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Potential-model implications of the charmed strange states at 2860 MeV WALTER JARONSKI, Radford University — Recently, the CERN LHCb collaboration has reported that the charmed strange resonance at 2860 MeV is an admixture of 1^- and 3^- states of nearly equal mass.[1] This has possible implications regarding the relative strengths of the spin-orbit and tensor interactions, as well as on the Lorentz nature of the potential. The charmed strange meson system, with its heavy charmed quark and with no truly light valence quarks, is a useful system in which to explore effective quark potentials. Model calculations are presented in which the masses of all known charmed strange mesons are used to obtain information about the potential and its Lorentz nature.

[1]LHCb Collaboration, R. AAij *et al., Observation of overlapping spin-1 and spin-3* $\bar{D}^0K^-$ *resonances at mass 2.86* GeV/c^2, arXiv:1407.7574

Walter Jaronski
Radford University

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