

MERIT Progress Report

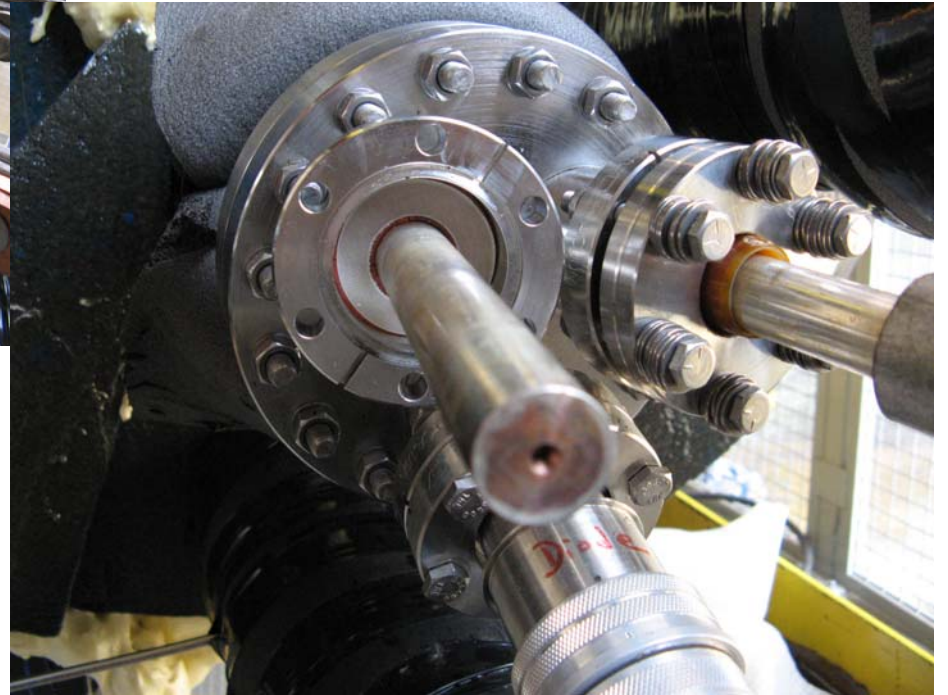
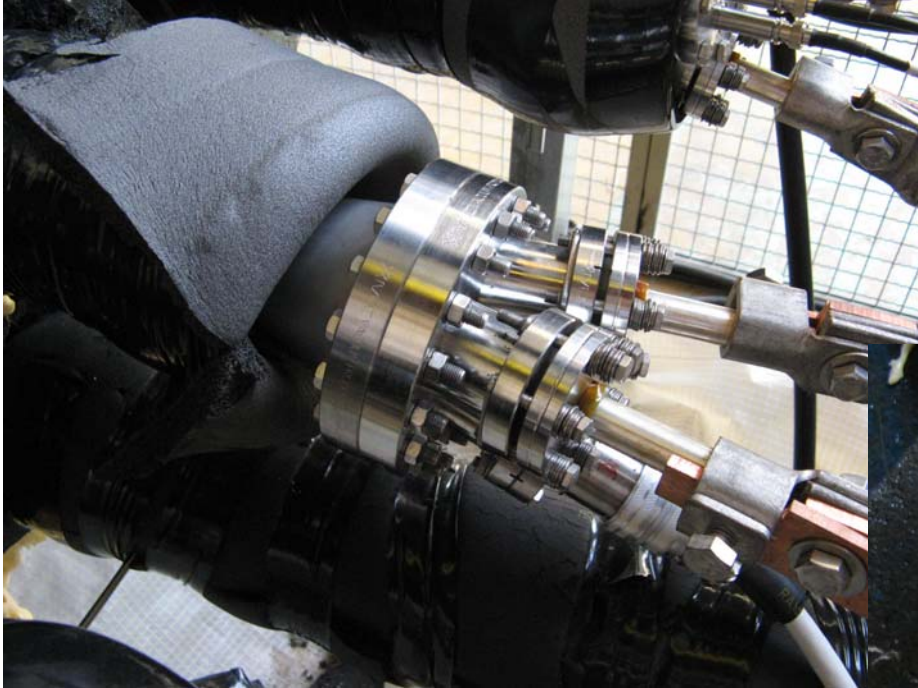
Collaboration Phone Meeting

