

L51/13
"Tolapa 2"

(m)

10

5

0

Inverse-graded, poorly-sorted, whitish ignimbrite with pumice lapilli of similar textural characteristics like the falls below (>4.5 m)

★ O2-2

Moderately- to poorly-sorted deposit made of fine- to medium- pumice lapilli with similar characteristics as the underlying units and scarce mm-sized lithics and high amount of fine ash. Finer-grained base and ashy top (30 cm)

Well-sorted white fallout with normal gradation at top show similar characteristics as the underlying unit (82 cm)

Normal-graded, well-sorted, white fallout of fine- to medium pumice lapilli with mm- to cm-sized lithics. The highly vesicular pumice have large elongated vesicles, pl, px and qtz. Normal gradation in the last 20 cm (2 m)

White surge deposit with poorly-sorted ash to fine pumice lapilli (10 cm)

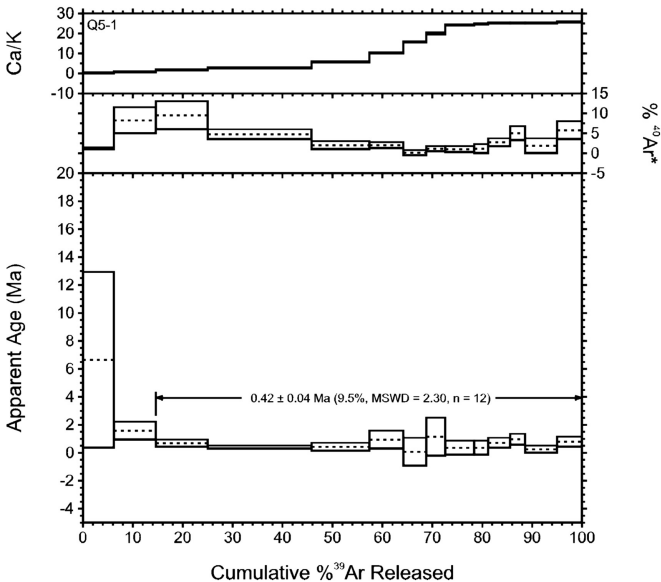
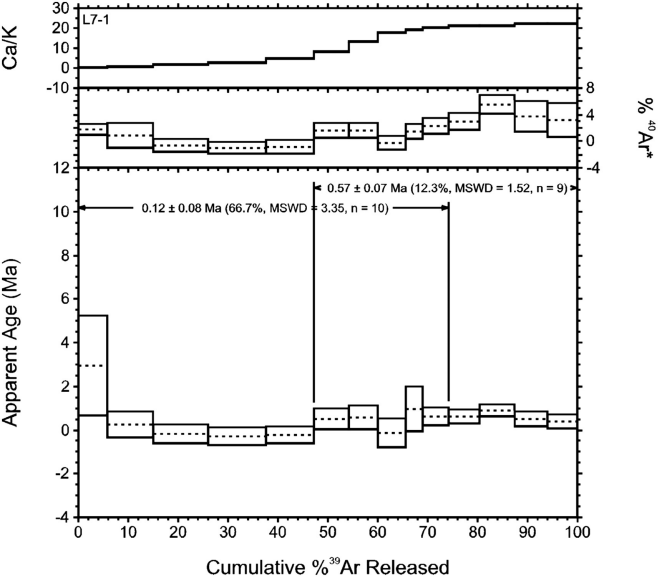
Well-developed Paleosol

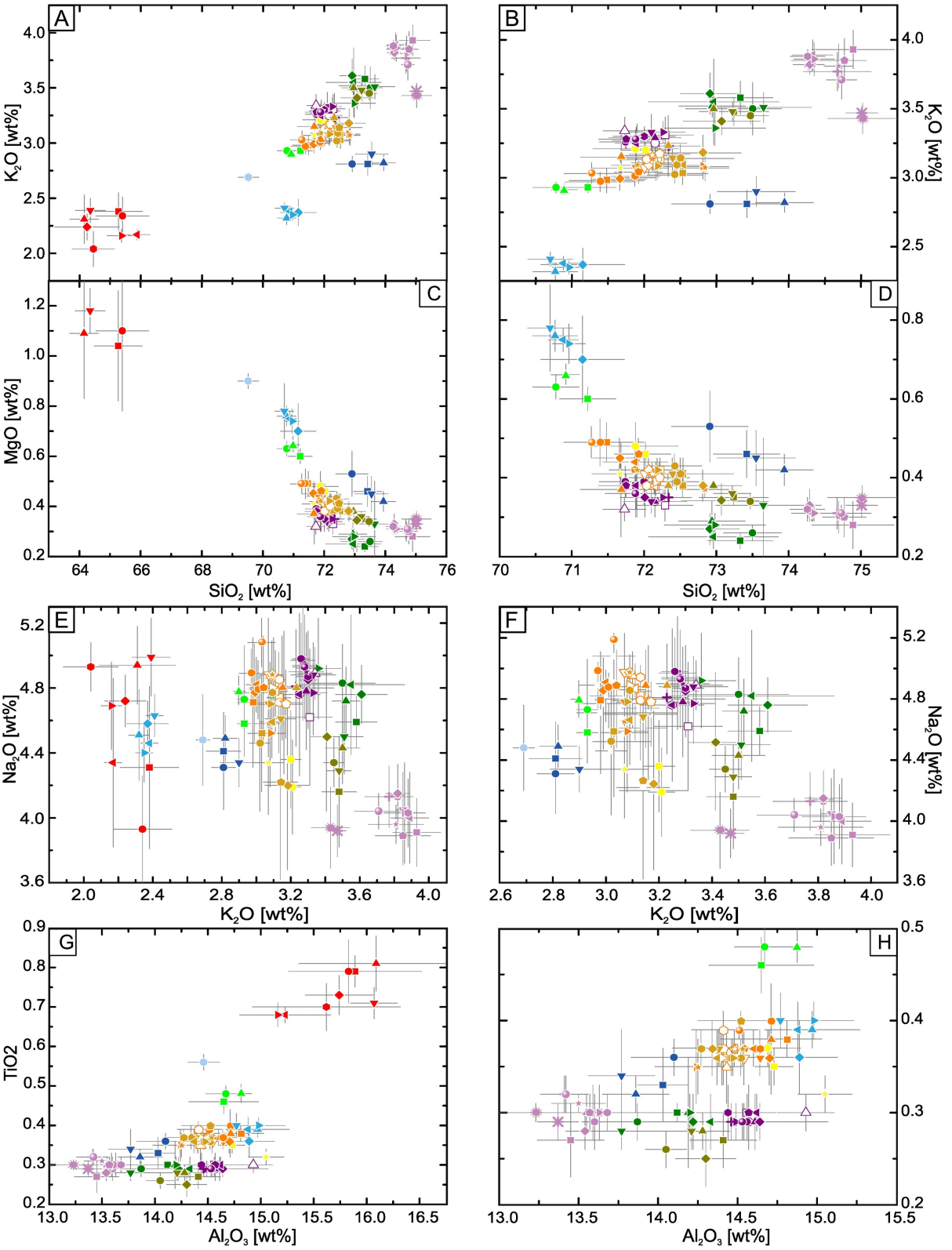
★ O2-1

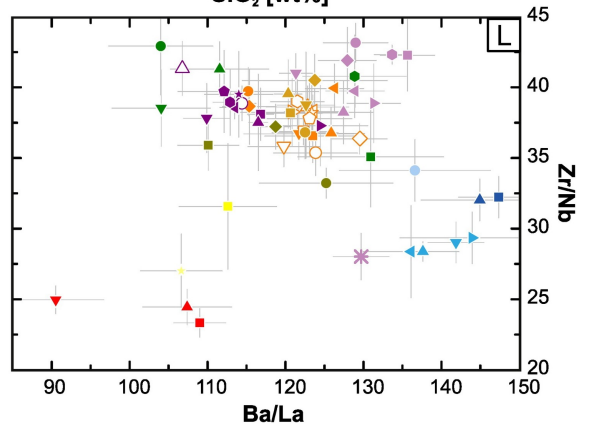
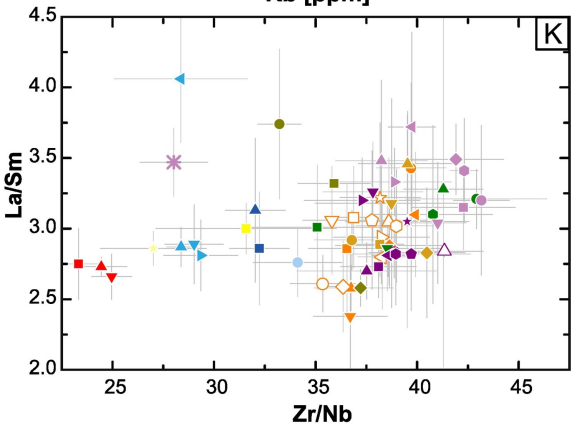
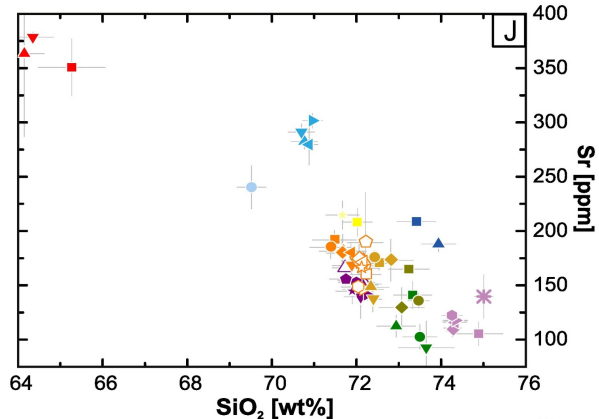
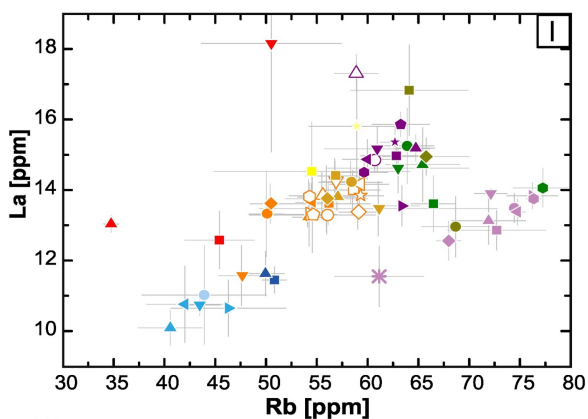
Pinkish-greyish poorly-sorted ignimbrite with white to pink ash matrix, fine- to medium-grained pumice lapilli. Pumice are mainly white, highly vesicular with large elongated vesicles. +/- dark grey moderately vesicular pumice with small elongated bubbles, silver and streaky pumice. All of them contain mineral nests, px and qtz (>2 m)

	Sample/ Unconformity	Description
(m) 4 2 0 L29/13 "Maderas Negras"	★ J1-3	Well-sorted greyish-white fallout with normal-graded top. Medium- to pumice lapilli are mainly white and highly vesicular with large subspherical vesicles, px and pl. +/- silver and streaky pumice. No lithics visible (90 cm)
	★ J1-2	Well-sorted, greyish fallout, normal-graded at top. Medium- to coarse, highly vesicular, greyish pumice lapilli with large subspherical vesicles, px, pl, ol, bi, qtz. Scattered mm-sized lithics (180 cm)
	★ J1-1	Poorly-sorted surge deposit. Pinching-out wave structures of ash to fine-grained, rounded, highly vesicular pumice lapilli with large subspherical vesicles, px and pl (20 cm)
	★ N6-3	Inverse-graded well-sorted fallout at base, normal-graded at top. Fine- to medium, beige-greyish pumice lapilli (25 cm)
	★ N6-2	Incipient soil. Brown ash and px and pl crystals (10 cm)
	★ N6-1	Brownish to yellowish poorly sorted ignimbrite in the upper part ==> soil generation. Very altered fine-grained highly vesicular streaky pumice lapilli with large subspherical vesicles, px and pl (110 cm)
(m) 5 0 L33/13 "Los Portillos"		Slightly altered ignimbrite. Pink ash matrix, fine-grained moderately vesicular grey pumice lapilli with elongated microvesicles, px, pl and qtz.
		Whitish poorly-sorted ignimbrite, rich in ashy matrix. Highly vesicular pumice lapilli with px and the same characteristics like pumices of the fallouts below. Scattered mm-sized lithics (55 cm)
		Fallout of similar clast and textural characteristics as the underlying unit with normal graded top (86 cm)
		Well-sorted white fallout with normal-graded top. Medium- to highly vesicular pumice lapilli with large elongated vesicles, px, pl, qtz. Scattered mm-sized lithics (1.08 m)
(m) 5 0 L50/13 "Tolapa 1"	U	
	★ J6-1 N9-1	Whitish-pinkish-greyish poorly sorted ignimbrite rich in fine- to coarse-grained pinkish-greyish ash matrix and eroded top. Medium- to coarse highly vesicular pumice lapilli with large elongated vesicles, px, pl, qtz. Scattered mm-sized lithics (>2.90 m)
(m) 5 0 L50/13 "Tolapa 1"		Normal-graded, well-sorted, white fallout of highly vesicular medium pumice lapilli with large elongated bubbles, pl, px and qtz. Scattered mm-sized lithics (2.10 m)
	U	Poorly-sorted surge deposit with black and white laminations of coarse ash to fine, well-rounded, pumice lapilli (30 cm)
		Well-developed Paleosol
		Well-sorted fallout of fine- to medium white pumice lapilli (40 cm)
		Normal-graded well-sorted fallout of white, fine pumice lapilli (5 cm)
	★ O1-1	Poorly-sorted surge deposit of white fine ash with varying amount of accretionary lapilli, cross-stratified lenses, mm-sized lithics and rounded, fine pumice lapilli with px (1.10 m)
(m) 5 0 L41/13 "3D Outcrop"		Poorly-sorted greyish-pink ignimbrite, rich in brownish/pinkish ash matrix. Fine- to medium, white, highly vesicular pumice lapilli with tubular vesicles, px, qtz and pl. Mm-sized obsidian clasts and +/- very altered highly vesicular fine-grained grey pumice lapilli. Scattered mm-sized
	★ K4-3	
	U	
	★ K4-2	Well-sorted fallout of highly vesicular, greyish-white, fine- to medium pumice lapilli with small tubular vesicles, +/- px and qtz. (1 m) and eroded
(m) 5 0 L41/13 "3D Outcrop"		Paleosol
	★ K4-1	Greyish-beige, poorly-sorted ignimbrite with white-pinkish ashy matrix. Medium- to coarse-grained highly vesicular grey and silver pumice lapilli with glass nests, px, qtz and pl. Scattered mm-sized lithics (>84 cm)









Supplementary data 1: Outcrops and respective geographic coordinates

Outcrop	Coordinates
L1	12°24'21.11"N
	86°38'51.00"W
L2	12°31'55.75"N
	86°33'16.63"W
L08	12°19'36.46"N
	86°37'49.71"O
L09	12°19'44.44"N
	86°38'14.41"W
L10	12°20'9.26"N
	86°39'20.66"W
L11	12°20'11.10"N
	86°39'54.00"W
L13	12°31'44.55"N
	86°35'38.87"W
L15	12°31'6.49"N
	86°32'36.66"W
L17	12°30'37.41"N
	86°30'54.46"W
L18	12°38'32.64"N
	86°31'57.41"W
L19	12°38'9.96"N
	86°32'56.43"W
L20	12°40'23.50"N
	86°34'2.30"W
L22	12°36'54.18"N
	86°38'3.63"W
L26	12°32'24.71"N
	86°34'7.88"W
L27	12°32'22.41"N
	86°34'54.73"W
L28	12°32'2.85"N
	86°35'20.05"W
L29	12°30'50.83"N
	86°32'12.89"W
L30	12°28'56.39"N
	86°28'50.35"W
L31	12°30'49.79"N
	86°31'58.68"W
L33	12°33'9.02"N
	86°32'50.89"W
L34	12°33'54.87"N
	86°32'2.06"W
L35	12°34'47.53"N
	86°32'14.82"W
L36	12°35'48.82"N
	86°32'28.87"W
L39	12°20'45.15"N
	86°40'50.45"W
L41	12°20'50.59"N
	86°39'24.48"W
L42	12°21'41.60"N
	86°39'55.88"W
L43	12°21'26.38"N
	86°39'41.09"W
L44	12°23'20.82"N
	86°39'50.22"W
L45	12°25'4.17"N
	86°38'46.20"W
L46	12°25'13.73"N
	86°38'39.16"W
L47	12°24'54.24"N
	86°38'0.93"W
L48	12°25'5.65"N
	86°38'38.61"W
L49	12°22'5.33"N
	86°39'52.53"W
L50	12°37'21.72"N
	86°37'15.92"W
L51	12°37'34.37"N
	86°37'29.43"W
L52	12°37'37.18"N
	86°36'45.47"W
L53	12°37'55.01"N
	86°36'43.72"W
L55	12°39'57.69"N
	86°34'44.91"W
L56	12°37'57.92"N
	86°32'6.03"W
L57	12°38'18.73"N
	86°32'28.47"W
L58	12°31'52.54"N
	86°34'45.51"W
L62	12°32'14.87"N
	86°31'10.68"W
L63	12°34'52.25"N
	86°30'26.94"W
L65	12°36'37.33"N
	86°38'7.10"W
L1/15	12°21'29.97"N
	86°39'46.13"W
L2/15	12°21'20.14"N
	86°39'34.06"W
L3/15	12°21'14.44"N
	86°39'30.02"W
L4/15	12°20'48.56"N
	86°39'23.85"W
L5/15	12°22'10.70"N
	86°39'51.60"W
L6/15	12°24'18.40"N
	86°38'51.23"W
L17/1	12°26'17.44"N
	86°37'8.71"W

Supplementary data 2: Tabular outcrop description for all major outcrops

Outcrop #	Ourcop Name	Type	Thickness (cm)	stratigraphic Unit	Tephra
L1/13	curve La Paz-Leon Viejo	Ignimbrite (white)	>370	IXf	ToT
		Surge-ash	>160	IXe	
L2/13	Infiernito	Fall 1	>90	IXc	ToT
		Fall 2	90	IXd	
		Surge-ash	(>)92	IXe	
		Ignimbrite (white)	10	IXf	
L8/13	Nagarrote-La Paz	Ignimbrite (FU 1) (greyish-white)	>40	VIb	FeT
		Ignimbrite (FU 2) (greyish-white)	>60	VIb	
L9/13	A043	Fall	>200	IV	GT
L10/13	La Paz: cross Momotombo	Ignimbrite (grey/beige)	>100	I	LPT
L11/11	Cartel Toña	Ignimbrite (grey/beige)	>120	I	LPT
L13/13	Military quarry	Ignimbrite (FU 1)	>920	VIb	FeT
		Ignimbrite (FU 2)	>400	VIb	
		Ignimbrite (FU 3) (greyish-white)	>381	VIb	
		Ignimbrite (FU 4) (greyish-white)	>350	VIb	
		paleosoil	20 -50		
		ash layer	70	VIIa	
		surge deposit	>400	VIIb	ST
L15/13	SE Tecuaname curve 1	Ignimbrite	>320	XII	UMT
L17/13	Quarry Patalonal	Ignimbrite (FU 1)	>450	IXf	ToT
		Ignimbrite (FU 2)	>250	IXf	
L18/13	Km 141 cables	Ignimbrite (FU 4) (greyish-white)	>195	VIb	FeT
		Acc lapilli	20-30 cm	VIb	
		paleosoil	40		ToT
		Surge 1	10	IXb	
		Fall 1	103	IXc	
		Fall 2	29	IXd	
		ash	23	IXe	
L19/13	Pyramid Quarry	Ignimbrite	>700	IXf	ToT
L20/13	Quarry Larreynaga	Ignimbrite	>700	IXf	ToT
L21/13	"Debris canal"	Ignimbrite Debris	>200	IXf	ToT
L22/13	Bee profile	Ignimbrite (FU 1)	>100	VIIc	ST
		Ignimbrite (FU 2)	628	VIIc	
		paleosoil	50		
		Fall	10	VIII	MgT
		paleosoil	60		
		Fall	>8	IXa	ToT
		Surge	22	IXb	
		Fall 1	240	IXc	
		Fall 2	80	IXd	
		Ignimbrite	400	IXf	
L23/13	Hermes' Quarry 1	Ignimbrite	>500	IXf	ToT
L24/13	Hermes' Quarry 2	Ignimbrite	>330	IXf	ToT
L25/13	<i>Hermes' Quarry 3</i>	Ignimbrite	>100	IXf	ToT
L26/13	La Ceiba	Fall	70	IXd	ToT
		ash-surge	40	IXe	
		Ignimbrite (white)	>230	IXf	
L27/13	Hill La Fuente	paleosoil	>40		FeT
		surge deposit	300	VIb	
L28/13	Hole Military-La Fuente	Ignimbrite (FU 3) (greyish-white)	>300	VIb	FeT

