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Projections for Key Measurements in Heavy Flavour Physics

Precision studies of flavour-changing processes involving quarks and leptons provide a number of ways to improve knowledge of the Standard Model and search for physics beyond it. There are excellent short- and mid-term prospects for significantly improved measurements in heavy flavour physics (involving b and c hadrons and τ leptons), with upgrades in progress or planned for the ATLAS, CMS and LHCb experiments exploiting proton-proton collisions at CERN's Large Hadron Collider, and for the Belle II experiment operating with electron-positron collisions from the SuperKEKB accelerator in KEK. The expected sensitivities that can be achieved from these experiments for a number of key observables are presented, highlighting the complementarity of the different experiments and showing how the precision will improve with time. This international programme in heavy flavour physics will result in unprecedented capability to probe this sector of the Standard Model and, potentially, observe imprints of physics at higher energy scales than can be accessed directly.

Authors: GAZ, Alessandro; ROVELLI, Chiara Ilaria (Sapienza Universita e INFN, Roma I (IT)); JONES, Dominic (University of Sussex (GB)); BLANC, Fred (EPFL - Ecole Polytechnique Federale Lausanne (CH)); LIBBY, James; PIERINI, Maurizio (CERN); NOVOTNY, Radek (Czech Technical University in Prague (CZ)); GERSHON, Timothy (University of Warwick (GB))