

Relativistic Heavy Ion Collisions. The ALICE experiment at LHC

Ginés Martínez, Subatech, Nantes, France

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I will remind the main physics motivations for the study of heavy ion collisions at relativistic energies [1]. After a brief review of the heavy ion experiments at SPS and RHIC, I will focus on the heavy ion program at LHC (CERN, Switzerland). ALICE [2], the only experiment at LHC specially designed for the heavy ion physics, will be presented. Special attention will be paid to its physics program. Then first data in proton-proton collisions at 7 TeV will be presented [3].

References

- [1] Cabbibo et al., Phys. Lett. B59 67 (1975); Collins et al., Phys. Rev. Lett. 34 1353 (1975); Bjorken, Phys. Rev. D27 140 (1983).
- [2] The ALICE Collaboration, JINST 3 S08002 (2008); The ALICE Collaboration, J. Phys. G: Nucl. Part. Phys. 32 1295 (2006).
- [3] The ALICE Collaboration, arXiv:0911.5430v2, Eur. Phys. Jour. C65 111(2010); The ALICE Collaboration, arXiv:1004.3034v2, accepted by EPJC (2010); The ALICE Collaboration, arXiv:1004.3514v2, accepted by EPJC (2010).