

YETS Maintenance Update

February 23, 2023

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On behalf of TileCal maintenance team

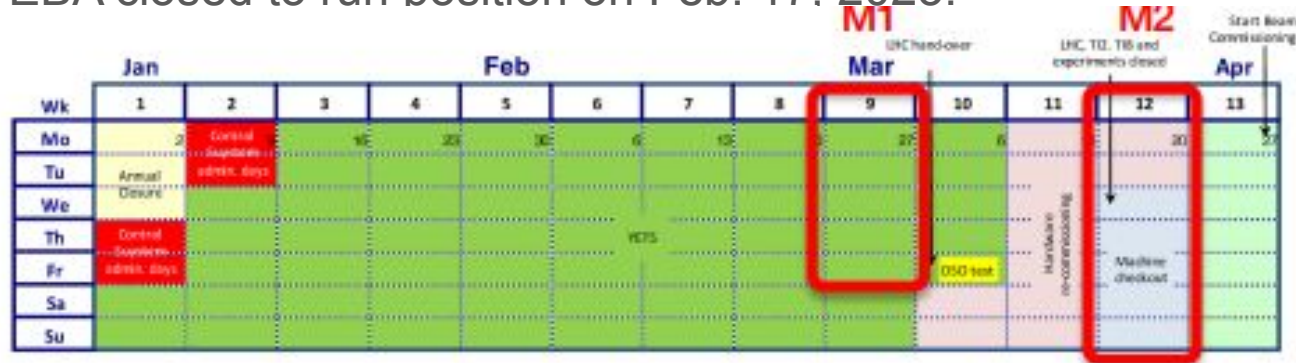


Maintenance Status

Maintenance period is completed, and all modules were moved back to run position last week.

Important dates:

- EBC closed to run position on Feb. 15, 2023.
- EBA closed to run position on Feb. 17, 2023.



Maintenance Status

Maintenance started in early December after LHC stopped running on November 28th

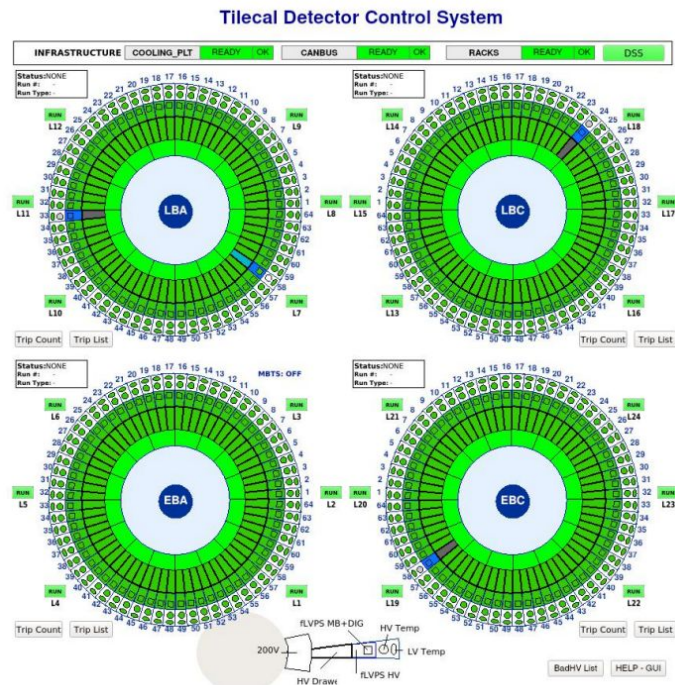
Four (4) Major Interventions:

LBA33: **Off** (trips on MB side) → Passed DVS tests after checks with Mobidick

EBC58: **Off** → Fixed digital sense line on Harting connector

LBC24: **Off** → New fLVPS installed, Harting connector replaced after burn

LBA58: **Emergency Mode** → Harting pins for HV checked and crimped; cooling on HV isolated



TileCal Status at the beginning of December 2022 before maintenance commenced

1. Recent Interventions (Week Before Extended Barrel Movement)

Interventions

1. LBC 49

Problem: No CIS for Digitizer 3 and 4

Intervention: First, we tried replacing the Mezzanine card and Digitizer 3 and 4, but that did not help. Finally, replacement of Motherboard 2 solved the problem

Status: Passed DVS test; Mezzanine and Motherboard addresses have been updated in OKS database

2. LBA 14

Problem: Upon insertion of the module, overcurrent was detected in the HV source. This is due to a cut wire in HV remote connector for MD1 (pin 7)

Intervention: ?

Status: ?

Interventions

3. LBA 58

Problem: Investigation of cooling on HV side

Intervention: Due to the problem being located deep inside the drawer and due to limited access, no further work could be done

Status: Module closed and passed DVS test.

4. EBA 40

Problem: Timing problem in Digitizer 2 (identified by Sasha Solodkov)

Intervention: Drawer was opened after scaffolding was removed. Digitizers 2,3 were replaced and the addresses have been changed in OKS

Status: Module closed and passed for DVS test (some noise in PMT 5)

Interventions

5. EBC 47

Problem: Many digital errors with Digitizer 7

Intervention: Drawer was extracted inside the short basket, and the external drawer was disconnected from the internal one. Digitizer 7 was replaced, and its serial number was changed in OKS.

Status: Module closed and passed DVS test. There is slightly higher noise in some laser channels.

6. LBA 39

Problem: 12 PMTs are without HV

Intervention: None possible