

Bijlage 14: ¹⁴C-onderzoek

labnr.	vondst	context	structuur	$\delta^{13}\text{C}_{\text{‰ V-PDB}}$	14C BP	SD 1 σ	datering	periode
Ua-69951	189	paalkuil	1	-23.1	1836	29	126 - 250 n. Chr.	midden-Romeinse tijd
Ua-69952	191	paalkuil	1	-24.0	1796	30	274 - 349 n. Chr.	midden- - laat-Romeinse tijd
Ua-69955	539	paalkuil	2	None	1762	45	216 - 405 n. Chr.	midden- - laat-Romeinse tijd
Ua-69957	672	paalkuil	4	-25.9	1285	29	662 - 774 n. Chr.	vroege middeleeuwen
Ua-69958	673	paalkuil	4	-27.9	1206	29	773 - 891 n. Chr.	vroege middeleeuwen
Ua-69956	540	paalkuil	54	-26.7	2182	30	363 - 151 v. Chr.	midden- - late ijzertijd
Ua-69953	655	paalkuil	61	-24.3	2564	34	805 - 746 v. Chr.	vroege ijzertijd
Ua-69954	656	paalkuil	61	-24.9	2519	29	650 - 544 v. Chr.	vroege ijzertijd
Ua-69959	696	paalkuil	62	-25.8	2986	30	1300 - 1116 v. Chr.	midden-bronstijd
Ua-69960	698	paalkuil	62	-28.4	1580	29	421 - 553 n. Chr.	vroege middeleeuwen
Ua-69948	449	brandrestengraf	500	-16.4	2077	27	169 - 35 v. Chr.	late ijzertijd - vroeg-Romeinse tijd
Ua-69947	433	brandrestengraf	501	-20.4	2024	25	53 v. Chr. - 63 n. Chr.	vroeg-Romeinse tijd
	452	brandrestengraf	508				niet dateerbaar	
Ua-69950	600	brandrestengraf	511	None	1969	42	47 v. Chr. - 131 n. Chr.	vroeg- - midden Romeinse tijd
Ua-69949	588	brandrestengraf	512	-22.6	2105	24	175 - 46 v. Chr.	late ijzertijd - vroeg-Romeinse tijd
	923	brandrestengraf	513				niet dateerbaar	



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Result of ^{14}C dating of cremated bones, macrofossils and charcoals from A-19.0209, Aalter, Belgium. (p 3441)

Pre-treatment of burnt bone samples:

1. 1.5 % NaOCl is added to the cleaned and pestled sample and kept at ambient temperature for 48 h.
2. The sample is washed in distilled water.
3. 1 M HAc is added to the sample and kept at ambient temperature for 24 h.
4. The sample is washed in distilled water and then dried.
5. The sample is leached with 6 M HCl.
6. The obtained CO_2 is graphitised using a Fe-catalyst reaction prior to the determination of the ^{14}C -content in the accelerator.

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 °C). 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 determination of the ^{14}C -content in the accelerator, 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.

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 determination of the ^{14}C -content in the accelerator, 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.

RESULT

Lab number	Sample	$\delta^{13}\text{C}_{\text{‰ V-PDB}}$	^{14}C age BP
Ua-69947	V433	−20.4	2 024 ± 25
Ua-69948	V449	−16.4	2 077 ± 27
Ua-69949	V588	−22.6	2 105 ± 24
Ua-69950	V600	¹	1 969 ± 42
Ua-69951	vnr. 189	−23.1	1 836 ± 29
Ua-69952	vnr. 191	−24.0	1 796 ± 30
Ua-69953	vnr. 655	−24.3	2 564 ± 34
Ua-69954	vnr. 656	−24.9	2 519 ± 29
Ua-69955	vnr. 539	¹	1 762 ± 45
Ua-69956	vnr. 540	−26.7	2 182 ± 30
Ua-69957	vnr. 672	−25.9	1 285 ± 29
Ua-69958	vnr. 673	−27.9	1 206 ± 29
Ua-69959	vnr. 696	−25.8	2 986 ± 30
Ua-69960	vnr. 698	−28.4	1 580 ± 29

The samples *V452* and *V923* were of too poor quality and could not be dated.

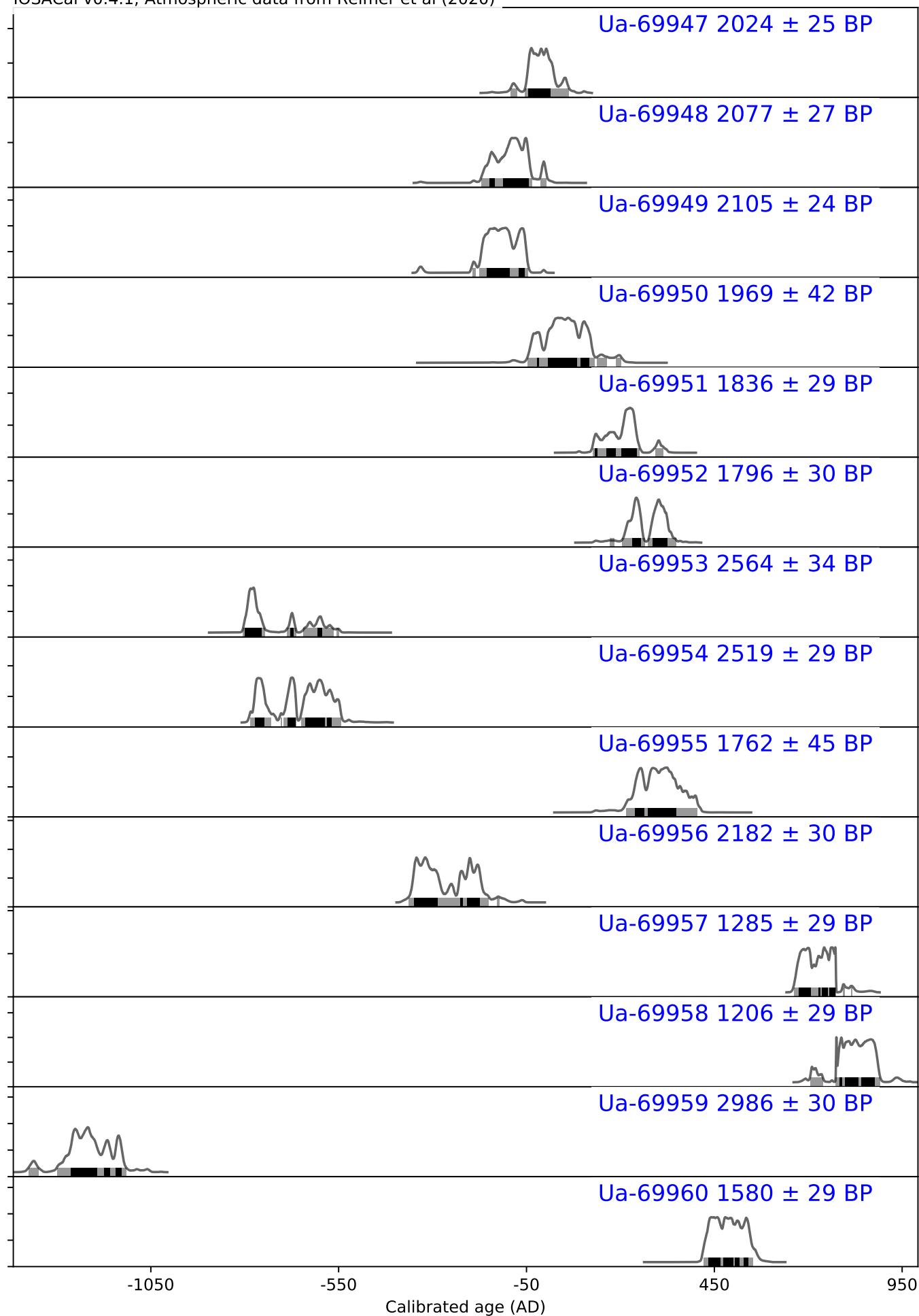
¹ Not enough material for analysis.

