

8-12 MICRON RADIOMETRIC IMAGING

The NWS Metrology R&D Program is in the process of enhancing the Navy's calibration capabilities in 8-12 micron infrared imaging. Infrared imaging has become the leading technology in being able to quickly and correctly identify enemy forces. Also, unlike radar, infrared can operate passively thereby reducing the risk of detection and counter fire.

One of the primary two bandwidths used in infrared imaging technology is 8-12 micron. (The other, 3-5 micron, is addressed by another project.) The 8 to 12 band is more often used to image targets closer to room temperature such as in reconnaissance missions.



Figure 1
Infrared Imaging System

Existing Navy standards are inadequate to calibrate FLIR's and other infrared systems currently in development. An imaging system would quickly give much more helpful information. This project will develop a reliable, more accurate radiometric imaging system. The key specification will be temperature accuracy. The new system will also allow much easier data manipulation with enhanced software.

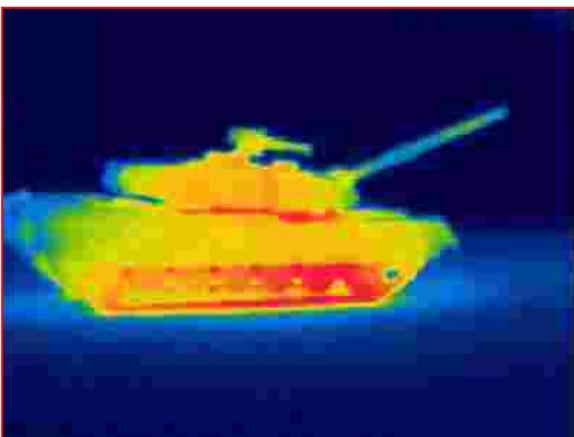


Figure 2
Infrared Imaged Tank

The end product will be a system that is useful to the fleet, accurate enough to address the measurement concerns likely to arise in the next few years, and traceable in as few steps as possible to NIST and NPSL