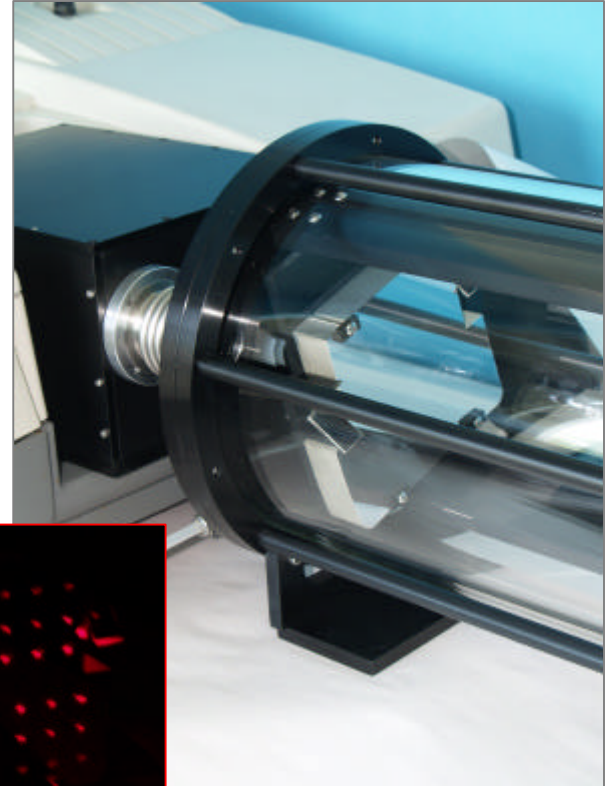
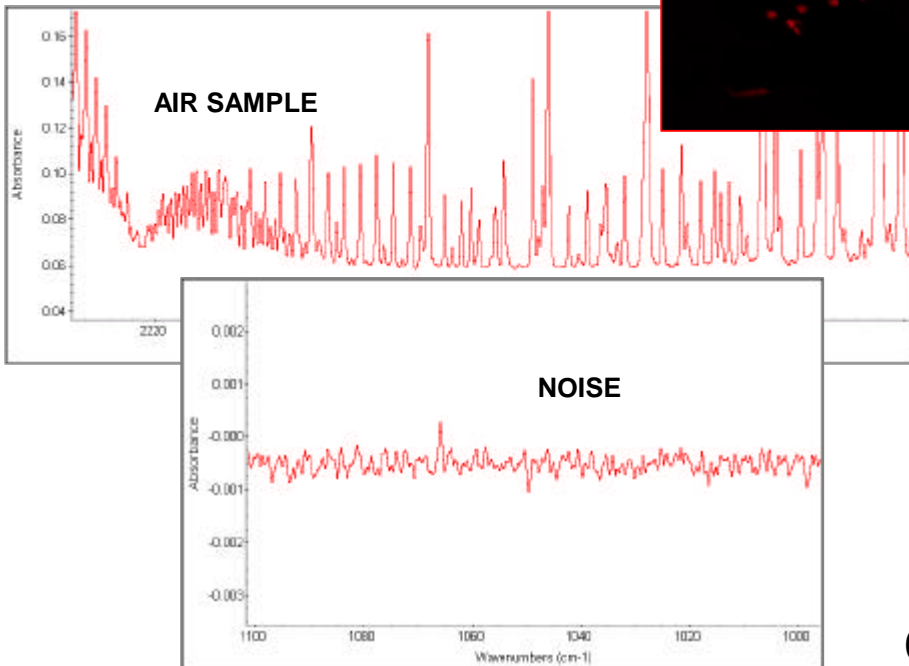
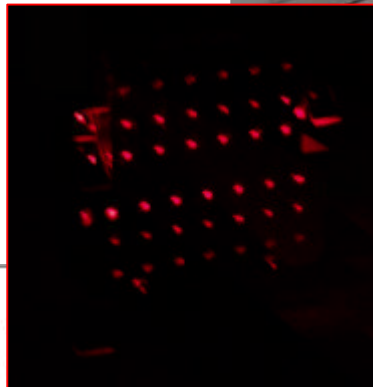


## Saturn Series Multi-Pass Gas Cells For Long-Long Path Infrared Spectroscopy

Saturn Series Multi-Pass cells from Gemini are Research-grade long path gas cells from 50 meters to 200 meters or more. Custom transfer optics and mounting hardware for center-focus or side port use on spectrometer systems are provided. An innovative advancement of the White optical configuration for long-long path length effectively triples the operational range of the instrument inside a moderate size cell volume. This provides path lengths in excess of 100 meters that can produce a strong IR signal throughput for trace level detection.



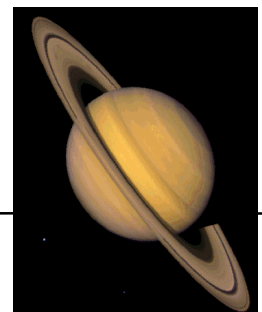
A HeNe laser visual alignment verification device projects a centerline laser beam coincident with the IR path, and reveals six rows of infrared images on the field mirror. Saturn cell model #SAT 50L/200V can provide an IR signal as high as approx. 200 meters.



