

Parameter	Data source	Fitting internal (nm)		
		NO ₂	SO ₂	HCHO
Wavelength range		338–368 nm	308–314 nm	336.5–359 nm
NO ₂	Vandaele et al. (1998), 220 K, 294 K, I ₀ correction* (SCD of 10 ¹⁷ molecules cm ⁻²)	✓	✓ (only 294 K)	✓ (only 294 K)
SO ₂	Vandaele et al. (2009), 298 K	×	✓	×
HCHO	Meller and Moortgat (2000), 297 K	✓	×	✓
O ₃	Serdyuchenko et al. (2014), 223 K, 243 K, I ₀ correction* (SCD of 10 ²⁰ molecules cm ⁻²)	✓	✓	✓
O ₄	Thalman and Volkamer (2013), 293 K	✓	×	✓
BrO	Fleischmann et al. (2004), 223 K	✓	×	✓
Ring	Ring spectra calculated with QDOAS according to Chance and Spurr (1997)	✓	✓	✓
Polynomial degree		Order 5	Order 5	Order 5
Intensity offset		Constant	Order 1	Order 1
Wavelength calibration	Based on a high-resolution solar reference spectrum (SAO2010 solar spectra); Chance and Kurucz (2010)			