



April 15, 2019

Scott Larsen,
R&D Program Manager,
NYSERDA,
17 Columbia Circle
Albany, NY 12203-6399

Dear Mr. Larsen:

This letter summarizes the activities performed at BNL and at Cornell University in the period March 1 through 31, 2019, in support of the Cornell BNL ERL Test Accelerator project, CBETA.

SIGNIFICANT EVENTS AND ISSUES

Equipment Protection System. A review of the Equipment Protection System was held on March 1, following the advice that was given to the Project at the last meeting of the CBETA Advisory Committee. For more information see

https://www.classe.cornell.edu/CBETA_PM/notes/CBETA038.pdf

Site visit. Scott Larsen and Mark Sperry from NYSERDA were accompanied by Mark Driscoll from SUNY-ESF on a site visit to CBETA at Cornell on March 12. Present from the CBETA side were Hoffstaetter, Manning, Michnoff, Patterson, Peggs, Roser, Smolenski and Trbojevic. Several other Cornell physicists and engineers participated in many conversations in the tour to the LOE floor.

The tour and the following round table discussion went more than an hour beyond the scheduled time, thanks to the high level of interest by all parties, and the large number of ideas that were brainstormed in the discussion session. One topic of discussion was the joint BNL-Cornell optimization of a broader public relations event, in a few months time when there has been single turn success with CBETA beam.

Task 8. Technical Milestone 8 in the CBETA contract between BNL and NYSERDA – “Final Assembly and Pre-Beam Commissioning” – was met on March 13.

Four deliverables were associated with milestone 8:

- Ship pre-aligned girders to Cornell University.
- Assemble, install and align the girders in the LOE hall, along with other components including the vacuum system, beam instrumentation, shielding, control system and safety system.

- Complete the final assembly for pre-beam commissioning through system integration.
- Carry out detailed system checks to ensure accurate functioning of the system and have the system pre-beam commissioning ready.

Task 9. The initial one-pass configuration that was completed under Task 8 enables beam operations under Task 9 – “Single pass beam energy scan” – to begin. Some installation activities are continuing in parallel with beam operations, so that each section of CBETA is fully ready for beam as it arrives, and also to prepare for beam operations in 2-, 3-, and 4-pass configurations.


ACTIVITY CALENDAR

March 1 Equipment Protection System review
 March 12 NYSERDA site visit to CBETA
 March 13 Milestone 8 achieved
 April 22 Oversight Board meeting
 May 9-10 Advisory Committee technical review

Table 1: Technical milestones in the NYSERDA contract. **Boldface** milestones are go/no-go.

#	Technical milestone	Contract	Actual
	NYSERDA funding start date		31-Oct-16
1	Engineering design documentation complete	31-Jan-17	31-Jan-17
2	Prototype girder assembled	30-Apr-17	30-Apr-17
3	Magnet production approved	30-Jun-17	23-Jun-17
4	Beam through Main Linac Cryomodule	31-Aug-17	16-Jun-17
5	First production hybrid magnet tested	31-Dec-17	21-Dec-17
6	Fractional Arc Test: beam through MLC & girder	30-Apr-18	20-Apr-18
7	Girder production run complete	30-Nov-18	21-Nov-18
8	Final assembly & pre-beam commissioning complete	28-Feb-19	13-Mar-19
9	Single pass beam energy scan	30-Jun-19	
10	Single pass beam with energy recovery	31-Oct-19	
11	Four pass beam with energy recovery (low current)	31-Dec-19	
12	Project complete	30-Apr-20	

Kind regards,



Karl Smolenski

Cc: H. Biedenkapp, D. Hatton, G. Hoffstaetter, E. Hunt, K. Jackson, S. McKeon, J. Mehlinger, R. Michnoff, J. Misewich, B. Mueller, S. Pankowski, R. Patterson, T. Roser, K. Smolenski, J. Thom, M. Torpey, D. Trbojevic, R. Tribble.