

WGR report on

$$B \rightarrow 4\mu$$



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Basic information

⇒ twiki:

<https://twiki.cern.ch/twiki/bin/viewauth/LHCbPhysics/B24Mu>

⇒ Newest ANA note:

https://twiki.cern.ch/twiki/pub/LHCbPhysics/B24Mu/4mu-note-v0_3.pdf

⇒ The time schedule:

⇒ Authors:

J. Albrecht, A. Baranov, D. Berninghoff, A. Golutvin, P. Klauke, T. Likhomanenko, N. Nikitin, N. Scharmberg, T. Tekampe, A. Ustyuzhanin

⇒ Time schedule:

⇒ First circulation: Jan 13th.

⇒ Newest circulation: May 13th.

Key points

- ⇒ Analysis is an update of the 1 fb^{-1} .
- ⇒ The expected limit has been significantly improved compared to previous.
- ⇒ Key points:
 - Problems with SM MC. The classifier was retrained with PHSP model.
 - From training the model dependent variables were removed.
 - The Data-MC correction were using a BDT reweighing. The were highly correlated variables used(ntracks, spdhits). Removed the correlated variables → fixed the high weights problem.
- ⇒ All the raised points in the WG review were accessed.
- ⇒ The interesting points for other analysis:
 - BDT reweighing.
 - N-dim grid optimisation.

I congratulate the proponents on a nice analysis and wish them nice review!

