Canadian Association of Physicists
Association canadienne des physiciens et physiciennes

Contribution ID: **2457** Type: **Oral not-in-competition (Graduate Student) / Orale non-compétitive (Étudiant(e) du 2e ou 3e cycle)**

Potential Model Tetraquark Mass Predictions Using Doubly Heavy Diquark Masses from QCD Sum Rules

Thursday, June 6, 2019 2:30 PM (15 minutes)

We use QCD Laplace sum rules to generate mass predictions for vector cc and bb diquarks. We calculate the diquark correlator within the operator product expansion to next to leading order, including terms proportional to the four- and six-dimensional gluon and six-dimensional quark condensates. Using these diquark masses as input, a potential model is used to predict the masses of tetraquark states consisting of the these diquarks.

Authors: PALAMETA, Alex (University of Saskatchewan); STEELE, Tom (University of Saskatchewan); HARNETT, Derek (University of the Fraser Valley); KLEIV, Robin; ESAU, Steven (University of Waterloo)

Presenter: PALAMETA, Alex (University of Saskatchewan)

Session Classification: R2-4 Testing Fundamental Symmetries II (DTP/PPD/DNP) | Tests de symétries fondamentales II (DPT/PPD/DPN)

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