

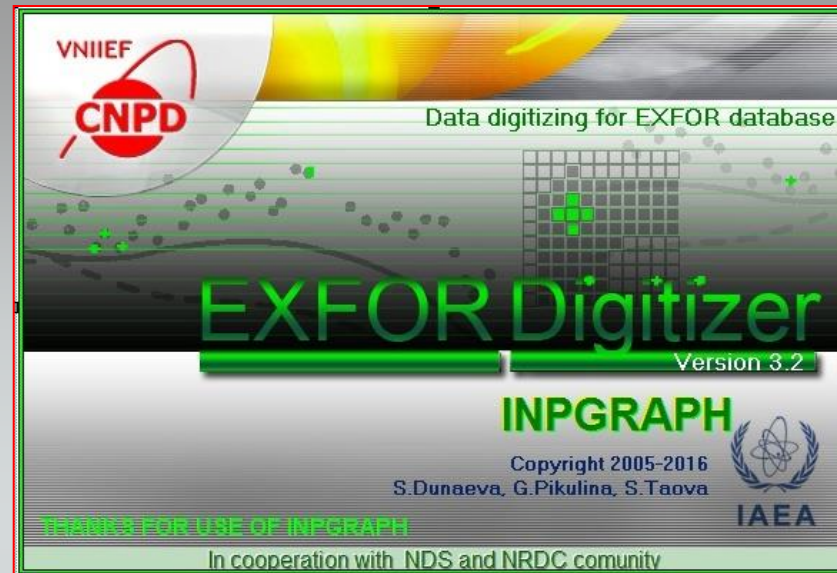
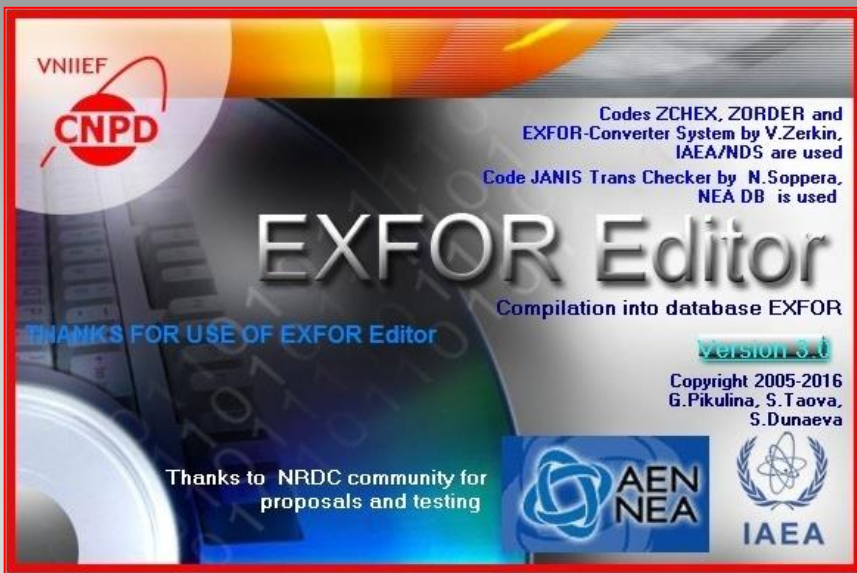
DEVELOPMENT OF COMPILATION TOOLS FOR THE EXFOR LIBRARY

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EXFOR-EDITOR SOFTWARE PACKAGE

Technical Properties:

- Microsoft Windows 2003/07 and higher
- Standalone applications
- Off-line mode

- be convenient and simple
- minimize the volume of manual input
- keep the user from inputting incorrect values
- keep the user from calculating the input position

User Interface Should:

Lists of Possible Values

Automated Searching

Verification at Input Step

Column Name	Absolute Value	Minimum Check	Include Minimum	Minimum Value	Maximum Check	Include Maximum	Maximum Value
ANG-CM	NO	YES	yes	0.0001	NO	NO	10000
MOM	NO	NO	NO	0.0001	NO	NO	10000
DATA-CM	NO	NO	NO	0.0001	NO	NO	10000
DATA-ERR	NO	NO	NO	0.0001	NO	NO	10000

- Identical reactions of the program on the identical user's actions
- Standard interface elements: menus, buttons, dialogs, etc
- Use of similar sets of components with identical functions

The screenshot displays the EXFOR software interface with several key components:

