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B physics prospects of CMS with the first LHC data

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B physics will be one of the key physics themes at the Large Hadron Collider (LHC). B hadrons are an ideal tool for advancing our current understanding of the flavour sector of the Standard Model (SM), and searching for effects originating from physics beyond the SM, thanks to the large production rate and the fact that B hadrons are relatively easy to trigger on and identify due to their long lifetime and high mass. The interplay between strong and electroweak effects in the production and decay of B hadrons makes them a unique test ground for both forces. The integrated luminosity collected by the CMS experiment during the first LHC running period 2009-2010 is expected to be about 300 pbˆ-1. In this talk, we present the estimated sensitivities of CMS with this first LHC data. The first B physics measurements with the CMS experiment include charmonium production (both prompt J/psi production and J/psi's from B decays), Upsilon production, exclusive final states B->J/psi K(*), b-quark production, and bbbar correlations.

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