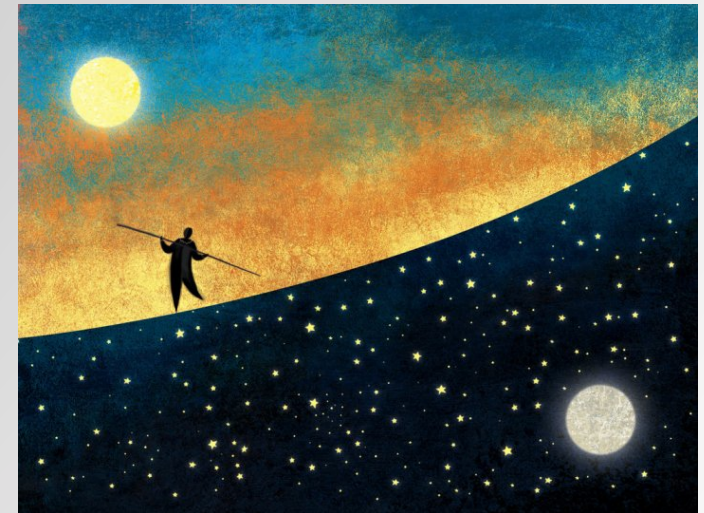
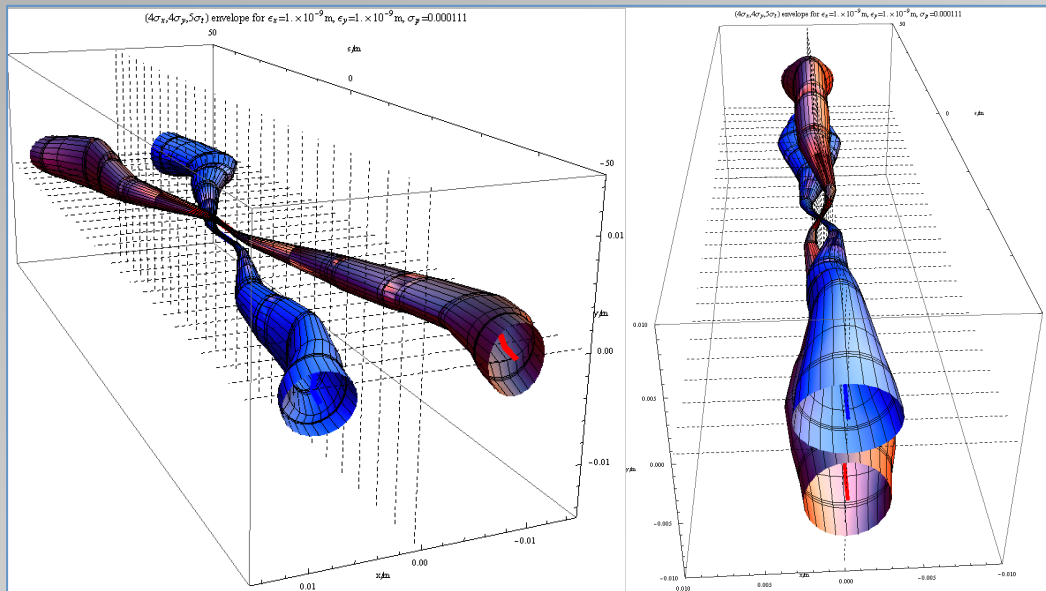


2012 LHCb highlights

The strength of the equilibrium ...

Two beams of 8 TeV with ~ 1200 bunches and more than 10^{11} particles per bunch “*tamed*” for LHCb needs and circulating at few mm from our silicon detector !



