Threshold-Based Analysis – Gain Vs Inclination Angle

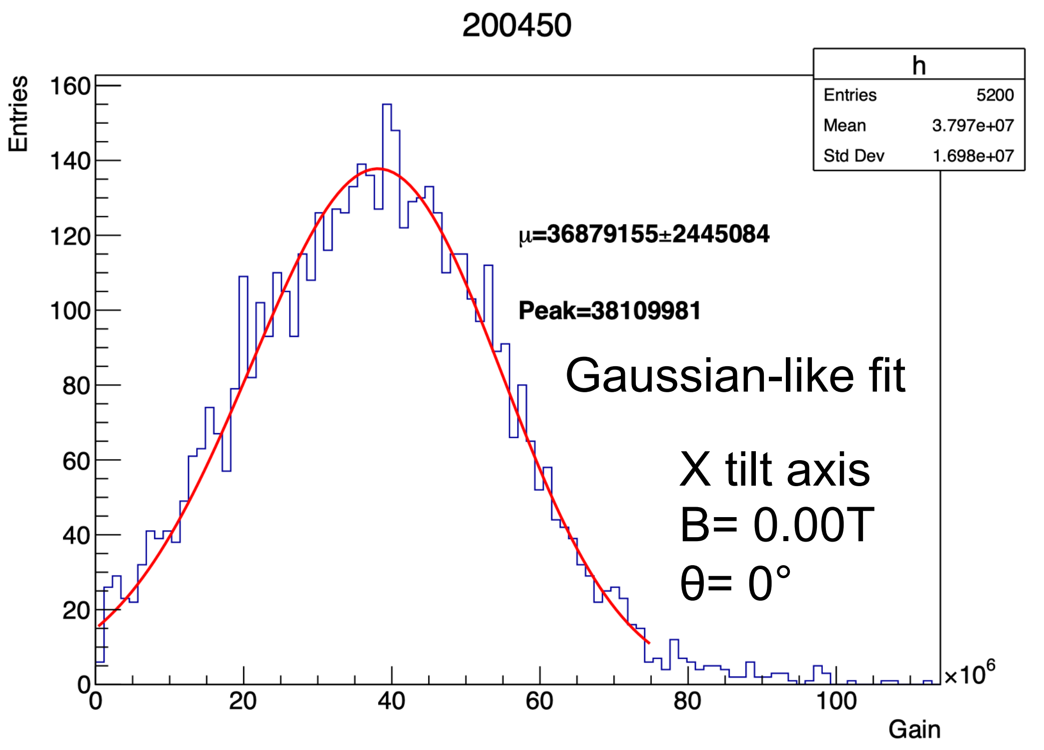
Jihee Kim (jkim11@bnl.gov) and Yifan Jin
Brookhaven National Laboratory

