# November 19, 2024

- Plugin: `GEMTrack`
- Input Trees: `lumigemcooked`, `TrigScint`
- Output Tree: `tracks`

# Coordinate System and Paddle Numbering
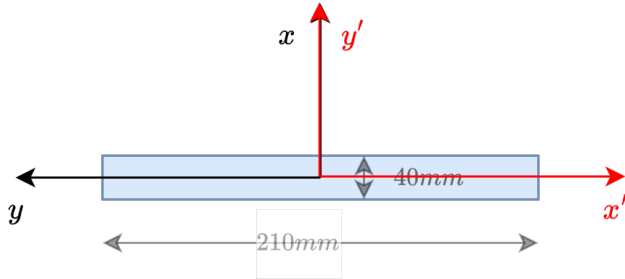


Figure: Local Coordinate System (Black)



Figure: Paddle Numbering

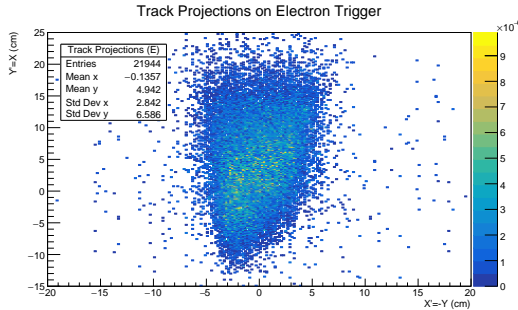# Results: Track Projections on Electron Trigger
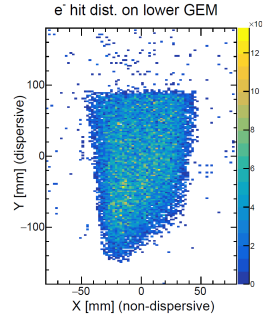


Figure: GEMTracker



Figure: Win's Result

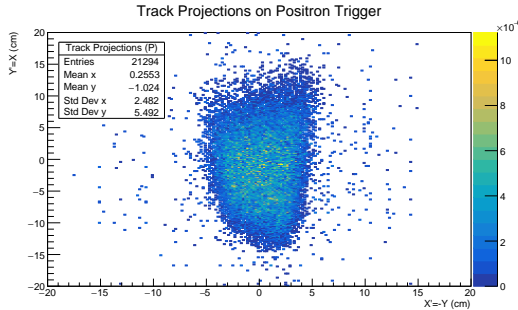# Results: Track Projections on Positron Trigger
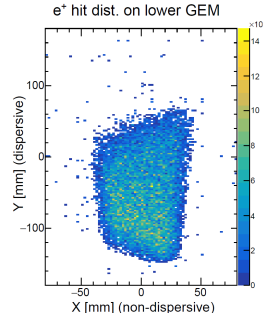


