



TOTEM / PPS XRP Interlock Status

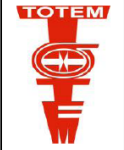


MPP Meeting

21 April 2022

Mario Deile

Summary of:

CERN CH-1211 Geneva 23 Switzerland		the TOTEM Experiment at LHC	<small>TOTEM Project Document No.</small> TOTEM
			<small>CERN Div./Group or Supplier/Contractor Document No.</small> EP-CMT
			<small>EDMS Document No.</small> 2720680 v. 1.0

Date: 20 April 2022

Functional Specification and Test Report

**THE TOTEM INTERLOCKS IN 2022:
TEST PROCEDURE AND RESULTS**

Abstract

This document summarises the recommissioning tests of the TOTEM interlock system after LS2, performed in spring 2022.

See also MPP presentation from 21/05/2021 about all LS2 activities.



Test Overview



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Links to Collimation e-log entries

← tested for each pot

← tested for each pot and both sets of inner limits (old and IPL)

← machine mode test (08/04/2022)

← done in autumn for pilot beam (not repeated)

No anomalies observed.



Status and Plans



XRP system ready for beam from interlock point of view,
but ...

not ready for data taking because no detector packages in horizontal pots (for PPS runs):

- Diamond timing detectors had suffered from late deliveries;
now detector packages ready and waiting for installation slot
- Silicon tracking detector packages had been installed but showed too many faults
(wire bonds damaged between H8 tests and tunnel tests)
→ now repaired and waiting for installation slot

We already requested usage of the LHCb access slots in early May.

Then:

All pots concerned (2 x 3) need a short basic interlock validation:
Inner limit violations (old and IPL) have to cause a dump.
(few hours needed; can be split)