

# AI Feature Recognition: Extract Spectrometer Angle from Image

- Experimental Hall C makes use of two train-engine sized detector systems called spectrometers to collect data.
- We need to know the precise angle of those systems relative to the target.
- One way we measure and log those angles is using a camera at the rear of each spectrometer viewing angle markings on the floor.
- **Goal:** Use AI supported feature recognition tools to identify and interpret the angle markings to extract the true spectrometer angle from images embedded in our data files.
  - **Stretch Goal A:** Use the same model to overlay a 'real-time' angle readback onto our live camera feed used during experiments.
  - **Stretch Goal B:** Implement a C++ class to integrate this model into the main Hall C analyzer.

