



Searching for New Phenomena with Heavy Quarks and Neutrinos.

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Something is at odds with our understanding of the universe: although highly anticipated by our field, no new particles apart from the Higgs boson and exotic hadrons materialized at the Large Hadron Collider (LHC). We have, however, good reasons to believe that our understanding of fundamental particles and their interactions is incomplete. In this presentation, I will touch on how we are trying to reveal cracks in the Standard Model of particle physics using decay properties of heavy quarks at the Belle II experiment, and by studying neutrinos and searching for feebly interacting particles at the FASER Experiment. Belle II just finished its first long-shutdown to upgrade the pixel detector, and is now on a mission to collect sufficient collision data for competitive measurements at the precision frontier. FASER is a small detector, located about 480 m downstream of the ATLAS experiment. It started recording its first data sample and aims to shed light on the long-lifetime frontier and explore properties of neutrinos produced in LHC collisions. Both Belle II and FASER will give us new insights and I firmly believe our largest discoveries are still ahead of us. Let's go on a journey together to find out why.

