

# JANIS as an EXFOR tool

## EXFOR format checking

### Comparing EXFOR with Evaluated data

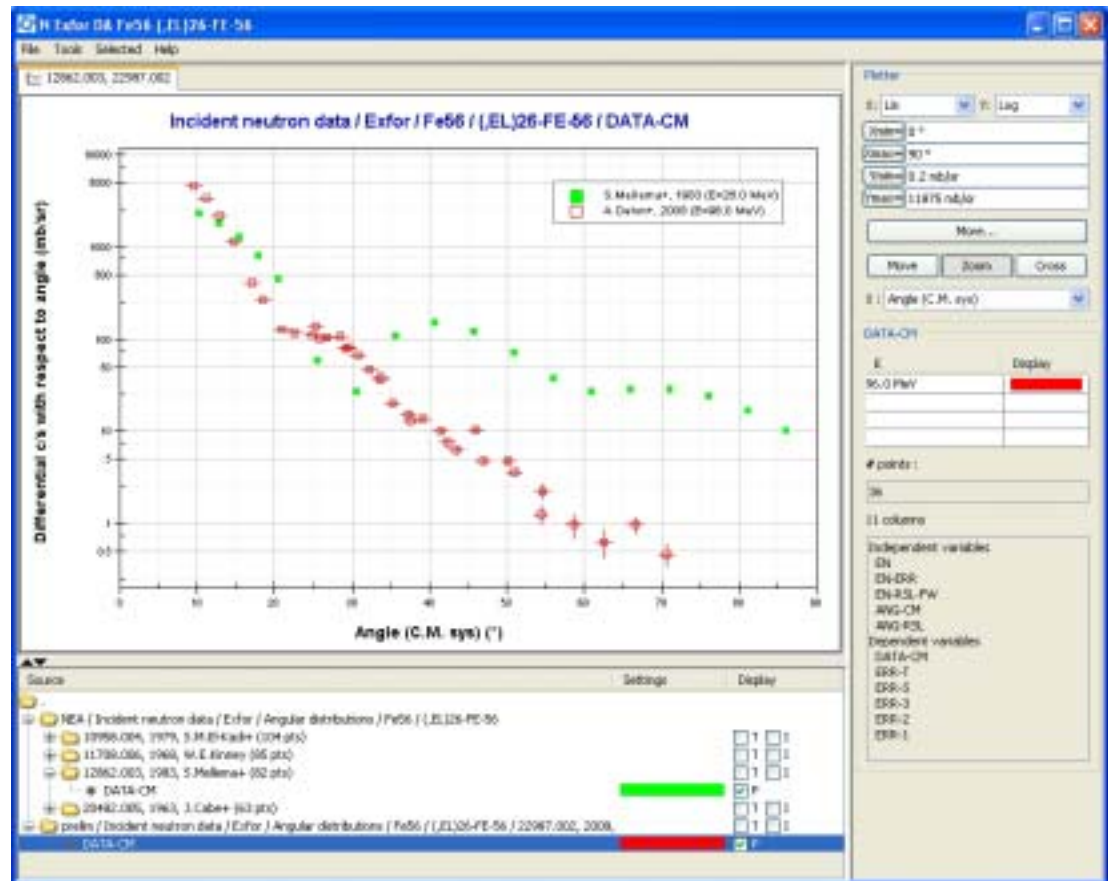
### Output formats

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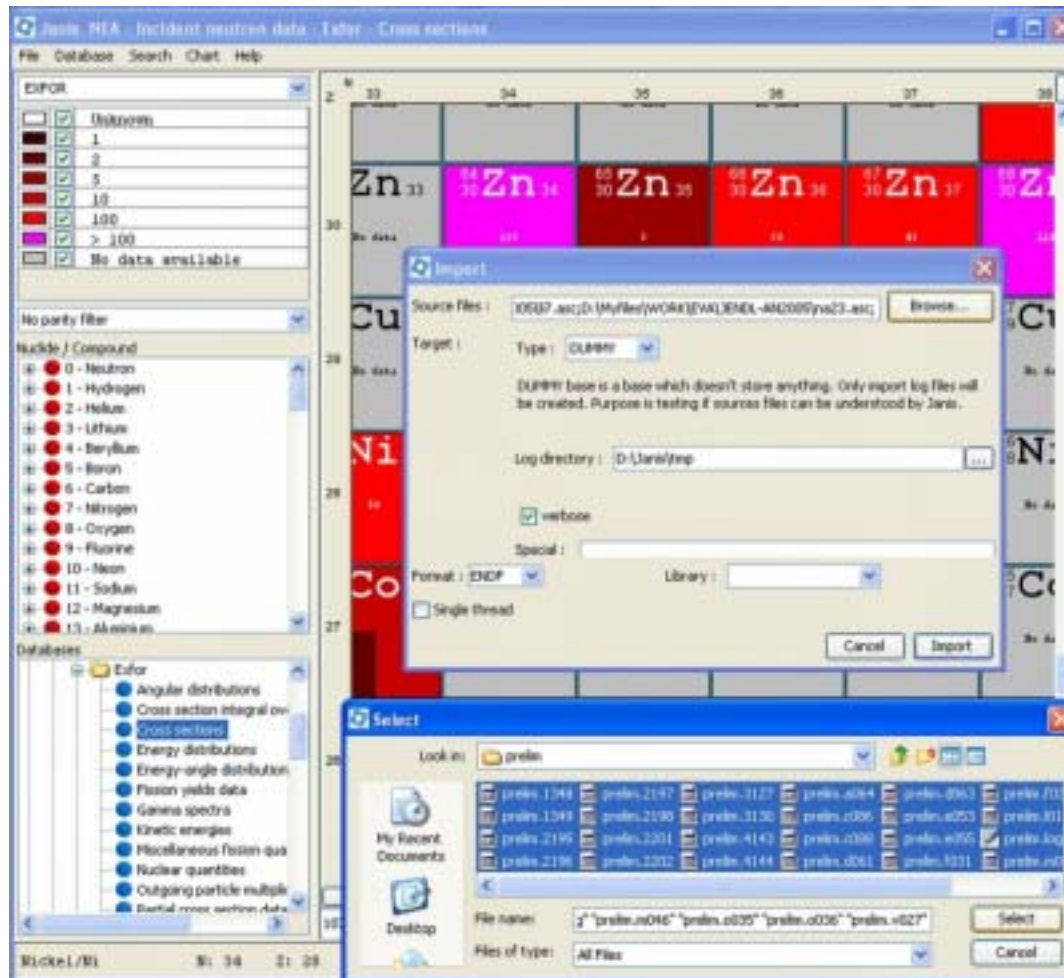
# Janis 3

