

**NEA Data Bank**  
**12, boulevard des Iles**  
**92130 Issy-les-Moulineaux**  
**FRANCE**

Email: [exfor@nea.fr](mailto:exfor@nea.fr)  
or [cinda@nea.fr](mailto:cinda@nea.fr)

Tel: +33 (0) 1 45 24 10 84  
Fax: +33 (0) 1 45 24 11 28

**MEMO CP-N/80**

**DATE:** 19 May 2009  
**TO:** See distribution list below  
**FROM:** C. Nordborg  
**SUBJECT:** Proposals related to the EXFOR keyword AUTHOR

Dear colleagues,

Please find attached some proposals related to the EXFOR keyword "AUTHOR" to be discussed at the forthcoming NRDC meeting

Best regards,  
Claes Nordborg

**Distribution:**

**HUNGARY**

[s.takacs@atomki.hu](mailto:s.takacs@atomki.hu)  
[tarkanyi@atomki.hu](mailto:tarkanyi@atomki.hu)

**INDIA**

[ganesan@magnum.barc.ernet.in](mailto:ganesan@magnum.barc.ernet.in)

**JAPAN**

[chiba@earth.sgu.ac.jp](mailto:chiba@earth.sgu.ac.jp)  
[katakura.junichi@jaea.go.jp](mailto:katakura.junichi@jaea.go.jp)  
[kato@nucl.sci.hokudai.ac.jp](mailto:kato@nucl.sci.hokudai.ac.jp)  
[ohnishi@nucl.sci.hokudai.ac.jp](mailto:ohnishi@nucl.sci.hokudai.ac.jp)  
[nrdc@jcprg.org](mailto:nrdc@jcprg.org)

**KOREA (REPUBLIC OF)**

[yolee@kaeri.re.kr](mailto:yolee@kaeri.re.kr)

**P.R. OF CHINA**

[gezg@ciae.ac.cn](mailto:gezg@ciae.ac.cn)  
[hongwei@ciae.ac.cn](mailto:hongwei@ciae.ac.cn)  
[zhuangyx@ciae.ac.cn](mailto:zhuangyx@ciae.ac.cn)

**RUSSIAN FEDERATION**

[s.babykina@polyn.kiae.su](mailto:s.babykina@polyn.kiae.su)  
[blokhin@ippe.obninsk.ru](mailto:blokhin@ippe.obninsk.ru)

[samaev@obninsk.ru](mailto:samaev@obninsk.ru)  
[manokhin@ippe.obninsk.ru](mailto:manokhin@ippe.obninsk.ru)  
[mmarina@ippe.obninsk.ru](mailto:mmarina@ippe.obninsk.ru)  
[taova@expd.vniief.ru](mailto:taova@expd.vniief.ru)  
[varlamov@depni.sinp.msu.ru](mailto:varlamov@depni.sinp.msu.ru)

**UNITED STATES OF AMERICA**

[mwherman@bnl.gov](mailto:mwherman@bnl.gov)  
[oblozinsky@bnl.gov](mailto:oblozinsky@bnl.gov)

**International Organisations**

[s.dunaeva@iaea.org](mailto:s.dunaeva@iaea.org)  
[a.mengoni@iaea.org](mailto:a.mengoni@iaea.org)  
[N.Otsuka@iaea.org](mailto:N.Otsuka@iaea.org)  
[v.zerkin@iaea.org](mailto:v.zerkin@iaea.org)  
[o.schwerer@iaea.org](mailto:o.schwerer@iaea.org)  
[hasegawa@nea.fr](mailto:hasegawa@nea.fr)  
[nicolas.soppera@oecd.org](mailto:nicolas.soppera@oecd.org)  
[manuel.bossant@oecd.org](mailto:manuel.bossant@oecd.org)

To avoid errors in the coding of the AUTHOR keyword, it is proposed to modify the respective EXFOR documentation as follows: (modifications appear in yellow).

