

LHC Collider Status and outlook

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After a Long Shutdown (LS1), LHC physics resumed in 2015 with a 1st data taking campaign at the record-breaking energy of 13 TeV. The year 2016 was declared a production year and was an exceptional year for the LHC with a peak luminosity ($> 1.4 \cdot 10^{34} \text{ cm}^{-2}\text{s}^{-1}$) overcoming by 40% the design luminosity and with an integrated luminosity of 40 fb^{-1} received by ATLAS and CMS, that equates to more data than had been collected in the previous years combined. Overview of LHC operation, performance and limitations over the last 2 years and the strategy to reach the full design energy of 14 TeV are discussed.

A projection for the expected LHC performance for Run 2 and Run 3 is given. Then, the plans for the full exploitation of the LHC (HL-LHC) in line with the priority of Update of the European Strategy for Particle Physics are presented.