

WPEC/SG-C Meeting, 9 May 2016

Revision of Actions Implementation of the changes to the HPRL request

O. Cabellos
OECD/NEA Data Bank

28th WPEC meeting, 9-13 May 2016,
OECD Headquarters, Conference Centre, Paris, France.

SG-C Meeting, 2016: List of ACTIONS- 2015

| Actions | | |
|-------------------------|---|---|
| 1. Action NEA: | The mandate should be a reference document on the HPRL website. | ✓ |
| 2. Action NEA: | Remind the projects of the need to appoint new/additional members of SG-C and ask existing members if they wish to continue. | ✓ |
| 3. Action NEA: | Modify the SG-C mailing list to reflect its current members and remind the members and WPEC of the way to use it (distribute the name). | ✓ |
| 4. Action SG-C members: | review the HPRL mailing list (distribution of present list by NEA). | ✓ |

wpec-sgc@nea.fr or wpec-sgc@oecd-nea.org

WPEC subgroup C on the High Priority Request List for Nuclear Data (Subscribers: 17)

<http://www.oecd-nea.org/sympa/review/wpec-sgc>

| Email | <u>Domain</u> | Reception | <u>Sub date</u> | Last update |
|--|-----------------|-----------|-----------------|-------------|
| a.koning@iaea.org | | mail | 25 Nov 2015 | 25 Nov 2015 |
| arjan.plompen@ec.europa.eu | | mail | 05 Nov 2015 | 05 Nov 2015 |
| danony@rpi.edu | | mail | 27 May 2015 | 27 May 2015 |
| donald.l.smith@anl.gov | bouncing | mail | 11 Dec 2013 | 11 Dec 2013 |
| fukahori.tokio@jaea.go.jp | | mail | 16 Jun 2015 | 16 Jun 2015 |
| gerald.rimpault@cea.fr | | mail | 11 Apr 2016 | 11 Apr 2016 |
| gezg@ciae.ac.cn | | mail | 04 Jun 2015 | 04 Jun 2015 |
| harada.hideo@jaea.go.jp | | mail | 03 Jun 2015 | 03 Jun 2015 |
| iwamoto.osamu@jaea.go.jp | | mail | 03 Jun 2015 | 03 Jun 2015 |
| ntof@ciae.ac.cn | | mail | 04 Jun 2015 | 04 Jun 2015 |
| oscar.cabellos@oecd.org | | mail | 02 May 2016 | 02 May 2016 |
| pronyaev@ippe.ru | bouncing | mail | 29 Feb 2016 | 29 Feb 2016 |
| sun_weili@iapcm.ac.cn | | mail | 05 Jun 2015 | 05 Jun 2015 |
| tomohiko.iwasaki@qse.tohoku.ac.jp | | mail | 26 Feb 2016 | 26 Feb 2016 |
| vkoscheev@ippe.ru | | mail | 04 Jan 2016 | 04 Jan 2016 |
| yokoyama.kenji09@jaea.go.jp | | mail | 06 Jul 2015 | 06 Jul 2015 |
| yolee@kaeri.re.kr | | mail | 03 Jun 2015 | 03 Jun 2015 |

WPEC subgroup C on the High Priority Request List for Nuclear Data (Subscribers: 17)

SG-C Meeting, 2016: List of ACTIONS- 2015

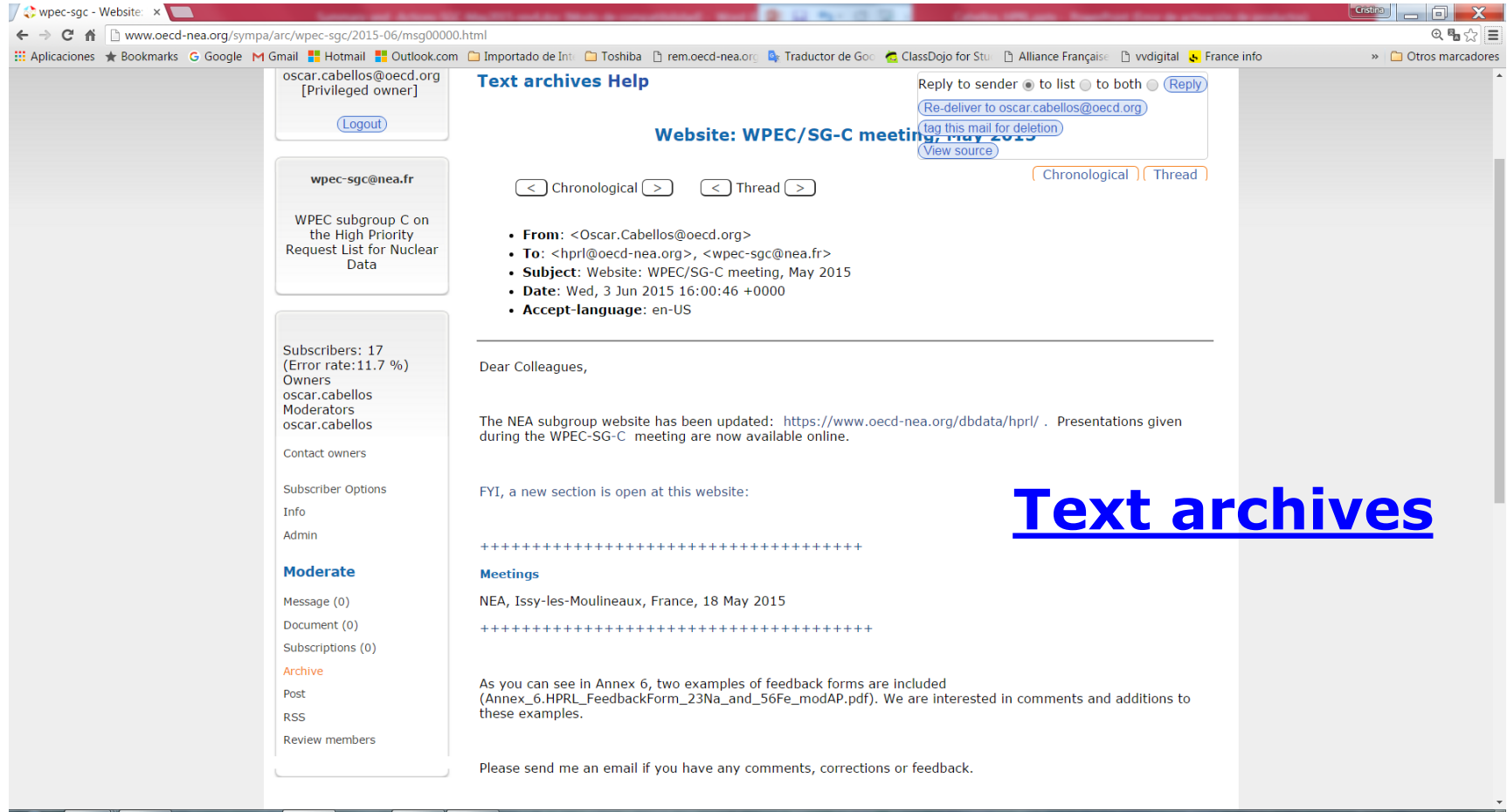
| Actions | | |
|-------------------------|---|---|
| 1. Action NEA: | The mandate should be a reference document on the HPRL website. (Duration: June 2016) | ✓ |
| 2. Action NEA: | Remind the projects of the need to appoint new/additional members of SG-C and ask existing members if they wish to continue. | ✓ |
| 3. Action NEA: | Modify the SG-C mailing list to reflect its current members and remind the members and WPEC of the way to use it (distribute the name). | ✓ |
| 4. Action SG-C members: | review the HPRL mailing list (distribution of present list by NEA). | ✓ |

