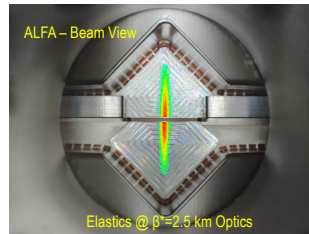
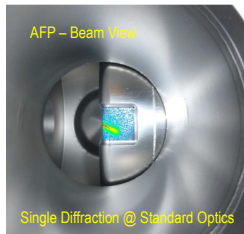
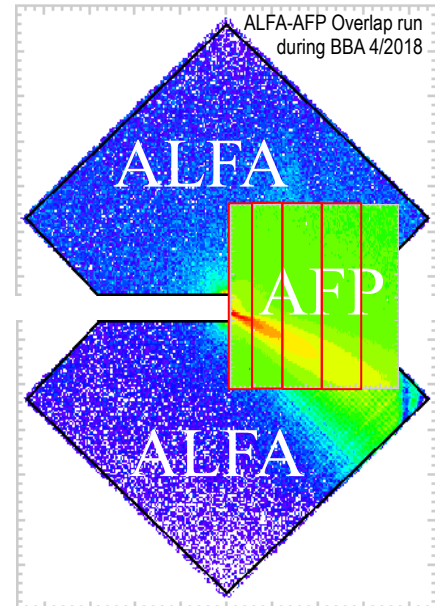


ARP status and plans in YETS

Ivan López Paz
TREX Meeting
15th October 2021



ARP status summary

ALFA:

- Fully functioning detector, but readout motherboards have been irradiated
-> Plans for replacement, identified working spares
- Partial BIS validation (enough for garage position during pilot beam)

ALFA in Holiday mode, ready for Pilot beams

AFP:

- Recently populated FAR stations with ToF+SiT detectors (August '21)
- BIS validation already performed: AFP will be inserted partly during pilot beams

AFP ready for Pilot beams

ARP interventions planned during YETS

ALFA:

- **Survey:** from 14th to 25th of November (experts available this period)
- **BIS validation:** after survey. Preliminary and partial BIS validation performed, to ensure safety during pilot beams
- **Installation of TLDs:** same dates as Survey
- **Vacuum pumps:** same as Survey
- **Motherboard replacement:** starting November

AFP:

- **pico-TDCs:** Replace High Precision TDC (HPTDC) with new pico-TDC. Depends on availability of the electronics
- Occasional accesses for DAQ electronics updates and commissioning after pilot beams

Back-up

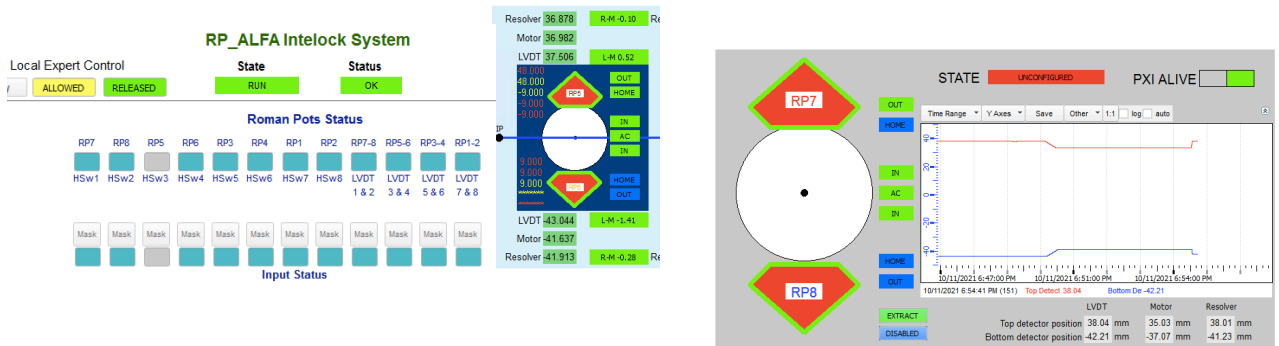
ALFA BIS pre-validation

ALFA stays in HOLIDAY mode, i.e. Bypass key on in USA15, impossible to move.

Interlock tests for safety:

- **INJECTION PERMIT:** Removal of INJECTION PERMIT when out of HOME
- **LVDT box tests:** Safe self-retraction when PXI is down and recovery, HOLIDAY mode
- **DCS and Emergency button extraction**

Note that the full validation will need to be done after survey

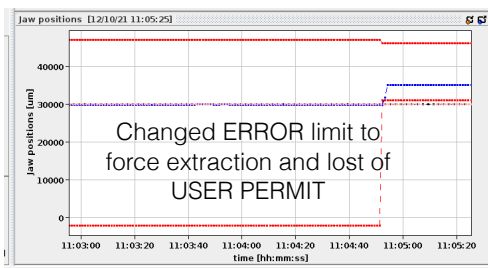


AFP BIS validation

AFP will move to mid-way beam position during pilot beams: needs full BIS validation

Interlock tests:

- **INJECTION PERMIT:** Removal of INJECTION PERMIT when out of HOME
- **LVDT box tests:** Safe self-retraction when PXI is down and recovery, HOLIDAY mode
- **USER PERMIT removal:** Removal of USER PERMIT when reaching an ERROR position, self-retraction in either WARNING or ERROR position
- **Interaction with beam modes:** similar, but LHC in STABLE BEAMS and ADJUST
- **DCS and Emergency button extraction**



Permit	Timestamp	Visibility	Event type
●	2021-10-12 11:04:52.009778	ALL	USER_PERMIT 3 B F T
●	2021-10-12 11:04:52.009778	ALL	USER_PERMIT 3 A F T
●	2021-10-12 11:04:52.009921	ALL	USER_PERMIT 3 A T F
●	2021-10-12 11:04:52.009921	ALL	USER_PERMIT 3 B T F
●	2021-10-12 11:04:52.009832	ALL	USER_PERMIT 3 B F T
●	2021-10-12 11:04:52.009832	ALL	USER_PERMIT 3 A T F
●	2021-10-12 11:04:52.008404	ALL	USER_PERMIT 3 B T F
●	2021-10-12 11:04:52.008404	ALL	USER_PERMIT 3 A T F
●	2021-10-12 11:04:52.008174	ALL	USER_PERMIT 3 B F T
●	2021-10-12 11:04:52.008174	ALL	USER_PERMIT 3 A F T
●	2021-10-12 11:04:52.007810	ALL	USER_PERMIT 3 A T F
●	2021-10-12 11:04:52.007869	ALL	USER_PERMIT 3 B T F
●	2021-10-12 11:04:52.007562	ALL	USER_PERMIT 3 A F T
●	2021-10-12 11:04:52.007562	ALL	USER_PERMIT 3 A F T
●	2021-10-12 11:04:51.837649	ALL	USER_PERMIT 3 A T F
●	2021-10-12 11:04:51.837649	ALL	USER_PERMIT 3 B T F

AFP ready to be inserted!

USER PERMIT was lost and recovered after retraction