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Corrigendum to

"Heterogeneous reaction of N_2O_5 with airborne TiO_2 particles and its implication for stratospheric particle injection" published in Atmos. Chem. Phys., 14, 6035–6048, 2014

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In the original paper "Heterogeneous reaction of N_2O_5 with airborne TiO_2 particles and its implication for stratospheric particle injection" (published in Atmos. Chem. Phys., 14, 6035–6048, 2014), an error was made in calculating the heterogeneous loss rates of N_2O_5 on TiO_2 aerosol particles and therefore the uptake coefficients of N_2O_5 onto TiO_2 particles. This error was due to a mistake when we calculated the reaction times in the flow tube. The correct reaction times are all a factor of 1.5 smaller than those used in the original paper, and thus the correct heterogeneous loss rates and uptake coefficients of N_2O_5 are a factor of 1.5 larger than those reported in the original paper.

The fourth sentence in the abstract should be changed to "The uptake coefficient of N_2O_5 onto TiO_2, $\gamma(N_2O_5)$, was determined to be $\sim 1.5 \times 10^{-3}$ at low RH, increasing to $\sim 4.5 \times 10^{-3}$ at 60 % RH." The updated Table 1 with corrected values is provided in this corrigendum.

This error does not influence the main discussion and conclusions in the original paper, especially also not the modelling part of the paper where we consider two scenarios with two different $\gamma(N_2O_5)$ (i.e., 1.0×10^{-3} and 5.0×10^{-3}), which cover all values reported in Table 1.

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Table 1. Loss rate of N_2O_5 on TiO_2 (k_a), total surface area of TiO_2 particles in the flow tube (S_a) and uptake coefficients of N_2O_5 onto TiO_2 aerosols, $\gamma(N_2O_5)$ at different relative humidities. All the errors shown here are 1σ statistically.

RH (%)	k_a ($\times 10^{-2}$ s^{-1})	S_a ($\times 10^{-3}$ cm^2 cm^{-3})	$\gamma(N_2O_5)$ ($\times 10^{-3}$)	Average $\gamma(N_2O_5)$ ($\times 10^{-3}$)
5 ± 1	4.53 ± 2.43	4.39 ± 0.26	1.73 ± 0.93	1.83 ± 0.32
	3.96 ± 0.87	3.79 ± 0.06	1.74 ± 0.39	
	3.66 ± 1.67	3.02 ± 0.10	2.03 ± 0.92	
12 ± 2	3.59 ± 0.60	2.75 ± 0.16	2.18 ± 0.36	2.01 ± 0.27
	4.29 ± 0.54	3.80 ± 0.52	1.89 ± 0.24	
	3.98 ± 0.33	2.89 ± 0.33	2.30 ± 0.20	
	2.76 ± 0.36	2.70 ± 0.14	1.71 ± 0.23	
23 ± 2	9.39 ± 0.30	1.75 ± 0.17	0.90 ± 0.29	1.02 ± 0.20
	3.41 ± 0.42	4.89 ± 0.21	1.16 ± 0.02	
33 ± 2	1.50 ± 0.56	2.27 ± 0.16	1.10 ± 0.41	1.29 ± 0.26
	1.91 ± 0.45	2.01 ± 0.12	1.59 ± 0.38	
	1.61 ± 0.39	2.23 ± 0.09	1.20 ± 0.30	
45 ± 3	1.94 ± 0.39	1.59 ± 0.33	2.04 ± 0.41	2.28 ± 0.51
	3.80 ± 0.90	3.00 ± 0.05	2.12 ± 0.47	
	4.37 ± 0.84	2.86 ± 0.05	2.55 ± 0.50	
	3.99 ± 0.87	2.75 ± 0.02	2.43 ± 0.53	
60 ± 3	7.83 ± 2.10	2.86 ± 0.06	4.62 ± 1.23	4.47 ± 2.04
	5.76 ± 1.56	2.24 ± 0.09	4.34 ± 1.17	