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Heavy K^* mesons with hidden charm

We report a robust prediction of heavy K^* mesons, which can be viewed as excited kaon states with hidden charm, through a study of the three body system $KD\bar{D}^*$ using the fixed center approximation to the Feddeev equations. The two-body interactions are stringently constrained by the experimental as well as theoretical investigations and leave little space for uncertainties. Concrete coupled channel three-body calculations yield the two heavy K^* mesons: $4337.0 - i3.3$ MeV and $4277.6 - i14.0$ MeV with $I(J^P) = 1/2(1^-)$.

Similar to the recent discovery of the pentaquark states pentaquark states with hidden charm content, our findings could inspire the experimental community to study the so far unexplored heavy strange physics, help improve our understanding of nonperturbative strong interactions.

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