

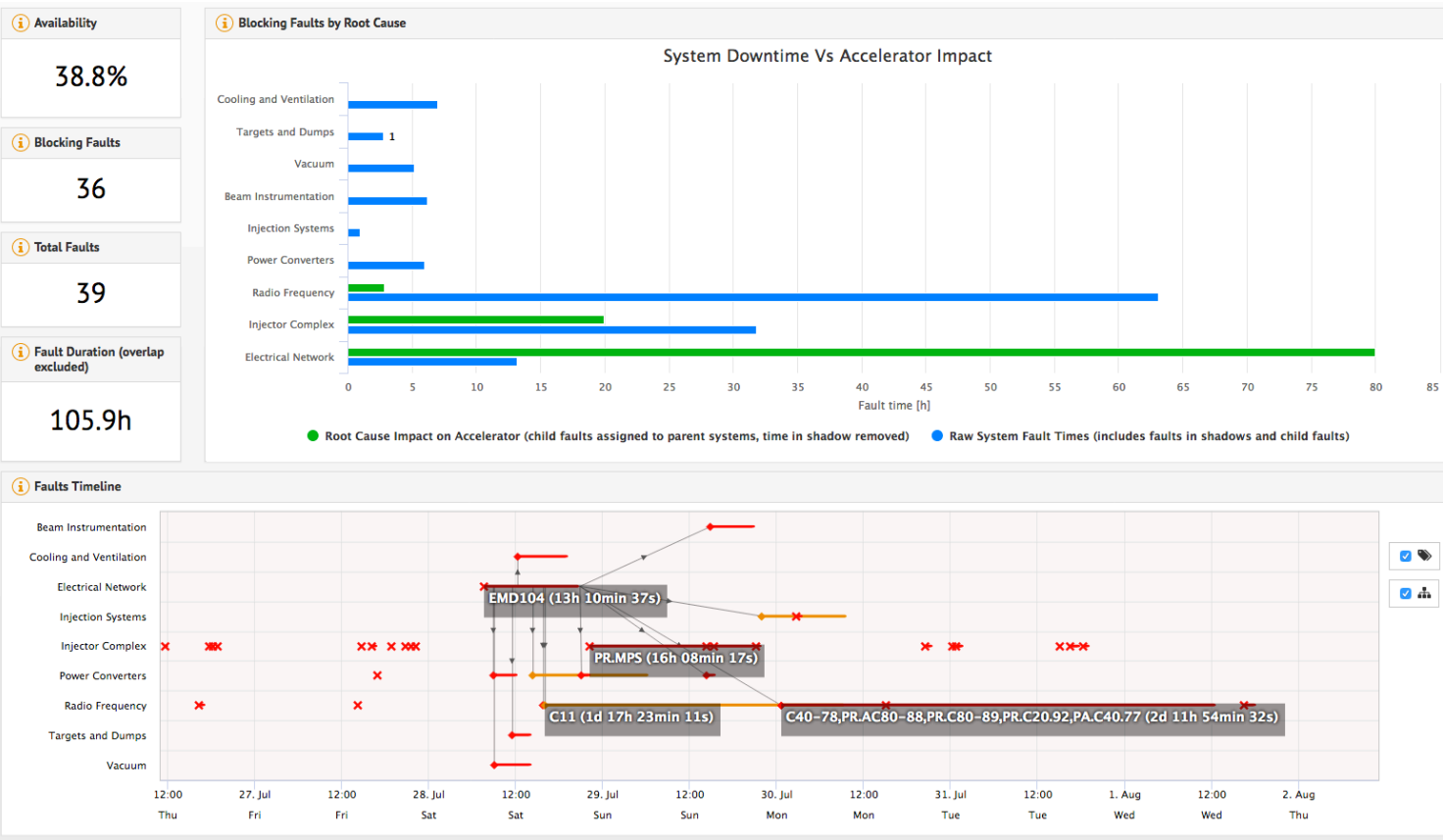


Brief PS status 26 July – 2 Aug 2018

Matthew on behalf of PS operations and supervisor team



PS Dashboard



PS Dashboard

Representative of LHC only (RF fault from Monday)

