

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 and possibly enstatite chondrites, by "anomalous fading"

Sample	Class	NTL [krad at 250 deg. C]		Sample	Class	NTL [krad at 250 deg. C]	
QUE94204	E7	22	+ 5	QUE94207	L6	21	+ 9
QUE94217	H5	40.7	+ 0.2	QUE94208	L6	13	+ 5
QUE94237	H5	44.4	+ 0.4	QUE94209	L6	13	+ 5
QUE94242	H5	1.5	+ 0.1	QUE94210	L6	9	+ 2
QUE94252	H5	30.6	+ 0.4	QUE94211	L6	31.0	+ 0.1
LON94104	H6	44.9	+ 0.1	QUE94212	L6	12	+ 2
QUE94243	H6	19.1	+ 0.2	QUE94213	L6	2.0	+ 0.9
QUE94229	L5	7.2	+ 0.1	QUE94215	L6	11	+ 1
QUE94240	L5	16.0	+ 0.1	QUE94216	L6	5	+ 1
QUE94246	L5	6.4	+ 0.1	QUE94227	L6	3	+ 1
QUE94304	L5	4	+ 1	QUE94228	L6	2.0	+ 0.9
QUE94360	L5	10.7	+ 0.1	QUE94230	L6	12	+ 2
QUE94380	L5	2.9	+ 0.1	QUE94231	L6	2.0	+ 0.5
LON94103	L6	0.5	+ 0.1	QUE94232	L6	80.1	+ 0.1
LON94105	L6	0.8	+ 0.1	QUE94233	L6	4	+ 1
LON94106	L6	79.4	+ 0.6	QUE94234	L6	17	+ 5
LON94107	L6	0.6	+ 0.1	QUE94235	L6	76	+ 1
LON94108	L6	16.7	+ 0.1	QUE94236	L6	9	+ 2
LON94109	L6	1.2	+ 0.1	QUE94238	L6	15.7	+ 0.1
QUE94202	L6	15	+ 5	QUE94239	L6	10	+ 4
QUE94203	L6	11	+ 1	QUE94241	L6	4	+ 1
QUE94205	L6	7.0	+ 0.1	QUE94244	L6	2.3	+ 0.1
QUE94206	L6	3	+ 1	QUE94251	L6	41.7	+ 0.1
				QUE94255	L6	52.4	+ 0.1
				QUE94247	LL6	4	+ 1

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

Benoit P.H. and Sears D. (1996c) Natural thermoluminescence (NTL) data for antarctic meteorites. *Antarctic Meteorite Newsletter* **19(2)**, 14-15. Johnson Space Center, Houston TX.

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

QUE94202, QUE94203, QUE94205, QUE94206, QUE94207, QUE94208, QUE94209, QUE94210, QUE94212, QUE94213, QUE94215, QUE94216, QUE94227, QUE94228, QUE94230, QUE94231, QUE94233, QUE94234, QUE94236, QUE94239, and QUE94241 (all L6) may be heavily shocked.

1. Pairings (Confirmations of pairings):

L6: QUE94203, QUE94205, QUE94206, QUE94207, QUE94208, QUE94209, QUE94210, QUE94212, QUE94213, QUE94215, QUE94216, QUE94227, QUE94228, QUE94231, QUE94233, QUE94234, QUE94236, QUE94239, and QUE94241 with QUE94202 (AMN 19:1).

2. TL data do not confirm pairings proposed in the Newsletter:

L6: QUE94211, QUE94235, and QUE94238 with the QUE94202 group (AMN 19:1).

3. Additional pairings suggested by TL data:

H5: QUE94237 and QUE94217.

L5: QUE94304 and QUE94380 with the QUE90205 group (AMN 15:2).

L5: QUE94229 and QUE94246 with the QUE90207 group (AMN 15:2).

L6: LON94105 and LON94107 with LON94103.

L6: QUE94212 and QUE94230 with the QUE94202 group.

L6: QUE94235 with QUE94232.

L6: QUE94202 group may be paired with QUE93015 (AMN 19:1).