hpri@nea.fr or hpri@oecd-nea.org

High priority Request List (Subscribers: 110)

<http://www.oecd-nea.org/sympa/review/hpri>

SG-C Meeting, 2016: List of ACTIONS- 2015



The screenshot shows a web browser window displaying an email interface. The address bar shows the URL: www.oecd-nea.org/sympa/arc/wpec-sgc/2015-06/msg00000.html. The email header includes the sender 'oscar.cabellos@oecd.org [Privileged owner]' and the subject 'Website: WPEC/SG-C meeting, May 2015'. The main body of the email contains the following text:

Dear Colleagues,

The NEA subgroup website has been updated: <https://www.oecd-nea.org/dbdata/hprl/>. Presentations given during the WPEC-SG-C meeting are now available online.

FYI, a new section is open at this website:

Text archives

+++++

Meetings

NEA, Issy-les-Moulineaux, France, 18 May 2015

+++++

As you can see in Annex 6, two examples of feedback forms are included (Annex_6.HPRL_FeedbackForm_23Na_and_56Fe_modAP.pdf). We are interested in comments and additions to these examples.

Please send me an email if you have any comments, corrections or feedback.

<http://www.oecd-nea.org/sympa/review/hprl>

SG-C Meeting, 2016: List of ACTIONS- 2015

| Actions | | |
|----------------|---|-----|
| 5. Action NEA: | Implement the changes to the request given according to Annex 2 and move the status of the request from “to be checked” to “high priority”. An email should be sent to the HPRL list to announce this new request once this is done. | TBD |
| | | |
| | | |

| Raws | List of pending requests from database | |
|------|--|--|
| 145 | Np-237(n,f)-SIG,DE : Fredrik Tovesson | |

“HPRL” ADD group to be able to use :

