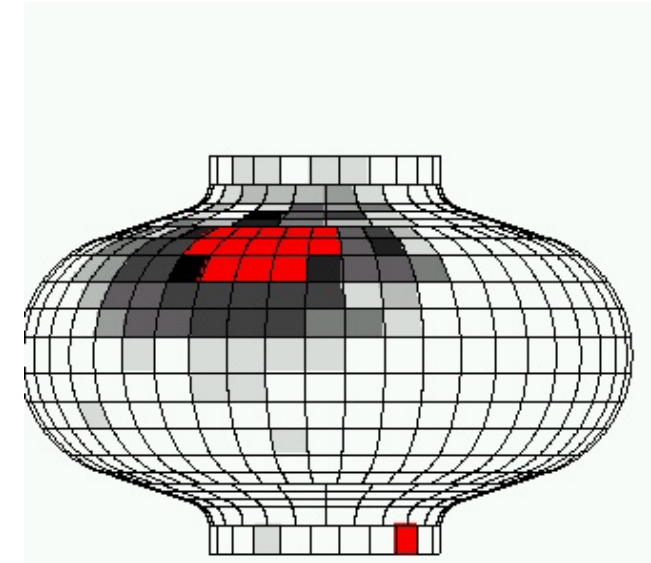
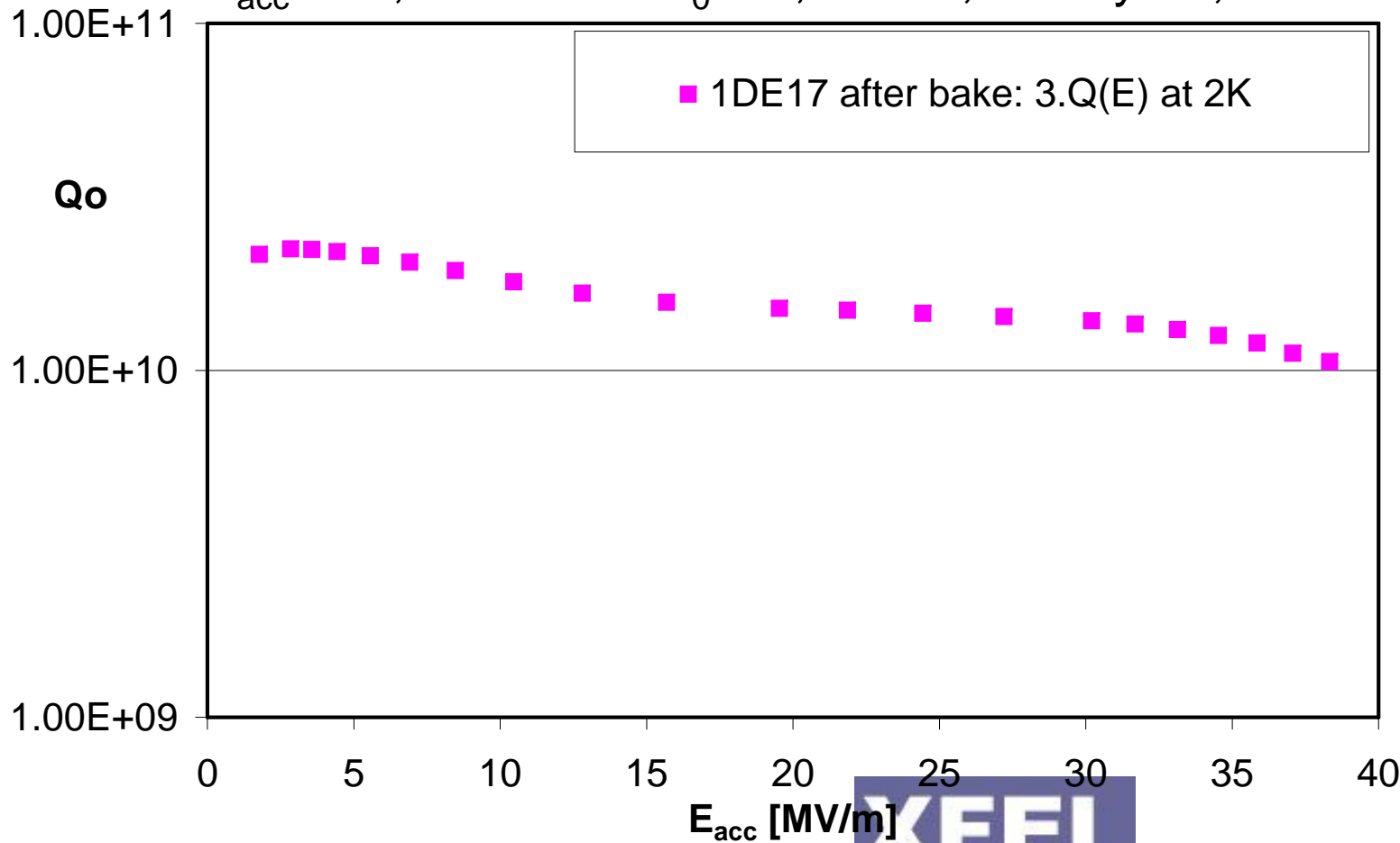


