

Status of the 2024 run

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NA62 Italia

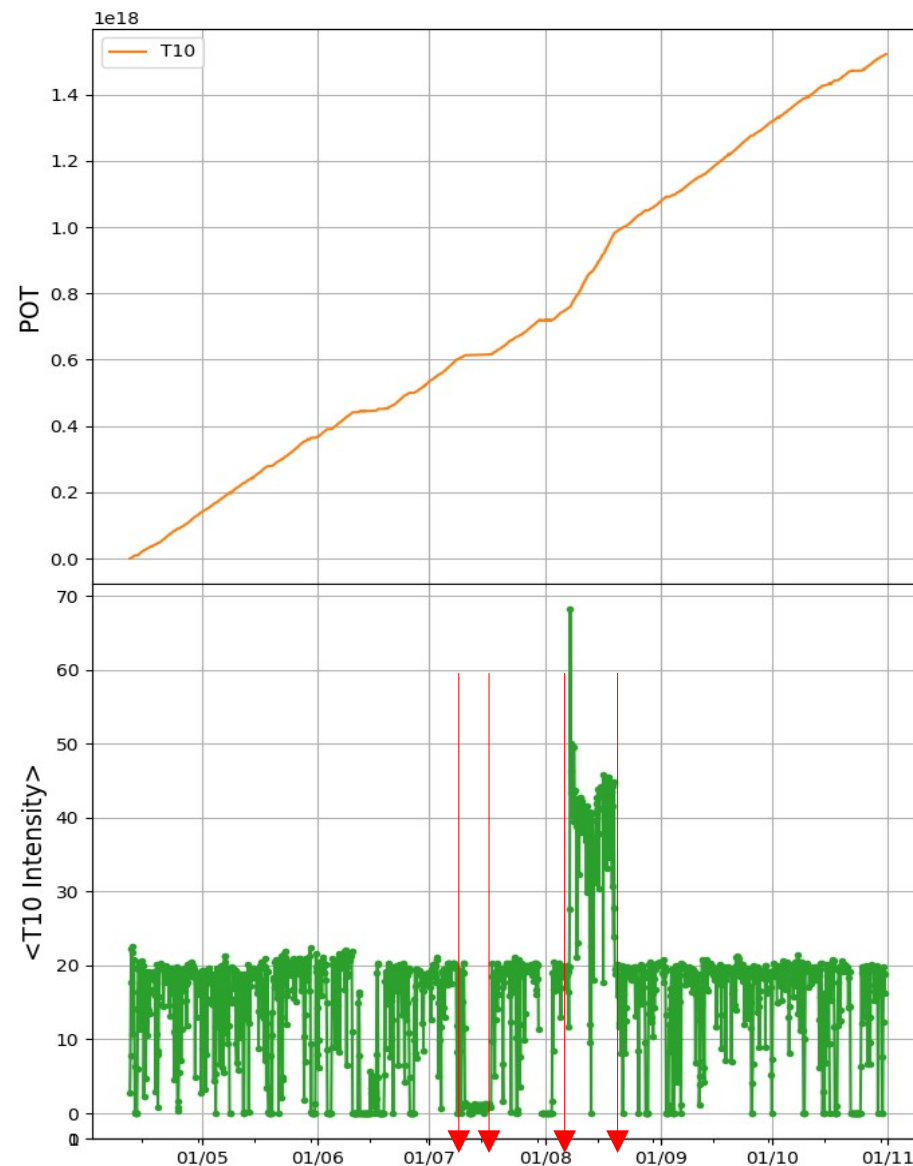
Beam and data taking periods

- Three main periods
 - Standard $\pi\nu\nu$ run
 - 1 week at low intensity ($< 2 \cdot 10^{11}$ ppp)
 - 12 days of dump run ($\sim 40 \cdot 10^{11}$ ppp)
- Problems
 - Issues when switching on MNP33, intervention required
 - Before dump run, problem with the movement of TAX1. Position fixed for the $\pi\nu\nu$ configuration
 - Since August the NA complex is running economy mode: if there is no extraction for a problem to be fixed in some time, all the magnets not in P0 survey are switched off
 - Apparently, no issues when restarting the magnets

Data taking statistics (1)