## Newest version from February 2008

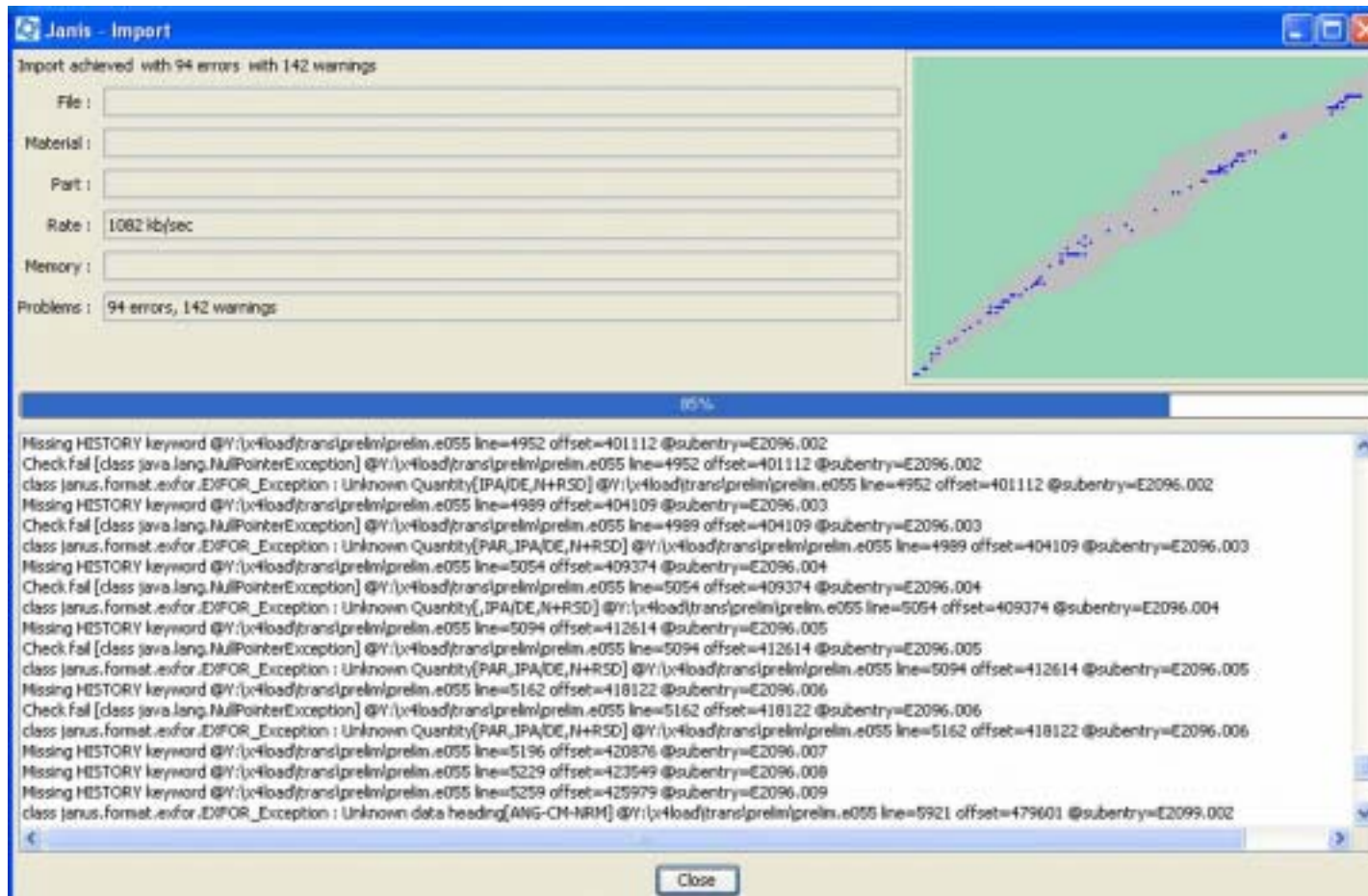
- ✓ Bug fixes regarding EXFOR format
- ✓ Improved plotting functionality
- ✓ Better export possibilities
- ✓ Extended EXFOR Search
- ✓ Still free download from [www.nea.fr/janis](http://www.nea.fr/janis) (DVD on request)
- ✓ Further development:
  - ✓ Web application
  - ✓ Improved coverage of data such as photonuclear and covariances



