

Discussion-Session
Session 1: Wednesday (11:15–13:00 Hrs)

Machine Protection And Interlock Systems

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The purpose of a MPS is to protect the equipment against abnormal beam behaviour. High intense and high brilliant particle, photon and X-ray beams are capable of causing significant damage to components in a fraction of a second, i.e. too fast for any human reaction.

The aim of this session is to discuss existing and planned MPS with both their specific and their general requirements. Among points to be reviewed in the need for the MPS to be fail-proof are:

- the choice of sensors and components,
- the logic,
- the strategy, etc.

Some typical questions that will be raised are:

- What are the criteria for determining that an alarm situation has been reached?
- What is the subsequent action of the system?

Very often the MPS may allow different beam modes, depending on beam permit inputs:

- Which kind of beam modes exist?
- Which are the input signals?
- How are these systems integrated with the accelerator controls?
- What is the impact on their operation?

This session will include a few very brief presentations of existing and planned MPS' from different machines to illustrate the above questions and to stimulate the subsequent discussion.