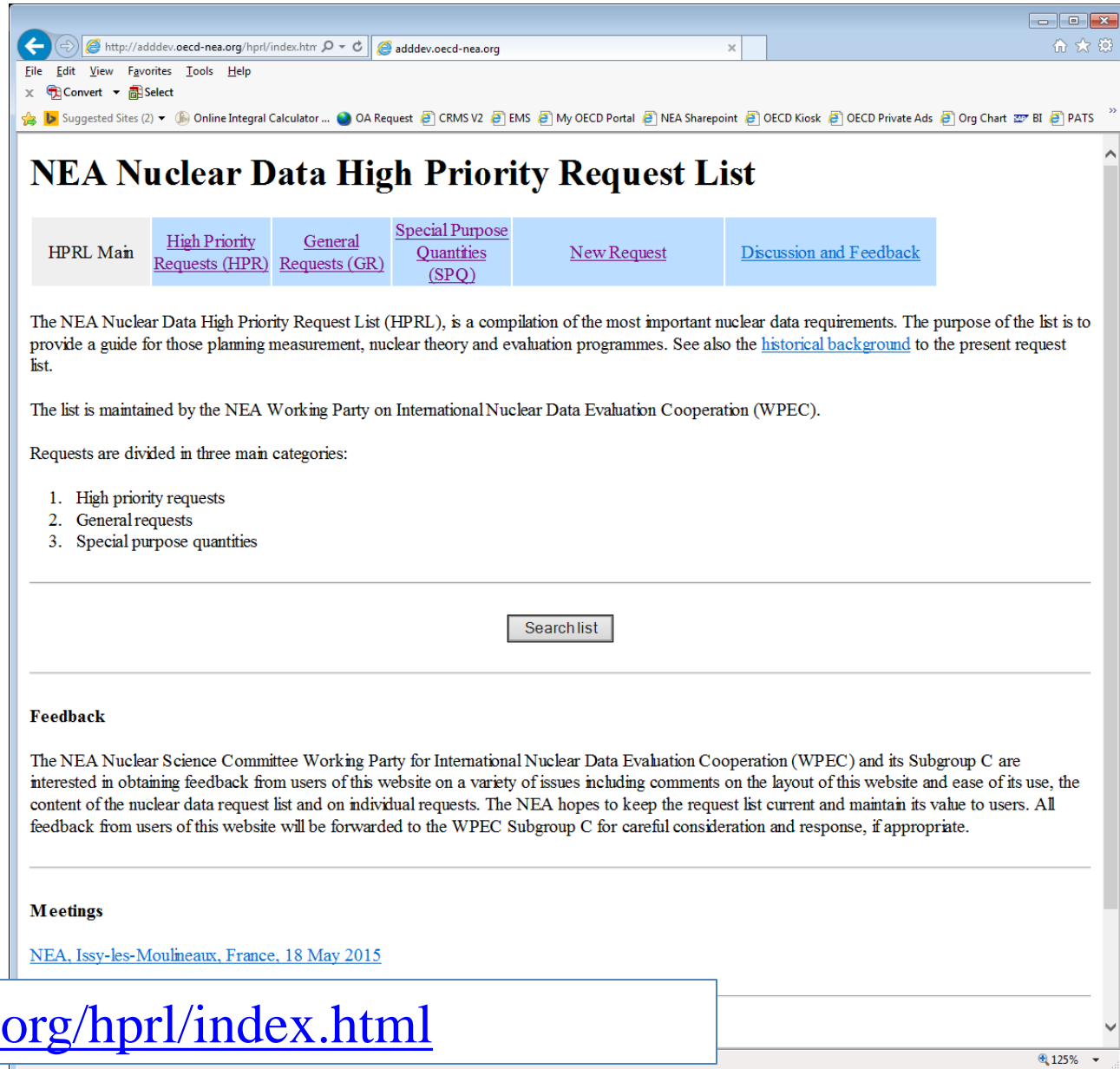
<https://www.oecd-nea.org/html/dbdata/hprl/pending/>

[Annex 2. High priority request for the new measurements of the 237Np\(n,f\)](#), by F Tovesson

https://www.oecd-nea.org/dbdata/hprl/2015_May/Annex_2_Np-237.pdf

SG-C Meeting, 2016: List of ACTIONS- 2015

| Actions | | |
|----------------|--|---|
| 6. Action NEA: | <p>Modify the website and database of the HPRL to accommodate requests for special purpose quantity using the guidance provided in Annex 3. The example in Annex 4 provides partial further guidance. A timely implementation is of the utmost importance for a credible follow-up of the SG decisions and its mandate.</p> | ✓ |
| 7. Action NEA: | <p>Ask for secretarial support from S. Simakov and the NEA secretariat to enter the SPA requests of the proposal by Simakov according to the guidelines given in Annex 4 together with his request.</p> | ✓ |



The screenshot shows a web browser window with the address bar containing <http://adddev.oecd-nea.org/hprl/index.html>. The page title is "NEA Nuclear Data High Priority Request List". Below the title is a navigation menu with links: "HPRL Main", "High Priority Requests (HPR)", "General Requests (GR)", "Special Purpose Quantities (SPQ)", "New Request", and "Discussion and Feedback". The main content area contains a paragraph explaining the purpose of the list, a paragraph stating it is maintained by the NEA Working Party on International Nuclear Data Evaluation Cooperation (WPEC), and a list of three categories: "1. High priority requests", "2. General requests", and "3. Special purpose quantities". Below the list is a "Search list" button. Further down, there are sections for "Feedback" and "Meetings", with a link to "NEA, Issy-les-Moulineaux, France, 18 May 2015". The browser's address bar is highlighted in a blue box at the bottom of the screenshot.

<http://adddev.oecd-nea.org/hprl/index.html>

High Priority

NEA Nuclear Data High Priority Request List

[HPRL Main](#)
[High Priority Requests \(HPR\)](#)
[General Requests \(GR\)](#)
[Special Purpose Quantities \(SPQ\)](#)
[New Request](#)
[Discussion and Feedback](#)

Results of your search in the request list

Requests are shown from the following list(s):

High Priority (H)

Explanations of each column can be found in the table heads. To view the details of a request, please click on the **link symbol** after the request ID. To send a comment on a particular entry, please view the request, and click on the **'letter'** symbol there.