### *EXFOR Exchange Formats Manual*

**AUTHOR.** Gives the authors of the work reported. See also **LEXFOR, Author**.

1. Presence is obligatory. Must have coded information. For this keyword, a code corresponds to an author's name.
2. Authors' names are entered in the normal way of writing a name, *i.e.*, A.B.Name, each name separated by a comma. The word 'and' should not be used to separate authors' name. Hyphenated family names, 2-characters initials (as in the transliteration of some Cyrillic characters), and any other deviations from the normal name structure are permitted. For a family name modified by 'Junior' or 'Senior', Jr or Sr is entered following the family name and separated from it by a blank. Likewise, for a family name modified by a roman number, for example II, II is entered following the family name and separated from it by a blank.

Initials are, when given, entered before the name. Initials of compound first names such as Jean-Charles must be coded as J.-C., *i.e.* the dot after the first name is mandatory. Middle names may appear either in full length or only its initial(s) followed by a full stop, for example J.Blair Briggs or J.B.Briggs.

Capitalization of particles should be respected whenever possible as different countries use different convention *e.g.* 'von' or 'Von' might be used in names. Particles should not be alphabetized *e.g.* 'v.' used for 'von'.

All names are entered between one set of parenthesis. Blanks are permitted between authors' names (*i.e.*, after a comma), but are not permitted following initials. (For transliteration of authors' names containing characters not permitted in EXFOR, see **LEXFOR, Author**).

Authors' names may be continued on the next record, but names should not be broken, *i.e.* the last character on the line to be continued should be a comma.

### 3. 'et al.'

'et al.' should not be coded. All the codes of AUTHOR keyword are intended to be author's name.

#### **Examples (Correct ones):**

AUTHOR (A.B.Jones, L.Poza-Lobo, JA.M.Ivanov, Ngo-Dinh-Long, A.Morales Amado)  
 AUTHOR (J.Blair Briggs)  
 AUTHOR (J.B.Briggs)  
 AUTHOR (R.W.McNally Jr, H.Farrar IV)  
 AUTHOR (V. Sebastian, L. Weissman, ISOLDE)

#### **Examples (incorrect ones):**

##### **Use a comma to separate names**

AUTHOR (P.Schwandt and J.Wiggins) should be coded (P.Schwandt, J.Wiggins)  
 AUTHOR (P.Schwandt, and J.Wiggins) should be coded (P.Schwandt, J.Wiggins)

##### **Initials must appear before the last name, not after**

AUTHOR (Penionzhkevich Yu.E.) should be coded (Yu.E.Penionzhkevich)

##### **Junior must be coded as 'Jr'**

AUTHOR (D.R.Mendes Junior) should be coded AUTHOR (D.R.Mendes Jr)

*LEXFOR (EXFOR compiler's manual)***Author**

The author(s) of a data set are entered under the information-identifier keyword AUTHOR, all names between one set of parentheses and separated by a comma. The sequence of the names should be the same as in the publication.

See EXFOR Exchange Formats Manual Chapter 7: AUTHOR for coding format.

If a data set has several references with varying co-authors, all co-authors may be entered.

Some East-European authors spell their names, and, in particular, their initials differently depending on whether they publish in their own language or in English. Gyulia (Hungarian)= Julius (English). Hristov (Bulgarian) = Christoph (English). If this is detected, the spelling in the author's own language is preferred.

Some names contain character(s) that cannot be represented in the EXFOR permitted character set. If this is detected, the transliteration rules coded in the table below must be applied (these rules are not exhaustive):

| Forbidden characters | Transliteration |
|----------------------|-----------------|
| Ç (ç)                | C (c)           |
| Č (č)                | C (c)           |
| ñ                    | n               |
| Ä (ä)                | AE (ae)         |
| Ü (ü)                | UE (ue)         |
| Ö (ö)                | OE (oe)         |
| ß                    | ss              |
| Æ (æ)                | AE (ae)         |
| Ø (ø)                | OE (oe)         |
| Å (å)                | AA (aa)         |