Kind regards

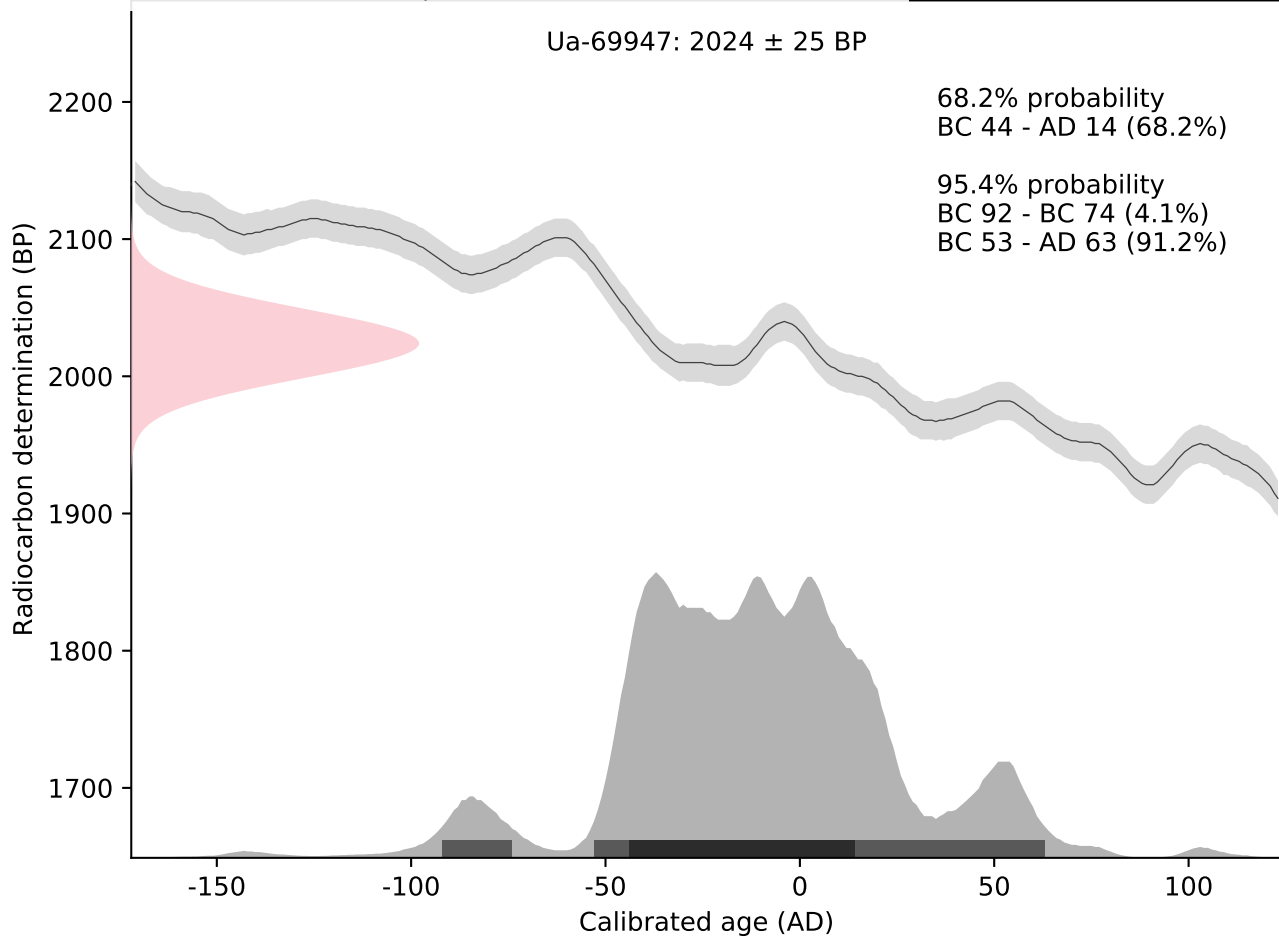
Karl Håkansson/Lars Beckel

Calibration curves

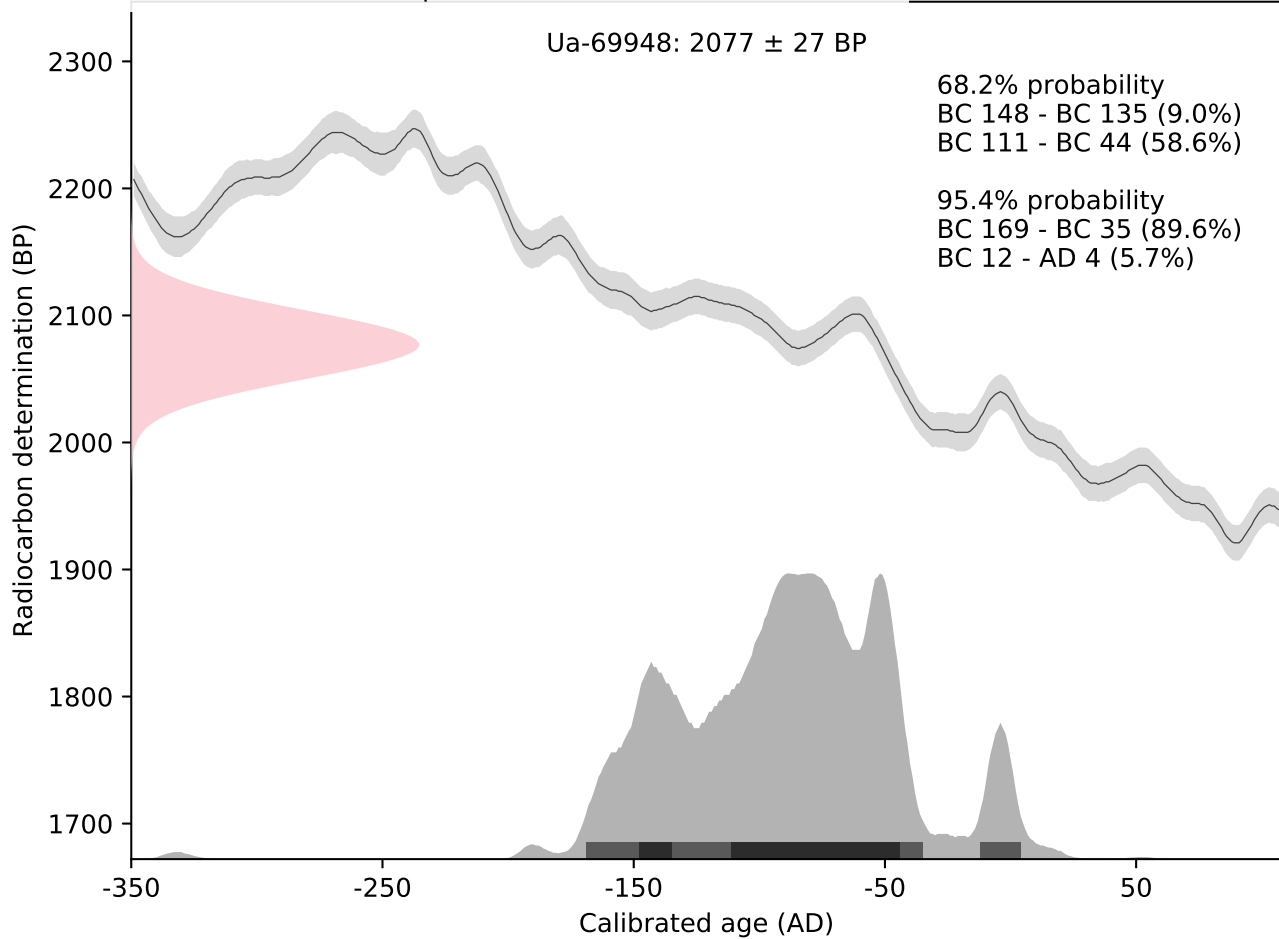
IOSACal v0.4.1; Atmospheric data from Reimer et al (2020)



