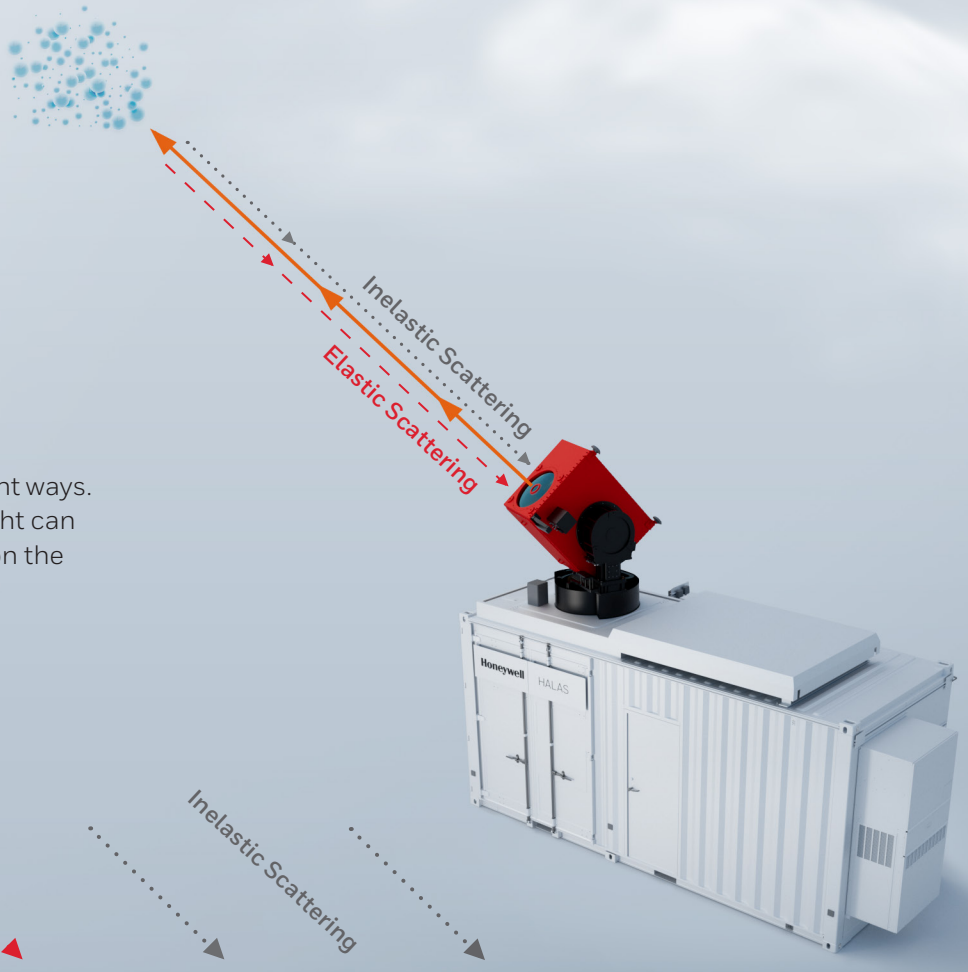
HIGH ALTITUDE LIDAR ATMOSPHERIC SENSING (HALAS)

How the technology works

1. We send light out into the atmosphere (via laser)
2. Some light gets scattered from the molecules and sent back to our instruments along the same trajectory as how the laser (light) was sent.
3. Our instruments read the returning scattered information through:
   - Wavelength
   - Phase
   - Relative amounts
4. We decipher from the three categories and determine the individual atmospheric parameters (wind, density, pressure, etc.)



What is Scattering?

Light interacts with the atmosphere in different ways. A mirror reflects light, light can refract, and light can "scatter" in many directions. HALAS focuses on the molecules, things the human eye can not see.

	MIE SCATTERING	RAYLEIGH SCATTERING	ROTATIONAL RAMAN SCATTERING	VIBRATIONAL RAMAN SCATTERING
VARIABLES *Data received by HALAS*	• Extinction • Winds • Cloud Height	• Extinction • Density • Winds • Pressure	• Temperature • Density	• Water Vapor • Dew Point • Relative Humidity

THE FUTURE IS WHAT WE MAKE IT

Honeywell

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