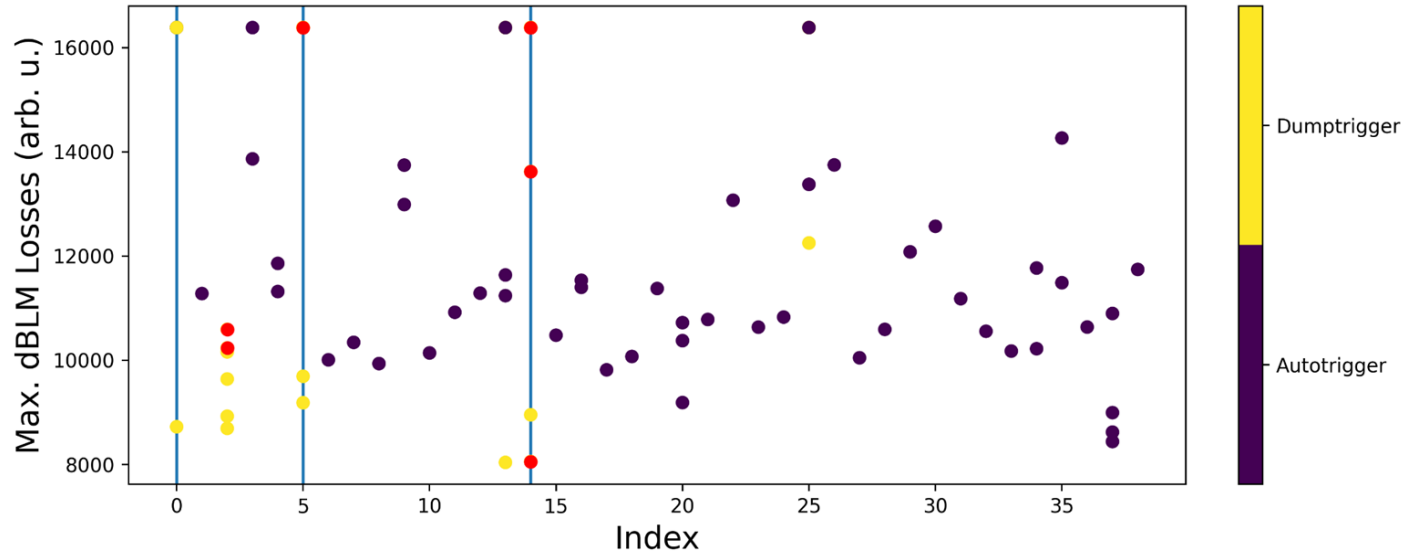


dBLM Overview

Statistics 2024: UFO Signals and Autotrigger

- 39 UFO events visible at dBLM:
 - 3 UFO events (6 signals) only found by dump (no autotrigger)
 - 33 UFO events found only by Autotrigger (no dump)
 - 3 UFO events (Autotrigger + Dump)
- 39 UFO events sum up to approx 49 UFO signals (different devices at same event)
- Devices with UFO signal:
 - .3: 3x Autotrigger, 1x Dumptrigger
 - .5: 7x Autotrigger, 1x Dumptrigger
 - 2.3: 3x Autotrigger
 - 2.5: 2x Autotrigger, 1x Dumptrigger
 - 3.3: 15x Autotrigger, 1x Dumptrigger
 - 3.5: 15x Autotrigger, 1x Dumptrigger
- 26 (reconstructable) events in 2024:
 - 19 during ramp, 2 during squeeze, 1 in adjust, 4 in stable beams
 - 6 lead to beam dump
- 1108 False Autotrigger

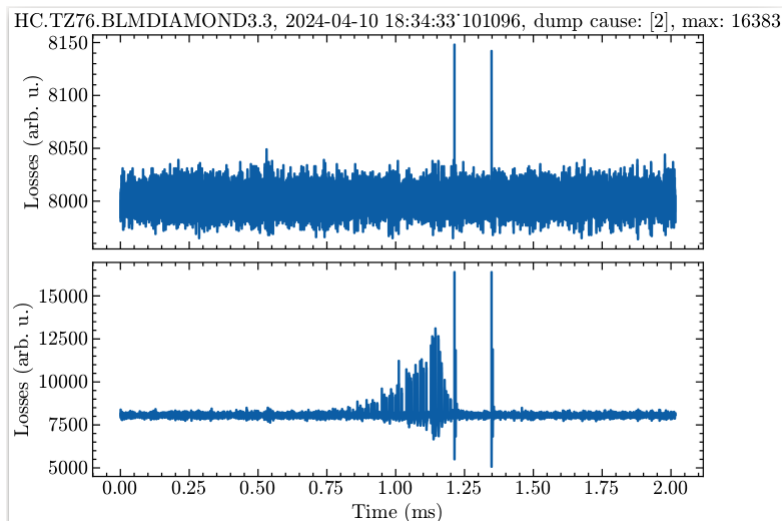
Comparison between max. losses within PM buffer of dump- and autotrigger