Figure: GEMTracker



Figure: Win's Result

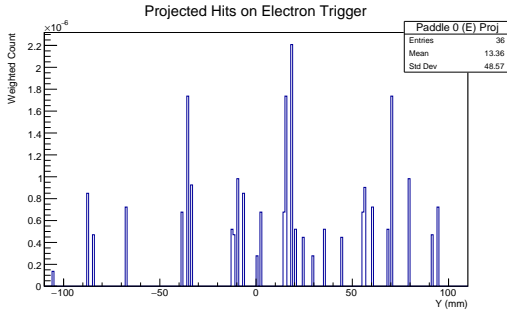# Results: Electron Trigger



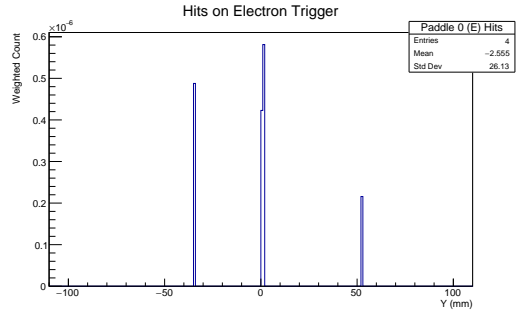Figure: Paddle 0: Projections



Figure: Paddle 0: Hits

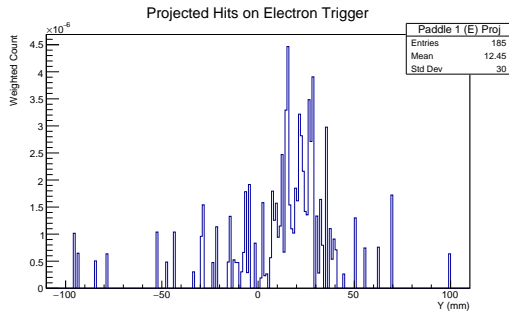# Results: Electron Trigger
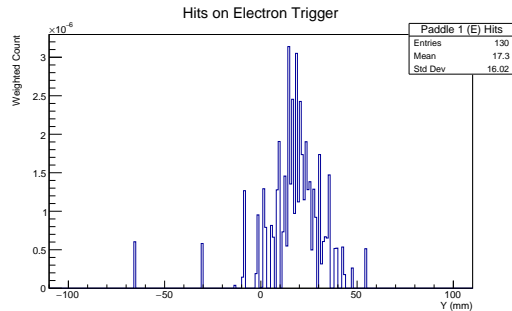


Figure: Paddle 1: Projections



Figure: Paddle 1: Hits
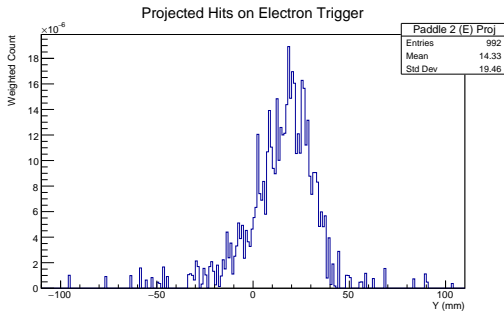
# Results: Electron Trigger
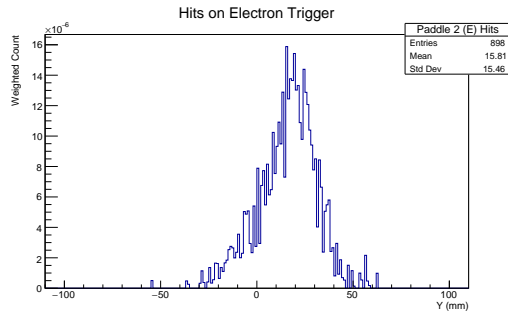


Figure: Paddle 2: Projections



Figure: Paddle 2: Hits
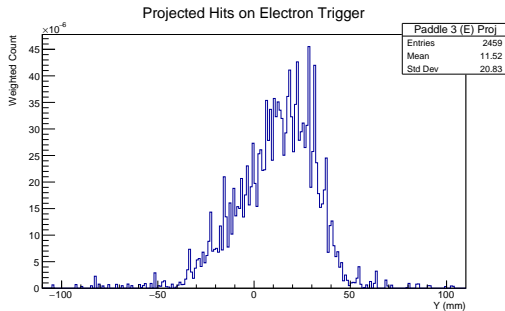
# Results: Electron Trigger
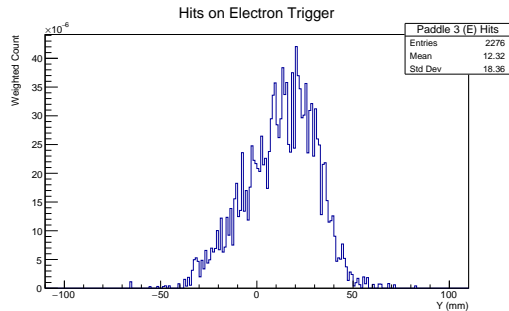


