

AirUX
DIFFERENT THINKING. BETTER MEASURING.

Open Path Compact NH_3

Contact-free ammonia detection for uncompromised accuracy

DESCRIPTION

Direct optical measurement of atmospheric NH_3, NO, SO_2, CS_2, H_2S, VOCs and aromatic compounds.

Fully motorized telescope for automatic alignment & tracking

Multiple light paths possible

Ambient measurements on minute time scale with ppb precision

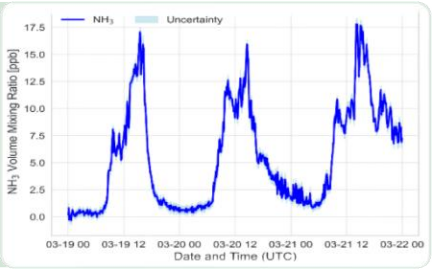
Open Path UV-DOAS Spectroscopy

UV light beam is sent to reflector & back



Gases are quantified from characteristic absorption spectrum (DOAS-technique)

Representative across light path



Robust against intensity variations (lamp aging, rain, scattering, window losses)

KEY FEATURES

ACCURATE CONTACT FREE MEASUREMENT
No losses in tubings & filters

CALIBRATION FREE
No calibration gases required
No drift due to automatic zero reference

PLUG & PLAY SETUP
Camera-supported auto-alignment for instant deployment

RUGGED & FLEXIBLE
Weatherproof housing, optional tripod

DESIGNED FOR...

Air quality monitoring

Agriculture & industrial emission

Process control & fence line monitoring

Trace gas spatial distribution analysis

TECHNICAL DETAILS

Data Quality

Detectable Gas	Limit of detection [ppb] *1,2,3	Range [ppb]*1,4	Detectable Gases	Limit of detection [ppb] *1,2,3	Range [ppb]*1,4
NH_3	1	0 - 10^5	Chlorobenzene	12	0 - 4400
NO	2	0 - $5 \cdot 10^3$	M-Xylene	20	0 - 9000
SO_2	5	0 - $2 \cdot 10^3$	P-Xylene	8	0 - 3700
O_3	15	0 - 1000	M-Cresol	4	0 - 9000
H_2S	200	0 - 1400	P-Cresol	1	0 - 900
CS_2	0.2	0 - 35	O-Cresol	6	0 - 1800
Toluene	20	0 - 6000	Benzaldehyde	3	0 - 1600
Styrene	5	0 - 170	Ethylamine	10	0 - 3200
Benzene	15	0 - $2.6 \cdot 10^4$	Methylfurane	8	0 - 350
Time Resolution	up to 1 minute				

1) Dependent on Light Path Setup.
2) @ 100 m Distance between Reflector & Telescope.
3) Dependent on Visibility
4) Optical density = 1 on 25 m. Other Ranges available on Request

Optics

Light Source	Deuterium Lamp (Lifetime >3 Months, typically 6 Months)
Telescope	Mirror Telescope, Focal Length 300 mm
Spectrometer	Spectral Range 190 – 310 nm, Resolution < 0.5 nm (FWHM) Temperature stabilised
Distance to Reflector	20 – 150 m

Instrument Features

Weatherproof	IP64, Dew Point Monitoring, Window Wiper Suitable for Outdoor Installation
Low Maintenance	Exchange of Lamp (1x / 3 - 6 Months) & Desiccant (1x / 6 Months) Window cleaning (site-dependent)
Motorisation	Azimuthal (0° to 360°) and Elevation (-40° to 75°)
Temperature Control	Spectrometer & Housing stabilised with two-staged Heating & Cooling Unit
Smart Setup	Integrated Camera and Searchlight for Identification of Light Path
Additional Sensors	Ambient Temperature & Pressure, Internal Dew Point

Control & Connection

Control Unit	Embedded PC; Windows 11 IoT
Data Interfaces	Internal Data Storage, LAN, WiFi, UIDEP Protocol Support
Power Supply & Consumption	24 V, 80 W max.

Airyx
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Product page

Contact us