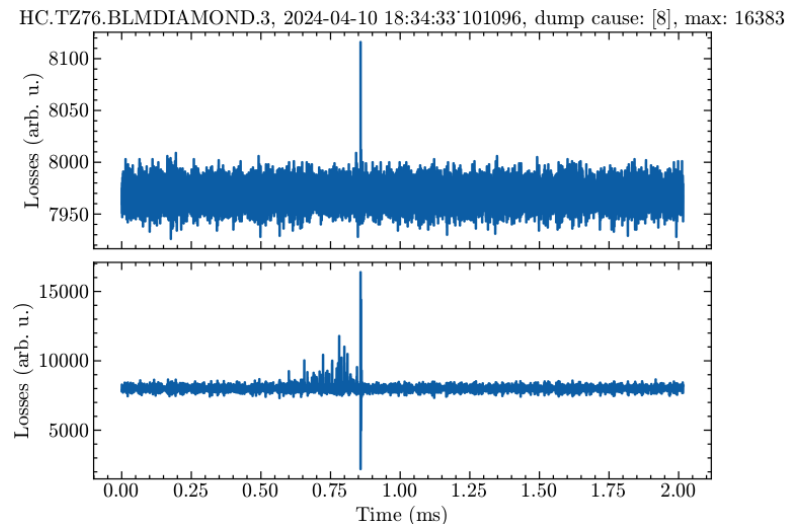
- Each index shows one UFO event (meaning one index could have up to 6 points for the different devices)
- Purple refers to correct Autotriggering
- Yellow refers to signals obtained by dump trigger
- Red indicate the max. losses of different devices at UFO dumps, where the Autotrigger did not trigger
- Y-axis shows the max. of the dBLM losses per device
- During the UFO events with beam dumps, some max. losses are caused by dump itself as UFO signal lead to slightly smaller losses than the dump itself

Example: successful vs non-successful Autotrigger (UFO dump 2024-04-10)