		Ignimbrite (FU 4) (greyish-white)	70	VIb	FeT
		paleosoil	30		
		surge deposit	>260	VIIa	ST
L29/13	SE curve Maderas Negras	pink-white ignimbrite	>10	IXf	ToT
		paleosoil from Ignimbrite	>65		
		incipient soil	10		
		fallout	>25	X	LMT
		surge	20	X	
		fallout 1	183	XI	MMT
		fallout 2	90	XI	
L30/13	Patalonal entrance	Ignimbrite	>250	IXf	ToT
L31/13	Pink house	fallout 1	110	XI	MMT
		Ignimbrite with soil at top	>65	XI	
		paleosoil			
		fallout	>12	XII	UMT
		Ignimbrite	>75	XII	
L33/13	Los Portillos cuidador house	Ignimbrite eroded at top	290	VIIc	ST
		Unconformity			
		Fallout 1	108	IXc	ToT
		Fallout 2	86	IXd	
		Ignimbrite (white)	>55	IXf	
L34/13	Quarry Finca la Virgen	Ignimbrite	>290	IXf	ToT
L39/13	La Pomera	Ignimbrite	>1400	IXf	ToT
L41/13	3D outcrop	Ignimbrite (grey/beige)	>84	I	LPT
		paleosoil			
		fallout	>103	IV	GT
		Unconformity			
		ignimbrite (greyish-white)	>600	VIb	FeT
L42/13	Quarry la Baronesa	Ignimbrite (grey/beige) FU1	>155	I	LPT
		Ignimbrite (grey/beige) FU2	>1050	I	
		ash acc lap	>150	I	
L43/13	Aggl La Paz-León Viejo	Ignimbrite (grey/beige)	>80	I	LPT
		incipient soil/tuff	15		
		fallout	17	II	PPT
		paleosoil	5		
		fallout	100	IV	GT
L44/13	Las Sabanetas km 60	fallout	400	VIIb	ST
		4 thin fallouts	12,7,5,7	VIIb	
		ign	150	VIIc	
L45/13	before cross Leon Viejo km 64	lower fall	>65	VIIa	ST
		fall	26	VIIb	
		upper fall	>300	VIIb	
L46/13	Quarry Leon Viejo	fallout 1	>240	IXc	ToT
		fallout 2	120	IXd	
		surge	50	IXe	
		Ignimbrite (white) FU1	>290	IXf	
		Ignimbrite (white) FU2	>60	IXf	
L47/13	Road to Leon Viejo	Ignimbrite	>390	IXf	ToT
L48/13	after cross Leon Viejo (A041)	fallout 1	>30	IXc	ToT
		fallout 2	40	IXd	
		surge	>100	IXe	
		Ignimbrite (white)	>300	IXf	
L49/13	Mafic La Arenera	Ignimbrite (grey/beige)	>400	I	LPT
		paleosoil	20		
		fallout/ash with lithics	13	VIa	FeT
		ignimbrite (greyish-white)	>120	VIb	
L50/13	Tolapa1	accretionary lapilli tuff	>110	VIIb	

		surge deposit	5	VIIb	ST
		fallout	5	VIIb	
		fallout	40	VIIb	
		paleosoil			
		surge deposit	30	IXb	ToT
		fallout	210	IXc	
L51/13	Tolapa2	Ignimbrite (white)	>800	VIb	FeT
		surge deposit	10	IXb	
		fallout 1	200	IXc	
		fallout 2	82	IXd	ToT
		surge deposit & Ignimbrite	30	IXe	
		Ignimbrite (white)	>450	IXf	
L52/13	Tolapa3	accretionary lapilli tuff	>110	VIIb	
		fallout	5	VIIb	
		fallout	>50	VIIb	ST
		fallout	>23	VIIb	
		Ignimbrite (pinkish) FU1	50	VIIc	
		Ignimbrite (pinkish) FU2	>110	VIIc	
		paleosoil	40		
		surge deposit	55	IXb	
		fallout	>100	IXc	ToT
L55/13	House Larreynaga	Ignimbrite	>700	IXf	ToT
L56/13	Cut hill La Sabaneta	fallout 1	>110	IXc	
		fallout 2	50	IXd	
		thin surge deposit	8	IXe	ToT
		ash	22	IXe	
		Ignimbrite (white)	>82	IXf	
L57/13	Calle Real Tolapa	fallout 1	>20	IXc	
		fallout 2	53	IXd	
		thin surge deposit with acc. Lap	9	IXe	ToT
		Ignimbrite (white)	>416	IXf	
L62/13	San Francisco-San Mauricio	Ignimbrite	>280	IXf	ToT
L63/13	Las Lomas	Ignimbrite	>330	IXf	ToT
L1-L2/15		Ignimbrite (grey/beige) eroded top	>800	I	LPT
		paleosoil above unconformity	0-150		
		fallout of three beds	105	II	PPT
		paleosoil above unconformity	100		
		fallout reverse	21	III	LCbT
		paleosoil	100		
		fallout	>200	IV	GT
		paleosoil	20		
		fallout reverse	>100	V	UCbT
		paleosoil	100		
		paleosoil above unconformity	>100		
		fallout	230	VIa	
		ignimbrite (greyish-white)	>500	VIb	FeT
L3/15	new road	Ignimbrite (grey/beige) eroded top	>100	I	LPT
		paleosoil above unconformity	>50		
		fallout	>210	IV	GT
		paleosoil	20		
		fallout reverse	>100	V	UCbT
		paleosoil	>100		
		paleosoil above unconformity	>60		
	layers are at a slope and show local creeping	surge deposit/ash	10	IXb	
		fallout 1	100	IXc	
		fallout 2	40	IXd	ToT

		Ignimbrite (white)	>416	IXf	
L4/15	new road	Ignimbrite (grey/beige) eroded top	>100	I	LPT
		paleosoil above unconformity	>150		
		fallout	>200	IV	GT
		ignimbrite (greyish-white)	>500	VIb	FeT
L6/15	new road	pink-white ignimbrite	>600	IXf	ToT
		unconformity			
		paleosoil above unconformity	>100		
		fallout 2	100	IXd	ToT
		surge deposit with acc. Lap	55	IXe	
		Ignimbrite (white) FU1	200	IXf	
		Ignimbrite (white) FU2	>300	IXf	
		unconformity			
		Ignimbrite (pinkish) FU1	>250	VIIc	ST
		Ignimbrite (pinkish) FU2	>200	VIIc	
		unconformity			
		paleosoil above unconformity	>100		
		Fall	>155	VIII	MgT
		paleosoil above unconformity	>200		
		fallout 1	200	IXc	ToT
		fallout 2	160	IXd	
		surge	300-400	IXe	
		Ignimbrite (white) FU1	>290	IXf	
		Ignimbrite (white) FU2	>1400	IXf	

Supplement Table 3: Individual major and trace element analyses, respective ratios and averaged values of analyzed samples from Malpaisillo-Monte Galán volcanic complex; stddev (standard deviation) describes the range of single measurements within the sample

[illegible]

Lower Chibola Taper (Unit IV)																				Lower Chibola Taper (Unit V)																			
L1-15-051	2.00	2.50	0.60	0.31	0.43	1.89	0.04	13.66	0.05	4.62	3.10	27.00	71.90	0.34	0.46	2.04	0.04	14.74	0.03	7.76																			
L1-15-052	3.92	2.91	2.56	0.97	0.32	2.08	0.10	12.77	0.02	4.22	3.13	27.00	71.90	0.35	0.47	2.22	0.10	14.83	0.02	7.76																			
L1-15-053	4.30	3.17	2.68	0.97	0.32	2.08	0.10	12.77	0.02	4.22	3.13	27.00	71.90	0.35	0.47	2.22	0.10	14.83	0.02	7.76																			
L1-15-054	3.89	2.91	2.11	0.63	0.29	0.42	1.90	0.05	13.53	0.07	4.25	3.18	27.11	72.44	0.32	0.46	2.13	0.08	14.78	0.07	7.43																		
L1-15-055	4.30	3.17	2.68	0.97	0.32	2.08	0.10	12.77	0.02	4.22	3.13	27.00	71.90	0.35	0.47	2.22	0.10	14.83	0.02	7.76																			
L1-15-056	4.00	2.89	2.09	0.66	0.34	0.43	1.90	0.05	13.53	0.07	4.25	3.18	27.11	72.44	0.32	0.46	2.13	0.08	14.78	0.07	7.43																		
L1-15-057	4.00	2.89	2.09	0.66	0.34	0.43	1.90	0.05	13.53	0.07	4.25	3.18	27.11	72.44	0.32	0.46	2.13	0.08	14.78	0.07	7.43																		
L1-15-058	4.00	2.89	2.09	0.66	0.34	0.43	1.90	0.05	13.53	0.07	4.25	3.18	27.11	72.44	0.32	0.46	2.13	0.08	14.78	0.07	7.43																		
L1-15-059	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-060	4.00	2.89	2.09	0.66	0.34	0.43	1.90	0.05	13.53	0.07	4.25	3.18	27.11	72.44	0.32	0.46	2.13	0.08	14.78	0.07	7.43																		
L1-15-061	4.27	2.88	2.14	0.60	0.31	0.42	1.90	0.05	13.53	0.07	4.25	3.18	27.11	72.44	0.32	0.46	2.13	0.08	14.78	0.07	7.43																		
L1-15-062	4.27	2.88	2.14	0.60	0.31	0.42	1.90	0.05	13.53	0.07	4.25	3.18	27.11	72.44	0.32	0.46	2.13	0.08	14.78	0.07	7.43																		
L1-15-063	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-064	4.00	2.89	2.09	0.66	0.34	0.43	1.90	0.05	13.53	0.07	4.25	3.18	27.11	72.44	0.32	0.46	2.13	0.08	14.78	0.07	7.43																		
L1-15-065	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-066	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-067	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-068	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-069	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-070	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-071	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-072	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-073	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-074	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-075	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-076	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-077	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-078	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-079	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-080	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-081	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-082	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-083	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-084	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-085	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-086	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-087	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-088	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-089	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-090	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-091	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-092	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-093	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-094	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-095	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-096	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-097	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-098	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-099	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-100	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-101	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-102	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-103	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-104	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-105	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-106	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-107	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-108	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06	7.45																		
L1-15-109	3.82	2.86	2.44	0.65	0.29	0.41	1.88	0.10	13.38	0.08	4.20	3.25	28.00	72.00	0.32	0.45	2.10	0.17	14.71	0.06																			

04-14	4.30	3.07	2.47	88.26	0.29	0.31	1.49	0.12	0.14	0.08	94.92	4.55	3.29	2.81	72.22	0.31	0.33	1.68	0.13	0.14	0.09	94.80	04-15	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-16	4.39	3.03	2.33	88.44	0.25	0.30	1.43	0.13	0.14	0.07	94.91	4.39	3.39	2.97	73.53	0.27	0.32	1.62	0.12	0.14	0.07	94.81	04-16	16.74	10.75	2.10	102.87	1.34	69.74	147.94	36.36	180.65	4.56	2.39	174.80	14.98	
04-17	4.48	3.12	2.57	88.24	0.30	0.32	1.61	0.16	0.18	0.09	94.91	4.88	3.29	2.71	71.90	0.32	0.34	1.70	0.17	0.17	0.07	94.87	04-17	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-18	4.40	3.15	2.67	88.48	0.29	0.36	1.52	0.12	0.13	0.05	94.72	4.72	3.37	2.81	72.30	0.31	0.37	1.60	0.13	0.15	0.05	94.89	04-18	16.74	10.75	2.10	102.87	1.34	69.74	147.94	36.36	180.65	4.56	2.39	174.80	14.98	
04-19	4.39	3.10	2.70	88.66	0.27	0.40	1.56	0.08	0.10	0.08	94.45	4.01	3.29	2.88	72.70	0.29	0.42	1.64	0.08	0.10	0.08	94.45	04-19	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-20	4.41	3.15	2.73	88.30	0.28	0.34	1.51	0.12	0.13	0.08	94.84	4.41	3.32	2.84	71.90	0.28	0.36	1.64	0.13	0.13	0.03	94.45	04-20	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-21	4.68	3.10	2.73	88.16	0.22	0.32	1.57	0.08	0.10	0.08	94.85	4.01	3.27	2.88	71.87	0.23	0.34	1.66	0.21	0.15	0.07	94.87	04-21	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-22	4.68	3.13	2.73	88.68	0.29	0.31	1.54	0.12	0.13	0.05	94.72	4.58	3.29	2.88	71.90	0.30	0.32	1.62	0.13	0.15	0.05	94.89	04-22	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-23	4.40	3.13	2.83	88.08	0.34	0.31	1.60	0.10	0.13	0.01	94.13	4.82	3.27	2.84	72.33	0.25	0.33	1.70	0.11	0.14	0.07	94.84	04-23	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-24	4.41	3.15	2.84	88.17	0.31	0.36	1.51	0.12	0.13	0.07	94.87	4.40	3.15	2.84	72.33	0.25	0.33	1.70	0.11	0.14	0.07	94.84	04-24	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-25	4.57	3.09	2.92	88.45	0.29	0.38	1.57	0.14	0.14	0.09	95.28	4.80	3.24	3.08	71.84	0.31	0.37	1.65	0.15	0.14	0.08	94.84	04-25	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-26	4.54	3.12	2.92	88.45	0.29	0.38	1.57	0.14	0.14	0.09	95.28	4.80	3.24	3.08	71.84	0.31	0.37	1.65	0.15	0.14	0.08	94.84	04-26	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-27	4.54	3.12	2.92	88.45	0.29	0.38	1.57	0.14	0.14	0.09	95.28	4.80	3.24	3.08	71.84	0.31	0.37	1.65	0.15	0.14	0.08	94.84	04-27	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-28	4.54	3.12	2.92	88.45	0.29	0.38	1.57	0.14	0.14	0.09	95.28	4.80	3.24	3.08	71.84	0.31	0.37	1.65	0.15	0.14	0.08	94.84	04-28	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-29	4.54	3.12	2.92	88.45	0.29	0.38	1.57	0.14	0.14	0.09	95.28	4.80	3.24	3.08	71.84	0.31	0.37	1.65	0.15	0.14	0.08	94.84	04-29	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-30	4.54	3.12	2.92	88.45	0.29	0.38	1.57	0.14	0.14	0.09	95.28	4.80	3.24	3.08	71.84	0.31	0.37	1.65	0.15	0.14	0.08	94.84	04-30	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-31	4.78	3.11	2.86	88.48	0.27	0.31	1.56	0.19	0.12	0.11	0.05	95.12	5.03	3.27	2.80	72.00	0.28	0.33	1.64	0.20	0.14	0.05	94.80	04-31	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98
04-32	4.78	3.11	2.86	88.48	0.27	0.31	1.56	0.19	0.12	0.11	0.05	95.12	5.03	3.27	2.80	72.00	0.28	0.33	1.64	0.20	0.14	0.05	94.80	04-32	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98
04-33	4.77	3.07	2.81	88.70	0.29	0.35	1.66	0.12	0.14	0.07	95.48	4.90	3.27	2.81	71.95	0.31	0.36	1.74	0.13	0.14	0.08	94.81	04-33	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-34	4.54	3.26	2.46	88.60	0.30	0.31	1.49	0.12	0.17	0.07	95.03	5.08	3.43	2.59	72.56	0.29	0.32	1.57	0.12	0.14	0.04	94.81	04-34	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-35	4.47	3.18	2.47	88.48	0.29	0.36	1.52	0.12	0.13	0.05	94.72	4.72	3.37	2.81	72.30	0.31	0.37	1.60	0.13	0.15	0.05	94.89	04-35	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-36	4.82	3.03	2.55	88.00	0.22	0.33	1.60	0.14	0.18	0.05	94.85	5.09	3.20	2.69	71.79	0.34	0.35	1.69	0.15	0.16	0.05	94.86	04-36	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-37	4.80	3.08	2.56	88.70	0.27	0.33	1.54	0.14	0.17	0.05	94.72	5.04	3.24	2.69	72.07	0.29	0.36	1.62	0.14	0.16	0.05	94.86	04-37	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-38	4.80	3.08	2.56	88.70	0.27	0.33	1.54	0.14	0.17	0.05	94.72	5.04	3.24	2.69	72.07	0.29	0.36	1.62	0.14	0.16	0.05	94.86	04-38	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-39	4.73	3.12	2.76	88.32	0.26	0.33	1.58	0.12	0.14	0.04	95.34	4.86	3.27	2.66	71.69	0.28	0.34	1.64	0.12	0.17	0.06	94.84	04-39	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-40	4.85	3.07	2.77	88.45	0.22	0.32	1.58	0.10	0.23	0.01	95.04	5.08	3.31	2.59	71.65	0.33	0.29	1.57	0.14	0.24	0.06	94.82	04-40	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-41	4.84	3.11	2.76	88.27	0.24	0.34	1.66	0.12	0.13	0.05	94.96	4.76	3.31	2.59	72.71	0.28	0.33	1.61	0.16	0.14	0.06	94.82	04-41	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-42	4.78	3.17	2.47	88.66	0.27	0.36	1.62	0.17	0.17	0.05	95.27	5.08	3.33	2.59	72.07	0.29	0.38	1.70	0.18	0.14	0.06	94.82	04-42	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-43	4.78	3.17	2.47	88.66	0.27	0.36	1.62	0.17	0.17	0.05	95.27	5.08	3.33	2.59	72.07	0.29	0.38	1.70	0.18	0.14	0.06	94.82	04-43	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-44	4.78	3.17	2.47	88.66	0.27	0.36	1.62	0.17	0.17	0.05	95.27	5.08	3.33	2.59	72.07	0.29	0.38	1.70	0.18	0.14	0.06	94.82	04-44	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-45	4.78	3.17	2.47	88.66	0.27	0.36	1.62	0.17	0.17	0.05	95.27	5.08	3.33	2.59	72.07	0.29	0.38	1.70	0.18	0.14	0.06	94.82	04-45	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-46	4.78	3.17	2.47	88.66	0.27	0.36	1.62	0.17	0.17	0.05	95.27	5.08	3.33	2.59	72.07	0.29	0.38	1.70	0.18	0.14	0.06	94.82	04-46	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-47	4.78	3.17	2.47	88.66	0.27	0.36	1.62	0.17	0.17	0.05	95.27	5.08	3.33	2.59	72.07	0.29	0.38	1.70	0.18	0.14	0.06	94.82	04-47	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-48	4.78	3.17	2.47	88.66	0.27	0.36	1.62	0.17	0.17	0.05	95.27	5.08	3.33	2.59	72.07	0.29	0.38	1.70	0.18	0.14	0.06	94.82	04-48	17.01	11.05	2.14	102.85	1.35	69.93	148.89	36.36	180.70	4.56	2.43	174.73	14.98	
04-49	4.78	3.17	2.47	88.66	0.27	0.36	1.62	0.17	0.17	0.05	95.27	5.08	3.33	2.59	72.07	0.29	0.38	1.70	0.18	0.14	0.06	94.82	04-49	17.01	1												

