**Optical Engines**®

Calibration Station

Optical Engines, Inc develops high power laser systems, performs cutting edge R&D for leading scientific firms and universities, and delivers high quality custom fiber devices. We create exceptional solutions with hardware and software hand in hand. We constantly strive to keep improving and developing new capabilities in the areas of LMA fibers, Fiber Processing, Fiber Devices and Fiber Amplifier designs. We also possess the most advanced fiber processing equipment from industry leaders such as Vytran, and 3SAE, along with glass processing equipment of our own design and construction.

The Project
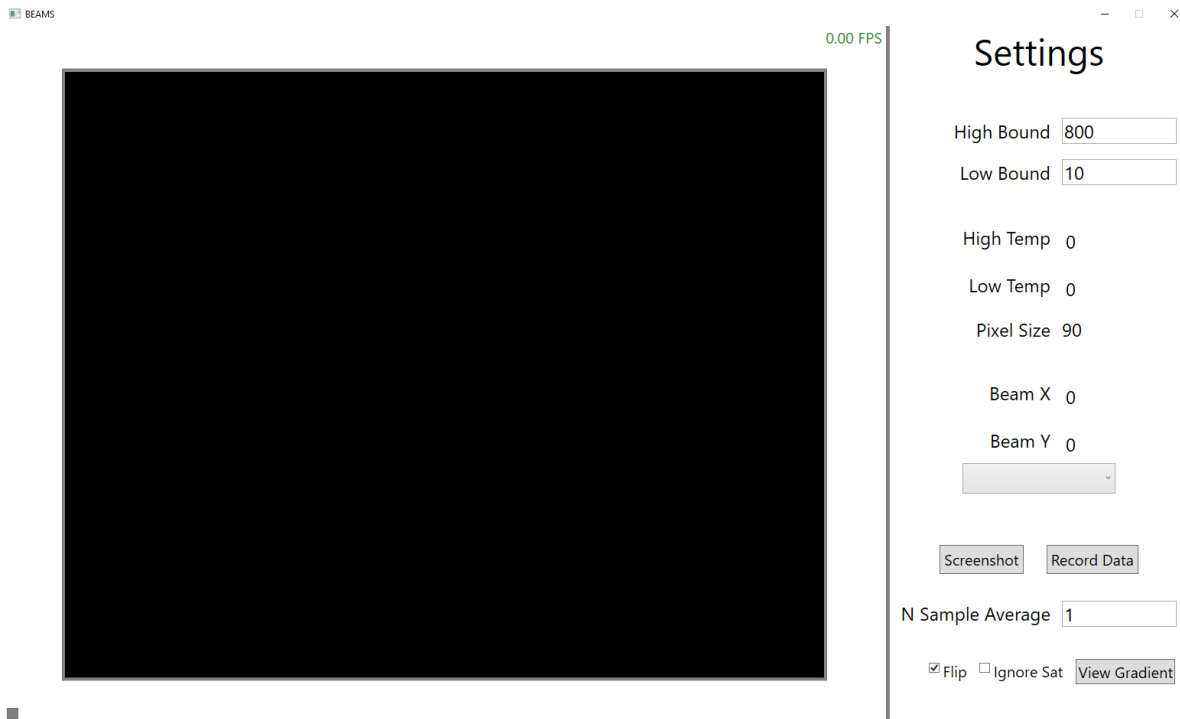
Current version of the Spyro software "BEAMS"

