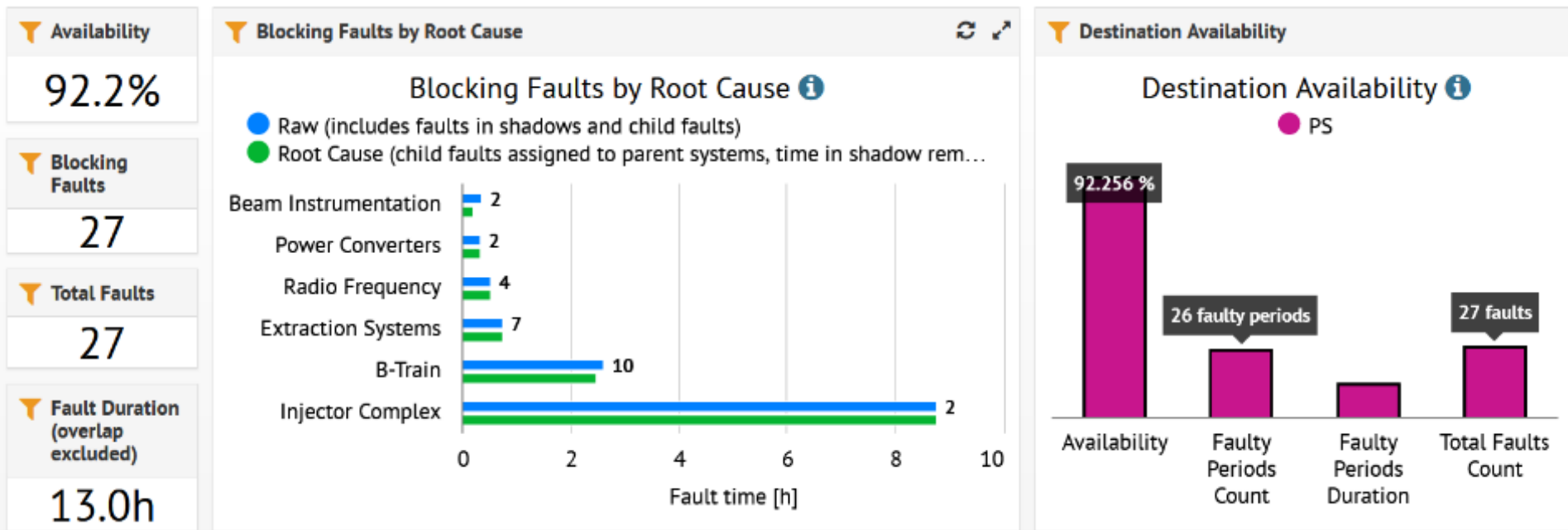


# PSB FOM Report

G.P. Di Giovanni  
for the PSB beam commissioning team

# Report w14: AFT

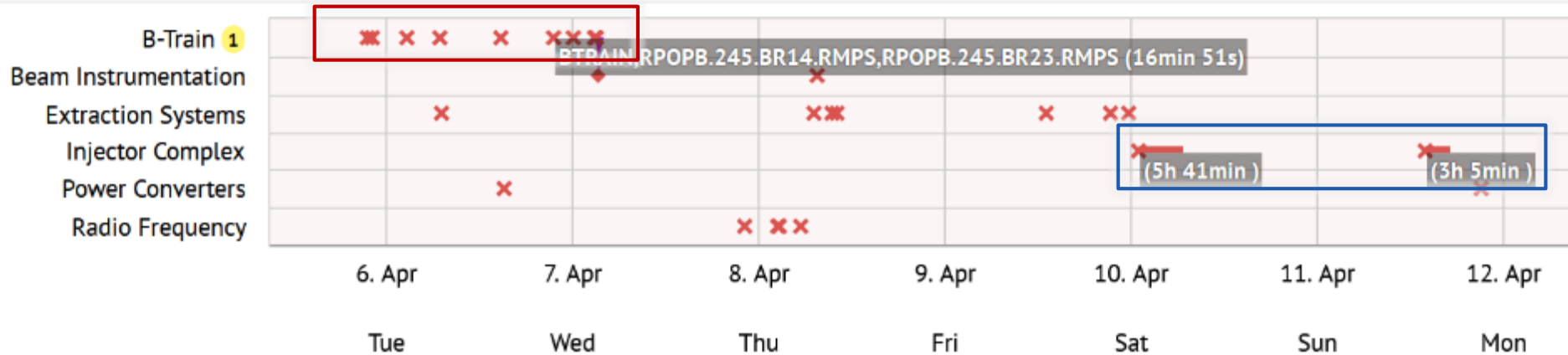
- Period from 5<sup>th</sup> April 9:00 a.m. to 12<sup>th</sup> April 9:00 a.m.