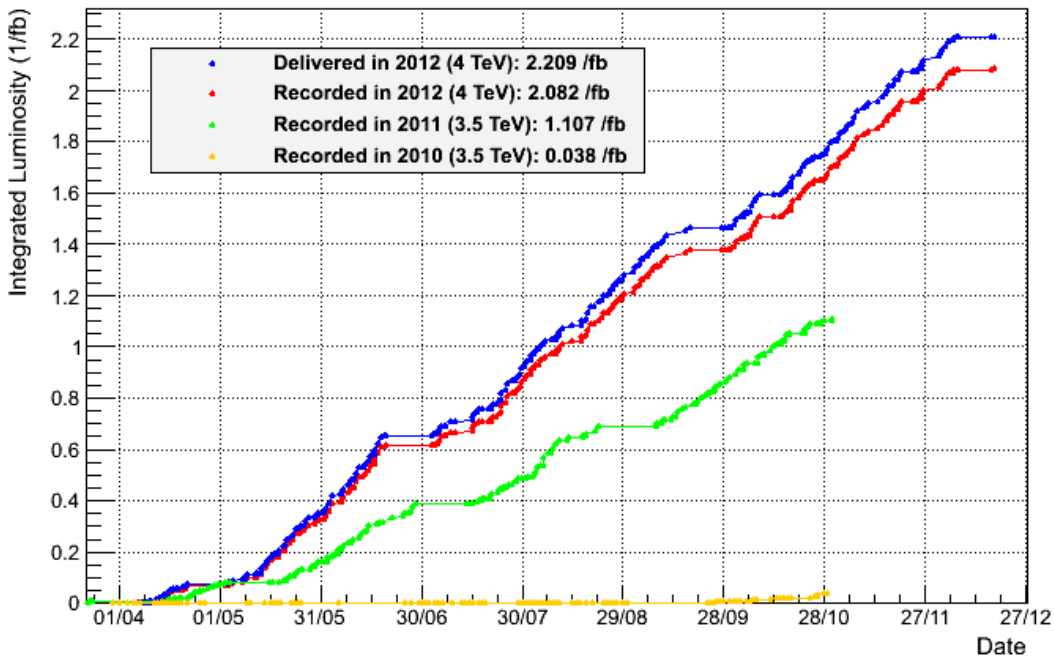
THANKS !

A steady flow of data

More than 2/fb of “good data” in 2012 with high efficiency
Luminosity at $4 \cdot 10^{32} \text{ cm}^{-1} \text{ s}^{-1}$ @ 1 MHz data taking !

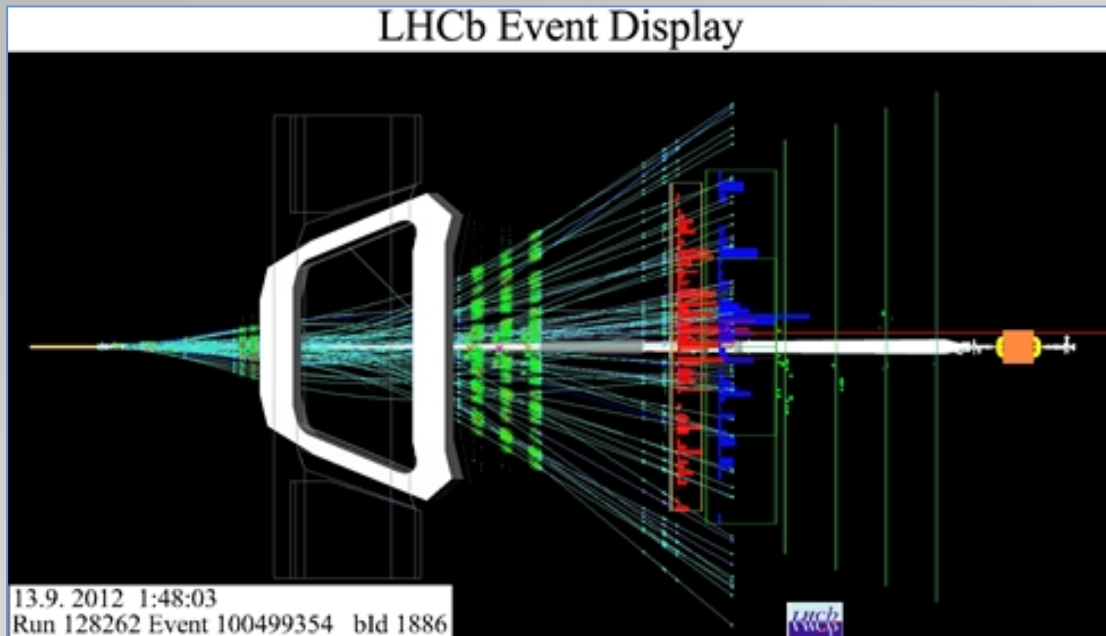
Tests done at $6 - 8 - 10 \cdot 10^{32} \text{ cm}^{-1} \text{ s}^{-1}$ and with 25 ns to prepare
the 2015 run and LHCb upgrade

