MyEnsdf: Web Tool for ENSDF Evaluators

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Topics:

1. Processing user's data on Web-Server

- Concept
- MyENSDF Web Tool for ENSDF Evaluators

2. MyENSDF programs and operations

- MyENSDF operations
- Login and input ENSDF file
- Programs and parameters
- NDSPUB in editing mode

3. Demo and discussion

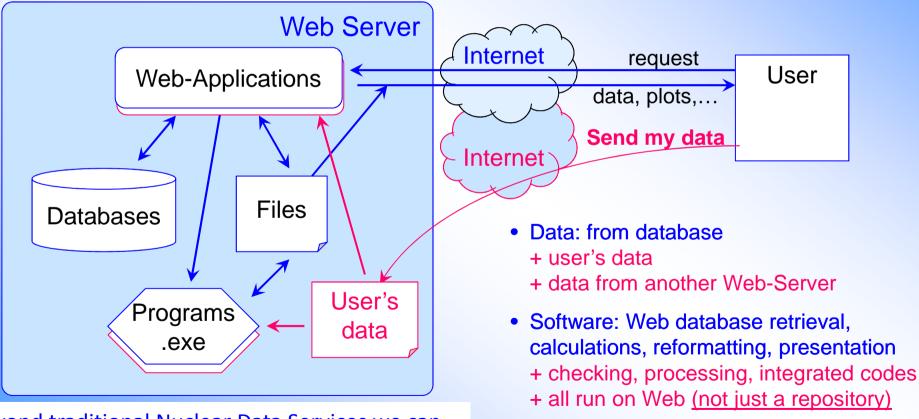
- Examples of usage: running programs (+questions)
- Discussion: experience of usage, further needs
- MyEnsdf on nndcin in BNL and on www-nds
- Self-cleaning (squeeze temporary data)
- Temporary and permanent areas
- Users' privileges, administrating, continuing work (multiple entries)

1. Processing user's data on Web-Server

Oriented to nuclear data professionals producing nuclear data

Modern definition: "Cloud computing" / "SaaS" = Software as a Service
Other types of cloud computing: IaaS (Infrastructure as a Service: disk space) and PaaS (Platform as a Service)

Structure and basic ideas



Beyond traditional Nuclear Data Services we can offer <u>Nuclear Data Software as a Service</u> oriented to the nuclear data compilers and evaluators

User's data can be processed together with data from databases

NDS Web server applications

MyPlot Plotting with Web-ZVView (2009)

MyEXFOR Uploading System (2010-2014)

Zchex, Zorder, Xtract, X4toc4; Web-EXFOR

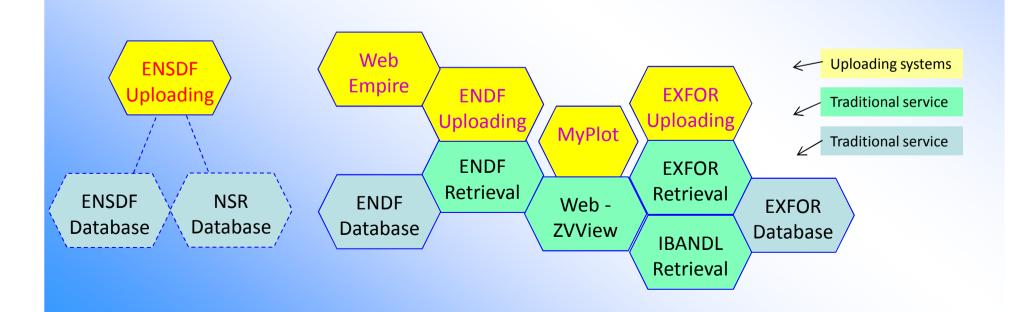
MyENDF Uploading System (2010-2015)

Checkr, Fizcon, Stanef, Psyche, Inter, Prepro, Endver, Web-EXFOR-ENDF, Fudge, Grucon

EMPIRE-3.1 Web Interface to Empire /test-version/ (2013)

MyENSDF Uploading System (2011-2015)

