

AES cavity meeting

Aug 28, 07

Charge

1. Review data on AES 1-4 fabrication, processing, and testing.
2. Discuss possible causes for limited cavity performance.
3. Review and recommend any changes for future fabrication procedures and schedule.
4. Recommend future processing and measurement plans for AES 1-4.

Possibilities to discuss

- Material
 - Defects
 - RRR
- Fabrication & welding
 - Weld contamination
 - Weld surface
- Preparation & Test
 - Degreasing-multipacting

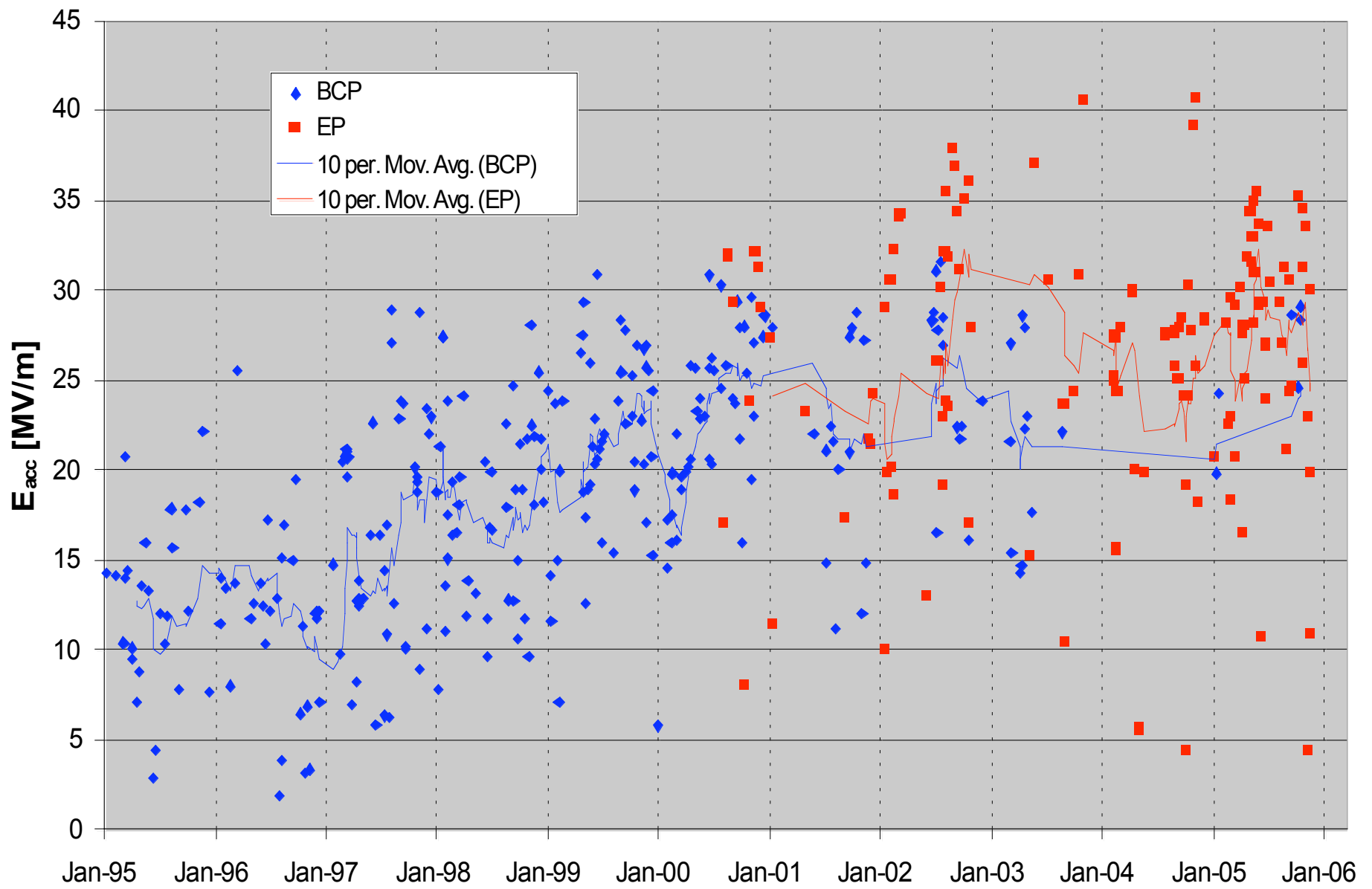
Investigations- procedures & strategy

- Visual inspection of welds
- T mapping
- Mode analysis
- Ti treatment
- Mechanical polish welds
- Degreasing (sulphur > multipacting)
- Do we proceed with treatment before have good T maps?
- Do we proceed with further 9 cell (equator welds) before results from further 9cell tests or 1 cell tests?
- What are schedule and test priority issues and ramifications

