



Linac4

Week 47

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Machine Availability

92.8%

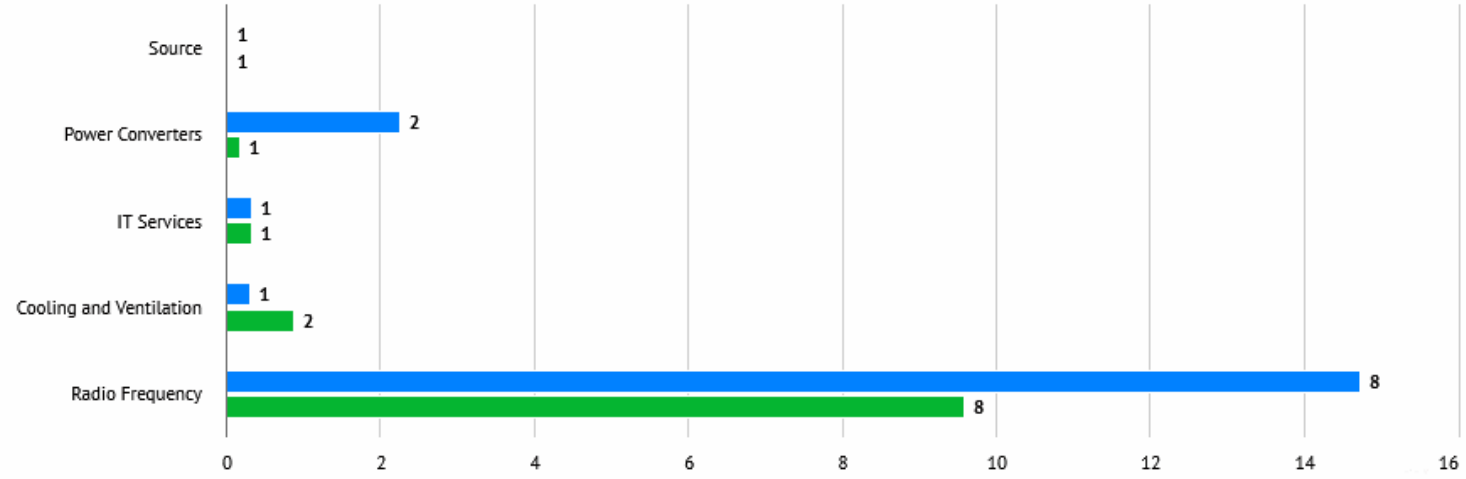
Fault Count

13

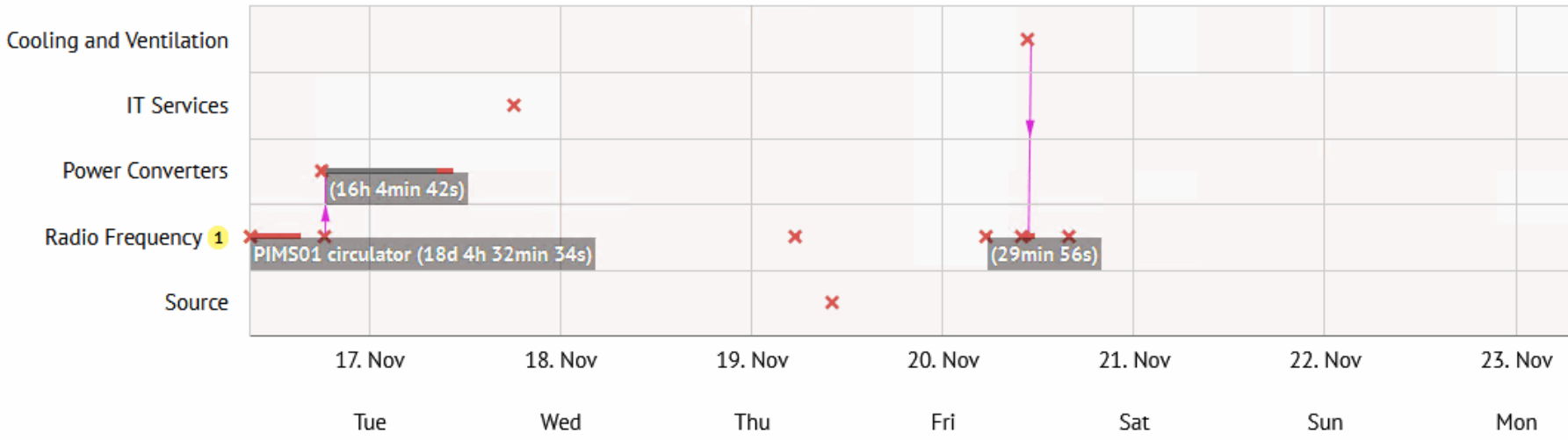
Fault Duration (overlap excluded)

11.0h

System Downtimes: Raw, Root Cause



Faults Timeline by System



- Beam to Linac4 dump only (PSB and SWY access)
- New logbook successfully deployed
- Investigation of open aspects in phasing procedure
 - downstream cavities can be detuned or pulsed at low voltage (amplitude/100) to avoid TOF energy errors (1% amplitude, 1° phase)
 - BPM need to be well-calibrated to provide reliable TOF results
 - distance between BPMs in layout database found to be partly wrong => had to be corrected in TOF FESA class (update for layout database ongoing)
 - TOF timestamp required to be transmitted to OP-TOF application to align phase and beam energy measurement correctly



Summary, week 47



- A new method using the beam phase in 1 downstream BPM was successfully tested. It can provide an independent energy measurement.
- The phase-shifter of CCDTL5-6 was re-adjusted. Satisfactory setting reached. However, the optimum is slightly outside the accessible range of 0 to 70°.
- Linac4 was completely re-phases. Good result: Symmetric profile with sharp edges, no tails