UPPSALA UNIVERSITET

Ångström Laboratory
Tandem Laboratory

Radiocarbon group

Visiting address:
Ångström Laboratory
Lägerhyddsvägen 1

Postal address:
Box 529
SE-751 20 Uppsala
Sweden

Telephone:
+46 18 – 471 3124

Telefax:
+46 18 – 55 5736

Website:
http://www.tandemlab.uu.se

E-mail:
radiocarbon@physics.uu.se

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Adé Porreij-Lyklema
BAAC bv
Graaf van Solmsweg 103
NL-5222 BS 'S-HERTOGENBOSCH
The Netherlands

Result of ^{14}C dating of charcoal and macrofossils from Lokeren, Oost-Vlaanderen, A-19.0222. (p 2993)

Pre-treatment of charcoal:

1. Visible root-fibres are removed.
2. 1 % HCl is added (10 h, just below the boiling point) (carbonates are removed).
3. 1 % NaOH is added, (10 h, just below the boiling point). The soluble part is precipitated by addition of concentrated HCl. The precipitate, which mainly consists of humus material, is washed, dried and referred to as fraction SOL. The insoluble fraction, referred to as INS, is mainly consisting of the original organic material, and should therefore provide the most re-liable age. Influence of contaminants could be obtained from the SOL fraction.

Prior to the accelerator determination of the ^{14}C-content, the washed and dried material, acidulated to pH 4, is combusted to CO_2 which is graphitised using a Fe-catalyst reaction. In the present investigation fraction INS has been dated.

Pre-treatment of macrofossil samples:

1. 1 % HCl is added (10 h, just below the boiling point) (carbonates are removed).
2. 0.5 % NaOH is added (1 h, 60 ℃). The soluble part is precipitated by addition of concentrated HCl. The precipitate, which mainly consists of humus material, is washed, dried and referred to as fraction SOL. The insoluble fraction, referred to as INS, is mainly consisting of the original organic material, and should therefore provide the most reliable age. Influence of contaminants could be obtained from the SOL fraction.

Prior to the accelerator determination of the ^{14}C-content, the washed and dried material, acidulated to pH 4, is combusted to CO_2 which is graphitised using a Fe-catalyst reaction. In the pre-sent investigation fraction INS has been dated.

