**LARP Crab Cavity Cryostat Integration and Planning**

Fermilab – May 30, 2013

**Objectives:**

- define/understand the scope of the SBIR

- a plan to integrate the current designs into a final design for the SPS test into a cryostat

- an overall schedule on how to get to the SPS test

- (on Friday for the LARP group) a revised budget to get there, possibly identifying which contributions we can include from outside LARP (UK. CERN, GARD, SBIRs...).

**Questions:**

A - Scope of work:

1. Can/shell we make the Niowave cryostat for the SBIR and the SPS test cryostat the same device? Can/shell LARP have an additional effort for a separate cryostat?

Issues:  we need to test dressed cavities (cavity with helium vessel, tuner, and all RF couplers) as expediently as possible.  This seems to be the intent and may be the best goal of the Niowave SBIR.

Can this dressed cavity test cryostat also serve to hold two cavities for the SPS test?  Or should SPS test cryostat design proceed in parallel?

What role can STFC Daresbury plan in cryostat design? -- they have made a very good start.  Are they interested/available/funded to contribute?

1. How can we best accommodate all cavity options, given the desire to carry both US designs?

What cavity or cavities go into the Niowave SBIR cryostat?  Can we accommodate both the DQW and RFD cavities in the design of a single vacuum vessel both for dressed cavity tests (Niowave cryostat) and SPS tests?

How far can we carry two designs to the SPS test? If not, when do we chose the cavity to be integrated in the SPS cryostat? Is it either one or the other design, or can we combine features?

B -  Schedule.

1. Short term

what do we plan for the next year of work? Likely cavity progress, a realistic schedule for tests of the various cavity types, tuner and coupler development, cryostat design, and SPS test preparations.

1. Overall

What is the plan to the SPS test? Do we have time to deliver by the due date? What is the due date?

C - Resources

Resource (personnel) requirements (who will do what)?

How much shell we rely on contributions from outside LARP?