



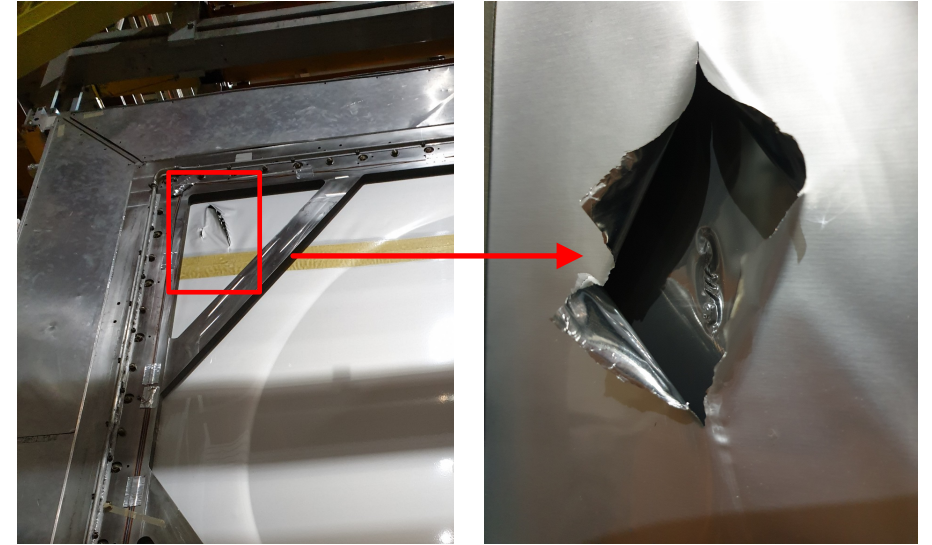
DC4 status

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DC4 repair - reminder

- Accident in the COMPASS hall – Jan. 2019
 - Broken Mylar window
 - damage on the first U' cathode
 - opportunity to repair a persistent leakage current on the V plane (between cathode and BK)
- Detector moved to Clean area – week of Jan. 27
- Week of Feb. 3
 - Dismounting electronics, hotlinks, HV cables, etc..
 - Opening of DC4 – disassembling the upstream stiffening frame with its Mylar window