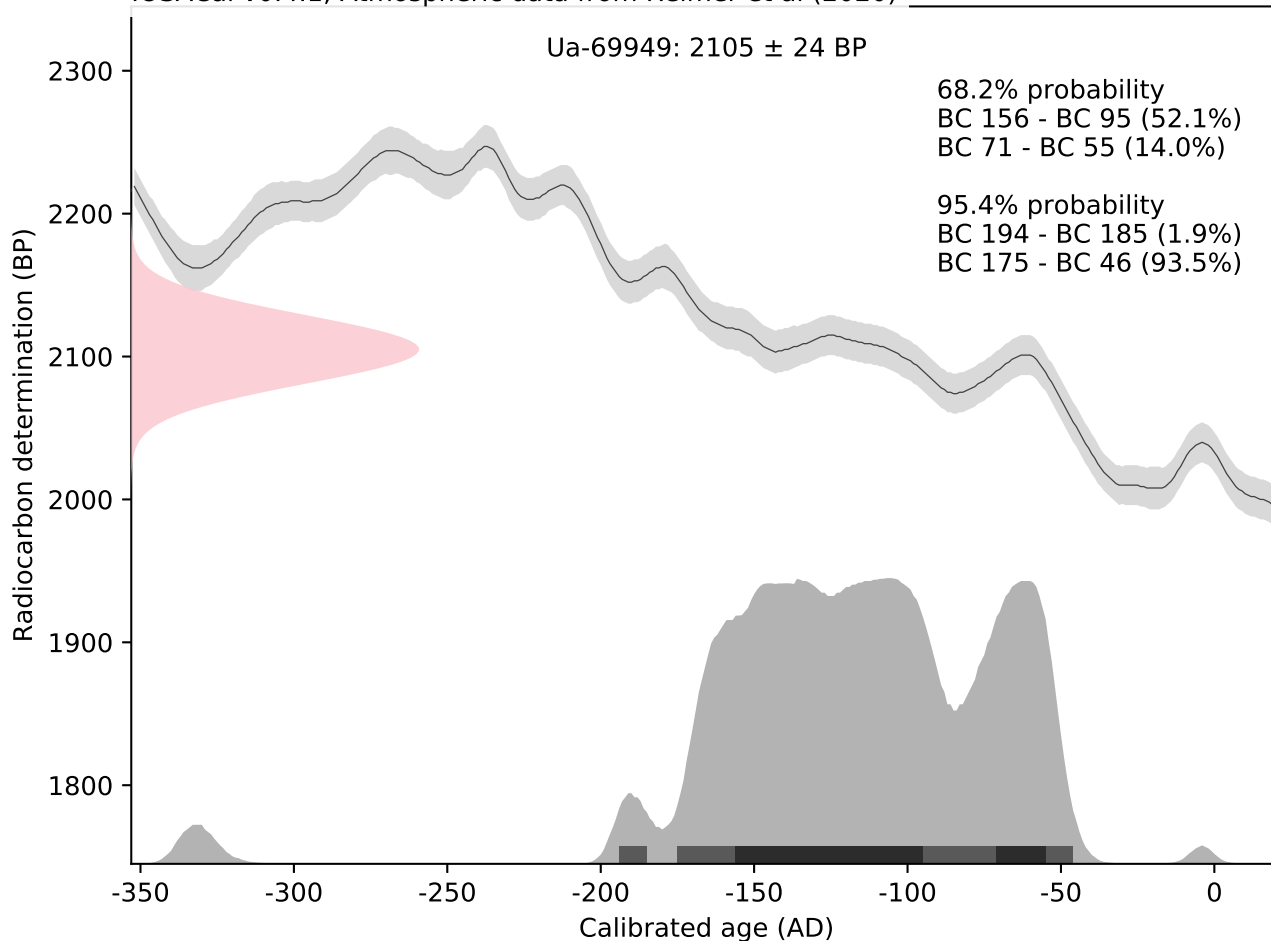
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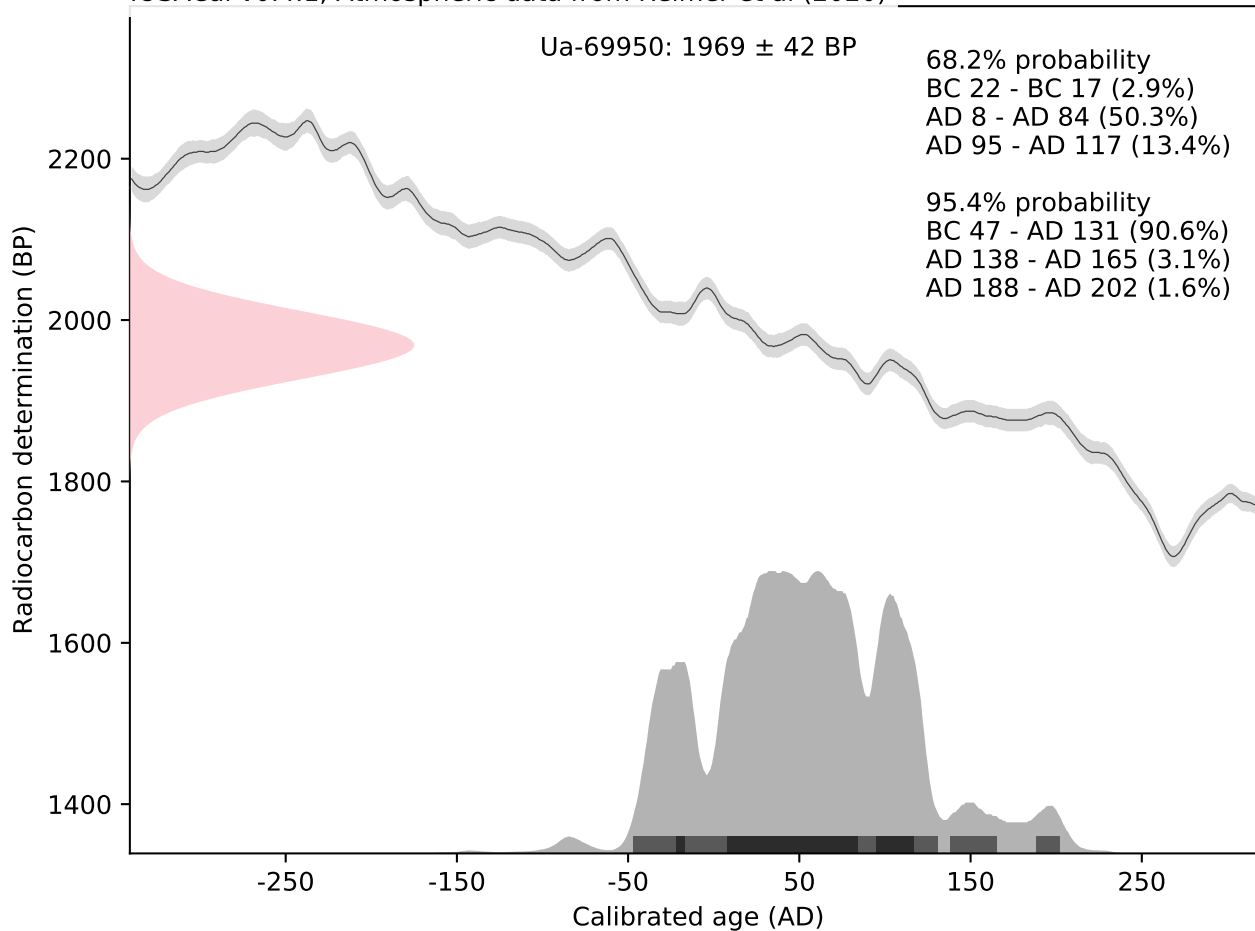
