WPEC Subgroup C
HPRL
High Priority Request List for Nuclear Data

www.oecd-nea.org/dbdata/hprl

Emmeric DUPONT for SG-C
WPEC Subgroup C / HPRL

① Administrative items
- Membership
- Procedures
- Entry status

② Progress report
- Update of the website
- Adoption of new entries
- Follow-up of entries
- Review of entry status
- Additional requests

③ Mandate extension
Expert members: experimentalists, evaluators, and (too few) users

Representatives of nuclear data evaluation projects or countries

- ENDF: Y. Danon (RPI)
- JEFF: E. Dupont (CEA), A. Plompen (EC-JRC-Geel), G. Rimpault (CEA)
- JENDL: N. Iwamoto (replacing H. Harada) (JAEA), O. Iwamoto (JAEA), T. Iwasaki (Tohoku), A. Kimura (JAEA), K. Yokoyama (JAEA)
- BROND: V. Pronyaev (IPPE), V. Koscheev (IPPE)
- CENDL: Zhigang Ge (CNDC), Xichao Ruan (CIAE), Sun Weili (IAPCM)
- IAEA: R. Capote, A. Koning, A. Trkov
- Korea: Young-Ouk Lee (KAERI)
- Romania: A. Negret (IFIN-HH)
Rationale for the current HPRL established about 15 years ago

- Requests are reviewed and screened by Subgroup C
- Requests are driven by applications
- Requests are targeted to improvement of evaluated nuclear data
- Few categories without internal ranking:
  - High Priority (HP), General request (GR) since 2004
  - Special Purpose Quantities (SPQ) since 2014

HPRL is a reference tool in support to experimental, theoretical and evaluation projects aiming at improving evaluated nuclear data

SG-C is a forum for nuclear data producers and nuclear data users
1 Administrative items – Procedures

New requests
- Can be submitted online or by email to NEA or to the SG-C coordinator
- Are reviewed by SG-C using the “wpec-sgc” mailing list within a few weeks
- Are uploaded by NEA/Coordinator and advertise to the “hprl” mailing list

Monitoring of activities related to HPRL entries
- Is made by the requesters and all SG-C members who should inform NEA/Coordinator of new relevant publications and activities
- The online list of related publications will be updated on a regular basis by NEA/Coordinator who should inform all SG-C members of this update

Decisions on entry status
- Are made by SG-C (and WPEC) at their annual meeting
① Administrative items – Entry status

Different categories for entry status

(1) ✔ □ □ Work in progress
    covers all experimental and theoretical activities

(2) ✔ ✔ □ Pending new evaluation or validation
    for entries that have already stimulated a lot of activities, but are not completed yet because of the lack of new evaluation or validation

(3) ✔ ✔ ✔ Completed
    for entries that have been satisfied (consensus required)

(4) □ □ □ Archived
    for entries that are no longer relevant (consensus required)

Caution on possible impact on activities when closing an entry
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③ Mandate extension
② Progress report – Update of the website

- Hosted by NEA at [www.oecd-nea.org/dbdata/hprl](http://www.oecd-nea.org/dbdata/hprl)
  - New features and layout implemented in July 2017
    - Direct access to the lists for High Priority, General, and Special Purpose Quantity requests (in addition to the Search engine)
    - Form and guidelines for SPQ requests
    - SG-C members, mailing lists and documents
  - New features and layout to implement in 2018
    - Split the SPQ webpage into “SPQ-dosimetry” and “SPQ-standards”
    - Add list of relevant publications and activities
    - Fields for “Status” and “Status date” in the database and search output

- Many thanks to NEA Science & DB, and to NEA IT for their support
Recent entries

- 4 High priority requests
  - K-39(n,p),(n,np) for fusion
  - Cr-50,53(n,\(\gamma\)) for fission
  - Pu-239 nubar
  - Gd-155,157(n,\(\gamma\))

Special Purpose Quantities
- SPQ-dosimetry: essentially spectrum-averaged xs (51 requests)
- SPQ-standards: U-235,238 high-energy fission xs
Progress report – Follow-up of entries

Compilation for each entry of relevant publications and activities for:
- Experiments,
- Theory/Evaluation,
- Validation.

Draft report prepared by SG-C have been circulated in the ND community and its content will be uploaded shortly to the online HPRL.

This compilation (+ current evaluated uncertainties) have been sent to ND “requesters” and forms the basis for the SG-C review of entry status.
② Progress report – Review of entry status

Status for recent entries (2017-2018)
- In most cases: (1) Work in progress
- For Gd-155,157: (2) Pending new evaluation or validation

Status for (37) old entries (< 2017)
- Status discussed on a case-by-case basis during SG-C meeting
  - ~80% entries: (1) Work in progress or (2) Pending new evaluation or validation
  - ~20% entries: (3) Completed or (4) Archived

More feedback from requesters and users is welcome (and necessary in some cases)
② Progress report – Additional requests

- Requests already sent to SG-C (but not yet approved)
  - Pu-239 alpha xs ratio between thermal and 5 eV
  - U-233 nubar between thermal and 5 eV
  - High-energy tail of the Pu-239\(n_{th},f\) PFNS (in SPQ-dosimetry)

- Possible additional requests
  - Fast-range (especially < 20 keV) nubar of major fissile isotopes Pu-239,241 and U-233,235 (but no request from users so far)
  - ADS (MYRRHA): a few needs put forward by A. Stankovskiy
  - Fission reactors and criticality-safety data that should be improved are known, but discussion is going on to identify priority requests
  - Last but not least, M. Salvatores initiative to update SG26 results
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③ Mandate extension
Mandate extension

- SG-C current mandate until June 2018 with two deliverables
  - A report on the status of all requests describing completed activities and outlook.
  - An up-to-date online version of the “High Priority Request List for Nuclear Data”.
    - A working document compiling relevant publications and evaluated uncertainties has been prepared to assign a status to each entry
    - Online HPRL is up-to-date wrt recent users’ requests, and will be complemented with detailed status information on each request
- Request for two-year extension (of the same mandate) in order to
  - Finalize and publish the review of entry status
  - Add new entries for fission reactors (cf. ongoing discussions plus M. Salvatores initiative to update SG26 results)
  - Maintain a standing point of reference for ND users and producers
Thank you for your attention!