



HONEYWELL HALAS

High Altitude LiDAR Atmospheric Sensing

Honeywell

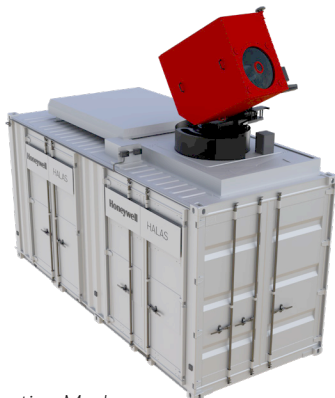
NEAR REAL-TIME ATMOSPHERIC DATA IN MINUTES

Gathering highly-accurate and near real-time atmospheric data at a desired time and location can be difficult, time-consuming and expensive for commercial and defense organizations that need up-to-the-minute weather information.

Honeywell's High Altitude LiDAR Atmospheric Sensing (HALAS) is a remotely-operated, ground-based weather information system that provides near real-time, high altitude atmospheric measurements in as little as three minutes.



Stowed Mode



Collection Mode

KEY HONEYWELL ADVANTAGES

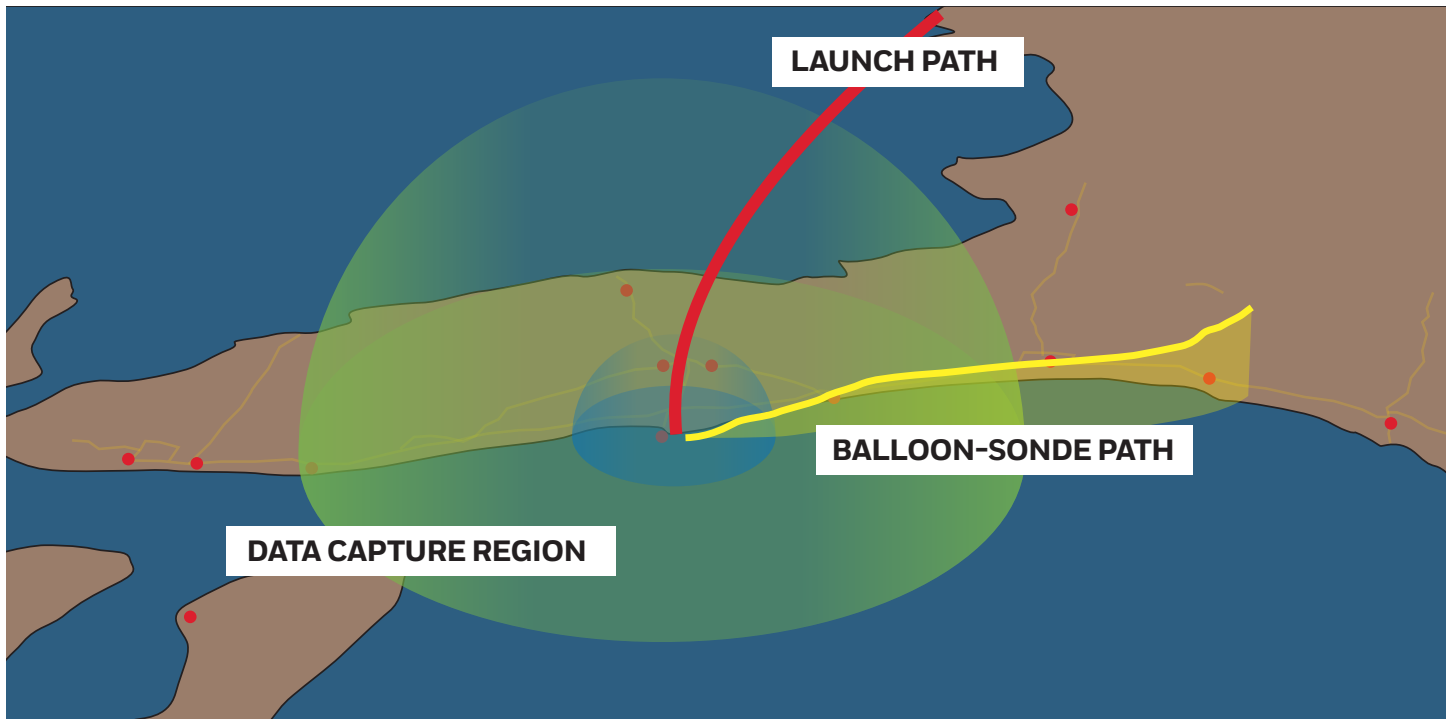
- **Faster Data Continuously Captured:** Full atmospheric observations in minutes
- **Single Device:** Simultaneous data products from a single device
- **Location Relevant Data:** Measures atmosphere in area and time of interest
- **Lower Uncertainty:** Improved accuracy at higher altitudes
- **Remote Operation:** Access HALAS from a remote operation using our customer web portal

POTENTIAL APPLICATIONS

- Accurate timely data for launch decisions
- Flight test support (sub-, super- and hypersonic)
- Weather prediction and modelling data
- Augmentation of balloon-sonde data
- Directed energy weapon support
- Precision air drop evaluation

BENEFITS BY CUSTOMER APPLICATION

- **Commercial Weather**
 - Increase the accuracy of weather predictions
 - Provides more frequent high altitude weather observations
- **Space Launch**
 - Provides greater confidence in the ability to launch in marginal weather conditions
 - Potential to increase the number of launches per year
- **Hypersonics / Missile Test**
 - More accurate spatial and temporally relevant atmospheric measurements
 - Provides higher accuracy weather data when and where it is needed



CURRENT VARIABLES MEASURED

- Air Temperature
- Wind Speed & Direction
- Density
- Humidity (Water Vapor)

FUTURE VARIABLES WE WILL MEASURE

- **Optical Turbulence (C_n^2)** - The impact of refraction variations on optical signal transmission. For example, it is responsible for phenomena such as the twinkling of stars in the night sky.
- **Aerosols** - Minute particles suspended in the atmosphere. When these particles are sufficiently large, they will scatter and absorb sunlight.
- **Cloud Height** - also known as cloud thickness or depth, is the distance between the cloud base and the cloud top.
- **Extinction** - Atmospheric extinction is the reduction in brightness of stellar objects as their photons pass through our atmosphere.

For more information

To find out more about the Honeywell HALAS scan the QR code



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THE
FUTURE
IS
WHAT
WE
MAKE IT

Honeywell