Availability

38.8%

Blocking Faults

36

Total Faults

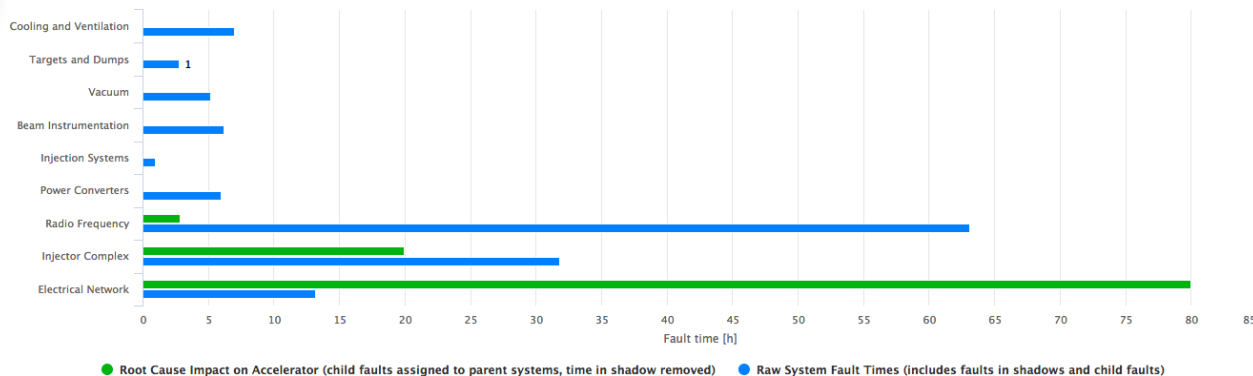
39

Fault Duration (overlap excluded)