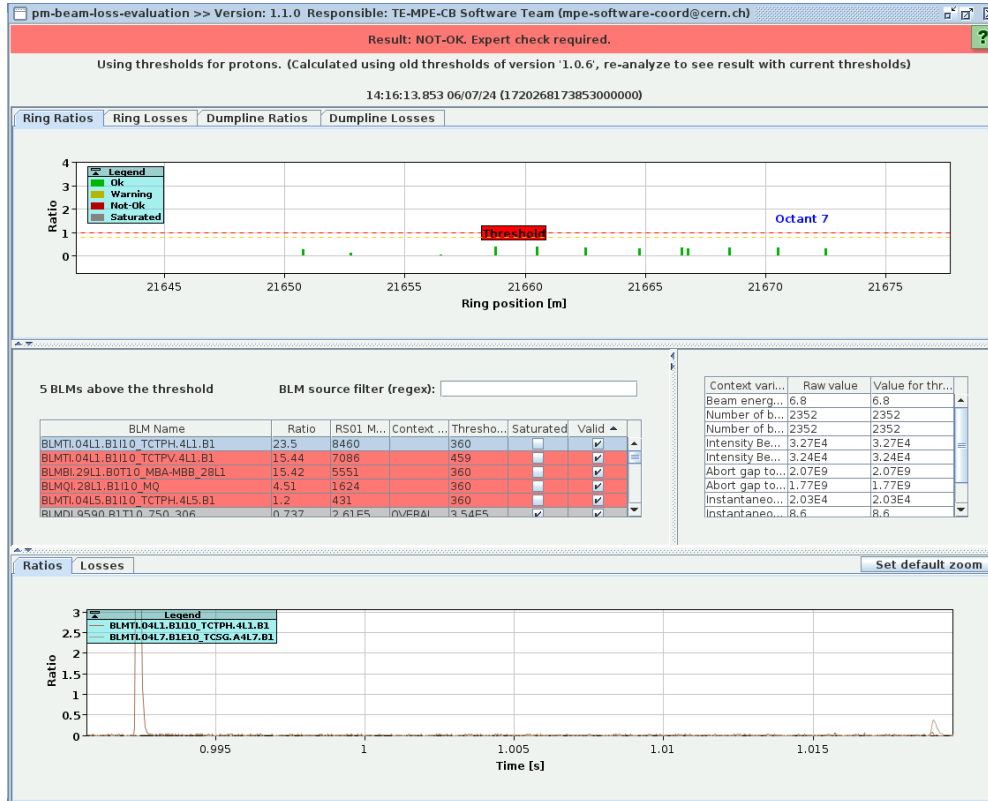
Autotrigger successful before beam dump



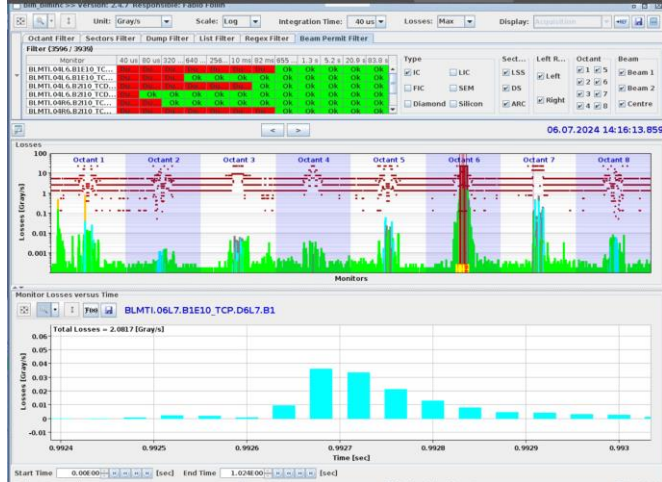
Signal only obtained by dump trigger



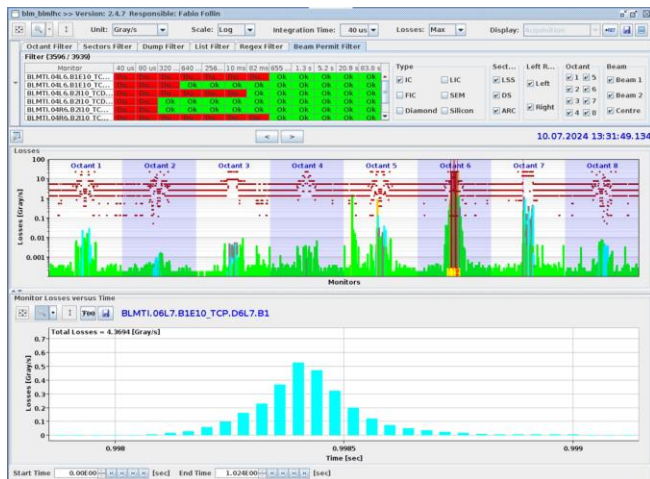
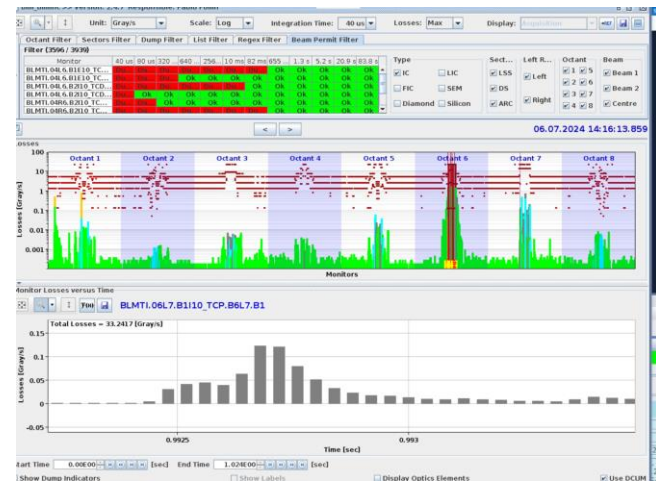
Quench 06/07: Dump losses compared to UFO losses



- UFO losses 30 ms before dump losses
- No autotrigger, dBLMs show at dump time no UFO losses



Quench, 06.07
No autotrigger



Quench, 10.07
With autotrigger



Losses at TCP

- During quench at 06/07/2024 autotrigger did not trigger
- BLM at TCP.D6 has for first quench at 06/07/2024 0.035 Gray/s and for quench at 10/07/2024 0.5 Gray/s
- Further downstream at .B6: quench (06/07/2024) losses are ~7 times smaller than during the one from 10/07/2024
- Could threshold for minimum losses be reduced?

UFO without autotrigger

- Losses at TCP.D6 0.025 Gray/s and at B6: 0.08 Gray/s
- Beam losses are visible, but factor 10 smaller compared to quench event at 10/07/2024

