

BERAC Teleconference Meeting Minutes
September 27, 2012, 11:00 am -1:00 pm EDT

In attendance:

Gary Stacey, Dennis Baldocchi, Janet Braam, James Ehleringer, Andrzej Joachimiak, Ruby Leung, Joyce Penner, Dave Randall, Phil Robertson, Jacqueline Shanks, Gus Shaver, Jim Tiedje, Judy Wall, Minghua Zhang, Huimin Zhao; David Thomassen, DFO; Sharlene Weatherwax, Associate Director, BER

Not able to attend:

Judith Curry, Susan Hubbard, Jay Mace, Greg Petsko, Gary Sayler, Martha Schlicher, Hank Shugart, Warren Washington, Ray Wildung

General comments:

- Much more exciting and integrated document.
- (Lost about 5 minutes of notes on initial discussion due to computer shut down.)
- When you go across scales knowing how much you need to go to different scales can be emphasized when talking about multiscale frameworks and tools. Emergent properties?
- What you need to know at each scale is an important integrator. Much more pleased with this version. Too strong to say that there is no motivation for JGI-EMSL collaboration. Haven't these all failed? Try to make it less negative.
- Try to do a better job to work the user facilities in more/better.
- Too early to think about implementation? Called for workshops to look at many of the detailed issues so not really called out in the workshop. These have been very effective in the past for DOE/BER.
- Workshop #4 could help in the design of this laboratory because nothing like this exists on a large scale. People are trying to do it but not at this scale.

Section by section discussion:

- Integrated field laboratories. Don't understand "Google life" on first figure. Directly from initial report.
- Probably the best developed of the areas in the report.
- Pg 9 bottom – ARM discussion. "Reconfiguration" used. More than just shuffling pieces around. "An enhancement..." or "an enhanced ARM..." would be better. Avoiding the work expansion.
- "Phenomics" really means phenotype. NSF phenomics report reference lost in this version. Needs to be reinserted. **Andrzej Joachimiak will send edits.**
- Ameriflux bullets need to be broadened to water and energy exchange. **Dennis Baldocci will send edits.**
- Good job of distinguishing among the different components of the integrated field laboratories. Taken care of appropriately now.

- Pg 10 – why no reference to some of the existing “incubator” efforts, e.g., instrument development at existing user facilities. Getting instrument developers together with the field deployers important. Jim E will suggest words.
- Biosystems Frontier Facility - Not as well developed as section above. Thoughts on how to improve? **Andrzej Joachimiak will send comments**. Should expand list of tools and facilities that are actually supported and state of art at DOE. How to make the virtual facility more productive? Likely topic for discussion at workshop #4. Big challenge is how we go across all these different scales.
- How do we integrate this information in a modeling context? Lots of discussion in Knowledgebase about this. Element of proposed workshop too.
- CASK section.
- Bullet on simulation in climate modeling – better to constrain parameters into the model than to assimilate data into climate models. Not useful on longer time scales.
- Assimilation makes sense on some contexts. Not as clear how it fits into climate models unless doing forecasting to test them. Pg 17 bottom – complexity itself is not the goal bullet on climate modeling. Already says greater fidelity. Perhaps greater realism? Intended meaning is fine but complexity not a goal in itself. “Greater completeness and fidelity.”
- Modeling potential emerging properties. Don’t talk about these hardly at all in the document. This should be a goal of the facility so needs to be called out more directly. E.G., what properties that come out of plant work should be fed into climate models? **Andrzej Joachimiak/Jacqueline Shanks to send comments**
- Recommendations / Actionable items
- Item 2. Inconsistencies. One or many workshops. Should be more than one. Heading and in text.
- As part of Subcommittee thought that some discussion was stale. This version has been sent to ~20 individuals from the National Labs plus a few others. Comments and specific edits are coming in. A few edits may be making significant changes so these will be reviewed by the Subcommittee prior to insertion. All are encouraged to reach out to other communities. Remember this is a preapproved version.
- No comments from BER.
- Any major concerns at this point? None were identified.

Meeting adjourned 11:56 am EDT.