

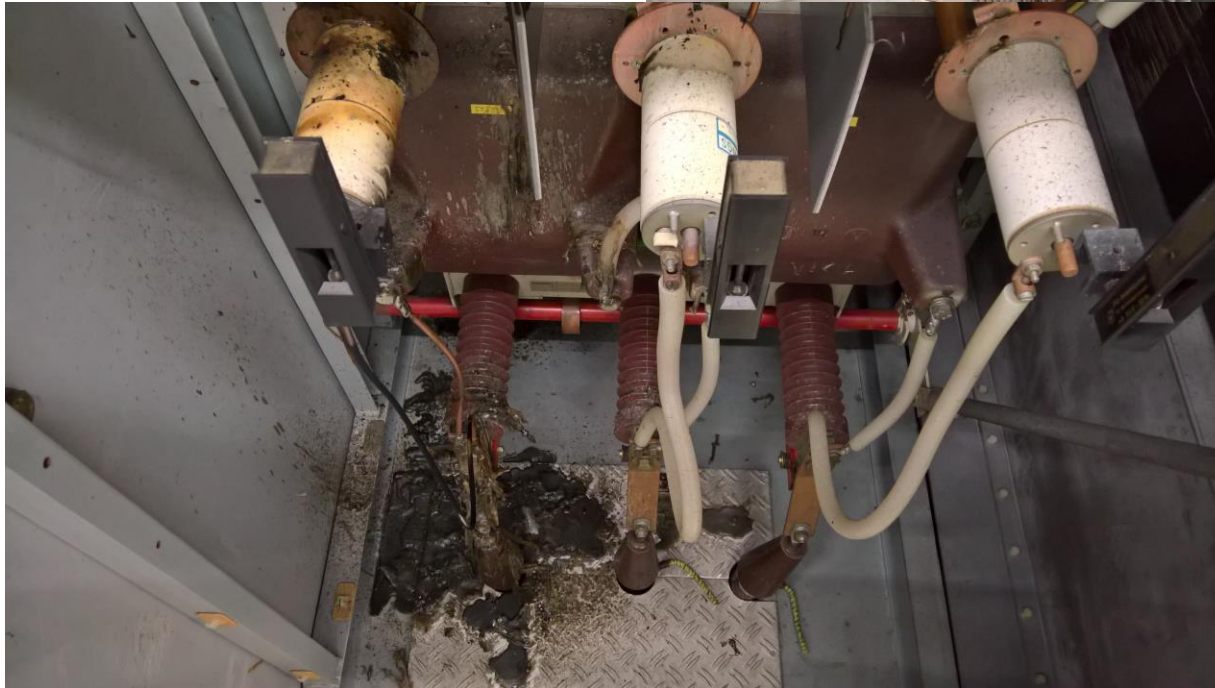
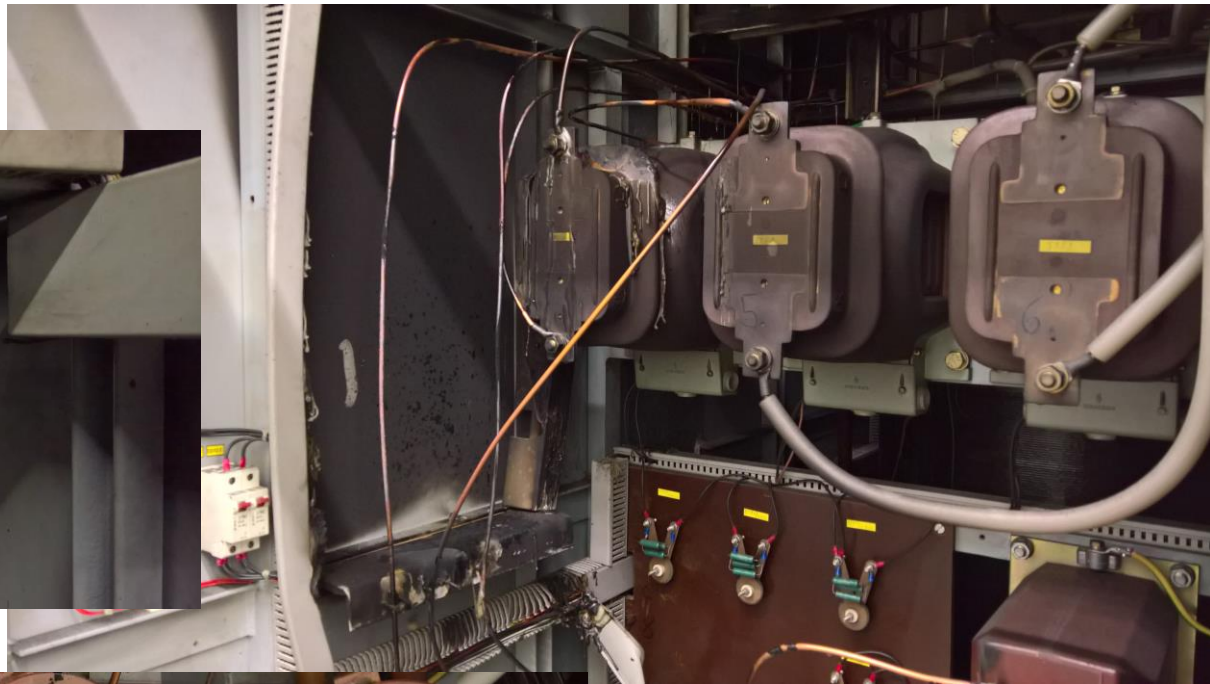
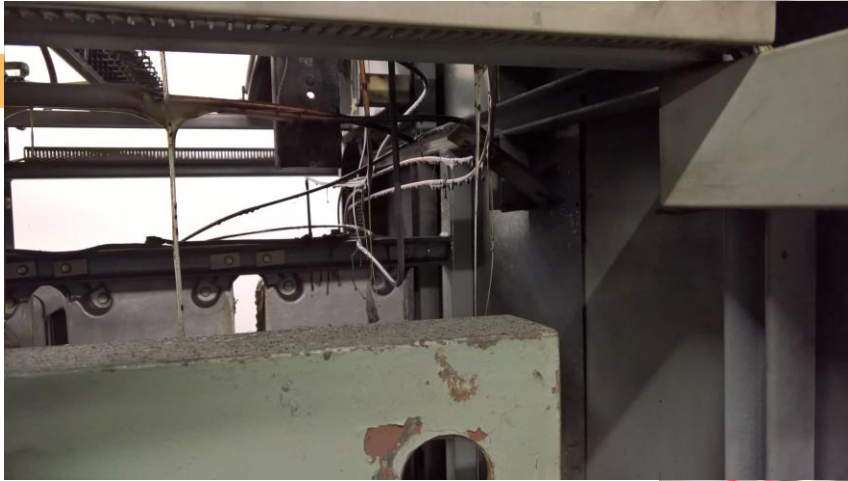
A large, detailed wireframe model of the GSI accelerator complex is shown in the background. It features a large, oval-shaped ring structure (the Main Ring) and several smaller, more complex structures (the Linac and Synchrotron) connected to it. The model is rendered in a light gray wireframe style, showing the intricate geometry of the facility.