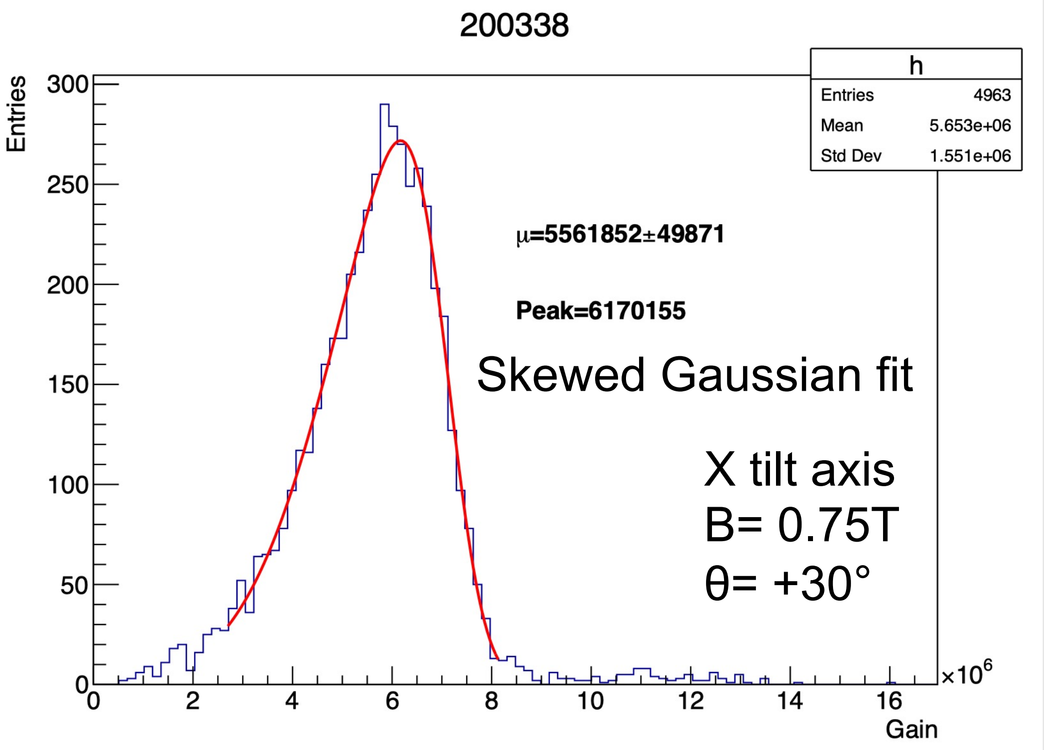
2026/02/25

HRPPD B-Field Measurements at BNL

Overview

- A total of **126 runs** were analyzed to evaluate **Gain vs. Inclination Angle**.
- Comparison conducted between **time-window-based** and **threshold-based** methods for consistency checking.