- Main Menu:** File, Section input, Keyword input, Edit, Processing, Tools, Help.
- EXFOR File Wizard:** A panel with fields for TITLE, AUTHOR, INSTITUTE, DECAY-DATA, HALF-LIFE, PAR, SUBENTRY001, and SUBENTRY002.
- Inc-source edit dialog:** Contains a text area with the text: "(PHOTO) Neutrons were produced by photoneutron reaction using oak ridge electron linear accelerator. ORELA was operated at a repetition rate of 525 Hz, a burst width of 8 ns, and a power of 5 to 6 KW." It includes buttons for Spell Checking, Compress, and Clear, and a Dictionary search section with "ARAD - Annihilation radiation (PHOT)" selected.
- Facility Description dialog:** Contains a text area with the text: "(CYCLO) Tandem including the FLNR cyclotrons U400M and U400." It includes buttons for Spell Checking, Compress, and Clear, and two dictionary search sections: "Facility Dictionary" with "CYCTM - Tandem cyclotrons" selected, and "Institute Dictionary" with "4KASKAZ" selected.
- Keyword Input Option dialog:** Features radio buttons for "Cursor Position" (selected), "End of File", "Current SUBENTRY", and "SUBENTRY-001".

- Design of dialogs in the same style
- Use of special palette, fonts and other visual effects

Input of data status and actual value source

STATUS Data were obtained from AUTHOR

Spell Checking Compress Clear

Dictionary Search New Code Add to String

Additional Information about Data Source

Data were obtained from: **FIGURE** Number: 1 **Add Information**

Reference Type: **FIGURE** (dropdown menu with options: AUTHOR, FIGURE, TABLE)

Edition (or Code): Search

Number (Reports/Preprint): Author:

Vol: Issue (Part): Page (Paper#): Date:

Keyword Input Option

- Cursor Position
- End of File
- Current SUBENTRY
- SUBENTRY-001

OK Cancel Help EXFOR-Help

2N) 81-II-201,, SIG)

Incident Particle - SF2 Process - SF3 Reaction Product - SF4

Search Search Search Add

th and 236th DICTIONARIES

Particles Consider - SF7 Modifiers - SF8 Data Type SF9

Search Search Add SF5-SF9

FOR Help New Record

Current Position: [SUBENTRY F0837002 BIB section](#)

OK Cancel Help EXFOR-Help

Author List Edit

AUTHOR K.H.Guber, P.E.Koehler, D.Wiarda, J.A.Harvey, T.E.Valentine, R.O.Sayer, L.L Leal, N.M.Larson, T.S.Bigelow, C.Ausmus, D.R.Brashear, R.B.Overton, J.A.White, V.M.Cauley

Compress Clear

Use spaces between Authors Convert Cyrillic Name

Name of Collaboration: nTOF Collaboration **Add**

Current Position: [SUBENTRY 14155001 BIB section](#)

OK Cancel Help EXFOR-Help

- Complex, infrequently performed or unfamiliar tasks is easier to perform using a wizard technique
- Wizard technique automatically offers a way through a series of steps to create an EXFOR file or a segment of file

The image displays three overlapping software windows used for creating EXFOR files:

- EXFOR File Wizard:** The main window on the left, showing a tree view of file sections (SUBENTRY1-6, BIB SECTION, COMMON SECTION, REACTION) and a central form for entering data like TITLE, AUTHOR, INSTITUTE, and REFERENCE. It includes buttons for 'Add SUBENTRY', 'BACK', and 'NEXT'.
- EXFOR Dummy Wizard:** A smaller window in the middle, used for creating dummy entries. It features a 'Subentry List' with checkboxes for SUBENTRY1-4 and buttons for 'Add', 'Delete', 'CREATE', 'CANCEL', and 'HELP'.
- SUBENTRY Wizard:** A window on the right for detailed entry configuration. It includes a 'SUBENTRY Context' tree, a 'REACTION' field, and various search and selection options for fields like 'Reaction Field SF1 - SF4', 'Incident Particle', and 'Reaction Product'. It also has 'BACK', 'NEXT', 'OK', and 'CANCEL' buttons.

