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Search for B_c to ΦK^+ decay using LHCb experiment Run 2 data

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There is no B_c annihilation decay experimentally observed to date. The $B_c \rightarrow \Phi K^+$ decay can proceed via annihilation of anti- b and c quarks into a W intermediate boson or, alternatively, involving final-state rescattering effects. Observation of the $B_c \rightarrow \Phi K^+$ decay will provide a new insight on the B_c meson properties and will allow a new independent determination of the V_{cb} CKM matrix element. The analysis is performed using LHCb experiment data from Run 2 at 13 TeV center of mass energy. Φ meson is reconstructed via decays to two charged kaons. The B^+ decay to ΦK^+ is used for normalization.

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