Fmtchk, Gtol, Logft, Pandora, Ndspub, Radlst, BrICC, chk_ENSDF, Prepro



Web Server Applications: Summary

Advantages:

- User does not need software installation (only Web browser)
- Central maintenance of utilities (only one platform)
- It can implement specific operations connecting with central database and Web (e.g. search for duplications of EXFOR references, DOI checking,..)
- Convenient Web interface to old legacy codes
 (automatic connection input-output of programs)
- Comparison users' data with data from central databases

Disadvantages:

- User needs Internet (which can have problems)
- Adding new program: replace sequential dialogue by single input-form

Potential problems and limitations:

- Speed, resources on server computer system
- IT security (current solution: password protection)

MyENSDF programs and operations

Functionality (as of 2015):

- upload your ENSDF file and run remotely (Fortran, C) programs:
 - ENSDF analysis/utility codes:

```
• FMTCHK /v-10.3a, 28-Sep-2007/
```

- chk_ENSDF /v-0.4.7, 10-Apr-2014/
- PREPRO /2014/
- GTOL /v-7.2h, 24-May-2013/
- LOGFT /v-7.2, 7-Feb-2001/
- PANDORA /v-7.0b, 01-May-2007/
- RADLST /v-5.5, 05-Oct-1988, input parameters: 2012/
- Brlcc /v2.3b, 16-Dec-2014/
- NDSPUB2: produces PS/PDF for Nuclear Data Sheets (connected to ENSDF and NSR relational databases)
- upload ENSDF file to ENSDF database, edit/upload NDSPUBcontrol file, produce final PS/PDF
- administrating users' files and working areas

Login and input ENSDF file





Web tools for ENSDF evaluators

by V.Zerkin, IAEA-NDS, 2011-2015 (ver.2015-01-30)

Upload your ENSDF dataset and run remotely ENSDF codes: FMTCHK, chk ENSDF, PREPRO, GTOL, LOGFT, PANDORA, RADLST, BrIcc, NDSPUB

Evaluator: Viktor Working area: 121 Session: 122 Use existing ENSDF file: Browse. No file selected. Reset Submit or ENSDF text. Examples: text web-links: fmtchk.inp pandora.inp logft.inp gtol.inp radist.inp 235U Į İ 184AII 184HG EC DECAY 2005SA40,1994IB01,1978NE1010NDS 184AU H TYP=FUL\$AUT=CORAL M. BAGLIN\$CIT=NDS 111,275 (2010)\$CUT=1-Oct-2009\$ 184AU D PARENT T: 30.6 S 3 (1972Fi12), 30.9 S 3 (1994Wa23). 184AU2D 32.5 S 10 (1970Ha18); from 5535A(T). 32.0 S 10 (1969Ha03). 184AU3D WEIGHTED AVERAGE: 30.87 S 26. 184AU c Others: 1975Ho03, 1971Hu02, 1969Ha03 (observed 157|g and 237|g). 184AU c 2005Sa40: mass-separated {+184}Hg source from fragmentation of molten 184AU2c Pb target by 600 MeV or 1 GeV protons; Ge(Li) and Si(Li) detectors,

Login: Viktor 2015/04/15:17:55:41 161.5.149.47::Austria Access level=2

		ENSDF file		MACHINE STATE OF THE STATE OF T	
1.1	tmp121 Viktor	a184.ens	2	2015/04/15 17:15:43 Viktor 161.5.149.47::Austria	continue

Continue your previous session

Your ENDSE

data file or

Web link

Web Design and Programming: Viktor Zerkin, NDS, International Atomic Energy Agency (V.Zerkin@iaea.org)
Last updated: 04/15/2015 17:55:48

184AU3c high resolution 180 | magnetic spectrograph; measured E g. I g.