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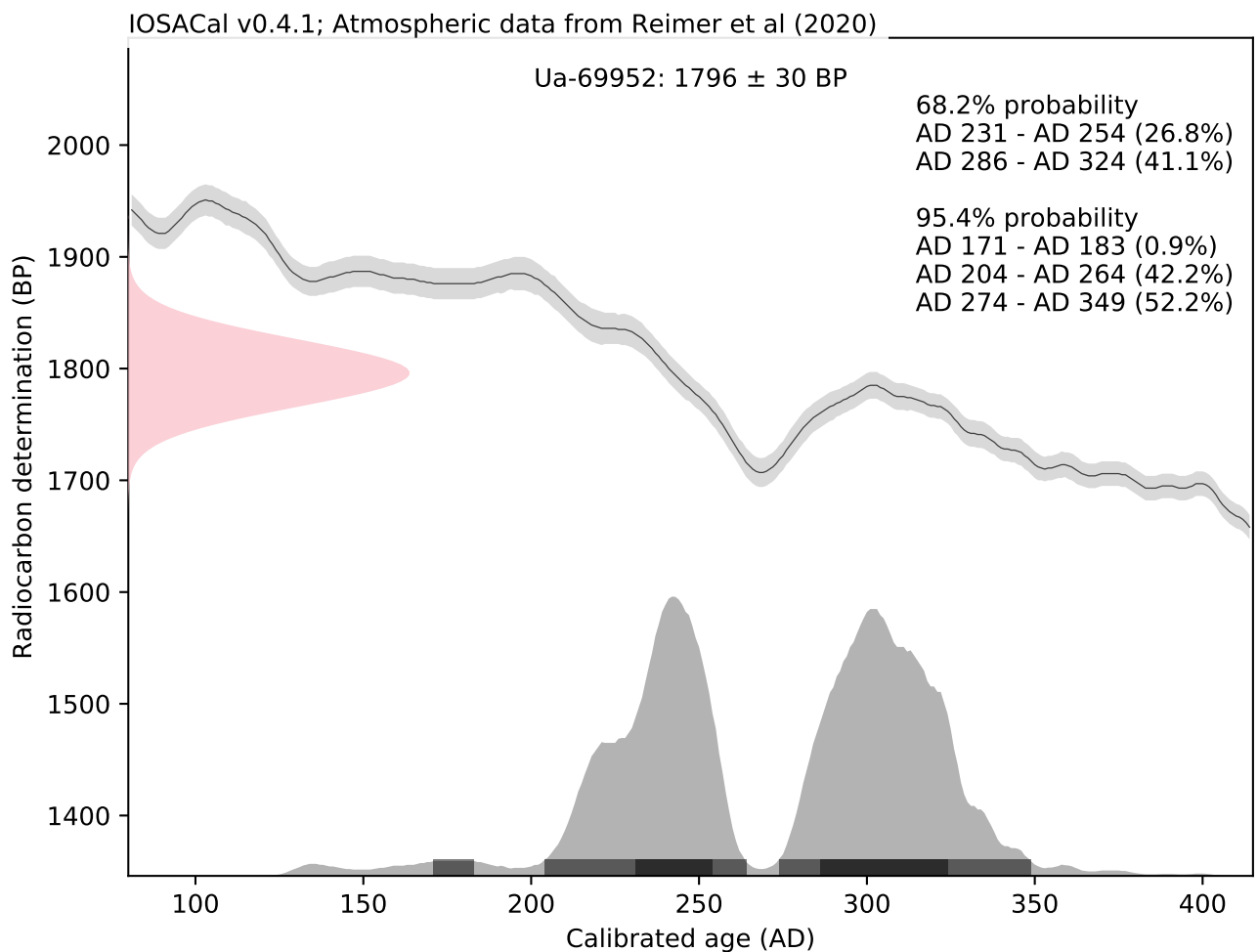
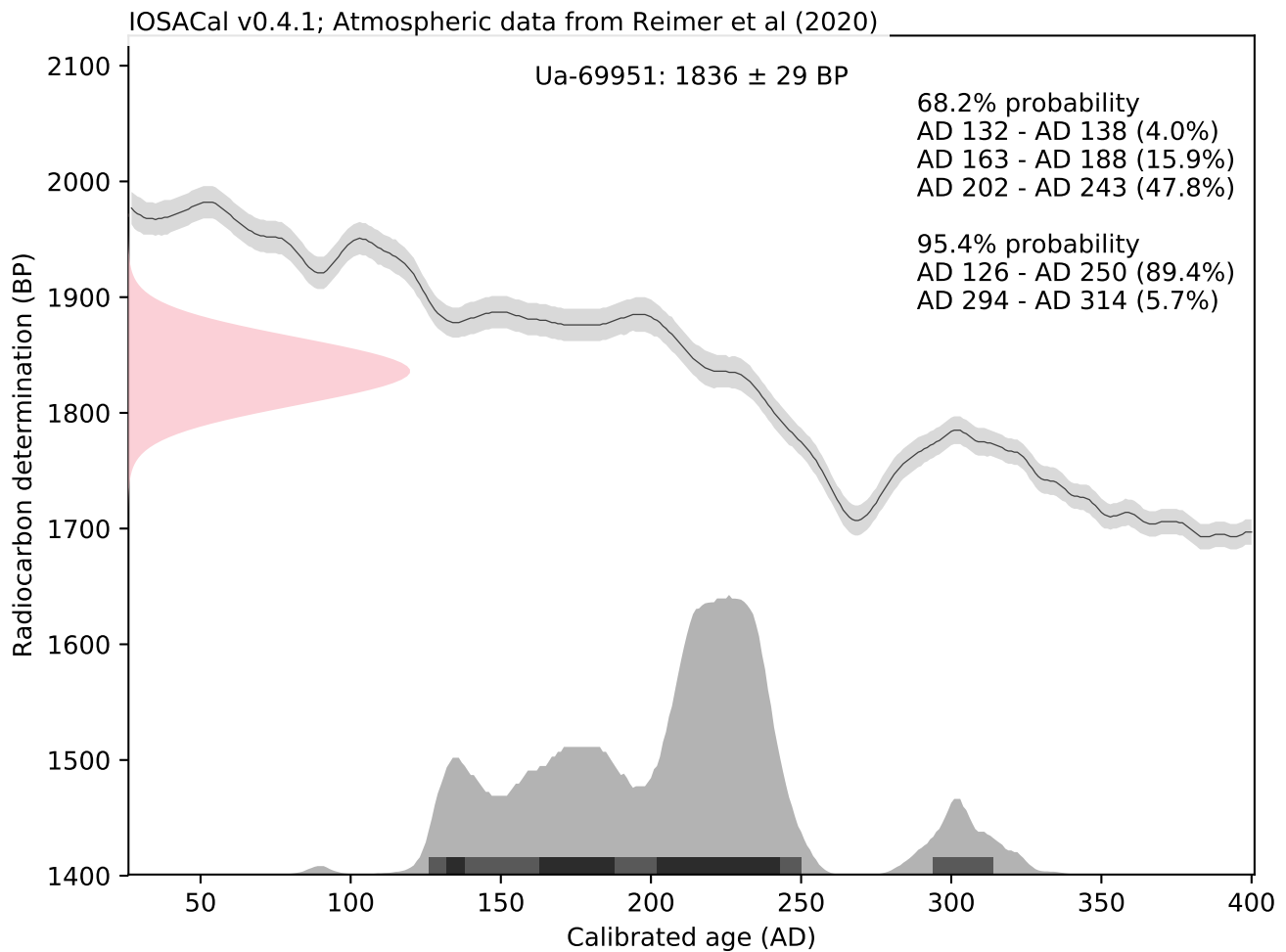


