

Physics Division Seminar

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Searching for Physics Beyond the Standard Model at the LHCb Experiment

Host: José Repond

Tuesday, October 30, 2018 – 203, R150, 3:30 PM

Since 2011, the LHCb experiment at the Large Hadron Collider (LHC) at CERN has been the world's premier laboratory for studying processes in which the quark types (or flavors) change since 2011. Such processes are highly sensitive to quantum-mechanical contributions from as-yet-unknown particles, e.g. supersymmetric particles, even those that are too massive to produce at the LHC. I will discuss the status of these searches, including some intriguing anomalies. I will also present searches for the proposed dark matter analogs of the photon and the Higgs boson. Planned future upgrades and the resulting physics prospects will also be discussed, including our plans to process the full 5 terabytes per second of LHCb data in real time in the next LHC run.