| Req. ID | View | Target | Reaction | Quantity | Energy range | Sec. E/Angle | Accuracy | Cov Field | Date |
|---------|----------------------|------------------------|--------------------------|--------------------------|------------------------------|------------------------------|--------------------------|---------------------------|----------------------|
| H 37 | | 94-PU-240 | (n, f) | SIG | 0.5 keV-5 MeV | | See details | Y Fission | 15-SEP-08 |
| H 38 | | 94-PU-240 | (n, f) | nubar | 200 keV-2 MeV | | See details | Y Fission | 15-SEP-08 |
| H 22 | | 95-AM-242 | (n, f) | SIG | 0.5 keV-6 MeV | | See details | Y Fission | 31-MAR-08 |
| H 27 | | 96-CM-245 | (n, f) | SIG | 0.5 keV-6 MeV | | See details | Y Fission | 04-APR-08 |
| H 29 | | 11-NA-23 | (n, inl) | SIG | 0.5 MeV-1.3 MeV | Emis spec. | See details | Y Fission | 04-APR-08 |
| H 43 | | 1-H-1 | (n, n) | SIG, DA | 10 MeV-20 MeV | 4 pi | 1-2 | Y Standard | 29-APR-11 |
| H 32 | | 94-PU-239 | (n, g) | SIG | 0.1 eV-1.35 MeV | | See details | Y Fission | 04-APR-08 |
| H 36 | | 92-U-238 | (n, g) | SIG | 20 eV-25 keV | | See details | Y Fission | 15-SEP-08 |
| H 4 | | 92-U-235 | (n, f) | prompt g-prod | Thermal-Fast | Eg=0-10MeV | 7.5 | Y Fission | 10-MAY-06 |
| H 2 | | 8-O-16 | (n, a), (n, abs) | SIG | 2 MeV-20 MeV | | See details | Y Fission | 21-SEP-05 |
| H 5 | | 72-HF-0 | (n, g) | SIG | 0.5-5.0 keV | | 4 | Y Fission | 28-APR-06 |
| H 3 | | 94-PU-239 | (n, f) | Prompt g-prod | Thermal-Fast | Eg=0-10MeV | 7.5 | Y Fission | 28-APR-06 |
| H 8 | | 1-H-2 | (n, ela) | dA/dE | 0.1 MeV-1 MeV | 0-180 Deg | 5 | Y Fission | 25-JUL-06 |
| H 15 | | 95-AM-241 | (n, g), (n, tot) | SIG | Thermal | | See details | Fission | 08-NOV-07 |
| H 12 | | 92-U-235 | (n, g) | SIG, RP | 100 eV-1 MeV | | 3 | Y Fission | 29-AUG-07 |
| H 18 | | 92-U-238 | (n, inl) | SIG | 65 keV-20 MeV | Emis spec. | See details | Y Fission | 28-MAR-08 |
| H 19 | | 94-PU-238 | (n, f) | SIG | 9 keV-6 MeV | | See details | Y Fission | 31-MAR-08 |
| H 25 | | 96-CM-244 | (n, f) | SIG | 65 keV-6 MeV | | See details | Y Fission | 04-APR-08 |

General

NEA Nuclear Data High Priority Request List

[HPRL Main](#) | [High Priority Requests \(HPR\)](#) | [General Requests \(GR\)](#) | [Special Purpose Quantities \(SPQ\)](#) | [New Request](#) | [Discussion and Feedback](#)

Results of your search in the request list

Requests are shown from the following list(s):

General (G)

Explanations of each column can be found in the table heads. To view the details of a request, please click on the **link** symbol after the request ID. To send a comment on a particular entry, please view the request, and click on the **'letter'** symbol there.

| Req. ID | View | Target | Reaction | Quantity | Energy range | Sec.E/Angle | Accuracy | Cov Field | Date |
|---------|------|-----------|------------------|-----------------|------------------|-------------|----------|-----------------|-----------|
| G 1 | | 14-SI-28 | (n, np) | SIG | Threshold-20 MeV | 4 pi | 20 | Y Fusion | 21-SEP-05 |
| G 6 | | 92-U-233 | (n, g) | SIG | 10 keV-1.0 MeV | | 9 | Y Fission | 28-APR-06 |
| G 7 | | 26-FE-56 | (n, xn) | SIG, DDX | 7 MeV-20 MeV | 1MeV-20MeV | 30 | Fission, ADS | 13-JUL-06 |
| G 9 | | 92-U-233 | (n, g) | nubar, SIG | Thermal-10 keV | | .5 | Y Fission | 19-APR-07 |
| G 14 | | 94-PU-242 | (n, g), (n, tot) | SIG | 0.5 eV-2.0 keV | | 8 | Y Fission | 06-JUL-07 |
| G 16 | | 95-AM-243 | (n, f) | n spectrum | Eth-10 MeV | | 10 | ADS | 08-NOV-07 |
| G 17 | | 96-CM-244 | (n, f) | n spectrum | Eth-10 MeV | | 10 | ADS | 08-NOV-07 |
| G 11 | | 94-PU-239 | (n, f), (n, g) | SIG, eta, alpha | 1 meV-1 eV | | 1 | Y Fission | 09-MAY-07 |
| G 10 | | 79-AU-197 | (n, tot) | SIG | 5 keV-200 keV | | 5 | Science, Fusion | 18-MAY-07 |
| G 13 | | 24-CR-52 | (n, xd), (n, xt) | SIG | Threshold-65 MeV | | 20 | Y Fusion | 23-OCT-07 |

Number of requests found: 10 (out of a total of 38 requests).
[Download consolidated output report](#)

Special Purpose Quantities (SPQ)

The screenshot shows a web browser window displaying the NEA Nuclear Data High Priority Request List. The page title is "NEA Nuclear Data High Priority Request List". There are navigation tabs for "HPRL Main", "High Priority Requests (HPR)", "General Requests (GR)", "Special Purpose Quantities (SPQ)", "New Request", and "Discussion and Feedback". The "Special Purpose Quantities (SPQ)" tab is selected.

The main heading is "Results of your search in the request list". Below this, it states "Requests are shown from the following list(s): Special Purpose Quantities (SPQ)".

Explanations of each column can be found in the table heads. To view the details of a request, please click on the link symbol after the request ID. To send a comment on a particular entry, please view the request, and click on the 'letter' symbol there.

| <u>Req. ID</u> | <u>View</u> | <u>Target</u> | <u>Reaction</u> | <u>Quantity</u> | <u>Energy range</u> | <u>Sec.E/Angle</u> | <u>Accuracy</u> | <u>Cov Field</u> | <u>Date</u> |
|----------------|-------------|---------------|-----------------|-----------------|---------------------|--------------------|-----------------|------------------|-------------|
| 465 | | 93-NP-237 | (n, f) | SIG, DE | 200KeV-20MeV | 0 | 0 | Y Fission | 02-MAR-16 |

Number of requests found: 1 (out of a total of 38 requests).
[Download consolidated output report](#)

Browser address bar: https://www.nds.iaea.org/IRDFTest/

Browser tabs: F5: Oscar Cabellos's Home, CABELLOS Oscar, NEA/DB - Ou..., Mailing lists service - home, IRDF Testing and Validation

