COMPASS TB: W45 has purity

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The problem

- Problem when ramping-up the voltages for the first time
- More than a week to ramp-up
- 50 uA limitation
- Slow decrease with time
- Not all channels are problematic
The problem

• Correlation with humidity found
The not understood behaviour

Increasing flux did not changed behaviour

• 13 July 2021
• Comment

“Few days ago i was not able to ramp-up the detector from off to on whithout being in small steps. Currents were increasing till 100uA. Yesterday night there was a cut in CF4 supply and shift crew switched off the detector. In the morning i switch everything on and the detector went to nominal voltges with currents < 5uA while ramping-up. No idea why the problem got improoved. Also Station1 was the worst case and know has the same current level like the other ones (<0.5uA).”
The not understood behaviour

- August 2021
- Huge O2 contamination found in DW04 and DW05
- No correlation with humidity
Possible explanation?

- Google pointed me an old W45 page
- Link not in COMPASS webpage
Station3 V2 recovery

- Possible wire short-circuit
  - But can also be outside
- Not possible to investigate in due time
- Need to open the HV distribution…
- No idea how it is done. No documentation.
- HV channels and cool channels swapped (V1-V2)
- In worst scenario chamber as to be opened
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