Abstract

We analyse the rare kaon decays $K_S \rightarrow \gamma \gamma$ and $K_S \rightarrow \gamma l^+l^-$ in a dispersive framework. (The leptons are either electrons or muons). Our analysis extends predictions from lowest order chiral perturbation theory $\chi$PT to fully account for effects from final-state interactions. I will discuss how to formulate a dispersion relation. Given input from $K_S \rightarrow \pi \pi$ and $\gamma \gamma \rightarrow \pi \pi$, we solve the once-subtracted dispersion relation numerically to predict rates for the those processes. In the semi-leptonic modes, we find sizable corrections to the $\chi$PT predictions for the integrated rates.