

- **Jefferson Labs Testing Begun at Low Powers; Hardware complete for 10 KW testing when FEL comes on line**
- **CW Test Program Underway with Penn State Fiber Laser**





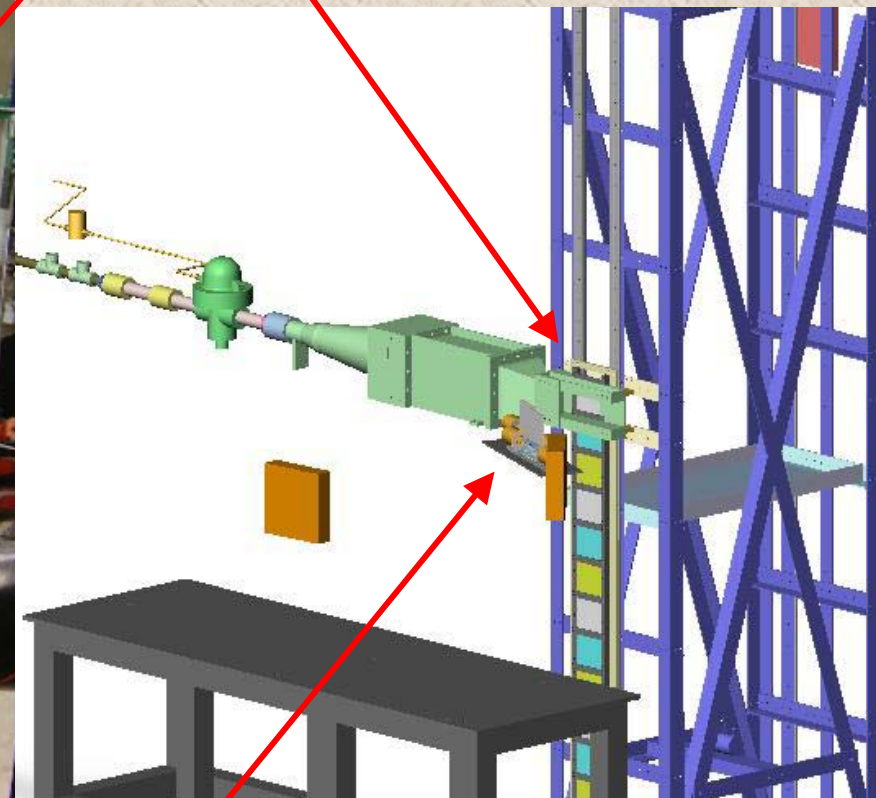
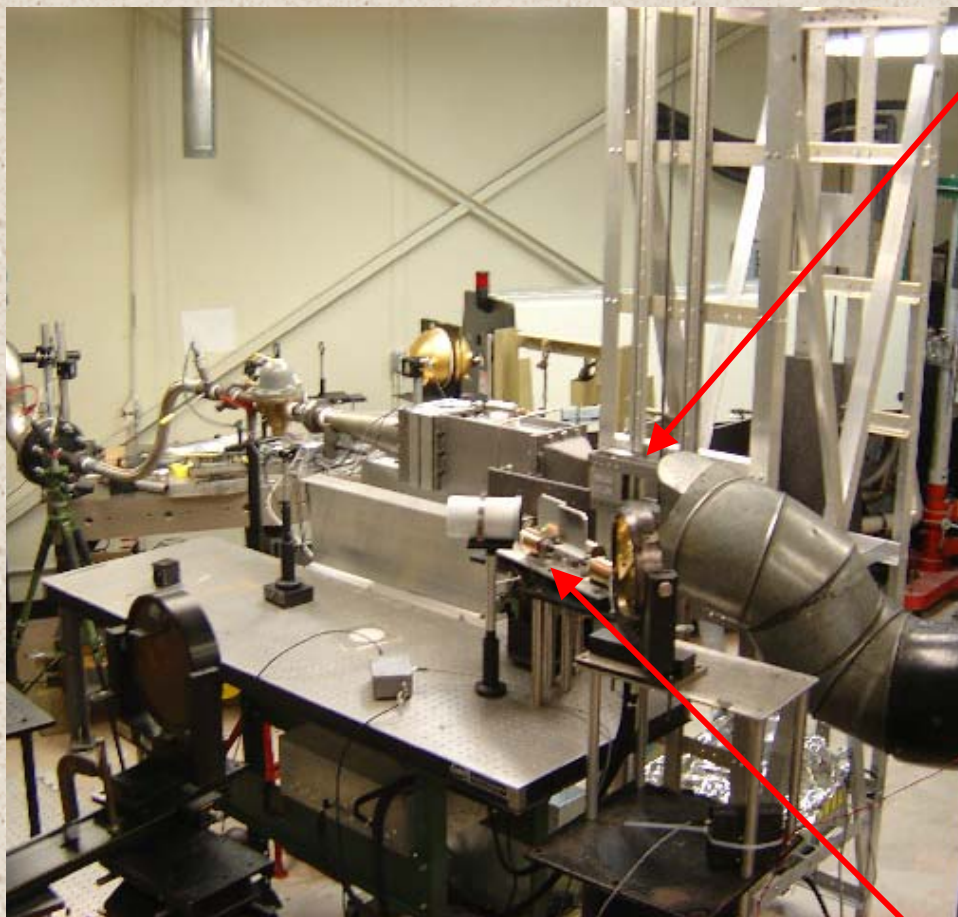
FEL J Labs Testing



