

Abstract Submitted
for the APR17 Meeting of
The American Physical Society

Masses of Open-Flavour Heavy-Light Hybrids from QCD Sum Rules JASON HO, University of Saskatchewan, DEREK HARNETT, University of the Fraser Valley, TOM STEELE, University of Saskatchewan — Our current understanding of the strong interaction (QCD) permits the construction of colour singlet states with novel structures that do not fit within the traditional quark model, including hybrid mesons. To date, though other exotic structures such as pentaquark and tetraquark states have been confirmed, no unambiguous hybrid meson signals have been observed. However, with data collection at the GlueX experiment ongoing and with the construction of the PANDA experiment at FAIR, the opportunity to observe hybrid states has never been better. As theoretical calculations are a necessary piece for the identification of any observed experimental resonance, we present our mass predictions of heavy-light open-flavour hybrid mesons using QCD Laplace sum-rules for all scalar and vector J^P channels, and including non-perturbative condensate contributions up to six-dimensions.

Jason Ho
University of Saskatchewan

Date submitted: 27 Sep 2016

Electronic form version 1.4