

Project Introduction

Investigation of New Small Wheel High Current/Noise Interruptions at High Luminosity

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24/06/2024



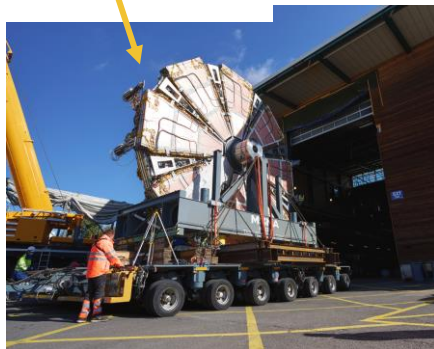
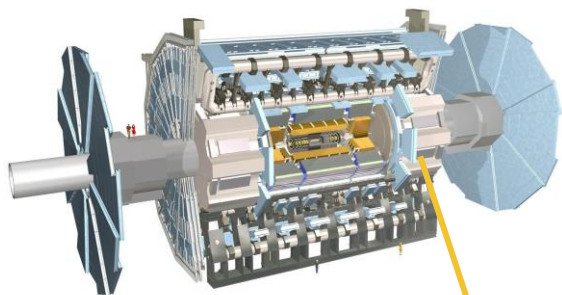
University of Michigan: Majoring in Physics and German, 4th year

Previous research: ATLAS work at UofM, Radiation testing at Brookhaven and Los Alamos, DES Astrophysics

Hobbies: Hiking, thrifting, dancing



New Small Wheel - ATLAS Experiment



Team: Margaret Lutz & Stergios
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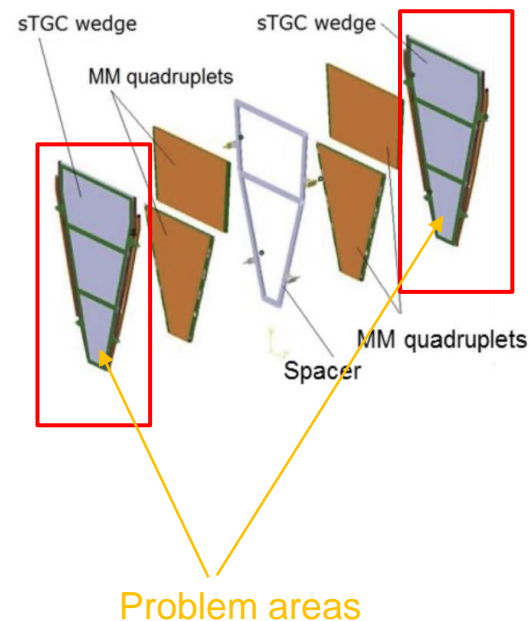
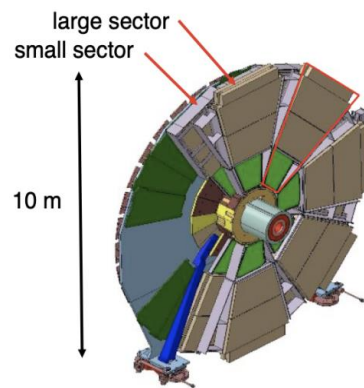
Major Goals:

- **ATLAS:** Detect particle collisions using extensive electronics
- **New Small Wheels:** Detect muons using Small-strip Thin Gas Chambers and Micromega detection systems
- **Small-strip Thin Gas Chambers:** Use ionizing gas chambers with high voltage wires to detect muons

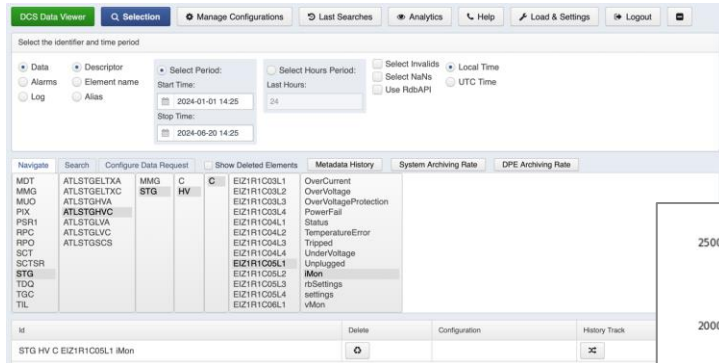
Project

Current Problem: High voltage chambers are showing prolonged spikes in current which are creating noise (over 10% limit)

Project (for now): Investigate the relationship between high luminosity and current discharges



Progress



To be continued...

- Compare New Small Wheels on each side
- Extensive electronic testing

