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Production and properties of the Bc(2S)and B∗c(2S)states

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We reported the production and properties studies of the Bc(2S)and B∗c(2S)states,based on an event sample of pp collisions at a center-of-mass energy of 13 TeV, col-lected by CMS detecter and corresponding to an integrated luminosity of 143 fb−1.The excited states are reconstructed in theBcπ+π−decay. The production rate ofBc(2S)and B∗c(2S)respect to the base state Bcas estimated within the acceptance ofthe detector. The relative rate of the two mesons respect to each other is also estimatedas well as the shape of the invariant mass of the pion-pion system.

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