

High Energy Physics - Experiment

Measurement of B_c Mass and Lifetime at LHCb

Jibo He (Laboratoire de l'Accélérateur Linéaire, Orsay), for the [LHCb collaboration](#)

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The B_c mass and lifetime measurements using the decay $B_c \rightarrow J/\psi \pi$ at the LHCb experiment were studied. About 310 signal events are expected for a data set which corresponds to an integrated luminosity of 1 fb^{-1} , with a B/S ratio equal to 2. Based on these data, the B_c mass and lifetime can be measured with expected statistical errors below $2 \text{ MeV}/c^2$ and 30 fs, respectively.

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