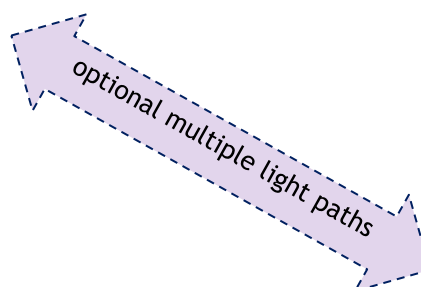
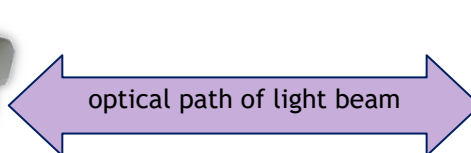


# Airyx $\text{NH}_3$ Open Path Compact v.100

SMART, STABLE, AND CALIBRATION-FREE AMONIA MONITORING



## KEY FEATURES

- **ACCURATE GAS DETECTION:**  $\text{NH}_3$ ,  $\text{NO}$ ,  $\text{SO}_2$  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
- $\text{NH}_3$  spatial distribution analysis



Airyx webpage



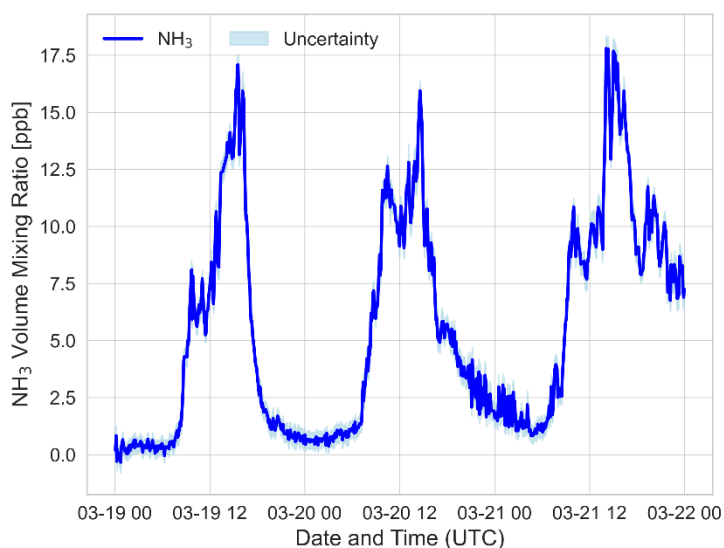
Airyx Contact

## DESCRIPTION

The system enables precise Open Path DOAS measurements of ammonia ( $\text{NH}_3$ ) 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 OPC easily adapts to a wide range of applications.

## TECHNICAL DETAILS

|                                                                                                                       |                                                                                    |             |               |                    |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------|---------------|--------------------|
| Optics                                                                                                                | Mirror Telescope, Focal Length of 300mm                                            |             |               |                    |
| Light Source                                                                                                          | D2 Lamp                                                                            |             |               |                    |
| Detectable Gases                                                                                                      | $\text{NH}_3$                                                                      | $\text{NO}$ | $\text{SO}_2$ | Aromatic Compounds |
| Limit of Detection /ppb<br>[@ 100m path length, 5 min]<br><i>depend on conditions such as visibility, path length</i> | 1                                                                                  | 4           | 5.5           | -                  |
| Path length to reflector                                                                                              | up to 150 m                                                                        |             |               |                    |
| Time Resolution                                                                                                       | up to 1 minute                                                                     |             |               |                    |
| Compact Spectrometer                                                                                                  | Spectral Range 190 to 310nm & Resolution (FWHM) < 0.5 nm<br>Temperature Stabilized |             |               |                    |
| Motorization                                                                                                          | Azimuthal ( $0^\circ$ to $360^\circ$ ) and Elevation ( $-40^\circ$ to $75^\circ$ ) |             |               |                    |
| Housing                                                                                                               | IP64 Housing, Internal Heating, Dew Point Monitoring                               |             |               |                    |
| Control Unit                                                                                                          | Integrated Embedded PC, WIN10 IOT                                                  |             |               |                    |
| Temperature Control                                                                                                   | Heating & Cooling                                                                  |             |               |                    |
| Additional Sensors                                                                                                    | Elevation, Ambient Temperature and Pressure, Internal Dew Point                    |             |               |                    |
| Data Interfaces                                                                                                       | Internal Data Storage, LAN, WiFi, Machine2Machine                                  |             |               |                    |
| Power Supply / Consumption                                                                                            | 24V, 80 W max.                                                                     |             |               |                    |



*NH<sub>3</sub> Open Path Compact set up at the Federal Environmental Agency station Neuglobsow, Germany (left). Example data time series (right).*