

# **Update on S0 Work in the Americas Region**

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- **A11 first test after first complete S0 processing**
  - Gradient exceeded ILC vertical test specification
  - Q0 did not
  - Low-field Q0 is lower than usual
  - Further testing is under way for better understanding.
- **J2 (one of the two new JLab-built fine-grain 9-cell cavities)**
  - RF surface was inspected with JLab LDM inspection system
  - Bulk EP completed
  - Furnace heat treatment completed: 600 C for 10 hours
- **Surface re-melting**
  - Experiments started to explore the EBW parameters for niobium remelting, a potential technique for removal of gradient-limiting defects in a real cavity
- **Accel cavities A13 and A14 arrived at JLab**
- **Assembling Accel cavity A12 for upcoming FNAL-VTS test**
  - Good cavity: previously reached ~36 MV/m in JLab vertical test



- **Electro-polishing of AES single-cell cavity TE1AES003 at Argonne**
  - Optimize and qualify EP system with single-cell cavity before trying another nine-cell cavity
  - This particular cavity was BCPd and tested to >25 MV/m at Cornell late last year
  - Trouble with Fermilab-A0 HPR pump delayed the test preparation for FNAL-VTS
- **Installation of high-pressure rinsing system and related hardware ongoing at Argonne**
  - HPR instrumentation to be commissioned in next four weeks
  - Cavity moves vertically, wand rotates
  - Commission with a cavity Fall'08
  - Cleanroom class 10, 100, 1000 in progress
  - Ultrasonic (US) rinse tank for anteroom in progress
  - Cavity vacuum system in progress
  - A lot of fixtures remain to be completed
- **Accel cavity A6 was tested with variable input coupler and active cavity vacuum pumping last week**
  - Performance degraded from 39 MV/m to 18 MV/m in pi-mode
  - Quench with no FE observed
  - Some FE in 8pi/9 mode