Running ENSDF Codes on Web Main Request #123 by V.Zerkin, IAEA-NDS, 2011-2015 (ver.2015-01-30) User: Viktor Access level=2 News, updates, versions, history Project: tmp121 Uploading... Your input: 29Kb (29602 bytes) **Panel** ...Fnsdf file... Total: 361 lines ...Nuclide: 184AU ...See: copy of your data file: [a184.ens-00], working ENDSF File: [a184.ens] **Timeout** ...End of work; remove files and close this project - clean □ Run utilities Programs, parameters, run, results Your Files [refresh] Timeout: 600 sec Working files × a184.ens-00 29,602 2015/04/15 18:15:47 □ FMTCHK Checking ENSDF format /v-10.3a, 28-Sep-2007/ 29.241 2015/04/15 18:13:47 a184 ens Analyzes the format of an ENSDF formatted file to verify that it conforms to "EVALUATED NUCLEAR STRUCTURE DATA FILE. A Manual for Preparation of Data Sets" a184.ens.fmtchk 2.007 2015/04/15 18:15:51 by J.K. Tuli, Brookhaven National Laboratory, USA a184 ens fmtchk err 2015/04/15 18:15:51 Input File: a184.ens a184.ens.fmtchk.inp 2015/04/15 18:15:51 Errors only (or full report) a184.ens.fmtchk.tt 2015/04/15 18:15:51 Check continuation cards a184.ens.ndspub.err 453 2015/04/15 18:16:11 a184.ens.ndspub.inp 2015/04/15 18:16:08 Report only fatal errors a184.ens.ndspub.pdf 59.104 2015/04/15 18:16:12 Suppress warning messages a184.ens.ndspub.ps 166.644 2015/04/15 18:16:11 Suppress XREF/DSID check a184.ens.ndspub.tt 6.594 2015/04/15 18:16:12 Run [result] [terminal] a184.ens.ndspub.zeroctl 2015/04/15 18:16:08 a184.ens.pandora 29.241 2015/04/15 18:08:17 E chk ENSDF Total ENSDF checker /v-0.4.7, 10-Apr-2014/ a184.ens.pandora.err 0 2015/04/15 18:08:17 E sprepro 'some' preprocessing /v-2, 2014/ a184.ens.pandora.gam 9,464 2015/04/15 18:08:17 GTOL Determines level energies from a least-squares fit to Ev's & feedings a184.ens.pandora.gle 7.336 2015/04/15 18:08:17 /v-7.2h, 24-May-2013/ a184.ens.pandora.inp 2015/04/15 18:08:16 Input File: a184.ens a184.ens.pandora.lev 3.224 2015/04/15 18:08:17 Terminal output Create a new file with level energies replaced by GTOL results a184.ens.pandora.rad 1,305 2015/04/15 18:08:17 a184.ens.pandora.rep 2015/04/15 18:08:17 Suppress gamma energy comparison a184.ens.pandora.tt 2015/04/15 18:08:17 Suppress intensity comparison a184.ens.pandora.xrf 1.580 2015/04/15 18:08:17 Assumed DCC theory (%): 1.4 (Bricc-1.4%, Hsicc-3%, etc.) Total files: 22, length: 347504 Mozilla Firefox Run -----www2.nndc.bnl.gov/devtools/servlet/EnsdfRunUtil ■ Submit results to NNDC /C E LOGFT Calculates log ft for beta dec Treatment ENSDF file by FMTCHK program Zip and Submit to NNDC: your ENSD Parameters 4 8 1 Basic file: ENS4up00014.ensdf Input file: ENS4up00014.ensdf Run IF RADLST calculates the nuclear and atomic radiations associated with the Timeout: 5min 2sec...finished radioactive decay /v-5.5, 05-Oct-1988/ Start process... F BrIcc calculates conversion coefficients and E0 electronic factors /v2.3b. FMTCHK version 10.3a [28-Sep-2007] 16-Dec-2014/ INPUT file (DEF: fmtchk.inp): OUTPUT file (DEF: fmtchk.rpt): Publication tools (2014) Errors only or full report (E, F): Check continuation cards (Y, N): Report only fatal errors (N, 184AU 184BG EC DECAY 2005SA40,1994B01,1978NE1010NDS 201002 ** Upload your ENSDF file to working database /Sept. 2014/ 3 error(s) reported 6 warning(s) reported ■ NDSPUB ENSDF publication program /v-12.26b, 15-Jul-2008/ Program completed successfully Produces PostScript and PDF files from your ENSDF file ---File: ENS4up00014 ensdf fintchk EVALUATED NUCLEAR STRUCTURE DATA FILE SYNTAX CHECK FMTCHK version 10.3a AS Input File: a184.ens Type of input: 0 (Cards-0, Working-1):...1....2.....3.....4.....5....:...6....:...7....:...8 Control file (applied only in regime "Working"). Use initial text from the file: upload.zeroctl.184 Run/interrupt program 1. 184AU 184HG EC DECAY 2005SA40,1994IB01,1978NE1010NDS Run Stop [result] [terminal] 103. 184AU G 3.4

