Gases	O_3	HNO_3	HCl	HF	$ClONO_2$	CH_4	CO	N_2O	C_2H_6	HCN
MW for profile retrievals	1000–1004.5	867.5–870	2727.73–2727.83 2775.7–2775.8 2925.8–2926.0	4109.4–4110.2	779.85–780.45 782.55–782.87	2613.7–2615.4 2835.5–2835.8 2921.0–2921.6	2057.7–2058 2069.56–2069.76 2157.5–2159.15	2441.8–2444.6 2481.2–2482.5	2976–2978 2982.6–2984.5	3268–3268.38 3287–3287.48
Retrieved interfering gases	H_2O, CO_2, C_2H_4, O3668, O3686	H_2O, OCS, NH_3	CH_4, NO_2, O_3, N_2O, HDO	H_2O, HDO, CH_4	O_3, HNO_3, H_2O, CO_2	CO_2, NO_2, H_2O, HDO	O_3, N_2O, CO_2, OCS, H_2O	CO_2, CH_4	H_2O, CH_4,	H_2O, O_3, C_2H_2, O_3CH_4
H_2O treatment	Profile retrieval	Scaling retrieval	Profile retrieval	Profile retrieval	Scaling retrieval	Profile retrieval	Profile retrieval	Profile retrieval	Profile retrieval	Profile retrieval
SNR for de-weighting	None	None	300	None	None	None	500	None	None	None
$\mathbf{S}_a$	Diagonal: 20 % No correlation	Diagonal: 50 % No correlation	Diagonal: 50 % No correlation	Diagonal: 10 % No correlation	Diagonal: 100 % Exponential correlation HWHM:	Diagonal: 10 % No correlation	Diagonal: 11 % ∼ 27 % 8 km No correlation	Diagonal: 10 % No correlation	Diagonal: 10 % No correlation	Diagonal: 21 % ∼ 79 % No correlation
Error analysis	Systematic error: – smoothing error – errors from parameters not retrieved by sfit4*: background curvature, optical path difference, field of view, solar line strength, background slope, solar line shift, phase, solar zenith angle, line temperature broadening, line pressure broadening, line intensity									
	Random error: – interference errors: retrieval parameters, interfering species – measurement error – errors from parameters not retrieved by sfit4*: temperature, zero level									