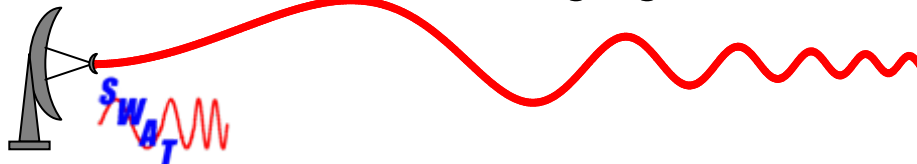


# THz Imaging for Biomedical Applications (Caltech/JPL)



**Program:** NIH bioengineering cross training grant with Scott Fraser & Warren Grundfest (UCLA) (ends in Sept. 2008)

**Purpose:** Develop THz imaging techniques and instruments for biomedical applications from disease diagnostics to cellular processes

**Underlying Technology:** RF Schottky diode heterodyne sensor and source components developed for NASA space applications.

**State-of-the-Art:** This was the very first NIH grant awarded for THz applications. At the time of initial funding, THz pulsed instruments (TPI) were just beginning to come on line in this area.

## Major Accomplishments to date:

- Assembled first 2.5 THz heterodyne imaging system obtaining >100dB dynamic range and 200 micron resolution.
- Extended to lower frequencies (100-700 GHz) using modified commercial MVNA
- Currently prototyping 2D TPI system

## 2.5 THz Wide IF Heterodyne Imager