RESULT

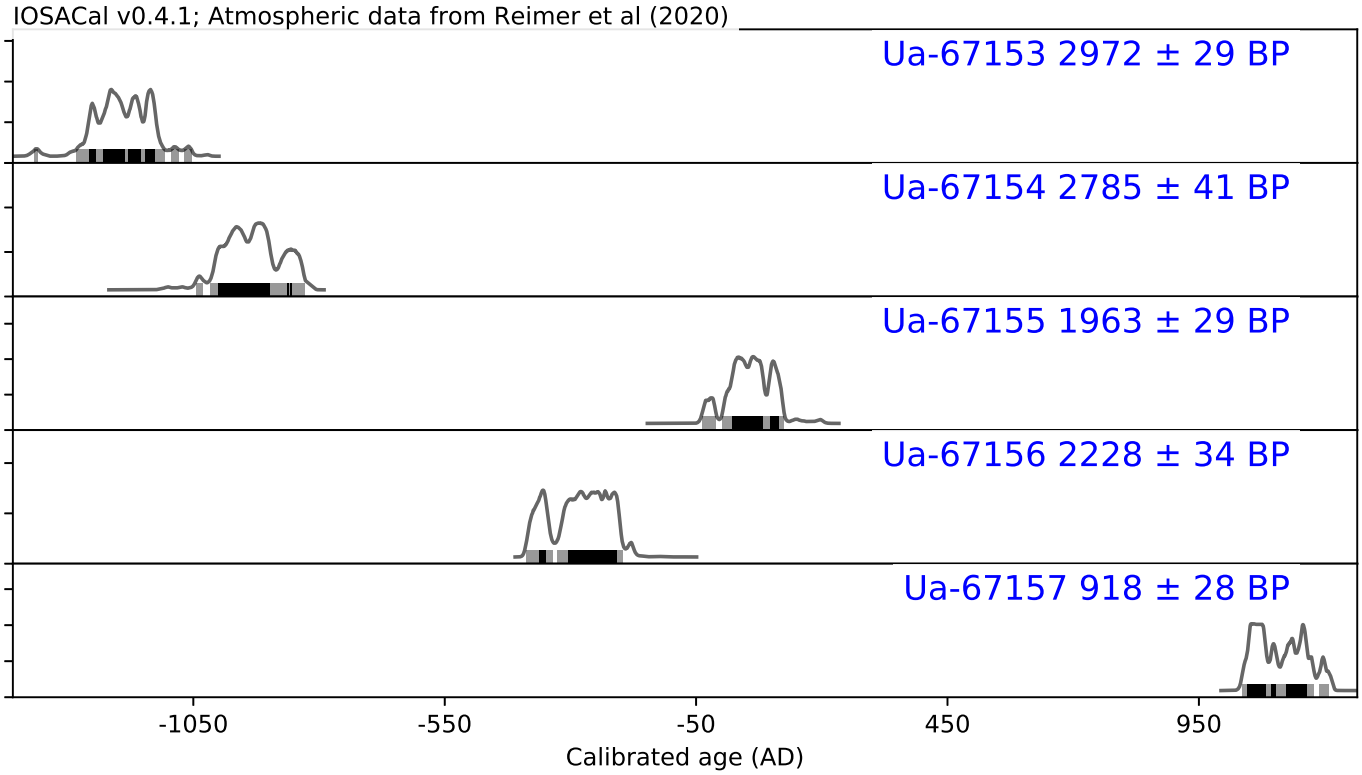
Lab number	Sample	$\delta^{13}C$‰ V-PDB	^{14}C age BP
Ua-67153	VNR 63	−26.7	2 972 ± 29
Ua-67154	VNR 95	−25.2	2 785 ± 41
Ua-67155	VNR 147	−26.7	1 963 ± 29
Ua-67156	VNR 65	−22.8	2 228 ± 34
Ua-67157	VNR 343	−27.8	918 ± 28