Browser extensions: Schleich action figures ani..., abouttaps, Sitios sugeridos, eBay, Galeria de Web Slice, Skyscanner, Spotify

International Atomic Energy Agency

Nuclear Data Services

Section Données Nucléaires, AIEA

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Databases » EXFOR | ENDF | CINDA | IBANDL | Medical | PGAA | NGAtlas | RIPL | FENDL | IRDF-2002 | IRDFF

- Participants (CSI)
- M. Angelone
 - M. Chadwick
 - V. Chechev
 - C. Destouches
 - L. Greenwood
 - P. Griffin
 - I. Kodeli
 - C. Konno
 - M. Majerle
 - P. Mastinu
 - R. Nchodu

Testing and Improving the International Reactor Dosimetry and Fusion File (IRDFF)

Coordinated Research Project (CRP) - approved on 30 October 2012, CRP code **F41031**
 duration period: 4 years, July 2013 (1st RCM) - March 2015 (2nd RCM) - 1Q 2017 (3rd RCM)

Motivation/Purposes

The Nuclear Data Section of IAEA, in accordance with the recommendation of the International Nuclear Data Committee (INDC(NDS) -0619), has initiated a Coordinated Research Project (CRP) with the main goal to test, validate and improve the IRDFF library. The International Reactor Dosimetry and Fusion File (IRDFF) (for more information see [IRDFF release page](#)) is an extension of the International Reactor Dosimetry File (IRDF-2002) to cover fission, fusion and accelerator driven applications.

5. Photo-induced Reactions which produce the same residual isotope or fission product as neutrons do:

- (g,n) vs (n,2n): cross sections and contributions in the n-g mixed field, e.g. ^{238}U , ^{23}Na
- (g,f)FP vs (n,f)FP: cross sections, their contributions in the n-g mixed field
- Photonuclear Reaction Libraries: [IAEA](#) or [others](#)
- Photo-Induced Fission Product Yields: no Evaluations (?), only Measurements (? - see [PhysRev C91\(2014\)034603](#), [Eur.Phys.J. A51\(2015\):150](#)) (see [IAEA CRP on Photonuclear Data](#))

IRDFF: Needs for measurements, updates or new evaluations, data formats ...

- **Proposals for new measurements for IRDFF community and HPRL: Reactions to Measure**
- **The list of reactions recommended for updating or new evaluation and inclusion in IRDFF : Reactions to Update/Evaluate**
- **Energy group structure** recommended by 1st RCM: "640 groups below 20 MeV, 0.5 MeV steps from 20 to 30 MeV, 1 MeV steps from 30 to 40 MeV, and 2 MeV steps from 40 to 100 MeV, and 5 MeV above 100 MeV".

Energy domains, typical fields, facilities and data status

Reactor driven and spontaneous or induced fission spectra (thermal, fast)

- Spectrum averaged cross sections (SPA) in standard and reference fields
 - ^{252}Cf (s.f.): **Measured**, Calculated with [Standard spectrum](#) and [C/E Ratio plots](#)
 - ^{235}U (n_{th},f): **Measured**, Calculated with [ENDF/B-VII.1](#) or [JENDL-4.0](#) spectra and [C/E Ratio plots](#)
 - Thermal: Experimental σ and RI (Atlas in EXFOR: **Z=1-50**, **Z=51-100** or **Z=1-100**) and Calculated with [Maxwellian \(25.3meV\)](#) spectrum
- **SPA for high threshold reactions not measured yet** in ^{252}Cf (s.f.) and ^{235}U (n_{th},f) fields
- IRDF-2002 collection of standard and reference reactor spectra (however without uncertainties) ([Spectra and C/E](#) and [ENDF formatted data](#))
- research reactors and critical assemblies (e.g., ICSBEP collection: [Spectra](#) and [SPA and Indices](#))

- IRDFF Documentation
- RCM-2 Report
INDC(NDS)-0682
 - RCM-1 Report
INDC(NDS)-0639
 - INDC(NDS)-0668:
Evaluation of ^{28}Si
(n,p) ^{28}Al , ^{31}P (n,p)
 ^{31}Si and ^{113}In (n,g)
 ^{114}mIn
 - INDC(NDS)-0657:
Evaluation of some

IAEA Scientific Committee
 k0 Scientific Committee
[NAA-online.net](#)

- Codes for Spectrum Adjustemnt
- SAND-II-SNL
 - STAYSL @ PNNL
 - STAYSL @ IAEA
 - GRAVELW
 - STAYNL (NMF-90)

- Spectrum Unfolding Exercises
- REAL-88 = NMF-90
 - REAL-84 (Results): INDC (NDS)-212
 - REAL-84 (Analysis): INDC (NDS)-198
 - REAL-84 (Analysis): INDC (NDS)-190
 - REAL-80 (Results): INDC (NED)-007
 - REAL-80 (Analysis): INDC (NDS)-148/G
 - Current Status of Neutron Spectrum Unfolding,

New Request

http://adddev.oecd-nea.org/hprl/requestfo OECD Nuclear Energy Age... x

File Edit View Favorites Tools Help

Convert Select

Suggested Sites (2) Online Integral Calculator... OA Request CRMS V2 EMS My OECD Portal NEA Sharepoint OECD Kiosk OECD Private Ads Org Chart BI PATS

HPRL: NEA Nuclear Data Request Submission Form

HPRL Main High Priority Requests (HPR) General Requests (GR) Special Purpose Quantities (SPQ) **New Request** Discussion and Feedback

Before filling in this template, Please see the guidelines for submitting requests.