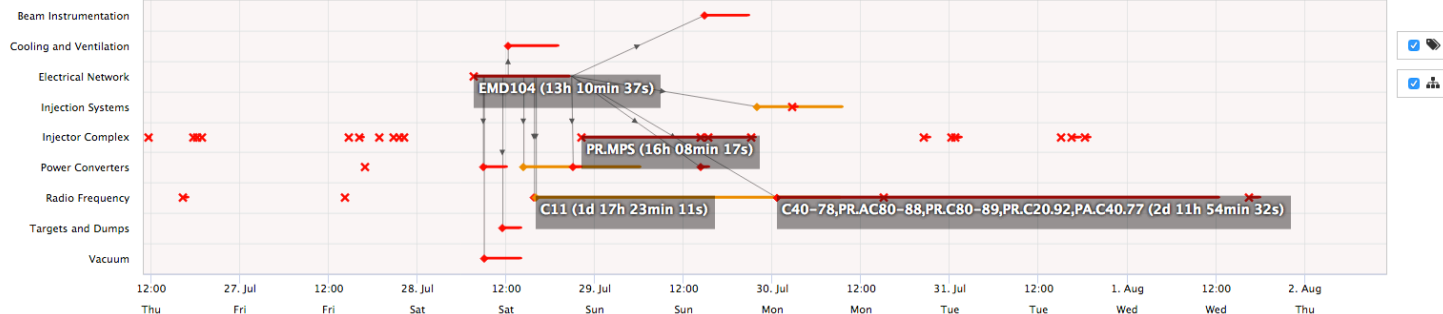
105.9h

Blocking Faults by Root Cause

System Downtime Vs Accelerator Impact



Faults Timeline



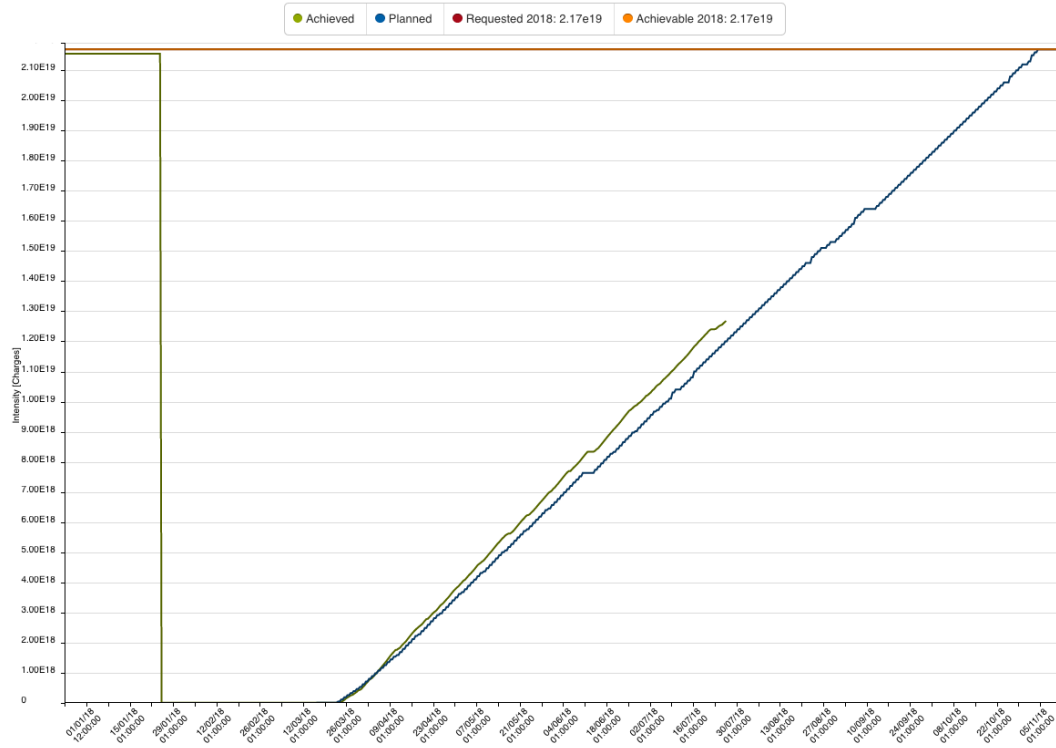
Timeline of main events this week... (1)

- **LHC MD week went very smoothly**
- **Vaccum Leak in SS90 (WBPU): stable, cooling water leak in ring: stable**
- **Thursday evening:** a few trips from the PSB MPS
- **Friday evening:**
 - Stability issues again on Ring 2 in PSB, **forced to switch back to Ring 3 on TOF:** likely to stay like this for 2 weeks
- **Saturday morning (at 07:41):**
 - Many TT2 power converters tripped, in local mode: piquet called
 - Caused by fault on 18 kV transformer station (EMD104): **~13 hours of downtime**
 - Beam delivery continued to the East Area until about 08:55...
- **1 hour later at 08:55 and electrical glitch (due to intervention on EMD104), tripped the entire CPS:**
 - Huge implications getting equipment up and running!
 - PSB-PS operation teams spent the day coordinating piquet teams to get things back up and running
- **Saturday afternoon (at 16:00) PS was ready for EAST but beam unstable from PSB:**
 - Problems with PSB TFB and correctors in BT: managed to accelerate a parasitic TOF: **PS looked OK**
- **Saturday evening at 20:50: EMD104 repaired** but waiting for beam set-up in PSB...
 - Until its MPS failed at ~22:00, root cause of failure still being investigated

Timeline of main events this week... (2)

- **Sunday afternoon (at 14:00) PSB MPS fixed** allowing INDIV and EAST beams in PS:
 - **Issue with SMH57 could be identified:** interlock settings changed after reboot caused by glitch
 - Similar story for **TMS**: local reboot needed to get it going
- **PS start-up delayed until to late Sunday evening ~22:00**
 - Issues with PSB: **distributor** and **extraction bumpers**
- **KFA45 module 2** was found not pulsing (due to bad contact in electronics rack):
 - Survived in a degraded mode with 3 modules overnight, fixed by expert yesterday
- **Sunday at midnight:** LHC (single bunch), MTE, TOF and EAST were up and running
- Various other minor issues we solved throughout the night:
 - **SMH42 power supply stability**, **Sequence Manager** (not editable) blocking complex and **20 MHz cavities**
- Major problem with LHC LLRF beam control from re-start on Sunday evening:
 - No multi-bunch LHC beams could be produced since start-up, resolved yesterday at lunch time

nTOF Protons on Target - Status



- Up to this morning 2/8 we delivered 1.27×10^{19} POT
- This is 58% of the total intensity forecasted and 6% more than scheduled today
- New n-TOF cycle ready for deployment today (now):
 - OP are making references of trajectory and beam size at target before swap



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