Contribution ID: **31** Type: **not specified**

Search for New Physics in Beryllium

Friday, 16 February 2018 10:15 (15 minutes)

Nuclear transitions provide a means to probe light, weakly-coupled new physics and portals into the dark sector. Particularly promising are those transitions that can be accessed through excited nuclear states that are resonantly produced, providing a high-statistics laboratory to search for MeV-scale new physics. In this talk we will review the so-called 8Be - anomaly, which is a 6.8 σ discrepancy reported by the ATOMKI group in the observation of the decays of excited 8Be -nuclei to their ground state via internal e+- e- pair creation. The anomaly can be explained by the emission of a neutral boson with a mass of 17 MeV. We discuss the ATOMKI experiment and present ideas about a possible follow-up experiment to confirm these results.

Primary author: Prof. ZACEK, Viktor (University of Montreal)

Presenter: Prof. ZACEK, Viktor (University of Montreal)

Session Classification: Session #2