

Degassing at Sabancaya volcano measured by UV cameras and the NOVAC network

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Table 1 – Masses calculated for gas pulses at Sabancaya on 27 April 2018. The second line gives the mass for a set of three pulses, the average of which is reported in the main text. The raw mass is calculated as (mean flux – background) × time = raw mass, and is multiplied by the light dilution factor to give the corrected mass. Masses reported in the main text are calculated using the raw data and rounded to 3 s.f.

Pulse front (UTC)	Mean flux (kg s ⁻¹)	Background flux (kg s ⁻¹)	Time (s)	Raw mass (kg)	Corrected mass (kg)
14:13:36	8.839	4.472	764	3336	8238
14:26:241	14.299	10.417	972	4162	10276
14:55:40	11.869	10.271	748	1196	2950

MASS CALCULATIONS FOR SO₂ PULSES FROM UV CAMERA-DERIVED FLUXES AT SABANCAYA, 27 APRIL 2018

This is a brief outline of calculations of the SO₂ masses associated with pulses of ash and gas emitted during eruptive activity at Sabancaya on 27 April 2018. The SO₂ fluxes used for these calculations were derived from UV camera measurements as described in the main text. The values used for the calculations are shown in tab:01 of this document, and correspond to the masses in Table 2 of the main text.

Continued degassing is visible between pulses, so the background passive degassing level is assumed to be the flux at the time when the pulse crosses the UV camera integration line (Table 1, ‘Pulse front’). The background is subtracted from the mean flux over the dura-

tion of the pulse, to obtain the flux that can be ascribed to the pulse. This value is multiplied by the time taken for the pulse to cross the UV camera integration line. To correct for light dilution, this raw flux is multiplied by 2.469 (see main text for details).

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