J6-1.4	3.78	3.83	1.72	70.76	0.24	0.27	1.46	0.08	13.00	0.05	34.94	3.95	3.82	1.81	74.54	0.25	0.28	1.54	0.07	13.69	0.05	7.77	J6-1-average	17.31	6.28	9.34	81.92	2.28	74.47	117.80	29.77	211.86	4.91	2.98	1738.86	13.48
J6-1.5	3.78	3.85	1.73	70.76	0.24	0.27	1.46	0.08	13.03	0.05	34.94	3.96	3.83	1.78	74.53	0.24	0.31	1.56	0.08	13.84	0.05	7.79														
J6-1-average	3.91	3.82	1.77	70.38	0.28	0.30	1.44	0.07	12.88	0.04	34.94	4.13	3.82	1.87	74.32	0.29	0.31	1.63	0.07	13.66	0.04	7.85														
L1-1.1	3.94	3.68	1.91	70.28	0.28	0.28	1.44	0.08	12.96	0.04	34.94	4.15	3.88	2.01	74.03	0.20	0.29	1.54	0.11	13.87	0.02	8.03	L1-1.1-average	15.17	6.56	8.56	462.69	2.02	67.47	100.24	26.32	194.16	4.93	2.88	1533.75	12.10
L1-1.2	3.97	3.68	1.88	70.28	0.29	0.31	1.45	0.09	12.78	0.04	34.88	4.25	3.83	1.98	74.17	0.30	0.33	1.53	0.09	13.47	0.05	8.07														
L1-1.3	3.97	3.63	1.83	70.27	0.28	0.28	1.44	0.08	12.74	0.03	34.94	4.16	3.82	1.92	74.18	0.22	0.22	1.52	0.10	13.32	0.03	7.84														
L1-1.4	3.97	3.60	2.03	70.31	0.26	0.30	1.52	0.10	12.99	0.04	34.94	4.17	3.78	2.13	73.92	0.28	0.31	1.60	0.10	13.68	0.04	7.86	L1-1.2-average	17.59	6.74	8.59	502.23	2.04	69.62	114.87	21.38	204.41	5.24	2.89	1680.51	13.68
L1-1.5	3.97	3.64	1.87	69.80	0.31	0.31	1.44	0.04	12.52	0.01	34.94	4.14	3.82	1.87	74.27	0.30	0.32	1.58	0.11	13.42	0.03	8.05														
L1-1.6	3.81	3.59	1.97	71.00	0.27	0.32	1.44	0.07	12.95	0.04	34.94	3.99	3.76	2.08	74.38	0.28	0.34	1.51	0.07	13.37	0.04	7.75														
L1-1.7	3.82	3.71	1.84	70.28	0.28	0.28	1.44	0.08	12.74	0.03	34.94	4.12	3.83	1.80	74.72	0.27	0.33	1.50	0.10	13.21	0.03	7.82														
L1-1.8	4.05	3.62	1.74	70.59	0.30	0.28	1.50	0.10	12.94	0.07	34.94	4.25	3.80	1.83	74.15	0.31	0.29	1.58	0.12	13.59	0.08	8.04														
L1-1.9	3.85	3.61	1.83	70.03	0.30	0.29	1.40	0.07	12.95	0.04	34.46	4.32	3.82	1.84	74.13	0.32	0.31	1.58	0.07	13.71	0.04	7.80														
L1-1.10	3.84	3.52	1.79	70.29	0.27	0.31	1.45	0.08	12.82	0.04	34.70	4.18	3.75	1.84	74.49	0.30	0.33	1.62	0.04	13.54	0.06	7.82														
L1-1.11	3.81	3.64	1.87	69.80	0.31	0.31	1.44	0.04	12.52	0.01	34.94	4.06	3.88	1.89	74.46	0.33	0.34	1.54	0.04	13.35	0.01	7.85														
L1-1.12	3.88	3.61	1.70	70.28	0.28	0.31	1.41	0.18	12.44	0.03	34.90	4.12	3.83	1.80	74.72	0.27	0.33	1.50	0.10	13.21	0.03	7.85														
L1-1.13	4.17	3.89	1.88	69.85	0.27	0.34	1.42	0.10	12.63	0.03	34.94	4.32	3.82	1.87	74.03	0.29	0.36	1.51	0.11	13.42	0.03	8.05														
L1-1.15	3.91	3.60	1.82	70.39	0.30	0.28	1.47	0.03	12.95	0.05	34.79	4.13	3.80	1.92	74.26	0.31	0.29	1.55	0.03	13.66	0.05	7.82														
L1-1.16-average	3.91	3.61	1.84	70.18	0.30	0.30	1.46	0.06	12.81	0.03	34.94	4.14	3.82	1.87	74.27	0.30	0.32	1.58	0.06	13.65	0.04	7.86														
L1-1.17-average	0.17	0.04	0.09	0.83	0.02	0.02	0.05	0.05	0.19	0.02	1.14	0.14	0.04	0.09	0.21	0.02	0.02	0.04	0.05	0.18	0.02	0.14	L1-1.17-average	18.31	6.41	9.59	496.70	1.94	71.92	116.63	28.17	202.80	5.33	3.10	1673.24	13.13
L1-2.1	3.65	3.68	1.85	70.34	0.26	0.27	1.46	0.08	12.71	0.02	34.91	3.87	3.88	1.96	74.59	0.28	0.29	1.55	0.08	13.48	0.03	7.75														
L1-2.2	3.72	3.63	1.88	71.03	0.27	0.29	1.51	0.09	12.80	0.05	34.97	4.19	3.88	1.88	74.68	0.30	0.30	1.54	0.06	13.57	0.02	7.81														
L1-2.3	3.75	3.63	1.88	71.03	0.27	0.29	1.51	0.09	12.80	0.05	34.96	3.90	3.81	1.97	74.69	0.28	0.30	1.58	0.08	13.55	0.03	7.80														
L1-2.6	3.79	3.60	1.82	70.28	0.30	0.30	1.44	0.10	12.79	0.01	34.40	3.98	3.81	1.93	74.65	0.31	0.31	1.53	0.11	13.55	0.01	7.80														
L1-2.7	3.90	3.68	1.75	70.05	0.29	0.30	1.46	0.08	12.74	0.03	34.40	4.14	3.84	1.91	73.87	0.26	0.30	1.57	0.13	13.78	0.06	8.15														
L1-2.8	4.09	3.64	1.81	70.07	0.24	0.28	1.49	0.13	13.05	0.06	34.98	4.31	3.84	1.91	73.87	0.26	0.30	1.57	0.13	13.78	0.06	8.15														
L1-2.9	4.10	3.69	1.74	70.80	0.28	0.28	1.45	0.13	12.90	0.04	34.94	4.35	3.87	1.83	74.17	0.28	0.29	1.52	0.14	13.55	0.04	8.18														
L1-2.10	4.15	3.69	1.80	71.01	0.22	0.29	1.45	0.04	12.86	0.02	34.91	4.37	3.87	1.83	74.27	0.23	0.30	1.52	0.04	13.47	0.02	8.21														
L1-2.11	3.94	3.70	2.01	70.87	0.29	0.29	1.44	0.08	13.17	0.03	34.94	4.11	3.88	2.10	73.88	0.31	0.30	1.50	0.10	13.73	0.03	7.86														
L1-2.12	4.06	3.63	1.82	71.08	0.31	0.33	1.48	0.05	13.12	0.01	34.91	4.23	3.78	2.00	74.04	0.32	0.34	1.58	0.08	13.87	0.03	8.01														
L1-2.13	3.65	3.55	1.83	69.87	0.28	0.30	1.41	0.07	12.61	0.04	34.81	4.30	3.89	1.79	74.64	0.30	0.32	1.51	0.06	13.47	0.04	7.89														
L1-2.14	3.58	3.58	1.81	70.07	0.29	0.28	1.38	0.08	13.15	0.01	34.91	4.31	3.89	1.82	74.31	0.32	0.35	1.53	0.06	13.70	0.03	7.80														
L1-2.15	3.58	3.61	1.81	70.04	0.27	0.31	1.45	0.06	12.93	0.03	34.85	4.35	3.87	1.83	74.17	0.28	0.29	1.52	0.06	13.67	0.04	7.84														
L1-2.16-average	3.84	3.64	1.83	70.38	0.28	0.30	1.46	0.07	12.87	0.03	34.94	4.05	3.86	1.90	74.32	0.30	0.31	1.64	0.08	13.89	0.03	7.90														
L1-2.17-average	0.17	0.04	0.09	0.83	0.02	0.02	0.05	0.05	0.19	0.02	1.14	0.14	0.04	0.09	0.21	0.02	0.02	0.04	0.05	0.18	0.02	0.14	L1-2.17-average	17.81	6.99	9.68	506.63	1.99	72.13	117.21	31.84	204.49	5.04	3.13	1688.28	13.86
L1-2.18	3.65	3.68	1.85	70.34	0.26	0.27	1.46	0.08	12.71	0.02	34.91	3.87	3.88	1.96	74.59	0.28	0.29	1.55	0.08	13.48	0.03	7.75														
L1-3.1	3.93	3.62	1.78	69.76	0.26	0.30	1.43	0.03	12.68	0.07	33.81	4.19	3.86	1.85	74.38	0.27	0.31	1.52	0.03	13.52	0.07	8.05	L1-3.1-average													
L1-3.2	3.93	3.63	2.01	67.78	0.26	0.37	1.53	0.03	12.40	0.03	30.99	3.99	3.64	2.21	74.05	0.33	0.40	1.68	0.04	13.83	0.04	7.83														
L1-3.3	3.95	3.55	1.70	71.07	0.28	0.30	1.44	0.07	12.74	0.03	34.94	4.16	3.82	1.79	74.19	0.27	0.33	1.54	0.07	13.82	0.03	7.84	L1-3.3-average	12.84	6.56	8.32	462.66	1.80	65.96	102.22	28.22	196.48	4.28	2.90	1587.08	12.11
L1-3.4	3.95	3.60	1.80	70.05	0.26	0.31	1.50	0.08	12.90	0.04	34.91	4.26	3.80	1.88	74.20	0.27	0.33	1.58	0.08	13.58	0.04	7.80														
L1-3.5	3.98	3.57	1.70	70.04	0.26	0.30	1.43	0.07	12.74	0.03	34.94	4.18	3.82	1.79	74.19	0.27	0.33	1.54	0.07	13.82	0.03	7.84	L1-3.4-average													
L1-3.6	3.98	3.60	1.84	71.03	0.27	0.31	1.45	0.11	12.84	0.04	34.91	4.26	3.77	2.03	74.04	0.29	0.33	1.52	0.11	13.54	0.04	7.83														
L1-3.7	3.98	3.57	1.70	70.04	0.26	0.30	1.43	0.07	12.74	0.03	34.94	4.18	3.82	1.79	74.19	0.27	0.33	1.54	0.07	13.82	0.03	7.84	L1-3.5-average	18.84	7.11	9.10	486.41	2.54	68.42	110.81	31.25	204.34	4.85	2.84	1620.84	13.09
L1-3.8	3.98	3.60	1.84	71.03	0.27	0.31	1.45	0.11	12.84	0.04	34.91	4.26	3.77	2.03	74.04	0.29	0.33	1.52	0.11	13.54	0.04	7.83														
L1-3.9	4.01	3.65	1.88	70.05	0.27	0.38	1.45	0.03	12.83	0.03	34.93	4.25	3.87	1.97	74.18	0.29	0.29	1.52	0.04	13.59	0.05	8.11	L1-3.6-average													
L1-4.1	3.97	3.65	1.78	70.28	0.28	0.31	1.46	0.08	12.74	0.03	34.94	4.16	3.82	1.79	74.19	0.27	0.33	1.54	0.07	13.82	0.03	7.84														
L1-4.2	3.97	3.65	1.87	69.83	0.28	0.31	1.46	0.08	12.70	0.02	34.94	4.20	3.79	1.88	74.33	0.30	0.33	1.55	0.07	13.52	0.02	7.89	L1-4.2-average	12.84	6.56	8.32	462.66	1.80	65.96	102.22	28.22	196.48	4.28	2.90	1587.08	12.11
L1-4.3	3.97	3.65	1.87	69.83	0.28	0.31	1.46	0.08	12.70	0.02	34.94	4.20	3.79	1.88	74.33	0.30	0.33	1.55	0.07	13.52	0.02	7.89														
L1-4.4	3.97	3.65	1.87	69.83	0.28	0.31	1.46	0.08	12.70	0.02	34.94	4.20	3.79	1.88	74.33																					

0.25	0.07	0.11	0.58	0.02	0.04	0.05	0.20	0.03	0.11	0.23	0.05	0.11	0.30	0.02	0.04	0.05	0.20	0.03	0.23			
Tolaga Tapers (Unit US)																						
O4-3	433	230	263	671	0.36	0.41	1.96	0.16	13.69	0.08	94.12	4.60	3.30	269	7194	0.38	0.44	2.08	0.17	14.54	0.09	7.68
O4-4	438	279	283	672	0.38	0.48	2.13	0.12	13.79	0.08	94.26	4.85	2.96	720	7123	0.38	0.51	2.18	0.13	14.60	0.08	7.81
O4-5	435	275	248	672	0.34	0.47	2.02	0.13	13.43	0.07	94.21	4.83	2.96	723	7136	0.38	0.50	2.14	0.12	14.69	0.07	7.79
O4-6	384	284	241	663	0.36	0.47	1.95	0.13	13.43	0.07	94.21	4.17	2.99	723	7136	0.38	0.49	2.02	0.15	14.69	0.07	7.69
O4-7	487	275	248	673	0.38	0.40	1.92	0.13	13.43	0.07	94.21	5.15	2.91	727	7156	0.37	0.43	2.03	0.16	14.76	0.06	7.08
O4-8	472	274	268	673	0.38	0.52	2.12	0.12	14.19	0.10	94.79	4.69	2.89	734	7071	0.40	0.56	2.34	0.13	14.51	0.10	8.07
O4-9	459	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.87	2.87	716	7101	0.41	0.53	2.31	0.13	15.03	0.08	7.74
O4-10	452	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.56	2.73	716	7101	0.38	0.48	2.20	0.15	14.69	0.07	7.68
O4-11	452	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.56	2.73	716	7101	0.38	0.48	2.20	0.15	14.69	0.07	7.68
O4-12	352	266	248	683	0.38	0.46	1.71	0.13	14.03	0.05	92.94	3.79	3.18	727	7234	0.41	0.49	1.84	0.14	15.10	0.05	8.07
O4-13	462	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.56	2.73	716	7101	0.38	0.48	2.20	0.15	14.69	0.07	7.68
O4-14	421	270	263	6596	0.34	0.55	2.13	0.19	13.81	0.10	92.81	4.53	2.91	715	7099	0.37	0.59	2.20	0.48	14.86	0.10	7.94
O4-15	421	270	263	6596	0.34	0.55	2.13	0.19	13.81	0.10	92.81	4.53	2.91	715	7099	0.37	0.59	2.20	0.48	14.86	0.10	7.94
O4-16 average	443	280	241	670	0.36	0.46	1.99	0.15	13.93	0.07	93.08	4.71	2.98	718	7148	0.38	0.49	2.12	0.16	14.81	0.08	7.49
O4-16 stddev	0.40	0.09	0.19	0.51	0.02	0.05	0.13	0.04	0.12	0.02	0.63	0.40	0.09	0.20	0.52	0.02	0.05	0.14	0.18	0.12	0.33	
O4-17	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-18	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-19	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-20	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-21 average	443	280	241	670	0.36	0.46	1.99	0.15	13.93	0.07	93.08	4.71	2.98	718	7148	0.38	0.49	2.12	0.16	14.81	0.08	7.49
O4-21 stddev	0.40	0.09	0.19	0.51	0.02	0.05	0.13	0.04	0.12	0.02	0.63	0.40	0.09	0.20	0.52	0.02	0.05	0.14	0.18	0.12	0.33	
O4-22	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-23	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-24	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-25	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-26 average	443	280	241	670	0.36	0.46	1.99	0.15	13.93	0.07	93.08	4.71	2.98	718	7148	0.38	0.49	2.12	0.16	14.81	0.08	7.49
O4-26 stddev	0.40	0.09	0.19	0.51	0.02	0.05	0.13	0.04	0.12	0.02	0.63	0.40	0.09	0.20	0.52	0.02	0.05	0.14	0.18	0.12	0.33	
O4-27	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-28	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-29	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-30	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-31 average	443	280	241	670	0.36	0.46	1.99	0.15	13.93	0.07	93.08	4.71	2.98	718	7148	0.38	0.49	2.12	0.16	14.81	0.08	7.49
O4-31 stddev	0.40	0.09	0.19	0.51	0.02	0.05	0.13	0.04	0.12	0.02	0.63	0.40	0.09	0.20	0.52	0.02	0.05	0.14	0.18	0.12	0.33	
O4-32	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-33	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-34	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-35	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-36 average	443	280	241	670	0.36	0.46	1.99	0.15	13.93	0.07	93.08	4.71	2.98	718	7148	0.38	0.49	2.12	0.16	14.81	0.08	7.49
O4-36 stddev	0.40	0.09	0.19	0.51	0.02	0.05	0.13	0.04	0.12	0.02	0.63	0.40	0.09	0.20	0.52	0.02	0.05	0.14	0.18	0.12	0.33	
O4-37	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-38	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-39	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-40	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-41 average	443	280	241	670	0.36	0.46	1.99	0.15	13.93	0.07	93.08	4.71	2.98	718	7148	0.38	0.49	2.12	0.16	14.81	0.08	7.49
O4-41 stddev	0.40	0.09	0.19	0.51	0.02	0.05	0.13	0.04	0.12	0.02	0.63	0.40	0.09	0.20	0.52	0.02	0.05	0.14	0.18	0.12	0.33	
O4-42	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-43	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-44	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-45	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-46 average	443	280	241	670	0.36	0.46	1.99	0.15	13.93	0.07	93.08	4.71	2.98	718	7148	0.38	0.49	2.12	0.16	14.81	0.08	7.49
O4-46 stddev	0.40	0.09	0.19	0.51	0.02	0.05	0.13	0.04	0.12	0.02	0.63	0.40	0.09	0.20	0.52	0.02	0.05	0.14	0.18	0.12	0.33	
O4-47	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-48	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-49	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-50	457	276	240	661	0.39	0.50	2.17	0.12	14.14	0.08	94.90	4.86	2.85	726	7120	0.40	0.49	2.28	0.14	14.67	0.09	7.79
O4-51 average	443	280	241	670	0.36	0.46	1.99	0.15	13.93	0.07	93.08	4.71	2.98	718	7148	0.38	0.49	2.12	0.16	14.81	0.08	7.49
O4-51 stddev	0.40	0.09	0.19	0.51	0.02	0.05	0.13	0.04	0.12	0.02	0.63	0.40	0.09	0.20	0.52	0.02	0.05	0.14	0.18	0.12	0.33	
O4-52	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10	94.73	5.11	2.97	728	7131	0.41	0.55	2.20	0.17	14.61	0.10	8.08
O4-53	484	281	241	672	0.39	0.52	2.28	0.16	13.84	0.10												

J1-1	4.76	2.92	2.61	68.02	0.35	0.35	1.73	0.13	13.82	0.01	4.97	3.05	2.73	71.99	0.37	0.37	1.85	0.14	14.48	0.08	8.02
J1-2	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-3	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-4	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-5	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-6	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-7	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-8	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-9	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-10	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-11	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-12	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-13	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-14	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-15	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-16	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-17	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-18	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-19	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-20	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-average	4.89	2.86	2.76	68.03	0.36	0.41	1.81	0.13	13.87	0.07	5.08	3.08	2.88	71.52	0.37	0.43	1.89	0.14	14.53	0.08	8.18
J1-stdev	0.16	0.07	0.12	0.02	0.02	0.05	0.03	0.15	0.03	0.43	0.16	0.07	0.13	0.02	0.02	0.03	0.04	0.12	0.02	0.06	0.03
K2-1	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-2	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-3	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-4	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-5	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-6	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-7	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-8	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-9	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-10	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-11	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-12	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-13	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-14	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-15	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-16	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-17	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-18	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-19	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-20	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-average	4.72	2.95	2.65	68.32	0.38	0.38	1.69	0.13	13.66	0.08	4.64	3.12	2.72	72.21	0.37	0.37	1.74	0.14	14.39	0.08	8.04
K2-stdev	0.08	0.05	0.12	0.02	0.02	0.06	0.03	0.15	0.03	0.43	0.16	0.07	0.13	0.02	0.02	0.03	0.04	0.12	0.02	0.06	0.03
L4-1	4.43	2.99	2.61	68.33	0.33	0.33	1.71	0.09	13.63	0.07	4.66	3.13	2.73	72.60	0.32	0.35	1.79	0.10	14.27	0.07	7.77
L4-2	4.78	2.91	2.62	68.39	0.38	0.38	1.73	0.13	13.75	0.07	4.95	3.15	2.82	72.68	0.38	0.40	1.78	0.13	14.39	0.08	8.04
L4-3	4.78	2.91	2.62	68.39	0.38	0.38	1.73	0.13	13.75	0.07	4.95	3.15	2.82	72.68	0.38	0.40	1.78	0.13	14.39	0.08	8.04
L4-4	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-5	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-6	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-7	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-8	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-9	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-10	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-11	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-12	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-13	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-14	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-15	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-16	4.60	3.01	2.67	68.14	0.32	0.40	1.80	0.08	13.41	0.05	4.69	3.02	2.71	72.84	0.32	0.38	1.68	0.08	14.04	0.05	7.97
L4-17	4.60	3.01	2.67	68.14	0.32	0.40															

CeLa	PrLa	NdLa	SmLa	EuLa	GdLa	TbLa	DyLa	HoLa	ErLa	TmLa	YbLa	LuLa	HFLa	TaLa	PbLa	ThLa	ULa	BaLa	BaLa	BaLa	LaLa	LaLa	RbLa	ZrLa	KLa
34.16	4.94	22.74	5.44	1.26	0.09	0.96	5.87	1.36	3.87	0.61	4.29	0.64	5.82	0.36	8.83	3.15	2.71	120.43	368.52	27.00	3.06	2.71	4.46	39.88	0.202
30.85	4.15	18.69	3.58	0.94	4.27	0.72	5.77	1.15	2.58	0.46	4.09	0.54	4.49	0.21	6.51	2.64	2.28	125.33	339.68	23.43	2.71	1.82	5.35	33.91	0.229
33.66	4.61	20.01	4.88	1.21	0.21	0.85	5.14	1.00	3.08	0.56	3.40	0.68	4.53	0.21	9.63	2.46	1.94	127.92	382.44	26.12	2.99	2.69	4.90	31.43	0.228

32.29	4.87	19.91	4.64	1.14	0.19	0.91	5.99	1.17	3.17	0.54	3.93	0.82	4.95	0.26	9.99	2.91	2.31	126.96	393.54	25.92	2.92	3.91	4.99	39.96	0.232
1.78	0.40	3.03	0.55	0.17	0.91	0.07	0.40	0.18	0.65	0.07	0.47	0.07	0.76	0.09	0.68	0.35	0.39	3.80	21.81	1.86	0.18	0.54	0.45	4.34	0.02
31.26	4.59	15.04	4.75	1.02	0.02	0.84	5.17	1.12	5.11	0.32	2.40	0.89	4.93	0.43	7.17	2.94	2.21	97.06	346.24	23.43	3.57	3.36	4.14	40.29	0.182
31.37	4.52	19.56	4.21	1.12	4.11	0.78	6.81	1.34	4.07	0.70	3.40	0.89	4.70	0.23	9.22	2.64	2.41	113.39	328.73	26.90	2.90	3.35	4.23	39.56	0.206
34.46	4.97	20.80	5.94	1.07	5.02	0.97	5.34	1.59	4.83	0.58	4.85	0.71	5.25	0.38	8.66	3.18	2.19	96.29	379.87	25.53	3.86	3.30	3.85	45.14	0.175
30.65	3.96	17.84	5.02	1.18	5.66	0.62	5.52	1.26	3.81	0.47	3.96	0.45	4.47	0.21	8.21	2.31	2.00	107.27	353.93	23.34	3.30	2.86	4.60	43.89	0.203

31.93	4.51	19.26	4.75	1.10	5.68	0.85	5.71	1.33	4.46	0.52	3.88	0.88	4.94	0.31	8.28	2.82	2.29	104.00	392.14	24.77	3.41	3.21	4.21	42.92	0.19
1.71	0.42	2.43	0.39	0.07	1.67	0.09	0.75	0.19	0.61	0.16	1.07	0.18	0.33	0.11	0.86	0.37	0.17	7.74	21.18	1.69	0.41	0.24	0.31	4.00	0.02
33.51	4.66	21.48	6.56	1.09	6.32	0.90	6.14	1.37	3.49	0.61	4.50	0.84	5.79	0.33	11.18	2.77	2.34	110.68	330.53	25.38	2.99	2.42	4.36	38.54	0.184
29.40	5.27	17.95	2.78	0.83	4.78	0.81	5.25	1.34	3.10	0.48	4.38	0.53	5.23	0.46	19.23	3.10	2.59	103.02	369.89	23.49	3.53	3.67	4.39	40.78	0.186
30.58	4.85	20.30	5.23	1.11	6.49	0.92	5.87	1.11	5.16	0.63	4.11	0.83	4.23	0.15	8.92	3.04	2.28	111.20	380.71	25.07	3.24	2.84	4.44	40.63	0.197
29.20	4.11	18.34	3.97	0.78	4.52	1.12	4.97	0.90	4.09	0.60	4.13	0.59	4.03	0.38	9.86	2.98	2.14	122.66	384.74	26.40	3.25	3.31	4.83	42.92	0.233
32.32	4.50	18.86	6.53	0.95	6.07	0.77	6.43	1.25	3.55	0.50	3.21	0.38	4.90	0.34	9.19	2.27	2.06	110.18	377.85	25.92	3.43	2.15	4.25	44.47	0.208

31.00	4.68	19.36	6.91	0.95	6.42	0.91	5.73	1.17	3.86	0.56	4.05	0.95	4.93	0.31	9.68	2.91	2.28	111.65	366.34	26.05	3.29	3.28	4.46	41.29	0.230
1.67	0.43	1.91	1.65	0.15	0.76	0.14	0.81	0.18	0.80	0.07	0.49	0.11	0.72	0.11	1.00	0.33	0.21	7.06	20.91	0.93	0.21	1.41	0.22	2.18	0.02
28.45	3.85	17.68	4.57	0.97	5.65	0.84	6.08	0.95	3.66	0.63	4.15	0.60	4.74	0.16	9.79	2.84	2.13	109.15	353.11	26.37	3.24	3.20	3.85	37.27	0.199
28.96	4.02	18.98	4.89	0.58	4.26	0.65	3.95	0.98	3.52	0.58	4.42	0.81	3.61	0.25	13.09	1.72	1.79	93.38	310.95	22.96	3.33	2.85	4.07	42.92	0.218
30.54	5.01	18.22	6.26	1.10	5.35	0.97	5.96	1.25	3.65	0.70	4.09	0.60	5.65	0.25	11.35	2.85	2.39	110.96	352.70	23.81	2.91	2.33	4.68	38.96	0.200
34.20	4.32	21.87	5.03	0.99	4.93	0.75	7.04	1.51	5.36	0.24	6.80	1.10	6.28	0.26	10.12	2.94	2.46	105.85	325.59	22.52	3.08	3.08	4.70	38.89	0.188
33.38	4.62	19.87	5.31	0.74	5.49	0.95	6.46	1.26	4.07	0.59	4.50	0.78	5.62	0.21	9.72	2.92	2.25	109.92	385.99	23.94	2.83	2.83	4.23	34.60	0.194