# Checking EXFOR format with Janis



# Checking EXFOR format with Janis (2)



*During the loading (reading) of the EXFOR file*

# Checking EXFOR format with Janis (3)

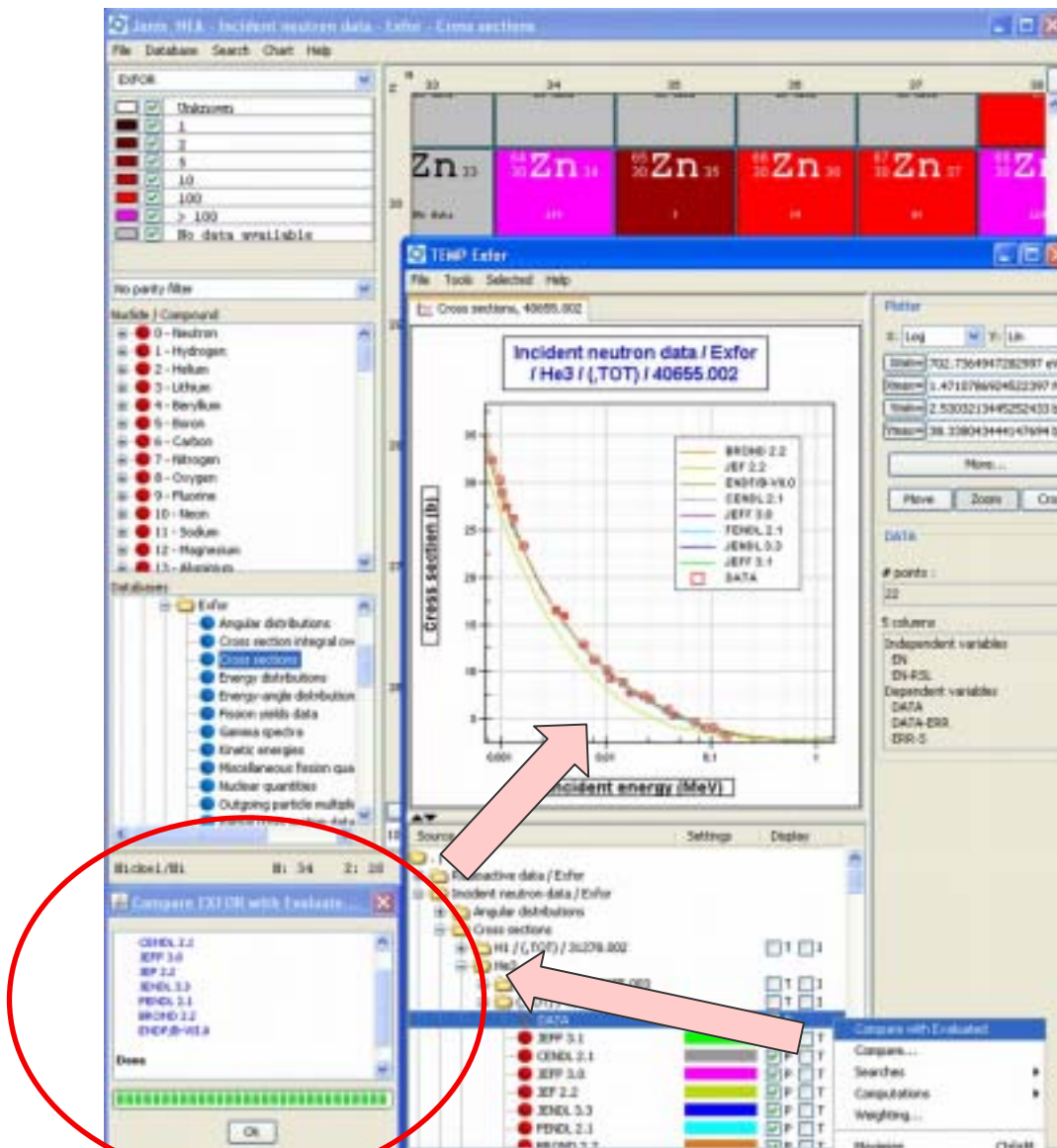
*Load log in XML format*



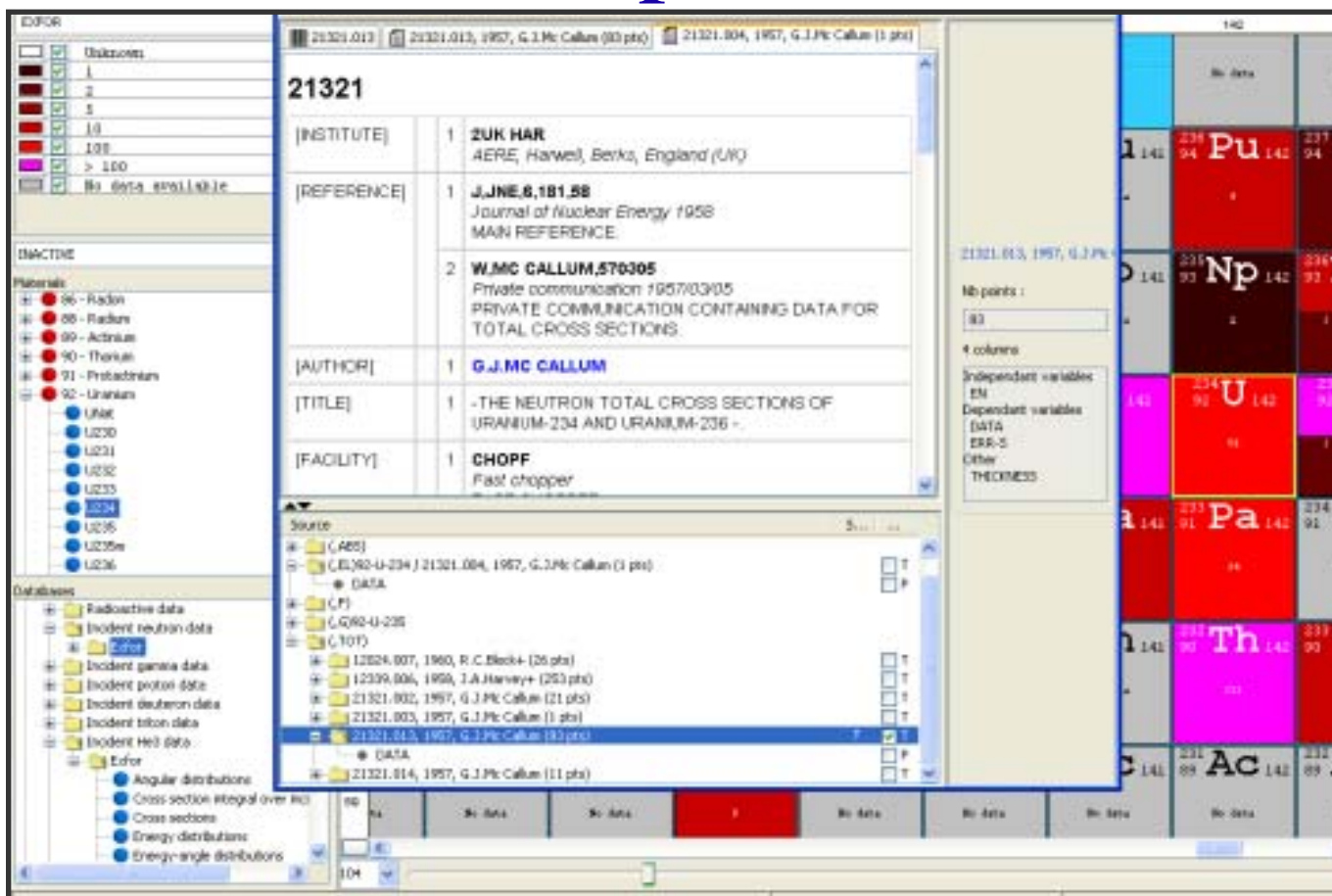
JANIS Import Log	
142 Warnings	
1 x EXFOR_Exception Expected blanks	SUBENT record, columns 12-14 [C 3298000 ] = 2200 004
1 x EXFOR_Exception SUBENT must be followed by 000 or 0000	SUBENT [ 2000042 ] (length) = 22003.001
1 x EXFOR_Exception SUBENT must be followed by 000 or 0000	= 31620 001
1 x EXFOR_Exception Unexpected line	= null (null)
3 x EXFOR_Exception Unknown data heading	ANG-CHARRM in E2059 000 E-LVL3 in 20341 023, 20341 026
8 x EXFOR_Exception Unknown data unit	RTEVSR in E0980 002, E0900 003, E0880 004, E0900 005, E0980 006, E0900 007