Figure: Paddle 3: Projections



Figure: Paddle 3: Hits
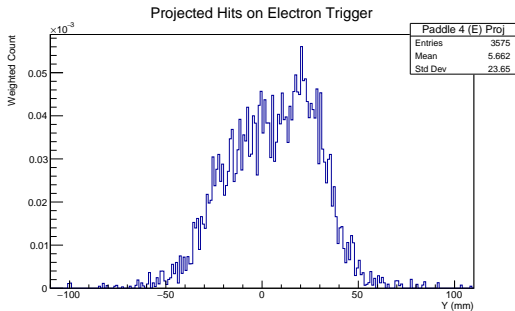
# Results: Electron Trigger
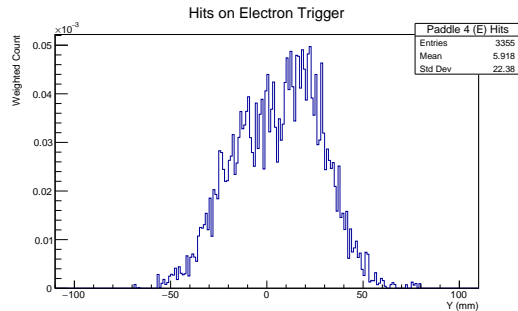


Figure: Paddle 4: Projections



Figure: Paddle 4: Hits
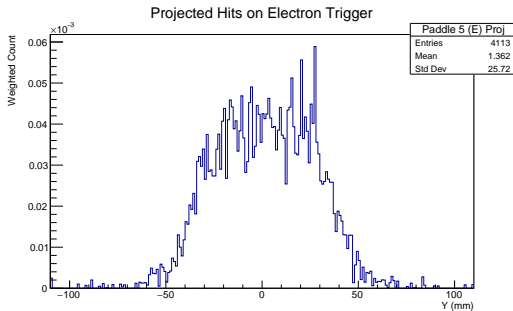
# Results: Electron Trigger
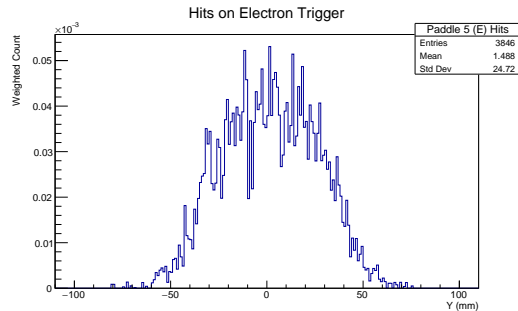


Figure: Paddle 5: Projections



Figure: Paddle 5: Hits
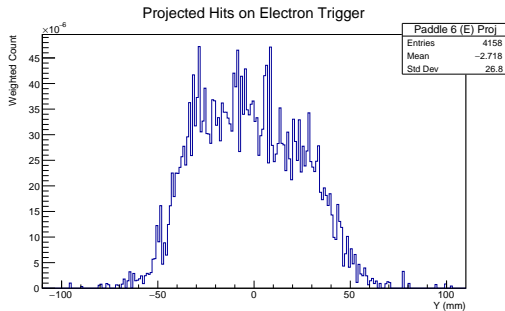
# Results: Electron Trigger
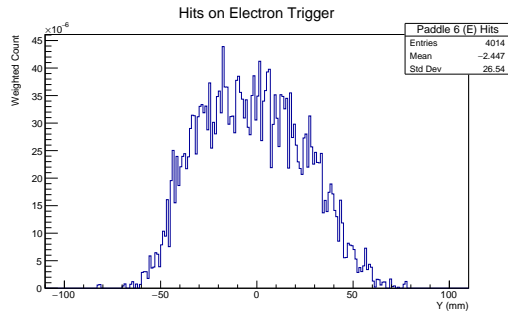