July 6, 2007

Installation Issues

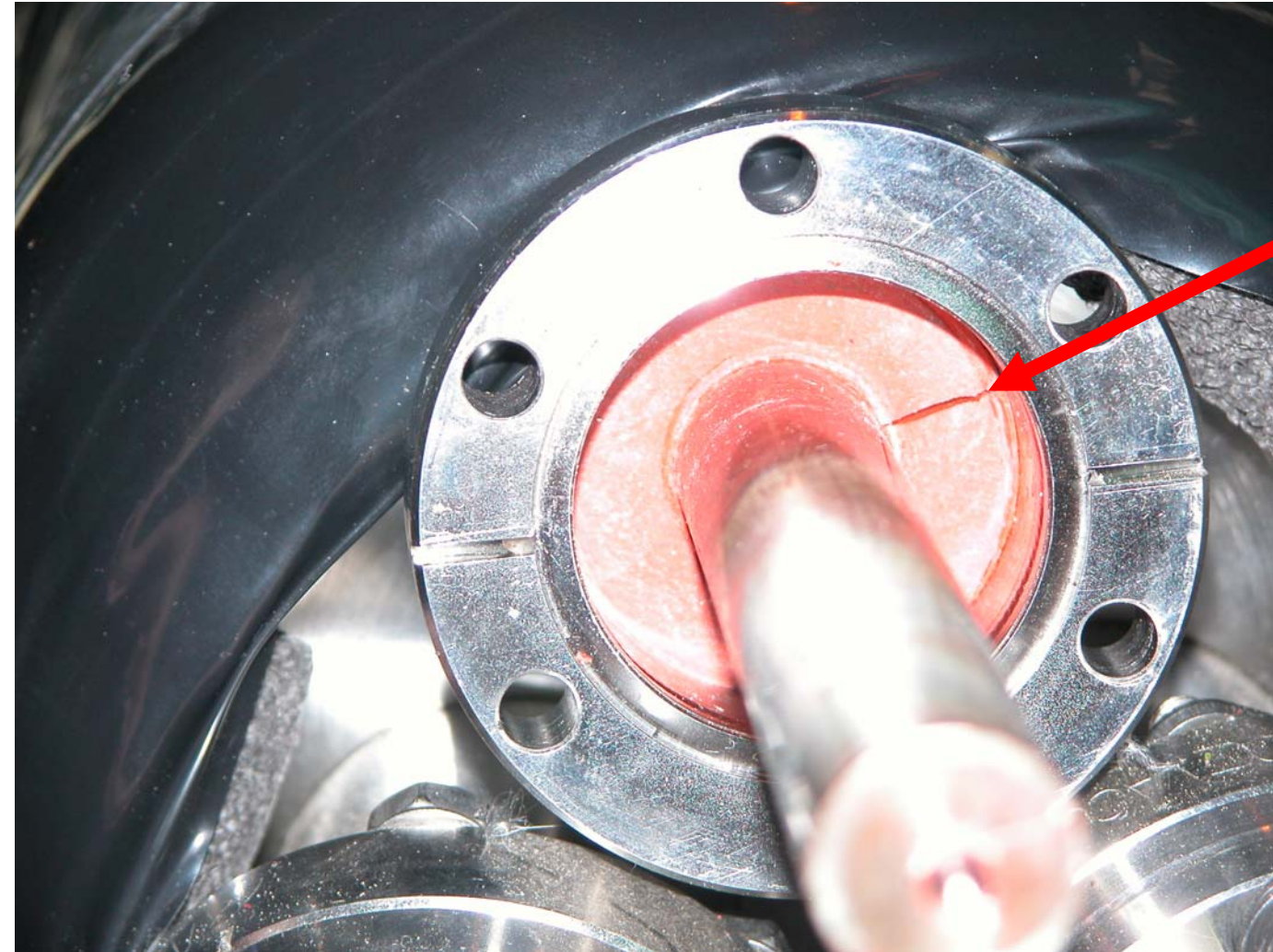
- Solenoid Leads Leaks
- Access restrictions to TT2/TT2a area

