

# PS Booster magnets Task Force Kick-off meeting

Ralf Trant

21 March 2023

# Agenda

- Introduction – Miguel
- TF mandate - Ralf
- The challenge – Antony
- Today's understanding of the failure modes – Stefano
- How do we work - Luigi

# Mandate

This task force will carry out a full analysis of the impact of increasing failure rates in the PS Booster main ring magnets and propose possible mitigation measures. The various objectives of this Task Force with different timelines and problematics call for an approach by subtasks.

The Task Force shall report on its findings at the TE-TM, present an intermediate report to the IEFC by end of June 2023 and a final report to the Chamonix workshop early 2024. In addition to summarising the analysis described above, the different subtasks shall put forward technical proposals.

# Mandate

- Subtask-1: Readiness and history of spares, including those in radioactive storage.
- Subtask-2: Analysis and understanding of the failure modes and processes to evaluate the nature and severity of the causes for these failures, including the magnets in radioactive storage.
- Subtask-3: Options including respective decision criteria, for in-situ and ex-situ patches and repairs of water leaks and other failures, including those that will induce PS Booster performance limitations.
- Subtask-4: Identification of degraded beam operation modes and alternative beam optics or beam parameters to mitigate the stresses on the magnets to limit or slow down further degradation of the magnets.
- Subtask-5: Preparation of the medium-term plan to re-establish a set of spare magnets to compensate for the loss of magnets which cannot be repaired, including procurement of new magnets, evaluating the option of a new design and addressing timeline aspects.

# Mandate

## Task Force Members:

Chair: Ralf Trant (TE)

Scientific secretary: Luigi Scibile (TE)

Subtask 1: Anthony Newborough (TE-MS)

Subtask 2: Stefano Sgobba (EN-MME), Ana Teresa Perez Fontenla (EN-MME)

Subtask 3: Gilles Favre, Serge Mathot (EN-MME), Antony Newborough (TE-MS)

Subtask 4: Gian Piero di Giovanni (BE-OP)

Subtask 5: Mikko Karppinen (TE-MS)

# How do we work

- TF will meet every 2 weeks Wednesday 14h00 to 15h30 (t.b.c.)
- Next meeting ( $t_0 + 2w$ ) 29 March
- The sub-TF will organize themselves for additional membership, meetings, ...
- Sub-TFs will report regularly to TF on the progress and challenges
- TF indico page