- FEL effects
 - Utilize FEL materials and sensor effects ancillary equipment developed in FY04 in FY 06 testing
 - Concentrate on effects near 1um / tactical irradiance
- Completed Initial Test Series: Silicon Sensor Testing
 - Unique FEL waveform boosts peak irradiance by 10^4
 - $\sim 10^3$ pulses during a 10 μ s illumination
 - High peak has an impact on damage thresholds



Materials Effects Test Setup

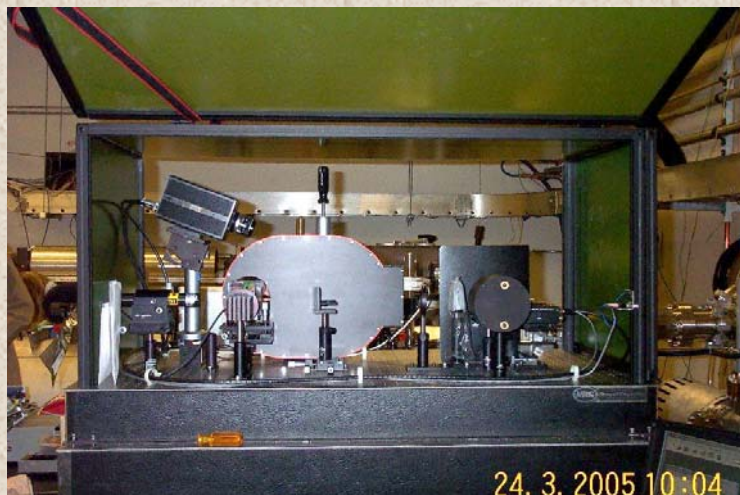
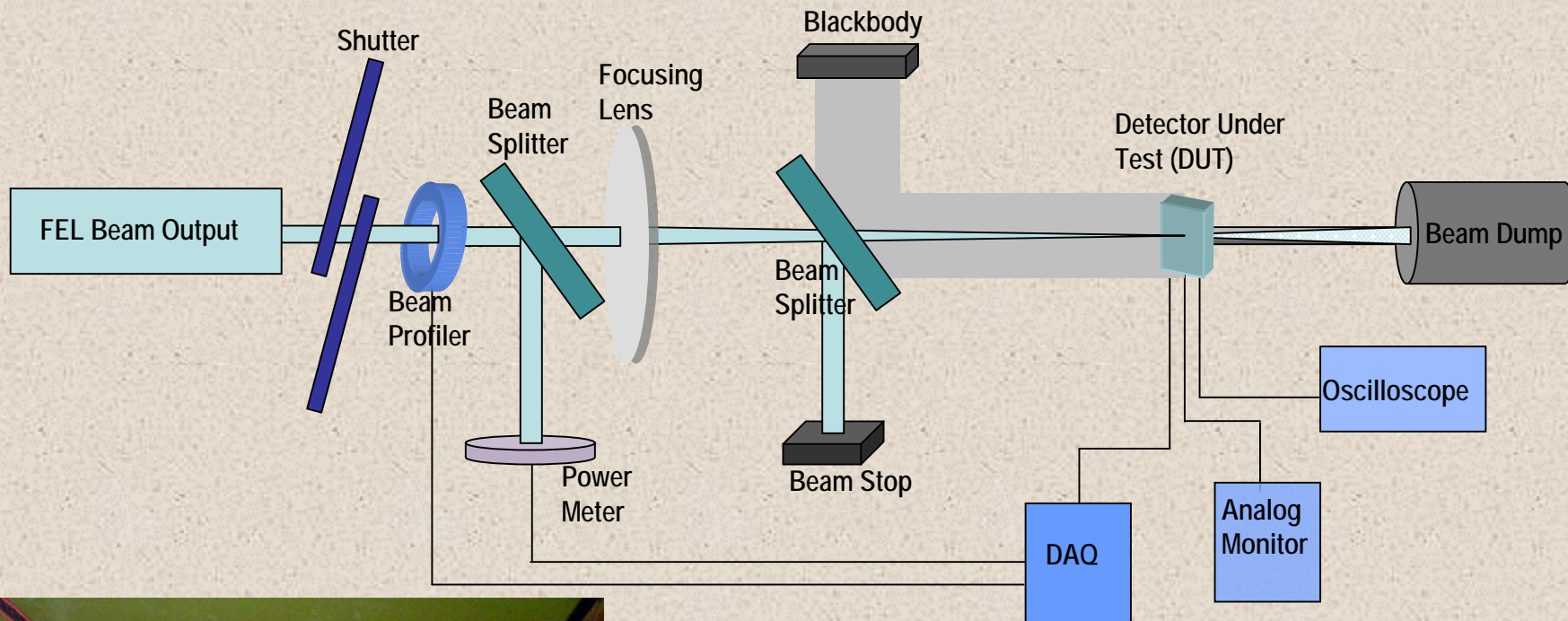


Burn location

Shutters



Sensor Effects Test Bed



- NIR in-band staring array
- Configuration mimics imaging seekers
- Blackbody sets consistent background
- Initial tests on silicon detector arrays



Program for CW Testing

- Electro-Optics Center has installed a 10 kW Ytterbium fiber laser at its facility
- Three planned activities relevant to military applications
 - Laser charring effects of semi-transparent composites
 - Optical coating damage tests
 - Low-cost beam director demonstration