Figure: Paddle 6: Projections



Figure: Paddle 6: Hits
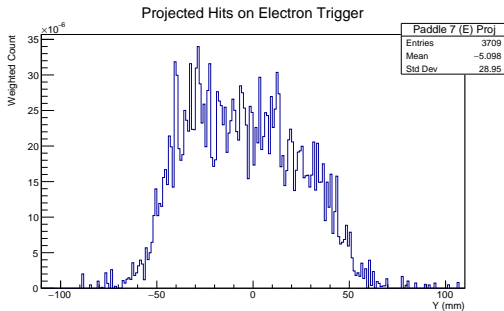
# Results: Electron Trigger
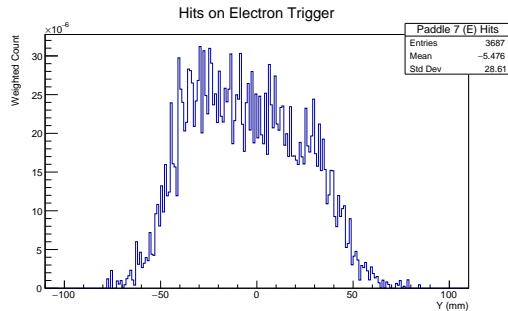


Figure: Paddle 7: Projections



Figure: Paddle 7: Hits
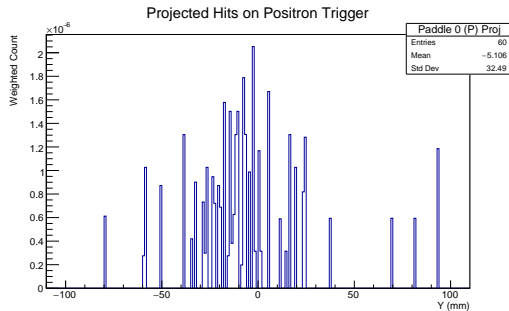
# Results: Positron Trigger
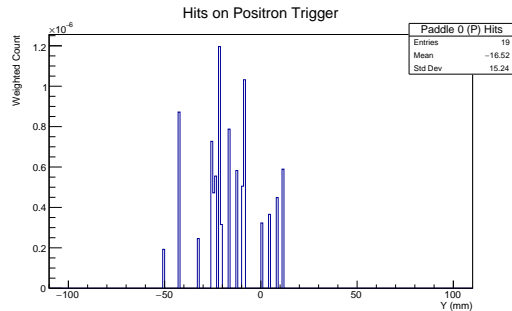


Figure: Paddle 0: Projections



Figure: Paddle 0: Hits
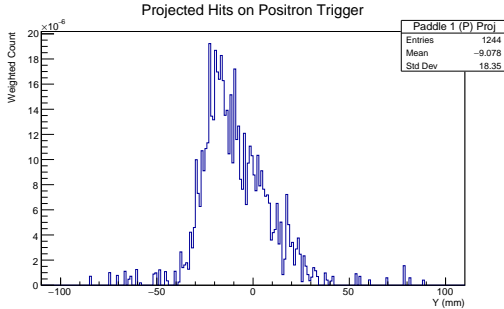
# Results: Positron Trigger
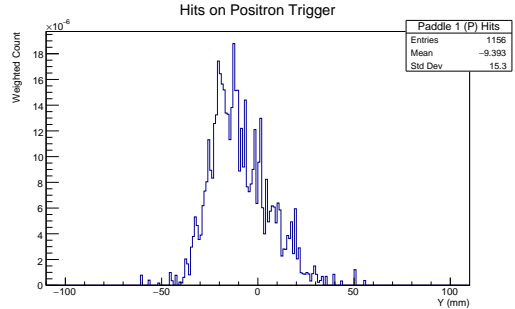


Figure: Paddle 1: Projections



Figure: Paddle 1: Hits
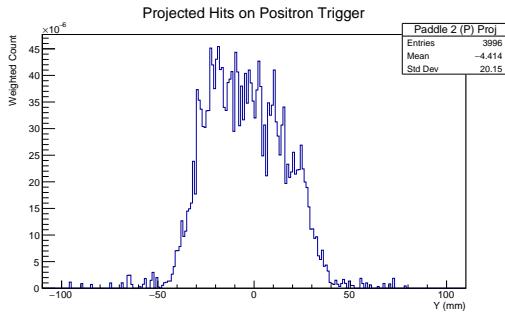
# Results: Positron Trigger
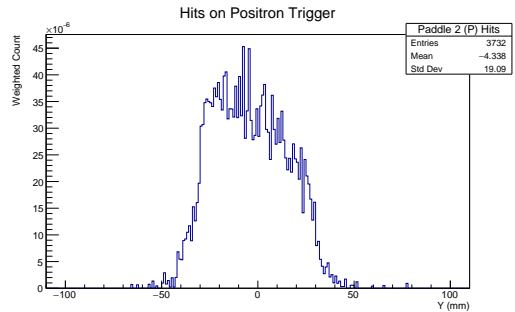


