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[202] CHART MagDev Roadmap for Nb3Sn Magnets for FCC-hh

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Reaching the ultimate field for Nb3Sn conductor in accelerator magnets in a robust (industrializable) and cost-effective manner is the goal of an international effort, centered around the specifications for the FCC-hh main dipoles. While conductor R&D makes steady progress towards FCC-hh specs, the experimental effort on high-field magnets in Europe is ramping up. CHART MagDev has recently reached an important milestone, allowing for the selection of the most promising technologies of an innovative Nb3Sn magnet. The concept combines novel materials with stress-management and simplified manufacturability. In this presentation we present R&D results, as well as the design concept that will be implemented and refined over the coming years.

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