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## 67 - Meson-Hybrid Mixing in Vector and Axial Vector Charmonium

*Tuesday, June 4, 2019 5:00 PM (2 minutes)*

Hybrid mesons are hypothesized hadrons containing a constituent quark, antiquark, and gluon. Despite nearly 50 years of searching, hybrids have not yet been conclusively observed in experiment. Part of the problem could be due to hadron mixing, the idea that observed hadrons are actually superpositions of conventional mesons, hybrid mesons, and other combinations of constituents. To explore this idea, we look to the vector and axial vector charmonium-like resonances. Using the QCD sum-rules methodology, we test observed resonances for coupling to a meson-hybrid cross-correlator. Resonances which couple to both currents can be interpreted as evidence for meson-hybrid mixing.

**Authors:** HARNETT, Derek (University of the Fraser Valley); STEELE, Tom (U of Saskatchewan); PALAMETA, Alex (University of Saskatchewan); HO, Josha (University of the Fraser Valley)

**Presenter:** HARNETT, Derek (University of the Fraser Valley)

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