

Table 4: Natural Thermoluminescence (NTL) Data for Antarctic Meteorites

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The measurement and data reduction methods were described by Hasan et al. (1987, Proc. 17th LPSC, E703-E709; 1989, LPSC XX, 383-384). For meteorites whose TL lies between 5 and 100 krad the natural TL is related primarily to terrestrial history. Samples with NTL <5 krad have TL below that which can reasonably be ascribed to long terrestrial ages. Such meteorites have had their TL lowered by heating within the last million years or so (by close solar passage, shock heating, or atmospheric entry), exacerbated, in the case of certain achondrite classes, by "anomalous fading".

Sample	Class	Natural TL [krad at 250 deg. C]	Sample	Class	Natural TL [krad at 250 deg. C]
EET96029	C2	<1	EET96024	L6	2.5 ± 0.2
GRA95229	CR2	16 ± 3	EET96028	L6	50 ± 2
GRO95551	CHON-AN	18.2 ± 0.3	EET96038	L6	85.2 ± 0.5
MET96500	HOW	20.7 ± 0.9	EET96060	L6	51.3 ± 0.7
GRO95509	H5	<3	EET96061	L6	0.6 ± 0.1
EET96023	H6	23.2 ± 0.1	GRO95553	L6	40.6 ± 0.1
EET96025	H6	17.0 ± 0.1	GRO95562	L6	24.2 ± 0.2
EET96027	H6	9.2 ± 0.1	GRO95563	L6	20.9 ± 0.5
GRO95554	H6	45 ± 3	GRO95564	L6	60 ± 1
EET96035	L4	<1	GRO95567	L6	5.3 ± 0.1
GRA95216	L5	74.6 ± 0.3	GRO95568	L6	28 ± 1
GRA95217	L5	2.0 ± 0.2	GRO95604	L6	49.5 ± 0.2
GRO95579	L5	79.0 ± 0.5	GRO95636	L6	15.9 ± 0.1
EET96020	L6	8.9 ± 0.1	GRO95637	L6	39.3 ± 0.1
EET96022	L6	53.4 ± 0.1	GRO95552	LL4	39.8 ± 0.2
			GRO95557	LL5	73.2 ± 0.1
			GRO95556	LL6	47.2 ± 0.5
			EET96026	R	<2

The quoted uncertainties are the standard deviations shown by replicate measurements of a single aliquot.

COMMENTS: The following comments are based on natural TL data, TL sensitivity, the shape of the induced TL glow curve, classifications, JSC and Arkansas group sample descriptions.

Pairings suggested by the TL data:

L5: GRO95579 with GRO95529 (AMN 21:1)

L6: EET96020 with EET90157 group (AMN 16:1).

L6: EET96022 and EET 96060 with EET92055 group (AMN 18:1)

L6: EET96024 with EET86800 (Benoit et al., 1994, J. Geophys. Res. 99, 2073-2085)

L6: GRO95563 with GRO95500 (AMN 21:1)