



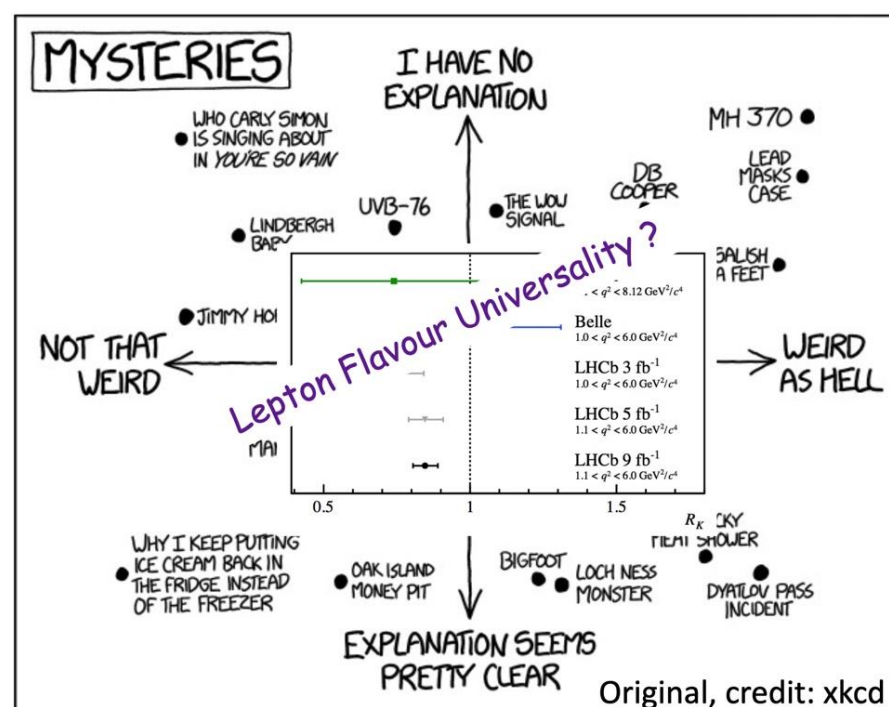
# #Cautious Excitement: the past, present and future of LHCb.

Tuesday, 06 July, 2021

Webcast 16:00 h

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The Large Hadron Collider-beauty (LHCb) experiment completed its initial operating period (2010-2018) and has published over 550 scientific papers. Recent highlights of the physics output will be reviewed, including intriguing results on charged lepton flavour universality that differ by more than three standard deviations from the standard model. The next era is now starting for LHCb, with the Upgrade I experiment being installed for operation from 2022. This will allow a significant increase of instantaneous luminosity and improve efficiencies and flexibility through the introduction of a fully software based trigger at 40MHz. Beyond this the collaboration is planning the Upgrade II for the 2030s, an ambitious flavour physics experiment at the HL-LHC, and a larger scale project than previously undertaken by LHCb. This will use a range of novel technological developments including precision timing MAPS based tracking systems and cryogenically cooled SiPMs for a scintillating fibre tracker, with many opportunities for the involvement of new collaborators in the research, design and construction activities.



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