

We predict the isospin asymmetry well as the branching ratio for the decay $B \rightarrow K^* \gamma$ within QCD factorization using new anti-de Sitter/quantum chromodynamics (AdS/QCD) holographic distribution amplitudes (DAs) for the K^* meson. Our prediction for the branching ratio agrees with that obtained using standard QCD sum-rules (SR) DAs and with experiment. More interestingly, our prediction for the isospin asymmetry using the AdS/QCD DA does not suffer from the end-point divergence encountered when using the corresponding SR DA. We predict an isospin asymmetry of 3.2% in agreement with the most recent average measured value of $(5.2 \pm 2.6)\%$ quoted by the Particle Data Group.