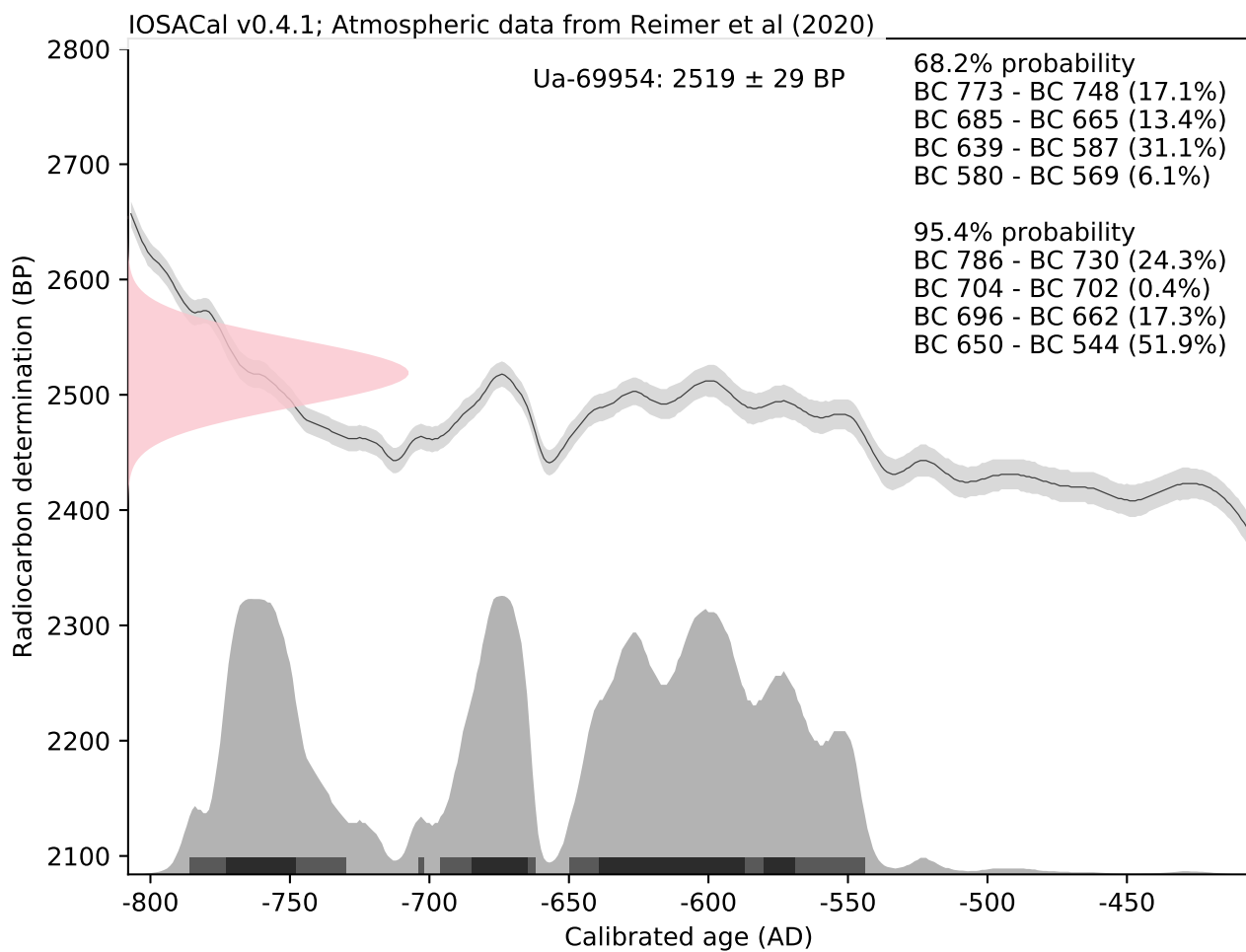
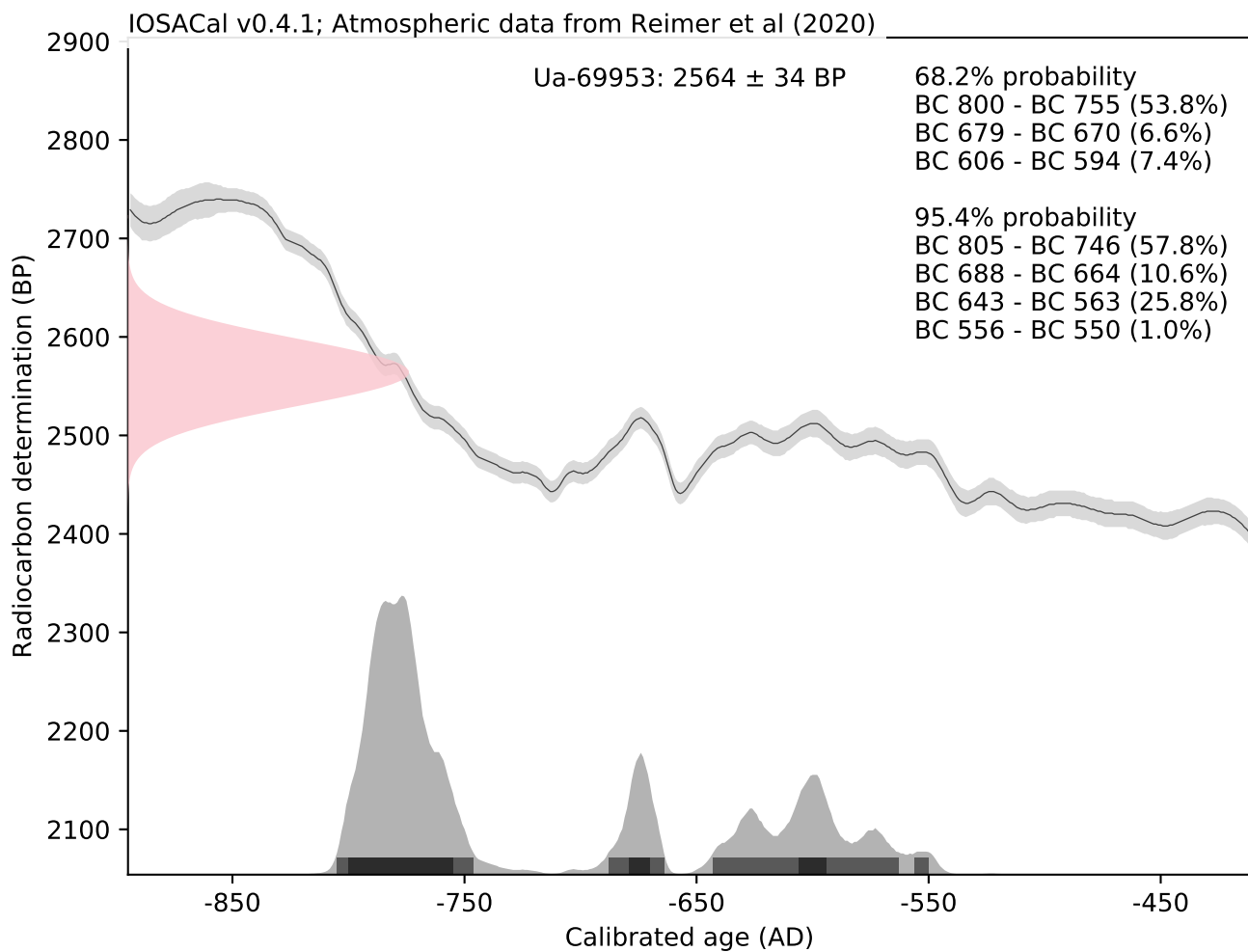
IOSACal v0.4.1; Atmospheric data from Reimer et al (2020)