A good student for this project enjoys: Math, Lasers, Arduino

Objectives

- Extend functionality of existing BEAMS software
- Add a new tab for reading and writing EEPROM of Thermopile sensor
    - Calibration
    - Modification/Upgrades
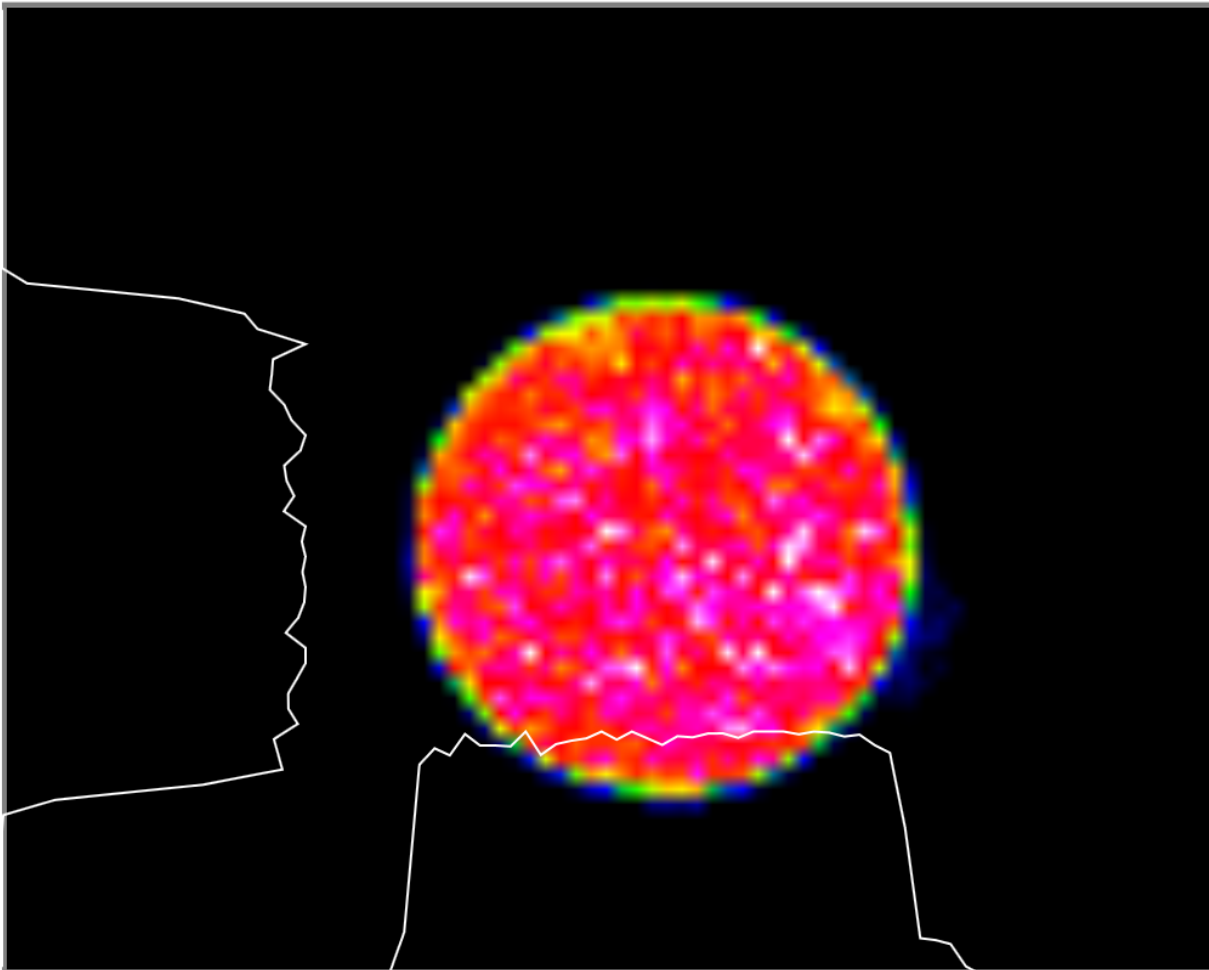- Advanced math on beam profiles
    - Centroid

- 1/e^2 beam radius
- 2nd moment beam radius
- Legendary Goal: Modify Arduino firmware/libraries to show as "Spyro Cam" instead of "Arduino Due"

Learning

- Technologies
    - C#
    - WPF
    - Windows
    - Arduino (Due/SAM)
    - Thermopile Array Sensor
- GitHub

Details

- Preferred team size: 3-5 students
- Potential for student internship(s)
- Work performed remotely and some on-site in Colorado Springs

A 2um beam profile from BEAMS