# Report w14: AFT

- Period from 5<sup>th</sup> April 9:00 a.m. to 12<sup>th</sup> April 9:00 a.m.

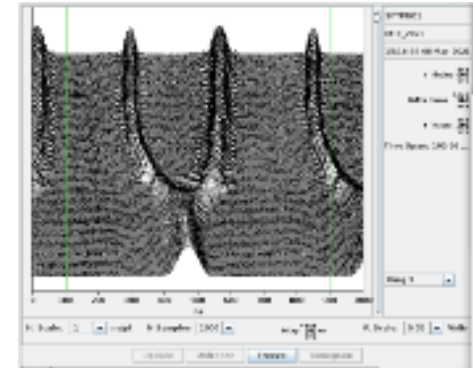
## Faults Timeline by System



- **Recurrent faults of POPS-B over the long Easter break.**
  - Finally could be linked to a mis-configuration of the **B-Train in Ring2.**
  - Initially TE-MSC-MM experts updated the configuration, but it did not completely fixed the issue.
  - On Wednesday planned stop of ~1 hour to allow **switching the B-Train chain from R1&2 to R3&4**
    - At the same time POPS-B experts switched the bank **MPS-B to MPS-C.**
- **Most of the downtime in the week-end due to faults in Linac4.**

# Report w14: Progress

- **Beam needed for PS/SPS beam commissioning provided as requested.**
- **MTE High Intensity version ready:**
  - Issues with the RF splitting and synchronization fixed. More fine tuning needed, but the **beam is ready for PS BC.**
  - Available with an intensity up to **500 ppr** and  $\varepsilon_H/\varepsilon_V \sim 12/3.5 \mu\text{m}$ .
- **BCMS25:**
  - **First version** for the PS RF setting-up was prepared and being actively used by PS.
- **PSB injection reviewed and optimized:**
  - To follow-up on **recent changes in the PSB injection TL**, such as adaptations needed for the L4 Laser Emittance Measurement.
  - **Stripping Foils** testing ongoing.
- **Transverse emittance measurements:**
  - Ongoing work to **clean up HW/SW settings** and **understand discrepancies across instruments.**
  - **BTM SEM grid** application updated to get the latest optics: **stability issue** observed with the measurements of low horizontal emittance ( $\sim 1 \mu\text{m}$ ) because of the dispersive component.
  - A few **bugs fixed** and **new features** available for the **LIU** and **pre-LS2 WS** applications
- Intense **measurement program** to understand of the **resonances and their compensation**, and identify the root cause of **the tails in the profile of the vertical plane observed on LHC25.**



# Report w14: Next Steps/Outstanding Issues

- **POPS-B:** continue working on improved regulation together with Bdl tuning.
- **LIU WS:** work together with SY-BI to systematically get reliable profiles.
  - LIU R2H wire seems broken. SY-BI preparing a replacement for the TS.
- **Extraction trajectory:** Continue the debugging of the jitter of the extraction trajectory observed in the last weeks.

## Continue beam setup:

- Start working on **ISOLDE** and **AD**.
- Continue **LHC25 optimisation** studies (resonance and beta-beating compensation, effect of reduce momentum spread of injected beam).