

File revision date:

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Data Set Description:

PI: Richard Querel  
Site(s): Arrival Heights, Antarctica, 77.83° S, 166.67° E, 184 m  
Measurement Quantities: NO<sub>2</sub>, aerosol, O<sub>3</sub>

Contact Information:

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Reference Articles:

Kreher et al., 2020, AMT 13, 2169, <https://doi.org/10.5194/amt-13-2169-2020>  
Roscoe et al., 2010, AMT 3, 1629, <https://doi.org/10.5194/amt-3-1629-2010>

Instrument Description:

The MAX-DOAS instrument at Arrival Heights is a commercial system, Airyx SkySpec 1D (elevation scanning only, fixed azimuth) from Airyx GmbH. It has high grade Avantes dual-spectrometers with back thinned detectors, wavelength ranges of approximately 300–450 and 400–550 nm, for the 'UV' and 'VIS' spectrometers, respectively, and spectral resolutions of ~0.6 nm. The spectrometers are temperature stabilised to 20 °C and the elevation scanning head maintains a self-corrected viewing elevation angle.

Algorithm Description:

The raw spectra from the MAX-DOAS are corrected for electronic offset and dark current. Data will be submitted to the FRM4DOAS central processing system soon, when permitted. The output from FRM4DOAS are low-vertical resolution profiles of tropospheric NO<sub>2</sub> and aerosol (off-axis products) and total columns of ozone (zenith products). FRM4DOAS is described here:  
<https://frm4doas.aeronomie.be/index.php>

Instrument history

Arrival Heights MAXDOAS: data since 2018  
Long-term operational at Arrival Heights from 2018 to present day