31.11	4.36	18.92	5.17	0.86	5.14	0.83	5.99	1.19	4.95	0.55	4.75	0.77	5.16	0.23	10.62	2.85	2.29	104.05	319.86	24.38	3.96	2.86	4.39	36.93	0.236
2.68	0.46	1.96	0.68	0.23	0.66	0.14	1.17	0.23	0.76	0.18	1.05	0.20	1.03	0.04	1.43	0.52	0.26	7.08	24.38	2.34	0.21	0.33	0.37	3.62	0.01
31.72	4.66	22.17	6.42	1.10	6.14	0.77	6.28	1.28	3.98	0.40	3.75	0.56	5.39	0.49	9.70	3.17	3.10	117.93	323.64	21.68	2.74	2.29	5.44	37.46	0.197
28.36	4.68	17.83	5.23	0.87	4.85	0.74	4.94	1.04	3.79	0.62	4.29	0.54	5.40	0.32	8.62	3.02	2.53	128.31	315.94	22.67	2.46	2.51	5.66	36.97	0.222
31.10	4.48	18.44	3.79	0.75	4.95	0.73	5.41	1.05	3.84	0.55	3.71	0.71	7.95	0.33	9.03	3.75	3.62	127.70	353.37	24.76	2.77	3.76	5.16	43.59	0.204
30.74	4.30	16.10	3.71	0.80	3.65	0.74	5.69	1.41	2.84	0.45	3.29	0.38	5.57	0.39	11.30	3.34	3.12	132.11	373.16	23.54	2.82	3.86	5.91	42.93	0.203
30.47	4.22	19.57	4.50	1.40	5.30	0.83	6.02	0.75	4.44	0.65	2.84	0.51	6.06	0.45	9.68	4.22	3.62	138.29	379.79	24.59	2.72	3.10	5.62	42.97	0.209
30.48	4.47	18.82	4.73	1.00	4.98	0.76	5.87	1.19	3.78	0.53	3.89	0.54	6.30	0.36	9.71	3.59	2.96	128.87	346.58	23.45	2.79	3.19	5.50	40.78	0.21
1.14	0.18	0.20	1.01	0.27	0.80	0.04	0.47	0.23	0.25	0.10	0.46	0.11	1.06	0.08	0.87	0.44	0.22	5.64	24.64	1.16	0.13	0.63	0.19	2.83	0.01

28.40	4.77	20.05	4.42	1.07	4.39	0.70	5.73	0.90	2.95	0.56	3.38	0.50	4.31	0.36	6.91	1.57	1.54	109.62	255.96	30.90	2.33	2.93	3.55	25.23	0.148
28.05	4.11	18.05	5.55	1.05	5.60	0.91	4.98	1.13	3.51	0.55	3.00	0.38	4.91	0.38	6.59	2.19	1.56	113.64	239.99	30.43	2.11	2.34	3.73	23.26	0.148
30.08	4.83	23.91	5.26	1.77	6.68	0.91	5.83	1.29	2.77	0.30	4.76	0.85	3.62	0.25	8.13	2.35	2.30	106.51	213.35	29.30	2.00	2.89	3.83	22.89	0.141
25.71	3.88	22.21	4.03	2.01	5.26	0.72	5.90	1.09	2.64	0.33	2.51	0.46	3.73	0.28	8.24	1.90	1.20	104.14	219.89	29.21	2.11	2.97	3.57	23.13	0.161
24.08	3.97	16.16	3.96	1.68	4.25	0.79	4.17	0.84	3.15	0.34	2.63	0.51	3.34	0.46	6.85	1.60	1.11	111.10	224.20	31.20	2.02	2.93	3.56	22.16	0.169
27.26	4.21	20.98	4.83	1.52	5.23	0.81	5.14	1.05	3.91	0.42	3.26	0.90	4.93	0.35	6.54	1.96	1.94	109.00	239.68	30.21	2.12	2.79	3.61	23.33	0.16
2.36	0.48	3.11	0.74	0.43	0.98	0.10	0.93	0.18	0.34	0.13	0.91	0.10	0.63	0.08	1.10	0.31	0.47	3.75	17.21	0.91	0.13	0.28	0.08	1.14	0.01

27.98	5.44	32.08	4.88	2.56	5.78	0.802	6.64	1.04	3.12	0.42	2.6	0.314	2.44	0.3	3.08			112.19	398.91	41.22	3.20	2.64	2.72	24.07	0.141
27.34	4.24	19.52	4.76	1.77	6.02	0.816	5.14	1.074	2.92	0.398	3.16	0.462	3.72	0.308	5.7	1.934	1.418	110.59	245.79	41.63	2.22	2.81	2.66	23.14	0.135
25.2	4	18.9	4.88	1.808	5.18	0.838	5.5	1.088	3.3	0.402	3.48	0.532	3.62	0.262	6.8	1.956	1.396	99.95	231.81	37.95	2.33	2.75	2.62	26.15	0.141

26.84	4.96	21.50	4.77	2.05	5.66	0.82	5.76	1.05	3.11	0.41	3.88	0.44	3.33	0.30	5.09	1.90	1.36	107.38	278.84	40.27	2.88	2.73	2.67	24.45	0.14
1.46	0.77	7.44	0.10	0.44	0.97	0.02	0.78	0.02	0.19	0.01	0.45	0.11	0.77	0.01	0.97	0.06	0.08	7.00	69.70	2.02	0.53	0.09	0.05	1.54	0.00
40.38	6.63	30.51	7.53	2.09	6.11	1.56	9.29	2.06	5.7	0.688	4.7	0.832	7.17	0.54	9.34	3.34	1.77	84.37	179.92	31.22	2.13	2.62	2.70	23.97	0.002
28.08	4.62	22	6.91	1.48	6.18	1.08	7.21	1.47	4.64	0.376	4.44	0.494	5.86	0.306	7.37	2.52	1.54	96.69	211.32	33.42	2.19	2.51	2.89	25.94	0.190

34.23	5.83	26.26	6.77	1.79	7.66	1.32	8.30	1.77	5.17	0.63	4.57	0.66	6.13	0.42	6.31	2.93	1.66	96.93	195.62	32.32	2.16	2.66	2.80	24.96	0.11
8.70	1.42	6.02	1.07	0.43	2.07	0.34	1.40	0.42	0.75	0.08	0.18	0.24	1.45	0.17	1.32	0.58	0.16	8.71	22.20	1.56	0.54	0.22	0.13	1.59	0.03

23.9 3.91 16.58 4.67 0.844 4.62 0.871 5.44 1.212 3.52 0.643 3.66 0.867 5.78 0.325 9 2.49 1.51 106.34 254.05 31.15 2.39 2.81 3.41 36.02 0.201
35.79 5.04 21.08 5.01 1.058 5.7 0.915 6.62 1.228 4.06 0.62 4.23 0.641 6.13 0.479 8.44 3 2.62 116.88 234.52 29.50 1.97 3.18 4.03 27.13 0.166

29.95 4.48 18.82 4.84 0.95 5.16 0.89 6.63 1.22 3.79 0.63 3.95 0.85 5.96 0.40 6.72 2.75 2.67 112.61 244.29 30.32 2.16 3.06 3.72 31.58 0.18
8.41 0.85 3.17 0.24 0.15 0.76 0.59 0.82 0.01 0.38 0.02 0.40 0.02 0.25 0.11 0.40 0.36 0.78 8.87 13.81 1.77 0.29 0.26 0.44 5.29 0.02

27.4 4.26 17.41 4.52 0.787 5.86 0.765 5.53 1.186 3.81 0.845 3.94 0.574 6.09 0.366 6.75 3.21 2.22 114.63 288.37 30.44 2.49 3.32 3.77 36.12 0.190
33.02 4.72 21.14 5.31 0.865 5.92 1.027 6.22 1.44 4.95 0.724 5.08 0.79 7.47 0.405 11.11 3.95 2.67 110.30 242.73 27.54 2.20 3.32 4.01 33.64 0.162
33.95 4.59 19.32 5.39 0.86 4.71 1.05 5.51 1.25 4.34 0.693 5.56 0.837 5.8 0.575 9.99 3.48 3.05 105.18 270.38 28.90 2.57 3.31 3.64 37.97 0.160

31.76 4.52 19.29 5.67 0.83 5.50 0.95 5.75 1.29 3.97 0.65 4.85 0.67 6.45 0.45 9.28 3.55 2.71 116.19 266.16 28.96 2.42 3.32 3.81 35.91 0.17
3.77 0.34 1.87 0.46 0.55 0.68 0.16 0.40 0.13 0.42 0.10 0.52 0.11 0.83 0.31 2.26 0.38 0.44 4.63 21.64 1.45 0.19 0.01 0.19 2.17 0.02
27.65 3.19 14.15 2.54 0.38 2.59 0.44 4.60 0.82 2.99 0.35 2.29 0.35 4.40 0.34 6.71 2.55 2.47 138.62 296.40 21.73 2.14 4.35 9.38 34.32 0.349
28.13 3.98 15.74 3.68 0.52 3.89 0.74 4.34 0.88 3.54 0.60 3.71 0.59 5.39 0.36 7.40 2.71 2.22 125.73 285.17 26.04 2.11 3.59 4.83 32.29 0.217
28.04 4.41 18.03 4.89 0.50 3.73 0.70 4.58 1.16 2.42 0.446 3.95 0.52 4.89 0.31 6.15 2.92 2.28 121.23 283.73 23.66 2.16 2.94 5.12 32.03 0.213
25.61 3.77 15.21 3.56 -0.3162 4.60 0.63 3.99 0.98 2.51 0.48 4.73 0.60 5.61 0.33 8.33 2.72 2.64 115.29 285.10 22.96 2.47 4.07 5.02 34.25 0.210

27.36 3.84 15.79 3.57 0.47 3.70 0.63 4.38 0.97 2.89 0.48 3.87 0.52 5.12 0.34 7.65 2.75 2.46 125.22 277.60 23.60 2.22 3.74 5.34 33.22 0.22
1.19 0.51 1.63 0.81 0.07 0.83 0.12 0.29 0.16 0.70 0.10 1.02 0.11 0.40 0.02 0.74 0.15 0.19 3.91 15.89 1.81 0.17 0.62 0.70 1.23 0.02

34.24 4.94 21.09 5.72 1.11 6.23 0.94 6.50 1.26 4.82 0.54 5.26 0.80 5.78 0.20 9.66 3.41 2.28 117.55 325.66 25.61 2.77 2.71 4.59 37.06 0.183
32.83 4.63 20.09 5.79 1.14 5.74 0.82 6.19 1.31 4.36 0.62 4.36 0.61 6.40 0.28 9.48 3.13 2.28 122.29 309.67 26.64 2.78 2.49 4.89 38.32 0.196
32.09 4.46 20.40 6.05 0.94 7.21 0.83 6.47 1.37 4.47 0.53 4.20 0.64 5.74 0.26 8.44 3.14 2.77 119.40 332.75 28.98 2.79 2.39 4.12 37.40 0.198
34.97 4.71 23.23 6.05 1.04 4.99 1.16 6.97 1.80 4.52 0.64 5.15 0.75 6.39 0.24 10.38 2.85 2.64 117.12 329.16 26.46 2.81 2.59 4.43 39.00 0.180
32.49 5.14 21.95 5.41 1.15 4.51 0.82 6.97 1.29 3.85 0.61 4.22 0.74 5.78 0.23 8.33 2.85 2.18 117.29 306.60 27.07 2.61 2.72 4.25 34.32 0.192

33.32 4.78 21.95 5.91 1.08 5.73 0.92 6.50 1.37 4.40 0.59 4.83 0.71 6.02 0.26 9.26 3.09 2.45 118.73 326.81 27.05 2.75 2.98 4.40 37.22 0.19
1.29 0.27 1.23 0.27 0.08 1.06 0.16 0.37 0.14 0.35 0.05 0.63 0.08 0.34 0.03 0.87 0.22 0.25 2.19 12.45 1.28 0.08 0.14 0.21 1.79 0.01

28.26 4.12 19.03 5.94 1.09 5.68 0.933 5.96 1.247 3.72 0.504 4.02 0.646 5.82 0.42 10.01 2.92 1.68 106.38 187.01 28.06 1.76 2.78 3.79 25.52 0.181
34.77 5.33 25.53 6.57 1.332 6.73 1.126 7.21 1.571 4.66 0.77 5.43 0.825 7.1 0.521 9.46 3.48 2.33 100.33 217.24 28.24 2.17 2.77 3.55 30.68 0.193
34.33 4.96 21.89 5.01 1.27 6.02 1.008 5.51 1.323 3.81 0.582 4.62 0.571 5.56 0.567 9.38 2.88 2.26 113.18 207.04 29.19 1.83 3.04 3.88 24.83 0.166

32.45 4.80 22.15 5.54 1.23 6.14 1.02 6.23 1.38 4.14 0.62 4.89 0.68 6.16 0.80 9.62 3.09 2.09 104.63 203.76 28.50 1.82 2.86 3.74 27.91 0.16
3.64 0.62 3.28 0.59 0.12 0.64 0.10 0.88 0.17 0.65 0.14 0.71 0.13 0.82 0.08 0.34 0.34 0.36 6.43 16.38 0.60 0.22 0.15 0.17 3.20 0.02

32.60 4.65 19.26 4.74 1.18 4.97 0.93 5.98 1.40 4.50 0.64 4.50 0.66 5.99 0.34 8.03 3.09 2.27 114.45 340.85 28.26 2.98 3.14 4.95 38.75 0.190
31.82 4.62 21.09 5.37 1.14 5.65 0.94 6.13 1.28 4.22 0.61 4.07 0.72 5.62 0.30 6.01 2.99 2.34 117.86 326.61 27.97 2.77 2.66 4.23 37.37 0.198
32.29 4.77 20.82 5.59 1.19 5.69 0.91 6.21 1.34 4.27 0.61 4.39 0.74 5.88 0.30 8.76 3.05 2.50 113.00 345.45 28.23 3.06 2.71 4.50 39.88 0.187
32.12 4.84 20.48 5.16 1.20 5.38 0.92 5.55 1.31 4.46 0.66 4.04 0.68 5.22 0.32 6.51 2.92 2.45 112.88 334.93 27.81 2.87 2.92 4.96 37.71 0.186
32.08 4.65 20.65 5.49 1.10 5.76 0.91 6.26 1.28 4.04 0.61 4.39 0.67 6.14 0.27 8.38 2.74 2.33 113.93 359.79 27.79 3.16 2.71 4.10 40.61 0.190

32.18 4.75 20.46 5.27 1.16 5.45 0.92 6.16 1.32 4.30 0.63 4.26 0.69 5.49 0.30 6.34 2.94 2.38 114.42 341.83 27.99 2.99 2.83 4.69 36.87 0.19
0.29 0.09 0.71 0.33 0.04 0.30 0.01 0.14 0.05 0.19 0.02 0.21 0.04 0.30 0.03 0.32 0.15 0.09 2.03 12.45 0.34 0.14 0.30 0.09 1.39 0.00

33.45 4.99 22.19 6.12 1.16 6.07 1.29 8 1.53 5.34 0.614 5.51 0.771 6.9 0.469 6.8 3.39 2.22 107.13 340.41 31.78 3.18 2.87 3.37 44.00 0.201
35.12 5.4 28.08 6.12 1.42 6.36 0.957 7.31 1.47 4.59 0.76 5.55 0.774 6.74 0.352 10.19 3.38 2.21 105.88 323.83 30.69 3.05 2.87 3.45 36.59 0.201
32.59 4.96 22.72 5.98 1.254 5.78 1.089 6.94 1.502 4.75 0.764 5.21 0.712 6.12 0.333 8.83 3.25 2.14 107.30 326.63 31.69 3.04 2.77 3.39 40.44 0.002

33.72 5.12 24.33 6.16 1.28 6.27 1.11 7.42 1.90 4.89 0.71 5.42 0.75 6.26 0.38 9.21 3.34 2.19 106.77 329.86 31.39 3.89 2.84 3.46 41.34 0.80
1.29 0.25 3.28 0.11 0.13 0.45 0.17 0.54 0.03 0.40 0.09 0.19 0.03 0.44 0.07 0.86 0.08 0.04 0.78 8.37 0.61 0.08 0.05 0.04 2.34 0.00

32.04 4.90 20.72 5.35 1.04 5.34 1.03 5.53 1.24 3.55 0.52 4.59 0.62 6.04 0.62 8.56 3.40 2.70 119.94 348.69 28.86 2.91 2.74 4.16 39.13 0.187
32.17 4.71 21.84 5.88 1.27 5.89 1.00 6.54 1.35 4.14 0.63 4.26 0.59 5.73 0.32 7.87 3.10 2.48 115.94 371.45 29.79 3.26 2.52 3.90 39.86 0.186
34.25 4.82 21.04 5.98 1.14 6.31 1.11 5.78 1.41 4.07 0.60 4.41 0.58 5.91 0.28 6.42 2.87 2.80 115.26 319.63 26.47 2.77 2.53 4.35 34.61 0.181
30.93 4.72 19.70 4.83 1.02 6.10 0.98 5.65 1.27 4.67 0.73 4.62 0.89 4.93 0.29 6.07 2.64 2.62 117.17 350.25 28.18 2.99 3.12 4.16 37.65 0.182
35.22 5.02 22.33 5.54 0.79 6.06 1.15 7.67 1.94 3.97 0.79 3.96 0.63 5.87 0.39 9.06 2.83 2.73 115.71 365.39 26.26 3.16 2.76 4.41 38.85 0.179

32.92 4.83 21.13 5.91 1.04 5.54 1.06 6.19 1.26 4.98 0.65 4.41 0.66 5.69 0.38 6.46 3.03 2.67 116.80 351.66 27.91 3.81 2.79 4.19 38.10 0.18
1.75 0.13 1.02 0.45 0.19 0.44 0.07 0.83 0.14 0.40 0.11 0.32 0.13 0.44 0.14 0.50 0.23 0.12 1.49 20.19 1.52 0.19 0.24 0.20 2.68 0.00

32.95 4.43 21.78 5.54 1.12 5.56 1.15 4.46 1.11 3.31 0.60 3.46 0.72 5.28 0.31 24.09 2.78 2.50 118.31 302.56 25.95 2.56 2.63 4.56 32.13 0.188
31.29 4.86 19.13 5.42 1.21 6.33 0.98 5.25 1.40 4.61 0.45 4.78 0.66 4.92 0.29 10.99 2.92 2.45 115.60 373.47 27.98 3.23 2.84 4.14 40.75 0.178
33.54 4.61 20.50 5.36 1.09 5.92 0.92 6.19 1.20 4.48 0.59 4.23 0.71 5.28 0.31 10.17 2.93 2.52 114.65 335.60 28.93 2.93 2.90 3.96 35.99 0.176

34.41	4.53	18.53	6.39	0.99	5.93	1.01	5.93	1.20	4.49	0.56	4.32	0.80	5.48	0.26	11.89	3.21	2.66	116.59	382.52	26.46	3.28	2.34	4.41	41.59	0.183
32.80	4.89	20.78	5.96	1.14	5.53	0.97	6.86	1.20	4.37	0.56	4.32	0.77	5.60	0.22	12.63	2.75	2.68	117.15	348.84	27.41	2.98	2.78	4.27	37.13	0.177

32.00	4.46	26.36	5.65	1.11	5.86	1.06	5.74	1.26	4.26	0.55	4.16	0.69	5.31	0.26	13.95	2.91	2.56	116.50	346.60	27.35	2.89	2.76	4.27	37.52	0.18
1.15	0.20	1.05	0.42	0.08	0.33	0.09	0.92	0.13	0.53	0.06	0.47	0.06	0.26	0.04	5.74	0.19	0.10	1.38	21.85	1.19	0.29	0.22	0.23	3.83	0.00

30.62	4.44	17.76	4.40	1.29	4.77	0.88	5.37	1.22	3.71	0.59	3.37	0.77	5.68	0.27	9.19	3.00	2.39	110.12	320.64	27.89	2.91	3.26	3.95	36.81	0.193
32.04	4.22	20.36	5.28	1.09	5.06	0.97	5.52	1.37	4.15	0.72	3.20	0.73	4.87	0.26	9.88	3.45	2.42	107.26	292.06	27.38	2.91	2.94	3.62	36.10	0.179
32.74	4.50	17.57	4.19	1.08	5.06	0.82	6.22	1.26	4.79	0.72	4.87	0.49	5.39	0.29	11.81	2.53	2.71	107.19	337.85	24.31	3.15	3.94	4.41	40.48	0.172
30.62	4.69	19.84	4.53	1.09	5.63	0.86	4.98	1.26	4.85	0.56	4.33	0.63	5.31	0.43	8.04	2.65	2.20	109.48	302.19	28.09	2.76	3.38	3.62	34.78	0.181
31.58	4.64	19.77	5.05	1.05	5.30	0.88	5.61	1.25	3.33	0.65	4.42	0.53	5.15	0.27	10.11	2.96	2.48	115.37	361.36	29.00	3.16	2.89	3.98	40.93	0.190

31.92	4.50	19.95	4.89	1.12	5.39	0.86	5.59	1.31	4.28	0.65	4.04	0.63	5.59	0.32	9.61	2.96	2.44	109.89	327.42	27.45	2.96	3.26	4.91	37.82	0.18
0.93	0.19	1.28	0.45	0.10	0.51	0.03	0.46	0.15	0.50	0.07	0.72	0.12	0.52	0.07	3.44	0.33	0.16	1.33	24.46	1.67	0.17	0.39	0.23	2.74	0.01

