

“The LHCb Physe-2b upgrade”

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To fully exploit the flavor physics potential of the High Lumi LHC, the LHCb collaboration plans to further upgrade the LCHb detector after Run 4. The new detector - LHCb Upgrade II - will be installed during the LHC long shutdown 4, and will operate at an instantaneous luminosity up to $1 \times 10^{34} \text{ cm}^{-2} \text{ s}^{-1}$. All detector subsystems need significant enhancement to cope with the high particle density and the increased radiation load. High - precision time information and 4D tracking are the key to reduce the high mulitplicity and allow efficient tracking. With the new detector it will be possible to accumulate a data - sample which corresponds to 300 fb^{-1} , a factor 6 increase w/r to what the collaboration is expecting to collect until the end of Run 4. The presentation will discuss the proposed detector technologies and challenges.