Plan to measure engine core flow water vapor content

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Flow Path Schematic
Air Sample Locations
Tunable Diode Laser Absorption Spectroscopy

Based on Beer Lambert Law:

Laser beam Intensity reduced: water vapor absorbs radiant energy from beam

Concentration of the water vapor in sample is proportional to the difference between incoming and outgoing intensity of laser beam
Concentration of the water vapor in sample is proportional to the difference between incoming and outgoing IR energy.
Plumbing Schematic
Questions or Comments