32.60	4.92	19.97	5.14	1.14	5.83	0.90	6.27	1.40	4.33	0.59	4.43	0.69	5.24	0.37	8.10	2.95	2.45	113.39	338.23	27.82	2.96	2.92	4.95	38.83	0.190
33.46	4.78	21.27	5.43	1.04	6.02	0.97	6.39	1.40	4.38	0.68	4.57	0.68	5.55	0.31	8.02	3.04	2.48	110.58	337.69	28.06	3.05	2.91	3.94	38.09	0.171
31.65	4.41	19.82	5.00	1.14	5.69	0.91	6.00	1.36	4.26	0.63	4.30	0.69	5.67	0.32	8.26	2.90	2.45	110.37	352.09	27.72	3.05	2.94	4.16	39.82	0.184
30.50	4.51	19.25	5.54	1.04	6.36	0.88	5.87	1.23	3.81	0.60	3.99	0.67	5.09	0.28	7.30	2.72	2.32	116.80	335.44	29.54	2.90	2.95	3.92	37.28	0.191
30.51	4.63	20.07	5.36	1.12	6.23	0.87	5.89	1.27	4.00	0.60	3.92	0.67	5.72	0.30	7.41	2.72	2.33	112.37	340.62	27.54	3.03	2.74	4.08	39.06	0.184

31.78	4.63	20.08	5.29	1.10	6.66	0.91	6.86	1.34	4.19	0.62	4.24	0.67	5.48	0.29	7.83	2.86	2.41	113.48	340.81	28.14	3.00	2.91	4.94	38.87	0.18
1.30	0.17	0.74	0.22	0.05	0.28	0.04	0.24	0.08	0.24	0.04	0.28	0.01	0.27	0.02	6.44	0.14	0.08	2.13	6.96	0.81	0.07	0.17	0.10	0.81	0.01

31.97	4.59	20.97	5.02	1.11	5.39	0.98	6.75	1.37	3.89	0.61	4.37	0.68	5.53	0.32	8.34	2.78	2.26	120.53	325.25	27.24	2.70	2.84	4.42	37.43	0.194
31.67	4.46	19.37	4.60	0.89	6.68	0.91	6.20	1.44	4.28	0.51	3.30	0.67	4.55	0.26	6.71	2.93	2.23	130.53	311.45	26.75	2.38	2.87	4.67	32.95	0.202
35.11	3.85	17.81	4.96	0.96	4.70	0.96	5.49	1.49	4.04	0.58	3.80	0.78	4.26	0.23	8.62	2.67	1.77	132.79	362.19	27.25	2.73	3.10	4.87	38.07	0.219
28.94	4.91	18.74	3.89	1.03	6.30	0.90	5.57	1.22	2.78	0.59	4.23	0.61	4.76	0.33	6.88	2.82	2.72	121.37	339.45	26.67	2.80	3.43	4.69	40.70	0.207
28.09	4.28	16.85	3.83	0.91	2.73	0.65	4.06	0.91	2.73	0.52	2.06	0.45	5.41	0.29	8.34	2.37	1.97	117.07	338.85	25.75	2.89	3.65	4.55	38.22	0.198

31.29	4.34	16.16	4.28	0.94	5.16	0.82	5.16	1.29	3.65	0.56	3.65	0.69	4.90	0.29	6.58	2.71	2.19	124.46	336.44	26.98	2.76	3.26	4.68	37.29	0.20
2.79	0.37	1.82	0.62	0.16	1.57	0.14	7.09	0.23	0.53	0.04	0.93	0.14	0.95	0.04	0.24	0.21	0.38	6.62	18.85	0.73	0.19	0.33	0.30	3.19	0.01

30.15	4.31	17.73	4.57	1.02	4.56	0.93	5.62	1.14	3.73	0.53	3.30	0.61	5.14	0.24	8.84	3.09	2.06	110.55	322.30	26.34	2.92	3.17	4.20	37.96	0.189
31.29	4.44	19.50	4.80	0.94	4.70	0.97	6.02	1.36	3.88	0.61	3.98	0.67	5.06	0.36	8.15	2.95	2.49	116.38	336.67	27.86	2.89	2.99	4.16	40.48	0.190
31.10	4.36	18.78	5.93	1.10	4.90	0.87	6.22	1.29	4.20	0.66	4.43	0.71	5.08	0.29	8.73	2.65	2.20	114.48	337.31	27.43	2.95	2.38	4.17	39.82	0.194
33.04	4.44	20.66	6.43	1.38	6.35	1.08	5.72	1.13	3.77	0.55	4.46	0.53	5.42	0.28	9.08	2.94	2.45	111.22	291.37	27.10	2.62	2.39	4.10	34.88	0.178
30.61	4.07	16.81	4.49	1.11	6.97	0.88	6.56	1.15	3.50	0.57	4.36	0.62	5.91	0.30	6.89	2.91	1.78	111.81	336.20	26.39	3.00	3.16	3.94	41.59	0.193

31.24	4.32	19.96	5.24	1.11	5.24	0.91	5.83	1.22	3.91	0.64	4.10	0.63	5.24	0.29	6.68	2.88	2.20	112.89	324.97	27.45	2.87	2.82	4.11	36.95	0.19
1.10	0.15	1.10	0.89	0.16	0.73	0.14	6.28	0.10	0.26	0.06	0.49	0.07	0.27	0.04	5.35	0.20	0.29	2.46	19.55	0.79	0.15	0.40	0.10	2.63	0.01

32.21	4.50	16.85	5.96	1.31	5.73	0.82	6.28	1.39	4.17	0.58	4.33	0.72	5.21	0.37	8.21	3.10	2.62	109.46	346.96	29.31	3.18	2.79	3.74	41.33	0.185
32.53	4.89	20.88	6.36	0.83	5.47	1.02	5.25	1.09	3.77	0.47	2.81	0.61	5.78	0.26	8.31	3.15	2.10	110.00	300.07	25.19	2.73	2.33	4.37	33.85	0.183
32.12	4.26	20.21	5.32	1.19	5.17	0.91	5.81	1.21	4.15	0.59	3.88	0.66	5.85	0.33	9.16	2.90	2.10	114.70	356.36	27.40	3.10	2.88	4.19	40.25	0.176
31.38	4.25	19.22	5.32	1.16	5.36	0.89	5.69	1.22	3.93	0.54	3.88	0.68	5.34	0.37	9.38	2.72	2.11	114.04	346.07	27.29	3.03	2.80	4.18	36.49	0.181
32.16	3.92	21.71	3.43	0.79	4.74	0.96	6.06	1.25	3.56	0.68	5.00	0.55	7.78	0.22	8.61	2.42	1.87	121.76	376.44	30.66	3.09	4.50	3.97	42.65	0.175

32.04	4.37	26.13	5.28	1.02	6.30	0.92	5.81	1.23	3.91	0.57	3.94	0.64	5.99	0.31	6.73	2.87	2.16	114.01	345.00	27.97	3.03	3.05	4.99	39.51	0.18
0.25	0.35	1.24	1.12	0.28	0.77	0.07	0.38	0.11	0.26	0.05	0.61	0.06	1.94	0.07	0.52	0.31	0.25	4.63	20.06	2.09	0.18	0.84	0.24	3.40	0.01

32.36	4.23	18.29	5.35	1.31	3.81	0.85	5.38	1.23	3.24	0.58	5.26	0.47	7.93	0.25	9.45	2.90	2.35	106.21	336.49	29.19	3.17	3.05	3.64	39.37	0.167
33.63	4.78	20.49	4.76	1.37	7.37	0.96	5.83	1.45	4.43	0.79	4.50	0.55	5.54	0.26	9.89	2.71	2.54	110.35	320.23	26.74	2.90	3.42	4.13	36.81	0.167
33.69	4.63	23.01	5.66	1.32	5.84	1.01	5.52	1.31	4.15	0.53	4.94	0.72	5.91	0.36	9.79	3.01	2.14	115.40	365.80	28.43	3.17	2.75	4.05	41.86	0.175
33.93	4.75	20.79	6.93	0.89	4.99	1.03	5.84	1.57	3.77	0.43	4.78	0.67	5.37	0.24	13.14	3.03	2.43	115.07	388.53	29.03	3.38	2.34	3.96	44.04	0.176
33.30	4.79	19.87	5.97	0.96	6.01	0.96	5.52	1.29	3.91	0.47	3.89	0.74	5.74	0.45	10.04	2.89	2.73	113.55	327.82	27.19	2.89	2.62	4.18	36.49	0.174

33.42	4.68	20.49	5.73	1.11	5.60	0.97	6.44	1.37	3.90	0.58	4.87	0.63	5.92	0.32	10.46	2.91	2.44	112.12	347.77	28.13	3.10	2.82	3.99	39.71	0.17
0.65	0.25	1.71	0.80	0.28	1.32	0.08	0.13	0.14	0.45	0.15	0.52	0.12	1.16	0.09	1.81	0.13	0.22	3.86	28.59	1.10	0.21	0.45	0.21	3.25	0.00

23.60	3.99	12.99	3.33	0.64	3.23	0.47	3.82	0.68	2.14	0.30	2.46	0.41	5.67	0.47	7.74	2.97	2.48	129.71	232.33	24.91	1.80	1.47	5.29	28.52	0.26
2.63	0.40	1.98	0.21	0.14	7.39	0.13	0.91	0.07	0.39	0.09	0.50	0.11	0.84	0.07	1.60	0.59	0.23	4.00	19.30	0.43	0.79	0.28	0.14	1.86	0.02

26.61	3.70	16.31	4.89	0.68	4.95	0.72	4.77	1.25	2.85	0.37
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29.32	3.96	16.99	4.34	0.78	4.99	0.69	4.81	1.05	2.81	0.55	3.33	0.60	5.85	0.28	10.75	3.36	3.04	129.00	354.69	23.36	2.75	3.20	5.92	43.16	0.24
0.54	0.23	1.91	0.92	0.06	0.73	0.99	0.99	0.07	0.39	0.05	0.40	0.94	0.32	0.05	0.60	0.34	0.11	4.64	8.90	0.94	0.11	0.80	0.22	1.54	0.01
24.94	3.41	13.39	4.34	0.54	3.44	0.51	3.93	0.85	2.82	0.46	2.57	0.59	4.86	0.30	11.33	3.16	2.49	120.73	310.86	22.73	2.45	2.79	5.57	39.35	0.262
29.45	4.43	15.92	3.16	0.58	2.80	0.54	3.42	1.13	3.08	0.68	3.80	0.87	5.39	0.39	10.81	2.95	2.62	132.51	397.60	23.34	2.70	4.18	5.68	41.23	0.240
34.64	3.85	15.03	3.10	0.71	5.02	0.55	4.54	0.84	2.95	0.51	4.06	0.49	5.97	0.50	11.43	3.29	2.44	123.07	297.82	23.09	2.42	4.09	5.33	38.58	0.350
29.02	4.03	17.53	4.10	0.78	3.59	0.63	4.21	1.15	2.75	0.57	3.34	0.58	6.14	0.46	10.75	3.19	3.14	123.85	310.95	23.43	2.51	3.41	5.29	37.45	0.227
31.75	3.78	15.77	4.62	0.85	3.83	0.63	5.21	1.05	2.54	0.56	3.61	0.55	6.07	0.34	10.78	3.70	3.02	131.04	298.26	23.67	2.28	2.95	5.54	34.46	0.332

27.96	3.90	16.73	3.87	0.89	3.75	0.58	4.32	1.00	2.83	0.55	3.47	0.58	5.66	0.40	10.97	3.26	2.74	127.44	315.10	23.25	2.47	3.48	5.48	38.24	0.24
3.08	0.37	1.49	0.70	0.13	0.78	0.06	0.71	0.15	0.20	0.09	0.57	0.07	0.57	0.08	0.38	0.30	0.32	4.22	24.62	0.36	0.15	0.64	0.17	2.51	0.01
25.06	4.03	18.72	4.44	0.72	5.28	0.75	5.39	1.08	3.90	0.44	3.73	0.54	5.62	0.32	9.14	3.57	2.96	122.88	321.38	24.17	2.61	3.08	5.09	39.05	0.234
27.86	4.25	19.53	4.34	0.70	4.99	0.73	5.00	1.10	3.05	0.45	3.75	0.57	6.91	0.38	8.87	3.09	2.85	121.89	338.18	23.70	2.77	3.23	5.14	40.35	0.238
28.95	3.93	17.16	3.97	0.90	5.15	0.64	4.27	1.28	2.49	0.38	4.73	0.48	5.82	0.47	8.40	3.58	2.89	122.72	347.28	23.03	2.83	3.50	5.33	42.40	0.230
28.31	4.04	18.51	5.99	0.81	4.15	0.69	5.07	1.09	3.05	0.59	4.26	0.63	6.27	0.29	8.79	3.45	3.25	117.73	332.78	22.86	2.83	3.34	5.20	42.23	0.238

26.25	4.06	16.28	4.69	0.76	4.89	0.70	4.93	1.14	3.12	0.47	4.12	0.56	6.08	0.36	9.80	3.42	2.99	121.33	334.36	23.39	2.76	3.64	5.19	41.91	0.235
0.50	0.13	0.75	0.90	0.09	0.61	0.05	0.47	0.09	0.69	0.09	0.47	0.08	0.44	0.08	0.61	0.22	0.19	2.48	16.82	0.97	0.10	0.80	0.10	1.60	0.00
26.34	3.89	14.89	3.04	0.72	3.74	0.62	4.19	0.99	2.94	0.48	4.39	0.42	5.71	0.29	8.72	3.26	2.85	134.35	330.91	23.36	2.46	3.90	5.75	41.43	0.268
26.74	3.64	15.78	3.29	0.52	3.09	0.71	3.63	1.04	3.04	0.48	3.85	0.77	4.97	0.22	8.91	3.09	2.98	129.45	346.13	23.76	2.83	3.68	5.45	45.91	0.262
28.01	4.26	18.39	4.03	0.74	5.10	0.69	4.75	1.06	2.51	0.48	3.32	0.49	5.89	0.25	9.14	3.15	2.79	125.13	329.97	24.46	2.57	3.29	5.12	39.29	0.239
27.36	3.72	16.64	4.00	0.74	4.34	0.73	4.53	1.09	2.80	0.58	4.05	0.58	6.95	0.37	8.94	3.69	2.94	123.79	333.97	23.69	2.70	3.28	5.23	42.03	0.242
26.77	3.70	14.68	3.77	0.65	4.44	0.73	4.73	0.87	2.78	0.36	3.15	0.50	5.87	0.33	9.15	3.09	2.60	126.95	321.00	22.76	2.63	3.31	5.58	40.91	0.264

27.04	3.64	16.08	3.62	0.67	4.14	0.68	4.37	1.91	2.81	0.47	3.75	0.55	5.99	0.29	9.97	3.26	2.98	127.93	334.69	23.61	2.62	3.49	5.42	41.91	0.26
0.65	0.25	1.51	0.44	0.09	0.76	0.07	0.47	0.09	0.30	0.08	0.51	0.13	0.56	0.06	0.18	0.25	0.19	4.17	18.57	0.62	0.15	0.28	0.26	2.63	0.01
30.19	3.87	16.68	3.95	0.59	5.08	0.62	4.81	0.97	3.81	0.53	3.52	0.81	5.94	0.37	9.43	3.61	2.68	133.67	333.05	23.96	2.49	3.44	5.58	39.02	0.238
28.25	3.90	14.76	4.46	0.63	3.68	0.73	4.53	1.12	3.33	0.60	2.95	0.49	5.09	0.38	9.45	3.65	2.90	128.21	331.60	23.20	2.69	3.06	5.53	39.91	0.237
27.07	3.48	15.23	2.59	0.59	3.73	0.59	4.16	0.86	2.26	0.33	3.24	0.29	5.42	0.30	12.42	3.07	2.31	122.27	328.60	21.04	2.89	4.96	5.81	39.56	0.262
26.72	3.71	14.48	3.43	0.52	4.48	0.60	4.32	1.08	2.61	0.59	4.20	0.65	5.57	0.48	8.00	3.01	3.02	130.36	308.88	23.14	2.37	3.80	5.63	38.57	0.248
29.40	4.11	17.12	4.15	0.50	3.80	0.67	5.07	1.21	3.74	0.49	3.36	0.41	6.26	0.43	9.74	3.54	3.54	130.07	359.30	24.06	2.75	3.32	5.41	41.64	0.294

28.32	3.81	16.65	3.71	0.57	4.11	0.64	4.58	1.06	3.15	0.51	3.45	0.49	5.66	0.39	9.81	3.38	2.99	126.82	332.07	23.68	2.58	3.75	5.59	39.74	0.24
1.49	0.23	1.18	0.73	0.05	0.65	0.07	0.36	0.13	0.69	0.11	0.47	0.15	0.45	0.07	1.61	0.31	0.45	4.21	17.60	1.22	0.15	0.75	0.15	1.31	0.01
29.68	3.80	17.59	3.75	0.85	3.84	0.69	4.79	0.98	3.41	0.42	3.70	0.48	5.98	0.34	9.85	3.63	3.29	129.85	331.26	22.66	2.65	3.59	5.73	38.75	0.238
30.44	4.27	17.55	4.29	0.49	3.99	0.72	4.91	0.96	2.96	0.45	3.80	0.64	5.62	0.37	9.01	3.40	3.28	133.25	394.39	23.66	2.56	3.33	5.63	43.38	0.235
28.34	3.64	16.54	4.62	0.96	3.73	0.74	4.82	1.06	3.19	0.40	2.75	0.71	5.89	0.21	9.48	3.07	3.00	125.60	315.61	24.09	2.51	2.89	5.21	35.99	0.230
31.59	4.30	18.65	4.04	0.71	3.71	0.62	4.12	1.00	3.39	0.55	3.26	0.51	6.49	0.36	9.10	3.45	3.03	132.12	328.35	24.70	2.47	3.51	5.26	35.98	0.226
30.69	4.17	17.50	3.99	0.96	5.09	0.70	5.38	1.13	3.78	0.50	3.22	0.53	5.15	0.38	9.89	3.51	2.95	135.79	352.94	24.16	2.60	3.35	5.62	40.29	0.240

30.19	4.04	17.16	4.18	0.79	4.97	0.75	4.80	1.03	3.34	0.47	3.32	0.57	5.91	0.31	9.46	3.41	3.20	131.32	344.11	23.96	2.62	3.33	5.91	38.88	0.235
1.23	0.30	0.92	0.41	0.20	0.58	0.05	0.45	0.07	0.29	0.06	0.37	0.10	0.45	0.07	0.41	0.27	0.22	3.85	31.22	0.76	0.20	0.27	0.22	3.12	0.00
30.26	4.38	17.10	4.10	0.62	4.40	0.79	3.99	0.91	3.86	0.47	2.86	0.69	5.58	0.28	10.02	3.54	2.76	134.31	347.06	23.47	2.58	3.29	5.72	41.27	0.239
29.26	3.78	15.95	4.56	0.69	5.52	0.72	4.21	1.16	4.49	0.63	3.73	0.69	5.34	0.25	8.92	3.52	2.90	134.13	349.62	24.06	2.61	3.01	5.58	41.81	0.234
29.15	3.98	18.12	3.56	0.62	4.97	0.61	4.23	0.84	4.00	0.48	3.00	0.71	5.98	0.34	10.95	3.65	3.30	136.31	370.51	24.53	2.72	3.88	5.66	42.90	0.333
32.31	3.71	18.44	3.60	0.83	3.41	0.81	5.84	1.04	3.78	0.30	4.31	0.48	6.54	0.48	9.38	3.21	2.65	134.25	359.62	24.52	2.68	3.82	5.48	42.50	0.235
30.66	4.02	16.03	4.56	0.87	4.65	0.79	4.77	1.12	3.65	0.45	3.89	0.46	6.35	0.31	9.73	3.97	3.22	129.40	349.21	23.77	2.70	3.06	5.44	43.10	0.230

30.33	3.86	17.13	4.97	0.72	4.99	0.74	4.61	1.02	3.95	0.46	3.56	0.60	5.76	0.31	9.62	3.58	2.96	133.68	355.28	24.97	2.66	3.41	5.56	42.32	0.235
1.28	0.26	1.15	0.49	0.12	0.78	0.09	0.75	0.14	0.33	0.12	0.62	0.12	0.64	0.10	0.48	0.27	0.28	2.56	9.83	0.46	0.06	0.41	0.11	0.77	0.00

28.06 4.12 18.67 4.92 1.80 3.53 0.60 5.16 0.81 3.23 0.53 5.08 0.53 5.04 0.20 6.18 2.23 2.20 120.71 344.62 31.92 2.86 2.66 3.78 37.06 0.189
28.88 5.00 19.40 3.91 0.99 6.88 0.77 5.86 1.47 3.84 0.49 4.50 0.60 4.93 0.24 6.18 1.99 1.36 113.48 338.26 30.31 2.98 3.64 3.74 35.25 0.174
30.46 4.44 17.50 5.61 1.41 5.04 0.92 5.78 1.36 3.51 0.65 5.07 0.60 4.46 0.38 6.18 2.32 2.03 120.91 364.65 27.87 2.71 2.37 4.70 35.57 0.194
31.84 4.03 18.46 4.57 0.86 6.51 0.91 5.71 1.28 4.16 0.52 4.28 0.68 4.69 0.28 6.18 2.68 2.67 128.70 346.13 30.13 2.71 3.07 4.27 34.78 0.177
31.62 4.77 17.65 5.22 1.30 5.72 0.78 6.01 1.41 4.18 0.46 4.79 0.57 4.60 0.27 12.45 2.59 2.26 123.64 361.38 29.70 3.17 2.68 4.16 40.01 0.177

29.77 6.47 18.34 4.84 1.29 5.53 0.80 5.76 1.27 2.79 0.53 4.54 0.60 4.74 0.27 10.20 2.36 2.16 122.49 355.61 29.98 2.86 2.86 4.13 36.55 0.16
2.20 0.42 0.78 0.65 0.34 1.93 0.13 0.22 0.26 0.41 0.07 0.65 0.05 0.34 0.07 2.44 0.26 0.48 6.90 20.88 1.45 0.19 0.52 0.39 2.11 0.01
29.71 3.60 18.40 4.01 0.83 5.69 0.87 6.82 1.24 3.00 0.55 3.49 0.65 4.25 0.30 7.01 2.75 2.26 101.50 351.51 32.29 3.46 3.87 3.14 41.01 0.159
30.00 3.72 16.38 4.91 0.90 4.70 0.91 4.93 1.29 3.78 0.58 3.89 0.62 5.01 0.13 5.07 2.34 1.44 114.25 354.37 31.64 3.10 2.68 3.61 40.08 0.188
27.79 4.15 15.51 4.35 1.30 5.15 0.79 5.30 1.43 2.92 0.58 3.19 0.80 4.96 0.21 7.14 2.16 2.02 129.22 377.69 29.63 2.62 2.73 4.26 40.40 0.207
26.64 4.25 18.19 3.48 0.68 4.50 0.70 6.01 0.95 2.70 0.38 4.16 0.48 3.44 0.17 6.72 2.19 1.77 112.18 324.00 29.30 2.89 3.86 3.83 36.34 0.183
26.28 3.58 15.11 3.14 1.04 4.71 0.89 4.72 1.06 3.71 0.57 3.32 0.59 4.66 0.28 5.88 2.17 1.65 116.97 360.31 29.02 3.10 4.02 4.52 40.70 0.195

