From: Baylor, Larry R. <baylorlr@ornl.gov>
Date: Fri, Dec 16, 2011 at 2:15 PM
Subject: FW: Reminder - Request for Community input on FESAC Int Collaborations Charge
To: "Dale Meade (dmeade@pppl.gov)" <dmeade@pppl.gov>

Hi Dale,

Nermin's reminder made me think a little about my experiences with international collaborations and I wanted to just share my thoughts on what works and what doesn't.

I did my PhD research as part of a successful US collaboration with JET on pellet fueling, more than 20 years ago now. What made that successful, besides my involvement ;-) , was a strong interest on both sides in the subject and people there on the ground from both parties doing the installation, experimental operation and physics analysis. We brought a proven pellet injection system that was well tailored to JET's needs and people (from multiple institutions) to participate in both the hardware and physics. This collaboration resulted in the discovery of reversed shear transport barrier formation and a wealth of information on pellet fueling of L-mode and H-mode plasmas.

Other collaborations that I have seen and participated in since then, where there was not a significant hardware component, such as scientists making short visits to participate in some experiments, were not always as productive in my opinion. I think that when collaborators have a vested interest in spending the time on site making something work, it is more likely to result in useful scientific discoveries that both parties can benefit from.

Some areas where I see opportunities to collaborate with this kind of success oriented mode are in the areas of ELM mitigation and disruption mitigation, both of which are of course very important for ITER and have a strong US involvement in the hardware production for ITER. I hate to sound overly parochial since I am involved in both of these systems, but I really think it would benefit the US to field prototypes of our ITER designs on other machines around the world (JET, W7X, JT-60SA, EAST, KSTAR, etc.) in order to study these topics beyond what we can do on our own domestic machines. It also would provide some much needed realistic testing of the systems for ITER to help maximize the probability of success on ITER.

Let me know if I can be of any help in your future efforts on collaborations.

Best regards and Happy Holidays,

Larry

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