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Measurement of the B_c Lifetime Using the $B_c \to J/\psi+\mu^{\pm}+X$ Decay Channel MARK HARTZ, University of Pittsburgh, CDF COLLABORATION — We report on a measurment of the lifetime of the B_c meson in the semileptonic decay mode $B_c \to J/\psi + \mu^{\pm} + X$ with $J/\psi \to \mu^+\mu^-$. The measurement utilizes 360 pb^{-1} of data collected with the CDF II detector during Run II of the Fermilab Tevatron in pbarp collisions at $\sqrt{s} = 1.96$ TeV. We build a likelihood function, consisting of signal and background lifetime distribution functions, which is maximized when applied to the data sample of $J/\psi + \mu^{\pm}$ events to extract a measurement of the lifetime.

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