

Microwave Photonics Project

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Objective: Develop miniature solid-state lasers for microwave/millimeter wave signal generation and signal transmission applications.

Advantages: Optically pumped; low noise, narrow linewidth; high-power; simple construction

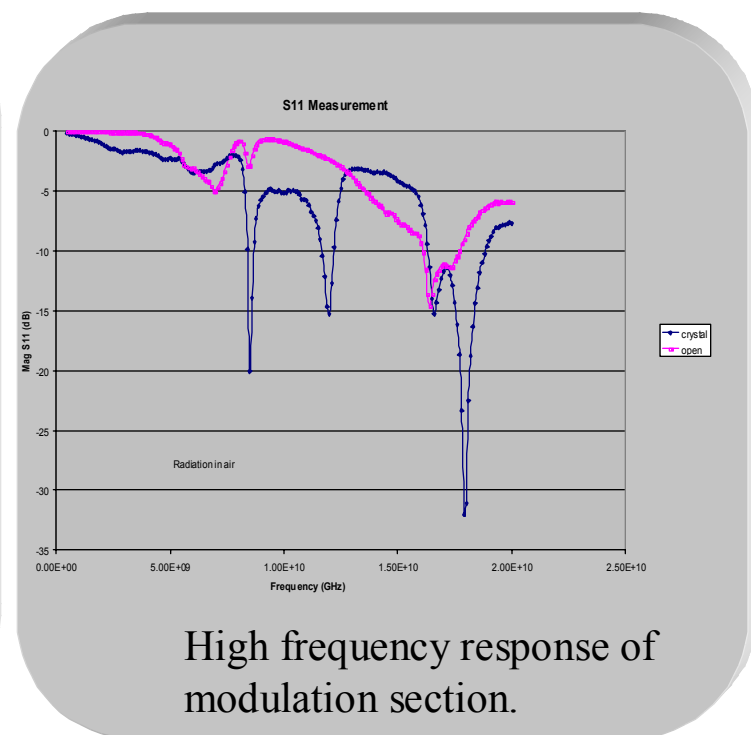
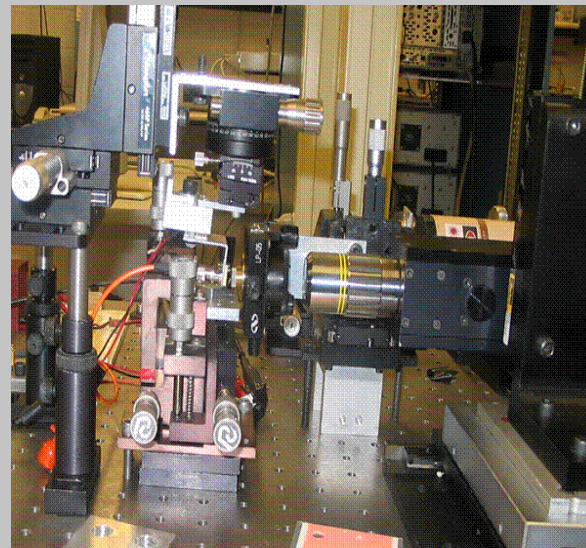
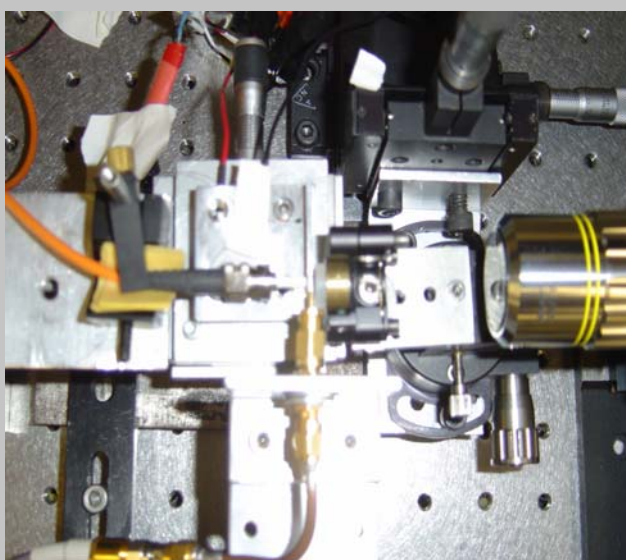
Applications:

Single Mode Lasers

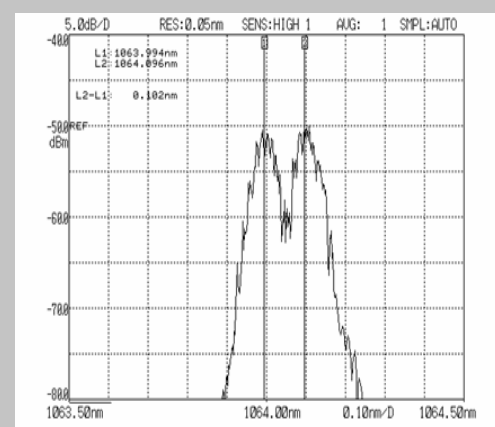
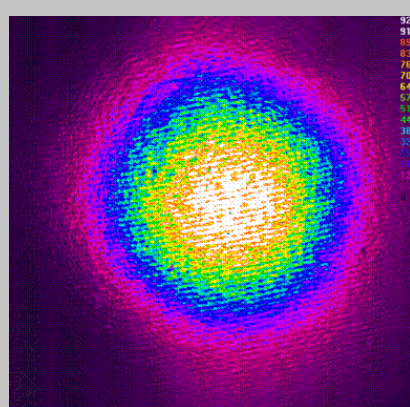
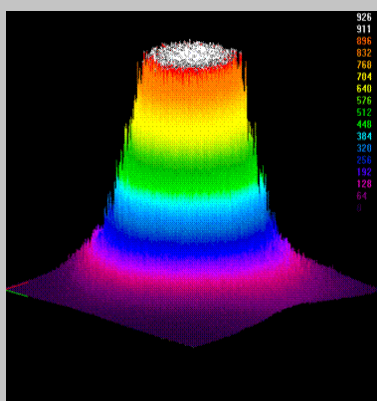
Coherent FM optical communications, FM analog fiber optic links.

Mode-Locked Lasers

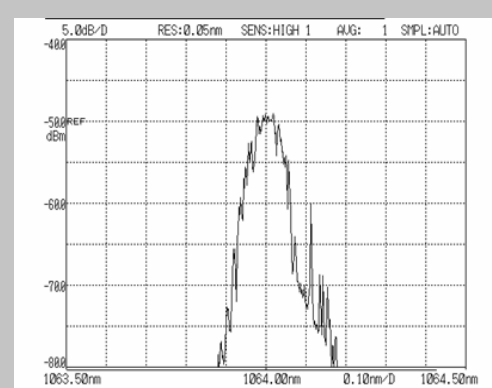
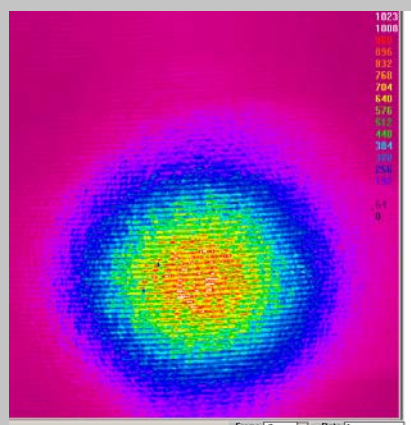
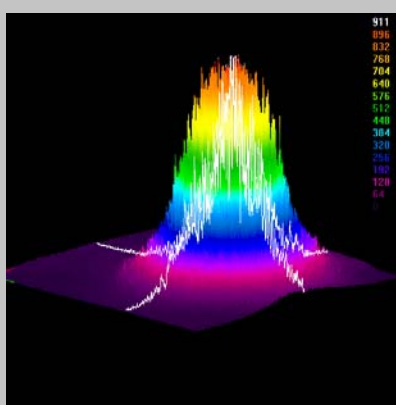
Fiber Radio, A/D Clock generation Optoelectronic Oscillators



Microchip Laser configurations



Dual Mode Laser



Single Mode laser

3-D Beam Profile

2-D Beam Profile

Laser Spectrum