

**New Nuclides Dictionary (replacing Dict.27)**

Ref.: Conclusion C8 and Action A11 of 2002 NRDC Meeting (WP 2003-1)

See below e-mails between NNDC and NDS from October and September 2002.

**Subject: Re: Dict. 27**

From: Victoria McLane <vml@bnl.gov>

Date: Mon, 28 Oct 2002 13:07:54 -0500

To: Otto Schwerer <schwerer@iaeand.IAEA.ORG>

Otto,

The plan is to list only states given in the Wallet Cards. However, the computer database for the Wallet Cards is updated several times a year.

Vicki

----- Original Message -----

From: "Otto Schwerer" <schwerer@iaeand.iaea.or.at>

To: "Victoria McLane" <vml@bnl.gov>

Sent: Monday, October 28, 2002 1:05 PM

Subject: Re: Dict. 27

> Vicki,

>

> I have your message of 10 September which gives a list of fields for the  
> new dictionary 27, but I have not seen an example (the message had no  
> attachment).

> In the message, you asked me about the units for half-lives. My opinion  
> is that giving it in seconds only is not convenient. I would prefer  
> having it with the unit (e.g. 1.5 MIN) anyway; conversion to seconds  
> could be given in addition (would probably be useful).

>

> You list "spin and parity of ground or metastable state". I understand  
> that metastable states will be listed separately. Which states will  
> qualify for it (only those now listed in the wallet cards?)

>

> Otto

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>

> Victoria McLane wrote:

>

>> Otto,

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>> Before I send a CP Memo on Dict. 27, do you have any comments on the sample  
>> dictionary I sent in September?

>>

>> Vicki

>>

>> Victoria McLane

>> National Nuclear Data Center

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**Subject: Dict. 27 produced from Nuclear Wallet Cards**

From: Victoria McLane <vml@bnl.gov>

Date: Tue, **10 Sep 2002** 11:18:12 -0400

To: ZERKIN Viktor <zerkin@iaeand.IAEA.ORG>, SCHWERER Otto <schwerer@iaeand.IAEA.ORG>

Victor and Otto,

I have written a program to produce a Dictionary 27 from the Nuclear Wallet Cards. The atomic weight has been extracted from the Audi-Wapstra files.

Ramon is now working on a relational database for the Nuclear Wallet Cards. It may be a good idea to put all the info we need (e.g., atomic weights into the NWC database. That way we can interface directly to the NWC database for the relational databases and extract the Dict. 27 from the NWC database for other users.

The Dict. 27 fields I have produced are the EXFOR code as primary key, and includes an entry for each metastable state as in NWC.

**The following fields are given:**

- . Code as given for NSR et al. (e.g., 3Li).
- . Integer equivalent of Z,A,M (zzzaam).
- . Spin and parity of ground or metastable state, given as floating point number (e.g., +1.5).
- . Natural abundance, for naturally occurring nuclides.
- . Half-life, for radioactive nuclides; given in min, sec, etc., with units (e.g., 1.5 MIN). Alternately, can be given in secs, or in both representations (Otto: what are your feelings on this?).
- . Atomic weight (extracted from Audi-Wapstra files).

I am giving our needs and my code to Ramon to look at. When Victor comes we can discuss it further.

I will also send a proposal for a new format for dictionary 27 soon.

Vicki

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