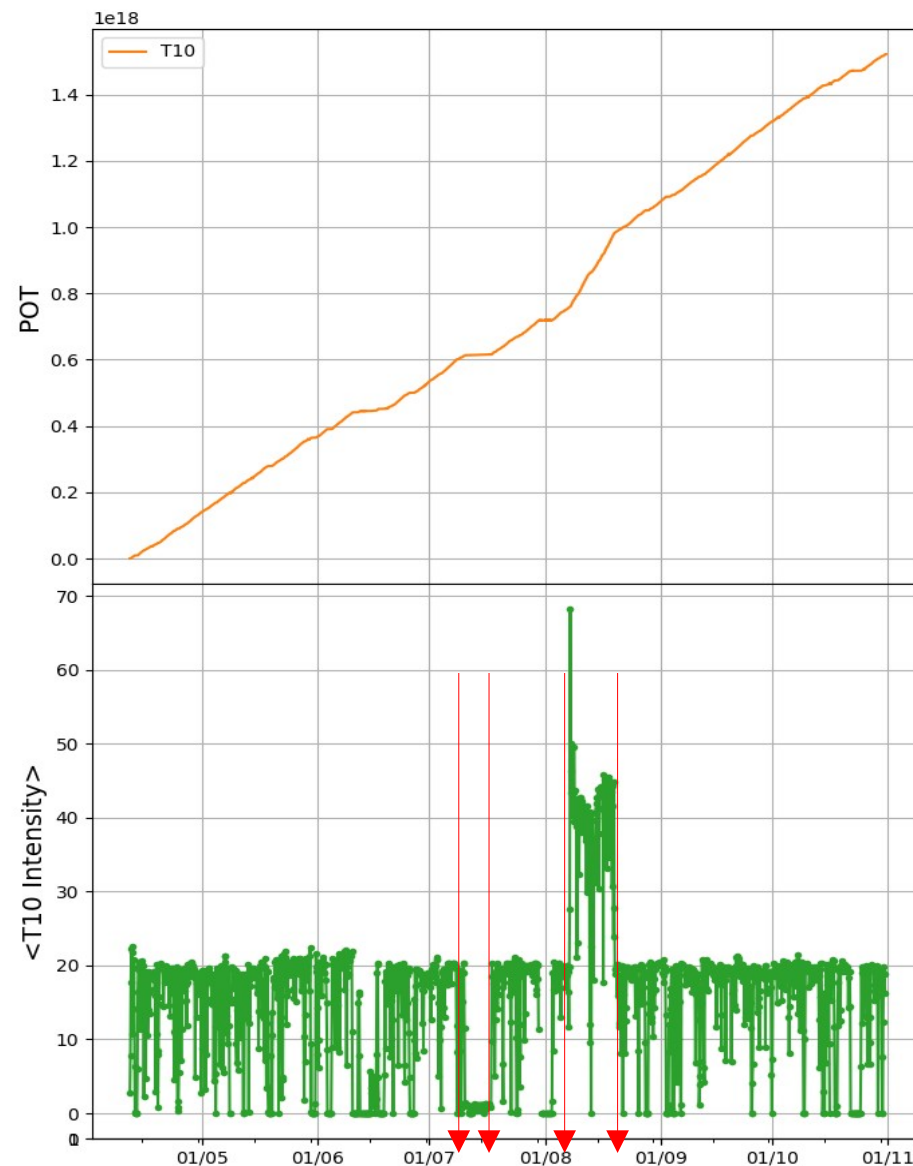
Period start: Thu Apr 11 2024
Period end: Thu Oct 31 2024
Total SOBs: 942279

T4 non-empty bursts ($>10e11$): 748291 (79%) (81% 2023)
T10 non-empty bursts ($>1e10$): 734161 (98%) (96% 2023)
Average burst period: 18.3 s



Data taking statistics (2)

	PNN	Low intensity	Dump
Non Empty bursts	645935	22241	52177
Total runs	523	16	47
Total runs saved	510	15	41
Saved bursts	604783	21722	50802
Total good runs	495	15	39
Good bursts	566233	20436	48984
Efficiency	88%	92%	94%
Protons on T10	$1.29 \cdot 10^{18}$	$2.7 \cdot 10^{15}$	$2.3 \cdot 10^{17}$



Operations (1)

- Chanti Felix
 - Well behaving after the initial troubles for the setup
- Anti0
 - Smooth operations
 - Problematic tile replaced before the start of the run
- Veto Counter
 - Smooth operation
- GTK
 - Smooth operation
 - 1 quarter of CHIP not working
- KTAG
 - Smooth operation

Operations (2)

- CHOD
 - Smooth operation
- LAV,SAC and IRC
 - Smooth operation
 - Usual problems with HV system (Crate CPU and boards)
 - One problematic channel (tripping)
- RICH
 - Smooth operation
 - TEL62 Saleve UP replaced
- NewCHOD
 - Smooth operation
 - Sipm replaced before the start of the run

Operations (3)

- MUVs
 - Smooth operation
- Lkr
 - Smooth operation
 - Problems with fan tray concentrated at the end of the run
- L0Calo
 - Smooth operation
 - New trigger conditions available
- HASC
 - Smooth operation

Main issues (FIXED)

- Big problem (beginning of May) with the timing system
 - First symptom: primitive time misalignment (no triggers or very few) fixed moving the fibers to a different LTU
 - After the fix problem with GTK (it was not restarting) fixed moving the fibers to a different LTU
 - After the fix of the GTK huge amount of TSM on LKr and MUV12 fixed moving the fibers to a different LTU
 - Plans to check properly the timing system (LTU+TTCEX) during the shutdown
- CHANTI readout
 - Difficult transition from TEL62 to new TDC readout
 - Lot of work by CHANTI experts to debug and to have a working firmware and online monitoring from the CERN group

Main issues (PENDING)

- PCfarm
 - Constantly crashing due to corrupted data coming from the detectors
- Run Control
 - Memory saturation
 - Periodic restart of the project
 - Problems in updating of the run and burst number
 - Duplicated file to be removed
 - Communication with L0TP periodically not working
- L0TP
 - Missing EoB packet (to be understood if really due to L0TP)

Main issues (PENDING)

- TEL62 of KTAG1 constantly CHOKING to be replaced during the shutdown
- TEL62RICHMULT not generating triggers and CHOKING
To be replaced??

TDAQ SPARES

- 2 TEL62 working (to be tested again)
- 4 TDCB working
- 1 TEL62 needs a new QDR chip (different with respect the others)
- 1 TEL62 showing constant rebooting (the one replaced on RICH): in lab no reboot
- Other TEL62 with communication problems between PP-SL
- 3 possible TEL62 good spares + 12 TDCB from CHANTI