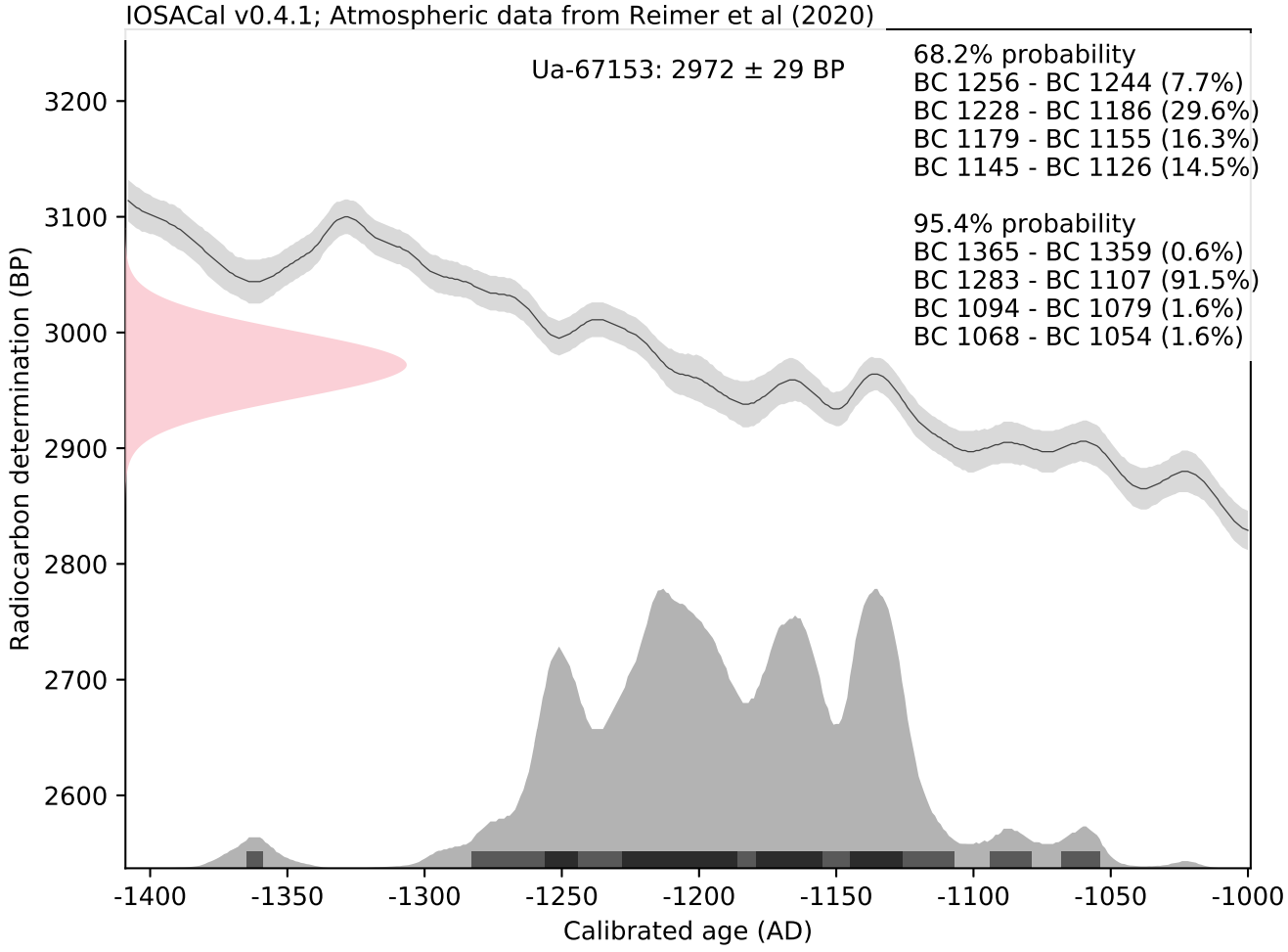
The sample *VNR 195* was of too poor quality and could not be dated.

