
Ancient TL

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Ancient TL SUPPLEMENT

Date List

November 1991 Issue 5

1. This list includes dates for fired materials of archaeological interest, submitted to *Ancient TL* during 1991 for which sufficient information has been supplied. Readers are referred to earlier issues of the Date List for a fuller description of the structure of entries.

2. Application forms are available from the Editor, who will be pleased to advise on data compilation; laboratories wishing to submit dates for which the current date entry specification is not suitable should write to him. The application forms may be supplied on either paper or magnetic media.

Laboratory: [name]

Date Entry Specification

Entry: [entry number]

PART I

Site: [Name]

Location: [Region, country]

Grid Ref.: [National map reference]

Site Description: [Brief description of period and nature of site]

Dates/Ages:

Lab. Ref. Material Archaeological Ref.

[Type] [Type]

[Lab. abbrev.]

TL Context Date
Single Age

800 AD $\pm$ 50 (Dur87TLfg)

100-1/6

pottery

ABC-1a

[Overall error]

[Test year]

[Technique]

[Sample ref.]

[Context reference]

[Dated material]

— TL Context Components: [Details of component TL dates/ages used to derive Context Date/Age] —

Archaeological Evidence: [Excavator's brief description of context(s)]

Site Director: [Full name and institutional postal address]

Reports: [Details of excavation and laboratory reports]

PART II

Section A. TL Measurements

1. min.([mineral]) tech.([technique]; [grain size range, gsr] μm)
Data tabulated for each sample:
2. $P = [\text{value}] \pm \text{s.e. Gy}$ 2a. $I/P = [\text{value}]$ 3. Slopes [2nd/1st: $[\text{value}] \pm \text{s.e.}$]
4. [Type of plateau] Plateau $[\pm [\text{value}] \%; [T_1 - T_2]]$
- 4a. Peak [@ $[\text{value}] ^\circ\text{C}$; [heating rate] $^\circ\text{s}$; [pre-heat details if applicable]]
5. Stability[[interval, $T_1 - T_2$]; [period]; [storage $T ^\circ\text{C}$]; [result; $[\text{value}] \pm [\text{value}] \%$]]
6. a value = $[\text{value}]$ or b value = $[\text{value}]$

Section B. Dose-rate Measurements

Data tabulated for each sample:

1. Total Effective Dose-rate = $[\text{value}] \pm \text{s.e. mGy/a}$ [$\alpha = [\text{value}] \%$ [method];
 $\beta = [\text{value}] \%$ [method]; $\gamma = [\text{value}] \%$ [method]; $\cos(\text{mic}) = [\text{value}] \%$ [method]]
2. Radon $[\pm [\text{value}] \%$ [method]]
3. Water [Sample ($[\text{value}] \pm \text{s.e. } \%$); (Burial) Environment ($[\text{value}] \pm \text{s.e. } \%$)]

Section C. Error [[Procedure : eA76 or specify other]]

Section D. TL Age

Data tabulated for each sample:

TL Age $[\pm [\text{random error}]; \pm [\text{overall accuracy}]]$

Special Remarks: [Details of entries with * or any other additional information]

KEY TO ABBREVIATIONS

STANDARD METHODS/TECHNIQUES/PROCEDURES

i	Inclusion	pd	Pre-dose	a Plat	Age plateau
fg	Fine-grain	MA	Multiple activation	d Plat	Dose plateau
mmi	Multi-mineral	ADD	Additive dose proc.	s Plat	TL Signal plateau
		Sb	Sensitivity baseline		
α -c	Alpha counting	FPh	Flame Photometry	TLD	TL dosimetry
AAS	Atomic absorption	NAA	Neutron Activation Analysis	XRF	X-ray fluorescence
β -c	Beta counting	PXE	PIXIE		
CAP	Capsule	SPEC	Spectrometer (SPEC = portable)		
Non-standard		AutoR	Auto regeneration	PTTL	Photo-transferred TL

MINERALS & ETC.

cal	Calcite	Nf	Sodium feldspar	*	Other
ft	Flint	p	Polyminal	-	Not applicable
f	Feldspar	q	Quartz	e	Equivalent to
Af	Unsep. alkali feldspar	z	Zircon		(used as prefix)
Kf	Potassium feldspar	por	Porcelain	a	Year

Terms: I, P, a, b, A, S_N , S_O , TAC: as defined in the literature.

Site: Beedenbostel
Location: Near to Celle, Lower Saxony, Topographic Map 3327 Beedenbostel, Germany.
Grid Ref: R 3585648.97, H 5834271.65

Site Description: This is an "open air" site, with several pre- and protohistoric occupations, from the late Upper Palaeolithic and Mesolithic onwards.