Requester details (Items marked * are mandatory)

| | |
|---------------------------------------|----------------------|
| Name * | <input type="text"/> |
| Email * | <input type="text"/> |
| Organisation * | <input type="text"/> |
| Country or International Organisation | <input type="text"/> |

Measurement details

| | |
|----------------------------------|--|
| Target Z * | <input type="text"/> |
| Target A * | <input type="text"/> |
| Reaction/Process * | <input type="text"/> Examples to choose from <input type="button" value="v"/> |
| Quantity * | <input type="text"/> Examples to choose from <input type="button" value="v"/> |
| Incident Energy range (eV) * | <input type="text"/> |
| Secondary energy (eV) or angle * | <input type="text"/> |
| Covariance information * | <input type="checkbox"/> |
| Type of request * | <input type="checkbox"/> High Priority <input checked="" type="checkbox"/> Special Purpose Quantity: <ul style="list-style-type: none"> Activation data Decay Data Fission yields Spectrum Averaged cross sections (SPA) <ul style="list-style-type: none"> SPA - 252Cf(Spontaneous fission) SPA - 235U(n-th.f) SPA - Maxwellian-Averaged Cross-Section (MACS) (kT=30 keV) Thermal Scattering Law |
| Field (application areas) * | |
| Subfield * | |

Notes

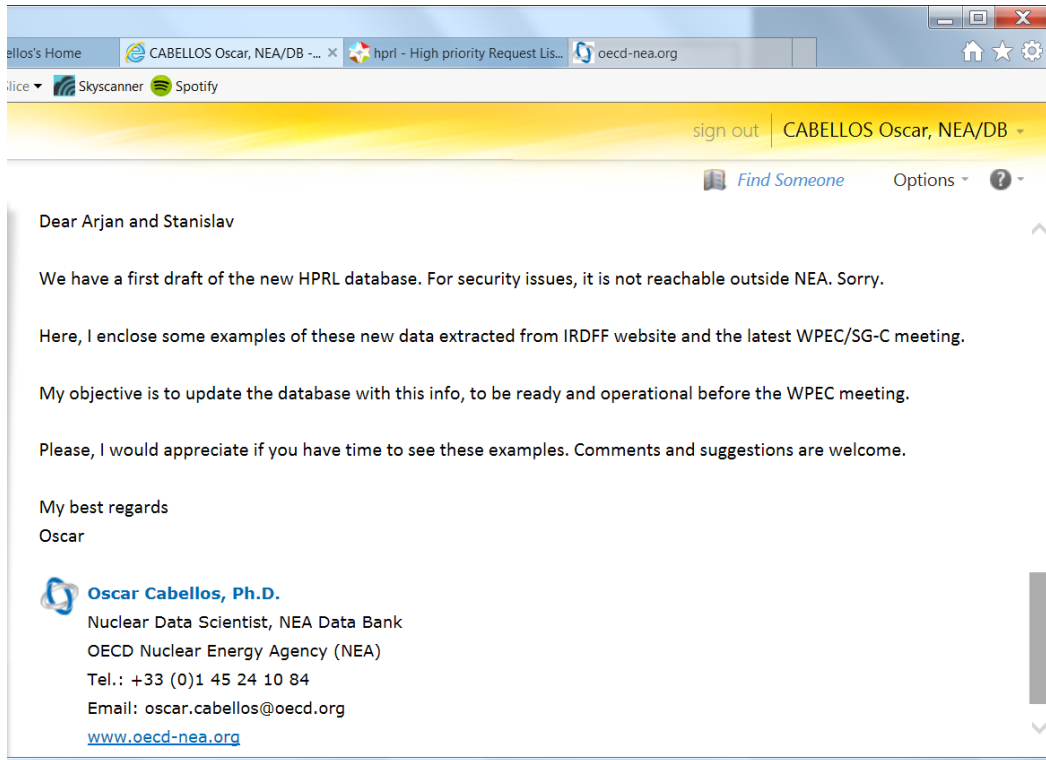
| | | |
|-------------------------------|----------------------|----------------------------------|
| Impact documentation * | <input type="text"/> | <input type="button" value="v"/> |
| Requested Accuracy * | <input type="text"/> | <input type="button" value="v"/> |
| Justification documentation * | <input type="text"/> | <input type="button" value="v"/> |
| General comments | <input type="text"/> | <input type="button" value="v"/> |

Optionally attach a file as an annex:

First:

100%

Monday, March 07, 2016 5:20 PM



Dear Oscar and Arjan,

I quickly looked through the docs you've sent - all these materials will surely serve for concrete specifications of HPRL for the low and high energy neutron dosimetry.

It will be interesting to observe later how all this information will be presented at the HPRL web .

Best regards,

Stanislav Simakov

PS. Likely I have to inform you that I'm leaving IAEA next month and all IRDFF business will be continued by A. Trkov and R. Capote.

| Requester details | |
|---------------------------------------|---|
| Name | S. Simakov |
| Email | s.simakov@iaea.org |
| Organisation | IAEA |
| Country or International Organisation | IAEA |
| Measurement details | |
| Target Z | Ga |
| Target A | 67 |
| Reaction/Process | DECAY |
| Quantity | DECAY data |
| Incident Energy range | NA |
| Secondary energy (eV) or angle | NA |
| Covariance information | Y |
| Type of request | SPQ – Decay Data |
| Field (application areas) | Standard |
| Subfield | Standards for detector calibration |
| Impact Documentation | IRDF web page https://www-nds.iaea.org/IRDF/ IRDF test CRP page https://www-nds.iaea.org/IRDFtest/ |
| Requested Accuracy | |
| Justification documentation | The evaluation is based on the value of the absolute emission probability of conversion electrons from the gamma transition of 93.3 keV $P(ec_{1,0})=0.325(4)$. It is obtained from the two discrepant measurement results of 0.3206(23) and 0.329(4). Further measurements of this key value are required. Methods: 4PI(LS)e, X-g coincidences |
| General comments | |
| Attached files | |

