



Update of MPP mandate and membership

MPP meeting 21st of March 2014

Updated Mandate (draft)

The machine protection systems protect accelerator equipment of the LHC and its injector complex against uncontrolled release of energy stored in the magnet system and the particle beams while at the same time allowing for efficient operation.

The Machine protection Panel (MPP) shall - in conjunction with experts of the relevant equipment and operation teams -

- ensure the coherent integration of all relevant sub-systems into the machine protection systems of CERNs existing accelerator complex and its future upgrades
- approve all essential elements included in the machine interlock chain and address questions related to the dependability of the machine protection system
- verify the proper commissioning of all MPS sub-systems and define the safe operational envelope of the machine based on the state of the commissioning
- define procedures for the operation of the machine interlock systems and required diagnostic tools
- Identify, assess and document relevant failure scenarios of equipment systems and machine components and propose according mitigation measures
- specify functional requirements for additional protection systems to be developed, constructed and tested

The panel shall report to the LMC for all matters related to the LHC and to other relevant bodies for matters related to the injector complex (IEFC) and future upgrades (HL-LHC, FCC).

Proposed (new) Members

Collimation		Injection/Beam Dump		BI/BLM	
REDAELLI	Stefano (BE-ABP-HSS)	CARLIER	Etienne (TE-ABT-EC)	DEHNING	Bernd (BE-BI-BL)
BRUCE	Roderik (BE-ABP-HSS)	BRACCO	Chiara (TE-ABT-BTP)	HOLZER	Eva Barbara (BE-BI-BL)
VALENTINO	Gianluca (BE-ABP-HSS)	UYTHOVEN	Jan (TE-ABT-BTP)	ZAMANTZAS	Christos (BE-BI-BL)
				KALLIOKOSKI	Matti (BE-BI-BL)
EXP		OP		MPP	
WENIG	Siegfried (PH-ADO)	SOLFAROLI CAMILLOCCI	Matteo (BE-OP-LHC)	WENNINGER	Jorg (BE-OP-LHC)
JACOBSSON	Richard (PH-LBO)	POJER	Mirko (BE-OP-LHC)	WOLLMANN	Daniel (TE-MPE-PE)
DI MAURO	Antonello (PH-AID-DT)	PONCE	Laurette (BE-OP-LHC)	ZERLAUTH	Markus (TE-MPE-MS)
BACCHETTA	Nicola (PH-UCM)	PAPOTTI	Giulia (BE-OP-LHC)	CHETVERTKOVA	Vera (TE-MPE-PE)
DEILE	Mario (PH-TOT)	KAIN	Verena (BE-OP-LHC)		
FASSNACHT	Patrick (PH-ADO)				
EN/STI		BIS/PIC/WIC/FMCM/QPS		MPE	
LECHNER	Anton (EN-STI)	GABOURIN	Stephane (TE-MPE-EP)	PUCCIO	Bruno (TE-MPE)
		ROMERA RAMIREZ	Ivan (TE-MPE-MS)	SCHMIDT	Rudiger (TE-MPE-PE)
		DENZ	Reiner (TE-MPE-EP)	APOLLONIO	Andrea (TE-MPE-PE)
		STECKERT	Jens (TE-MPE-EP)		
QTAWG/MP3		RF/ADT		EPC	
SAPINSKI	Mariusz (BE-BI-BL)	BUTTERWORTH	Andy (BE-RF-CS)	MONTABONNET	Valerie (EPC)
VERWEIJ	Arjan (TE-MPE-PE)	HOFLE	Wolfgang (BE-RF)	TODD	Benjamin (TE-EPC-CCE)

- No self-subscription to list

Proposed Info List

- Leave current entries (apart from departures) + add all names removed from member list +
 - LHC-EICs
 - LHC coordinators
 - Eva Calvo Giraldo, Enrico Bravin (BPMs and BSRT/AG)
 - Bettina Mikulec (Linac4)
 - Rhodri Jones (to complete all GLs of concerned groups)
 - 1 person from VAC and CRYO (tbd)
 - Thomas Ladzinski (Access)
 - Vincent Chareyre (EN/EL)
- Leave open for self-subscription

Current Mandate (last update in 2009)

The machine protection system shall protect all equipment of the LHC accelerator against uncontrolled release of energy stored in the magnet system and the beams. At the same time it must allow for efficient operation.

The main sub-systems for equipment protection are the quench protection system, the beam dump system, the beam loss monitor system and the collimation system. They need to be integrated and interfaced to other systems, such as the powering, beam instrumentation, RF, cryogenics, LHC experimental detectors, access, vacuum valves, injection elements, SPS as injector, etc. Interfaces between all systems for machine protection are via reliable links (machine interlock system) and via the control system.

The panel shall ensure a coherent integration of all those sub-systems into the machine protection system. The panel shall verify the proper commissioning of all MPS sub-systems. Based on the state of the commissioning and of the MPS test results the panel shall define the safe operational envelope of the LHC.

Taking into account operational phases and failure scenarios the panel shall define:

- Input channels to the machine interlock system

- Procedures for the operation of the machine interlock system and tools for diagnostic (enable powering, enable beam, post mortem recording, etc.)

