3,059	2022/03/29	17:57:59
✗	184Au.ens.java_nds.zip	386,261	2022/03/29	17:57:59

(21) **NDSPUB** Old ENSDF publication program /v-12.26b, 15-Jul-2008/

Produces PostScript and PDF files from your ENSDF file.

Input File:

Type of input: (Cards-0, Working-1)

[Control file \(applied only in regime "Working"\)](#). Use initial text from the file: [upload.zeroctl.184](#)

Control file commands for NDSPUB: [\[help\]](#)

[Run](#)

[\[clean\]](#)

✗	184Au.ens.ndspub.err	33	2022/03/29	17:58:11
✗	184Au.ens.ndspub.inp	35	2022/03/29	17:58:10
✗	184Au.ens.ndspub.pdf	59,374	2022/03/29	17:58:12
✗	184Au.ens.ndspub.ps	172,859	2022/03/29	17:58:11
✗	184Au.ens.ndspub.tt	2,930	2022/03/29	17:58:12

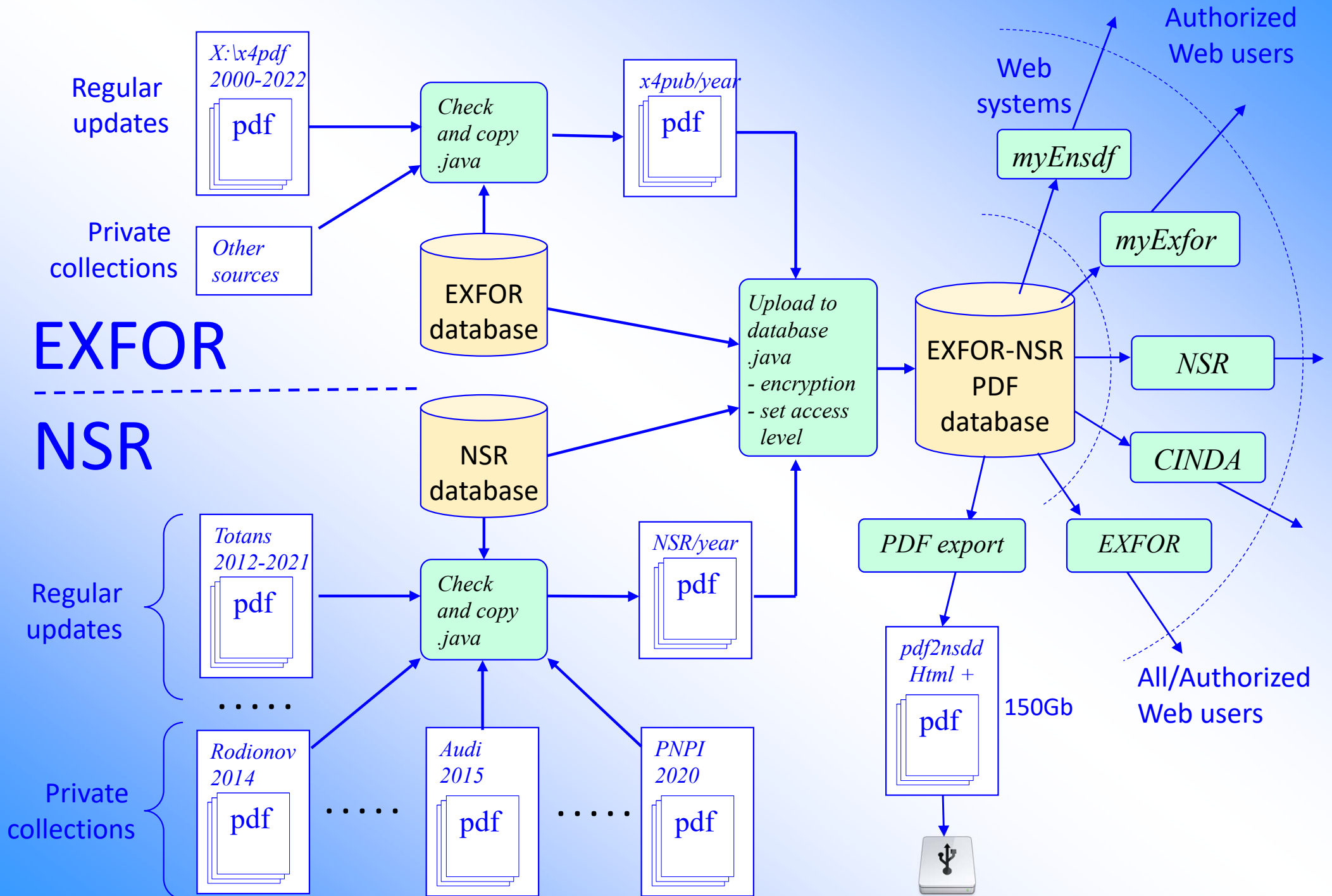
Note. NDSPUB continue working

History of EXFOR-NSR PDF database

- Publications: from 1896 to 2022, 124 years
- Content: 222,677 PDF files from 2000 to 2022 (23 years)
- Coverage: EXFOR 26,902 files (76.8%); NSR 188,354 files (79.2%)
- Web access via: EXFOR, NSR, CINDA, myEnsdf on NDS and NNDC sites
- 2005: EXFOR source papers are systematically stored in the IAEA-NDS PDF archive
- 2011: PDF files are included to EXFOR database (common between NNDC and NDS)
- 2011: EXFOR Web retrieval system provides PDF files to authorized users on NNDC and NDS Web sites
- 2012: PDF of original papers of NSR are exchanged between NNDC and NDS, and shared between NSR and EXFOR retrieval systems
- 2015: ENSDF evaluators donate their PDF collections to common database: A.Rodionov, G.Shulyak, B.Singh, G.Audi, F.Kondev
- 2015: NSR Web retrieval system provides access to PDF files for authorized users
- 2016: PNPI joins regular exchange of PDF files between NNDC and NDS
- 2016: CINDA Web retrieval system provides access to PDF files for authorized users
