

WORKSHOP on NJOY-2005 and USER GROUP MEETING

Issy les Moulineaux, France 2 May 2005

Questions and Answer

Introduction

The workshop was chaired by Arjan Koning and was attended by 33 participants from 11 countries, representing 16 organisations.

In the following the main questions and corresponding answers exchanged during the discussion are recorded. The details of the presentation are provided via hyperlinks by accessing <http://www.nea.fr/html/dbprog/Njoy/njoy-issy-05.html> .

Q: When will NJOY-2005 and TRANSX-2005 be released?

A: These two code systems will be packaged in June 2005 and released to RSICC for further distribution. The NEA DB will also distribute them, once the co-operative arrangement with DOE is signed, which is expected to happen in the near future.

Q: How about interfacing NJOY with SAMMY (N. Larson), FITACS (F. Fröhner) and AWEFIT (M. Moxon)?

A: **NJOY is now able to do RRR processing in SAMMY style, i.e. that the codes have now converged when it comes to resonance treatment.** The FITACS and AWEFIT procedures can be included into TALYS (A. Koning), but a check should be carried out for verifying that they give the same results.

Q: Has the treatment of low inelastic levels been resolved?

A: It is included in NJOY-2005

Q: Will NJOY-99 be further maintained for some time?

A: NJOY-99 will be kept up-to-date. A new release containing approved amendments will be released shortly as a new frozen version to RSICC. This will include recently exchanged proposals (e.g. M. Mattes, A. Trkov, updates from Japan and others). This release will contain also updated output files corresponding to these changes. However, this NJOY-99 version will not contain all the new NJOY-2005 features.

Q: Is there a module for directly Doppler-broadening ACE files to produce a new library to a user specified temperature?

A: This is a separate program called DOPPLER and will be embedded with future releases of MCNP as a library maintenance tool. It uses the algorithms of BROADR. It works for cross sections without unresolved resonances (e.g. light materials and fission products). For the unresolved resonances energy region the interpolation in the probability tables is still required. Also for the thermal scattering data interpolation of tables is required.

It was pointed out that a procedure with similar features as DOPPLER was developed at the IAEA NDS (A. Trkov), called SIGACE, now generally available. It is recommended that the results of the two procedures are compared.

Q: Has the MATXS format changed in NJOY-2005?

A: No, it is the same as for NJOY-99. The ordering is by isotope. In fact for each isotope there is a separate file.

Q: What is the status of the new documentation?

A: It is almost complete. There is new text in the ACER section and the Appendices need to be revised. The rest has changed only little.

Q: What issues remain concerning the significant decimal digits?

A: Single precision limits decimal digits to 6. 7 digits is a hangover of the ENDF-6 format, now with ENDF-7 and the introduction of F format, 8-11 digits are possible also due to use of double precision. As concerns PURR, it generates ladders directly, so precision of energy is not an issue. Also CALENDF is used in single precision.

Q: Will ERRORR be updated to handle new evaluations (e.g. JENDL-3.3)?

A: Some further work is required and planned

Q: Will the DRAGR module be generally available?

A: It will be available under a under a LGPL license.