Airyx NH_3 Open Path Compact v.100

SMART, STABLE, AND CALIBRATION-FREE AMONIA MONITORING

KEY FEATURES

- **ACCURATE GAS DETECTION**: NH_3, NO, SO_2 with proven DOAS technology
- **COMPACT & FLEXIBLE**: One system, multiple measurement paths
- **RUGGED & MOBILE**: Weatherproof (IP64)
- **PLUG & PLAY SETUP**: Motorized auto-alignment for instant deployment
- **CALIBRATION FREE**: DOAS technology, no calibration gases, no drift

APPLICATIONS

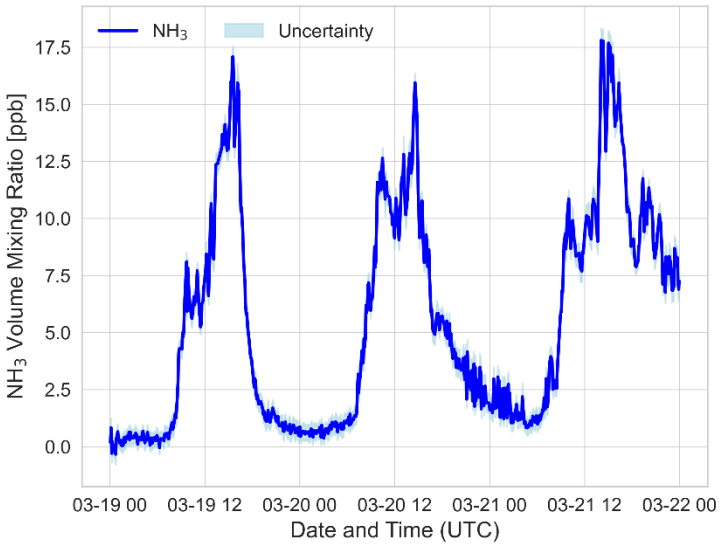
- Air quality & workplace safety monitoring
- Agriculture emission
- Industrial emission & process control
- Fence line monitoring
- NH_3 spatial distribution analysis

DESCRIPTION

The system enables precise Open Path DOAS measurements of ammonia (NH_3) across multiple paths using multiple retro reflectors. A UV deuterium lamp (D2) provides the light source, while a compact spectrometer performs the spectral analysis. With its fully motorized telescope head, the Open Path Compact easily adapts to a wide range of applications.

TECHNICAL DETAILS

Optics	Mirror Telescope, Focal Length of 300 mm		
Light Source	D2 Lamp		
Detectable Gases **Limit of Detection /ppb** [@ 100 m path length, 5 min] *depend on conditions such as visibility, path length*	NH_3	NO	SO_2
	1	4	5.5
Path length to reflector	up to 150 m		
Time Resolution	up to 1 minute		
Compact Spectrometer	Spectral Range 190 to 310 nm Temperature Stabilized		
Motorization	Azimuthal (0° to 360°) and Elevation (-40° to 75°)		
Housing	IP64 Housing, Internal Heating, Dew Point Monitoring		
Control Unit	Integrated Embedded PC, WIN10 IOT		
Temperature Control	Stabilised with Heating & Cooling		
Additional Sensors	Elevation, Ambient Temperature and Pressure, Internal Dew Point		
Data Interfaces	Internal Data Storage, LAN, WiFi		
Power Supply / Consumption	24 V, 80 W max.		



NH_3 Open Path Compact set up at the Federal Environmental Agency station Neuglobsow, Germany (left). Example data time series (right).