**Cyrillic names**

For the transliteration of Cyrillic names the following table should be used:

| Cyrillic character | Transliteration |
|--------------------|-----------------|
| А                  | A               |
| Б                  | B               |
| В                  | V               |
| Г                  | G               |
| Д                  | D               |
| Е                  | E               |
| Ё                  | E               |
| Ж                  | Zh              |
| З                  | Z               |
| И                  | I               |
| Й                  | Y               |
| К                  | K               |
| Л                  | L               |
| М                  | M               |
| Н                  | N               |

|    |      |
|----|------|
| О  | O    |
| П  | P    |
| Р  | R    |
| С  | S    |
| Т  | T    |
| У  | U    |
| Ф  | F    |
| Х  | Kh   |
| Ц  | Ts   |
| Ч  | Ch   |
| Ш  | Sh   |
| Щ  | Shch |
| Ъ  | ‘    |
| Ы  | Y    |
| Ь  | ‘    |
| Э  | E    |
| Ю  | Я    |
| Yu | Ya   |

This list had been made according to the ISO prescriptions, amended for computer usage with respect to accents, with the exception that different systems are not allowed in parallel (as is the case with the new ISO prescriptions). For instance the earlier transliterations Ju and Ja are allowed in the new ISO as well as Yu and Ya.

This scheme corresponds to the official Russian transliteration scheme with the exception of the character ‘, which **in Russian** is represented as ", a character **which is not allowed in EXFOR**.

Asian Names: For Asian names the full name may be given with the family name given first.

**Example:** Li Xiaodong

**NEA Data Bank  
12, boulevard des Iles  
92130 Issy-les-Moulineaux  
FRANCE**

Email: [exfor@nea.fr](mailto:exfor@nea.fr)  
or [cinda@nea.fr](mailto:cinda@nea.fr)

Tel: +33 (0) 1 45 24 10 84  
Fax: +33 (0) 1 45 24 11 28

**MEMO CP-N/81**

**DATE:** 19 May 2009  
**TO:** See distribution list below  
**FROM:** C. Nordborg  
**SUBJECT:** Proposals related to the EXFOR keyword TITLE

Dear colleagues,

Please find attached some proposals related to the EXFOR keyword "TITLE" to be discussed at the forthcoming NRDC meeting.

Best regards,  
Claes Nordborg

**Distribution:**

**HUNGARY**

s.takacs@atomki.hu  
tarkanyi@atomki.hu

**INDIA**

ganesan@magnum.barc.ernet.in

**JAPAN**

chiba@earth.sgu.ac.jp  
katakura.junichi@jaea.go.jp  
kato@nucl.sci.hokudai.ac.jp  
ohnishi@nucl.sci.hokudai.ac.jp  
nrdc@jcprg.org

**KOREA (REPUBLIC OF)**

yolee@kaeri.re.kr

**P.R. OF CHINA**

gezg@ciae.ac.cn  
hongwei@ciae.ac.cn  
zhuangyx@ciae.ac.cn

**RUSSIAN FEDERATION**

s.babykina@polyn.kiae.su  
blokhin@ippe.obninsk.ru

samaev@obninsk.ru  
manokhin@ippe.obninsk.ru  
mmarina@ippe.obninsk.ru  
taova@expd.vniief.ru  
varlamov@depni.sinp.msu.ru

**UNITED STATES OF AMERICA**

mwherman@bnl.gov  
oblozinsky@bnl.gov

**International Organisations**

s.dunaeva@iaea.org  
a.mengoni@iaea.org  
N.Otsuka@iaea.org  
v.zerkin@iaea.org  
o.schwerer@iaea.org  
hasegawa@nea.fr  
nicolas.soppera@oecd.org  
manuel.bossant@oecd.org

To avoid errors in the coding of the TITLE keyword and to facilitate the matching of article titles in EXFOR with other sources (publisher's websites like sciencedirect.com, Elsevier.com, aip.org or other databases like DOI, arXiv or Google Scholar), it is proposed to modify the respective EXFOR documentation as follows.