Programs and parameters

1) FMTCHK

```
FMTCHK Checking ENSDF format /v-10.3a, 28-Sep-2007/
Analyzes the format of an ENSDF formatted file to verify that it conforms to

"EVALUATED NUCLEAR STRUCTURE DATA FILE. A Manual for Preparation of Data Sets"
by J.K. Tuli, Brookhaven National Laboratory, USA

Input File: a184.ens

Ferrors only (or full report)

Check continuation cards
Report only fatal errors

Suppress warning messages
Suppress XREF/DSID check

Run [result] [terminal]
```

2) chk_ENSDF

```
Written by G. Shulyak, Petersburg Nuclear Physics Institute Nuclear Data Center, Russia, 1996-2014.
Analyzes the format of an ENSDF formatted file to verify that it conforms to "Evaluated Nuclear Structure
Data File. A Manual for Preparation of Data Sets", BNL-NCS-51655-01/02-Rev
  -w: suppress warning messages
             output level (default = 0)
  -x: <=$~01deFGHlNpPruX values: [<=$~01deFGHlNpPruX] (see help below)

    ■ Short help from the program

  -d level
              - output level (default = 0)
               - no warning messages
   -x flags - suppress any messages
               - ignore 'value <= dvalue' message
               - ignore 'value == dvalue' message
               - ignore 'extra $' message
               - ignore 'COND impossile with DVALUE' message
               - used '1' in comments as 1-st record of comments
               - suppress '1' in comments
               - suppress 'Invalid DATE' message
               - ignore empty field of E/DE
               - ignore 'undefined FLAG' message
               - ignore skipped uncertainty in '2 G': KC, LC, MC,...
               - ignore 'H'-record
               - ignore illegal record size
               - ignore 'Incompatible NUCID' message
               - suppress 'Invalid PUB' message
               - consider " PG " and " PL " as comment
               - suppress 'Src(Reaction) Dst' message
               - consider "?u " as comment
               - ignore '2 L XREF=x(?)'
  Run [result] [terminal]
```

□ chk ENSDF Total ENSDF checker /v-0.4.7, 10-Apr-2014/

```
X a184.ens.chk_ENSDF.err
X a184.ens.chk_ENSDF.inp
X a184.ens.chk_ENSDF.tt
```

Programs and parameters

3) PREPRO □ sprepro 'some' preprocessing /v-?, 2014/ a184.ens.sprepro.chg Input File: a184.ens a184.ens.sprepro.err a184.ens.sprepro.inp Run [result] [terminal] a184.ens.sprepro.new a184.ens.sprepro.tt 4) GTOL □ GTOL Determines level energies from a least-squares fit to Ey's & feedings a184.ens.qtol /v-7.2h, 24-May-2013/ a184.ens.gtol.err Input File: a184.ens a184.ens.qtol.inp Create a new file with level energies replaced by GTOL results a184.ens.gtol.tt ✓ Suppress gamma energy comparison Suppress intensity comparison Assumed DCC theory (%): 1.4 (Bricc-1.4%, Hsicc-3%, etc.) Run [result] [terminal] 5) LOGFT □ LOGFT Calculates log ft for beta decay /v-7.2, 7-Feb-2001/
This program calculates log ft for beta decay. It also calculates the partial capture fractions for electron capture, the electron capture to positron ratio for positron decay, and the average beta energies. It will do special calculations for first and second forbidden unique; All other categories are treated as allowed. a184.ens.logft a184.ens.logft.dat a184.ens.logft.err a184.ens.logft.inp Input File: a184.ens a184.ens.logft.rpt Run [result] [terminal] a184.ens.logft.tt □ PANDORA Checks physics of ENSDF files /v-7.0b, 01-May-2007/ a184.ens.pandora 6) PANDORA Provides the physics checks for an ENSDF file a184.ens.pandora.err Input File: a184.ens a184.ens.pandora.gam Level report and file sorted a184.ens.pandora.gle ✓ Gamma report and files sorted a184.ens.pandora.inp a184.ens.pandora.lev Radiation report and files sorted a184.ens.pandora.rad Cross-reference output a184.ens.pandora.rep Suppress warning messages a184.ens.pandora.tt Run a184.ens.pandora.xrf

