



Contribution ID: 20

Type: **Talk**

## **\*Leading Talk\* Evidence that the Lambda(1405) is a molecular antikaon-nucleon bound state.**

*Thursday, July 2, 2015 4:20 PM (30 minutes)*

We present lattice QCD results showing that the strange magnetic form factor of the Lambda(1405) vanishes, signaling the formation of an antikaon-nucleon. Together with a Hamiltonian effective-field-theory model analysis of the lattice QCD energy levels, this strongly suggests that the structure is dominated by a bound antikaon-nucleon component. This result clarifies that not all states occurring in nature can be described within a simple quark model framework and points to the existence of exotic molecular meson-nucleon bound states.

**Primary author:** KAMLEH, Waseem (University of Adelaide)

**Presenter:** KAMLEH, Waseem (University of Adelaide)

**Session Classification:** Parallel Session 6 - Hadron Structure & Meson-Baryon Interaction WG

**Track Classification:** Hadron Structure and Meson-Baryon Interaction Working Group