40Ar/39Ar Total-fusion and Step-heating Analyses of Single White Mica Grains separated from Himalayan Foredeep Sedimentary Rocks

Step	40Ar/39Ar	37Ar/39Ar	36Ar/39Ar	40ArR	K/Ca	40ArR	40ArK	39ArCa	36ArCa	39Ar	Age (d)	s.d.
(a)	(b)	(b)	(b)	(mol, c)		(%, c)	(%, c)	(%, c)	(%, c)	(%)	(Ma)	(Ma)
HM90-29F		White Mica		J = 0.006428			Total gas age =		61.70 +- 0.40 Ma			
TF1	2.255	0.000615	0.000362	1.80E-15	796	95.1	0.20	0.00	0.00	18.5	24.69	0.65
TF2	2.343	0.002607	0.000689	2.00E-15	188	91.1	0.20	0.00	0.10	20.9	24.59	0.38
TF3	2.454	0.002579	0.001048	1.00E-15	190	87.2	0.20	0.00	0.10	10.4	24.64	0.85
TF4	2.444	0.001808	0.000996	1.50E-15	271	87.8	0.20	0.00	0.00	15.1	24.71	0.64
TF5	31.780	0.004424	0.001791	1.60E-14	111	98.3	0.00	0.00	0.10	11.3	330.20	1.00
TF6	2.421	0.003064	0.001590	7.70E-16	160	80.4	0.20	0.00	0.10	8.8	22.44	1.07
TF7	2.407	0.003067	0.000709	1.50E-15	160	91.1	0.20	0.00	0.10	15.1	25.25	0.61
HM91-9B		White Mica		J = 0.006438			Total gas age =		31.47 +- 0.18 Ma			
TF1	2.461	0.001518	0.001306	1.50E-15	323	84.1	0.20	0.00	0.00	4.4	23.89	0.60
TF2	2.338	-0.000175	0.000433	2.30E-15	2802	94.3	0.20	0.00	0.00	6.3	25.43	0.40
TF3	8.110	0.001160	0.003298	9.50E-15	423	87.9	0.10	0.00	0.00	7.9	80.98	0.39
TF4	2.263	0.000922	0.000833	6.00E-15	532	88.9	0.20	0.00	0.00	17.7	23.23	0.10
TF5	2.285	0.002035	0.001270	2.10E-15	241	83.4	0.20	0.00	0.00	6.7	22.00	0.43
TF6	2.365	0.001327	0.000875	3.30E-15	369	88.9	0.20	0.00	0.00	9.4	24.25	0.25
TF7	2.329	0.000783	0.000451	1.20E-14	626	94.1	0.20	0.00	0.00	32.0	25.27	0.11
TF8	3.517	0.001120	0.004866	2.40E-15	438	59.0	0.10	0.00	0.00	6.9	23.94	0.42
TF9	4.841	0.001455	0.000195	6.90E-15	337	98.7	0.10	0.00	0.20	8.6	54.67	0.26
HM91-9B		White Mica		J = 0.006438			Total gas age =		22.15 +- 0.22 Ma			
0.16W	7.383	0.008728	0.018497	6.90E-16	56	25.9	0.10	0.00	0.00	9.1	22.09	1.28
0.25W	1.951	0.000929	0.000073	5.50E-15	527	98.7	0.20	0.00	0.30	72.1	22.22	0.14
0.40W	1.872	0.007958	0.000022	3.30E-16	62	99.5	0.20	0.00	9.70	4.5	21.49	1.48
FUSE	1.935	0.000854	0.000079	1.10E-15	574	98.6	0.20	0.00	0.30	14.2	22.01	0.58

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Step (a)	40Ar/39Ar (b)	37Ar/39Ar (b)	36Ar/39Ar (b)	40ArR (mol, c)	K/Ca	40ArR (%, c)	40ArK (%, c)	39ArCa (%, c)	36ArCa (%, c)	39Ar (%)	Age (d) (Ma)	s.d. (Ma)
HM91-12D		White Mica		J = 0.006417			Total gas age =		46.27 +- 0.25 Ma			
TF1	3.136	0.000698	0.000246	6.40E-15	702	97.6	0.10	0.00	0.10	12.8	35.07	0.20
TF2	5.688	0.000315	0.000469	1.40E-14	1557	97.5	0.10	0.00	0.00	15.6	63.07	0.16
TF3	3.965	0.000201	0.000329	7.40E-15	2434	97.4	0.10	0.00	0.00	11.8	44.17	0.23
TF4	2.766	0.001216	0.000886	5.60E-15	403	90.4	0.20	0.00	0.00	13.7	28.71	0.19
TF5	2.635	0.000631	0.000469	3.60E-15	776	94.6	0.20	0.00	0.00	8.9	28.62	0.26
TF6	7.181	0.000844	0.001049	1.70E-14	581	95.6	0.10	0.00	0.00	15.0	77.79	0.31
TF7	2.464	0.003256	0.000309	2.10E-15	151	96.1	0.20	0.00	0.30	5.4	27.22	0.45
TF8	2.795	0.001716	0.000083	1.80E-15	286	99.0	0.20	0.00	0.50	3.9	31.74	0.65
TF9	4.247	0.001150	0.001090	8.20E-15	426	92.3	0.10	0.00	0.00	12.9	44.83	0.34
HM91-12D		White Mica		J = 0.006417			Total gas age =		27.66 +- 0.29 Ma			
0.05W	4.407	0.011543	0.007047	7.80E-17	42	52.7	0.10	0.00	0.00	1.3	26.67	9.94
0.10W	2.571	0.002646	0.000326	1.10E-15	185	96.1	0.20	0.00	0.20	16.3	28.38	0.81
0.15W	2.390	0.001160	0.000003	2.90E-15	422	99.8	0.20	0.00	9.80	46.9	27.40	0.21
0.20W	2.459	0.001039	0.000007	1.30E-15	472	99.7	0.20	0.00	3.70	19.9	28.17	0.51
FUSE	2.366	0.002986	0.000009	9.70E-16	164	99.7	0.20	0.00	8.40	15.6	27.10	0.64
HM91-12G		White Mica (Coarse)		J = 0.006366			Total gas age =		83.51 +- 0.43 Ma			
TF1	9.252	0.000042	0.000792	1.90E-14	11613	97.4	0.00	0.00	0.00	18.5	100.66	0.31
TF2	2.502	0.001055	0.000566	2.30E-15	465	93.2	0.20	0.00	0.00	9.0	26.57	0.43
TF3	3.072	0.000287	0.001994	3.50E-15	1709	80.7	0.10	0.00	0.00	12.8	28.25	0.39
TF5	12.323	0.000464	0.000335	2.80E-14	1055	99.2	0.00	0.00	0.00	20.3	135.15	0.32
TF6	33.600	0.000214	0.001089	1.10E-14	2294	99.0	0.00	0.00	0.00	3.1	346.60	1.40
TF4	6.628	0.000151	0.000744	1.00E-14	3240	96.6	0.10	0.00	0.00	14.2	72.08	0.28
TF7	4.767	0.000600	0.001246	3.00E-15	816	92.2	0.10	0.00	0.00	6.2	49.78	0.51
TF8	2.617	0.001249	0.000822	9.40E-16	392	90.6	0.20	0.00	0.00	3.6	27.01	1.03
TF9	4.093	0.000786	0.000852	5.30E-15	624	93.7	0.10	0.00	0.00	12.4	43.54	0.27