Programs and parameters

7) RADLST

```
□ RADLST calculates the nuclear and atomic radiations associated with the radioactive decay /v-5.5, 05-Oct-1988/
The program RADLST (Radiation Listing) is designed to calculate the nuclear and atomic radiations associated with the radioactive decay of nucley. It uses as its primary input nuclear decay data in the ENSDF format. By T.W.Burrows Brookhaven National Laboratory. See [manual]

Input File: a184.ens

✓ Output Radiation Listing

✓ Output ENDF-like File

✓ Output File For Nudat

✓ Output Mird Listing

✓ Calculate Continua

☐ Calculate Bremsstrahlung

Run [result] [terminal]
```

```
a184.ens.radlst.ENDF.RAW
a184.ens.radlst.ENSDF.RPT
a184.ens.radlst.err
a184.ens.radlst.inp
a184.ens.radlst.NUDAT.OUT
a184.ens.radlst.RADLST.INP
a184.ens.radlst.RADLST.RPT
a184.ens.radlst.tt
```

8) Brlcc

```
■ BrIcc calculates conversion coefficients and E0 electronic factors N2.3b,

16-Dec-2014/

Bricc v2.3b (16-Dec-2014) calculates conversion coefficients (for electron conversion and pair production) and E0 electronic factors using cubic spline interpolation. See [manual]

Input File: a184.ens

List conversion coefficients for all subshells

Calculate conversion coefficients for all transitions

Lowest CC value to be put on G-card: 1e-4 (default 1.E-4)

Assumed value MR for E2/M1 transitions: 1 (default 1.)

Run [result] [terminal]
```

```
x a184.ens.bricc.BrIcc.lst
x a184.ens.bricc.Cards.mrg
x a184.ens.bricc.Cards.new
x a184.ens.bricc.Compar.lst
x a184.ens.bricc.err
x a184.ens.bricc.inp
x a184.ens.bricc.Out.ens
x a184.ens.bricc.tt
```

9) NSDPUB (type of input: "Cards")

```
    NDSPUB ENSDF publication program /v-12.26b, 15-Jul-2008/
    Produces PostScript and PDF files from your ENSDF file.
    Input File: a184.ens
    Type of input: 0 (Cards-0, Working-1)
    ⊕ Control file (applied only in regime "Working"). Use initial text from the file: upload.zeroctl.184
    Run [result] [terminal]
```

```
x a184.ens.ndspub.err 453
x a184.ens.ndspub.inp 33
x a184.ens.ndspub.pdf 60,041
x a184.ens.ndspub.ps 172,833
x a184.ens.ndspub.tt 2,796
x a184.ens.ndspub.zeroctl 0
```

¹⁸⁴Hg E Decay 2005Sa40,1994Ib01,1978Ne10

Parent ¹⁸⁴Hg: E=0.0; $J\pi$ =0+; $T_{1/2}$ =30.87 s 26; Q(g.s.)=3970 24; % ϵ +% β + decay=98.89 6.

Others: 1975Ho03, 1971Hu02, 1969Ha03 (observed 157y and 237y).