Solenoid Electrical Feedthrough



Source of the problem located

Radial cracks
observed in
several
silicone
packing
disks



Compression Test with GoreTex



The GoreTex after compression



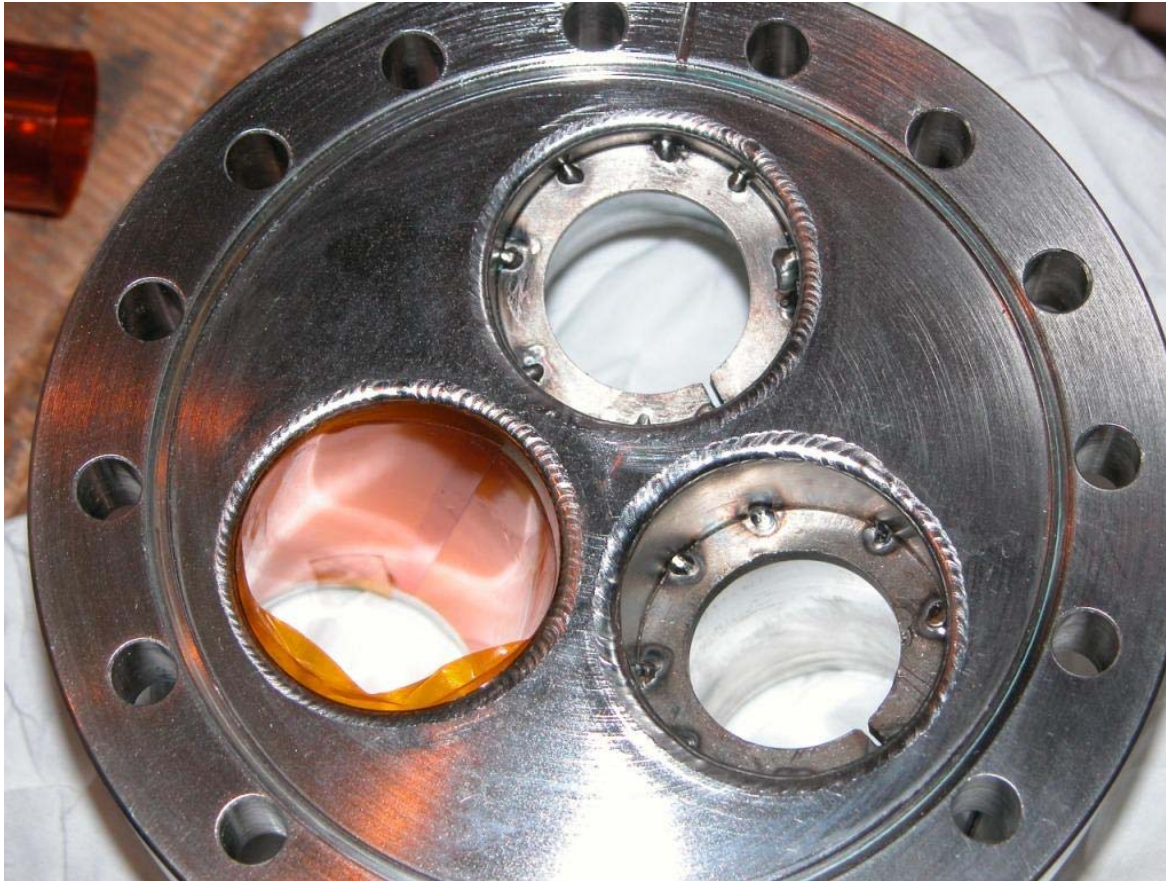
Installing the GoreTex in Test Fixture



Cryo Testing Results

- 2.5×10^{-5} mbar l /s Ambient Background
- No observed leak at 10bar Room Temp
- Initial cooldown, flush: substantial He leak
- Further tighten by closing gap 1.3mm
- 1.3×10^{-3} mbar l /s leak rate
- Shock cooled in LN₂ bath
- 3rd cycle cooldown
- 0.8×10^{-3} mbar l /s leak rate → 12 mg/day