- Interfaces, either via hardware links, or via the control system

- Specific hardware to be developed, constructed and tested

- Software interlocks required for safe machine operation

The panel shall approve all essential elements that are included in the machine interlock chain and will address questions related to the reliability of the machine protection system.

The panel shall report to the LMC.

Current Members

ALEMANY FERNANDEZ	Reyes (BE-OP-LHC)	MACINA	Daniela (EN-MEF)
APOLLONIO	Andrea (TE-MPE-PE)	MACPHERSON	Alick (BE-RF-SRF)
APPLEBY	Robert Barrie (BE-ABP)	NEBOT DEL BUSTO	Eduardo (BE-BI-BL)
ARDUINI	Gianluigi (BE-ABP)	PAPOTTI	Giulia (BE-OP-LHC)
ASSMANN	Ralph Wolfgang (BE-ABP-HSS)	PERROT	Anne-Laure (EN-MEF-LE)
BELLODI	Giulia (BE-ABP-HSL)	POJER	Mirko (BE-OP-LHC)
BHAT	Pushpalatha (PH-UCM)	PONCE	Laurette (BE-OP-LHC)
BRACCO	Chiara (TE-ABT-BTP)	PUCCIO	Bruno (TE-MPE)
BRUCE	Roderik (BE-ABP-HSS)	REDAELLI	Stefano (BE-ABP-HSS)
BURKART	Florian (TE-MPE-PE)	ROMERA RAMIREZ	Ivan (TE-MPE-MS)
BUTTERWORTH	Andy (BE-RF-CS)	SALVACHUA	
CARLIER	Etienne (TE-ABT-EC)	FERRANDO	Belen Maria (BE-ABP-HSS)
CHEVERTKOVA	Vera (TE-MPE-PE)	SCHMIDT	Burkhard (PH-DT-TP)
DABROWSKI	Anne (PH-CMX-DS)	SCHMIDT	Rudiger (TE-MPE-PE)
DEHNING	Bernd (BE-BI-BL)	SOLFAROLI	
DENZ	Reiner (TE-MPE-EP)	CAMILLOCCI	Matteo (BE-OP-LHC)
GABOURIN	Stephane (TE-MPE-EP)	STECKERT	Jens (TE-MPE-EP)
GODDARD	Brennan (TE-ABT)	STICKLAND	David Peter (PH-CMX)
GORINI	Benedetto (PH-ADT-DQ)	TODD	Benjamin (TE-EPC-CCE)
GUTHOFF	Moritz (PH-CMX-DS)	UYTHOVEN	Jan (TE-ABT-BTP)
HEIN	Lutz Matthias (TE-MPE-PE)	VENTURINI	
HOLZER	Eva Barbara (BE-BI-BL)	DELSOLARO	Walter (BE-RF-SRF)
JONKER	Michael (TE-MPE-PE)	WENNINGER	Jorg (BE-OP-LHC)
KAIN	Verena (BE-OP-LHC)	WOLLMANN	Daniel (TE-MPE-PE)
LEVINSEN	Yngve Inntjore (BE-ABP-LAT)	ZAMANTZAS	Christos (BE-BI-BL)
		ZERLAUTH	Markus (TE-MPE-MS)

Current Info List

APPLEBY	Robert Barrie (BE-ABP)	MARSILI	Aurelien (BE-ABP-HSS)
BACCHETTA	Nicola (PH-UCM)	MASI	Alessandro (EN-STI-ECE)
BAER	Tobias (BE-OP)	NEBOT DEL BUSTO	Eduardo (BE-BI-BL)
BAILEY	Roger (DG-DI-DAT)	NORDT	Annika
BARTMANN	Wolfgang (TE-ABT-BTP)	PRIEBE	Agnieszka (BE-BI)
BRUGGER	Markus (EN-STI-EET)	SAPINSKI	Mariusz (BE-BI-BL)
BRUNING	Oliver (BE-ABP)	SIEMKO	Andrzej (TE-MPE)
CALVIANI	Marco (EN-STI-EET)	STEIN	Oliver (TE-MPE-PE)
COLLIER	Paul (BE)	VERWEIJ	Arjan (TE-MPE-PE)
DEILE	Mario (PH-TOT)	WENIG	Siegfried (PH-ADO)
DI CASTRO	Mario (EN-STI-ECE)		
DI MAURO	Antonello (PH-AID-DT)		
ESPOSITO	Luigi Salvatore (EN-STI-EET)		
FERRO-LUZZI	Massimiliano (PH-LBD)		
GARNIER	Jean-Christophe (TE-MPE-MS)		
GUTHOFF	Moritz (PH-CMX-DS)		
HALL-WILTON	Richard (EN-STI)		
JACOBSSON	Richard (PH-LBO)		
JENSEN	Erk (BE-RF)		
JENSEN	Lars (BE-BI-SW)		
JONKER	Michael (TE-MPE-PE)		
KOZANECKI	Witold (PH-UAT)		
LAMONT	Mike (BE-OP)		
LECHNER	Anton (EN-STI-EET)		
LOSITO	Roberto (EN-STI)		