2005Sa40: mass-separated ¹⁸⁴Hg source from fragmentation of molten Pb target by 600 MeV or 1 GeV protons; Ge(Li) and Si(Li) detectors, high resolution 180° magnetic spectrograph; measured Eγ, Iγ, E(ce), I(ce). Additional sources from ¹⁴⁸Sm(⁴⁰Ar,X); planar Ge (FWHM=0.9 keV at 122 keV) for Eγ≤1 MeV; two HPGe detectors (FWHM =2.3 keV at 1.3 MeV) for Eγ≤1.3 MeV; measured x-γ-t and γ-γ-t events which were sorted to provide prompt-, total- and delayed-coincidence bidimensional matrices (60 ns or 100 ns time windows). Supersedes 2003IbZZ; see also 1994Ib01.

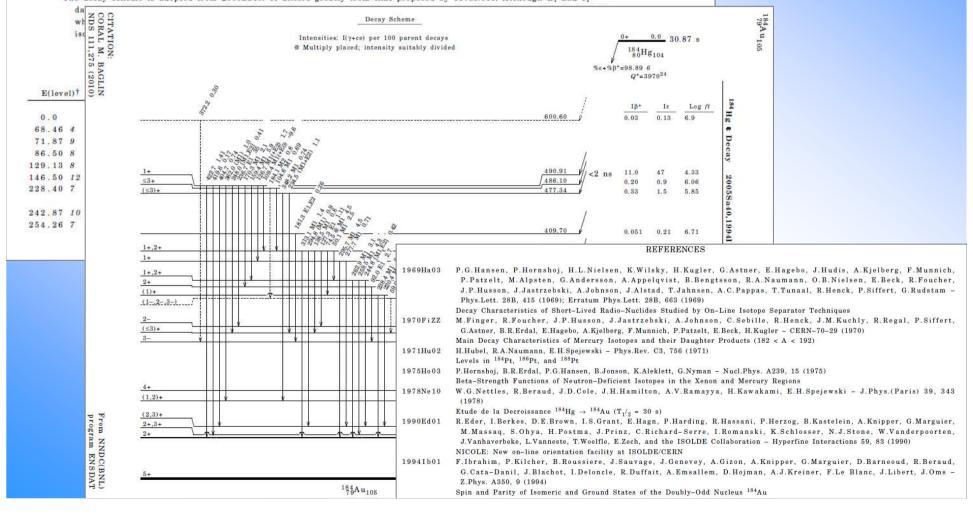
1994Ib01: mass separated source from bombardment of ¹⁴⁸Sm by 185 MeV ⁴⁰Ar ions; He-jet transport, iodine aerosol; two HPGe coaxial detectors, one HPGe x-ray detector; measured singles γ and x-ray spectra, γγ(t), x-γ(t). See also 1994RoZY.

1975HoO3: β strength function deduced from total-absorption γ measurement.

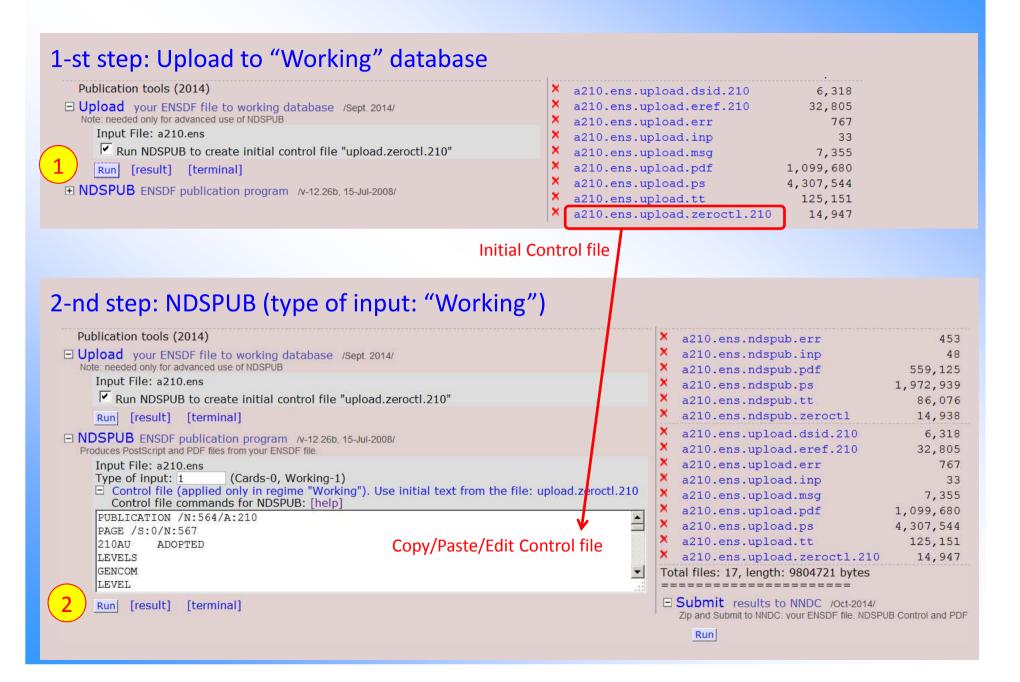
1978Ne10: Mass-separated source; measured Ey, Iy, yy coin, yy(t) (time resolution 6 ns 1).

