



Supplement of

Glacial limitation of tropical mountain height

Maxwell T. Cunningham et al.

Correspondence to: Maxwell T. Cunningham (maxwellc@ldeo.columbia.edu)

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Supplementary Information

Glacial limitation of tropical mountain height

This document provides raw analytical data used in exposure age calculation and presents alternative age estimates for different scaling schemes and production rates.

S1. ^{10}Be Raw data

^{10}Be exposure age dating analysis

DR Table 1. Geographical and analytical data for the samples from Chirripó

Sample ID	CAMS laboratory no.	Lat.	Long.	Elev. (m)	Thickness (cm)	Topographic Shielding	Mass (g)	Be Carrier (g)	$^{10}\text{Be}/^9\text{Be} (10^{-14})$	^{10}Be Conc. (10^4 atm/g)	$^{10}\text{Be}/^9\text{Be}$ ratio standard
VMR-14-01	BE38094	9.50002	-83.48929	3481	2.47	0.986	5.0076	0.1874944	14.7873 ± 0.2374	37.1591 ± 0.5868	07KNSTD
VMR-14-02	BE38095	9.49426	-83.48659	3497	0.75	0.987	5.0061	0.1882112	15.2234 ± 0.2818	38.3532 ± 0.6985	07KNSTD
VMR-14-03	BE38096	9.4998	-83.48961	3470	0.85	0.985	5.0503	0.1873920	15.7785 ± 0.2923	39.2368 ± 0.7152	07KNSTD
VMR-14-04	BE38097	9.50518	-83.49237	3417	0.69	0.967	5.0570	0.1880064	14.9551 ± 0.3521	37.4769 ± 0.8500	07KNSTD
VMR-14-05	BE38098	9.5062	-83.49303	3393	0.42	0.968	5.0440	0.1873920	15.4086 ± 0.2471	38.4477 ± 0.6065	07KNSTD
VTL-14-02	BE38103	9.45346	-83.50319	3425	1.25	0.989	5.0159	0.1856512	1.49129 ± 0.2397	37.1071 ± 0.5862	07KNSTD
MCH-14-03	BE38100	9.48582	-83.49130	3759	1.01	0.987	5.0321	0.1871872	22.4575 ± 0.4156	55.9493 ± 1.0186	07KNSTD
MCH-14-02	BE38102	9.48461	-83.48900	3814	0.88	0.997	1.5524	0.1871872	2.88263 ± 0.0951	23.3869 ± 0.7673	07KNSTD
MCH-14-01	BE38099	9.4832	-83.48698	3674	6.08	0.872	3.4982	0.1873920	8.81571 ± 0.1635	31.6230 ± 0.5771	07KNSTD
BLK1-2014Oct23											0.1869824
											0.01653 \pm 0.0080

Table S1. A procedural blank was processed identically with these samples, and is listed at the end of the table. Results are given with 1σ analytical AMS uncertainties. We used a Garmin eTrex handheld GPS to record altitude and position (WGS84). Samples were measured with a Be carrier concentration of 1024 ppm. AMS ratio and Be concentration data presented in this table as originally measured against the specified standard in the last column. Reported values are corrected for background ^{10}Be detected in associated procedural blank listed below samples. Reported $^{10}\text{Be}/^9\text{Be}$ value for 07KNSTD standard material is $^{10}\text{Be}/^9\text{Be}=2.85 \times 10^{-12}$, respectively (Nishiizumi et al., 2007; ^{10}Be half life = 1.36 Myr).

DR Table 2. Surface exposure ages at Chirripó

Sample ID	Kelly et al., 2013		Blard et al., 2013	
	St age	Lm age	St age	Lm age
VMR-14-01	16900 ± 500	16300 ± 500	16000 ± 900	15800 ± 1000
VMR-14-02	17100 ± 500	16500 ± 500	16200 ± 300	15900 ± 1000
VMR-14-03	17700 ± 500	17100 ± 500	16800 ± 900	16500 ± 1000
VMR-14-04	17600 ± 600	17000 ± 600	16700 ± 1000	16400 ± 1100
VMR-14-05	18300 ± 500	17600 ± 500	17400 ± 1000	17000 ± 1100
MCH-14-01	15200 ± 500	14800 ± 400	14400 ± 800	14300 ± 900
MCH-14-03	22000 ± 700	20800 ± 600	20900 ± 1200	20000 ± 1300
MCH-14-02	8750 ± 400	8400 ± 300	8300 ± 500	8000 ± 600
VTL-14-02	17100 ± 500	16500 ± 500	16200 ± 900	16000 ± 1000

Table S2. Production rates determined by Kelly et al. (2013) and Blard et al. (2013). Age uncertainties include internal analytical error. The discussion in the main text is based on St ages and the Kelly et al. (2013) production rate, although our conclusions are unaffected by choice of scaling model.