1. Details of Infrared Laboratories (goals, products, and culture)

Infrared Laboratories was founded in 1967 by Dr. Frank Low, the ‘Father of Infrared Astronomy’ and inventor of the bolometer. His original work included developing the technology to both ground based and airborne IR observation systems for the astronomical community.

The success of these systems and his ability to solve daunting technical problems prompted Dr. Low to start Infrared Laboratories and supply astronomers and research institutes worldwide with state-of-the-art instruments. Today Infrared Laboratories is still a family owned business of roughly 15 full time employees. We build custom cryogenic systems, IR detectors, optics, cameras and microscopes.

2. Identify experienced supervisor to oversee internship

Chris Foster- Engineering Manager
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I have been with Infrared Laboratories since graduating from the UofA with a B.S. in Physics in 2000. I lead a team of 4 engineers most under 30 years old. We have experience in optical design, mechanical design, motion control, and of course IR detection and cryogenics. Our work environment is casual dress and interns can put in their 20 hours Mon-Fri between 9AM-4PM.

3. Job Description, including technical skills the student will gain and what you are looking for in candidate.

I am looking for a candidate who will be happy in a production test lab environment. Typical activities would include the following:

- Pumping out cryostats and vessels using turbo vacuum pumping stations.
- Leak checking systems with Helium mass spectrometer.
- Infrared Detector Testing. Primarily this will entail bolometer testing to look for signal output, noise levels and cryogenic hold time.
- Testing and assembling wiring. Using a DMM to verify electrical continuity. This may include some light soldering work.
- Put together some test lab stations with common tools, fixtures, wiring and equipment.

4. US Citizenship not required