The SS Retaining Rings



May 22, 2007

The Reassembly Work



May 29, 2007

The Reassembled Leads



June 1, 2007

Cold Cycling Testing

June 7, 2007

- Coil 3 outer set to 13 N-m
- Coil 1 inner set to 12 N-m
- All other leads set to 10 N-m
- No observed leaks in all leads with magnet filled to 80% level with LN₂ and 5bar N₂ gas

Status as of 10 June

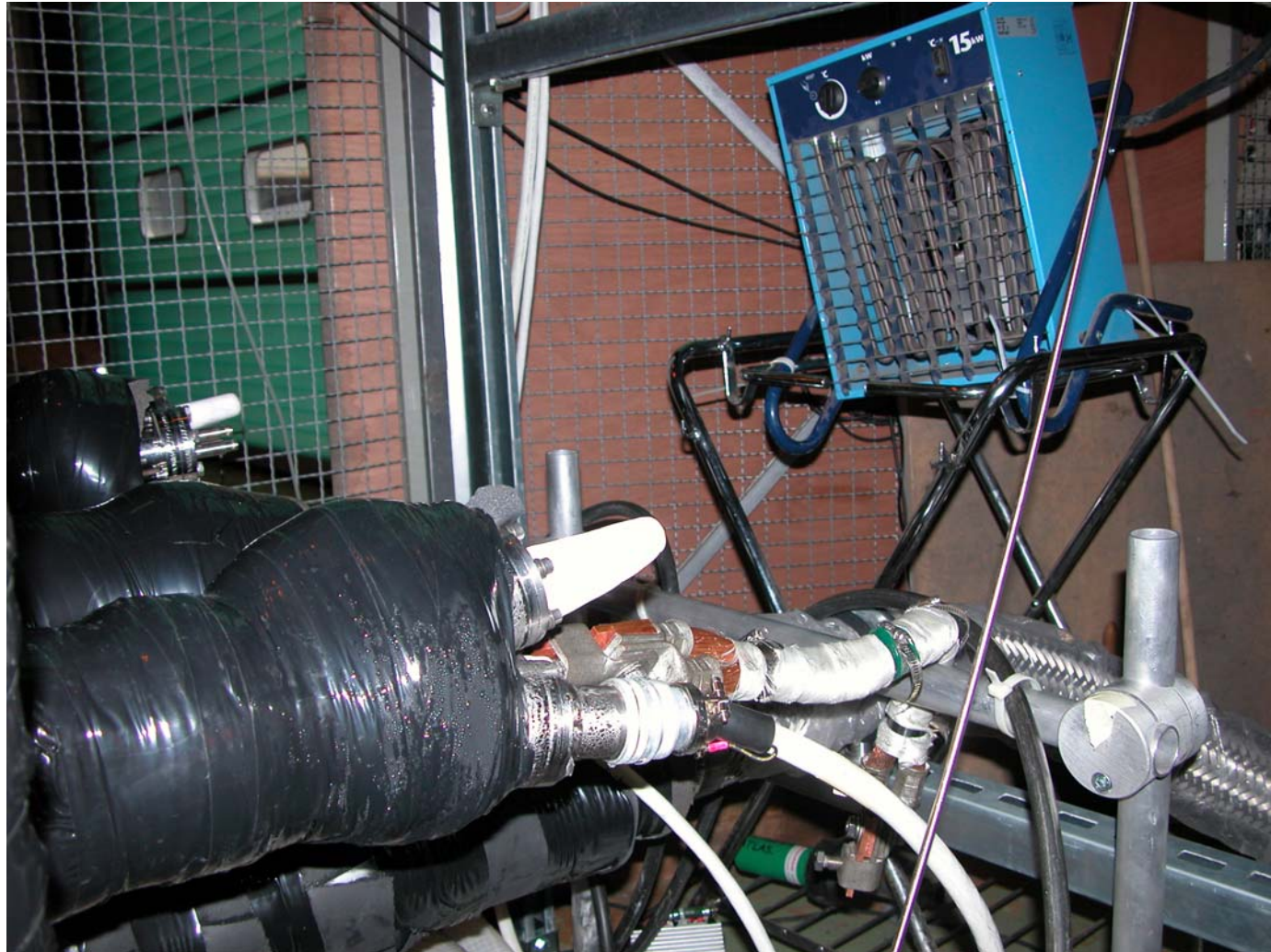
- A full warmup to room temperature and 2 day cooldown took place June 8-10.
- No observed leaks in all leads with magnet filled to 80% level with LN₂ and 5bar N₂ gas.

