



Contribution ID: 86

Type: Poster

## Measurement of polarisation amplitudes and triple product asymmetries in the $B_s \rightarrow \phi\phi$ decay at LHCb

Monday 4 June 2012 16:00 (1 hour)

An untagged, time-integrated analysis of the  $B_s \rightarrow \phi\phi$  decay has been performed with  $1 \text{ fb}^{-1}$  of pp collision data at centre-of-mass energy  $\sqrt{s} = 7 \text{ TeV}$  taken using the LHCb detector. Optimised selections have yielded 801  $B_s \rightarrow \phi\phi$  events at high signal to background ratio. This has allowed for measurements of polarisation amplitudes ( $|A_0|^2$ ,  $|A_\perp|^2$ ,  $|A_\parallel|^2$ ) and strong phase difference ( $\cos\delta_\parallel$ ) to be performed. T-violating triple product asymmetries have yielded results  $A_U = -0.055 \pm 0.036(\text{stat.}) \pm 0.018(\text{syst.})$  and  $A_V = 0.010 \pm 0.036(\text{stat.}) \pm 0.018(\text{syst.})$ .

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**Collaboration Name** **Please enter the name of the collaboration or group using the acronym, as in: ABC Collaboration**

LHCb collaboration

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**Session Classification:** 1D: Poster Session and Coffee Break

**Track Classification:** Heavy Flavour Physics