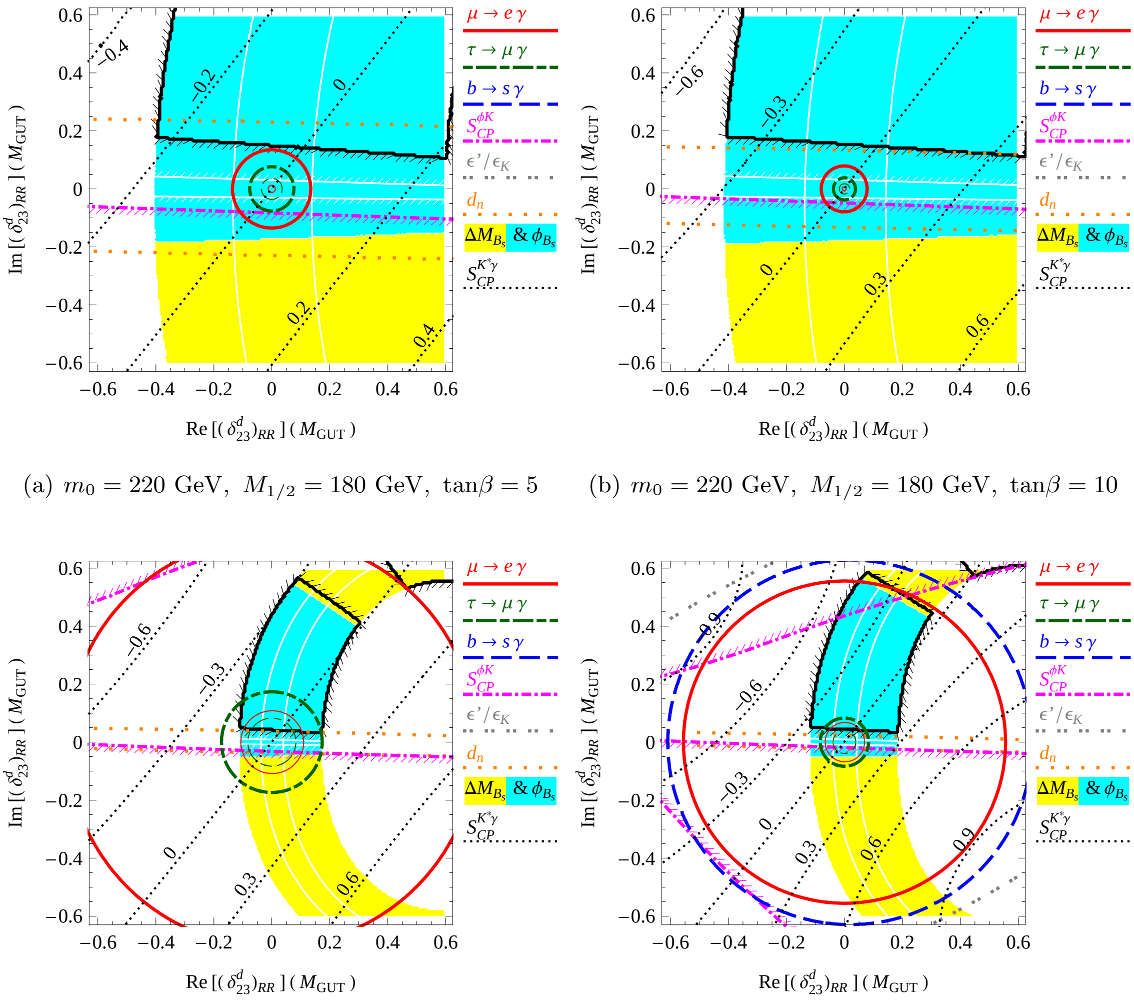

(a) $m_0 = 220$ GeV, $M_{1/2} = 180$ GeV, $\tan\beta = 5$ (b) $m_0 = 220$ GeV, $M_{1/2} = 180$ GeV, $\tan\beta = 10$

(c) $m_0 = 600$ GeV, $M_{1/2} = 180$ GeV, $\tan\beta = 5$ (d) $m_0 = 600$ GeV, $M_{1/2} = 180$ GeV, $\tan\beta = 10$

Figure 4: Constraints on the complex plane of $(\delta^d_{23})_{RR}$, with $(\delta^d_{ij})_{LL}$ generated from RG running between the reduced Planck scale and the GUT scale. For each LFV process, the thick circle is the present upper bound and the thin circle is the prospective future bound. A light gray (yellow) region is allowed by ΔM_{B_s}, given 30% uncertainty in the $\Delta B = 2$ matrix element, and a gray (cyan) region is further consistent with ϕ_{B_s} from DØ. A thick black curve shows ϕ_{B_s} from HFAG. The white curves running from top to bottom mark a possible improved constraint from ΔM_{B_s} with 8% hadronic uncertainty. The other white lines running from left to right display a measurement of ϕ_{B_s} at LHCb. Thin short lines attached to a curve indicate the excluded side.

sizeable since the cutoff scale can happen to be low close to the GUT scale. This is true. However, a low cutoff would threaten the validity of making a connection between the quark and the lepton flavors in the first place. Non-renormalizable operators shown in (2.3) and even higher order terms, generically, give $\mathcal{O}(1)$ contributions to the quark and the lepton Yukawa couplings, thereby erasing any trace of their connection in the flavor space as a single GUT multiplet. It should be remembered that an RG-induced LL insertion is not