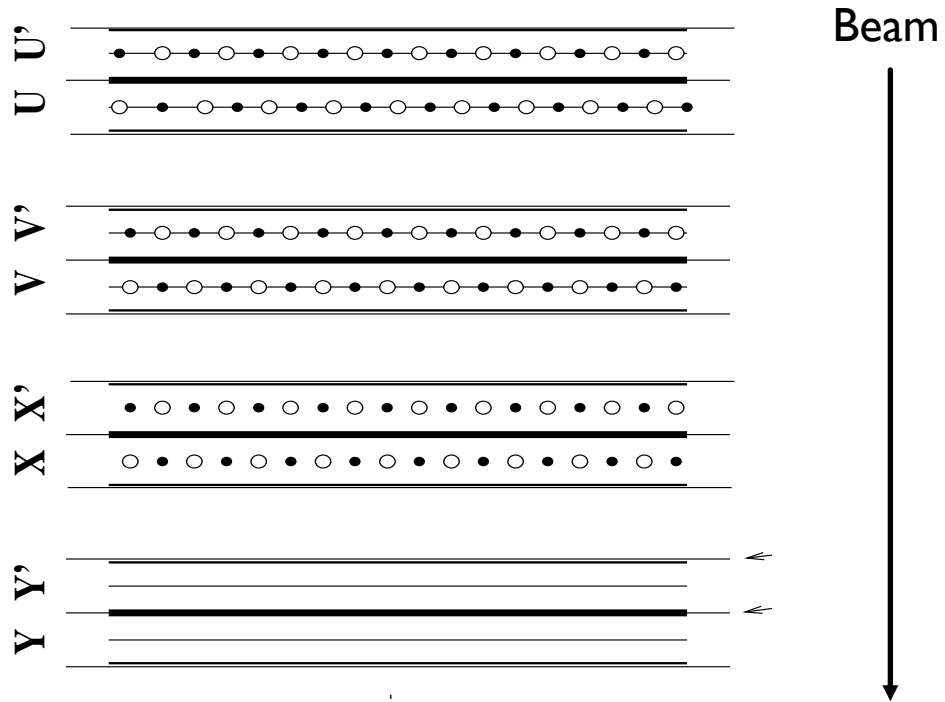


Week of Feb. 10 – 14

- An aluminized Mylar patch glued on the broken window

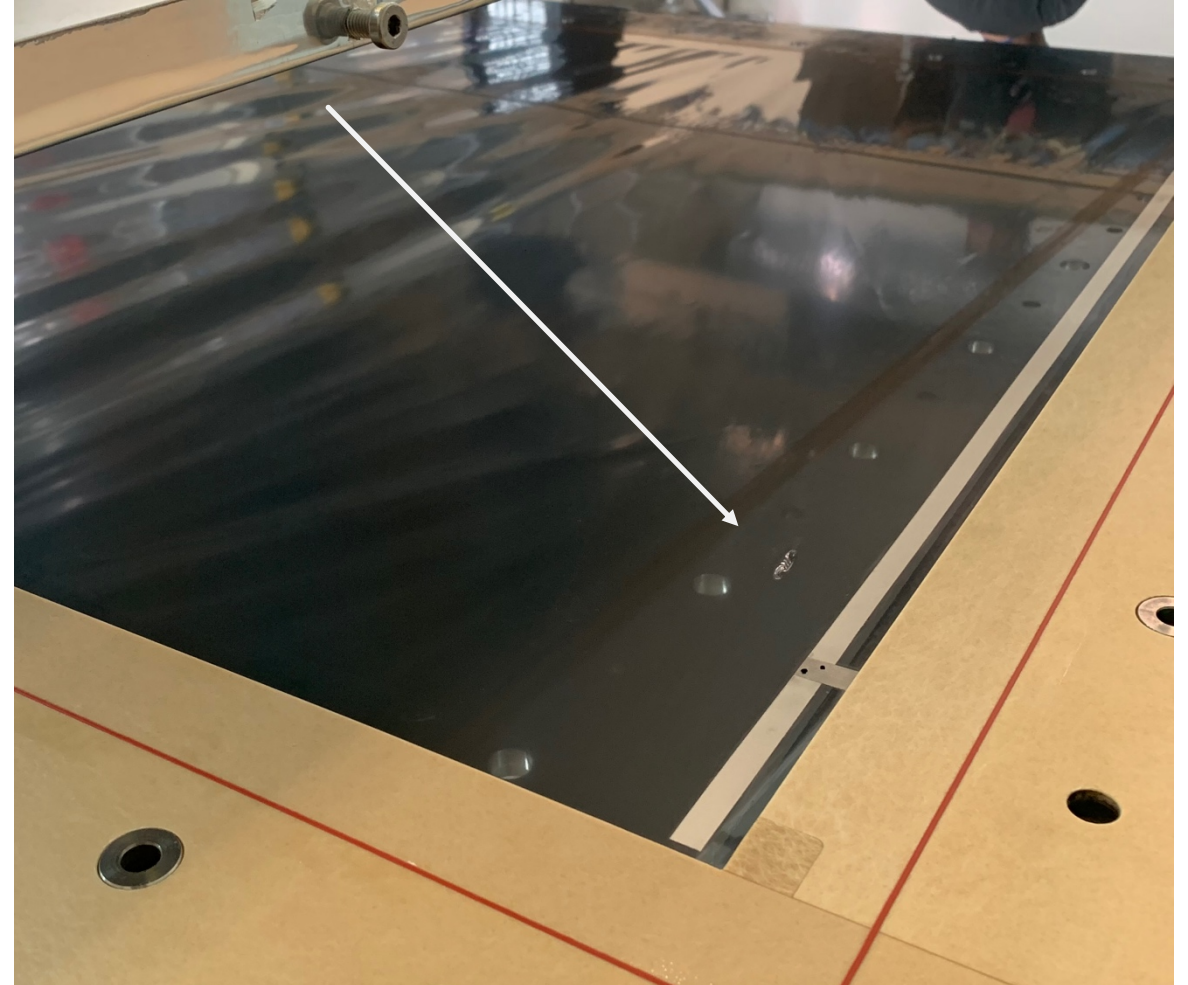


The DC4 chamber is a stack of cathode and wire planes



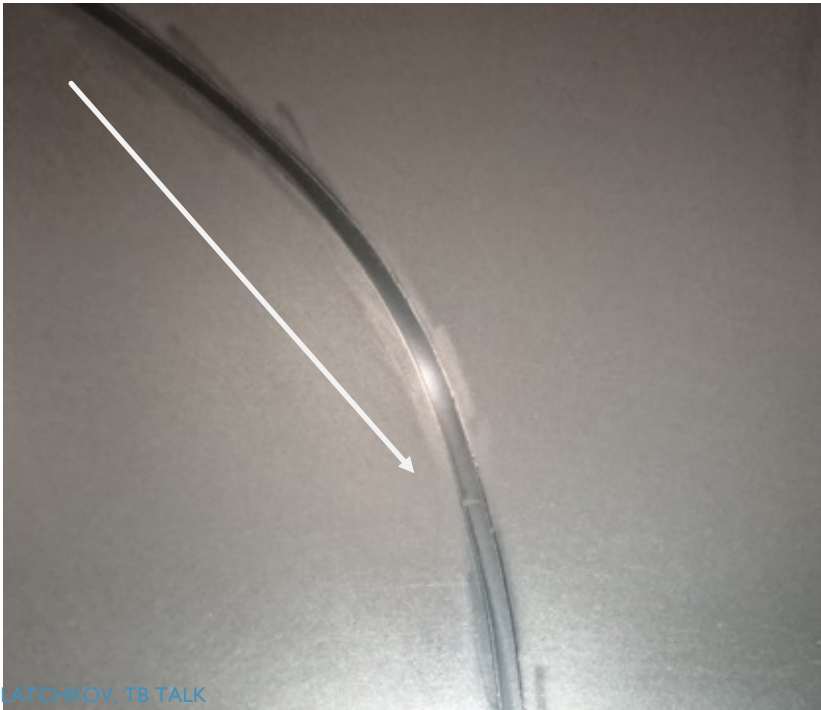
Week of Feb. 10 – 14

- Minor damage on the U' cathode – stretched with a heat gun



Week of Feb. 10 – 14

- Dismount the (first) double plane (U'/U)
- Open the (second) double plane (V) – tiny impurity found between the BK and the plane (middle cathode)

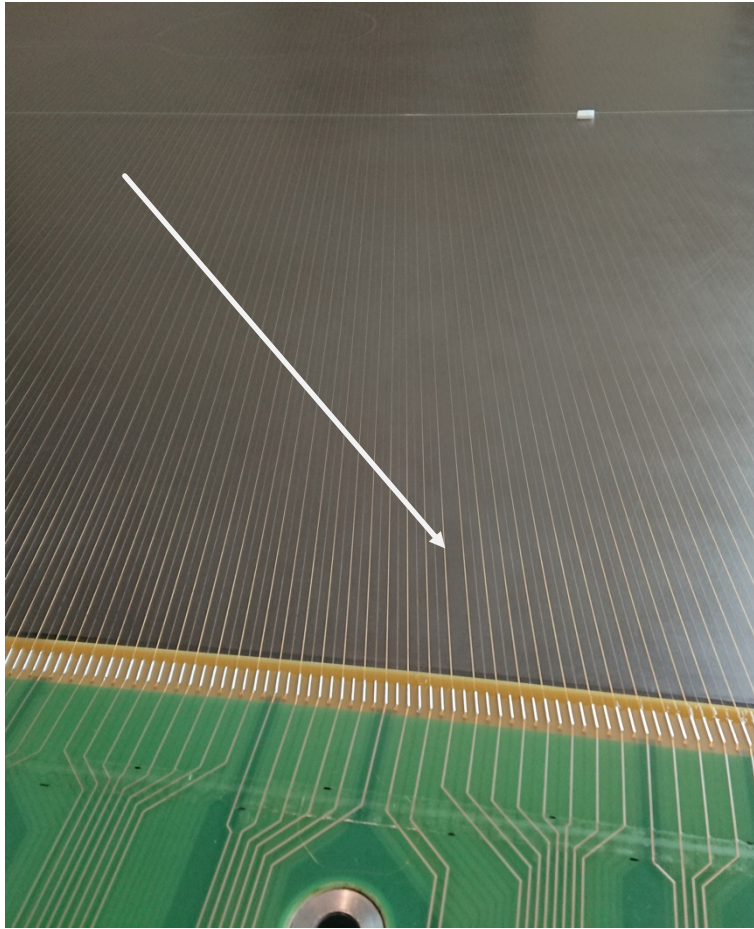


Week of Feb. 10 – 14

- DC4 ready to be reassembled on Friday, Feb.14th. But...
 - All planes assembled, not tightened. Flushed with Argon.
 - First HV tests showed large leakage currents in the U plane, for $V > 1000$ V
 - Investigations showed that the only explanation could be broken wires, and on both U and U' planes

- Work restarted on Feb. 24...
 - Remove the Mylar window, isolate U' first then U plane.

Week of Feb. 24 – 28 – repair of broken wires on U and on U'



Friday, Feb. 28: Chamber closed and tightened, electronics partly mounted

Week of March 2 - 6

- DC4 tests and electronics mounting (great help from Christophe)
 - HV tests: all planes tested up to 1900 V (with Nitrogen)
 - Noise tests: found values as expected
 - Leakage tests: apparently no leakage, to be measured precisely.
 - Mounting electronics and **new!** internal hotlink cables
 - DC4 is now flushed with Nitrogen and gas is checked regularly (thanks to Stefano)
- Remains to be done - after the lockdown (~1 week of work, if everything OK)
 - Make DAQ tests to check connections (thanks to Vladimir F., for the local DAQ)
 - Mount air cooling tubes
 - Mount temperature probes