LHCb Integrated Luminosity pp collisions 2010-2012



pA collisions : yes we can ...

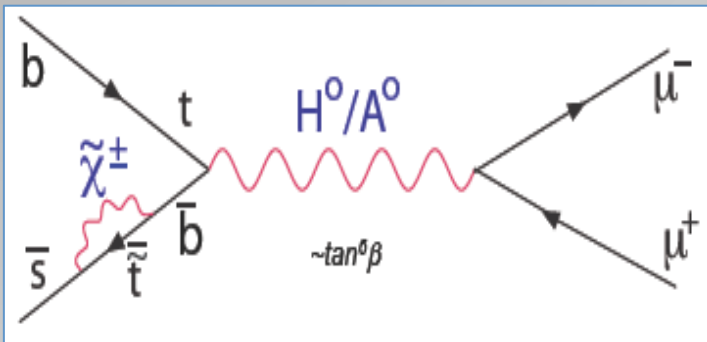
pA run (also) in LHCb - Very good and stable conditions
Low multiplicities in the detector (similar to pp collisions)
LHCb offers unique forward acceptance for this kind of collisions
New chapter of physics opened for LHCb



The need for precision

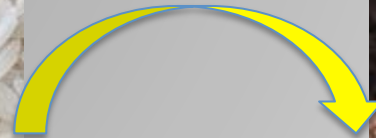
New Physics seems to be well hidden behind the Standard Model !

To find it we must increase the precision in our measurements in rare decays (such as $B_s \rightarrow \mu\mu$) or in CP Asymmetries



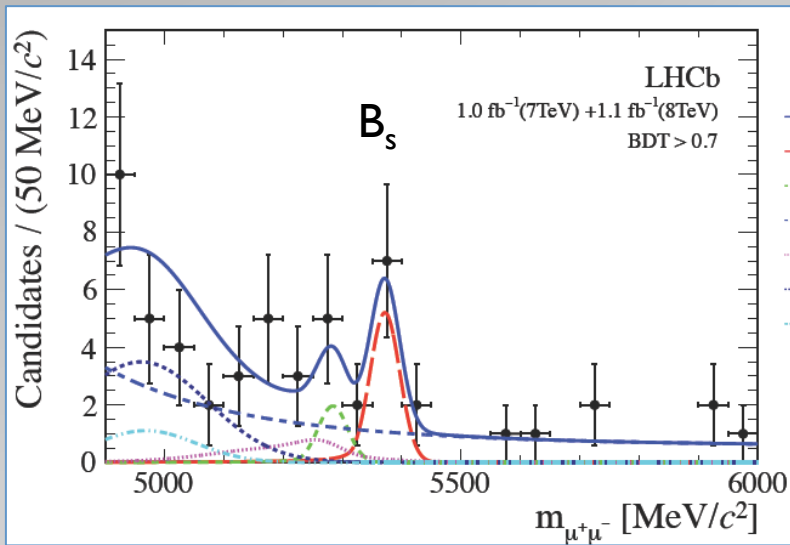
2012 brought the first evidence in LHCb for such a rare decay ...

