



Glenn Research Center

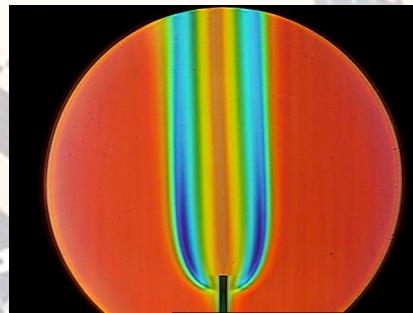


Species, Density, and Temperature Measurements

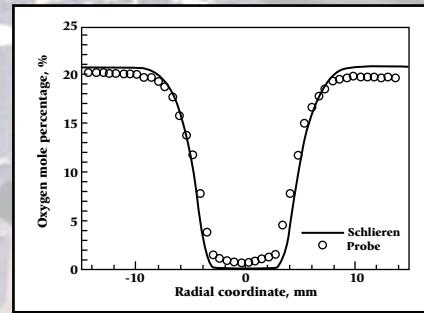
Challenge: Pursue alternatives to traditional fluorescence and scattering methods requiring large, power consumptive pump sources.

I. Refractive Index Methods

- Quantitative Rainbow Schlieren Deflectometry

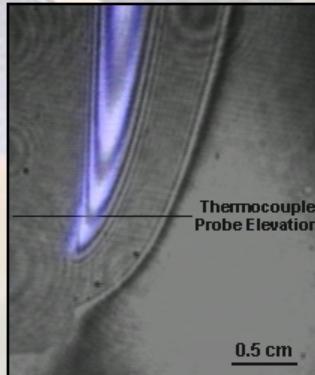


Laminar H_2 /air diffusion flame

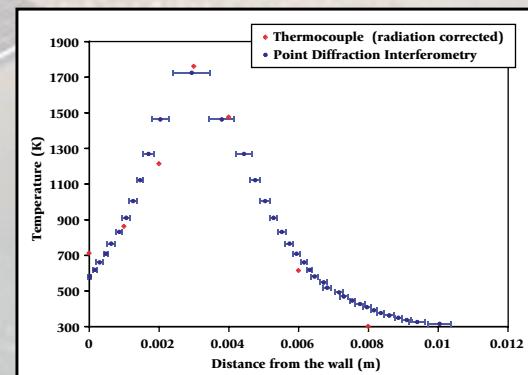
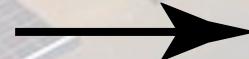


Derived O_2 mole fraction vs. sampling probe

- Point Diffraction Interferometry



2-D methanol wick flame



Derived temperature vs. thermocouple