

Aperture & optics –measurements and conclusions

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In 2011, the LHC has delivered collisions with different optics configurations in the four interaction points. The performance has been pushed during the year until a final configuration with 3 IPs squeezed to 1 m was achieved. Correspondingly, the machine aperture has been measured in the different configurations, at injection and at top energy, to ensure a safe operation in all conditions of β^* and crossing angle configuration. In this paper, the 2011 commissioning experience of LHC optics is reviewed and the results of aperture measurements are presented and compared with the expectations. The measurement requirements for the 2012 operation and possible improvements are also discussed.

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