28.08 3.86 16.92 3.98 0.97 4.96 0.81 5.56 1.23 3.22 0.53 3.41 0.89 4.47 0.22 6.44 2.30 1.83 115.22 365.38 30.50 3.10 3.43 3.79 39.70 0.19
1.71 0.32 1.89 0.70 0.27 0.48 0.68 0.66 0.19 0.49 0.09 0.41 0.06 0.65 0.07 0.72 0.25 0.32 10.10 20.57 1.37 0.23 0.67 0.45 1.91 0.02

21.20 3.17 13.07 5.59 0.83 3.83 0.76 5.29 1.01 3.02 0.73 3.32 0.38 3.24 0.17 6.41 1.85 1.94 126.90 311.30 29.89 2.42 1.82 4.31 34.56 0.250
28.92 3.90 17.03 4.41 0.91 4.47 0.84 4.12 1.04 3.19 0.58 3.78 0.55 3.85 0.23 9.30 2.34 2.13 113.40 309.99 28.52 2.71 2.84 3.98 35.46 0.203
26.71 4.38 16.14 5.80 0.96 6.05 0.56 4.78 0.98 2.55 0.26 4.66 0.89 2.57 0.16 7.31 1.79 2.05 116.01 326.53 27.99 2.81 2.63 4.14 39.21 0.216
26.86 4.10 15.75 4.19 1.18 5.59 0.81 5.31 0.97 4.03 0.59 3.92 0.51 4.78 0.26 6.83 2.54 2.07 128.51 355.98 31.65 2.78 2.81 4.98 37.60 0.217

25.95 3.89 15.50 5.00 0.97 4.99 0.74 4.88 1.00 3.20 0.54 3.92 0.51 3.62 0.20 6.46 2.13 2.05 121.71 325.45 29.52 2.68 2.38 4.12 36.71 0.22
3.32 0.52 1.70 0.81 0.15 1.02 0.12 0.56 0.03 0.62 0.20 0.56 0.09 0.94 0.05 0.85 0.37 0.08 8.15 22.63 1.64 0.18 0.52 0.14 2.10 0.02

30.41 3.88 20.29 4.97 1.04 5.60 0.86 6.66 1.30 3.65 0.47 4.17 0.87 5.01 0.29 6.47 2.68 2.69 130.37 342.11 30.45 2.62 2.63 4.28 35.40 0.232
28.68 4.13 19.99 5.08 0.84 3.76 0.86 5.54 1.23 3.75 0.51 4.09 0.53 4.81 0.29 7.82 2.47 2.22 130.03 375.07 30.70 2.91 2.52 4.54 39.70 0.234
29.64 4.55 20.70 5.80 0.88 4.91 0.79 6.02 1.30 3.84 0.57 3.77 0.68 5.38 0.23 7.51 2.51 2.47 124.57 350.96 30.09 2.82 2.30 4.14 37.38 0.225
30.21 4.31 20.47 4.91 1.11 5.59 0.92 5.62 1.30 3.73 0.56 3.99 0.65 5.17 0.18 7.63 2.69 2.18 125.68 355.54 32.66 2.60 2.73 3.65 34.36 0.223
27.73 4.00 19.71 5.00 1.16 4.71 0.77 4.34 1.20 3.31 0.49 3.61 0.72 4.41 0.29 7.66 2.44 2.12 118.62 366.89 30.07 3.09 2.72 3.95 36.90 0.206
29.34 4.18 19.23 5.15 1.00 4.81 0.84 5.69 1.26 3.66 0.52 3.83 0.69 4.95 0.26 7.82 2.65 2.34 126.85 365.98 30.78 2.91 2.68 4.49 36.76 0.222
1.00 0.23 0.67 0.33 0.13 0.75 0.05 0.71 0.04 0.18 0.04 0.21 0.11 0.33 0.05 0.34 0.10 0.21 4.29 18.02 0.56 0.18 0.18 0.17 1.62 0.01

30.66 4.17 16.31 5.35 0.77 4.91 0.77 6.41 1.70 3.49 0.72 3.27 0.57 4.75 0.12 6.15 2.30 1.86 115.08 313.58 31.32 2.73 2.59 3.67 34.73 0.179
26.86 3.72 17.10 4.17 1.01 4.97 0.62 6.47 1.09 3.06 0.28 3.34 0.49 4.72 0.25 7.05 2.38 2.06 120.51 339.35 32.80 2.52 2.94 3.67 36.77 0.196
29.79 3.98 16.86 4.38 1.34 4.71 0.76 5.27 0.93 3.45 0.54 4.31 0.83 4.18 0.24 6.40 2.45 2.33 111.53 361.32 30.72 3.24 3.29 3.63 41.09 0.173
29.18 4.52 16.18 5.42 0.76 4.64 0.80 6.21 1.16 3.35 0.46 3.89 0.55 4.94 0.43 6.61 2.35 2.28 117.79 341.94 30.61 2.90 2.48 3.62 36.86 0.165
29.66 4.23 18.52 4.62 0.88 4.74 0.84 5.46 1.18 4.43 0.56 4.05 0.89 5.75 0.30 9.08 2.59 2.43 111.89 327.50 30.06 2.93 2.97 3.72 41.93 0.181

29.21 4.13 17.00 4.78 0.86 4.56 0.76 5.88 1.01 3.56 0.53 3.73 0.88 4.87 0.27 6.26 2.41 2.19 115.36 336.74 31.14 2.92 2.89 3.79 38.64 0.18
1.42 0.30 0.94 0.67 0.24 0.30 0.98 0.57 0.20 0.63 0.13 0.45 0.07 0.57 0.11 5.76 0.11 0.23 3.85 17.78 1.03 0.19 0.34 0.07 2.88 0.01

29.23 4.20 17.54 5.22 1.00 4.26 0.73 5.80 1.13 4.15 0.62 3.18 0.68 5.33 0.33 7.30 2.61 2.18 123.74 375.05 31.69 3.03 2.70 3.91 38.95 0.177
30.55 4.24 18.79 5.40 1.18 3.30 0.74 4.15 1.38 3.65 0.47 4.10 0.70 5.89 0.29 8.75 2.47 2.14 126.76 367.69 30.80 2.82 2.65 4.12 38.43 0.181
28.21 3.67 17.57 4.64 0.92 4.19 0.83 5.24 1.22 3.56 0.47 3.67 0.58 4.58 0.31 7.21 2.34 1.97 120.70 370.53 31.53 3.07 3.09 3.63 40.68 0.174
27.23 3.96 18.17 3.51 1.11 4.24 0.67 4.82 1.21 3.63 0.51 4.47 0.46 4.50 0.35 7.34 2.41 2.08 128.81 406.42 32.70 3.16 3.75 3.64 43.01 0.189
27.99 3.98 18.01 3.80 1.16 4.83 0.75 5.54 1.17 3.81 0.53 2.41 0.59 4.35 0.33 8.25 2.37 1.90 131.40 364.46 31.40 2.77 1.40 4.18 38.53 0.193

28.64 4.03 18.82 4.51 1.07 4.10 0.74 5.11 1.22 3.74 0.52 3.66 0.60 4.89 0.32 7.79 2.44 2.05 126.28 374.89 31.63 2.97 3.16 3.99 39.92 0.18
1.28 0.18 0.81 0.94 0.11 0.47 0.06 0.65 0.09 0.25 0.06 0.81 0.10 0.59 0.02 0.68 0.10 0.11 4.20 16.75 0.69 0.16 0.50 0.15 1.95 0.01

29.08 4.30 18.30 4.42 1.18 4.20 0.81 7.23 1.38 3.52 0.43 4.08 0.86 5.49 0.35 2.69 2.04 118.04 322.48 30.01 2.73 3.30 3.88 35.33 0.178
21.80 3.84 24.17 4.68 1.16 5.06 1.12 5.88 1.27 4.62 0.63 3.49 0.83 4.07 0.32 2.78 2.40 119.35 360.54 26.63 3.02 2.99 4.17 38.35 0.178
29.17 4.38 20.00 5.80 1.23 4.49 0.80 4.70 1.13 3.46 0.68 3.95 0.44 5.51 0.32 2.73 1.89 122.95 339.72 29.93 2.76 2.42 4.11 36.91 0.191
31.73 4.86 19.23 4.04 0.89 5.04 0.86 5.65 1.28 4.01 0.62 3.47 0.58 4.85 0.29 2.69 1.99 124.77 346.19 27.94 2.79 1.48 4.47 36.99 0.185
30.28 4.53 19.56 4.13 1.05 5.60 0.71 6.24 1.22 2.94 0.42 3.38 0.61 5.05 0.37 2.22 1.91 126.49 358.10 29.25 2.83 3.19 4.32 36.85 0.197

30.99 4.38 29.25 4.81 1.12 5.26 0.91 5.84 1.25 3.71 0.56 3.87 0.62 5.17 0.33 #DIV0! 2.66 2.05 122.32 346.81 29.27 2.83 3.08 4.18 36.88 0.19
1.19 0.37 2.36 0.64 0.10 0.81 0.21 0.82 0.09 0.69 0.12 0.32 0.18 0.30 0.03 #DIV0! 0.26 0.21 2.57 15.44 1.05 0.11 0.41 0.22 1.57 0.01
29.27 4.17 18.37 4.45 1.12 6.75 0.81 5.27 1.16 3.32 0.41 3.61 0.75 4.38 0.30 12.84 2.39 1.95 128.13 329.61 29.52 2.59 2.95 4.34 34.22 0.206
29.91 4.49 18.88 5.06 0.84 6.44 1.01 6.70 1.23 3.77 0.57 4.21 0.57 4.44 0.24 2.74 2.01 127.20 347.61 29.69 2.73 2.80 4.29 37.62 0.198
28.36 3.59 19.65 5.89 1.16 3.54 0.88 5.09 1.05 3.52 0.59 3.14 0.35 5.55 0.36 15.72 2.60 2.04 116.24 314.61 28.80 2.71 2.37 4.04 34.22 0.187

29.18 4.08 18.97 5.13 1.07 5.58 0.90 5.69 1.15 3.54 0.53 3.65 0.56 4.79 0.30 14.28 2.55 2.00 123.85 327.61 29.33 2.85 2.81 4.22 35.35 0.20
0.78 0.45 0.65 0.73 0.12 1.77 0.10 0.88 0.09 0.23 0.10 0.53 0.20 0.66 0.06 2.04 0.22 0.04 6.61 17.58 0.47 0.13 0.24 0.16 1.96 0.01

30.17 4.41 20.08 4.55 1.36 5.28 0.77 5.97 1.42 4.43 0.42 3.66 0.58 5.04 0.30 8.00 2.37 2.23 127.10 373.01 29.85 2.83 2.99 4.26 37.72 0.189
29.81 4.55 18.18 4.26 1.14 5.21 0.81 5.53 1.27 3.73 0.59 3.44 0.59 4.81 0.25 6.74 2.75 2.01 120.97 360.93 30.69 2.88 2.80 3.94 37.73 0.180
28.44 4.69 18.28 3.62 1.24 6.01 0.69 4.70 1.46 4.28 0.66 3.27 0.59 4.40 0.29 2.36 2.27 118.51 389.02 31.65 3.11 3.73 3.74 37.64 0.180
30.07 4.84 21.59 5.91 1.62 5.78 1.11 7.23 1.23 3.69 0.57 4.85 0.74 4.78 0.22 2.28 2.55 116.74 359.41 28.93 3.08 2.47 4.05 37.90 0.176

29.57 4.62 18.93 4.64 1.34 5.67 0.84 5.96 1.35 4.03 0.56 3.81 0.62 4.76 0.27 8.00 2.34 2.29 122.83 372.46 30.66 3.03 3.05 4.01 38.61 0.19
0.80 0.18 1.62 0.90 0.21 0.39 0.19 1.03 0.11 0.38 0.10 0.71 0.08 0.27 0.04 0.05 0.19 6.10 12.06 1.61 0.08 0.52 0.21 1.73 0.01

31.07 4.46 18.25 4.32 1.20 6.22 0.71 6.10 1.62 3.64 0.48 3.06 0.68 4.90 0.28 9.55 2.46 2.08 125.79 341.32 30.19 2.71 3.09 4.17 36.78 0.191
30.13 4.66 19.19 5.05 1.02 5.43 0.81 6.27 1.26 3.87 0.50 4.89 0.57 4.65 0.25 6.74 2.75 2.01 120.97 360.93 30.69 2.88 2.80 3.94 37.73 0.180
31.67 4.63 19.70 4.70 0.80 6.49 0.86 6.11 1.20 3.18 0.63 4.20 0.47 4.23 0.17 9.43 2.57 2.17 120.55 316.39 29.22 2.62 3.08 4.13 34.24 0.177
30.58 4.32 18.83 4.05 1.19 5.87 0.89 5.62 1.21 3.38 0.56 3.91 0.59 5.86 0.17 6.79 1.92 2.68 111.60 346.42 29.63 3.11 3.73 3.75 36.22 0.189
30.87 4.49 18.88 5.47 1.30 5.61 0.91 4.90 1.21 3.78 0.64 3.28 0.61 4.28 0.19 10.46 2.28 1.95 120.12 340.63 30.42 2.84 2.61 3.95 34.09 0.178

30.86	4.49	18.93	4.72	1.12	6.72	0.94	5.89	1.39	3.97	0.96	3.81	0.98	4.78	0.21	9.40	2.39	2.18	119.79	341.14	36.03	2.86	3.96	3.99	35.81	0.18
0.87	0.12	0.86	0.97	0.16	0.32	0.98	0.66	0.18	0.29	0.07	0.44	0.98	0.99	0.05	0.70	0.30	0.23	0.17	16.08	0.60	0.30	0.42	0.16	1.60	0.01
26.02	4.44	16.26	4.46	0.99	3.81	0.83	4.94	0.82	4.42	0.52	3.32	0.75	5.89	0.15	0.05	2.19	2.31	132.36	379.03	29.03	2.86	2.83	4.56	36.98	0.203
31.30	4.14	19.46	4.47	1.50	6.66	0.78	6.44	1.22	3.78	0.50	3.88	0.57	4.20	0.26	10.16	2.47	2.74	126.77	334.57	29.10	2.84	3.11	4.36	34.37	0.184
31.36	4.79	21.10	5.69	0.84	5.44	0.71	6.36	1.14	3.25	0.42	4.10	0.65	5.47	0.29	9.78	2.44	2.37	134.31	391.54	29.03	2.84	3.32	4.63	37.68	0.185
30.29	4.65	19.04	5.95	0.85	4.30	0.95	5.89	1.12	3.95	0.49	3.82	0.60	4.39	0.21	9.85	2.49	2.81	124.60	339.65	28.90	2.73	2.33	4.31	36.12	0.185
30.23	3.97	18.21	5.59	1.12	5.80	0.80	5.63	1.33	4.12	0.45	4.12	0.62	4.48	0.31	8.65	2.58	2.47	129.51	361.82	30.04	2.79	2.38	4.23	37.25	0.193

29.78	4.38	18.89	5.23	1.06	5.02	0.81	5.83	1.15	3.99	0.48	3.85	0.64	4.98	0.24	9.09	2.47	2.89	129.51	359.28	29.34	2.77	2.99	4.42	36.36	0.19
2.19	0.33	1.79	0.71	0.36	0.91	0.99	0.66	0.20	0.44	0.04	0.32	0.07	0.75	0.06	0.88	0.19	0.18	3.86	21.70	0.73	0.09	0.36	0.17	1.50	0.01
30.26	4.65	20.64	4.51	1.13	5.43	0.74	5.64	1.28	3.26	0.62	4.05	0.86	4.42	0.19	8.26	2.36	2.09	125.45	365.54	29.23	2.91	3.07	4.29	38.01	0.187
31.85	4.10	20.16	6.19	0.98	6.25	0.82	6.58	1.41	2.61	0.66	3.66	0.43	4.97	0.24	7.73	2.61	2.41	126.73	403.85	28.82	3.19	2.28	4.43	39.85	0.183
30.63	4.70	21.39	4.75	1.25	6.85	0.88	6.22	1.13	3.33	0.61	3.53	0.69	4.78	0.32	7.87	2.72	2.16	118.38	346.11	30.06	2.92	3.06	3.62	36.99	0.178

30.91	4.48	20.73	5.16	1.12	5.84	0.81	6.14	1.27	3.04	0.63	3.76	0.66	4.72	0.25	7.89	2.57	2.22	123.62	371.83	29.60	3.01	2.86	4.18	38.28	0.18
0.83	0.34	0.62	0.91	0.13	0.41	0.06	0.47	0.14	0.40	0.03	0.27	0.22	0.27	0.07	0.32	0.19	0.17	4.80	29.38	1.22	0.15	0.48	0.32	1.48	0.00
30.56	4.29	18.67	5.43	1.29	5.80	0.84	5.11	1.26	3.68	0.43	3.73	0.67	4.80	0.31	6.14	2.77	2.31	118.14	324.66	30.86	2.75	2.70	3.85	34.81	0.175
27.25	3.73	20.01	4.61	1.07	4.52	0.81	5.71	1.06	5.14	0.55	4.27	0.80	4.05	0.28	9.26	2.64	2.42	128.13	360.35	28.29	2.81	2.88	4.63	42.15	0.208
28.39	4.52	18.68	4.88	1.28	4.96	0.84	5.05	1.07	3.64	0.57	4.27	0.89	4.39	0.29	9.31	2.60	1.85	124.83	342.73	29.72	2.75	2.75	4.20	37.27	0.199
26.07	3.68	16.76	3.96	0.87	5.01	0.88	5.20	1.09	3.18	0.66	3.86	0.42	5.13	0.23	9.38	1.84	2.08	109.30	349.95	27.62	3.12	3.06	3.89	38.42	0.182
27.81	3.35	18.21	4.17	1.02	3.40	0.66	6.67	1.18	4.32	0.68	2.00	0.78	3.40	0.29	6.47	2.39	1.73	123.84	351.43	31.77	2.84	3.01	3.90	38.54	0.204

28.13	3.91	18.47	4.87	1.10	4.34	0.81	5.55	1.13	3.97	0.56	3.82	0.61	4.36	0.28	6.91	2.43	2.07	120.85	344.02	29.81	2.85	2.94	4.09	38.24	0.19
1.50	0.48	1.17	0.57	0.18	0.71	0.05	0.68	0.09	0.77	0.09	0.94	0.13	0.67	0.03	1.25	0.36	0.29	7.29	19.30	1.70	0.15	0.37	0.25	2.65	0.01
29.29	4.31	19.96	4.39	0.59	4.07	0.82	6.07	1.27	3.53	0.42	5.43	0.46	5.09	0.28	10.66	2.63	2.27	125.60	388.99	28.73	2.83	2.80	4.10	39.63	0.197
31.90	4.43	19.71	4.17	0.88	5.86	0.66	5.70	1.14	3.60	0.72	3.56	0.84	3.68	0.30	6.46	2.89	2.05	117.17	347.27	30.98	2.86	3.45	3.78	36.89	0.181
28.71	4.24	20.53	4.06	0.65	5.07	0.89	5.46	1.24	3.35	0.46	4.38	0.52	4.63	0.21	8.80	2.88	2.17	118.75	379.68	30.41	3.20	3.51	3.91	41.40	0.182
27.35	4.08	19.65	5.07	1.13	5.65	0.85	5.04	1.32	3.47	0.60	3.55	0.70	5.07	0.20	6.06	2.45	2.09	123.34	385.46	31.21	3.16	2.81	3.65	40.94	0.198
29.31	4.48	19.92	5.46	0.82	4.30	0.59	6.18	1.40	4.11	0.44	4.44	0.57	4.56	0.22	6.52	2.35	1.95	121.46	337.48	31.25	2.78	2.54	3.89	36.68	0.187

29.29	4.31	19.84	4.63	0.85	5.07	0.78	5.97	1.27	3.61	0.53	4.35	0.57	4.61	0.25	6.98	2.64	2.10	121.53	392.49	30.91	2.98	3.02	3.93	38.98	0.19
1.65	0.16	0.53	0.61	0.19	0.82	0.16	0.74	0.10	0.29	0.13	0.93	0.11	0.57	0.04	0.89	0.24	0.12	3.84	21.77	0.35	0.19	0.49	0.13	2.20	0.01
31.64	4.14	18.98	4.21	1.12	5.04	0.92	4.81	1.28	4.08	0.72	4.31	0.71	4.73	0.32	9.42	2.78	2.37	119.44	347.59	28.14	2.91	2.47	4.24	36.37	0.179
29.13	3.93	19.38	4.62	1.16	4.96	0.77	5.64	1.07	3.92	0.46	4.83	0.45	5.32	0.31	6.86	2.63	2.23	128.63	389.19	28.09	2.86	2.80	4.58	38.73	0.202
32.38	4.20	18.66	4.70	0.72	5.99	0.74	5.80	1.13	3.61	0.37	4.29	0.44	4.27	0.30	8.70	2.32	2.43	118.28	389.56	27.65	3.10	3.05	4.28	39.44	0.182
31.21	4.52	20.20	3.39	1.03	6.26	0.82	6.04	1.15	3.59	0.68	5.45	0.60	4.30	0.14	6.15	2.56	2.54	122.24	391.64	29.62	3.12	4.13	4.13	41.50	0.187
29.22	4.44	19.62	4.99	1.56	4.81	0.90	5.39	1.30	3.70	0.54	3.52	0.81	5.34	0.26	7.52	2.30	2.25	128.33	358.71	30.68	2.80	2.68	4.19	36.88	0.197