The decay scheme is adopted from 2005Sa40. It differs greatly from that proposed by 1978Ne10. Although Ev and Iy

NDSPUB result: PS, PDF



NDSPUB in editing mode



NDSPUB in editing mode

3-rd step: Zip and Send result

Publication tools (2014)

□ Upload your ENSDF file to working database /Sept. 2014/
Note: needed only for advanced use of NDSPUB

Input File: a210.ens

□ Run NDSPUB to create initial control file "upload.zeroctl.210"

Run [result] [terminal]

□ NDSPUB ENSDF publication program /v-12.26b, 15-Jul-2008/
Produces PostScript and PDF files from your ENSDF file.

Input File: a210.ens

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

□ Control file (applied only in regime "Working"). Use initial text from the file: upload.zeroctl.210

Draft e-mail with list of files

Dear Dr. J. Tuli, The automated ENSDF system has sent you attached ENSDF files. Archive: a210.ens.submit.zip Name Length 787968 2015-04-16 12:52 a210.ens 788574 2015-04-16 12:52 a210.ens-00 2015-04-16 13:00 a210.ens.ndspub.err 453 2015-04-16 13:00 a210.ens.ndspub.inp 559125 2015-04-16 13:00 a210.ens.ndspub.pdf 1972939 2015-04-16 13:00 a210.ens.ndspub.ps 86076 2015-04-16 13:00 a210.ens.ndspub.tt a210.ens.ndspub.zeroctl 14938 2015-04-16 13:00 6318 2015-04-16 12:52 a210.ens.upload.dsid.210 a210.ens.upload.eref.210 32805 2015-04-16 12:52 767 2015-04-16 12:53 a210.ens.upload.err 2015-04-16 12:52 a210.ens.upload.inp 7355 2015-04-16 12:52 a210.ens.upload.msg 2015-04-16 12:53 a210.ens.upload.pdf 1099680 a210.ens.upload.ps 4307544 2015-04-16 12:53 2015-04-16 12:53 125151 a210.ens.upload.tt 14947 2015-04-16 12:53 a210.ens.upload.zeroctl.210 17 files 9804721 Best regards. Viktor (via MyENSDF)

```
a210.ens.ndspub.err
                                         453
  a210.ens.ndspub.inp
                                          48
  a210.ens.ndspub.pdf
                                     559,125
  a210.ens.ndspub.ps
                                   1,972,939
  a210.ens.ndspub.tt
                                      86,076
  a210.ens.ndspub.zeroctl
                                      14,938
  a210.ens.submit.txt
                                       1,144
   a210.ens.submit.zip
                                  2,797,304
  a210.ens.upload.dsid.210
                                       6,318
  a210.ens.upload.eref.210
                                      32,805
  a210.ens.upload.err
                                         767
  a210.ens.upload.inp
                                          33
  a210.ens.upload.msg
                                       7.355
  a210.ens.upload.pdf
                                  1,099,680
  a210.ens.upload.ps
                                   4,307,544
  a210.ens.upload.tt
                                     125.151
  a210.ens.upload.zeroctl.210
                                      14,947
Total files: 19, length: 12603169 bytes
□ Submit results to NNDC /Oct-2014/
  Zip and Submit to NNDC: your ENSDF file, NDSPUB Control and PDF
    Run [result] [terminal]
```

