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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

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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
α	alpha
β	beta
γ	gamma
μ	micro
θ	theta
ω	omega
$\bar{\nu}$	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 α , 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}Br and ^{76}Br -excitation functions and yields for ^3He 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 ($^{92}\text{U}-235$ 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}Mg BY THE $^{23}\text{Na}(P,12C)^{12}\text{C}$ REACTION.

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