



*Measurement  
of the  
bottom-strange  
meson oscillations  
at LHCb*

Marcos Romero Lamas

A measurement of the mixing-induced CP violation phase in the bottom-strange meson system and its oscillation parameters through the dimuon (after a charmonium decay) and dikaon decay mode is reported. The weak phase difference is precisely constrained within the Standard Model, constituting a key probe for new physics phenomena. This preliminary analysis uses 6/fb of 13 TeV proton-proton collisions at LHCb and constitutes the world's most precise measurement of the CP violation phase, the decay width, and the decay-width splitting of the bottom-strange meson. In a flavor-tagged time-dependent angular fit to about half a million signal candidates of background subtracted data, a statistical uncertainty of 22 mrad in the CP violating phase is achieved.