Dates	Lab. Ref.	Mat'l	Archaeological Reference
TL single dates:	268a2	burnt quartz	34, 53/51
	268a3	"	94, 53/51
	268b4	"	188, 54/50
	268c5	"	102, 57/51
	268c11	burnt flint	113, 54/52

Archaeological Evidence: Two of the younger dates(268a2,268a3) correspond to the late Bronze Age. They are acceptable for dating structure No.1, a sort of hearth not dateable by archaeological means.

Site Director: Dr. S. Veil, Oberkustos, Niedersächsisches Landesmuseum, Am Maschpark 5, 3000 Hannover 1, Federal Republic of Germany.

Reports: In preparation.

PART II
TECHNICAL SPECIFICATION

Section A. TL Measurements						
1. Mins (Burnt quartzes and burnt flint) tech.(qi and fit (90 - 125 µm), fg(1 - 8 µm)						
Sample Ref.	P ± s.e. (Gy)	I/P	Slips	s Plateau	Peak	Stability
268a2	12.65 ± 0.65	0	0.85 ± 0.05	± 3%; 350-400°	375°; 5°/s;	-
268a3	7.70 ± 0.40	0	1.08 ± 0.05	± 3%; 325-375°	350°; 5°/s;	-
268b4	6.05 ± 0.30	0	1.20 ± 0.05	± 3%; 300-450°	300°; 5°/s;	-
268c5	12.90 ± 0.60	0	0.80 ± 0.05	± 3%; 300-400°	375°; 5°/s;	-
268c11	5.70 ± 0.30	0	-	± 5%; 325-375°	375°; 5°/s;	325- 375°; 0.5 a; 18°;100 ±3% 0.07

Section B. Dose-rate Measurements									
Sample Ref.	Total Eff. Dose-rate mGy/a	Dose-rate Components			Radon		Water		
		α	β	γ	cos.	%	%	Sample	Env.
268a2	4.55 ± 0.70	-	91	6	3	0 ± 10	0 ± 2	24 ± 6	
268a3	2.49 ± 0.39	-	84	11	5	-	-	-	
268b4	0.70 ± 0.10	-	41	41	18	-	-	-	
268c5	4.17 ± 0.62	-	90	7	3	-	-	-	
268c11	0.58 ± 0.08	8	20	49	23	-	-	-	
Method	α-c		α-c	FPH	SPEC	SpEC	α-c SPEC		

Section C. Error [eA76]

Section D. TL Age			
Sample Ref.	TL Age ka	Random ka	Errors Overall ka.
268a2	2.80	-	0.30
268a3	3.10	-	0.30
268b4	8.65	-	0.78
268c5	3.10	-	0.30
268c11	9.88	-	0.78

Site: Beedenbostel
Location: Near to Celle, Lower Saxony, Topographic Map 3327 Beedenbostel, Germany.
Grid Ref: R 3585648.97, H 5834271.65

Site Description: This is an "open air" site, with several pre- and protohistoric occupations, from the late Upper Palaeolithic and Mesolithic onwards.

Dates	Lab. Ref.	Mat'l	Archaeological Reference
TL single dates:	268a2	burnt quartz	34, 53/51
	268a3	"	94, 53/51
	268b4	"	188, 54/50
	268c5	"	102, 57/51
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Archaeological Evidence: Two of the younger dates(268a2,268a3) correspond to the late Bronze Age. They are acceptable for dating structure No.1, a sort of hearth not dateable by archaeological means.

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PART II
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268a2	12.65 ± 0.65	0	0.85 ± 0.05	± 3%; 350-400°	375°; 5°/s;	-
268a3	7.70 ± 0.40	0	1.08 ± 0.05	± 3%; 325-375°	350°; 5°/s;	-
268b4	6.05 ± 0.30	0	1.20 ± 0.05	± 3%; 300-450°	300°; 5°/s;	-
268c5	12.90 ± 0.60	0	0.80 ± 0.05	± 3%; 300-400°	375°; 5°/s;	-
268c11	5.70 ± 0.30	0	-	± 5%; 325-375°	375°; 5°/s;	325- 375°; 0.5 a; 18°;100 ±3% 0.07

Section B. Dose-rate Measurements									
Sample Ref.	Total Eff. Dose-rate mGy/a	Dose-rate Components			Radon		Water		
		α	β	γ	cos.	%	%	Sample	Env.
268a2	4.55 ± 0.70	-	91	6	3	0 ± 10	0 ± 2	24 ± 6	
268a3	2.49 ± 0.39	-	84	11	5	-	-	-	
268b4	0.70 ± 0.10	-	41	41	18	-	-	-	
268c5	4.17 ± 0.62	-	90	7	3	-	-	-	
268c11	0.58 ± 0.08	8	20	49	23	-	-	-	
Method	α-c		α-c	FPH	SPEC	SpEC	α-c SPEC		

Section C. Error [eA76]

Section D. TL Age			
Sample Ref.	TL Age ka	Random ka	Errors Overall ka.
268a2	2.80	-	0.30
268a3	3.10	-	0.30
268b4	8.65	-	0.78
268c5	3.10	-	0.30
268c11	9.88	-	0.78

Site: Els Colls
 Location: Tarragona, Spain
 Grid Ref: 41° 17' 10" N., 0° 45' 20" E.
 Site Description: The site is a rock shelter in the Sierra de Monsant area of Tarragona. The flints are from the burnt soil horizon at the base of level two.