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Step (a)	40Ar/39Ar (b)	37Ar/39Ar (b)	36Ar/39Ar (b)	40ArR (mol, c)	K/Ca	40ArR (%, c)	40ArK (%, c)	39ArCa (%, c)	36ArCa (%, c)	39Ar (%)	Age (d) (Ma)	s.d. (Ma)
HM91-12G		White Mica (fine)		J = 0.006407			Total gas age =		41.07 +- 0.53 Ma			
TF1	2.760	0.001287	0.001871	1.30E-15	381	79.8	0.20	0.00	0.00	41.7	25.28	0.58
TF2	2.807	0.003840	0.000025	4.40E-16	128	99.6	0.20	0.00	4.10	10.7	32.02	1.69
TF3	10.311	0.001110	0.000177	2.30E-15	442	99.5	0.00	0.00	0.20	15.5	114.79	1.49
TF4	2.462	0.026730	0.000008	1.20E-15	18	99.8	0.20	0.00	86.10	32.2	28.18	1.11
HM91-12G		White Mica		J = 0.006366			Total gas age =		27.54 +- 0.44 Ma			
0.06W	6.127	0.014231	0.012746	1.40E-16	34	38.5	0.10	0.00	0.00	3.9	26.88	6.96
0.09W	2.485	0.000318	0.000192	2.40E-15	1539	97.5	0.20	0.00	0.00	67.8	27.62	0.40
0.11W	2.436	0.000299	0.000002	6.20E-16	1640	99.8	0.20	0.00	5.20	17.3	27.70	0.19
FUSE	2.379	0.000766	0.000024	3.90E-16	640	99.5	0.20	0.00	0.90	11.0	26.99	1.61
HM91-12G		White Mica		J = 0.006366			Total gas age =		85.59 +- 0.79 Ma			
0.7W	7.585	0.000670	0.000170	4.20E-15	731	99.3	0.10	0.00	0.10	52.2	84.47	0.64
0.11W	7.622	0.004269	0.000004	2.10E-15	115	99.9	0.10	0.00	30.40	25.6	85.42	1.31
FUSE	8.031	0.002695	0.000461	1.90E-15	182	98.3	0.10	0.00	0.20	22.2	88.42	2.11
HM91-85A		White Mica		J = 0.006387			Total gas age =		43.69 +- 0.27 Ma			
TF1	6.282	0.000078	0.000305	5.40E-15	6301	98.5	0.10	0.00	0.00	14.1	69.92	0.48
TF2	2.560	0.002143	0.000466	3.50E-15	229	94.5	0.20	0.00	0.10	23.8	27.64	0.28
TF3	3.512	0.000545	0.001878	2.60E-15	898	84.1	0.10	0.00	0.00	14.1	33.70	0.58
TF4	2.778	0.001200	0.001184	4.50E-15	408	87.3	0.20	0.00	0.00	30.4	27.72	0.19
TF5	2.787	0.000111	0.000621	1.80E-15	4430	93.3	0.20	0.00	0.00	11.2	29.70	0.48
TF6	14.957	0.003087	0.000832	5.80E-15	159	98.3	0.00	0.00	0.10	6.4	162.00	1.20

Samples analyzed by M S Pringle on the VULKAAN system at the Free University Amsterdam (after techniques described in Wijbrans et al. 1995).
(a) TFx: total fusion analysis number x; x. xxW: power (watts) of argon laser beam used to heat that step .
(b) Corrected for 37Ar and 39Ar decay, half-lives 35.1 days and 259 years, respectively.
(c) Subscripts indicate radiogenic (R), calcium-derived (Ca), and potassium-derived (K) argon.
(d) Lambda E = 0.581E-10/yr, lambda B = 4.692E-10/yr. Ages reported relative to 85G003 TCR San @ 27.92Ma; errors reported as 1 s.d. of analytical precision.