

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 (TE1ACC002)
 - 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), 3 TE1PAVxxx cavities are being CMM insp.
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)
 - X-ray at NorthStar (TE1ACC004)
5. Basic R&D
 - A. EP cavity Q-slope studies
 - B. General Q-slope studies (TE1AES002)
 - C. Cut-out study (TE1AES004)

Single cell list

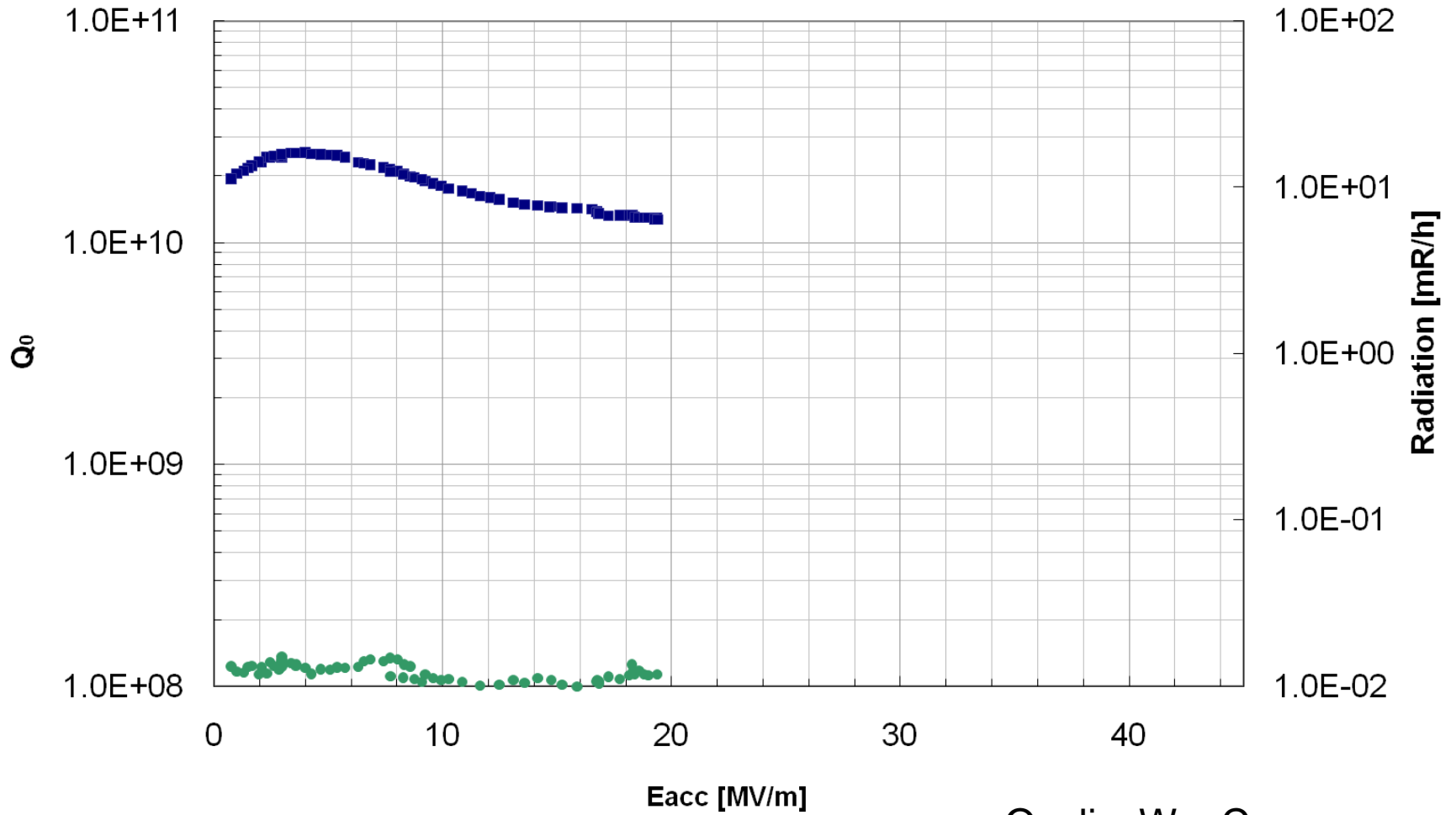
Number	Current location	Main purpose	Latest Activity	Current status	Notes
TE1AES004	A0	Equator quenching, T-map	HPR clean assembly	In queue for RF test	
TE1AES005	ICB	CMP, EP, ABLE		To be HF rinsed	
TE1ACC001	ICB				
TE1ACC002	CABOT	CMP		RF test done, to be polished at CABOT	
TE1ACC003	ANL	laser remelting	Molding extraction	In queue for HPR	
TE1ACC004	IB4	Tumbling	Inspected/replicated	Tumble media verification for 9-cell	
TE1ACC005	ICB	Eddy current scanning	Molding	Optical inspected and one final EP (40micon)	
TE1ACC006	ICB	Eddy current scanning	Molding	To receive progressive EP	
NR-1	ANL	ANL RF commissioning	RF tested		
NR-4	IB1	ABLE EP	120 C baking	In queue for RF test	
NR-5	FNAL/ICB	E-beam remelting on Pit		inspected, to be processed	
NR-6	IB1	Tumble	RF test done	In queue for RF test (100K 8h)	
TE1PAV001	PAVAC		Incoming inspection	three inside weld	This wk
TE1PAV002	PAVAC		Incoming inspection		
TE1PAV003	PAVAC		Incoming inspection		
TE1PAV004	PAVAC			Three normal weld	
TE1PAV005	PAVAC				
TE1PAV006	PAVAC				
TE1CAT001	IB1	RRCAT collaboration	RF test done	In queue for RF test (100K 8h)	
TE1CAT002	IB4	RRCAT collaboration	Tumble polishing	In queue for EP	
TW1AES001	MDTL	Traveling wave prototype	RF test		
TW1AES002	IB1	Traveling wave prototype	RF test	RF test with more T-map, and NbTi flanges	

