

Contribution ID: 108

Type: **Invited**

Recent results from the CBELSA/TAPS experiment at ELSA and future plans at INSIGHT

Saturday, 27 June 2026 11:00 (30 minutes)

Based on the high quality photoproduction data, our understanding of the spectrum and the properties of N^* - and Δ^* -baryons has substantially improved. Polarization data, as taken by the CBELSA/TAPS experiment for various final states, are a key to resolve the baryon spectrum. The measurement of polarization observables is indispensable for performing an unambiguous partial wave analysis to extract the resonances from the data. In contrast to the non-strange baryon sector, so far, little is known about the excited Λ and Σ spectrum. For decades, progress in the strange baryon sector has been hampered by the lack of data. Here, the new INSIGHT experiment at ELSA will provide high quality data and therefore crucial information on Λ^* and Σ^* resonances and will also investigate the possible existence of multi-quark states in the strange quark sector. INSIGHT features a unique combination of an almost complete angular coverage for high-resolution photon measurements, charged-particle detection and the ability to perform measurements using a transversely or longitudinally polarized target.

This talk will discuss recent results from the CBELSA/TAPS experiment as well as the plans for the future INSIGHT experiment at ELSA.

Collaboration

CBELSA/TAPS

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