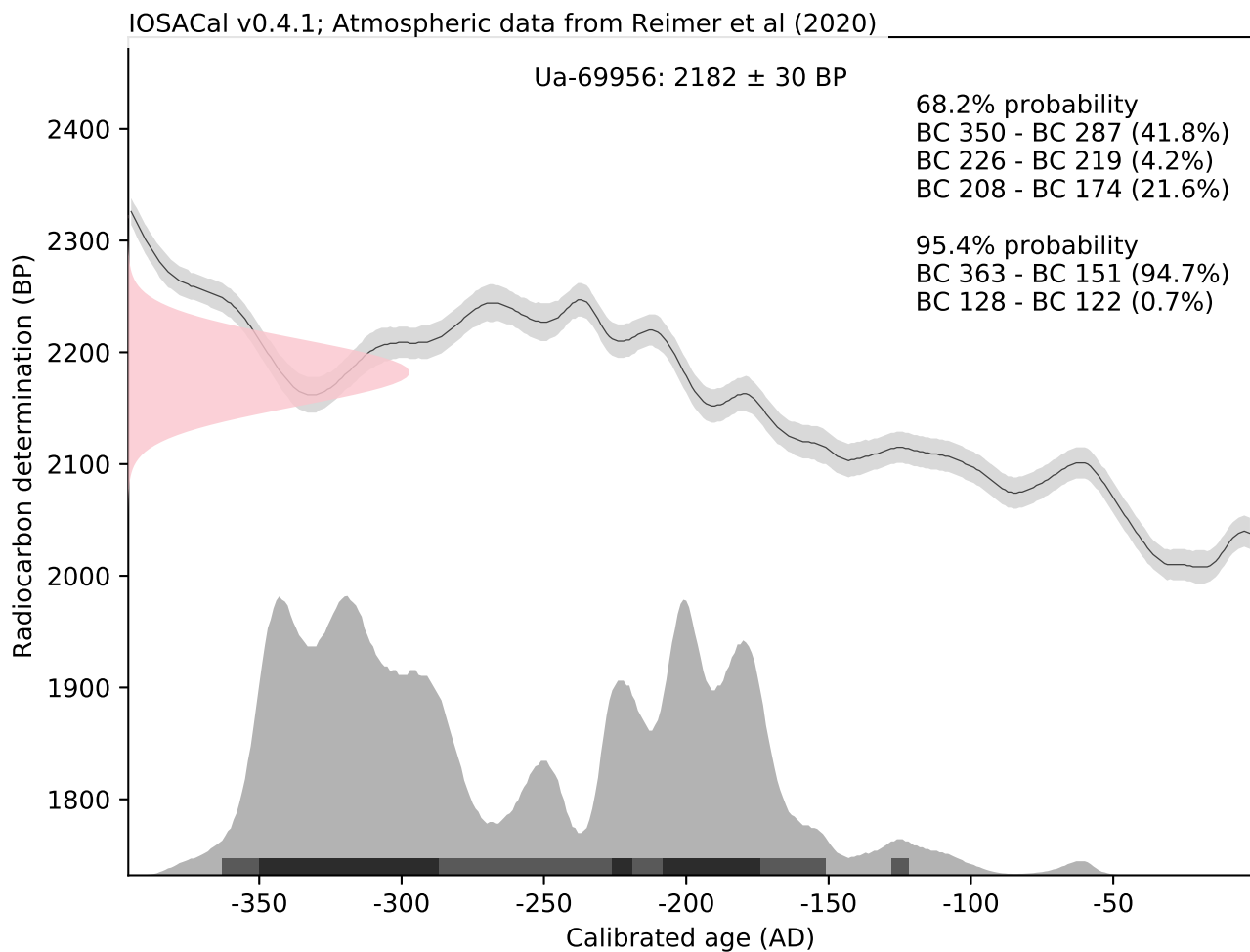
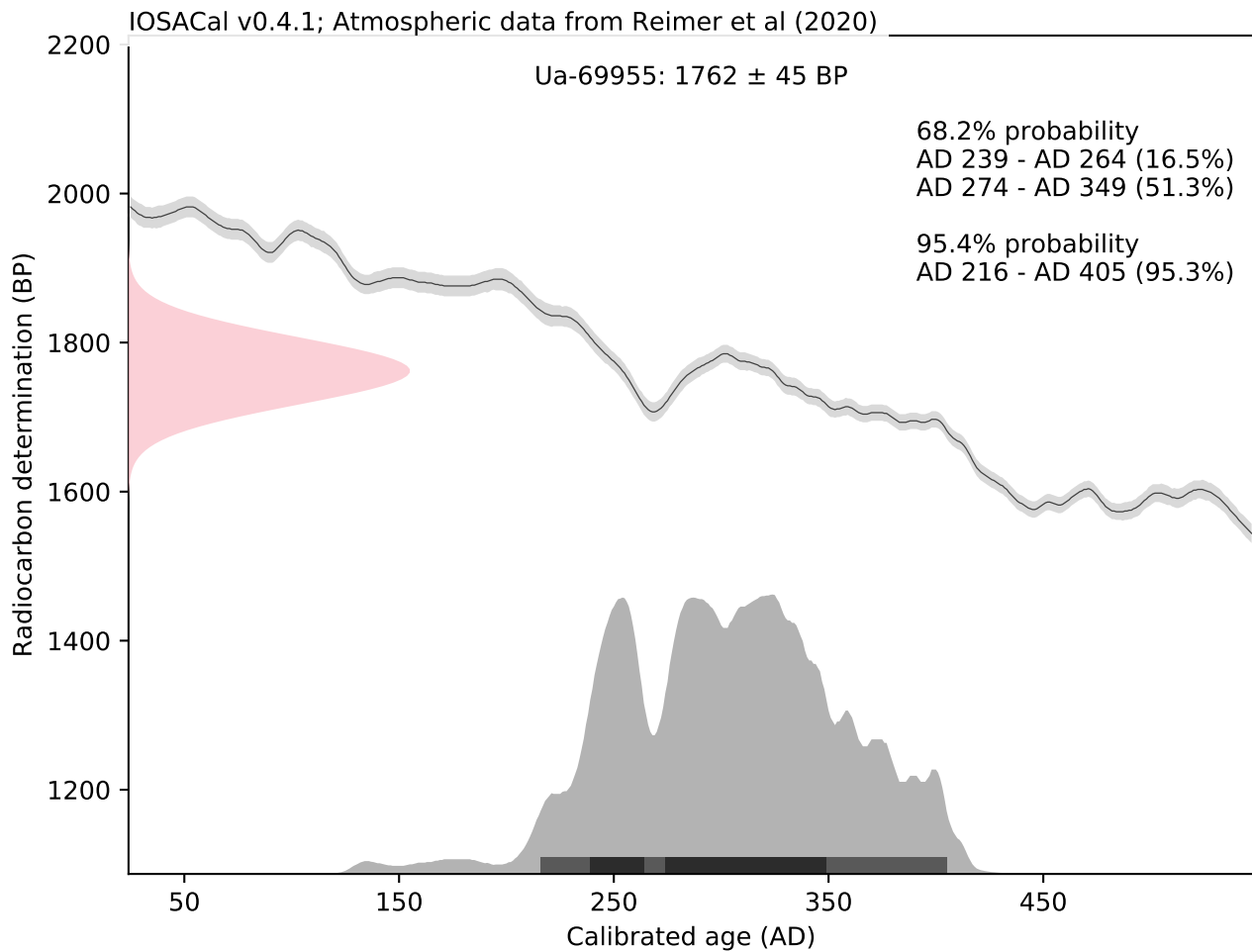