| | |
|---------------------------------------|---|
| Name | S. Simakov |
| Email | s.simakov@iaea.org |
| Organisation | IAEA |
| Country or International Organisation | IAEA |
| Measurement details | |
| Target Z | Bi |
| Target A | 209 |
| Reaction/Process | (n,xn) |
| Quantity | SIG |
| Incident Energy range | 20 - 200 MeV |
| Secondary energy (eV) or angle | NA |
| Covariance information | Y |
| Type of request | SPQ – Activation data |
| Field (application areas) | Reactor Dosimetry |
| Subfield | Validation |
| Impact Documentation | <p>IRDF web page https://www-nds.iaea.org/IRDF/ IRDF test CRP page https://www-nds.iaea.org/IRDFtest/</p> <p>CRP/IRDF strives to evaluate and eventually add to the IRDF library the high threshold reactions with cross section plateaus located between 20 and 100-200 MeV to meet the requirements of the high neutron energy accelerator driven sources such as ADS.</p> |
| Requested Accuracy | New measurements must make an effort to reach 2-5% uncertainty for E50%<15 MeV or 5-10% for E50%>15 MeV). |
| Justification documentation | As impact documentation. |
| General comments | The International Reactor Dosimetry and Fusion File aims at providing validated evaluated neutron dosimetry reactions for all applications in reactors and fusion technology development. |
| Attached files | |

| | |
|---------------------------------------|--|
| Name | S. Simakov |
| Email | s.simakov@iaea.org |
| Organisation | IAEA |
| Country or International Organisation | IAEA |
| Measurement details | |
| Target Z | Sn |
| Target A | 117 |
| Reaction/Process | (n,n') |
| Quantity | SIG |
| Incident Energy range | 5 - 10 MeV |
| Secondary energy (eV) or angle | NA |
| Covariance information | Y |
| Type of request | SPQ – Activation data |
| Field (application areas) | Reactor Dosimetry |
| Subfield | Validation |
| Impact Documentation | <p>IRDF web page https://www-nds.iaea.org/IRDF/</p> <p>IRDF test CRP page https://www-nds.iaea.org/IRDFtest/</p> <p>It is a unique way to measure neutrons in the 300 keV energy range. (See Ref. INDC(NDS)-0682)</p> |
| Requested Accuracy | New measurements must make an effort to reach 2-5% uncertainty for E50%<15 MeV or 5-10% for E50%>15 MeV). |
| Justification documentation | As impact documentation. |
| General comments | <p>The International Reactor Dosimetry and Fusion File aims at providing validated evaluated neutron dosimetry reactions for all applications in reactors and fusion technology development.</p> <p>This dosimeter has been already experimentally tested (irradiated) employing the inreached Tin foil (93% at. 117Sn) in different reactor spectra at CEA. However, the microscopic nuclear data for this reaction suffer of lack measurements on plateau (5 - 10 MeV), discrepancies between library evaluations, lack of uncertainties ... prevent this reaction to be used.</p> |
| Attached files | |
| Reviewer comment | |

| | |
|---------------------------------------|---|
| Name | S. Simakov |
| Email | s.simakov@iaea.org |
| Organisation | IAEA |
| Country or International Organisation | IAEA |
| Target Z | Sc |
| Target A | 45 |
| Reaction/Process | (n,g) |
| Quantity | SPA |
| Incident Energy range | FNS 252Cf(SF) |
| Secondary energy (eV) or angle | NA |
| Covariance information | Y |
| Type of request | SPQ – SPA 252Cf (Spontaneous fission) |
| Field (application areas) | Reactor Dosimetry |
| Subfield | Validation |
| Impact Documentation | IRDF web page https://www-nds.iaea.org/IRDF/ IRDF test CRP page https://www-nds.iaea.org/IRDFtest/ |
| Requested Accuracy | New measurements must make an effort to reach 2-5% uncertainty for E50%<15 MeV or 5-10% for E50%>15 MeV). |
| Justification documentation | As impact documentation. |
| General comments | The International Reactor Dosimetry and Fusion File aims at providing validated evaluated neutron dosimetry reactions for all applications in reactors and fusion technology development. Spectrum averaged cross sections in well characterized fields such as the 252Cf(SF), 235U(n-th,f) fission neutron spectra and the quasi-maxwellian 30 keV spectrum are essential to validation of the proposed cross sections in fields that are close to the interest in applications. |
| Attached files | |
| Reviewer comment | Reactions without threshold measured in fast spectra such as the ²⁵² Cf(SF) and ²³⁵ U(n-th,f) spectrum tend to have their spectrum averaged cross section dominated by scattering contributions and ‘room-return’ neutrons. In all cases experiments should be careful to minimize these contributions and maximize the reaction rate of the target spectrum. For new experiments best estimates must be provided by detailed Monte Carlo calculation of the spectrum realized in the experiment and the Monte Carlo model must be made available to IRDF to facilitate validation of new proposals for the cross section. In all cases it is advised to publish both the fully corrected SPA and the measured reaction rates of the primary reaction and the monitor reactions used for normalization and validation of the model. The measured reaction rates must be provided with a full covariance matrix. |