EXFOR-Editor (Basic Modules)

Text Editor (CNPD)

Subentry Wizards (CNPD)

Dummy Wizard (CNPD)

Data Table (CNPD)

Keyword Dialogs (CNPD)

Help System (CNPD)

EXFOR Dictionaries (NDS)

ZOrder (NDS)

ZChex (NDS)

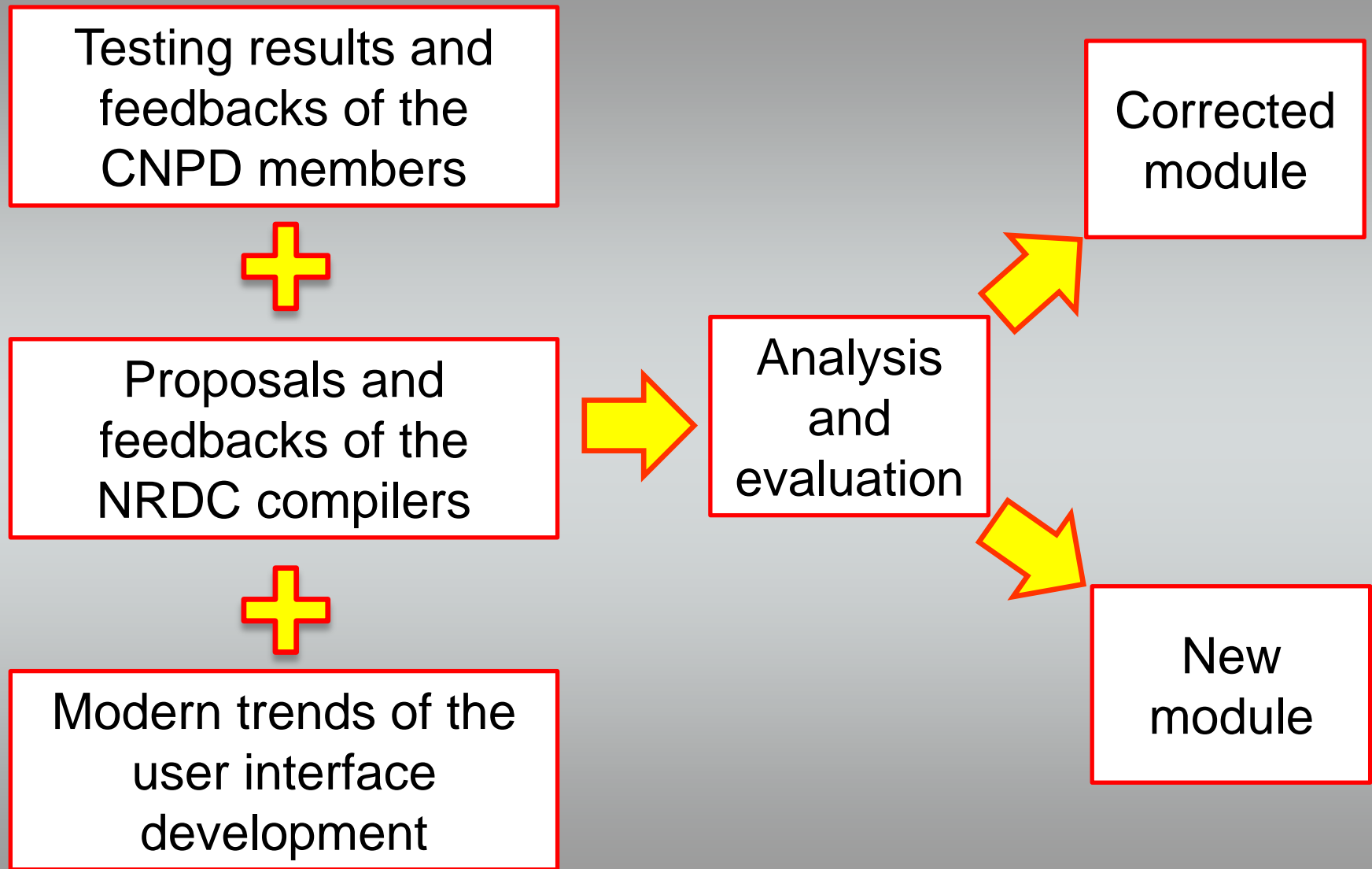
Trans Checker (NEADB)

X4plusViewer (NDS)

Chart (CNPD)

InpGraph (CNPD)

■ The verified library of algorithms is the framework of the EXFOR-Editor



■ The request of Boris Pritychenko: “The present EXFOR editor cannot handle more than 1 MB files... It is obvious that we will see more and more of large files if compilations of TOF become a reality”.

