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[404] Charmless hadronic B decays at LHCb: results and prospects

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Charmless *b*-hadron decays are good probes to test the Standard Model and search for New Physics. Of particular interest are the B_s^0 decays to final state with light resonances $(\eta, \eta' \text{ or } \phi)$ that can be used for time-dependent CP violation studies. The "golden" $B_s^0 \to \phi \phi$ mode has already been used by LHCb to measure the CP-violating phase difference between the B_s^0 mixing amplitude and the $b \to s\bar{s}s$ decay amplitude. We present the results of the search for the yet unobserved $B_s^0 \to \eta' \phi$ decays using the full data sample from LHCb Run1, as well as prospects for the other modes of this family using the LHCb Run2 data.

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