78 x EXFOR_Exception Unknown Quantity	JPA/DEA/RSD in E2054 004 JLTDG,GT in 41507 002 POL/DA/DE,P,VAP in E0813 010, E0813 011, E0813 012, E0813 013, E0813 014, E0813 015, E0813 016, E0813 017 20.POL/DA/DE,P,TAP in E0813 018, E0813 019, E0813 020, E0813 021, E0813 022, E0813 023, E0813 024, E0813 025 20.PAR.POL/DA,P,TAP in E0812 004, E0812 005 21.POL/DA/DE,P,TAP in E0812 010, E0813 026, E0813 027, E0813 028, E0813 029, E0813 030, E0813 031, E0813 032, E0813 033 21.PAR.POL/DA,P,TAP in E0812 006, E0812 007 22.POL/DA/DE,P,TAP in E0813 034, E0813 035, E0813 036, E0813 037, E0813 038, E0813 039, E0813 040, E0813 041 22.PAR.POL/DA,P,TAP in E0812 008, E0812 009 RPA/DEA/RSD in E2056 002 NP.POL/DA/DE,ANA in E0816 014, E0816 015, E0816 016, E0816 017, E0816 018, E0816 019, E0816 020, E0816 021, E0816 022, E0816 023, E0816 024, E0816 025, E0816 026, E0816 027, E0816 028, E0816 029, E0816 030 PAR/JPA/DEA/RSD in E2095 003, E2095 005, E2095 006 PAR/POL/DA,P,VAP in E0812 002, E0812 003 S5.POL/DA/DE,ANA in E0816 008, E0816 009, E0816 010, E0816 011, E0816 012, E0816 013, E0816 026, E0816 027, E0816 028, E0816 029, E0816 030, E0816 031 TERIPAR,FY,T in 23026 004, 23026 005, 23026 006 TERIPAR,FY in 22063 002, 22063 003, 22063 004, 22063 004
3 x NumberFormatException on digits found	= null (null), null (null), null (null)
1 x [INC-SOURCE] : Code for the polarized source must follow POLNS	POLNS in 40475 001
1 x [INSTITUTE] : Unknown Institute	ZTUNGZU in 23025 001
1 x [METHOD] : Unknown Code	EXTBSITA in 50752 001
1 x [PART-DET] : Particle code not allowed as PART-DET code	LCP in E0828 001

