

## **$K^+ \Lambda(1405)$ photoproduction at the BGO-OD experiment**

*Thursday 13 June 2019 16:30 (30 minutes)*

Since the discovery of the  $\Lambda(1405)$ , it remains poorly described by conventional constituent quark models, and it is a candidate for having an “exotic” meson-baryon or “penta-quark” structure, similar to states recently reported in the hidden charm sector.

The  $\Lambda(1405)$  can be produced in the reaction  $\gamma p \rightarrow K^+ \Lambda(1405)$ . The pure  $I=0$  decay mode into  $\Sigma^0 \pi^0$  is prohibited for the mass-overlapping  $\Sigma(1385)$ . Combining a large aperture forward magnetic spectrometer and a central BGO crystal calorimeter, the BGO-OD experiment is ideally suited to measure this decay with the  $K^+$  in the forward direction. Preliminary results will be presented.

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**Track Classification:** Baryon spectrum through meson photoproduction