30.71	4.04	19.97	4.38	1.12	5.63	0.83	5.92	1.19	3.76	0.55	4.48	0.56	4.79	0.27	6.63	2.66	2.36	123.36	344.42	28.83	2.96	3.22	4.28	38.18	0.18
1.50	0.53	1.84	0.62	0.30	0.75	0.08	0.83	0.12	0.23	0.15	0.72	0.11	0.52	0.08	0.72	0.20	0.13	4.85	12.36	1.26	0.14	0.89	0.17	2.22	0.01
22.31	3.71	13.03	2.88	1.01	4.29	0.83	4.32	1.04	2.18	0.38	2.99	0.44	4.51	0.32	6.31	1.93	2.13	116.63	346.84	31.34	2.98	3.93	3.72	41.36	0.232
29.03	4.35	17.78	4.63	1.19	4.83	0.82	5.45	1.20	2.84	0.58	3.62	0.84	4.84	0.24	6.15	2.68	2.33	120.62	387.02	30.12	3.04	3.14	4.00	37.73	0.185
28.07	4.01	16.21	5.06	0.89	5.78	0.98	5.65	1.18	3.00	0.51	3.79	0.68	5.48	0.30	8.99	2.26	2.09	121.68	352.91	29.43	2.90	2.78	4.13	36.93	0.187
29.84	4.51	18.00	4.37	1.02	6.04	0.86	6.09	1.42	4.17	0.50	3.07	0.70	4.72	0.19	7.81	2.65	2.30	132.87	315.77	30.16	2.37	2.88	4.41	33.39	0.202
30.18	4.37	19.23	5.58	0.79	4.04	0.77	6.34	1.14	4.00	0.55	4.35	0.65	4.93	0.26	9.21	2.73	2.21	123.58	370.21	29.38	3.00	2.47	4.21	39.47	0.191

28.01	4.19	16.85	4.45	0.86	4.73	0.85	5.75	1.20	3.24	0.50	3.86	0.60	4.89	0.26	6.11	2.41	2.21	123.06	350.56	30.08	2.86	3.06	4.10	37.78	0.20
3.22	0.32	2.39	1.07	0.15	0.68	0.07	1.00	0.14	0.84	0.09	0.56	0.11	0.36	0.05	1.15	0.32	0.10	6.10	21.72	0.80	0.28	0.58	0.28	2.98	0.02
30.94	4.34	19.71	6.14	0.75	3.78	0.82	4.99	1.25	4.18	0.52	4.45	0.72	5.62	0.39	7.09	2.91	2.00	115.28	366.13	31.64	3.18	2.45	3.64	39.12	0.167
31.97	3.69	19.09	4.63	1.17	3.32	0.94	5.27	1.28	3.53	0.31	5.02	0.60	5.17	0.28	9.56	2.75	2.63	126.14	385.62	27.87	3.06	2.98	4.53	39.28	0.182
31.73	4.48	19.56	4.89	0.85	4.78	0.85	5.07	1.29	5.16	0.86	4.09	0.95	4.00	0.24	7.03	2.49	2.14	120.23	379.66	30.01	3.16	3.05	3.78	37.78	0.189
30.01	4.56	19.40	5.66	0.83	4.60	0.85	5.11	1.14	3.58	0.63	4.30	0.64	5.94	0.29	6.07	2.58	2.40	117.20	334.30	30.26	2.85	3.10	3.87	36.07	0.178
30.32	4.60	20.66	4.89	1.15	5.80	0.97	6.28	1.31	3.08	0.76	4.31	0.89	4.76	0.31	6.13	2.68	2.28	124.31	370.91	31.46	2.86	2.88	3.85	38.81	0.179

31.00	4.39	16.89	5.62	0.97	4.46	0.88	5.34	1.25	3.90	0.61	4.44	0.62	5.04	0.30	6.36	2.68	2.29	120.63	367.32	30.85	3.05	2.89	3.95	38.17	0.17
0.65	0.34	0.59	0.64	0.19	0.96	0.07	0.63	0.06	0.87	0.21	0.35	0.07	0.69	0.06	1.20	0.16	0.24	4.60	19.95	1.65	0.13	0.26	0.34	1.50	0.01
30.91	4.94	17.93	4.19	1.21	5.51	0.77	6.17	1.16	4.10	0.54	5.14	0.52	5.05	0.20	7.23	2.67	1.87	115.67	368.47	31.77	2.29	3.32	3.92	38.23	0.181
31.00	4.91	17.97	5.62	1.30	5.57	0.86	6.29	1.16	3.72	0.70	4.10	0.83	5.67	0.30	9.40	2.73	2.17	124.53	367.67	29.56	3.21	2.72	3.88	38.76	0.164
31.01	4.76	17.98	5.62	1.27	5.57	0.79	6.29	1.16	3.72	0.70	4.10	0.83	5.67	0.30	9.40	2.73	2.17	124.53	367.67	29.56	3.21	2.72	3.88	38.76	0.164
31.72	4.16	20.29	4.87	1.15	4.11	0.96	4.79	1.30	3.59	0.65	4.37	0.73	5.15	0.19	6.78	2.75	2.48	120.58	357.72	29.74	2.83	2.80	4.63	35.67	0.175
32.25	4.73	21.48	4.87	1.14	5.72	1.02	6.34	1.15	3.91	0.71	4.73	0.89	5.73	0.37	8.48	2.78	2.48	122.09	315.25	29.82	2.58	2.95	4.40	34.66	0.170

18.95 2.39 11.22 3.66 0.82 3.14 0.57 2.48 0.75 2.66 0.40 2.58 0.43 3.36 0.16 13.92 1.86 1.36 150.28 352.83 38.04 2.35 2.48 3.95 31.11 0.346
22.77 3.23 17.20 3.98 0.88 6.24 0.55 6.37 1.13 3.88 0.28 3.82 0.50 4.17 0.20 14.42 2.81 1.69 128.78 344.51 30.98 2.88 3.07 4.18 35.04 0.183
25.25 4.37 16.45 4.31 0.98 4.49 0.71 6.14 1.08 4.89 0.42 4.41 0.50 4.24 0.20 24.73 2.33 2.08 130.75 351.16 34.10 2.89 2.73 3.83 36.23 0.189

22.29 3.33 14.96 3.96 0.89 4.63 0.61 5.99 0.99 3.74 0.37 3.80 0.48 3.93 0.19 17.69 2.34 1.71 136.61 349.50 34.37 2.87 2.76 3.96 34.12 0.21
3.23 1.00 3.26 0.33 0.08 1.65 0.09 2.18 0.21 1.63 0.08 0.93 0.04 0.48 0.03 6.11 0.47 0.36 11.88 4.40 3.54 0.19 0.30 0.16 2.68 0.03

20.74 2.86 13.56 3.57 0.74 3.07 0.59 3.32 0.86 2.71 0.34 3.04 0.39 2.90 0.19 5.82 2.01 1.39 141.00 332.06 33.79 2.36 2.75 4.17 29.31 0.196
18.95 2.72 11.36 3.47 0.82 2.77 0.45 3.20 0.60 2.16 0.21 1.75 0.39 3.46 0.13 5.42 1.67 1.59 138.54 321.41 36.42 2.32 2.73 3.80 28.61 0.204
22.41 3.25 14.15 3.51 0.68 3.31 0.48 3.23 0.74 2.13 0.31 1.79 0.44 3.91 0.23 6.56 1.91 1.68 139.30 316.99 32.08 2.27 2.65 4.34 27.36 0.186
21.09 2.94 12.04 3.52 0.72 3.42 0.37 2.93 0.82 2.39 0.37 2.67 0.41 3.42 0.32 5.94 2.19 1.64 131.68 310.82 34.92 2.36 3.05 3.77 26.20 0.179

20.80 2.94 12.75 3.52 0.74 3.14 0.47 3.17 0.75 2.35 0.31 2.31 0.41 3.40 0.22 5.93 1.94 1.63 137.63 320.25 34.30 2.33 2.87 4.02 26.36 0.19
1.43 0.22 1.33 0.04 0.06 0.29 0.09 0.17 0.12 0.27 0.07 0.64 0.02 0.38 0.08 0.47 0.22 0.20 4.10 8.99 1.83 0.04 0.16 0.28 0.81 0.01

21.96 3.10 14.56 3.34 1.08 3.89 0.57 2.62 0.80 2.84 0.42 2.39 0.40 2.88 0.12 6.73 1.94 2.18 141.13 342.09 33.53 2.42 3.27 4.21 28.02 0.183
23.21 3.23 14.52 4.11 0.95 4.74 0.43 4.65 0.81 2.57 0.43 2.45 0.55 3.57 0.37 6.63 2.07 1.53 141.90 352.04 35.39 2.48 2.82 3.94 26.55 0.185
22.69 3.14 11.48 3.87 0.87 3.42 0.48 3.36 0.76 2.57 0.33 2.63 0.36 3.55 0.14 7.04 1.93 1.48 148.23 380.43 35.99 2.57 2.64 4.12 31.40 0.196
21.86 3.09 12.28 3.45 1.07 3.43 0.36 3.59 0.75 2.35 0.40 2.66 0.39 3.51 0.23 7.15 2.15 1.68 137.11 364.07 33.02 2.66 3.20 4.15 29.77 0.161
22.79 2.77 12.88 3.95 1.08 4.13 0.45 3.63 0.83 2.05 0.34 2.14 0.53 2.71 0.20 7.88 2.20 1.58 140.99 322.83 37.02 2.29 2.74 3.81 27.28 0.185

22.48 3.06 13.14 3.74 1.81 3.82 0.48 3.87 0.79 2.47 0.38 2.45 0.48 3.24 0.21 7.98 2.06 1.68 141.87 352.28 35.11 2.48 2.89 4.05 29.82 0.19
0.60 0.18 1.37 0.23 0.10 0.65 0.08 0.73 0.03 0.30 0.05 0.21 0.09 0.42 0.10 0.49 0.12 0.28 4.01 21.81 1.74 0.14 0.32 0.17 1.61 0.01

24.36 2.66 14.79 3.29 1.11 2.85 0.86 3.79 0.86 2.75 0.30 4.28 0.36 2.63 0.41 13.57 2.05 1.55 141.29 337.70 36.94 2.39 3.35 3.82 25.26 0.180
20.38 2.78 13.20 2.48 1.22 3.38 0.88 3.02 0.71 1.69 0.48 3.36 0.45 3.37 0.43 6.33 2.50 2.21 137.13 329.37 32.65 2.40 4.42 4.20 25.98 0.180
17.93 2.51 12.83 2.26 0.94 2.70 0.43 3.55 0.57 2.64 0.31 2.69 0.30 3.85 0.24 7.80 1.64 1.61 140.21 350.70 35.18 2.80 3.99 3.99 33.60 0.219
22.93 3.03 13.25 2.69 0.97 3.28 0.72 3.51 0.65 1.70 0.39 2.56 0.33 3.89 0.13 6.04 1.75 1.69 125.78 331.35 34.49 2.63 4.48 3.85 28.64 0.164

21.40 2.74 13.54 2.68 1.06 3.05 0.67 3.47 0.70 2.20 0.37 3.22 0.36 3.39 0.30 5.44 1.96 1.76 136.10 347.78 34.82 2.56 4.06 3.91 26.37 0.19
2.84 0.22 0.84 0.44 0.13 0.33 0.18 0.32 0.12 0.58 0.09 0.79 0.06 0.54 0.14 2.76 0.38 0.30 7.11 30.16 1.78 0.20 0.52 0.24 3.77 0.02

21.63 3.14 13.83 3.73 1.00 4.73 0.56 4.79 0.82 2.31 0.31 2.80 0.44 3.38 0.26 6.96 1.82 1.54 136.80 372.49 35.92 2.72 2.83 3.81 32.72 0.185
21.77 3.33 12.43 4.23 0.94 4.00 0.59 3.86 0.93 2.06 0.41 2.27 0.43 3.78 0.15 7.91 2.21 1.73 136.92 327.72 34.12 2.39 2.74 4.01 27.15 0.188
22.68 3.62 9.68 4.27 0.27 3.85 0.60 4.06 0.85 1.32~0.24464 2.97 0.40 2.23 0.27 8.07 1.52 1.36 141.08 336.35 32.53 2.98 2.52 4.34 28.78 0.192
21.63 3.41 12.24 3.42 0.81 3.63 0.58 4.31 0.95 2.71 0.43 2.52 0.37 2.85 0.20 10.11 1.64 1.60 143.09 353.20 35.25 2.54 3.85 5.07 29.10 0.175
20.37 3.23 11.95 3.41 1.05 3.15 0.37 2.92 0.76 2.81 0.28 1.86 0.41 2.64 0.15 9.01 1.99 1.26 161.86 358.33 35.82 2.21 2.71 4.52 29.04 0.212

21.54 3.35 12.83 3.81 0.81 3.97 0.54 3.99 0.86 2.34 0.36 2.48 0.41 2.97 0.21 6.41 1.89 1.56 143.86 351.82 33.33 2.45 2.81 4.38 29.35 0.18
0.63 0.18 1.50 0.42 0.32 0.68 0.10 0.59 0.08 0.60 0.08 0.44 0.03 0.61 0.06 1.19 0.25 0.19 10.37 18.84 3.15 0.19 0.27 0.49 2.55 0.02

25.19 3.21 15.11 4.05 0.82 3.70 0.63 3.38 1.02 2.49 0.45 3.27 0.48 3.63 0.31 7.88 2.07 1.85 139.24 376.81 34.12 2.71 2.97 4.68 32.51 0.194
23.50 3.66 16.48 5.21 1.06 4.17 0.81 3.81 0.84 3.70 0.37 3.45 0.27 3.13 0.24 7.49 2.34 2.28 153.30 385.65 33.20 2.68 2.11 4.62 34.39 0.213
23.95 3.39 12.92 3.61 0.75 4.28 0.47 4.98 0.96 3.08 0.39 2.99 0.52 4.22 0.39 8.23 2.44 2.14 152.47 390.67 32.26 2.58 3.10 4.73 33.06 0.209
26.45 3.69 14.86 3.53 0.69 3.83 0.60 3.93 0.87 2.70 0.37 2.51 0.48 4.89 0.18 6.30 2.05 2.03 146.80 343.47 32.67 2.34 3.26 4.47 30.66 0.204
25.48 2.92 14.52 4.03 0.77 3.52 0.60 4.08 0.98 2.99 0.46 3.00 0.42 4.19 0.31 8.42 2.42 2.27 144.86 352.47 33.39 2.43 2.87 4.34 30.51 0.202

24.91 3.35 14.78 4.09 0.82 3.90 0.82 4.94 0.93 2.99 0.41 3.12 0.43 4.01 0.28 7.66 2.26 2.11 147.36 371.81 33.17 2.82 2.86 4.45 32.23 0.20
1.19 0.30 1.28 0.67 0.14 0.32 0.12 0.59 0.08 0.46 0.04 0.23 0.10 0.66 0.08 0.84 0.19 0.18 5.78 23.06 0.69 0.14 0.44 0.25 1.63 0.01

24.79 3.38 11.49 4.28 1.11 4.53 0.64 4.57 0.84 2.68 0.51 3.34 0.34 4.98 0.36 7.79 2.35 2.43 134.22 352.70 34.21 2.63 2.90 3.92 32.64 0.189
25.98 3.31 15.97 3.49 0.52 4.09 0.61 3.62 0.79 2.89 0.51 3.00 0.48 4.48 0.35 7.09 2.44 2.02 150.67 359.16 34.20 2.32 3.30 4.41 30.47 0.204
23.69 3.07 13.91 3.61 0.82 3.38 0.75 4.11 0.91 3.21 0.50 3.02 0.42 3.86 0.23 6.56 2.49 1.67 150.99 352.52 32.77 2.33 2.94 4.91 32.36 0.231
24.49 3.04 12.16 3.05 1.06 2.97 0.33 4.80 1.01 2.80 0.48 2.65 0.46 4.55 0.30 7.43 2.47 1.77 137.35 383.41 34.76 2.79 4.01 3.95 34.04 0.192
25.10 4.08 13.49 4.59 0.97 3.42 0.55 2.88 0.77 2.72 0.43 3.40 0.29 3.94 0.28 6.81 2.32 2.27 151.44 345.31 32.55 2.30 2.49 4.65 30.17 0.205

24.81 3.37 13.40 3.80 0.90 3.88 0.98 3.96 0.86 2.86 0.49 3.08 0.40 4.36 0.30 7.83 2.42 2.07 144.93 367.42 33.76 2.48 3.13 4.31 32.83 0.20
0.84 0.41 1.74 0.62 0.34 0.62 0.16 0.72 0.10 0.21 0.03 0.30 0.08 0.46 0.05 0.84 0.08 0.27 8.43 14.64 0.98 0.22 0.87 0.38 1.66 0.01