Frost Buildup



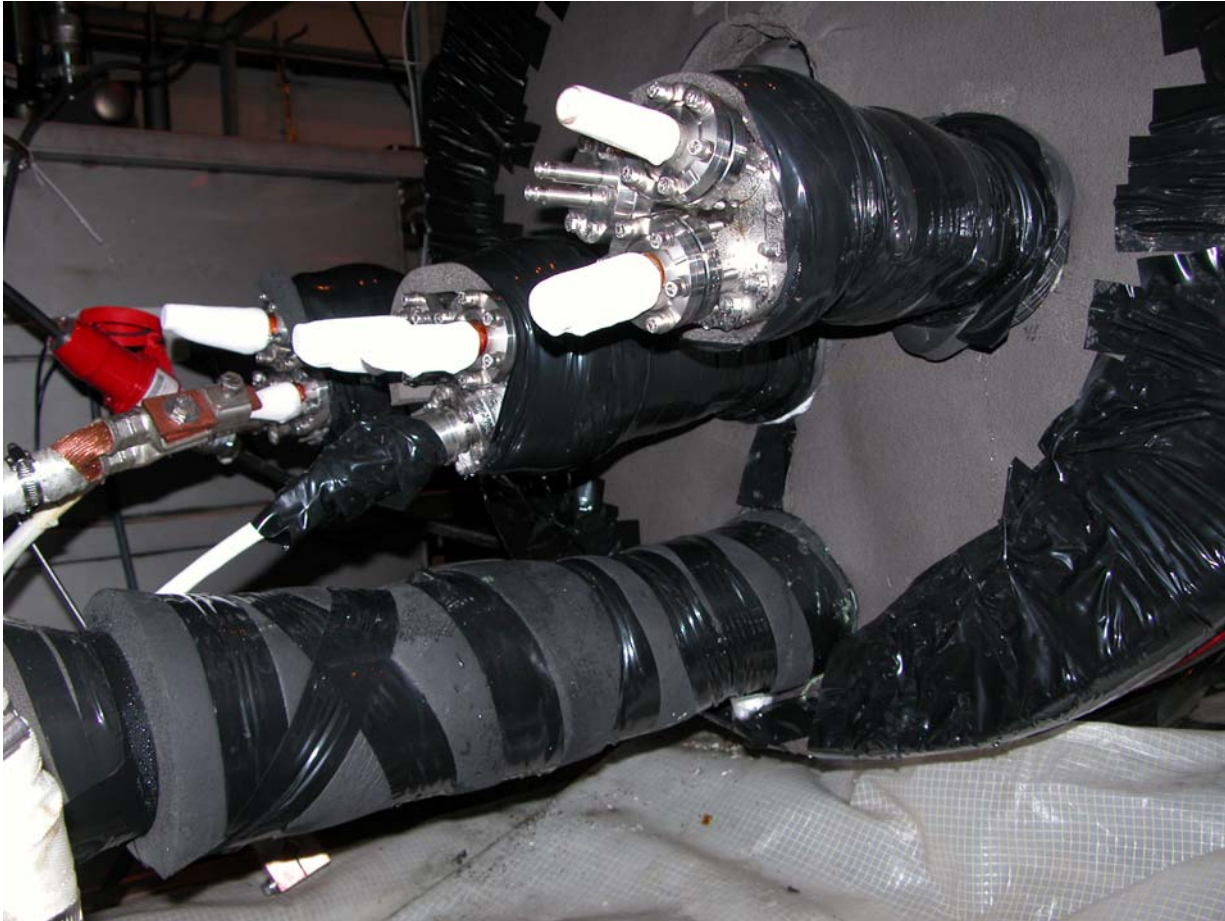
June 5, 2007

Air Heater/Fan Installed



June 6, 2007

Frost Buildup Reduced



Magnet
temperatures
from 83° to
 130° K

June 6, 2007

Safety Meeting June 11

Review by CERN Safety committee

- Cryogenics
- Operations
- Chemical

Approval given for installation of the pulsed solenoid