- 2016: IAEA-INDC reports are publically opened via Web EXFOR and NSR
- 2019: KINR opens lab reports and conference proceedings of Institute for Nuclear Research (Ukraine)
- 2022: 2,639 PDF files are public i.e., ~1.2% from total 222,677 publications
- 2022: paper describing EXFOR-NSR PDF database published in “Journal of Instrumentation”
DOI: <https://doi.org/10.1088/1748-0221/17/03/P03012>, NSR: <https://www.nndc.bnl.gov/nsr/nsrlink.jsp?2022ZE01>

NSDD Members are welcome to open their Lab reports for public access

Functioning of EXFOR-NSR PDF database



EXFOR-NSR PDF database

Database updated: 2022-03-29. Files: 222677 from 2000-04-19 to 2022-03-29.

- - - - - 1857:1 1858:1 - - [1851-1858]:2
- - - - - 1896:3 - 1898:4 1899:1 - [1891-1899]:8
1901:1 1902:2 1903:5 1904:5 1905:4 1906:2 1907:4 1908:2 1909:1 1910:5 [1901-1910]:31
1911:2 1912:1 1913:4 - - - 1917:4 1918:2 1919:3 1920:3 [1911-1920]:19
1921:5 1922:4 1923:3 1924:5 1925:2 1926:1 1927:3 1928:14 1929:8 1930:14 [1921-1930]:59
1931:27 1932:25 1933:30 1934:48 1935:59 1936:57 1937:81 1938:74 1939:127 1940:95 [1931-1940]:623
1941:73 1942:33 1943:85 1944:166 1945:107 1946:178 1947:250 1948:216 1949:381 1950:504 [1941-1950]:1993
1951:564 1952:512 1953:610 1954:710 1955:818 1956:899 1957:961 1958:1301 1959:1193 1960:1473 [1951-1960]:9041
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1981:3349 1982:3485 1983:3575 1984:3527 1985:3116 1986:3199 1987:3491 1988:3319 1989:3371 1990:3300 [1981-1990]:33732
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2001:4562 2002:4835 2003:4496 2004:4812 2005:5007 2006:4312 2007:4969 2008:3992 2009:3878 2010:3638 [2001-2010]:44501
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2021:292 2022:37 [2021-2022]:329