# WPEC SG-30

## Tool to compare EXFOR with evaluated data



# EXFOR output format



The screenshot displays the EXFOR software interface. On the left, there are panels for 'Unknowns', 'Inactive', 'Materials', and 'Databases'. The main window shows a detailed view of entry 21321, including its source, reference, author, title, and facility. Below this, a 'Source' tree shows the file structure. On the right, a periodic table of elements is visible, with specific isotopes highlighted in red and pink.

**21321**

[INSTITUTE] 1 **ZUK HAR**  
AERE, Harwell, Berks, England (UK)

[REFERENCE] 1 **J.JNE.6,1B1.58**  
Journal of Nuclear Energy 1958  
MAIN REFERENCE.

2 **W.MC CALLUM,570305**  
Private communication 1957/03/05  
PRIVATE COMMUNICATION CONTAINING DATA FOR  
TOTAL CROSS SECTIONS.

[AUTHOR] 1 **G.J.MC CALLUM**

[TITLE] 1 - THE NEUTRON TOTAL CROSS SECTIONS OF  
URANIUM-234 AND URANIUM-236 -

[FACILITY] 1 **CHOPF**  
Fast chopper

Source

- (C, A65)
- (E)92-U-234 J 21321.004, 1957, G.J.Mc Callum (1 pts)
- DATA
- (C, P)
- (C, T01)
- 12324.007, 1960, R.C.Bloch+ (26 pts)
- 12339.006, 1958, J.A.Harvey+ (293 pts)
- 21321.002, 1957, G.J.Mc Callum (21 pts)
- 21321.003, 1957, G.J.Mc Callum (1 pts)
- 21321.013, 1957, G.J.Mc Callum (13 pts)
- DATA
- 21321.014, 1957, G.J.Mc Callum (11 pts)

21321.013, 1957, G.J.Mc Callum (13 pts)

21321.014, 1957, G.J.Mc Callum (11 pts)

