

Joint Benchmark Committee, ANS summer meeting, Hollywood FL, Sunday, 11-1, June 9th, 2002,

Chair-RPD, Russ Mosteller
co-chair, MCD Barry Ganapol
co-chair, RPS Ham Hunter

attachments:

- 1.- attendees list
2. RPS ANS benchmark submission,
3. Benchmark Committee positions
- 4 Current chairs and long-term committee members
- Table 5. www Users Site sign in sheet

Meeting commences: 11: am, Chaired by Russ Mosteller
Minutes taken by H. T. Hunter
Accept Agenda for meeting

It was decided that the Vice Chair will act as secretary, or in his/her absence, the other available co-chair.

Old business:

establish MC chair for next year; MC Barry Ganapol
Replacement members for expired term:
RPSD, Nolan Hertel will continue for the next 3 years, to expire 2005.
MCD, Barry Ganapol will recruit replacement or recycle Ali Hagighat for new term.
RPD, Steve Baker will continue for the next 3 years, to expire 2005.

Discussion of precision of data reported and benchmark specifications:

Note Virginia Dean's submission of information at the ANS RENO Winter 01 meeting.
Discussion was presented on the co-review by HT Hunter, R. Sanchez, and D. McKnight on the use of 6 significant digits as a 'standard' reporting precision in all benchmarks.
Further discussion related concern over SI conversions from English based measurements. Committee finally accepted the reporting of actual numerical measurements with no changes in the number of significant digits. Any benchmark computational analysis would proceed using reported SI conversions in parenthesis. Conversions and factors would be reported with 6 digit precisions.

It was found to be equally important that the actual measurements be followed by reported errors in the original measurements and using the original number of significant digits. A note in the beginning of the benchmark would describe the use of SI conversions and other computational factors used in the benchmark analysis. Intermediate calculations would carry 6 digit precision and the final benchmark report using the rounded 5 digit precisions. This would maximize the convenience to the benchmarking analyst and minimize errors due to round off as a source of benchmarking analysis differences.

I prefer "uncertainties" to "errors", since that's really what we're dealing with.

New business:

Russ Mosteller/Jess Gehin submitted the first RP benchmark as a candidate for the JBC RP template and a accepted benchmark. The proposed JBC benchmark is based on the 1996 NEA NSC round robin comparison of computations for the **B&W Core XI loadings**. The original specifications will be modified slightly, to conform to the format (if agreeable) above.

Those benchmarks have nothing to do with the NEA. Instead, they were developed by the Ad Hoc Committee on Reactor Physics Benchmarks.

Note: Russ Mosteller prepared the specifications for the core portion of the measurements and Jess Gehin prepared the specifications for the assembly portion.

This comment can be omitted, unless you really think it needs to be there.

Ted Parish and his students had scanned in all submittals as single-page jpeg files. In addition, Ted had prepared a very detailed summary of the results in an Excel spreadsheet. Russ Mosteller left the spreadsheet unchanged but converted the jpeg files into PDF documents and added a PDF file containing the original benchmark specifications.

- 1) Vote on RP benchmark as accepted for storage and dissemination formats. Review by JBC (select 2 members) and report at next ANS Winter meeting, 2002.

I didn't appoint any reviewers. If you'd like, I can ask for volunteers from the RPD membership so that they can make a recommendation at our next meeting.

I've almost finished the revision and plan to distribute it, hopefully this week. I'll ask the three other RPD members of the JBC to review it and be ready to make a recommendation about its acceptability at the Washington ANS meeting. In addition, I'll ask all JBC members to review the format and be ready to discuss it at the Washing meeting.

- 2) Vote to accept ANS JBC RP benchmark at next ANS Winter 02 or ANS Summer 03 meetings

- 2) Ham will post the new information on the JBC/RSICC site, and will post JBC ANS RPD benchmark with format to be reviewed for acceptance.
- 3) Final benchmark documents will be redistributed via the NEA DB (Enrico Sartori) and RSICC (HT Hunter) as a no-fee 'free' tool package for public dissemination.

New Benchmark Suggestions

RPD

It was suggested to gather any relevant reactor physics experiments supporting PBMR, perhaps some GA experiments, and noted that any Prismatic fuel for high burnup was of interest again.

A working group for the Calvert Cliffs isotopics benchmark (it includes Steve, Bill Charlton, Dale Lancaster, John Scaglione, Pat O'Leary, and ~~me~~ Russ Mosteller, as well as a few others). The benchmark is using the history parameters of incore flux, boron, and temperature as variables to test lattice code performances by HELIOS and TRANSLAT. Steve Baker used TransLAT in his calculations. At present only the lattice codes TransLAT and an obsolete version of HELIOS are available, and the working group would **welcome participation by anyone who has access to other lattice codes and would be willing to test our benchmark specifications.**

RPSD

SINBAD 2002 will be released via RSICC as a no-fee (free) distribution from summer 2002.

6 new benchmarks in fission, fusion, and accelerator shielding with their analysis are to be made available in this new release.

Bill Hopkins suggested using the benchmarks for defining ANSI standards, ie as was done in the 1980's ANS 6 shielding, and perhaps the RPD component standard 19,

SQA, tech-25, would find the benchmarks used for safety code development and validation as a useful component to gather and promulgate to new users, new versions, and in comparison analysis.

MCD

It was suggested that the ANL-computational benchmarks be no-fee at RSICC. Ham Hunter agreed to gather this information, from NEA DB scanned reports. These would be no-fee released information on CD-ROM. See the RSICC site for more information. **email from Enrico Sartori: 11/08/2001 the different volumes [ANL Benchmark Book] are separated files. To divide them down to a document for each benchmark is feasible. However an analysis is required as to the supplements that often contain amendments / additions to previously published information. I have also the CSEWG ENDF 202 in electronic form with background text (OCR). It contains up to the last amendments (1991). That also may need splitting.

Richard Sanchez reports that computational work on boron coated fuels contained at least 10% errors. PBMR, MC expert M. Driscoll at MIT has need for computational benchmarks, perhaps from Framatome and future NERI projects. Specifically these would be critical experiments w/ >5w% UO2. Minature, 10E+6 particles, using stochastic techniques. More experiments on MOX, change mass of part. and boron content. Some particulate benchmark experiments were done in Fr. but unfortunately particulates, in Cadarache, were destroyed.

Meeting adjourned at 1: PM.

Minutes submitted for acceptance by HT Hunter....6/12/02

Table 5. Sign up for JBC interests from www site

first_name	last_name	company	city	state/province	postalcode	country	email
John	Alvis	Packaging	Tacoma	WA	98424-2633	USA	jalvis@pactec
Peter	Angelo	BWXT Y-1	Oak Ridge	TN	37831-8238	USA	angelopl@y12
NGUYEN	CUONG	nuclear res	Dalat	Lamdong	84	VIETNAM	reactor@hcm.
alina	dumitrescu	radiation h	bucharest	bucharest	76000	romania	alina_dumitres
Adlys	Gediminas	Kaunas Te	Kaunas	-	3031	Lithuania	Gediminas.Ad
Patrick	Griffin	Sandia Nat	Albuquerque	NM	87185-1146	USA	pjgriff@sandia
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A. C. (Skip	Kahler	Bechtel Be	West Mifflin	Pa	15122	United Stat	kahlerac@bet
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Tyobeka	Mzubanzi	E Pebble-Ber	State Colle	PA	16802	USA & Sou	bismark.tyobe
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milesi	sylvie	Transnucle	BAGNOLS	France	30204	France	smilesi @cara
soroush	tahmasebi	any???????	tehran	tehran	14736	Iran	soroushnet@y
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