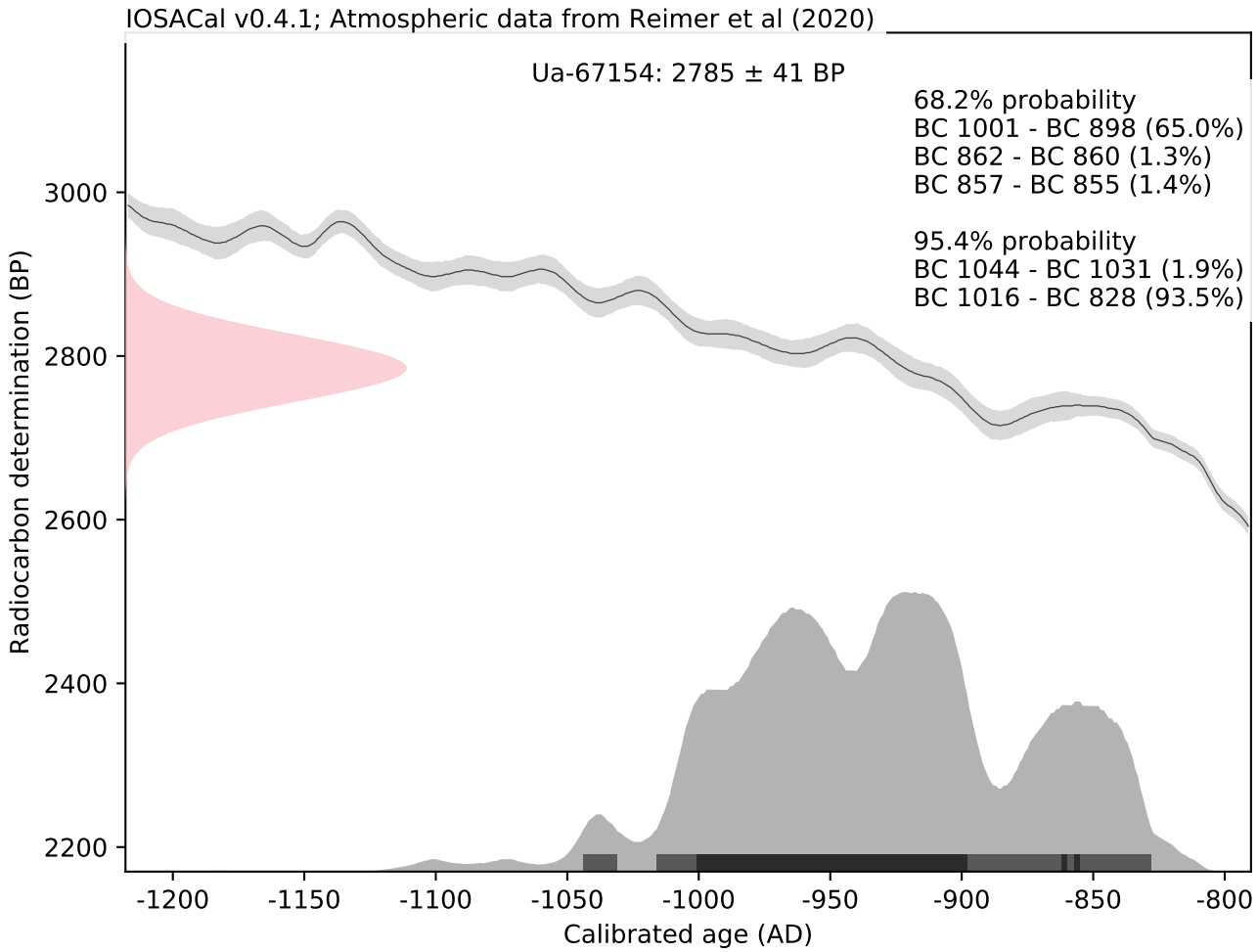
Kind regards

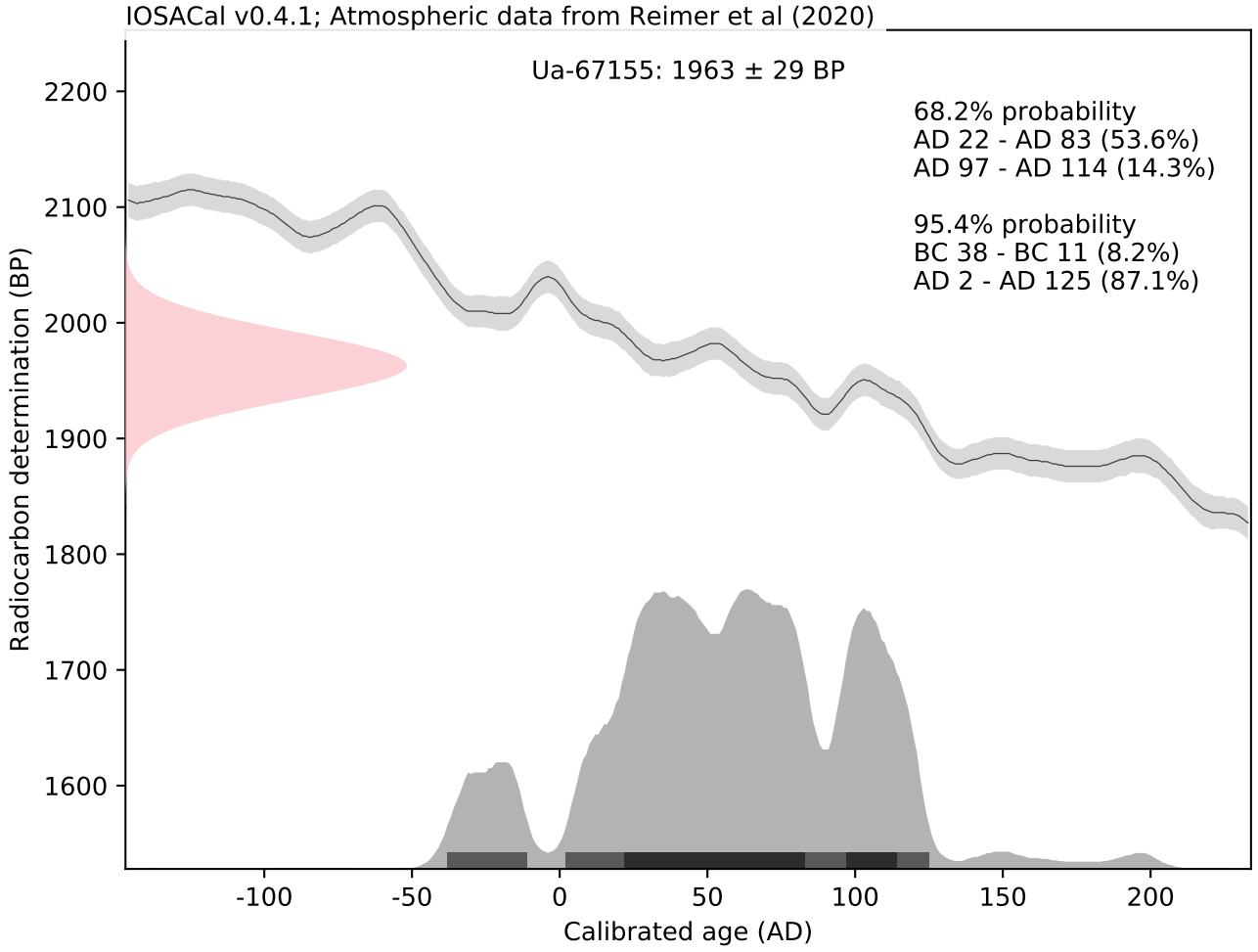
Karl Håkansson / Lars Beckel

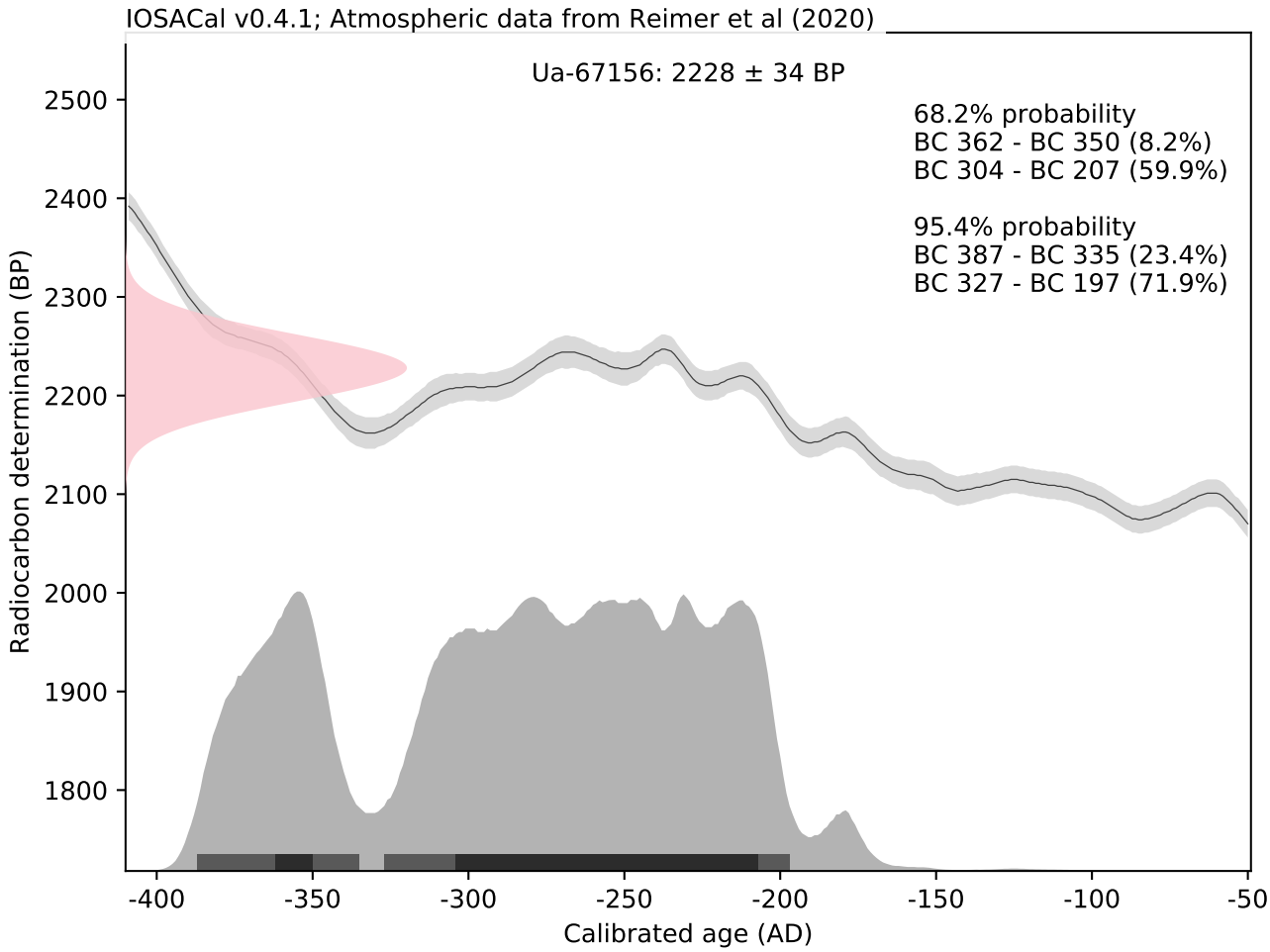
Calibration curves

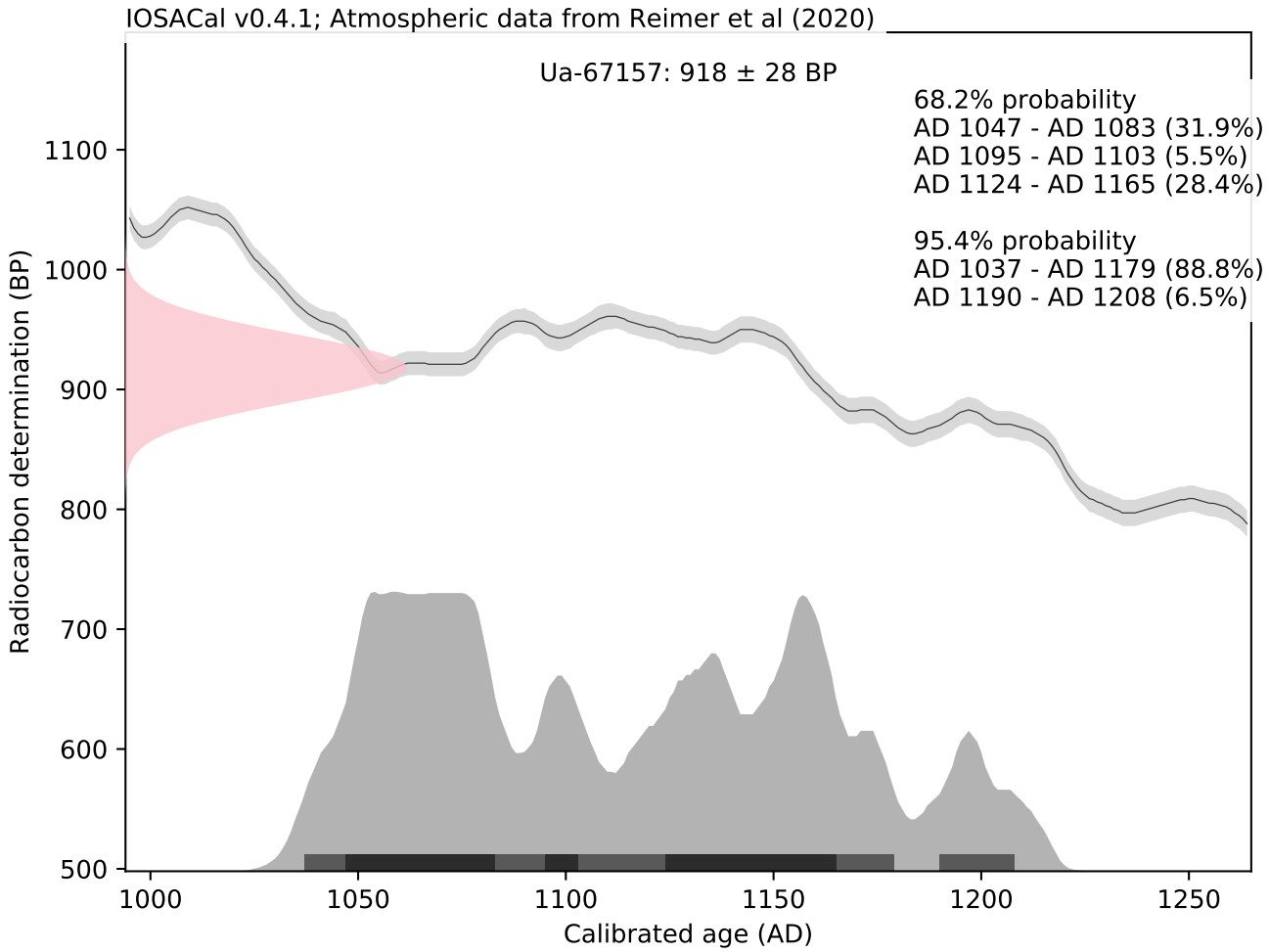





IOSACal v0.4.1; Atmospheric data from Reimer et al (2020)
Ua-67154: 2785 ± 41 BP
68.2% probability
BC 1001 - BC 898 (65.0%)
BC 862 - BC 860 (1.3%)
BC 857 - BC 855 (1.4%)