142

No data

234 94 Pu 142 237 94 I

238 92 Np 142 239 92 Np

234 92 U 142 235 92 U

233 91 Pa 142 234 91 Pa

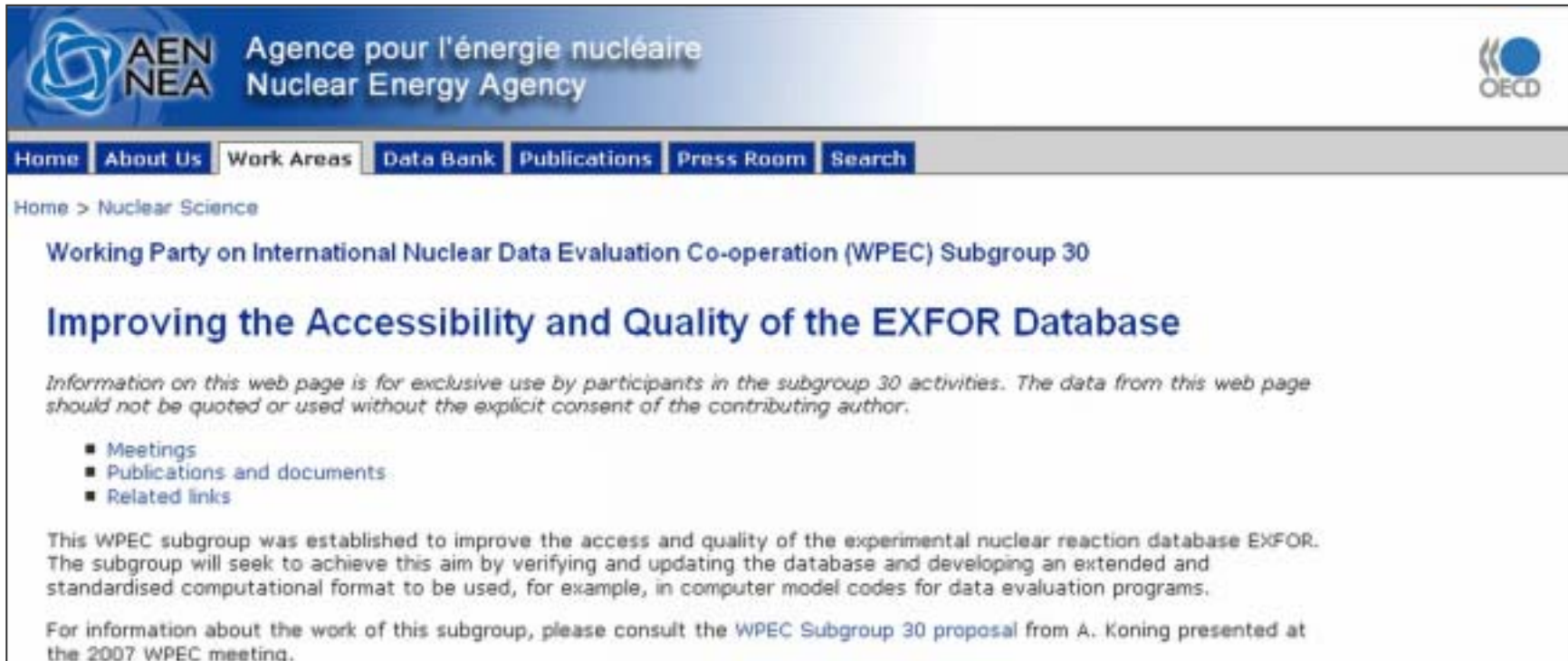
232 90 Th 142 233 90 Th

231 89 Ac 142 232 89 Ac

*Janis EXFOR BIB section output*

# WPEC SG-30 web page: Collected tools for checking

[www.nea.fr/html/science/wpec/SG30/](http://www.nea.fr/html/science/wpec/SG30/)



The screenshot shows the top part of a web page. At the top left is the AEN NEA logo and text: "Agence pour l'énergie nucléaire" and "Nuclear Energy Agency". At the top right is the OECD logo. Below the header is a navigation menu with links: "Home", "About Us", "Work Areas", "Data Bank", "Publications", "Press Room", and "Search". The main content area starts with "Home > Nuclear Science". The title of the page is "Working Party on International Nuclear Data Evaluation Co-operation (WPEC) Subgroup 30". Below the title is the main heading "Improving the Accessibility and Quality of the EXFOR Database". A paragraph of text follows: "Information on this web page is for exclusive use by participants in the subgroup 30 activities. The data from this web page should not be quoted or used without the explicit consent of the contributing author." Below this is a bulleted list: "Meetings", "Publications and documents", and "Related links". A paragraph of text follows: "This WPEC subgroup was established to improve the access and quality of the experimental nuclear reaction database EXFOR. The subgroup will seek to achieve this aim by verifying and updating the database and developing an extended and standardised computational format to be used, for example, in computer model codes for data evaluation programs." The final paragraph says: "For information about the work of this subgroup, please consult the WPEC Subgroup 30 proposal from A. Koning presented at the 2007 WPEC meeting."



# JANIS as a tool to validate data

- [www.nea.fr/html/science/wpec/SG30/comparison\\_with\\_ENDF/A127/index\\_D\\_desc.html](http://www.nea.fr/html/science/wpec/SG30/comparison_with_ENDF/A127/index_D_desc.html)