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|---------------------------------------|---|
| Name | S. Simakov |
| Email | s.simakov@iaea.org |
| Organisation | IAEA |
| Country or International Organisation | IAEA |
| Target Z | Ag |
| Target A | 109 |
| Reaction/Process | (n,g-m) |
| Quantity | SPA |
| Incident Energy range | MACS (30 keV) |
| Secondary energy (eV) or angle | NA |
| Covariance information | Y |
| Type of request | SPQ – SPA MACS (30 keV) |
| Field (application areas) | Reactor Dosimetry |
| Subfield | Validation |
| Impact Documentation | IRDF web page https://www-nds.iaea.org/IRDF/ IRDF test CRP page https://www-nds.iaea.org/IRDFtest/ |
| Requested Accuracy | New measurements must make an effort to reach 2-5% uncertainty for $E_{50\%} < 15$ MeV or 5-10% for $E_{50\%} > 15$ MeV). |
| Justification documentation | As impact documentation. |
| General comments | The International Reactor Dosimetry and Fusion File aims at providing validated evaluated neutron dosimetry reactions for all applications in reactors and fusion technology development. Spectrum averaged cross sections in well characterized fields such as the $^{252}\text{Cf}(\text{SF})$, $^{235}\text{U}(\text{n-th,f})$ fission neutron spectra and the quasi-maxwellian 30 keV spectrum are essential to validation of the proposed cross sections in fields that are close to the interest in applications. |
| Reviewer comment | Reactions without threshold measured in fast spectra such as the $^{252}\text{Cf}(\text{SF})$ and $^{235}\text{U}(\text{n-th,f})$ spectrum tend to have their spectrum averaged cross section dominated by scattering contributions and 'room-return' neutrons. In all cases experiments should be careful to minimize these contributions and maximize the reaction rate of the target spectrum. For new experiments best estimates must be provided by detailed Monte Carlo calculation of the spectrum realized in the experiment and the Monte Carlo model must be made available to IRDF to facilitate validation of new proposals for the cross section. In all cases it is advised to publish both the fully corrected SPA and the measured reaction rates of the primary reaction and the monitor reactions used for normalization and validation of the model. The measured reaction rates must be provided with a full covariance matrix. |

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|---------------------------------------|---|
| Name | S. Simakov |
| Email | s.simakov@iaea.org |
| Organisation | IAEA |
| Country or International Organisation | IAEA |
| Target Z | Sc |
| Target A | 45 |
| Reaction/Process | (n,g) |
| Quantity | SPA |
| Incident Energy range | PFNS 235U(nth,f) |
| Secondary energy (eV) or angle | NA |
| Covariance information | Y |
| Type of request | SPQ – SPA 235U(nth,f) |
| Field (application areas) | Reactor Dosimetry |
| Subfield | Validation |
| Impact Documentation | IRDFFF webpage https://www-nds.iaea.org/IRDFFF/ IRDFFF test CRP page https://www-nds.iaea.org/IRDFFFtest/ |
| Requested Accuracy | New measurements must make an effort to reach 2-5% uncertainty for E50%<15 MeV or 5-10% for E50%>15 MeV). |
| Justification documentation | As impact documentation. |
| General comments | The International Reactor Dosimetry and Fusion File aims at providing validated evaluated neutron dosimetry reactions for all applications in reactors and fusion technology development. Spectrum averaged cross sections in well characterized fields such as the 252Cf(SF), 235U(n-th,f) fission neutron spectra and the quasi-maxwellian 30 keV spectrum are essential to validation of the proposed cross sections in fields that are close to the interest in applications. |
| Reviewer comment | Reactions without threshold measured in fast spectra such as the ²⁵² Cf(SF) and ²³⁵ U(n-th,f) spectrum tend to have their spectrum averaged cross section dominated by scattering contributions and 'room-return' neutrons. In all cases experiments should be careful to minimize these contributions and maximize the reaction rate of the target spectrum. For new experiments best estimates must be provided by detailed Monte Carlo calculation of the spectrum realized in the experiment and the Monte Carlo model must be made available to IRDFFF to facilitate validation of new proposals for the cross section. In all cases it is advised to publish both the fully corrected SPA and the measured reaction rates of the primary reaction and the monitor reactions used for normalization and validation of the model. The measured reaction rates must be provided with a full covariance matrix. |

SG-C Meeting, 2016: List of ACTIONS- 2015

| Actions | | |
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| 8. Action AP (done): | Send an email to Robert Mills (NNL), Mark Kellett (LNHB), V. Chechev (Khlopin RI), Dr. F. Minato (JAEA), I. Gauld (ORNL), A. Sonzogni (BNL) to review the list by T.Golashvili (Annex 5) and modify and add to it in accordance with their view of importance to applications interests. Consult with the SG-C chair in case this email requires assistance. | |
| 9. Action AP (done): | Contact Robert Mills (NNL), Mark Chadwick, Morgan White (LANL), Ian Gauld (ORNL), (JENDL, T. Fukahori), O. Serot (CEA), A. Ignatyuk (IPPE) to provide their suggestions for an SPQ list of Fission Yield requests. | |
| 10. Action AP (done): | Contact G. Noguere (CEA), D. Roubtsov (AECL), Y. Danon (RPI), M. Dunn (ORNL), A. Kahler (LANL), I. Hawari (NCSU), T. Fukahori (JAEA) to provide their suggestions for an SPQ list of Thermal Scattering Law requests. | |

SG-C Meeting, 2016: List of ACTIONS- 2015

| Actions | | |
|-------------------------|---|--|
| 11.Action MW: | Prepare requests for nu-bar of U-235 and Pu-239 in consultation with M. Chadwick. | |
| 12. Action MW: | Prepare requests for the PFNS of U-235 and Pu-239 in consultation with M. Chadwick. | |
| 13. Action M. Chadwick: | Propose requests for the fission cross sections of U-235 and Pu-239. | |
| 14. Action MW and AP: | Prepare requests for Pu-239 and U-235 inelastic scattering. | |

SG-C Meeting, 2016: List of ACTIONS- 2015

| Actions | | |
|----------------|---|--|
| 15. Action AP: | Renew the appeal for feedback to the project responsables, SG-C and WPEC and ensure timely completion of the report and the mandate deliverables. | |
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