

Evaluating evidence for baryons with light quark content

Progress in understanding any aspect of nature is a “conversation” between measured quantities and theoretical models. As experiments get more accurate and sophisticated, models describing their results require to be more accurate and sophisticated; as new models are conceived, new experiments require to be performed to confirm or falsify predictions. Light baryon spectroscopy is no exception to this; what is notable in this field is that data have been collected over several decades from a wide variety of experiments, and the development of theoretical models in this period has undergone significant evolution. The resulting heterogeneity has a potential to lead to spurious results, so the time is now right to evaluate the available experimental evidence with the full power of modern statistical methodologies. This talk will discuss the available data for learning about the spectrum of baryons, and whether this data can be made self-consistent, such that comparison with theoretical models delivers the cleanest inference of the physics.

Author: Prof. IRELAND, David (University of Glasgow)

Presenter: Prof. IRELAND, David (University of Glasgow)

Track Classification: Spectroscopy of hadrons