



# Open Path Compact NH<sub>3</sub>

Contact-free ammonia detection for uncompromised accuracy

## DESCRIPTION

## Open Path UV-DOAS Spectroscopy

Direct optical measurement of atmospheric NH<sub>3</sub>, NO and SO<sub>2</sub>

UV light beam is sent to reflector & back

Fully motorized telescope for automatic alignment & tracking

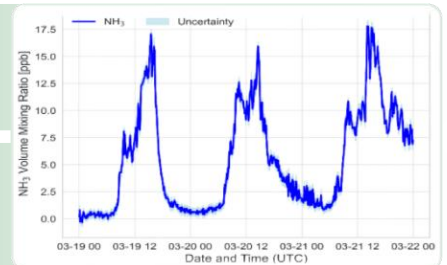
Gases are quantified from characteristic absorption spectrum (DOAS-technique)

Multiple light paths possible

Representative across light path

Ambient measurements on minute time scale with ppb precision

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



## KEY FEATURES

## DESIGNED FOR...



### ACCURATE CONTACT FREE MEASUREMENT

No losses in tubings & filters

Air quality monitoring



### CALIBRATION FREE

No calibration gases required  
No drift due to automatic zero reference

Agriculture & industrial emission



### PLUG & PLAY SETUP

Camera-supported auto-alignment for instant deployment

Process control & fence line monitoring



### RUGGED & FLEXIBLE

Weatherproof housing, optional tripod

Trace gas spatial distribution analysis

# TECHNICAL DETAILS

## Data Quality

Detectable Gases	NH <sub>3</sub>	NO	SO <sub>2</sub>
Limit of detection [ppb] *1,2 @ 100 m light path	1	3	5
Range *1,3	1 ppb - 100 ppm	1 ppb - 5 ppm	1 ppb - 20 ppm
Time Resolution	up to 1 minute		
1) Dependent on Light Path Setup	2) Dependent on Visibility	3) 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.