Supplementary data 4: Standard monitor measurements EMP and LA-ICP-MS

Monitor measurements electron microprobe in wt%

Comment	Na2O	K2O	FeO	SiO2	TiO2	MgO	CaO	MnO	Al2O3	P2O5	Total	Na2O	K2O	FeO	SiO2	TiO2	MgO	CaO	MnO	Al2O3	P2O5	Total
Uppr Reference data*	3.91	5.11	1.51	74.35	0.10	0.05	0.74	0.07	12.85	0.01	98.98	3.97	5.16	1.53	75.12	0.10	0.05	0.75	0.07	12.98	0.01	100.00
2011																						
Lipari	3.70	5.14	1.60	73.70	0.06	0.05	0.72	0.09	13.06	0.05	98.17	3.77	5.24	1.63	75.08	0.06	0.05	0.73	0.09	13.30	0.05	100.00
Lipari	3.97	5.10	1.46	73.69	0.06	0.04	0.75	0.10	13.01	0.00	98.17	4.04	5.19	1.49	75.06	0.06	0.04	0.76	0.10	13.25	0.00	100.00
Lipari	3.95	5.08	1.47	74.22	0.05	0.04	0.72	0.12	12.96	0.00	98.15	4.02	5.15	1.47	75.12	0.05	0.04	0.75	0.12	13.14	0.00	100.00
Lipari	3.86	5.17	1.52	73.62	0.09	0.05	0.76	0.06	12.97	0.00	98.10	3.93	5.27	1.55	75.04	0.10	0.05	0.78	0.06	13.22	0.00	100.00
Lipari	3.82	5.14	1.38	73.32	0.07	0.02	0.77	0.04	13.05	0.00	97.61	3.91	5.27	1.41	75.12	0.07	0.02	0.79	0.04	13.37	0.00	100.00
Lipari	3.82	5.10	1.55	73.48	0.08	0.06	0.78	0.03	12.79	0.01	97.72	3.91	5.22	1.59	75.19	0.08	0.06	0.80	0.03	13.00	0.01	100.00
Lipari	3.86	5.11	1.49	73.40	0.03	0.02	0.75	0.03	12.99	0.00	97.68	3.95	5.23	1.53	75.15	0.03	0.02	0.76	0.03	13.30	0.00	100.00
Lipari	3.92	5.12	1.40	73.80	0.10	0.02	0.77	0.02	12.75	0.00	97.90	4.00	5.23	1.43	75.38	0.10	0.03	0.78	0.02	13.02	0.00	100.00
Lipari	3.65	5.12	1.37	73.39	0.08	0.02	0.75	0.03	12.93	0.01	97.94	3.75	5.26	1.41	75.39	0.09	0.02	0.77	0.04	13.28	0.00	100.00
Lipari	3.95	5.17	1.32	73.66	0.08	0.05	0.78	0.04	12.86	0.02	97.93	4.03	5.28	1.35	75.21	0.08	0.05	0.80	0.05	13.13	0.02	100.00
Lipari	3.83	5.13	1.61	73.91	0.08	0.07	0.76	0.08	12.78	0.04	98.28	3.90	5.22	1.64	75.20	0.08	0.07	0.77	0.08	13.00	0.04	100.00
Lipari	3.95	5.17	1.58	74.36	0.10	0.04	0.74	0.12	12.77	0.02	98.84	4.00	5.23	1.60	75.23	0.10	0.04	0.75	0.12	12.82	0.02	100.00
Lipari	3.73	5.14	1.62	73.19	0.08	0.03	0.72	0.02	12.90	0.00	97.43	3.83	5.28	1.66	75.12	0.09	0.03	0.74	0.02	13.24	0.00	100.00
Lipari	3.98	5.10	1.40	73.64	0.09	0.03	0.77	0.07	12.75	0.00	97.83	4.07	5.21	1.43	75.28	0.09	0.03	0.79	0.07	13.03	0.00	100.00
Lipari	3.99	5.13	1.44	74.17	0.10	0.04	0.75	0.06	12.62	0.02	98.32	4.06	5.22	1.46	75.44	0.10	0.04	0.77	0.06	12.84	0.02	100.00
Lipari	4.01	5.03	1.48	74.01	0.11	0.07	0.74	0.10	13.19	0.00	98.74	4.06	5.09	1.50	74.95	0.11	0.07	0.75	0.11	13.36	0.00	100.00
Lipari	3.95	5.14	1.46	73.99	0.08	0.00	0.77	0.05	13.10	0.00	98.54	4.01	5.22	1.48	75.08	0.08	0.00	0.78	0.06	13.29	0.00	100.00
Lipari	3.76	5.11	1.63	73.66	0.06	0.02	0.75	0.15	12.84	0.02	97.90	3.84	5.22	1.66	75.03	0.06	0.02	0.77	0.16	13.22	0.02	100.00
Lipari	4.13	5.14	1.62	74.18	0.06	0.05	0.72	0.04	12.97	0.00	98.90	4.18	5.20	1.64	75.00	0.06	0.05	0.72	0.04	13.11	0.00	100.00
Lipari	3.90	5.14	1.34	74.09	0.09	0.03	0.73	0.16	12.95	0.00	98.42	3.96	5.22	1.36	75.28	0.09	0.03	0.75	0.16	13.16	0.00	100.00
Lipari	3.90	5.19	1.61	74.04	0.05	0.04	0.73	0.01	13.01	0.01	98.10	3.96	5.26	1.63	75.10	0.05	0.04	0.74	0.01	13.20	0.01	100.00
Lipari	4.01	5.14	1.68	74.61	0.07	0.02	0.77	0.10	12.95	0.00	99.36	4.04	5.17	1.69	75.09	0.07	0.02	0.78	0.10	13.03	0.00	100.00
Lipari	3.98	5.09	1.61	73.61	0.07	0.03	0.72	0.03	13.03	0.00	98.18	4.05	5.18	1.64	74.97	0.07	0.03	0.74	0.03	13.27	0.00	100.00
Lipari	3.88	5.05	1.69	73.82	0.08	0.05	0.74	0.08	12.81	0.02	98.22	3.95	5.14	1.72	75.16	0.08	0.05	0.75	0.08	13.04	0.02	100.00
Lipari	3.90	5.14	1.58	73.51	0.10	0.08	0.76	0.05	12.93	0.01	98.05	3.98	5.24	1.61	74.97	0.10	0.08	0.77	0.05	13.19	0.01	100.00
Lipari	3.76	5.08	1.57	73.45	0.07	0.03	0.76	0.06	13.07	0.03	97.88	3.84	5.19	1.60	75.04	0.07	0.03	0.78	0.06	13.35	0.03	100.00
Lipari	3.95	5.11	1.47	73.57	0.12	0.06	0.76	0.08	13.04	0.02	98.10	3.99	5.21	1.50	74.89	0.12	0.06	0.78	0.08	13.00	0.02	100.00
Lipari	3.64	5.08	1.47	73.71	0.08	0.02	0.72	0.11	12.86	0.00	97.69	3.73	5.20	1.50	75.45	0.08	0.02	0.74	0.11	13.16	0.00	100.00
Lipari	3.88	5.08	1.72	73.52	0.07	0.04	0.75	0.07	13.02	0.00	98.14	3.95	5.18	1.75	74.91	0.07	0.04	0.77	0.07	13.27	0.00	100.00
2015																						
Lipari	4.00	5.06	1.56	75.41	0.07	0.04	0.80	0.01	13.06	0.01	100.01	4.00	5.06	1.56	75.40	0.07	0.04	0.80	0.01	13.06	0.01	100.00
Lipari	4.00	5.08	1.67	74.97	0.09	0.05	0.78	0.02	13.03	0.00	99.47	4.06	5.07	1.67	75.19	0.09	0.05	0.79	0.02	13.07	0.00	100.00
Lipari	4.09	5.05	1.64	74.85	0.08	0.03	0.76	0.11	13.22	0.00	99.64	4.10	5.06	1.64	74.97	0.08	0.03	0.76	0.11	13.24	0.00	100.00
Lipari	3.89	5.13	1.41	73.77	0.08	0.06	0.76	0.07	13.23	0.00	98.41	3.95	5.21	1.43	74.96	0.08	0.06	0.78	0.07	13.44	0.00	100.00
Lipari	4.06	5.16	1.67	73.25	0.07	0.06	0.77	0.03	13.00	0.00	97.86	4.14	5.16	1.66	75.16	0.07	0.06	0.79	0.03	13.26	0.00	100.00
Lipari	3.93	5.09	1.41	73.95	0.05	0.04	0.75	0.05	13.03	0.00	98.30	4.00	5.18	1.43	75.23	0.05	0.04	0.76	0.05	13.26	0.00	100.00
Lipari	3.84	5.09	1.57	73.73	0.10	0.05	0.77	0.02	12.53	0.03	97.72	3.93	5.21	1.61	75.45	0.10	0.05	0.79	0.02	12.82	0.03	100.00
Lipari	3.67	5.02	1.54	73.13	0.06	0.06	0.73	0.12	12.90	0.03	97.72	3.77	5.16	1.56	75.18	0.06	0.06	0.78	0.12	13.27	0.03	100.00
Lipari	3.79	5.06	1.50	73.02	0.09	0.03	0.74	0.04	12.82	0.00	97.09	3.80	5.21	1.54	75.20	0.09	0.04	0.77	0.04	13.20	0.00	100.00
Lipari	3.71	5.00	1.47	73.54	0.06	0.03	0.73	0.07	12.97	0.00	97.59	3.80	5.12	1.51	75.36	0.06	0.03	0.75	0.08	13.29	0.00	100.00
Lipari	3.83	5.09	1.41	73.13	0.06	0.73	0.14	0.12	12.91	0.03	97.37	3.83	5.23	1.45	75.13	0.06	0.75	0.15	0.13	13.20	0.06	100.00
Lipari	3.65	5.07	1.46	73.44	0.07	0.03	0.74	0.09	12.99	0.05	97.59	3.74	5.20	1.50	75.25	0.07	0.03	0.76	0.09	13.31	0.00	100.00
2017																						
Lipari	4.20	5.07	1.74	74.70	0.10	0.06	0.76	0.10	12.96	0.03	99.71	4.21	5.08	1.75	74.91	0.10	0.06	0.76	0.10	13.00	0.03	100.00
Lipari	3.94	5.11	1.57	75.23	0.09	0.03	0.80	0.00	13.15	0.00	99.92	3.94	5.11	1.57	75.29	0.09	0.03	0.80	0.00	13.16	0.00	100.00
Lipari	3.97	5.03	1.64	72.91	0.09	0.05	0.71	0.05	12.61	0.05	97.11	4.09	5.18	1.69	75.08	0.09	0.06	0.73	0.05	12.98	0.05	100.00
Lipari	4.08	5.11	1.45	75.45	0.08	0.04	0.78	0.00	13.06	0.00	100.08	4.08	5.11	1.45	75.49	0.08	0.04	0.78	0.00	13.00	0.00	100.00
Lipari	4.23	5.03	1.61	75.02	0.08	0.09	0.75	0.10	12.99	0.00	99.89	4.23	5.04	1.61	75.10	0.08	0.09	0.75	0.10	13.00	0.00	100.00
Lipari	4.03	5.09	1.47	74.91	0.09	0.04	0.77	0.10	13.24	0.01	99.75	4.04	5.10	1.47	75.10	0.09	0.04	0.77	0.10	13.27	0.01	100.00
Lipari	4.07	5.07	1.66	74.21	0.07	0.03	0.78	0.03	12.81	0.02	98.77	4.12	5.07	1.68	75.13	0.07	0.03	0.79	0.03	12.97	0.02	100.00
Lipari	4.01	5.02	1.58	73.74	0.08	0.01	0.75	0.08	13.21	0.00	98.48	4.07	5.10	1.60	74.88	0.08	0.01	0.76	0.08	13.41	0.00	100.00
Lipari	4.13	5.05	1.58	74.95	0.09	0.06	0.74	0.08	13.01	0.01	99.70	4.14	5.07	1.58	75.18	0.09	0.06	0.74	0.08	13.05	0.01	100.00
Lipari	4.03	5.13	1.62	74.58	0.11	0.04	0.72	0.13	13.27	0.00	99.61	4.03	5.15	1.63	74.87	0.11	0.04	0.72	0.13	13.32	0.00	100.00
Lipari	4.06	5.12	1.54	74.84	0.09	0.05	0.75	0.06	13.10	0.03	99.63	4.08	5.14	1.55	75.12	0.09	0.05	0.75	0.06	13.15	0.03	100.00
Lipari	4.03	5.09	1.51	75.39	0.09	0.03	0.74	0.05	13.22	0.01	100.15	4.00	5.08	1.51	75.28	0.09	0.03	0.74	0.05	13.20	0.01	100.00
average	3.85	5.18	1.64	73.99	0.08	0.78	0.91	0.87	12.86	0.04	98.46	3.86	5.18	1.								

Supplementary data 5: Volume calculations for flow and fall deposits from the Malpaisillo and Monte Galán Calderas.
Simple volume calculation of Fallout after Legros 2000

			opening	distance	distribution	Thickness	DRE vol. (km ³); Dichte (g/cm3); 1.47 felsic, 1.7				
			angel of fan;	from source	area; AT	of ash	at bulk density	mafic <60 wt% SiO2, 1.6	intermediate 60-70 wt% SiO2; e.g.		
Tephra	acronym	Thickness	theta (deg.)	vent; x (km)	(km ²)	layer; T (km)	Tephra volume (km ³)	density of 1.25 and DR density of 2.7	Kutterolf et al. (2008b)	Eruption magnitude; Mv	
Punta del Plancha	PPT	160cm	30	30	8,03847577	0,0016	1,26	0,59	1,47	1,85E+12	5,3
Punta del Plancha	PPT	160cm	45	30	12,4264069	0,0016	1,82	0,85	1,47	2,67E+12	5,4
Punta del Plancha	PPT	160cm	60	30	17,3205081	0,0016	2,35	1,10	1,47	3,46E+12	5,5
Lower Chibola	LCbT	21cm	30	30	8,03847577	0,00021	0,17	0,08	1,47	2,43E+11	4,4
Lower Chibola	LCbT	21cm	45	30	12,4264069	0,00021	0,24	0,11	1,47	3,50E+11	4,5
Lower Chibola	LCbT	21cm	60	30	17,3205081	0,00021	0,31	0,14	1,47	4,54E+11	4,7
Guacucal	GT	200cm	30	30	8,03847577	0,002	1,57	0,73	1,47	2,31E+12	5,4
Guacucal	GT	200cm	45	30	12,4264069	0,002	2,27	1,06	1,47	3,34E+12	5,5
Guacucal	GT	200cm	60	30	17,3205081	0,002	2,94	1,37	1,47	4,32E+12	5,6
Upper Chibola	LCbT	115cm	30	30	8,03847577	0,00115	0,90	0,42	1,47	1,33E+12	5,1
Upper Chibola	LCbT	115cm	45	30	12,4264069	0,00115	1,31	0,61	1,47	1,92E+12	5,3
Upper Chibola	LCbT	115cm	60	30	17,3205081	0,00115	1,69	0,79	1,47	2,48E+12	5,4
La Fuente prox	FeT	230cm	30	30	8,03847577	0,0023	1,81	0,84	1,47	2,66E+12	5,4
La Fuente prox	FeT	230cm	45	30	12,4264069	0,0023	2,61	1,22	1,47	3,84E+12	5,6
La Fuente prox	FeT	230cm	60	30	17,3205081	0,0023	3,38	1,58	1,47	4,97E+12	5,7
La Fuente dist	FeT	2 cm	30	326	87,3514367	0,00002	1,86	0,87	1,47	2,73E+12	5,4
La Fuente dist	FeT	2 cm	45	326	135,033621	0,00002	2,68	1,25	1,47	3,94E+12	5,6
La Fuente dist	FeT	2 cm	60	326	188,216188	0,00002	3,47	1,62	1,47	5,10E+12	5,7
La Sabanetta	ST	5cm	30	473	126,739968	0,00005	9,78	4,57	1,47	1,44E+13	6,2
La Sabanetta	ST	5cm	45	473	195,923015	0,00005	14,11	6,59	1,47	2,07E+13	6,3
La Sabanetta	ST	5cm	60	473	273,086677	0,00005	18,27	8,53	1,47	2,68E+13	6,4
La Sabanetta	ST	400cm	30	20	5,35898385	0,004	1,40	0,65	1,47	2,06E+12	5,3
La Sabanetta	ST	400cm	45	20	8,28427125	0,004	2,02	0,94	1,47	2,97E+12	5,5
La Sabanetta	ST	400cm	60	20	11,5470054	0,004	2,61	1,22	1,47	3,84E+12	5,6
Miralago	MgT	155cm	30	21	5,62693304	0,00155	0,60	0,28	1,47	8,78E+11	4,9
Miralago	MgT	155cm	45	21	8,69848481	0,00155	0,86	0,40	1,47	1,27E+12	5,1
Miralago	MgT	155cm	60	21	12,1243557	0,00155	1,12	0,52	1,47	1,64E+12	5,2
M. Maderas Negras	MMT	270cm	30	9	2,41154273	0,0027	0,19	0,09	1,47	2,81E+11	4,4
M. Maderas Negras	MMT	270cm	45	9	3,72792206	0,0027	0,28	0,13	1,47	4,06E+11	4,6
M. Maderas Negras	MMT	270cm	60	9	5,19615242	0,0027	0,36	0,17	1,47	5,25E+11	4,7
U. Maderas Negras	UMT	>12cm	30	9	2,41154273	0,0003	0,02	0,01	1,47	3,12E+10	3,5
U. Maderas Negras	UMT	>12cm	45	9	3,72792206	0,0003	0,03	0,01	1,47	4,51E+10	3,7
U. Maderas Negras	UMT	>12cm	60	9	5,19615242	0,0003	0,04	0,02	1,47	5,83E+10	3,8

Flow volumes (calculated by multiplying distribution area with average thickness)

Unit	area [km]	av thickness [lvolume [km3]
La Paz Centro Tephra IG	180,67	0,006 1,08402
La Fuente Tephra IG	248,65	0,006 1,4919
Sabanettas Tephra IG	246	0,004 0,984
Tolapa Tephra Surge	159,32	0,001 0,15932
Tolapa Tephra IG	387,45	0,007 2,71215
L. Maderas Negras Tephra IG	29	0,001 0,029
M. Maderas Negras Tephra IG	29	0,001 0,029
U. Maderas Negras Tephra IG	29	0,001 0,029

Vollume summary table

Tephra	Fall Tephra volume [km3]	Flow Tephra volume [km3]	volume [km3]	DRE volume [km3]	Masse [kg]
La Paz Centro Tephra		1,10	1,10	0,50	1,2E+12
Punate de Planche Tephra	1,80		1,80	0,85	2,7E+12
Lower Chibola Tephra	0,24		0,24	0,11	3,5E+11
Guacucal Tephra	2,30		2,30	1,06	3,3E+12
Upper Chibola Tephra	1,31		1,31	0,61	1,9E+12
La Fuente Tephra	2,68	1,49	4,17	1,95	6,1E+12
Sabanettas Tephra	14,11	0,98	15,10	7,05	2,2E+13
Miralago Tephra	0,86		0,86	0,40	1,3E+12
Tolapa Tephra	123,33	2,87	126,20	83,07	1,7E+14
Lower Maderas Negras Tephra		0,03	0,03	0,01	4,5E+10
Middle Maderas Negras Tephra	0,28	0,03	0,30	0,14	4,4E+11
Upper Maderas Negras Tephra	0,03	0,03	0,06	0,03	8,8E+10
Malpaisillo Caldera	144,83	6,45	151,27	94,76	2,1E+14
Monte Galan Caldera	2,11	0,09	2,19	1,03	3,2E+12

Supplementary data 5: Volume calculations for flow and fall deposits from the Malpaisillo and Monte Galán Calderas.
Simple volume calculation of Fallout after Legros 2000

							DRE vol. (km ³); Dichte (g/cm3); 1.47 felsic, 1.7 mafic <60 wt% SiO2, 1.6 intermediate 60-70 wt% SiO2; e.g. Kutterolf et al. (2008b)				
Tephra	acronym	Thickness	opening angel of fan; theta (deg.)	distance from source vent; x (km)	distribution area; AT (km ²)	Thickness of ash layer; T (km)	Tephra volume (km ³)	at bulk density of 1.25 and DR density of 2.7	Masse (kg)	Eruption magnitude; Mv	
Punta del Plancha	PPT	160cm	30	30	8,03847577	0,0016	1,26	0,59	1,47	1,85E+12	5,3
Punta del Plancha	PPT	160cm	45	30	12,4264069	0,0016	1,82	0,85	1,47	2,67E+12	5,4
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Lower Chibola	LCbT	21cm	30	30	8,03847577	0,00021	0,17	0,08	1,47	2,43E+11	4,4
Lower Chibola	LCbT	21cm	45	30	12,4264069	0,00021	0,24	0,11	1,47	3,50E+11	4,5
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Upper Chibola	LCbT	115cm	30	30	8,03847577	0,00115	0,90	0,42	1,47	1,33E+12	5,1
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U. Maderas Negras	UMT	>12cm	30	9	2,41154273	0,0003	0,02	0,01	1,47	3,12E+10	3,5
U. Maderas Negras	UMT	>12cm	45	9	3,72792206	0,0003	0,03	0,01	1,47	4,51E+10	3,7
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Punate de Planche Tephra	1,80		1,80	0,85	2,7E+12
Lower Chibola Tephra	0,24		0,24	0,11	3,5E+11
Guacucal Tephra	2,30		2,30	1,06	3,3E+12
Upper Chibola Tephra	1,31		1,31	0,61	1,9E+12
La Fuente Tephra	2,68	1,49	4,17	1,95	6,1E+12
Sabanettas Tephra	14,11	0,98	15,10	7,05	2,2E+13
Miralago Tephra	0,86		0,86	0,40	1,3E+12
Tolapa Tephra	123,33	2,87	126,20	83,07	1,7E+14
Lower Maderas Negras Tephra		0,03	0,03	0,01	4,5E+10
Middle Maderas Negras Tephra	0,28	0,03	0,30	0,14	4,4E+11
Upper Maderas Negras Tephra	0,03	0,03	0,06	0,03	8,8E+10
Malpaisillo Caldera	144,83	6,45	151,27	94,76	2,1E+14
Monte Galan Caldera	2,11	0,09	2,19	1,03	3,2E+12

Supplementary methods

1.1 Field work

For thickness and grain size decay we determined maximum thicknesses and the maximum sizes of pumices and lithics when possible by searching at each outcrop for the largest specimen in an equal sized area. Where erosional contacts have been visible that reduced the original thickness, we listed the minimum thicknesses as with the “greater than” sign (e.g. > xx cm) The clasts were measured in-situ because they were too fragile to be extracted from the deposit. The maximum diameter (x) and the diameter perpendicular to it (y) were measured on five to ten large pumice clasts and averaged (maximum pumice = MP). Isopach and isopleth maps for the major fall units were constructed with the respective values.

1.2 Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS)

The LA-ICP-MS minor and trace element measurements of glass shards were done at the University of Bern (Switzerland) using a GeoLas-Pro 2006 ArF Excimer laser system (Lambda Physik / Coherent) attached to an Elan DRC-e quadrupole mass spectrometer (Perkin Elmer) and at the Academia Sinica in Taipei (Taiwan) equipped with 193 nm excimer laser system (Photon Machines Analyte G2 laser), coupled to a high-resolution ICP-MS (ThermoFinnigan Element XR).

In Bern the laser beam was set to a diameter of 32 μm and operated at a laser fluence of $\sim 6 \text{ J/cm}^2$. The standard reference glass SRM610 from NIST was used for external calibration of analytical sensitivities. Data reduction was done using the software SILLS (Guillong et al., 2008), employing Si or Al concentrations measured by EMP as the internal standard. The MPI-DING quartz diorite glass standard T1-G was used to document measurement performance. Measurement reproducibility across the entire measurement period was $< 7 \%$ 1SD for most elements, but uncertainties increase when measurements approach the element-specific limits of detection. Compared to T1-G, most measured element concentrations agree

to within 10% uncertainty, except for Li, Sc, Y, Gd, Dy, ER, Tm, Lu, Yb, as well as Tb, Ta, that agree within 14% and 17 % uncertainty, respectively (supplementary data 3 and 4). In Taipei spot sizes have been set between 16 to 30 μm , using 10 J/cm² energy density at 4-10 Hz repetition rate. Data have been reduced using Version 4.0 of “real-time on-line” GLITTER© software (van Achterbergh et al., 2001) with Si and Ca concentrations (EMP) as an internal standard and international basaltic glass standard (BCR-2g), measured every five to eight samples to check the accuracy of measurements. Measurement reproducibility across the entire measurement period was monitored with SRM610 from NIST and is <2 % 1SD for most elements. Compared to reference data of BCR-2g most element concentrations are within 7% uncertainty, except for Tb, Ho, and Lu, that have <10%, as well as Li, Y, Tm, Pb, and U that show <15% uncertainty, respectively (supplementary data 3 and 4).

1.3 $^{40}\text{Ar}/^{39}\text{Ar}$ Dating

Sanidine and plagioclase crystals were leached for 5 min in a 5% HF solution in an ultrasonic bath, rinsed three times with deionized water, and then covered in methanol to remove any adhering glass. Together with Fish Canyon (28.201 ± 0.0046 Ma; Kuiper et al., 2008) sanidines, the samples were co-irradiated for 8 h at the USGS TRIGA reactor in Denver. Subsequently, irradiated samples were measured on single-step fusions of single crystals or small groups of about seven crystals using a CO₂ laser to degas the samples. Before they entered the mass spectrometer, the gasses were cleaned by exposure to SAES GP50 getters run at 2 amps. Isotopes were measured in static, peak-hopping mode with an analog multiplier on a VG5400 noble gas mass spectrometer at Lamont-Doherty Earth Observatory/U.S.A. With this setup the conversion is 3.98e^{13} nannoamps/mole.

1.4 Determination of Eruptive Parameters

Total tephra volume for Tolapa Fall, expressed in cubic kilometers, was obtained by fitting straight-line segments to data on plots of \ln [isopach thickness] versus square-root [isopach area] following the methods of Pyle (1989) and Fierstein and Nathenson (1992). In cases where data for the thickness and abundance of distal eruptive products are sparse, only rough minimum estimates of eruptive volumes can be made. Several models have been proposed to estimate tephra volumes utilizing sparse data. For example, Green et al. (2016) applied a Bayesian statistical approach to sparse proximal and distal deposits, and Sulpizio (2005) tested three empirical methods to calculate distal tephra-fall volumes. Each of these methods has been compared and tested, partly incorporating the model of Legros (2000). Here, we follow therefore Legros's (2000) initial, simplified model that calculates a minimum tephra volume by assuming that the thickness at the farthest site lies on the dispersal axis. This assumption allows the construction of a tear-drop-shaped isopach with aperture angles of 45° , 60° , and 90° with 45° being the most realistic one compared to average angles for Pleistocene Nicaraguan eruptions (e.g. Kutterolf et al. 2007, 2008a). Then, on the resulting distribution area, an exponential thickness decrease with distance from the eruptive vent has been applied (see also Kutterolf et al., 2016; 2018; Schindlbeck et al., 2016b; 2015; 2018). Tephra volumes were converted to erupted magma masses and the respective dense rock equivalent (DRE km^3) applying the method of Kutterolf et al. (2007, 2008b) and using an approximate bulk tephra density of 600 kg/m^3 and a correction factor of 0.5 for interparticle pore space and lithics (which commonly constitute a minor component only).

1.5 Deposit classification (fall versus flow)

The terms flow deposit, ignimbrite, or surge deposit, are used for deposits originated from pyroclastic flows (e.g. Schmincke, 2004). Ignimbrites are characterized in our deposits

by massive, poorly-sorted, matrix-rich deposits that show lateral pinch and swelling and depression-filling behavior (e.g. Fischer and Schmincke, 1984). Subdivisions of ignimbrites were introduced according to Walker (1983) and Freundt and Bursik (1998), using bedding, grading and concentration of lithics and pumices in layers (e.g. flow units, ground layer, ash cloud deposits, ground surge). Surges in the present field area describe moderate to poorly-sorted fine-grained wavy deposits containing cross-bedded (anti-dunes) and laminar structures that originated from diluted pyroclastic flows (e.g. Schmincke, 2004). Fallout deposits of the Malpaisillo tephra sequence correspond to well-sorted, massive, often normal- or reversely-graded deposits that mantle the topography with nearly constant thicknesses at similar distances and directions from the vent.

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