



Contribution ID: 174

Type: **Talk**

Determining Sigma - Lambda mixing

Thursday, 26 June 2014 14:55 (20 minutes)

SU2 isospin breaking effects in hadron octet and decuplets are due to a combination of up and down quark mass differences and electromagnetic effects. Usually these masses difference are small. Between the Sigma and Lambda the splitting is much larger due to mixing between these states. We determine the QCD mixing matrix and hence find the mixing angle and mass splitting. Provided the average quark mass is kept constant, the expansion coefficients in our procedure can be determined from computationally cheaper simulations with mass degenerate sea quarks and partially quenched valence quarks.

Primary author: Dr HORSLEY, Roger (University of Edinburgh)

Presenter: Dr HORSLEY, Roger (University of Edinburgh)

Session Classification: Hadron spectroscopy and interaction

Track Classification: Hadron Spectroscopy and Interactions