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Status and Perspectives of High-Field Magnets R&D for Particle Physics

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The CERN Council has endorsed in June 2020 the Update of the European Strategy for Particle Physics. The strategy document contains a strong recommendation to reinforce R&D on key technologies for future accelerators, and in particular high field magnets, including HTS.

To follow up on the implementation of this recommendation, a High Field Magnet Expert Panel (HFM-EP) has been convened under the auspices of the European Large National Laboratories Directors Group (LDG) to create a prioritized R&D roadmap for the High Field Magnets.

The proceedings of the HFM-EP, planned to be endorsed by the CERN council in December 2021, will document this roadmap. They will include the current state-of-the-art and the scientific drivers for High Field Magnets R&D, the progress needed to enable this technology for future facilities, the potential deliverables and demonstrators for the next decade, a prioritized work plan, considering the capabilities and interests of stakeholders, and a range of scenarios for engagement.

We will describe here the status of this work including a technology review about the state-of-the-art, R&D plans, challenges and future opportunities for High Field Magnets for future accelerators.

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Collaboration / Activity

None

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