For next two weeks

- TE1ACC003 (Laser)
 - HPR to remove cracked molding material residual
- TE1ACC005&006 (ECS)
 - Replica done, in queue for EP (ANL)
- TW1AES001&002 (traveling wave)
 - TW2 RF test done (IB1), NbTi flanges in progress
- TE1CAT001/NR-6 (Tumble Polishing)
 - RF test done, in queue for Q-disease test
- TE1CAT002 (RRCAT collaboration)
 - Tumble polishing, in queue for EP
- TE1AES004 (basic SRF)
 - RF test done at A0 with active pumping, in queue for IB1 test (Q verifi.)
- NR-4 (ABLE electropolishing)
 - in queue for RF test and H bakeout
- TE1PAVxxx incoming inspection and optical insp.

TE1CAT001 - Q vs E

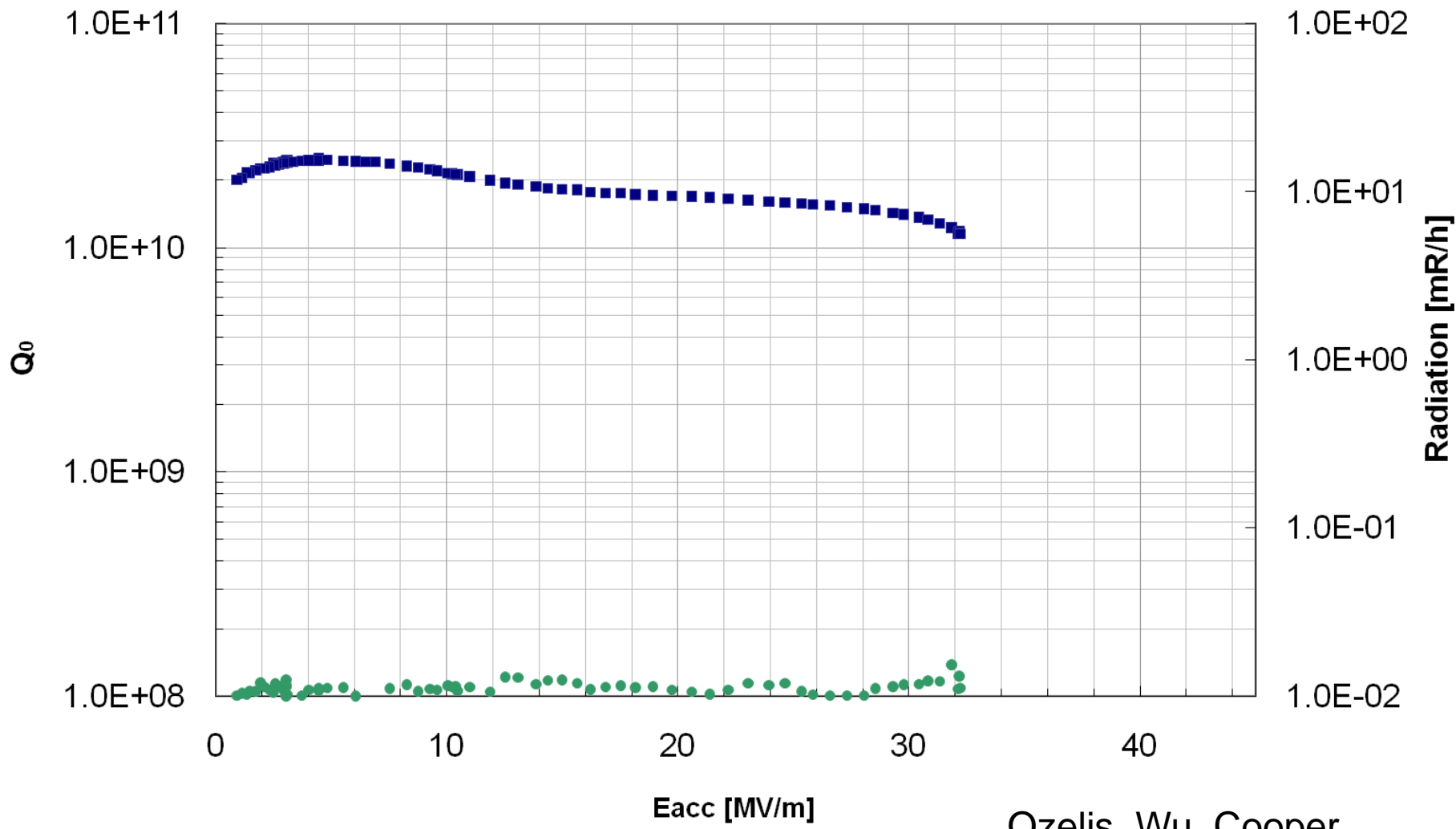
Test on 5/12/2010



Ozelis, Wu, Cooper

NR-6 - Q vs E

Test on 5/12/2010



Ozelis, Wu, Cooper

Fermilab 1-cell Statistics

- Quench
- Field emission
- Other

1/4/2009
ANL/FNAL facility
operation starts

Vacuum valve
poor operation

FE after
baking

Vacuum valve
malfunctioning

Today 5/12/2010

