APR14-2014-020164

Abstract for an Invited Paper for the APR14 Meeting of the American Physical Society

CERN Roadmap: Exploitation of the Full Potential of the LHC and post-LHC Accelerator Studies FREDERICK BORDRY, Director of Accelerators and Technology CERN

After a Long Shutdown (LS1), LHC physics will resume in early 2015 while the other injectors and experimental areas of CERN will resume their operation in the second half of 2014. After a short report on the LS1 status, the presentation will describe the operation strategy after the LS1 and the main activities during the LS2. Then, it will give the plans for the full exploitation of the LHC in line with the priority of Update of the European Strategy for Particle Physics: HL (High Luminosity) LHC project. HL-LHC installation is planned for Long Shutdown 3 (LS3), now scheduled for the period 2023-2025 with the goal to reach 3000 fb⁻¹ by 2035. Finally post-LHC accelerator studies will be introduced and particularly the Future Circular Collider (FCC) programme centred on a new-generation circular colliders with a circumference of 80 to 100 kilometres.