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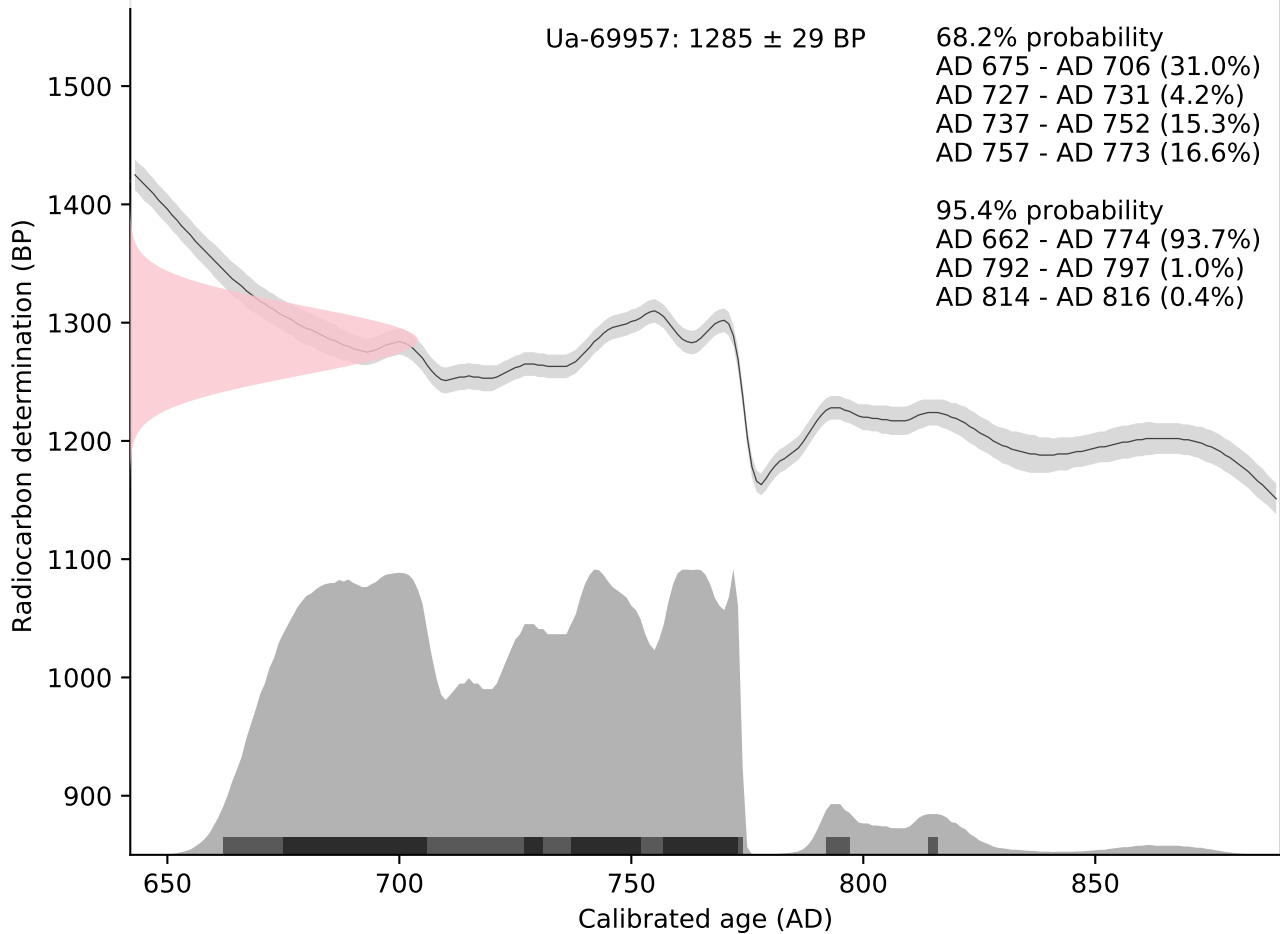