# **"Wiederinbetriebnahme"** **RF Gallery w/o ER1** **- Status -**

**July 31st, 2018**

**Gerald Schreiber, Linac RF Department**  
**GSI, Darmstadt, Germany**





Pictures:  
Cell 3 / 12,  
mains supply 20 kV

# Preliminary Schedule

| <b>Restart of UNILAC RF without ER1 (B5,B6,BC3,ER1-5) - best case</b>  |           |           |            |            |             |             |            |           |             |             |             |
|--|-----------|-----------|------------|------------|-------------|-------------|------------|-----------|-------------|-------------|-------------|
| M. Hörr, S. Pütz, G. Schreiber, First estimation July 18th, 2018   |           |           |            |            |             |             |            |           |             |             |             |
|  | 16.-22.7. | 23.-29.7. | 30.7.-5.8. | 6.8.-12.8. | 13.8.-19.8. | 20.8.-26.8. | 27.8.-2.9. | 3.9.-9.9. | 10.9.-16.9. | 17.9.-23.9. | 24.9.-30.9. |
|  | week 29   | week 30   | week 31    | week 32    | week 33     | week 34     | week 35    | week 36   | week 37     | week 38     | week 39     |
| Cleaning of ER1 Netzgerät Power Supply AND Air Cooling System  |           |           |            |            |             |             |            |           |             |             |             |
| Smear Tests, toxic analysis ER1 and other RF components, Result, clearance for work  |           |           |            |            |             |             |            |           |             |             |             |
| Inspection/Opening/Cleaning of RF power supplies and RF amplifiers along the gallery   |           |           |            |            |             |             |            |           |             |             |             |
| First restart/power-up of RF systems*  |           |           |            |            |             |             |            |           |             |             |             |
| Conditioning of RF systems and unilac cavities for following beam operation**  |           |           |            |            |             |             |            |           |             |             |             |
| A4 final work and commisioning   |           |           |            |            |             |             |            |           |             |             |             |
| A4 cavity conditoning and RF system optimization (parallel to SIS commisioning) in time sharing mode (RF<>Operations)***                                   |           |           |            |            |             |             |            |           |             |             |             |
| *no contamination in air colling or RF systems found   |           |           |            |            |             |             |            |           |             |             |             |
| ** 3rd of September RF available for operation without A4  |           |           |            |            |             |             |            |           |             |             |             |
| ***A4 ready but not exclusivly for operation, conditioning optimization parallel to SIS operation, sometimes few hours during day needed exclusivly for RF |           |           |            |            |             |             |            |           |             |             |             |



- ✓ Pre-cleaning of surrounded area finished, Fr, 20th July
- ✓ Disassembly of Air Cooling System (GA, J. Dreger), Mo/Thu, 23rd/24th July
- ✓ First Swab/Smear tests (Wisch-/Abklatschtests by DACORD, Schnelltest), Wed, 25th July
- ✓ Trockeneisreinigung (dry ice cleaning, CO<sub>2</sub>) ER1 power supply: 26th / 27th
  - Again more dirt in the area -> more cleaning required (expected end of this week, KW31 and KW32)
  - Further swab tests at RF gallery by SiSt, Wedn, 1st August
  - Preparation of cleaning of air cooling system ER1 by GA
  - Disconnection/separation of ER1 air cooling system end of this week for restart of air cooling systems -> during next week by GA (KW32?)

- Damage analysis of further RF systems and their power supplies due to electricity power failure (black-out) during restart
- Restart of HSI RF systems as soon as possible (air cooling required, water required, 20 kV), week 33?
- Post mortem analysis of ER1 after disassembly of 1 MVA transformer
- Discussions on 20 kV mains -> Ralph Becker
- Repair/exchange of 20 kV mains power lines by GA (Elektriker) end of week 31
- Analysis of 20 kV main switches by GA week 32 (external company)
- Discussions on air cooling system (emergency shutdown)
- ...

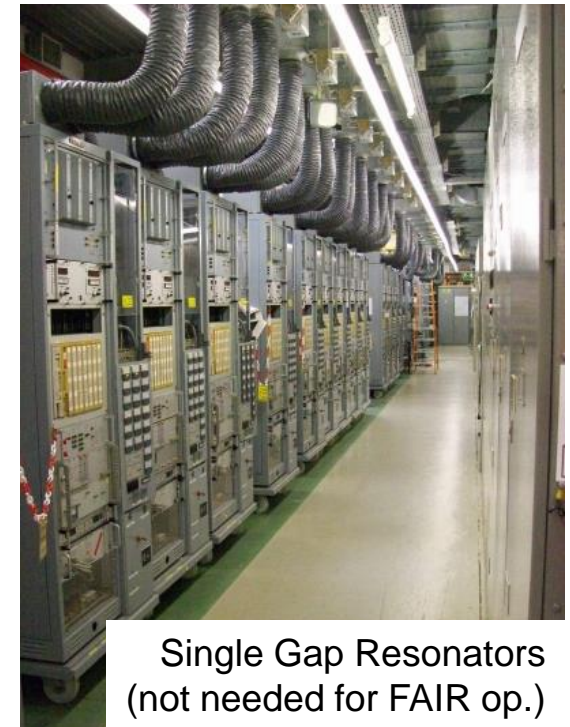
# Thank You!



1.6 MW HPA (5 x)  
@ Alvarez DTL



160 kW Driver



Single Gap Resonators  
(not needed for FAIR op.)