

Request for the format of the evaluated nuclear data file for the criticality safety evaluation

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Generally....

- **NO necessary** for changing the file format of the nuclear data (hereafter referred as to ND). But **no objection** if criticality calculation codes run successfully and obtained k-eff is correct and reliable, comparing with the current system.
- Raw “ND” is not used in the criticality calculation. Now, to make the cross section library of the adopted calculation code is absolutely required process.
- In that sense, NJOY or the similar system is the key player if we consider the format of the ND.
 - Such processing system should read the new ND and they should be able to process all required data if ND is updated. It is enough for the user of the criticality calculation.

Requirement?

- **No clear requirement** to change the format of ND is found for end-uses of the ND if current calculation scheme is kept.
- The requirement seems to come from the view point of the data management method and efficiency for compilers of the ND.
- However for the future development of ND, it might be reasonable to discuss whether the current system is the best one or not etc.
 - Possibility of new calculation code scheme (without processing by NJOY to produce cross section library)? In that case, the new format should be discussed openly.

and request?

- When changing the format of the current ND,
 - Please *input all information* included in the current ND into the new file in order *not to loss* required data in future.
 - Please *release simultaneously* a revised (i.e. new) processing system for the new ND.
 - Comparison with the current system (JENDL-4/ENDF/B-7, and JEFF-3.2+NJOY) should be carried out, when the new ND and processing system are released.

Conclusion

- The nuclear data is the basis of the all of the safety evaluation related to the neutronics calculation.
- We need clear reason to change the format of the ND from the view point of the end-users.
- Please take care about you have many users in the world and the current criticality calculation regime seems to be reliable enough.
- Good luck!

Idea on new format?

- My question.
 - Why nuclear data should be supplied as the combination of the background cross section and the resonance parameter?

- From the view point of criticality calculation, if we have no need to take care about the data storage space of the computer, the point-wise data, which are now generated by the processing code, is one of the candidates of the new format for the end-users.
 - Usually, we do not check the resonance parameter etc.
 - We focus on the final products, k-eff. The information of the cross section is additional one for inter-comparison of the calculation results.