1DE17 Summary of first test

- Nb with RRR 330 (Ningxia); deepdrawing at Accel; machining + EB welds at DESY
- Test 1: 82 μm BCP@Accel, 800C, 100 μm EP@Henkel, HPR, 133°C/12h bake, HPR (T-Maps):

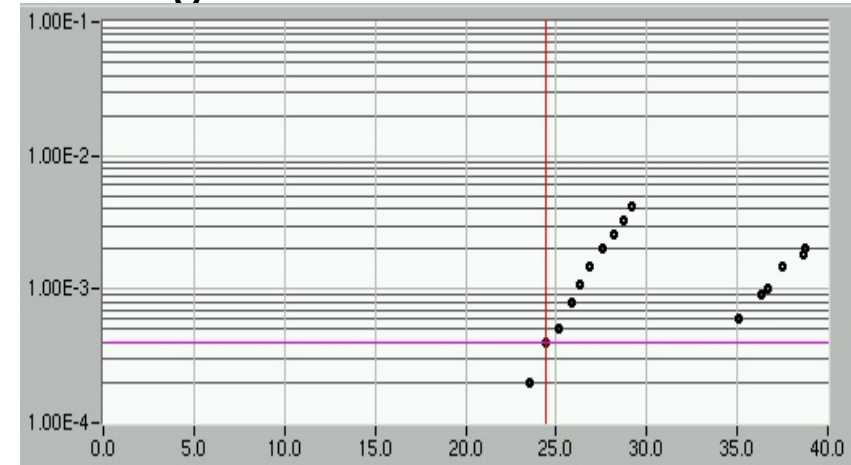
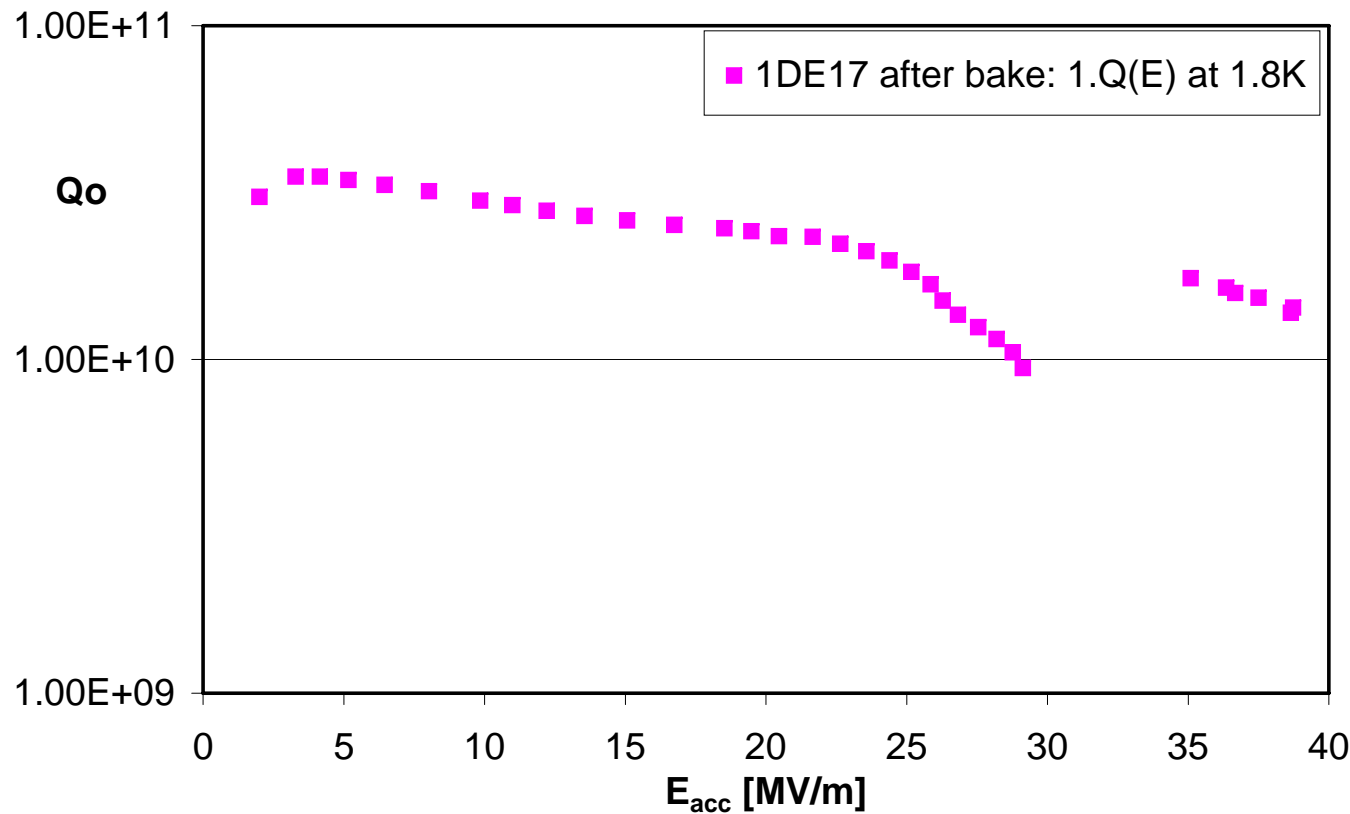
$E_{\text{acc}} = 38,3 \text{ MV/m} @ Q_0 = 1,5 \cdot 10^{10}$; lim. by bd; few FE (>34 /- MV/m); no MP



