SUSY 2016



Contribution ID: 184

Type: Talk

Mass Insertions vs. Mass Eigenstates calculations in Flavor Physics

Thursday 7 July 2016 14:20 (20 minutes)

I will discuss the relation between QFT amplitudes calculated in the "interaction" basis and "mass eigenstate" basis, especially important for flavor physics. I will present and prove a theorem in matrix analysis allowing to algebraically translate an amplitude written in mass eigenbasis into flavor mass insertions, without performing diagrammatic calculations in the interaction basis. The mentioned technique works to any mass insertion order for amplitudes involving scalar, vector and fermion particles. I will also describe MassToMI Mathematica package automatizing such translation and discuss its application to physical examples of neutron Electric Dipole Moment and Higgs boson decays in the MSSM.

Author:ROSIEK, Janusz Andrzej (University of Warsaw (PL))Presenter:ROSIEK, Janusz Andrzej (University of Warsaw (PL))Session Classification:Flavour Physics

Track Classification: Flavour Physics