Dates	Lab. Ref.	Mat'l	Archaeological Reference
TL Context Age: 13.0 ± 1 ka	(Ox90TLfg)	burnt flint	c2, 10B
TL single ages:			
11.6 ± 1 ka	270f1	"	89/2733
12.7 ± 1.2 ka	270f2	"	88/1488
11.2 ± 1 ka	270f3	"	88/519
10.8 ± 1 ka	270f4	"	89/1745
19.3 ± 2 ka	270f5	"	88/1589
12.1 ± 1.1 ka	270f6	"	89/2647
11.7 ± 1 ka	270f8	"	89/5319
16.1 ± 1.6 ka	270f9	"	89/2790

Archaeological Evidence: The flints are from level 2, which contains fire-places and a lithic industry of Upper Palaeolithic type. Level 4 is of the same typology. First indications placed the site around 20 to 25 ka BP, but the TL age fits well with the C-14 dates of other sites with similar lithic industries.

Site Director: Prof. Dr. J. Ma. Fullola i Pericot, University of Barcelona, Dept. of Prehistory and Archaeology, Baldri Reixac, 08028 Barcelona, Spain.

Reports: None published.

PART II TECHNICAL SPECIFICATION

Section A. TL Measurements

1. Min (burnt flint) tech. (fig : 1 - 8 µm)						
Sample Ref.	P ± s.e. (Gy)	I/P	Slps	Plateau	Peak	Stability
270f1	51.5 ± 1.5	0	-	± 5%; 300-400°	375°; 5°/s;	300 - 400°; 0.5 ± 18°; 100 ± 3%
270f2	60.2 ± 3	"	-	± 2%; 350-450°	"	350 - 450°; "
270f3	55.6 ± 2.6	"	-	± 5%; 350-450°	"	350 - 450°; "
270f4	65 ± 2.5	"	-	± 3%; 325-400°	"	325 - 400°; "
270f5	39 ± 2	"	-	± 3%; 325-400°	"	325 - 400°; "
270f6	46.2 ± 2.6	"	-	± 5%; 350-400°	"	350 - 400°; "
270f8	59.9 ± 1.8	"	-	± 2%; 350-400°	"	350 - 400°; "
270f9	88 ± 4	"	-	± 3%; 350-450°	"	350 - 450°; "
						a val.
						0.125
						0.146
						0.09
						0.10
						0.052
						0.058
						0.103
						0.074

Section B. Dose-rate Measurements

Sample Ref.	Total Eff. Dose-rate	Dose-rate Components			Radon		Water	
		α	β	γ	cos.	%	Sample	Env.
	mGy/a	%	%	%	%	%	%	%
270f1	4.43 ± 0.65	59	34	6	1	0 ± 5	0 ± 2	4 ± 4
270f2	4.73 ± 0.70	66	27	6	1	"	"	"
270f3	4.94 ± 0.74	56	38	5	1	"	"	"
270f4	5.99 ± 0.90	59	36	4	1	"	"	"
270f5	2.02 ± 0.30	39	46	13	2	"	"	"
270f6	3.83 ± 0.57	45	47	7	1	"	"	"
270f8	5.10 ± 0.77	59	35	5	1	"	"	"
270f9	5.45 ± 0.82	52	42	5	1	"	"	"
Method	α-c	α-c	FPPh	CAP	SPEC	SPEC	α-c	SPEC

Section C. Error [eA76]

Section D. TL Age			
Sample Ref.	TL Age ka	Random ka	Errors Overall ka.
270f1	11.6	-	1
270f2	12.7	-	1.2
270f3	11.2	-	1
270f4	10.8	-	1
270f5	19.3	-	2
270f6	12.1	-	1.1
270f8	11.7	-	1
270f9	16.1	-	1.6

Laboratory: Oxford	Entry: 48
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PART II TECHNICAL SPECIFICATION

Section A. TL Measurements					
1. Min. (Burnt flint) tech. (fig. 1 - 8 µm)					
Sample Ref.	P ± s.e. (Gy)	I/P	S/lps	Peak	Stability
273f	5.94 ± 0.28	0	-	375°; 5°/h;	350 - 400°; 0.3 at 18°; 100 ± 3%; 0.184