Figure: Paddle 2: Projections



Figure: Paddle 2: Hits
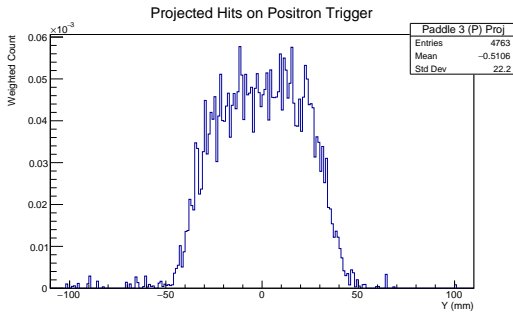
# Results: Positron Trigger
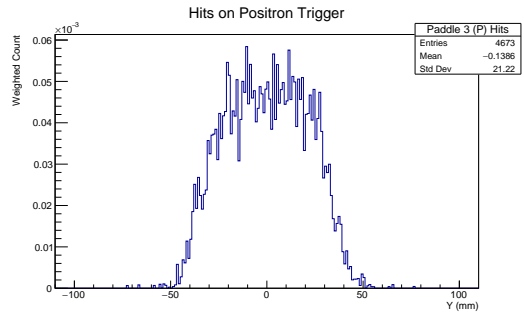


Figure: Paddle 3: Projections



Figure: Paddle 3: Hits
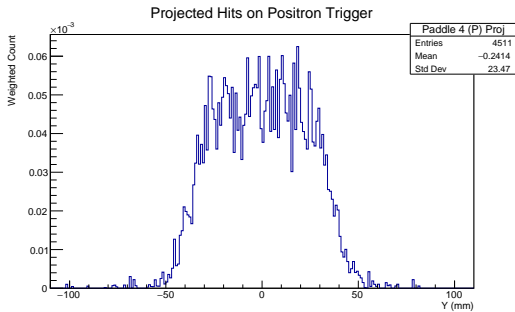
# Results: Positron Trigger
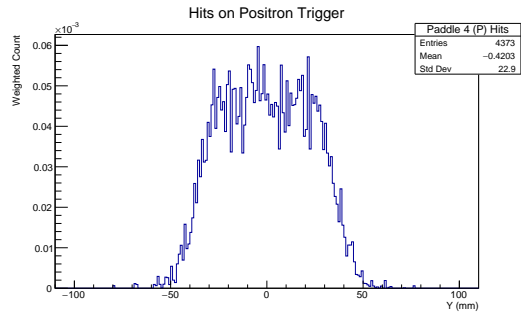


Figure: Paddle 4: Projections



Figure: Paddle 4: Hits
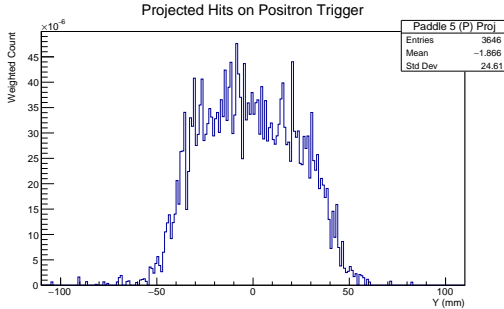
# Results: Positron Trigger
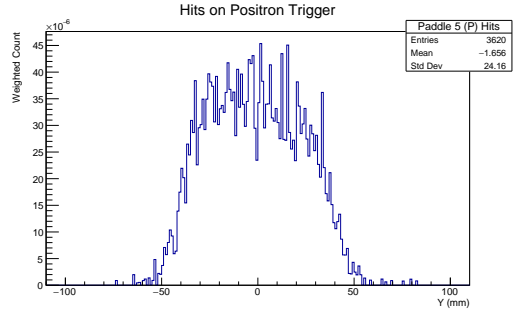


