Single cell coordination

Single Cell Cavity Activity Outline

1. ANL EP optimization (TE1AES005)
2. R&D cavities
   - A. Tumble, 2 cavities (TE1ACC004, NR-6, TE1CAT001, TE1CAT002)
   - B. Laser re-melting, 2 cavities (TE1ACC003)
   - C. CMP process, 1-2 cavities
   - D. ECS investigation, 2 cavities (TE1ACC005, TE1ACC006)
   - E. manufacturing optimization, 2 cavities
   - F. Atomic Layer Deposition (ALD) cavities
   - G. Traveling wave cavity, 2 cavities (TW1AES001, TW1AES002)
3. Vendor qualification
   - RRCAT Collaboration, 2 cavities (TE1CAT001, TE1CAT002)
   - ABLE EP 2 cavities (NR-4)
4. Infrastructure support
   - Furnace verification, 1 cavity. (completed)
   - Diode T-map and second sound development 1 cavity (TE1ACC001)
   - ANL HPR water verification 1 cavity (TE1ACC001)
5. Basic R&D
   - A. EP cavity Q-slope studies
   - B. General Q-slope studies (TE1AES002)

Single cell list

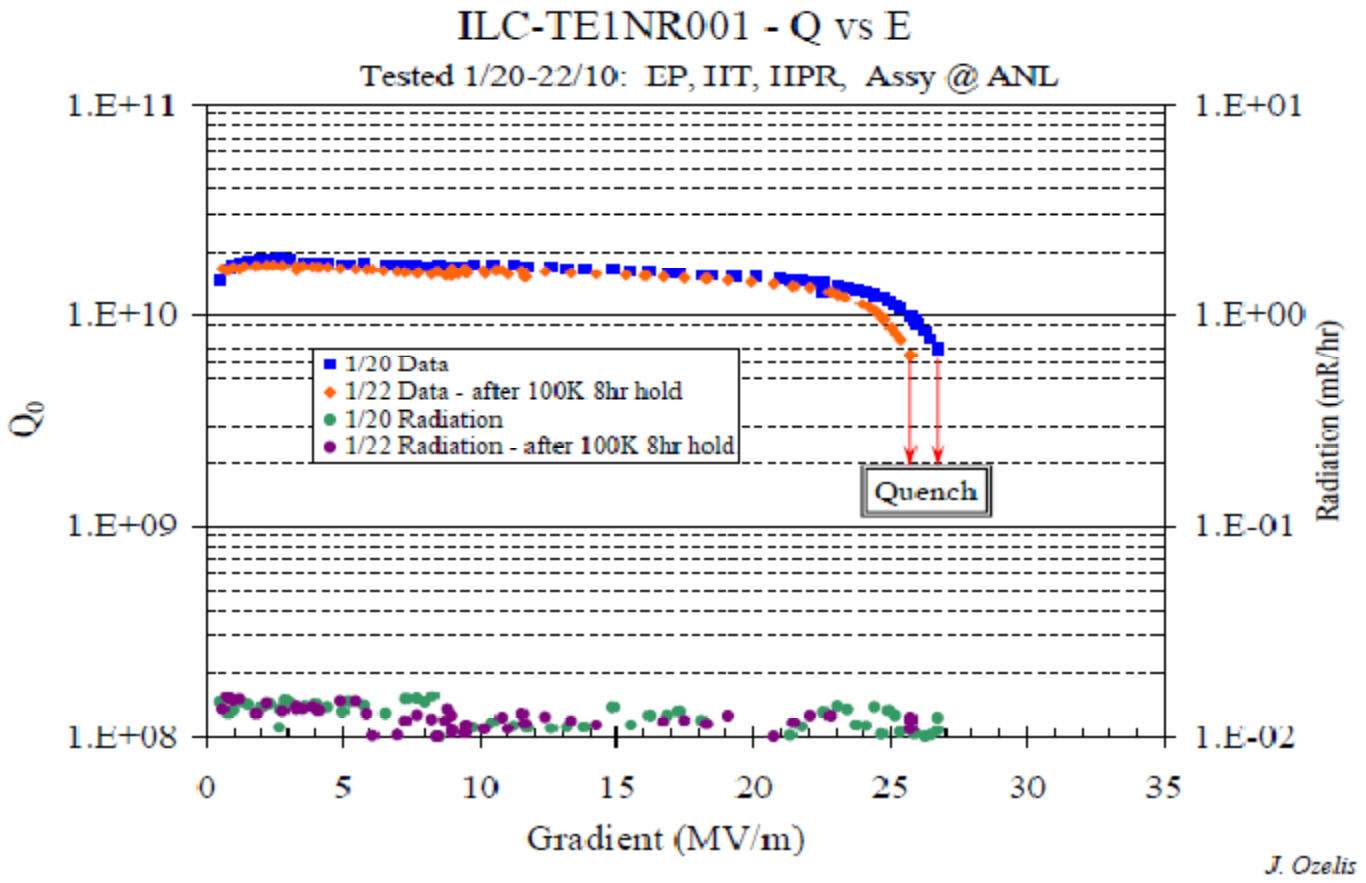
Number	Current location	Main purpose	Latest Activity	Current status	Notes
TE1AES004	ANL	Equator quenching, T-map		In queue for HPR/assy.	
TE1AES005	ICB	CMP, EP, ABLE		To be HF rinsed	
TE1ACC001	ICB				
TE1ACC002	CABOT	CMP		RF test done, to be polished at CABOT	
TE1ACC003	A0	laser remelting	RF test	A0 2nd sound, surface molding	
TE1ACC004	ICB	Tumbling	Inspected/replicated	To ABLE EP	
TE1ACC005	ICB	Eddy current scanning	Molding	Optical inspection and one final EP (40micon)	
TE1ACC006	ICB	Eddy current scanning	Molding	To be progressive EP	
NR-1	ANL	ANL RF commissioning	RF tested		
NR-4	ABLE	ABLE EP	RF tested	One more RF test for Q-disease study	
NR-5	FNAL/ICB	E-beam remelting on Pit		inspected, to be processed	
NR-6	FNAL/ICB	Tumble	Tumble polishing	In queue for EP	
TE1PAV001	PAVAC			three inside weld	This wk
TE1PAV002	PAVAC				
TE1PAV003	PAVAC				
TE1PAV004	PAVAC			Three normal weld	
TE1PAV005	PAVAC				
TE1PAV006	PAVAC				
TE1CAT001	ICB	RRCAT collaboration	Tumble polishing	In queue for EP	
TE1CAT002	ICB	RRCAT collaboration	RF test	Visual inspection	
TW1AES001	ICB	Traveling wave prototype		Cavity inspection, Tooling design for BCP	
TW1AES002	IB1	Traveling wave prototype		Cavity Inspection	

