



Contribution ID : 64

Type : Contributed talk

Flavor Violating Higgs Decays in Supersymmetric Models

Wednesday, 25 May 2016 16:00 (20)

We study the quark flavor violating Higgs-boson decay $h \rightarrow b\bar{s}$ in the Minimal Supersymmetric Standard Model (MSSM). The decay is analyzed first in a model independent, and in a second step in the minimal flavor violation (MFV) Constrained MSSM. The experimental constraints from B -Physics observables (BPO) and electroweak precision observables (EWPO) are also calculated and imposed on the parameter space. It is shown that in some cases the EWPO restrict the flavor violating parameter space stronger than the BPO.

In the model independent analysis values of $\text{order}\{10^{-4}\}$ can be found for $\text{BR}(h \rightarrow b\bar{s})$. In the MFV CMSSM such results can only be obtained in very restricted parts of the parameter space. The results show that it is not excluded to observe the decay $h \rightarrow b\bar{s}$ in the MSSM at future e^+e^- colliders.

Primary author(s) : REHMAN, Muhammad (IFCA, CSIC-Univ Cantabria)

Co-author(s) : Prof. GOMEZ, Mario E. (Universidad de Huelva); Dr. HEINEMEYER, Sven (IFCA (CSIC))

Presenter(s) : REHMAN, Muhammad (IFCA, CSIC-Univ Cantabria)

Session Classification : SUSY 3

Track Classification : SUSY/Higgs/BSM