

Supplement to "Observation of the aerosol plume from the 2022 Hunga Tonga – Hunga Ha’apai eruption with SAGE III/ISS"

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S1 Number of SAGE III profiles

Table S1. Number of vertical profiles of SAGE III per latitude band and month.

	70°S-50°S	50°S-30°S	30°S-10°S	10°S-10°N	10°N-30°N
02/2022	317	4	1	44	85
03/2022	32	186	69	70	43
04/2022	93	309	102	88	113
05/2022	0	217	71	5	0
06/2022	0	287	134	113	110
07/2022	0	218	82	1	0
08/2022	45	340	119	99	118
09/2022	56	120	99	69	60
10/2022	393	91	55	61	92
11/2022	59	145	112	45	77
12/2022	263	49	0	0	63
01/2023	94	127	124	93	100
02/2023	237	24	0	40	53
03/2023	48	160	76	72	42
04/2023	77	328	93	91	112

S2 Evolution of σ and r_m

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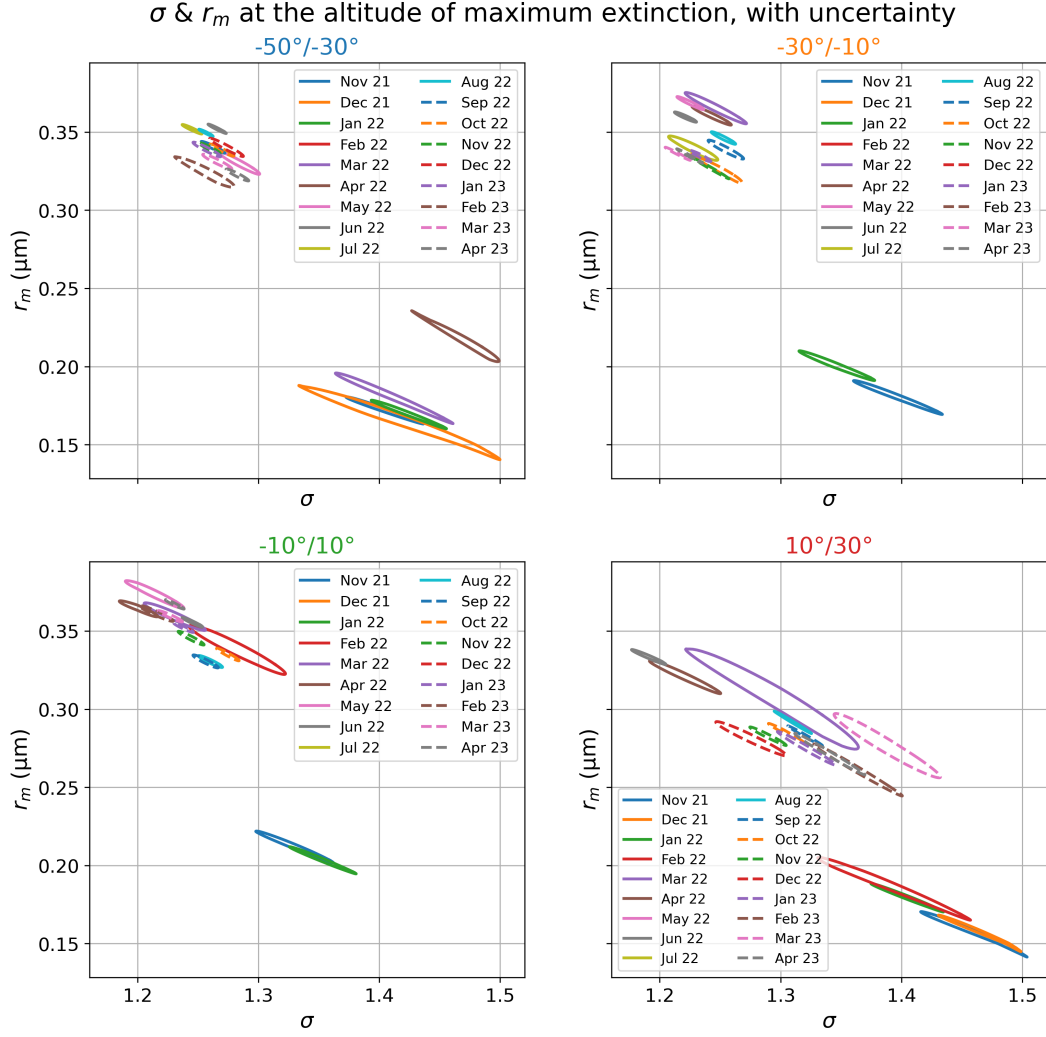


Figure S1. Estimates of σ and r_m at the altitude of the maximum extinction as a function of time. For each month, the uncertainty in σ and r_m is drawn from the ellipse representing the uncertainty in the two extinction ratios in the plane of Fig. 1b.