

Summary of the meeting held at the NEA to discuss Sigmabase

Present: Ali Nouri (NEA), Mark Kellett (NEA), Meinhart Lammer (IAEA), Ian Vickridge (Jussieu Uni.), Gabor Battistig (Budapest Uni.)

Aim: To discuss the future of Sigmabase and see whether the needs of its users could be fulfilled by it being incorporated into the NRDC network.

A brief summary of Sigmabase

Sigmabase is a database of experimental data from the Ion Beam Analysis community, which is available online at "<http://www.physics.isu.edu/sigmabase/>", a Web site currently hosted by Idaho State University, USA. A mirror site exists at "<http://www.mfa.kfki.hu/sigmabase/>" at the Research Institute for Technical Physics and Materials Science, Budapest, Hungary.

The collation of experimental data has been underway for a number of years and it is thought that most of the relevant data are currently included, however much of the data have been produced from digitizing figures in papers and so some concern is expressed at the accuracy of these data.

The data are stored in ascii text files, known as r33 format, which is relatively similar to the more complex EXFOR format. However this format is used by a number of codes that are used within this community, so to some extent must be maintained.

Summary of the discussions

The discussions focussed around two main points of view;

- 1) the hosting of the existing database at the NEA and associated centres, or
- 2) taking the existing data in the r33 format and producing E2FOR files for loading into the standard EXFOR database.

After discussion it was suggested that the best way forward for all concerned was if the r33 formatted data could be converted to the EXFOR format and loaded into the existing database, which is already hosted by the NRDCs. Ian Vickridge has previously been supplied with details of the EXFOR format and has agreed to write a small program to convert the r33 files into EXFOR files. These new EXFOR files will contain only a subset of the keywords from EXFOR that are required for the r33 data, however, this should still produce a "legal" EXFOR file. The NEA will liaise with Ian on this and undertake to test load converted files to check for consistency and correctness.

At this stage the question of the quality of the r33 files was discussed and it was felt that before the loading of the files was carried out, and in fact before the conversion of all was done, some checking and quality assurance for the data should be undertaken. A number of possibilities exist for this, but in the main it will require some kind of funding to be available. Both the NEA and the IAEA agreed to look at the possibility of supplying a small amount of funding for this purpose.

Conclusions

It was concluded that Ian Vickridge would write a small code to convert some of the existing r33 files and that the NEA would test load these into the EXFOR database to assess the compatibility. This would be completed by May 2000, so that the proposal to include such data into the EXFOR system could be discussed at the scheduled NRDC meeting. It should be noted that no decision on the inclusion of such data into the EXFOR system can be made by the NEA alone, but must be agreed upon by the members of the NRDC network, specifically; the NEA Databank, the Nuclear Data Section of the IAEA in Vienna, the National Nuclear Data Center at BNL in the USA and the Russian Nuclear Data Centre at Obninsk in Russia.

In order to allow the EXFOR files to be translated back to r33 format, Ian's code should be capable of accepting the nominal subset of EXFOR keywords required for the r33 file conversions. These reconstructed r33 files can then be used in the currently existing IBA codes.