### **Transcription table**

It is proposed to add the most commonly used transcriptions in a table in the LEXFOR manual.

| Character           | Substitute        |
|---------------------|-------------------|
| °                   | degree or degrees |
| $\alpha$            | alpha             |
| $\beta$             | beta              |
| $\gamma$            | gamma             |
| $\mu$               | micro             |
| $\theta$            | theta             |
| $\omega$            | omega             |
| $\nu$ ; $\bar{\nu}$ | nu-bar            |
| $\hbar$             | h-bar             |
| $\leq$              | $\leq$            |
| $\geq$              | $\geq$            |
| $\approx$           | $\sim$            |

It is also proposed to add to the EXFOR manual the following (underlined):

*Computer-compatible substitutes should be used where necessary according to the following substitution table (e.g., alpha for the Greek letter  $\alpha$ , degree or degrees for the degree symbol °):*

On the same idea, it would be nice to avoid hyphenation, as it cannot automatically be removed, e.g.:

#### **11007.001 (legitimate use)**

Total cross sections in the kilovolt region by time-of-flight.

#### **14027.001 (legitimate use)**

Measurements of (n,g) cross sections for very small stable and radioactive samples of interest to the s- and p- process

#### **22218.001 (un-necessary use)**

-Refined interpretation of Christiansen-filter experiments and neutron scattering lengths of the lead isotopes

#### **22965.001 (un-necessary use)**

.Experimental determination of the Cl-36(n,p)S-36 and Cl-36(n,a)P-33 reaction cross sections and the consequences on the origin of S-36. Ca-41(n,p) cross section

**A0232.001 (legitimate use)**

The production of positron emitters  $^{75}\text{Br}$  and  $^{76}\text{Br}$ -excitation functions and yields for  $^3\text{He}$  and alpha-particle induced nuclear reactions on arsenic.

**C0096.001 (legitimate use)**

Cyclotron production of PET radionuclides: no-carrier-added Fluorine-18 (109.77 min; beta+ 96.9%; EC 3.1%) with high-energy protons on sodium targets

**Coding of reactions present in title**

Coding of nuclides should be self-consistent with the EXFOR notation e.g. U-235 is the preferred way to enter Uranium 235 (92-U-235 is also acceptable). Coding of commonly used abbreviations for light particles are allowed, but usage should be in agreement with the original title, e.g. do not use “a” in the title whereas the original title contains “He-4”.

- n for neutron
- d for deuteron
- p for proton
- t for triton
- a for alpha or He-4
- g for gamma

*To be discussed:*

How-to transcribe polarisation?

Current usage is to add pol between parentheses.

How-to transcribe inelastic scattering?

Current usage inl, n'

How-to transcribe centre of mass, ground state, electronic capture, ...?

Current usage is to use abbreviations, e.g. c.m., g.s., e.c.

**Coding of mathematical expressions**

This is more difficult to render accurately in plain text.

Power can be coded as ‘\*\*’.

*To be discussed:*

Subscript, commonly used term like Planck constant, etc...

**13762.001:** Measurements of  $\sigma(f)(02)/\sigma(f)(28)$  and the value of  $\sigma(f)(02)$  as a function of neutron energy

**D5059.001:** Analog resonances with  $J_{\pi} = 3/2^-$  in the  $^{40}\text{Ar}(p,g)^{41}\text{K}$  reaction

**E1319.001:** EXCITATION OF  $J^{\pi} = 2^+$  RESONANCES IN  $^{24}\text{Mg}$  BY THE  $^{23}\text{Na}(P,^{12}\text{C})^{12}\text{C}$  REACTION.

**E1360.001:** 0 HBAROMEGA STRETCHED STATES OBSERVED IN THE (P,N) REACTIONS ON  $^{22}\text{Ne}$  AND  $^{26}\text{Mg}$