Store all files on you PC using < Mouse Right-button click>

Continue sessions, common data, administrating

Web tools for ENSDF evaluators



Your name: admin Working area: 307 Use existing ENSDF file: Choose File No file chosen

or ENSDF text. Examples: text web-links: fmtchk.inp pandora.inp 139

FMTCHK, chk ENSDF, PREPRO, GTOL, LOGFT, PAND

Login: admin 2015/04/17:02:56:19 161.5.6.220::Austria Access leve ENSDF file Files Created Area 1.1 tmp307 Grace a139.ens 24 2015/04/15 08:16:29 Grac 2.1 tmp311 Grace a209.ens 24 2015/04/16 12:50:18 Grac

Web Design and Programming: Viktor Zerkin, NDS, International Atomic Energy Age Last updated: 04/17/2015 09:56:20

Data structures:

area/mass.program.files ~ dir/file

tmp<auto-sequential-number> area: a<mass-number-from-ENSDF-file> mass:

Squeeze - recursive deleting users' areas/files:

- temporary areas: automatically after 2 days
- permanent areas: automatically never. remotely - by admin,

locally - by authorized staff

User's responsibility: to store files on his/her PC.

Running ENSDF Codes on Web

by V.Zerkin, IAEA-NDS, 2011-2015 (ver.2015-01-16) News, updates, versions, history

Login: admin

Now: 2015/04/17 02:58:32

- 1) Area:tmp307 Files:24 Masses:1 X 1) Mass:a139 Files:24 Grace 152.3.175.45::United States X a139.ens-00 1,562,028 2015/04/15 08:16:29 a139.ena 1,553,418 2015/04/15 08:16:29 a139.ens.fmtchk 111,666 2015/04/14 10:53:43 a139.ens.fmtchk.err 0 2015/04/14 10:53:43 a139.ens.fmtchk.inp 38 2015/04/14 10:53:43 a139.ens.fmtchk.tt 9.806 2015/04/14 10:53:43 a139.ens.fmtchk.ttl 9 2015/04/14 10:53:43 a139.ens.ndspub.err 33 2015/04/15 08:20:13 a139.ens.ndspub.inp 48 2015/04/15 08:18:47 a139,ens,ndspub.pdf 1.188.713 2015/04/15 08:20:31 a139.ens.ndspub.ps 4,410,625 2015/04/15 08:20:13 a139.ens.ndspub.tt 127,181 2015/04/15 08:20:31 a139.ens.ndspub.tt1 9 2015/04/15 08:20:13 a139.ens.ndspub.zeroctl 30,772 2015/04/15 08:18:47 a139.ens.upload.dsid.139 8,019 2015/04/15 08:16:45 a139.ens.upload.eref.139 30.375 2015/04/15 08:16:45 a139.ens.upload.err 67 2015/04/15 08:18:11 a139.ens.upload.inp 33 2015/04/15 08:16:45 a139.ens.upload.msg 10,198 2015/04/15 08:16:44 a139.ens.upload.pdf 2,382,979 2015/04/15 08:18:34 a139.ens.upload.ps 9,203,524 2015/04/15 08:18:11 a139.ens.upload.tt 232,244 2015/04/15 08:18:34 a139,ens.upload.ttl 9 2015/04/15 08:18:34
- 2) Area:tmp311 Files:24 Masses:1 X
- Logins
 - 1) 2015/01/09,09:50:19 171 admin 130.199.210.35::United States 2) 2015/01/09,09:50:38 172 Zerkin 161.5.6.223::Austria
 - 3) 2015/01/09.09:51:19 173 Zerkin 161.5.6.223::Austria

Demo and discussion

- 1. Examples of usage: demo (running programs + questions)
- 2. Discussion: experience of usage, further needs
- 3. MyEnsdf on nndcin in BNL and on www-nds
- 4. Self-cleaning (squeeze temporary data)
- 5. Temporary and permanent areas
- 6. Privileged users, administrating, continuing work (multiple entries)

Thank you.