Figure: Paddle 5: Projections



Figure: Paddle 5: Hits
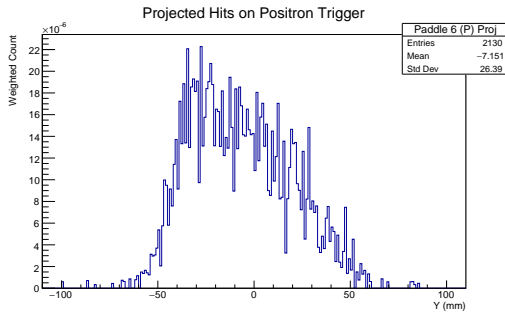
# Results: Positron Trigger
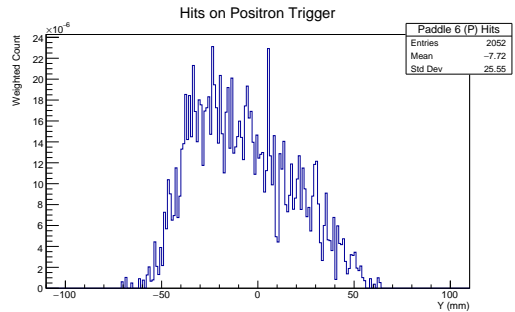


Figure: Paddle 6: Projections



Figure: Paddle 6: Hits
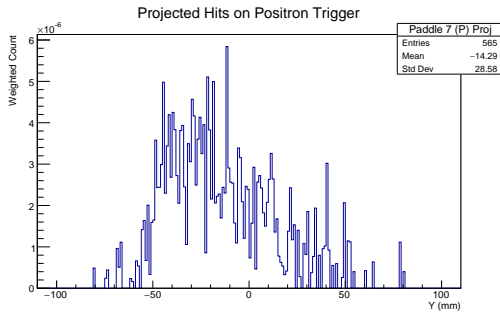
# Results: Positron Trigger
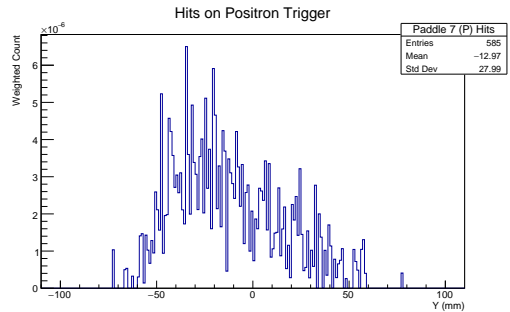


Figure: Paddle 7: Projections



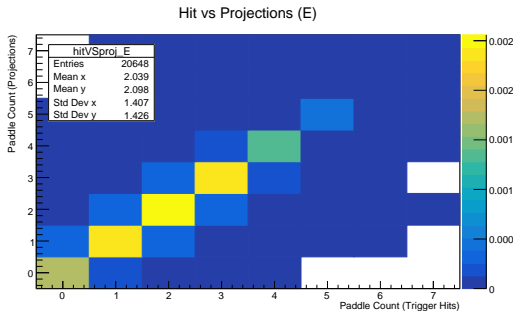Figure: Paddle 7: Hits

# Results: Correlation



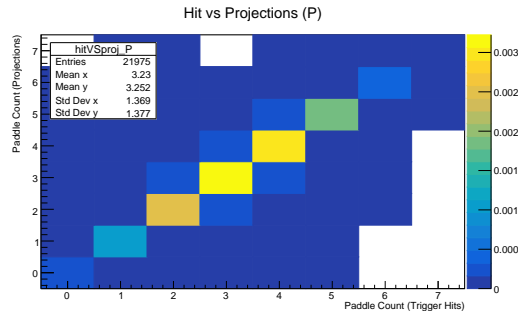Figure: Correlation (Electron Trigger)



Figure: Correlation (Positron Trigger)

# Future Work

- Investigate the disparity in the number of projected hit vs number of actual trigger hits
- Work on the plugin for mass reconstruction