$B_s \rightarrow \mu\mu$... a needle in the haystack



$18 \cdot 10^{13}$ pp
collisions in LHCb

$\sim 10 B_s \rightarrow \mu\mu$
events detected
in LHCb*

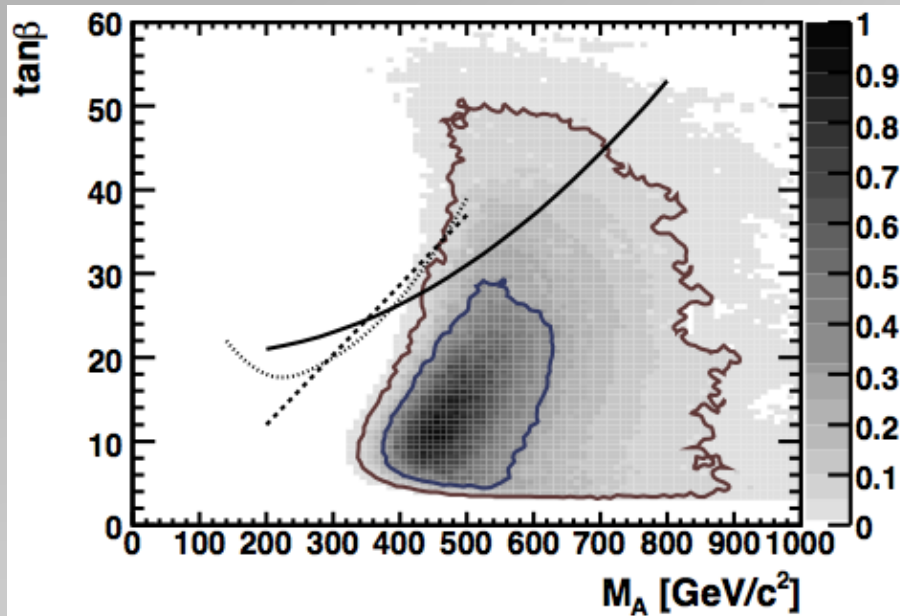


Note: these events are as rare as $H \rightarrow WW^ \rightarrow e\mu\nu\nu$ events found in ATLAS & CMS

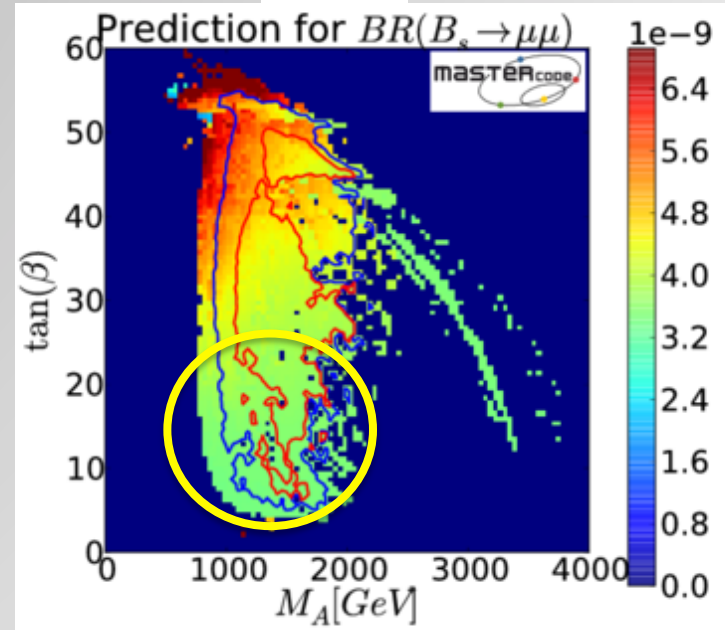
The needle is there ... and now ?

Helping in understanding how much our world is made of Supersymmetry ... a lot so far , but it is not ruled out

2009



2012



Constrained Minimal Supersymmetric Model (CMSSM)

Common and complementary efforts by ATLAS, CMS and LHCb

What next in 2013 ?

LHCb will analyse 2012 data (so far done only for $B_s \rightarrow \mu\mu$)

Emphasis on rare decays (again) and CP violation in B and D mesons, always chasing New Physics

First results expected in Moriond and in Summer conferences ...
difficult to make predictions (and I do not want to spoil my reputation ...)



Our wishes for 2013 (and beyond)* ...