Slides from Lutz Lilje

Dec 05

E_{acc} vs. time

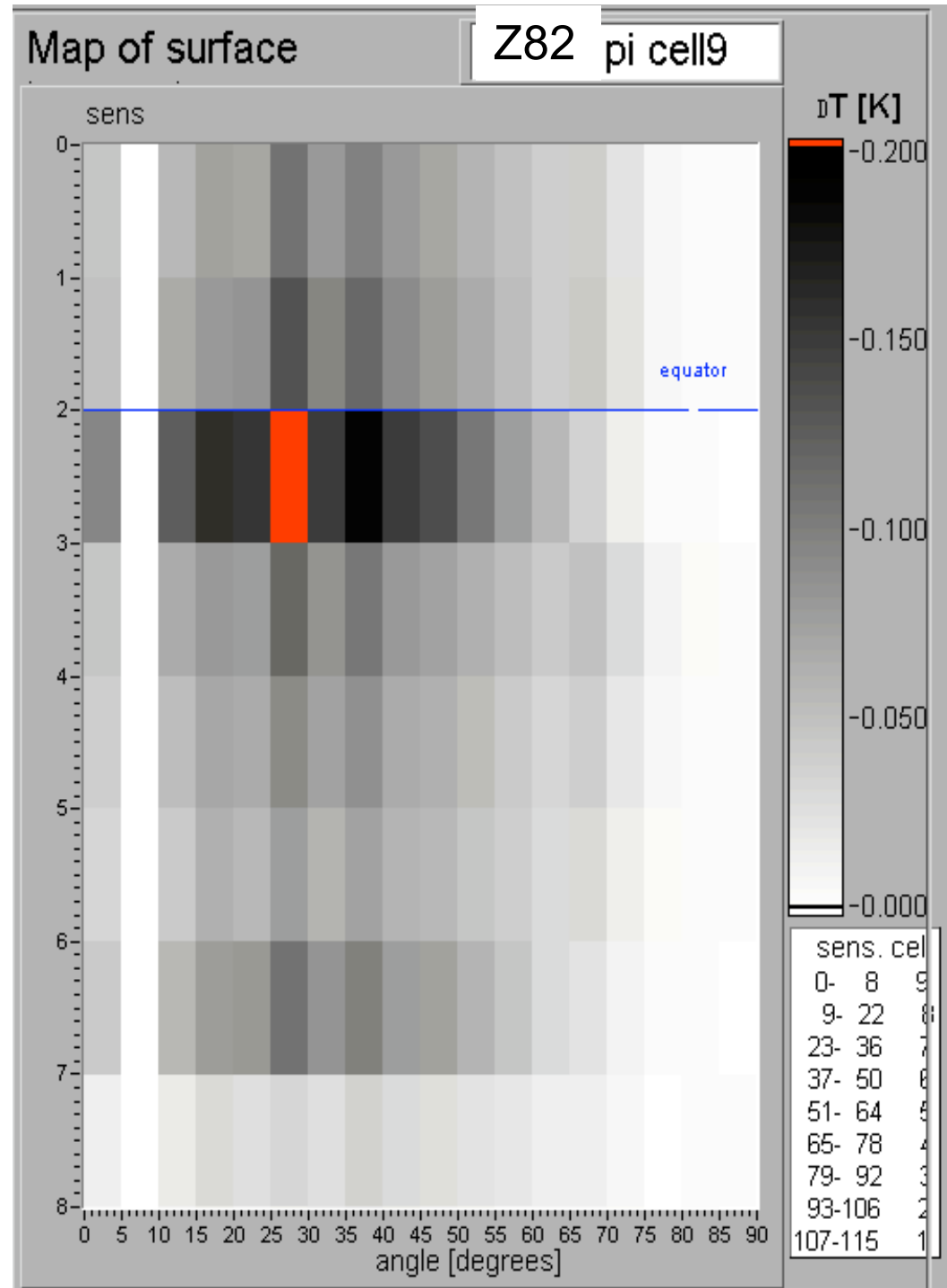


Weld Problems

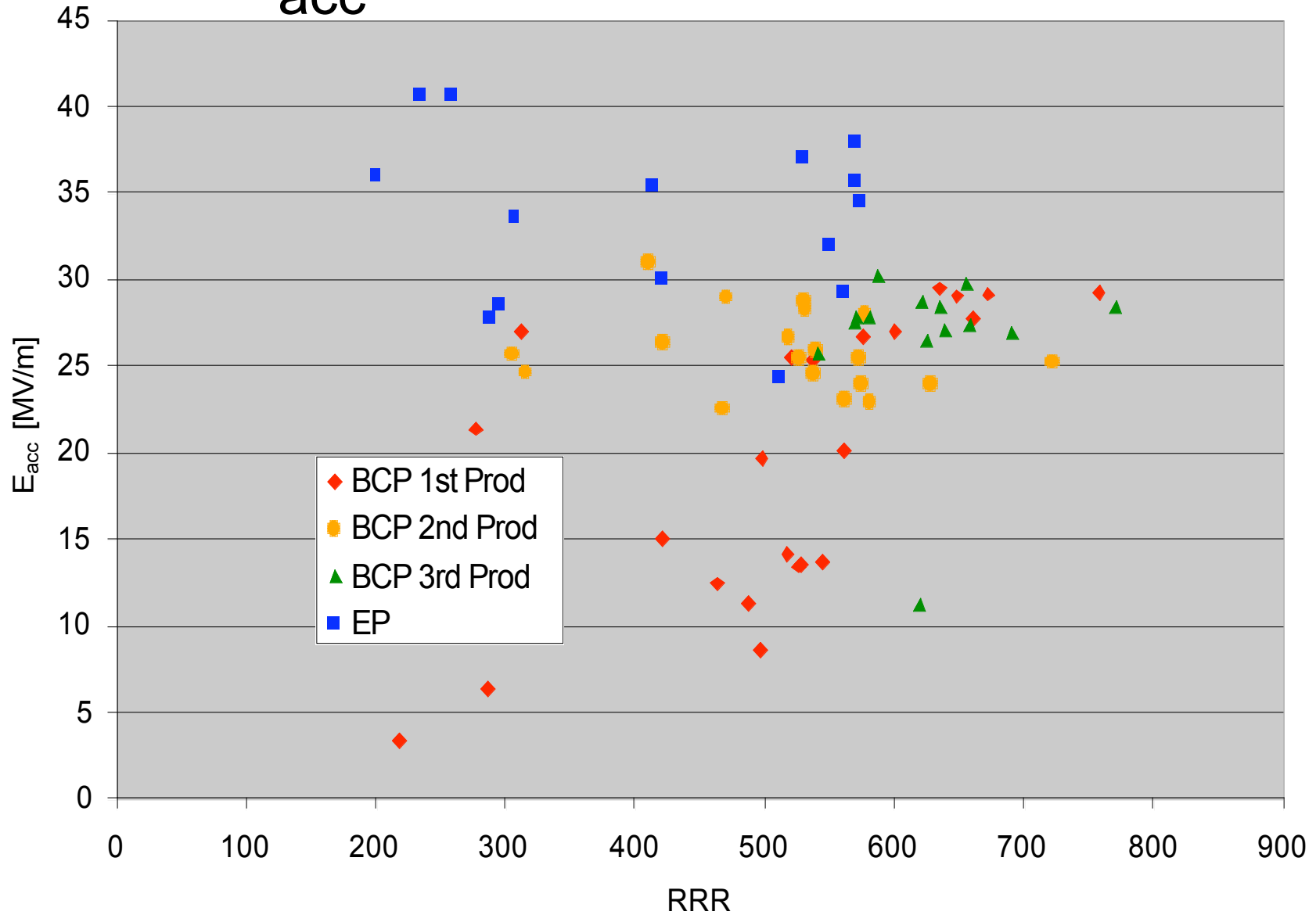
- Z cavities: Z82, Z83, Z84
 - No Cavity achieves a gradient above 28 MV/m without titanisation
 - T-maps on two cavities show quench on the equator
 - Fabrication at ZANON reviewed, improvements implemented

Z82 T-Maps: Pi-mode cell 9

- 25.1 MV/m
- Same location for:
 - 8/9 : 25.7 MV/m
 - 7/9 : 25.5 MV/m
 - 6/9 : 25.3 MV/m



E_{acc} vs. RRR - Best Test



E_{acc} ($Q > 10^{10}$) vs. RRR - Best Test

