Toward a General Procedure for Evaluating Higher Order Radiative Corrections for LHC Physics

MIKHAIL KALMYKOV, SWAPAN MAJHI, BENNIE F.L. WARD, SCOTT A. YOST, Baylor University — The era of precision theoretical predictions for LHC physics processes necessitates the development of efficient and reliable theoretical tools to evaluate QCDXEW higher order radiative corrections to such processes. In this talk, we present the elements and status a new methodology which is ultimately aimed at providing the exact higher order corrections needed for exactly resummed QCDXEW MC event generators, which we also have under development so that we may realize an event-by-event comparison between theory and the precision LHC data.