

Supplement Table

Previously published luminescence ages in both the Tibetan Plateau and the Mu Us desert

No.	Latitude	Longitude	Altitude (m)	Age (ka)	Sediment type	Dating method	Data source
Previous OSL/IRSL ages from the Tibetan Plateau							
1	30°34'	91°07'	4500	9.7±2.0	loess	OSL	Lehmkuhl et al. (2000)
2	30°25'	90°49'	4680	9.2±2.1	loess	OSL	Lehmkuhl et al. (2000)
3	30°26'	90°48'	4620	10.5±2.2	loess	OSL	Lehmkuhl et al. (2000)
4	29°44'	89°49'	4571	8.8±3.9	loess	OSL	Lehmkuhl et al. (2000)
5	29°46'	89°51'	4835	7.8±1.2	loess	OSL	Lehmkuhl et al. (2000)
6	30°08'	95°30'	3070	25.5±4.0	loess	OSL	Lehmkuhl et al. (2000)
7	31°57'	98°48'	4220	8.1±2.1	loess	OSL	Lehmkuhl et al. (2000)
8	32°07'	98°52'	4010	8.9±1.1	loess	OSL	Lehmkuhl et al. (2000)
9	31°59'	99°05'	4150	3.1±0.5	loess	OSL	Lehmkuhl et al. (2000)
10	31°29'	89°13'	4646	7.0±0.6	loess	TL	Lehmkuhl et al. (2000)
11	31°44'	87°32'	4715	3.5±0.3	loess	TL	Lehmkuhl et al. (2000)
12					sand	OSL	Liu et al. (2009)
13					sand	OSL	Liu et al. (2009)
14	36°36'	100°24'	3246	22.6±1.8	sand	OSL	Madsen et al. (2007)
15	35°55'	94°40'	3631	8.6±0.7	loess	OSL	Owen et al. (2006)
16	38°51'	93°25'	2782	14.9±1.5	loess	OSL	Owen et al. (2006)
17	26°35'	100°30'	3305	8.3±0.6	loess	IRSL	Porter et al. (2001)
18	26°36'	100°31'	3305	11.7±0.9	loess	IRSL	Porter et al. (2001)
19	26°39'	100°34'	3305	15.1±1.6	sand	IRSL	Porter et al. (2001)
20	26°41'	100°36'	3305	23.0±1.6	loess	IRSL	Porter et al. (2001)
21	26°42'	100°37'	3305	17.2±1.4	loess	IRSL	Porter et al. (2001)
22	26°43'	100°38'	3305	14.5±1.1	loess	IRSL	Porter et al. (2001)
23	26°44'	100°39'	3305	5.1±0.4	loess	IRSL	Porter et al. (2001)
24	26°45'	100°40'	3305	16.9±1.4	loess	IRSL	Porter et al. (2001)
25	26°46'	100°41'	3305	12.7±1.0	loess	IRSL	Porter et al. (2001)
26	29°19'	89°33'	3800	2.7±0.2	loess	OSL	Sun et al. (2007)
27	29°19'	88°55'	3920	11.0±1.2	loess	OSL	Sun et al. (2007)
28	29°16'	88°51'	3970	13.0±1.4	loess	OSL	Sun et al. (2007)
OSL ages of sand in the Mu Us desert							
1	37°39'	108°37'	1400	11.1±1.1	sand	IRSL	Lai et al., 1999
2	37°39'	108°37'	1400	16.8±1.6	sand	IRSL	Lai et al., 1999
3				1.05±0.10	sandy paleosol	OSL	Li et al. (2002)
4				3.50±0.36	sand	OSL	Li et al. (2002)
5				9.86±1.36	sandy paleosol	OSL	Li et al. (2002)
6				1.25±0.14	sandy paleosol	OSL	Li et al. (2002)
7				1.67±0.18	sand	OSL	Li et al. (2002)
8				11.1±1.3	sand	OSL	Li et al. (2002)
9	38°48.548'	110°23.283'	1195	7.39±0.48	sandy paleosol	OSL	Lu et al. (2005)
10	38°48.548'	110°23.283'	1195	12.68±1.08	sand	OSL	Lu et al. (2005)
11	38°48.548'	110°23.283'	1195	13.65±1.5	sand	OSL	Lu et al. (2005)
12	38°48.548'	110°23.283'	1195	37.71±2.75	sandy loess	OSL	Lu et al. (2005)
13	38°48.548'	110°23.283'	1195	52.05±4.03	sand	OSL	Lu et al. (2005)
14	38°48.548'	110°23.283'	1195	57.08±4.82	sand	OSL	Lu et al. (2005)
15	38°48.005'	110°24.107'	1224	7.77±0.5	sandy paleosol	OSL	Lu et al. (2005)

