Contribution ID: **663**   Type: **Oral (Student, In Competition) / Orale (Étudiant(e), inscrit à la compétition)**

QCD Sum Rule Analysis of Heavy-light Hybrids for $J^P = 1^-$

Thursday, 18 June 2015 09:15 (15 minutes)

Quantum chromodynamics (QCD) predicts many bound states that have not yet been conclusively identified, and as more charmonium-like XYZ states are being discovered, interest is increasing in matching these theoretical bound states with experimental observation. Among these states are hybrid mesons: bound states of a quark, an antiquark, and a gluon. With upcoming experiments such as GlueX, and PANDA, experimental data within the expected mass ranges of hybrids will be abundant in the next decade, and theoretical predictions are needed to help identify them. We present preliminary aspects of a QCD sum rule analysis of a heavy-light (open-flavour) $J^P = 1^-$ hybrid system, including non-perturbative condensate contributions up to six dimensions.

Primary author: Mr HO, Jason (University of Saskatchewan)

Co-authors: HARNETT, Derek (University of the Fraser Valley); STEELE, Tom (University of Saskatchewan)

Presenter: Mr HO, Jason (University of Saskatchewan)

Session Classification: R1-7 Hadronic Structure (DNP-DTP) / Structure hadronique (DPN-DPT)

Track Classification: Theoretical Physics / Physique théorique (DTP-DPT)