BI readiness for run 2a

12th AWAKE Instrumentation meeting
BI for run 2a

- Digital cameras
- ChDR BPM
- Streak line upstream plasma cell
- Motors
- Expansion volume interfaces
- Spectrometer camera test
- Replacement of screens BTVs 426 & 442
- Installation of ICT
Bl for run 2a

- Digital cameras
  - server & 10 gbps fibre connection OK
  - timing distribution finalised
  - software: tested. Functionalities missing (profile fit, tagging of SPS shot, camera power cycling). New PJAS start in Aug 21
  - design of mechanical parts for BTVs done.
  - Plan: electron BTVs (using PPOT cables), exp. volume cameras, common line BTVs.
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- ChDR BPM
  - Eugenio’s presentation
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• **Streak line upstream plasma cell**
  • Realigned in May. Protons and electrons visible (but >600 pC for electrons)
  • try to improve signal by: steering e-beam. Transport with Optics studio, additional lens ordered
  • remote controlled slit: should be back to CERN mid July

For both cameras:
• Issue with Hamamatsu software (“RemoteEX“) crashing. Possible conflict with Frame grabber, to be followed up with Hamamatsu
Motors

- all motors checked by Eugenio and Michele. All installed motors are functioning properly, however a few motors have limit switches not working properly or missing (BI streak line final mirror and focus, MPP line XY mirror).
- at present 20 channels available
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- Expansion volume interfaces
  - cables for cameras (coax for trigger, eth for data and power) *should* have been pulled
  - new cables for motors not needed, re-use existing cables (patch cables and panels being produced)
  - one actuator recuperated from CTF / CLEAR. Vacuum cleaning and testing
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- **Spectrometer camera test**
  - camera and lenses all available. Support is being finalised. All will be installed this week.
  - all cables for cameras (coax for trigger, eth for data & power) *should have been pulled*
  - SW will run on local PC (purchased) in streak room awaiting BI digital camera readout. SW developed by David
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- Replacement of screens BTVs 426 & 442
  - BTV 426: replace OTR with YAG. Parts not ready yet, unlikely to be ready for July. Replacement must be re-scheduled
  - BTV 442: replace composite screen with OTR. Replaced week 7-12 June. Optical line to be re-aligned
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- **Installation of ICT**
  - Installation of ICT for spectrometer calibration. Initial proposal: install two ICTs CF6'-60.4-40-070-UHV from Bergoz Instrumentation. one close to plasma cell, other to spectrometer
  - Inspection with vacuum: cannot install ICT upstream OTR/CTR table
  - ICT close to spectrometer: limit of 5 mt (transverse) for ICT. Measurement of magnetic field to be scheduled
  - Installation to be scheduled (YETS?)