



Contribution ID: 341

Type: **Parallel contribution**

## Relating $B_s$ Mixing and $B_s \rightarrow \mu^+\mu^-$ with New Physics

*Friday, 12 August 2011 08:00 (30 minutes)*

We perform a study of the Standard Model (SM) fit to the mixing quantities  $\Delta M_{B_s}$  and  $\Delta\Gamma_{B_s}/\Delta M_{B_s}$  in

order to bound contributions of New Physics (NP) to  $B_s$  mixing.

We then use this to explore the branching fraction of  $B_s \rightarrow \mu^+\mu^-$  in certain models of NP. In most cases, this constrains NP amplitudes for  $B_s \rightarrow \mu^+\mu^-$  to lie below the SM component.

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**Session Classification:** Heavy Flavor Physics

**Track Classification:** Heavy Flavor Physics (bottom, charm, tau)