

JBC Meeting Report from the Summer Reno ANS Meeting 2006

Call to Order

Chairman Richard Amato (Bechtel Bettis) called the meeting to order promptly at 11AM on June 4, 2006. The JBC membership is included as **Attachment A**. In attendance were the following JBC members and affiliate members:

R. Amato	B. Ganapol	G. Sjoden	P. Paul
F. Rahnema	P. Wilson	E. Satori	R. Mosteller
R. Sanchez	A. Prinja	R. Little	M. DeHart
B. Kirk	M. Raap	C. de Oliveira	

The previous meeting minutes of the November meeting in Washington DC were approved as written in the last (3rd) **JBC NEWSLETTER**.

Open Discussion Concerning the SINBAD Database and the Role of the JBC

As stated in the **JBC NEWSLETTER**, it was decided at the last JBC meeting that “The legitimacy of this [the SINBAD] database for JBC’s consideration should be discussed further”. E. Satori, who oversees the SINBAD compilation, initiated discussion by offering his vision on how the JBC could play a significant role with regard to this well- established shielding data base--a role which requires clarification as indicated at the last meeting. As stated by E. Satori, the SINBAD effort is truly an international one sponsored by the OECD/NEA and ORNL/RSICC with its primary focus on experimental shielding benchmarks--in particular reactor shielding, pressure vessel dosimetry, fusion blanket neutronics and accelerator shielding. It is an experimentally based database only. Additional areas of coverage will be reactor physics and aviation route and medical dose experiments. The database contains more than 70 experiments with each providing information on the experimental setup, material composition, detector measurements and an error analysis. Through an in-house review process, each experiment has been reviewed for accuracy by at least two experts in the radiation field before acceptance. The main point of E. Satori’s opening remarks was that we currently are experiencing a time of limited resources, and efforts, such as the ANS/JBC and the NEA/Data

Bank, should pool their resources for the maximum benefit to the nuclear community. Currently, the JBC is not a part of any other benchmarking body and maybe it is now time to consider combining with another organization in some capacity.

The Chair, R. Amato, interpreted this statement as one relating to the “role of the JBC in the greater benchmarking community” and asked the assembled body if they would like to vote on the role of the JBC. He then solicited recommendations. At this moment, R. Mosteller addressed the gathering concerning his thoughts on the matter. R. Mosteller strongly opposed any association with an outside organization as the JBC was originally envisioned as creating its own benchmark approval/archival process. However, he also expressed his frustration concerning the difficulty of encouraging JBC member participation using the example of lack of a quorum at any JBC meeting since its inception--making voting

question. R. Mosteller then explained the JBC structure, which requires a simple quorum of the 12 voting members (4 from each member division). F.

most in attendance

B. Ganapol sees one role of the committee to be a clearinghouse of ANS benchmarking activity and to be an oracle to the ANS providing this information. R. Sanchez then asked if we have a website to help in this effort. B. Kirk indicated that the RSICC website would be happy to host a JBC site with appropriate links to our archival benchmark library. This was the case in the past.

On a final polling, the general consensus of those present was that our role was to generate and approve benchmarks. If formal action were requested by an outside body, we would listen and recommend.

News from the Member Divisions

MCD: Report by B. Ganapol

1) New M&C/JBC Member

Simone Santandrea, a research Engineer at CEA Saclay/SERMA has graciously accepted membership on the JBC. He will replace Michael Smith and will bring a strong numerical transport flavor to the JBC, which we had hoped Michael would provide.

2) ADS Benchmark

The ADS benchmark is still an active project about which Piero Ravetto will report on at the next meeting. This activity could be a significant one for the JBC.

3) Azmy Benchmark

There is a new benchmark proposed by Yosry Azmy, which is actually over 300 benchmarks. The benchmark is proposed as an OECD activity and participants will convene at a special meeting in Albuquerque to discuss this rather comprehensive initiative.

The Tiel Benchmark has been submitted informally to several JBC members for review and is now ready for a vote of approval by the JBC members. It was requested by G. Sjoden that a table of source normalizations and cross sections be provided to better guide the benchmark user. B. Ganapol is planning a special session at M&C/SNA'07 to demonstrate possible uses of the proposed benchmark. Hopefully, by that time, it will be an approved benchmark.

RPD: Reported By R. Mosteller

1) Proposed Doppler Benchmark

At the last JBC meeting R. Mosteller proposed a Doppler benchmark to be approved at this meeting, but since there is no quorum this is not possible. Regardless, R. Mosteller will host a special session on this benchmark at M&C/SNA'07 and, at least for the time being, will withdraw the benchmark from consideration by the JBC.

RP&S Reported by R. Amato

1) CSEWG

No major activity to report concerning CSEWG; however, ENDF7 will be released in July or Aug with major changes to be expected. It would be appropriate to have a set of benchmarks in place that could investigate the extent of the expected changes.

2) SINBAD Update

E. Satori handed out a review of the recent additions to the SINBAD database. He indicated the addition of 17 reactor physics experiments available on CD amounting to 400 pages. All reactor types are considered with partial funding coming from Japan and US DoE. These will be valuable benchmarks for GEN IV.

New Benchmarking Efforts

The Medical Physics Working Group

B. Kirk was on hand to represent the newly formed Medical Physics Working Group and to indicate their interest in establishing a connection with the JBC. Several radiation benchmark descriptions have recently

[\[http://cmpwg.ans.org/index.html\]](http://cmpwg.ans.org/index.html).

The radiation benchmarks cover brachytherapy, external beam therapy and proton therapy. In future, working group members will be encouraged to submit benchmarks to the JBC. A first meeting of the working group was successfully held at ORNL recently with a second meeting planned in the near future at the University of Florida.

Breaking Benchmark News

1. R. Mosteller's Doppler benchmark now has 45 solutions from 16 different organizations in 8 countries.
2. The TIEL semi-analytical Benchmark has been approved by the JBC membership.

A Note from the Presiding Chair

As presiding JBC Chair, I (R. Amato) assumed the lead responsibility for coordinating the review and vote on acceptance of the TIEL as a qualified analytical benchmark [which I am happy to say was approved]. I also

express deep appreciation to the many attendees for their expertise, constructive comments and professionalism expressed throughout the [Reno] meeting. The subjects covered demonstrate the JBC's importance to the nuclear community in helping expand the benchmark database needed for our divisions. This importance will continue to grow in parallel with the growth in computational power.