Planning COMPASS Silicons for 2022 Run

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Planning COMPASS Silicon for 2022 Run

Reinstallation of Silicon at Beam Position

Partially installation of system present — all equipment already collected.

Required steps:
1. Reinstallation of cooling system cables (2 day)
   → General cable/equipment clean up
   → Connection test with PLC - MUSCARD control
   → Valve box vacuum pumping
2. Reinstallation of concrete platform required (7 days)
   → Positioning of optical bench + stations — first Survey (?)
   → Installation of scaffolding as support for nitrogen circuit
   → Installation of vacuum equipment and test
   → Installation of transfer lines to stations
   → Full survey of stations
   → Connecting full nitrogen circuit (exhausted pipes)
   → Filling of valve box

Limited access: Installation of FI02 after full survey?
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Partially installation of system present — all equipment already collected.

Required steps:
3. Readout installation (2 days)
   → Installation of repeater cards and ADCs + cables + GeSiCas
   → Setting up LV supplies for ADCs and APVs + HV
4. Test of cryogenics: (2 days)
   → Test of all connected sensors / flows / pressures etc.
   → Filling of valve box
   → Cooling of stations and vacuum / stability test
5. Readout test: (1 day)
   → HV test
   → Test of frontend (ADCs - Repeater Card - DAQ settings)
6. For data taking
   → HV scan, pedestals and timing
     (after alignment and BT commissioning; with beam)

About 14 days until ready for beam: Start end of March / beginning of April
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Further To Do’s and Ideas

• Some ADC LV issue — Deutonix PSU at maximum
  → Additional DC/DC converter as support (Igor)

• Idea (also Igor): Usage acceleration measurement devices for stations
  • Cross-check for alignment / test for AMBER
  • Example:
    • Measurement: ± 25.4 mm / s with freq. range 3-1500 Hz
    • Output: 4 ... 20 mA process current
    • around 250 - 500 CHF / piece

• Nitrogen supply: parallel operation of helium liquefier and silicons
  • Inlet pressure too low for silicon valve box to refill
Inlet pressure on gallery — distribution box