



Contribution ID: 23

Type: **not specified**

## **PICO-40L Calibration Simulation and Analysis Techniques using Machine Learning (student talk)**

*Friday, 16 February 2018 21:30 (15 minutes)*

PICO is a dark matter experiment using superheated liquid to detect particle interactions. PICO-40L is a detector with a novel design of a Right-Side-Up chamber, placed inside a large pressure vessel, immersed in a water tank. Radioactive source calibrations are essential to identify background events. In the presentation, I will show the results from detector simulations for PICO-40L radioactive source calibration. I will also summarize the progress that has been made in the development of analysis strategies to identify different radioactive sources using machine learning techniques.

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**Session Classification:** Session #3