

1 **Supplementary Tables**

2 **Table S1** Production rates of cosmogenic nuclide ^{10}Be at different cutoff
3 rigidities and altitudes [atoms/(g·year)]

4 **Table S2** Production rates of cosmogenic nuclide ^{26}Al at different cutoff
5 rigidities and altitudes [atoms/(g·year)]

6 **Table S3** Production rates of cosmogenic nuclide ^{14}C at different cutoff rigidities
7 and altitudes [atoms/(g·year)]

8 **Table S4** Production rates of cosmogenic nuclide ^{21}Ne at different cutoff
9 rigidities and altitudes [atoms/(g·year)]

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41 **Table S1** Production rates of cosmogenic nuclide ^{10}Be at different cutoff rigidities
 42 and altitudes [atoms/(g·year)]

Cutoff rigidity	Altitude (km)	This work	Argento	LSDn
14GV	0	2.6	1.89	2.4
	1	5.3	4.17	5.3
	2	10.4	8.32	10.8
	3	18.5	15.32	20.3
	4	30.5	25.9	34.9
	5	46.2	40.9	55.6
11.2GV	0	2.9	2.3	2.73
	1	6.2	5.1	6.3
	2	12.0	10.1	13.5
	3	21.9	18.9	24.8
	4	37.1	32.9	43.4
	5	57.5	52.5	70.1
6.4GV	0	3.8	3.29	3.62
	1	8.3	7.6	8.7
	2	16.7	15.9	18.8
	3	31.2	30.5	37.1
	4	53.4	54.1	67.3
	5	85	88.3	112.6
3.3GV	0	4.8	4.1	4.38
	1	11.23	9.76	10.8
	2	23.1	21.0	23.7
	3	44.4	41.8	48.2
	4	79.2	76.2	90
	5	128	129	155
1.2GV	0	5.2	4.4	4.68
	1	12.6	10.6	11.5
	2	27.1	23.2	25.4

Cutoff rigidity	Altitude (km)	This work	Argento	LSDn
0GV	3	53.0	47.0	51.8
	4	96.0	88.0	97.7
	5	163.0	151.6	170.4
	0	5.56	4.5	4.7
	1	12.4	10.9	11.5
	2	26.7	23.8	25.5
	3	52.2	48.2	52.0
	4	97.8	89.7	98.1
	5	165.9	156.0	171.2

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67 **Table S2** Production rates of cosmogenic nuclide ^{26}Al at different cutoff
68 rigidities and altitudes [atoms/(g·year)]

Cutoff rigidity	Altitude (km)	This work	Argento	LSDn
14GV	0	17.7	12.3	16.8
	1	36.1	26.9	37.6
	2	70.2	53.1	75.7
	3	125.1	96.9	140.3
	4	206.2	162.3	239.7
	5	312.2	253.6	378.7
11.2GV	0	19.5	15.0	19.5
	1	41.7	33.3	44.6
	2	80.8	66.7	91.5
	3	147.6	123.0	172.4
	4	250.6	208.4	299.1
	5	388.8	329.0	479.4
6.4GV	0	25.5	22.0	25.9
	1	56.0	50.3	61.9
	2	112.3	104.0	132.2
	3	211.1	198.0	259.0
	4	361.0	345.8	466.7
	5	574.0	562.0	774.8
3.3GV	0	32.7	27.4	31.4
	1	75.9	64.8	76.6
	2	156.3	138.6	167.7
	3	299.8	273.5	337.8
	4	534.9	494.4	626.6
	5	865.9	832.6	1072.4
1.2GV	0	35.3	29.7	33.7
	1	84.9	71.3	82.1
	2	182.9	155.0	180.3
	3	358.4	311.2	365.7

Cutoff rigidity	Altitude (km)	This work	Argento	LSDn
0GV	4	648.8	574.4	685.4
	5	1101.1	990.0	1188.8
	0	37.6	30.3	33.9
	1	84.1	72.9	82.5
	2	180.7	158.7	181.2
	3	352.7	319.5	367.4
	4	660.8	590.9	688.9
	5	1120.0	1020.1	1195.3

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101 **Table S3** Production rates of cosmogenic nuclide ^{14}C at different cutoff rigidities
102 and altitudes [atoms/(g·year)]

Cutoff rigidity	Altitude (km)	This work	Argento	LSDn
14GV	0	7.96	6.11	7.68
	1	16.3	13.3	17.2
	2	31.7	26.1	34.4
	3	56.4	47.2	63.6
	4	93.0	78.5	108.2
	5	140.8	121.7	170.2
11.2GV	0	8.8	7.5	8.94
	1	18.8	24.4	20.4
	2	36.4	32.6	41.7
	3	66.6	59.7	78.2
	4	113.0	100.4	135.2
	5	175.4	157.1	215.8
6.4GV	0	11.5	11.0	11.9
	1	25.2	25.1	28.4
	2	50.7	51.5	60.5
	3	95.2	97.4	118.1
	4	162.8	168.7	212.0
	5	258.9	271.8	350.5
3.3GV	0	14.7	13.9	14.5
	1	34.2	48.2	35.3
	2	70.5	69.4	77.0
	3	135.2	135.9	154.5
	4	241.3	243.6	285.6
	5	390.5	406.7	486.9
1.2GV	0	15.9	15.2	15.6
	1	38.3	54.0	37.9
	2	82.5	78.4	82.9
	3	161.6	156.5	167.6

Cutoff rigidity	Altitude (km)	This work	Argento	LSDn
0GV	4	292.6	286.9	313.3
	5	496.6	490.5	541.2
	0	16.9	15.3	15.7
	1	38.0	54.7	38.1
	2	81.5	79.5	83.3
	3	159.1	158.9	168.5
	4	298.0	291.6	314.8
	5	505.4	499.3	544.4

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Table S4 Production rates of cosmogenic nuclide ^{21}Ne at different cutoff rigidities and altitudes [atoms/(g·year)]

Cutoff rigidity	Altitude (km)	This work
14GV	0	10.2
	1	20.8
	2	40.6
	3	72.2
	4	119.1
	5	180.2
11.2GV	0	11.3
	1	24.1
	2	46.6
	3	85.2
	4	144.7
	5	224.5
6.4GV	0	14.7
	1	32.3
	2	64.8
	3	121.9
	4	208.4
	5	331.4
3.3GV	0	18.9
	1	43.8
	2	90.2
	3	173.1
	4	308.8
	5	499.9
1.2GV	0	20.4
	1	49.0
	2	105.6
	3	206.9

Cutoff rigidity	Altitude (km)	This work
0GV	4	374.5
	5	635.7
	0	21.7
	1	48.6
	2	104.3
	3	203.6
	4	381.5
	5	646.9

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