16	38°48.005'	110°24.107'	1224	8.32±0.45	sandy loess	OSL	Lu et al. (2005)
17	38°48.005'	110°24.107'	1224	8.54±0.4	sandy loess	OSL	Lu et al. (2005)
18	38°48.005'	110°24.107'	1224	9.81±0.36	sand	OSL	Lu et al. (2005)
19	38°48.005'	110°24.107'	1224	10.97±0.64	sand	OSL	Lu et al. (2005)
20	38°48.005'	110°24.107'	1224	41.19±2.11	sandy loess	OSL	Lu et al. (2005)
21	38°13'	109°45'		0.29±0.05	sand	OSL	Lu et al. (2005)
22	38°13'	109°45'		2.39±0.14	sandy paleosol	OSL	Lu et al. (2005)
23	38°8.223'	109°47.471'	1112	7.57±0.17	sandy paleosol	OSL	Lu et al. (2005)
24	38°8.223'	109°47.471'	1112	7.93±0.37	sandy paleosol	OSL	Lu et al. (2005)
25	38°8.223'	109°47.471'	1112	8.67±0.32	sand	OSL	Lu et al. (2005)
26	38°8.223'	109°47.471'	1112	10.04±0.31	sand	OSL	Lu et al. (2005)
27	37°35'	108°40'	1401	7.56±0.43	sandy loess	OSL	Lu et al. (2005)
28	37°56.186'	109°58.952'	1022	5.09±0.74	sand	OSL	Lu et al. (2005)
29	37°56.186'	109°58.952'	1022	11.55±1.57	sandy paleosol	OSL	Lu et al. (2005)
30	37°49.455'	110°24.203'	1152	16.19±3.48	sandy paleosol	OSL	Lu et al. (2005)
31	38°19.278'	109°43.907'	1114	0.95±0.14	sandy paleosol	OSL	Lu et al. (2005)
32	38°19.278'	109°43.907'	1114	2.67±0.40	sandy paleosol	OSL	Lu et al. (2005)
33	38°19.278'	109°43.907'	1114	7.25±1.23	sand	OSL	Lu et al. (2005)
34	38°19.278'	109°43.907'	1114	8.74±1.37	sand	OSL	Lu et al. (2005)
35	38°19.278'	109°43.907'	1114	18.66±2.42	sandy loess	OSL	Lu et al. (2005)
36				2.6±0.3	sand	OSL	Sun et al. (2006)
37				5.7±0.4	sandy paleosol	OSL	Sun et al. (2006)
38				5.3±0.5	sandy paleosol	OSL	Sun et al. (2006)
39				8.2±0.7	sandy paleosol	OSL	Sun et al. (2006)
40				11.5±1.2	sand	OSL	Sun et al. (2006)
41				3.7±0.4	sand	OSL	Sun et al. (2006)
42				5.6±0.6	sandy paleosol	OSL	Sun et al. (2006)
43				6.9±0.6	sandy paleosol	OSL	Sun et al. (2006)
44				8.8±1.1	sandy paleosol	OSL	Sun et al. (2006)
45				9.4±1	sand	OSL	Sun et al. (2006)
46				5.6±0.5	sandy paleosol	OSL	Sun et al. (2006)
47				7.7±0.6	sandy paleosol	OSL	Sun et al. (2006)
48				8.3±0.6	sand	OSL	Sun et al. (2006)
49				7.5±0.5	sandy paleosol	OSL	Sun et al. (2006)
50				8.8±0.6	sandy paleosol	OSL	Sun et al. (2006)
51				9.3±0.6	sand	OSL	Sun et al. (2006)

The references for the data source were listed in the paper.