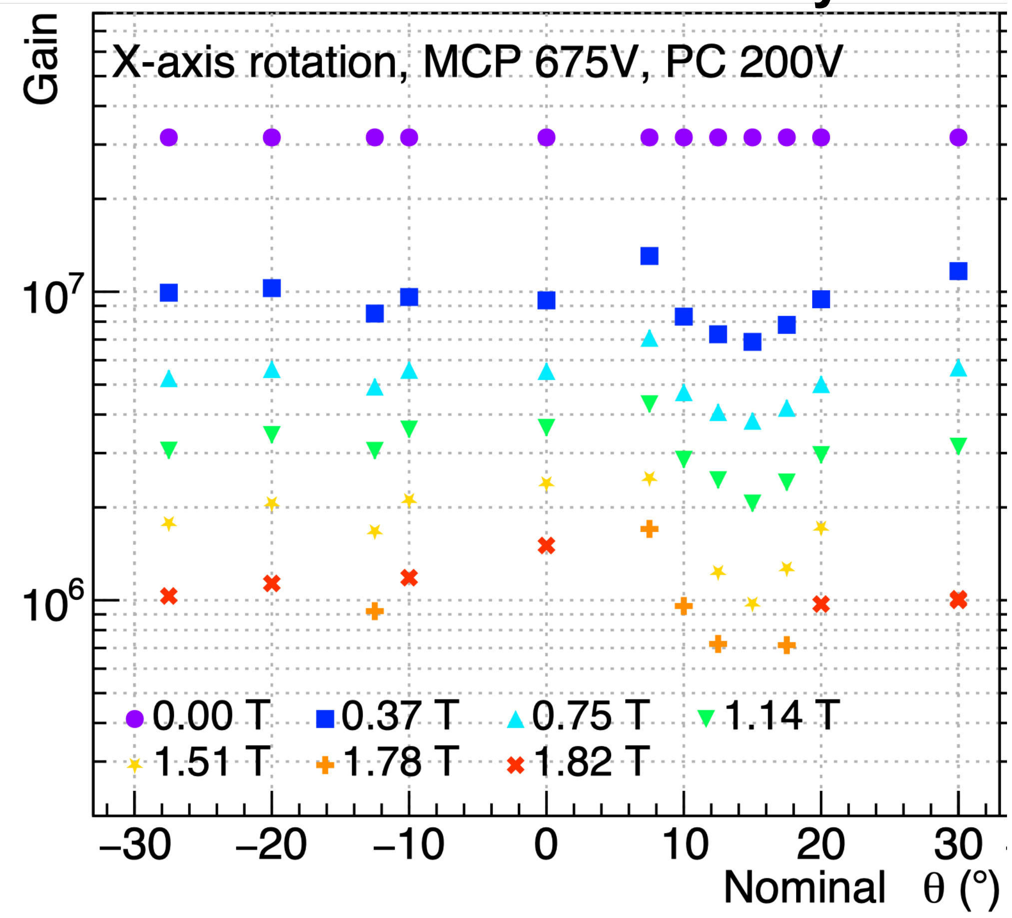


Brookhaven National Laboratory

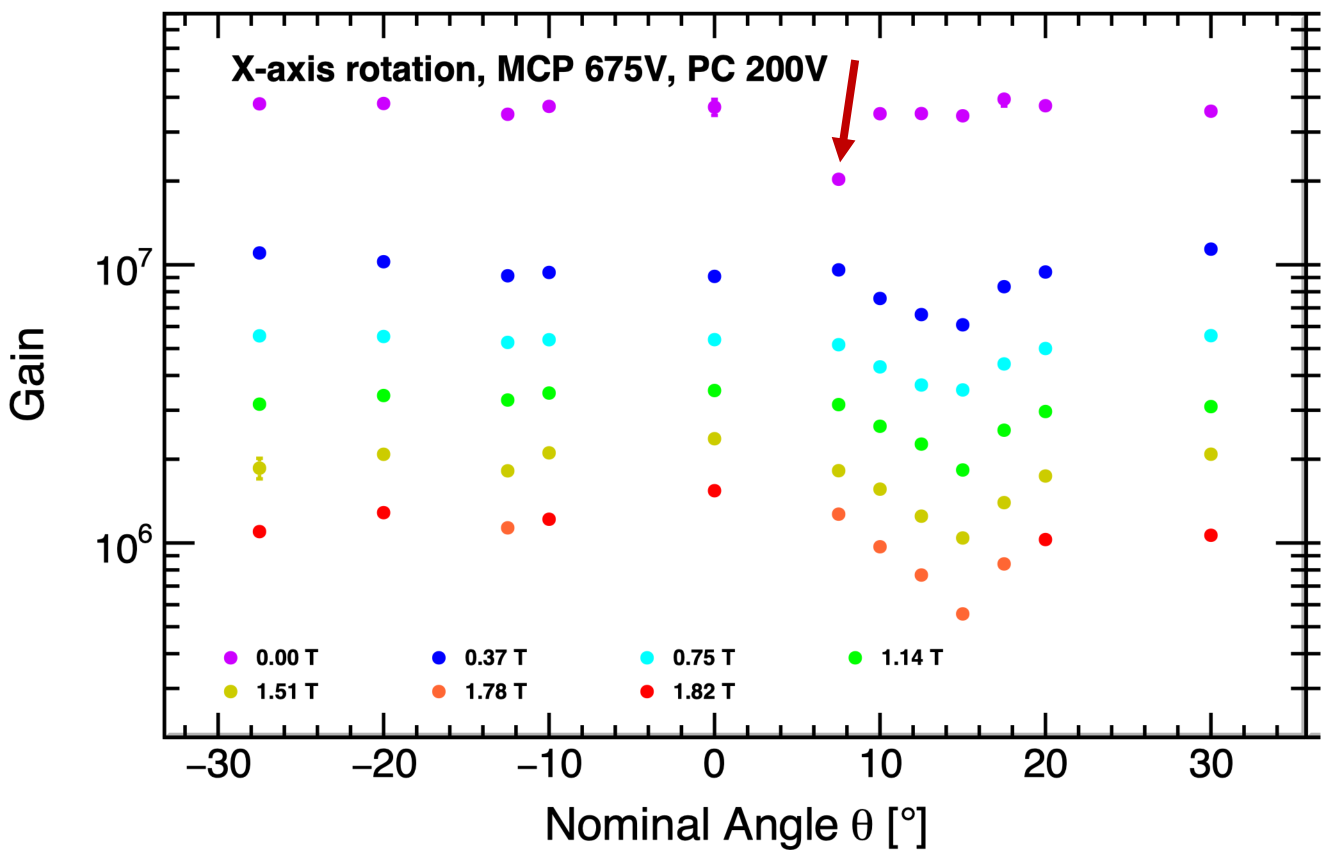
JIHEE KIM

Figure 3 – X Tilt Angle Rotation

Time-window-based analysis



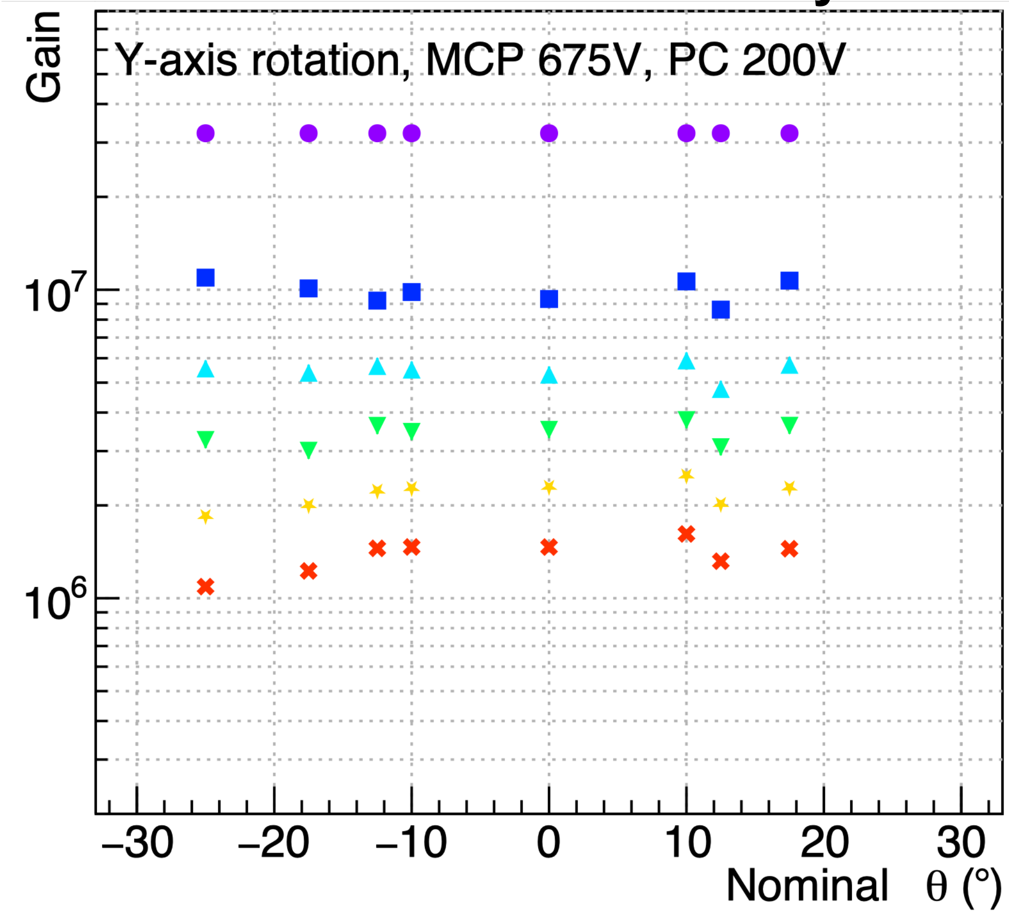