DATA		3	23387
EN	DATA	ERR-S	
EV	B	B	
2.51513E+0	1.8322E+11	6.71794E+9	
2.52643E+0	1.3710E+11	4.23234E+9	
2.53781E+0	9.1187E+10	2.26124E+9	
2.54927E+0	4.5487E+10	1.03345E+9	
2.56081E+0	7.58669E+2	1.70481E+1	
2.57242E+0	3.25463E+2	7.31629E+0	
2.58412E+0	2.46338E+2	5.54318E+0	
2.59589E+0	5.09604E+2	1.14820E+1	
2.60774E+0	3.88654E+2	8.74342E+0	
2.61968E+0	2.59036E+2	5.82295E+0	

EXFOR editor

Invalid cell reference.

OK

14155	2	40
14155	2	41
14155	2	42
14155	2	43
14155	2	44
14155	2	45
14155	2	46
14155	2	47
14155	2	48
14155	2	49
14155	2	50
14155	2	51
14155	2	52

■ The request of Stanislav Hlavac: “I installed the last version of EXFOR Editor and I have problem to import data. Program simply says : Class not registered. And refuses to read external files”.

Command Prompt

```
'!' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Stanislav Hlavac\Documents\FYZIKA\EXFOR\EE2015>
'pwd' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Stanislav Hlavac\Documents\FYZIKA\EXFOR\EE2015>
Hlavac\Documents\FYZIKA\EXFOR\EE2015\UCF132.OCX
Volume in drive C has no label.
Volume Serial Number is 3E98-DAF8

Directory of C:\Users\Stanislav Hlavac\Documents\FYZI
10/28/1995  03:03 AM                632,832 UCF132.OCX
             1 File(s)                632,832 bytes
             0 Dir(s)                2,053,992,448 bytes free

C:\Users\Stanislav Hlavac\Documents\FYZIKA\EXFOR\EE2015> regsvr32 C:\Users\Stani
slav Hlavac\Documents\FYZIKA\EXFOR\EE2015\UCF132.OCX

C:\Users\Stanislav Hlavac\Documents\FYZIKA\EXFOR\EE2015> regsvr32 "C:\Users\Stan
islav Hlavac\Documents\FYZIKA\EXFOR\EE2015\UCF132.OCX"

C:\Users\Stanislav Hlavac\Documents\FYZIKA\EXFOR\EE2015>
```

RegSvr32

The module "C:\Users\Stanislav Hlavac\Documents\FYZIKA\EXFOR\EE... \VCF132.OCX" was loaded but the call to DllRegisterServer failed with error code 0x80040200.

For more information about this problem, search online using the error code as a search term.

OK

VCF132.OCX	9/17/2007 10:08 AM	TXT F
OC30.DLL	9/21/2006 9:10 AM	Applic
	9/21/2006 9:02 AM	Windo
	2/15/2002 1:02 PM	Applic
	8/23/2001 2:00 PM	Applic
	10/28/1995 4:03 AM	Active
	5/21/1995 8:00 PM	Applic

■ The source of problems – free component that is used for the Data Table Mode

1	ANG-CM	MOM	DATA-CM	DATA-ERR
2	ADEG	MEV/C	MB/SR	MB/SR
3	40.	800.25	1.784	0.063
4	40.	800.25	1.784	0.063
5	40.	803.75	1.611	0.056
6	40.	803.75	1.633	0.056
7	40.	810.75	1.577	0.054
8	40.	814.54	1.575	0.037
9	40.	818.13	1.586	0.036
10	40.	822.17	1.560	0.046
11	40.	822.17	1.531	0.045
12	40.	829.92	1.482	0.035
13	40.	833.58	1.501	0.034
14	40.	837.67	1.478	0.052
15	40.	841.33	1.464	0.050
16	40.	845.17	1.546	0.040
17	40.	848.83	1.549	0.038
18	40.	852.67	1.553	0.054
19	40.	856.33	1.466	0.052
20	40.	859.96	1.467	0.038
21	40.	863.71	1.464	0.037
22	40.	867.58	1.524	0.054
23	40.	871.42	1.614	0.054
24	40.	874.88	1.540	0.042
25	40.	878.79	1.513	0.040
26	40.	882.50	1.563	0.061
27	40.	886.50	1.608	0.060
28	40.	890.00	1.638	0.044
29	40.	894.00	1.725	0.044
30	40.	897.50	1.669	0.059



■ Operations with Numerical data: import from external files, paste from clipboard, sort, check, chart, set precision, export, add to EXFOR file