For two weeks

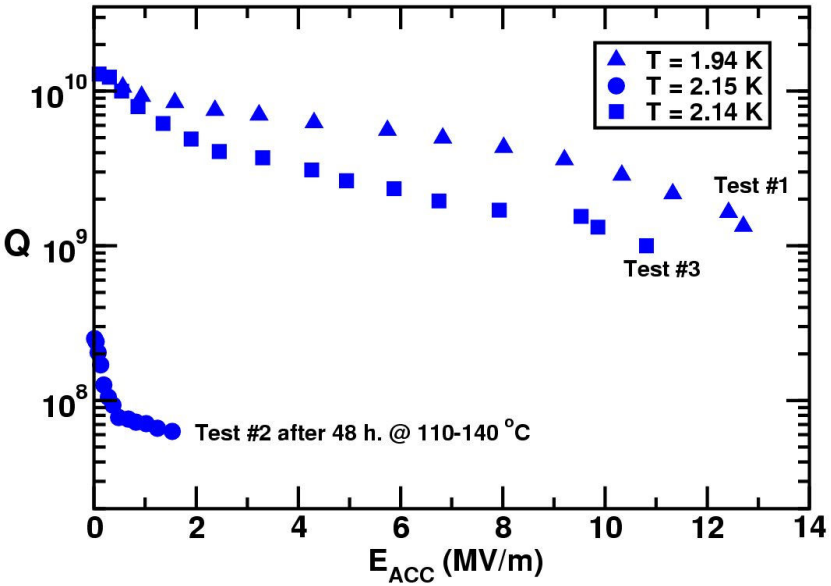
- TE1ACC003 (Laser)
  - Create a low field quench pit, test before & after laser re-melting.
- TE1ACC005&006 (ECS)
  - Replica done, brief inspection, then in queue for EP (ANL)
- TW1AES001&002 (traveling wave)
  - TW2 scheduled for RF test(IB1)
  - TW1 optical inspection
- TE1CAT001/NR-6 (Tumble Polishing)
  - In queue for 40 µm EP, H-bake, 20 µm EP, RF test
- TE1CAT002 (RRCAT collaboration)
  - Tumble polishing
- TE1AES004 (basic SRF)
  - in queue for HPR/Assy. after shutdown (ANL)
- NR-4 (ABLE electropolishing)

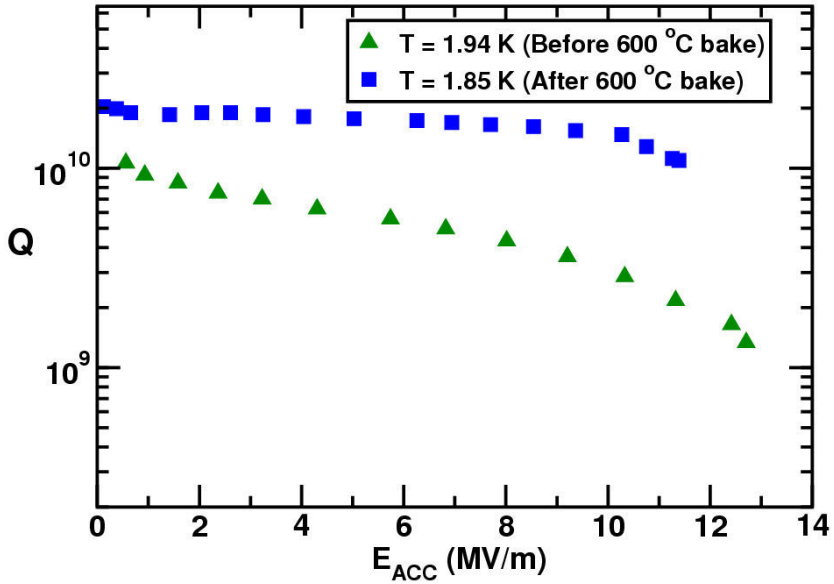
ANL furnace

Cavity performance



ANL spoke resonator example





Hydrogen bake out in that furnace improved the cavity Q