Threshold-based analysis



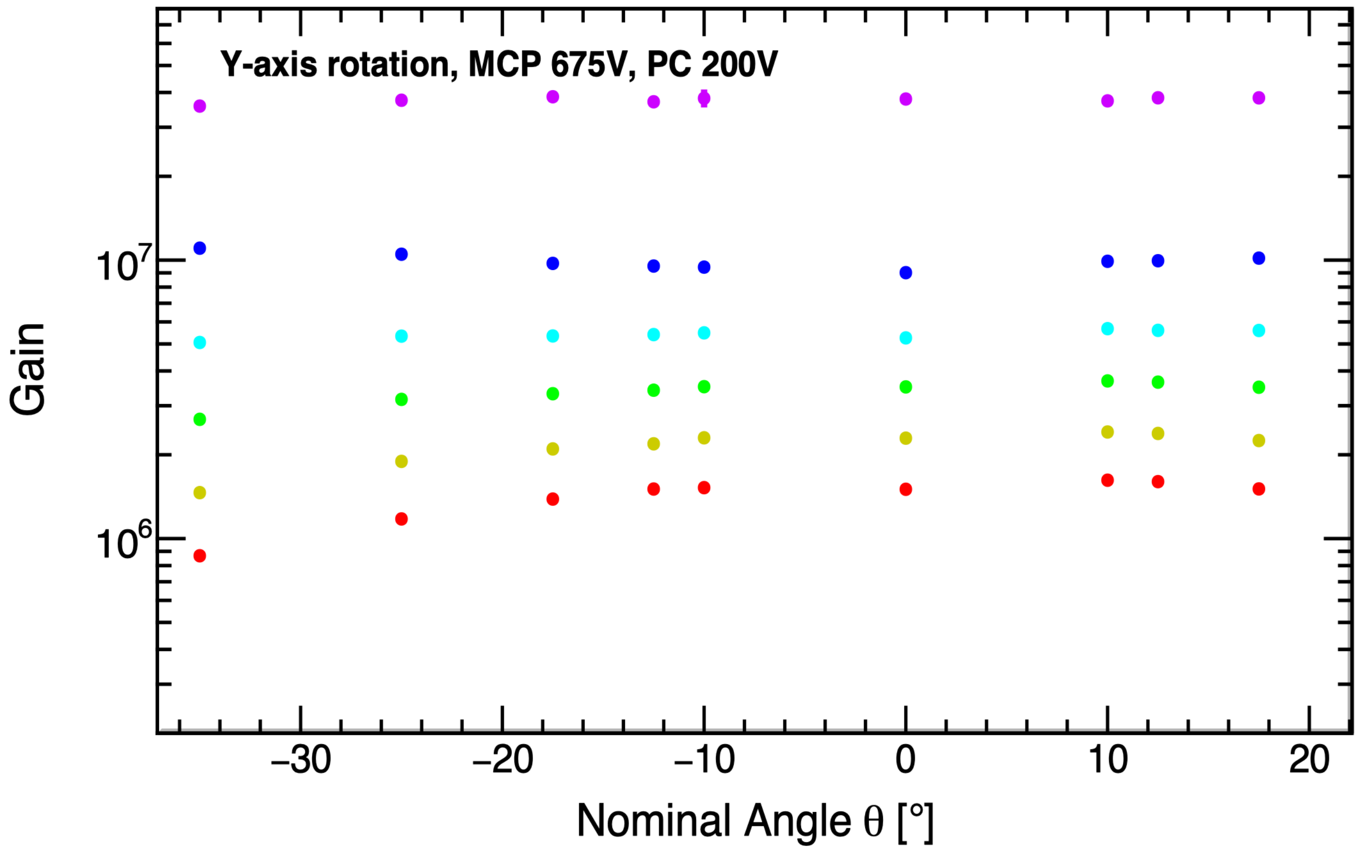
The **+7.5° measurement at 0T** shows a lower value that appears inconsistent with other 0T data points. In the **time-window-based analysis**, all **0T data points** are **normalized**.