95.4% probability
BC 1044 - BC 1031 (1.9%)
BC 1016 - BC 828 (93.5%)
Radiocarbon determination (BP)
3000
2800
2600
2400
2200
-1200
-1150
-1100
-1050
-1000
-950
-900
-850
-800
Calibrated age (AD)


IOSACal v0.4.1; Atmospheric data from Reimer et al (2020)
Ua-67155: 1963 ± 29 BP
68.2% probability
AD 22 - AD 83 (53.6%)
AD 97 - AD 114 (14.3%)
95.4% probability
BC 38 - BC 11 (8.2%)
AD 2 - AD 125 (87.1%)
Radiocarbon determination (BP)
2200
2100
2000
1900
1800
1700
1600
-100
-50
0
50
100
150
200
Calibrated age (AD)


IOSACal v0.4.1; Atmospheric data from Reimer et al (2020)
Ua-67156: 2228 ± 34 BP
68.2% probability
BC 362 - BC 350 (8.2%)
BC 304 - BC 207 (59.9%)
95.4% probability
BC 387 - BC 335 (23.4%)
BC 327 - BC 197 (71.9%)
Radiocarbon determination (BP)
2500
2400
2300
2200
2100
2000
1900
1800
-400
-350
-300
-250
-200
-150
-100
-50
Calibrated age (AD)


IOSACal v0.4.1; Atmospheric data from Reimer et al (2020)
Ua-67157: 918 ± 28 BP
68.2% probability
AD 1047 - AD 1083 (31.9%)
AD 1095 - AD 1103 (5.5%)
AD 1124 - AD 1165 (28.4%)
95.4% probability
AD 1037 - AD 1179 (88.8%)
AD 1190 - AD 1208 (6.5%)
Radiocarbon determination (BP)
1100
1000
900
800
700
600
500
1000
1050
1100
1150
1200
1250
Calibrated age (AD)