Section B. Dose-rate Measurements									
Sample Ref.	Total Dose-rate	Dose-rate Components			Radon		Water		
		α	β	γ	cos.	%	Sample	Env.	%
273f	0.63 ± 0.09	19	19	42	20	0 ± 5	0 ± 2	10 ± 5	
Method	α-c	α-c	α-c	α-c	α-c	α-c	α-c	α-c	α-c
	FPH	SPEC	SPEC	SPEC	SPEC	SPEC	SPEC	SPEC	SPEC

Section C. Error [eA76]

Section D. TL Age			
Sample Ref.	TL Age	Random	Overall
273f	9430	-	800

Laboratory: Oxford	Entry: 48
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Site: Little Hoyle Cave
Location: Penally, Dyfed, Wales, England
Grid Ref.: -

Site Description: Limestone cave in a small side valley off the river valley.

Dates	Lab. Ref.	Mat'l	Archaeological Reference
TL Single Date:	9430 ; ±800 a	(Ox-90)TLfig	273f flint L. H. 90: NP 1049

Archaeological Evidence: The burnt flint was a small blade core of "Mesolithic" type stratified in the latest phase of a succession of scree. These are presumed largely Late Glacial age and are overlying probable loess, overlying frost shattered bedrock.

Site Director: Dr. H. Stephen Green, Keeper of Archaeology and Numismatics, National Museum of Wales, Cathays Park, Cardiff, CF13NP.

Reports: Green, H.S. (1986) The Palaeolithic Settlement of Wales Research Project: A Review of Progress 1978-1985. in *The Palaeolithic of Britain and its nearest neighbours: Recent Trends* (Ed. S. N. Colclough) Recent Trends Series, Vol.1. Published by Dept. of Archaeology and Prehistory, University of Sheffield. ISBN 906090 27X.

Site: Bossington
Location: The site is in the valley bottom of the river Test at Houghton, Stockbridge, Hants., England.
Grid Ref.: SU 337308

Site Description: Burnt flints are on a mineral palaeosol surface, associated with flint blades. Underneath the overlay is peat with wood, in turn overlain by tufa.

Dates	Lab. Ref.	Mat'l	Archaeological Reference
TL single dates:	7590 $\pm$ 700 a	(Ox90TL4g)	Site B, Trench 3
	7150 $\pm$ 700 a	"	"
	8700 $\pm$ 850 a	"	"
	7480 $\pm$ 700 a	"	"

Archaeological Evidence: A late Mesolithic date equates with the associated flint blades. There is an adjacent late Mesolithic site of about 4000 flints, but it is less well stratified than the burnt flint.

Site Director: Dr John G. Evans, University of Wales, Dept of Archaeology, PO Box 909, Cardiff CF13XU, UK.

Reports: None published

PART II
TECHNICAL SPECIFICATION

Section A. TL Measurements

Sample Ref.	P $\pm$ s.e. (Gy)	I/P	Slps	$\pm$ Plateau	Peak	Stability	a val.
274f2	5.65 $\pm$ 0.17	0	-	$\pm$ 2%; 375-450°	375°; 5°/s;	375 - 450°; 0.25 a; 18°; 100 $\pm$ 3%	0.088
274f3	8.30 $\pm$ 0.46	0	-	$\pm$ 5%; 350-425°	375°; 5°/s;	350 - 425°; "	0.147
274f5	6.60 $\pm$ 0.40	0	-	$\pm$ 3%; 350-400°	375°; 5°/s;	350 - 400°; "	0.155
274f1	6.98 $\pm$ 0.28	0	-	$\pm$ 3%; 325-400°	375°; 5°/s;	325 - 400°; "	0.187

Section B. Dose-rate Measurements

Sample Ref.	Total Eff. Dose-rate mGy/a	Dose-rate Components				Water	
		α	β	γ	cos.	Radon	Sample Env.
		%	%	%	%	%	%
274f1	0.92 $\pm$ 0.14	17	15	54	14	0 $\pm$ 5	0 $\pm$ 2 60 $\pm$ 20
274f2	0.79 $\pm$ 0.12	7	13	63	16	"	"
274f3	0.95 $\pm$ 0.14	17	16	53	14	"	"
274f5	0.88 $\pm$ 0.13	14	14	57	15	"	"
Method		α -c	α -c FPh	CAP	SPEC	SPEC	α -c SPEC

Section C. Error [eA76]

Section D. TL Age		
Sample Ref.	TL Age a	Errors Random Overall a.
274f1	7590	700
274f2	7150	700
274f3	8700	850
274f5	7480	700