

9-cell cavity coordination

CM Ginsburg

8 Mar. 2010

Production Cavities in progress

- TB9ACC013 (dressed)
 - At HTS. To be warmed up in the middle of this week.
- TB9AES009 (dressed)
 - Prepared for HTS; HTS installation 15.Mar.
- ACCEL8 (dressed)
 - To be HPR'd and prepared for HTS this week at FNAL/ANL facility
- TB9AES008 (dressed)
 - Will be next
- TB9AES010 (dressed)
 - Will be next after TB9AES008
- TB9ACC016 (in transit)
 - was sent from JLab to FNAL 4.Mar. At O'Hare as of 5.Mar. (D.B. Schenker USA Tracking # 53472926). It's going straight to MP9 for dressing. Ti ring welding at Sciaky is planned for 18.Mar.
- TB9AES007 (@JLab)
 - did not initially pass the leak check because of a bad seal (not related to HOM weld void). It will be re-HPR'd and re-assembled with estimated vertical test Mon.15.Mar.
- TB9RI018 (@JLab)
 - is at JLab for the full process/test cycle. Bulk EP is complete. 800C furnace treatment starts today. Light EP and vertical test prep are next, with test date estimated the week of 15.Mar.
 - (continued...)

Production Cavities (cont.)

- TB9RI024*
 - had optical inspection and was sent to JLab for 800C furnace treatment. It is in the furnace over the weekend, cooling, and will be removed today and sent back to FNAL for light-EP and VTS prep via overnight shipping to squeeze it into the FNAL/ANL facility queue before the maintenance period.
- TB9RI026
 - completed optical inspection and was sent to JLab. It arrived Fri.Mar.5 for 800C furnace treatment expected around the middle of next week (once TB9RI018 is out). Then, it will be returned to FNAL asap for light-EP and VTS prep, presumably immediately after the FNAL/ANL facility maintenance..
- TB9RI023* (with the weld void at the transition ring)
 - RI will grind out the void so it will be large enough to accept a NbTi plug and will then re-weld. The repair is expected to be complete within 2 weeks.
- TB9RI019
 - Headed to JLab shortly; JLab will inspect irises and equators with their new KEK/Kyoto system upon arrival
- TB9RI029*
 - In optical inspection
- TB9RI020, TB9RI021* are done with incoming inspection
- Incoming inspection started on TB9RI022*
- To be inspected: TB9RI025*, TB9RI027, TB9RI028
- New cavities
 - The first AES cavities are currently expected to arrive by the end of March. The first two Niowave-Roark cavities are currently expected to be completed by end March.

R&D Cavities in progress

- AES003 (spot polished at KEK)
 - Next: optical inspection (possible brown stains), field flatness measurement and possibly tuning
 - Held in reserve as CM2 backup cavity until it can be replaced by a better cavity
- ACCEL6 and ACCEL7
 - Held in reserve as CM2 backup cavities until they can be replaced by better cavities
- TB9ACC014 (after dented cell was tuned to lower field)
 - Vertical test 15.Feb.: 29 MV/m at 2K; some FE observed. Q0 @max grad=1.4E10
 - retest with second sound and different thermometry configuration
- TB9ACC010, ACCEL9, TB9AES005, TB9ACC015 (@ Cornell)
 - are in various stages of tumbling and VEP. Being used for VEP commissioning and performance improvement.
- TS7MSU001 & TS7MSU002 (visual inspection and tuning only, then return)
 - Visual inspection complete, field flatness measurement complete, tuning in progress

9-cell Cavities - By Facility

NB: when in doubt, production cavities always have priority

- Incoming inspection
 - New RI cavities, alternating not-EP'd and EP'd
- Tuning/field flatness measurement
 - 2 MSU 7-cell $\beta=0.8$ cavities, AES003 (after optical inspection), TB9RI022* (when other incoming inspections complete); next will be TB9RI025*, TB9RI027, TB9RI028 (order uncertain)
- Optical Inspection
 - TB9RI026 last week, TB9RI029* currently, next: AES003, up to 3 additional production cavities available [TB9RI020, TB9RI021*, TB9RI022*]
- FNAL/ANL
 - (dressed – for HTS prep) ACCEL8, TB9AES008, TB9AES010
 - (bare – for VTS prep) TB9RI024* light EP+VTS prep (after JLab 800C HT); TB9RI026 light EP+VTS prep (after JLab 800C HT); more light EPs to come down pipeline [TB9RI029*, TB9RI021*, TB9RI022*, TB9RI025*, TB9RI023*]; also several heavy EPs on NR and AES cavities
 - Weighing device to be procured
- VTS
 - Second sound system to be completed
 - TB9ACC014 (with second sound and modified thermometry), TB9RI024* (after JLab visit and light EP); same list as FNAL/ANL (bare) above
- HTS
 - TB9ACC013 warm up mid-week, TB9AES009 (installation March 15; 3 weeks duration), ACCEL8 (test duration: 2 weeks proposed), TB9AES008 (test duration: 2 weeks proposed), TB9AES010 (test duration: 2 weeks)
- MP9
 - TB9ACC013 (dressed) remove cold coupler in cleanroom and inspect, TB9AES009 (dressed) to be delivered to HTS for installation 15.Mar., HTS prep follows for ACCEL8 (dressed), TB9AES008 (dressed), TB9AES010 (dressed); TB9ACC016 is next for dressing