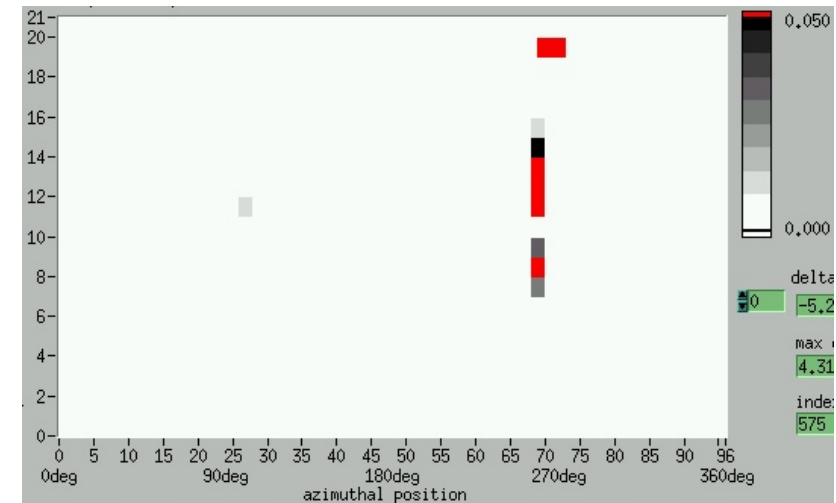
T-Map during quench at 1.8K; red hot spots show $dT > 90 \text{ mK}$

1DE17 test 1 details

- Test 1, 1.Q(E) at 1.8K with some FE and processing:



X-rays vs. E_{acc} at 1,8 K



T-Map at 1,8 K before processing

1DE17: detailed history + summary

- Cavity made of Ningxia sheets with RRR 330; production 2005
- Deepdrawing of cups at Accel
- Complete machining, electron beam welding + etching at DESY
- BCP at Accel Co.
- All electropolishing at Henkel Co.
- Assembly, HPR + test at hall NO

- Limited by quench in upper half cell => sheet Nx ???
- 12h bake at 133C successful

- Free for further treatment

1DE17: more rf-data

	Test 1 after 100 μ m EP, HPR, 133C, 12h bake, HPR	Test 2	
$R_{\text{res fit}}$	5,2 n Ω	n Ω	
$\Delta/k_B T_C$ ($T_C = 9,2\text{K}$)	1,94		
$Q_{\text{BCS}}(4,3\text{K})$	$6,3 \cdot 10^8$	-	
$Q_{0,\text{max}}(1,8\text{K})$	$3,5 \cdot 10^{10}$	$?? \cdot 10^{10}$	
$Q_0(E_{\text{acc}} = 23,5$ MV/m; 1,8K)	$2,1 \cdot 10^{10}$	$?? \cdot 10^{10}$	