This long path IR environment provides researchers rich spectral data for PPB level measurements of gas mixtures or in ambient air.

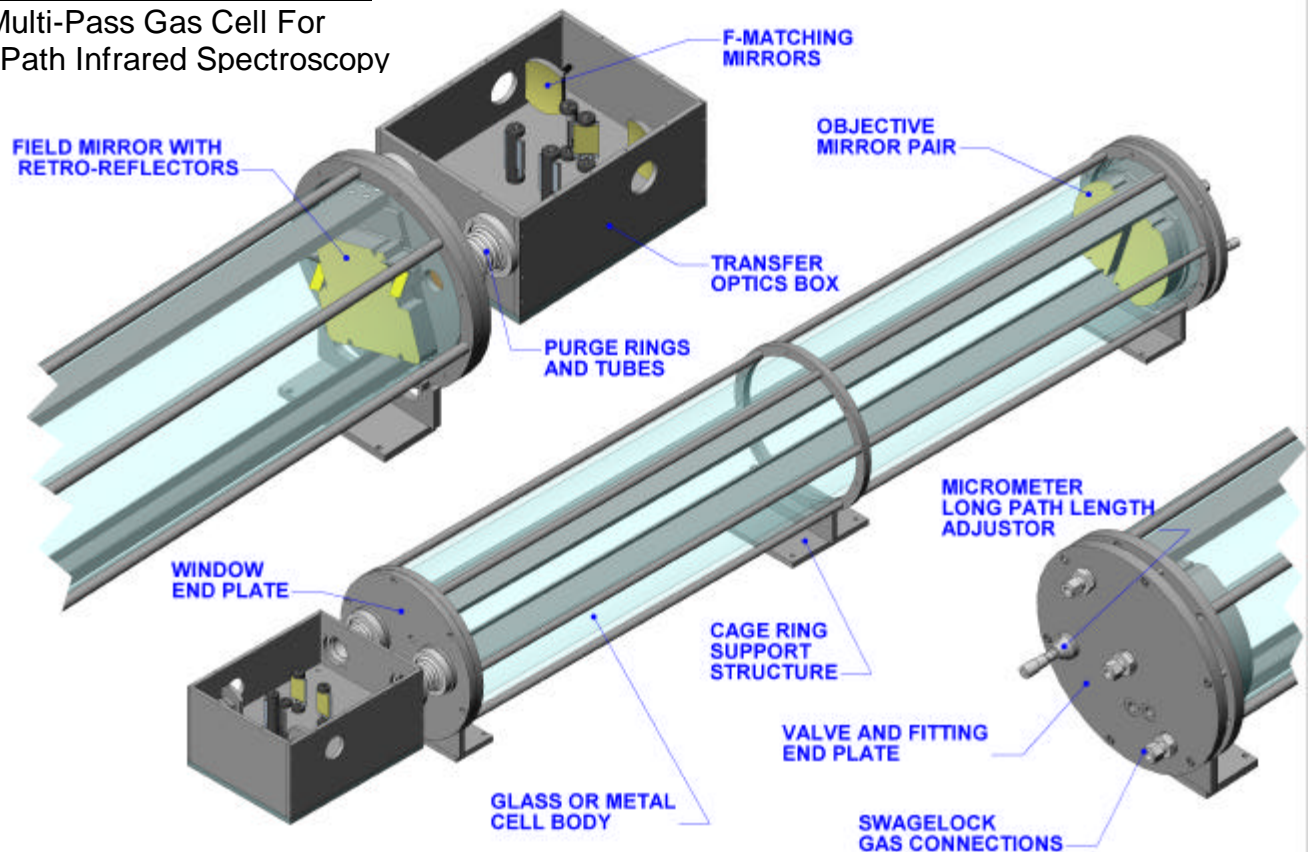
The figure below left shows excellent s/n performance at 0.5cm-1 res. in 160 meters path in a few minutes of observation time.

Gemini Saturn  
Series Gas Cells



## Features of Saturn 50L/200V

Multi-Pass Gas Cell For  
Long Path Infrared Spectroscopy



Systems are provided complete with windows, transfer optics, mounting fixture, etc., specific to the user's spectrometer type or other special optical needs. Cell hardware is black anodized aluminum, optics are silver coated glass for high infrared and vis reflectivity. Several different configurations are available in the price list, the manufacturer's recommended configuration is detailed below:

SAT-50L/200V

Saturn Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with 3/8" Swagelok connections and flow tube. Comes with two 37.5mm x 4mm KBr windows as standard.

**Pathlength:** 20 to 200 meters, variable

**Volume:** approx. 50 liters.

**Cell Body:** Borosilicate glass (pyrex)

**Cell Hardware:** aluminum black anodized

**Optical Coating:** GeminiSilver<sup>™</sup>, protected multilayer

**Temperature Range:** ambient

**Pressure Range:** vacuum-ambient

Gemini Saturn  
Series Gas Cells