Total years:124, files:222677

Full volumes: [[Conf.proc. & Books](#)] [[Theses](#)] [[Reports](#)]

Checking [mode](#) //contributions to NSR-PDF

PDF coverage

Database	#PDF/#References	#PDF+	Total #PDF+	Todo #PDF
NSR	188,354/237,957 ~79.2%	+1,464 ~0.6% from EXFOR	189,818 ~79.8%	48,139 ~20.2%
EXFOR	26,902/35,009 ~76.8%	+1,931 ~5.5% from NSR	28,833 ~82.4%	6,176 ~17.6%
CINDA	14,271/39,817 ~35.8%			
IBANDL	651/802 ~81.2%			

PDF files: 222,677 from 2000-04-19 to 2022-03-29

Contributions to NSR PDF database as of 2022-03-29

Registered contributions:

1) 201200_Totans	/3396/	26) 201803_Balraj	/1/
2) 201300_Totans	/962/	27) 201803_Pritychenko_RD	/523/
3) 201400_Totans	/512/	28) 201810_Zerkin_KINR	/50/
4) 201500_Totans	/583/	29) 201900_PNPI	/11226/
5) 201504_Dimitriou	/6/	30) 201900_Totans	/868/
6) 201510_Balraj	/257/	31) 201900_Zerkin	/356/
7) 201510_Rodionov	/2175/	32) 201907_Vrapcenjak	/1/
8) 201512_Audi	/2539/	33) 201911_Pritychenko	/1/
9) 201600_Totans	/1999/	34) 202000_PNPI	/37/
10) 201603_Rodionov	/181/	35) 202000_Pritychenko	/3/
11) 201603_Shulyak	/13012/	36) 202000_Totans	/860/
12) 201604_Kondev	/1066/	37) 202000_Vrapcenjak	/16/
13) 201611_PNPI	/31538/	38) 202000_Zerkin	/437/
14) 201700_PNPI	/50563/	39) 202100_Dimitriou	/3/
15) 201700_Totans	/2316/	40) 202100_Pritychenko	/11/
16) 201700_Zerkin	/629/	41) 202100_Totans	/871/
17) 201703_Shulyak	/302/	42) 202100_Vrapcenjak	/640/
18) 201705_Kondev	/44/	43) 202100_Zerkin	/77/
19) 201709_Pritychenko	/1182/	44) 202112_Balraj	/1/
20) 201711_Zerkin	/840/	45) 202201_Pritychenko	/4/
21) 201800_PNPI	/56291/	46) 202201_Vrapcenjak	/6/
22) 201800_Pritychenko	/58/	47) 202202_Totans	/299/
23) 201800_Totans	/1037/	48) 202202_Zerkin	/5/
24) 201800_Zerkin	/404/	49) 202203_Totans	/2/
25) 201800_Zerkin_JINR	/673/	50) 202203_Vrapcenjak	/68/

Sum:188931

Registered contributors:

1	PNPI	149655	79.2%
2	Totans	13705	7.3%
3	Shulyak	13314	7%
4	Zerkin	3471	1.8%
5	Audi	2539	1.3%
6	Rodionov	2356	1.2%
7	Pritychenko	1782	0.9%
8	Kondev	1110	0.6%
9	Vrapcenjak	731	0.4%
10	Balraj	259	0.1%
11	Dimitriou	9	0.005%
	Total	188931	100%

**Thanks to all
contributors!!!**

Thank you.