



Contribution ID: 17

Type: **Talk**

## **N Spectroscopy with hCQM and correction terms**

*Monday 12 September 2022 14:00 (20 minutes)*

The light and strange baryon sector has always been of keen interest to study the dynamics of composite quarks and relevant degrees of freedom leading to the observed properties. Many relativistic, semi-relativistic, and non-relativistic approaches have attempted to study the excited baryon spectrum. Earlier in the octet, decuplet baryons starting from  $N$  to  $\Omega$  have been studied using hypercentral Constituent Quark Model (hCQM) with a linear confining term along with the Coulomb-like term in the non-relativistic framework. However, the required hyperfine splitting could not be achieved using that potential term. Here, we have incorporated first and second-order correction terms for mass and spin-dependent potential term to account for all possible spin-parity states. The results have been obtained for  $N$  and  $\Delta$  baryons. This is expected to refine the known results and aid in future observations at various experiments dedicated towards the study of light, strange baryons namely PANDA at FAIR-GSI.

### **Is this abstract from experiment?**

No

### **Name of experiment and experimental site**

N/A

### **Is the speaker for that presentation defined?**

Yes

### **Details**

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### **Internet talk**

Maybe

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