Figure 3 – Y Tilt Angle Rotation

Time-window-based analysis



Threshold-based analysis



No dip is observed at +12.5°, unlike in the time-window-based analysis where a dip was present. The Y-axis rotation may not be aligned with one of the MCP plane? Might this effect to unrelated?

Backup Slides

Figure 3 – Threshold-Based Analysis

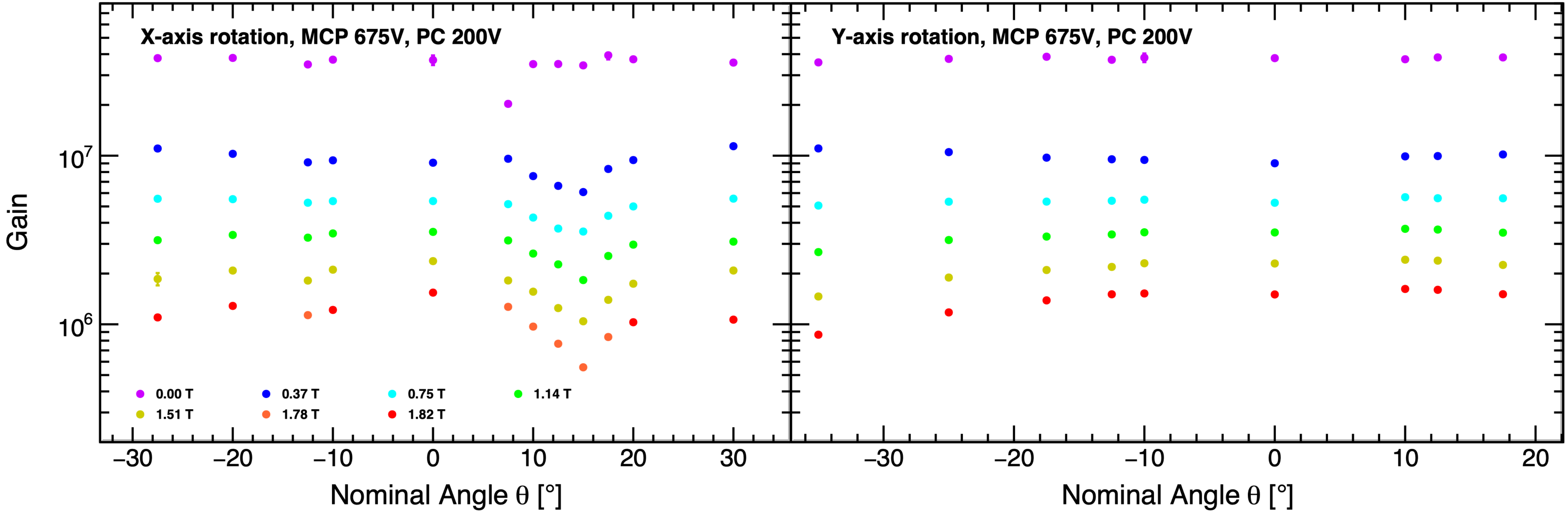


Figure 3 – Time-Window-Based Analysis