

TABLE 1: Apatite fission track data.

Sample Number	Lat.	Long.	Rho-S ($\times 10^6$ tracks/cm ²)	NS	Rho-I ($\times 10^6$ tracks/cm ²)	NI	Rho-D ($\times 10^6$ tracks/cm ²)	ND	NG	CS (%)	Sample Age (Ma)	Field Number
M1	42°58'30"	85°49'20"	1.238	632	2.244	1145	1.792	7838	22	12.0	186.9 \pm 10.0	89-M-52
M2	43°56'40"	85°51'50"	0.748	355	2.591	1229	1.792	7838	20	0.7	97.57 \pm 9.9	89-M-44
M3	43°55'10"	85°52'40"	0.427	452	5.218	5591	1.792	7838	39	<0.1	32.51 \pm 5.3	89-M-30
M4	43°51'50"	85°49'40"	0.391	977	3.232	8080	1.792	7838	37	<0.1	38.07 \pm 4.0	89-M-14
M5	43°51'20"	85°49'00"	0.180	92	2.279	1170	1.792	7838	16	0.3	29.65 \pm 5.7	89-M-7

Lat, sample latitude; Long, sample longitude; Rho-S, spontaneous track density; NS, number of spontaneous tracks counted; Rho-I, induced track density in external detector; NI, number of induced tracks counted; Rho-D, induced track density in external detector adjacent to CN5 dosimetry glass; ND, number of tracks counted in determining Rho-D; NG, number of individual grains dated; CS, chi-square probability (Galbraith, 1981; Green, 1981); Sample age, sample fission track central age (all grains) (Galbraith and Laslett, 1994), error is one sigma, calculated using zeta calibration method (Hurford and Green, 1984) with zeta of 385.9 (T. Dumitru, unpublished); Field number, original sample number in Hendrix (1992).

Summary of key laboratory procedures: Apatites etched 20 seconds in 5N nitric acid at room temperature. Grains dated by external detector method with muscovite detectors. CN5 dosimetry glasses (\approx 11 ppm undepleted U) with external detectors used as neutron flux monitors. Samples irradiated in well thermalized (Cd ratio \approx 118 for dilute Au) D₂O box of Texas A&M Nuclear Science Center Reactor with requested thermal neutron flux of 1×10^{16} neutrons-cm⁻². External detectors etched 14 minutes in 48% HF. Tracks counted with Zeiss Axioskop microscope with 100x air objective, 1.25x tube factor, 10x eyepieces, transmitted light with supplementary reflected light as needed. External detector prints located with Kinetek automated scanning stage (Dumitru, 1994). Only grains with c-axes subparallel to slide plane dated. Confined tracks lengths measured only in grains with c-axes subparallel to slide plane, only horizontal tracks measured (within \pm 5-10°), following protocols of Laslett et al. (1982). Tracks lengths measured with digitizing tablet and drawing tube, calibrated against stage micrometer (Dumitru, 1994). Age calculation, radial plot construction, table construction, etc. done with program by D.A. Coyle. Analyst: T.A. Dumitru.

TABLE 2: Two-component analysis (Galbraith and Laslett, 1994) of samples M3, M4, M5.

Sample Number	YOUNGER COMPONENT				OLDER COMPONENT			
	Component Age (Ma)	Standard Error on Age (Ma)	Proportion of Grains within Component	Standard Error on Proportion	Component Age (Ma)	Standard Error on Age (Ma)	Proportion of Grains within Component	Standard Error on Proportion
M3	20.50	1.83	0.90	0.10	71.35	27.00	0.10	0.10
M4	27.10	1.97	0.86	0.08	96.24	08.73	0.14	0.08
M5	22.52	3.02	0.77	0.16	61.22	15.97	0.23	0.16
M3+M4+M5 Composited	23.80	1.30	0.87	0.06	89.37	08.40	0.13	0.06

Computed by R.F. Galbraith.

ADDITIONAL REFERENCES NOT CITED IN PAPER

- Dumitru, T.A., 1994, A new computer-automated microscope stage system for fission-track analysis, *Nuclear Tracks*, v. 21, in press.
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- Green, P.F., 1981, A new look at statistics in fission track dating, *Nuclear Tracks*, v. 5, p. 77-86.
- Hurford, A.T., and Green, P.F., 1983, The zeta age calibration of fission track dating, *Isotope Geoscience*, v. 1, p. 285-317.
- Laslett, G.M., Kendall, W.S., Gleadow, A.J.W., and Duddy, I.R., 1982, Bias in the measurement of fission track length distributions, *Nuclear Tracks*, v. 6, p. 79-85.