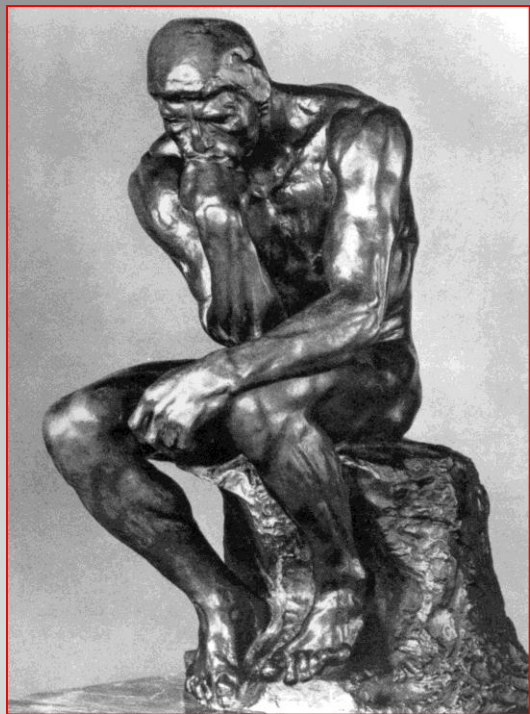
■ Operations with columns: add, insert, copy, delete, move left/right, set value, set precision, calculate

■ Operations with rows: add, insert, copy, delete, move up/down



■ The Excel5-compatible component has limitation of 16,384 (16 K) rows in a table

■ The component demands the registration in the system by administrator



- Solve the problems \Rightarrow replace the free component that is used for the Data Table Mode
- The decision was to develop our own component that would permit to add new functions and to save all pluses of the old one



Data Table
Selected Row: 30616

	EN	DATA	ERR-S
	EV	NO-DIM	NO-DIM
30593	5.85148E+5	8.64587E-1	2.39116E-2
30594	5.85769E+5	9.01063E-1	2.56409E-2
30595	5.86391E+5	9.00032E-1	2.57450E-2
30596	5.87014E+5	9.30548E-1	2.72495E-2
30597	5.87638E+5	9.56930E-1	2.86250E-2
30598	5.88264E+5	9.45731E-1	2.72255E-2
30599	5.88890E+5	9.44743E-1	2.69929E-2
30600	5.89517E+5	9.26036E-1	2.64979E-2
30601	5.90145E+5	9.53052E-1	2.67103E-2
30602	5.90775E+5	9.61092E-1	2.66831E-2
30603	5.91405E+5	9.05265E-1	2.51261E-2
30604	5.92036E+5	8.83946E-1	2.50784E-2
30605	5.92668E+5	9.01280E-1	2.51458E-2
30606	5.93302E+5	9.12619E-1	2.53758E-2
30607	5.93936E+5	9.92164E-1	2.74525E-2
30608	5.94571E+5	9.30434E-1	2.60093E-2
30609	5.95207E+5	9.39947E-1	2.58225E-2
30610	5.95845E+5	9.32514E-1	2.54408E-2
30611	5.96483E+5	9.46110E-1	2.62143E-2
30612	5.97123E+5	9.61050E-1	2.63754E-2
30613	5.97763E+5	9.64561E-1	2.68575E-2
30614	5.98404E+5	9.24619E-1	2.61528E-2
30615	5.99047E+5	9.45618E-1	2.70300E-2
30616	5.99690E+5	8.78297E-1	2.48048E-2

Current Subentry
14324002

DATA

Import	Sort
Paste	Chart
Clear	Check

Column

Add	Insert
Copy	Delete
Rename	
Move Left	Move Right
Calculations	
Set Value	
Set Precision	

Row

Add	Insert
Copy	Delete
Move Up	Move Down

Undo

Undo Last Action

Table

Precision for Table
Clear Data Table
Export Data Table
Add Data Table
Cancel

EXFOR-Help
Help

- We developed a new component for Data Table Mode
- There is no limitation on a size of numeric data array
- The automatic correction of wrong number position is ensured
- Updated Data Table Mode has the same functions
- We make additional improvements – simplify precision setting

Precision for column MOM
✕

Number Format

Fixed Point Format

Scientific Format

Fixed Point Format

Number of Digits after Decimal Point:

2

Erase Trailing Zero

Example: 0.01

OK
Cancel
Help

EXFOR-EDITOR 3.0 – NO INSTALLATION

- Load archive
- Unpack archive
- Run ExfData3_0.exe
- Enjoy
- Send feedbacks

- We move forward in developing the EXFOR-Editor software package
- We improve separate program modules and include the new ones,
- We keep the basic processing algorithms with the familiar user interface and functions.
- We wait for your feedbacks and proposals





THANK YOU!