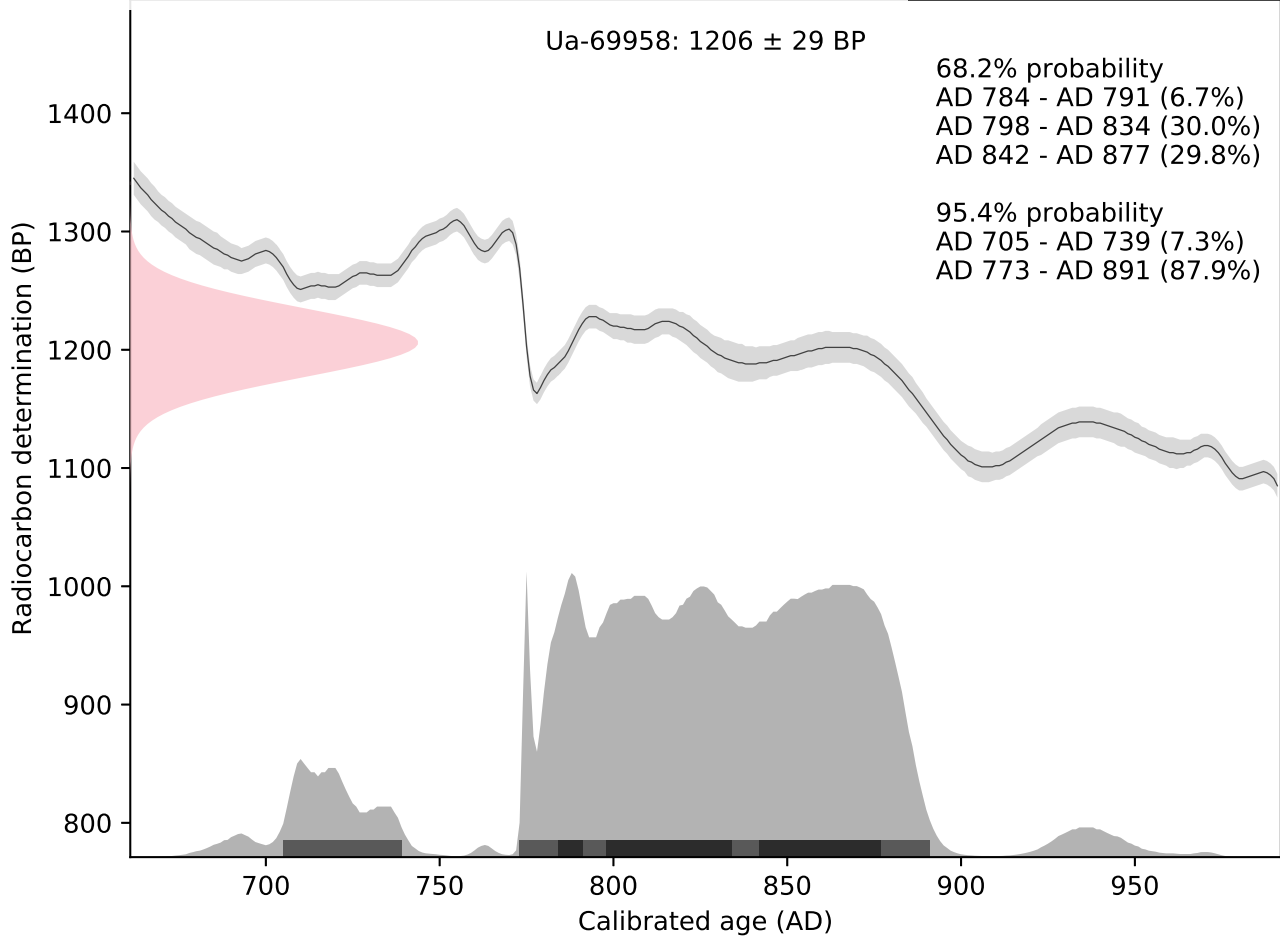




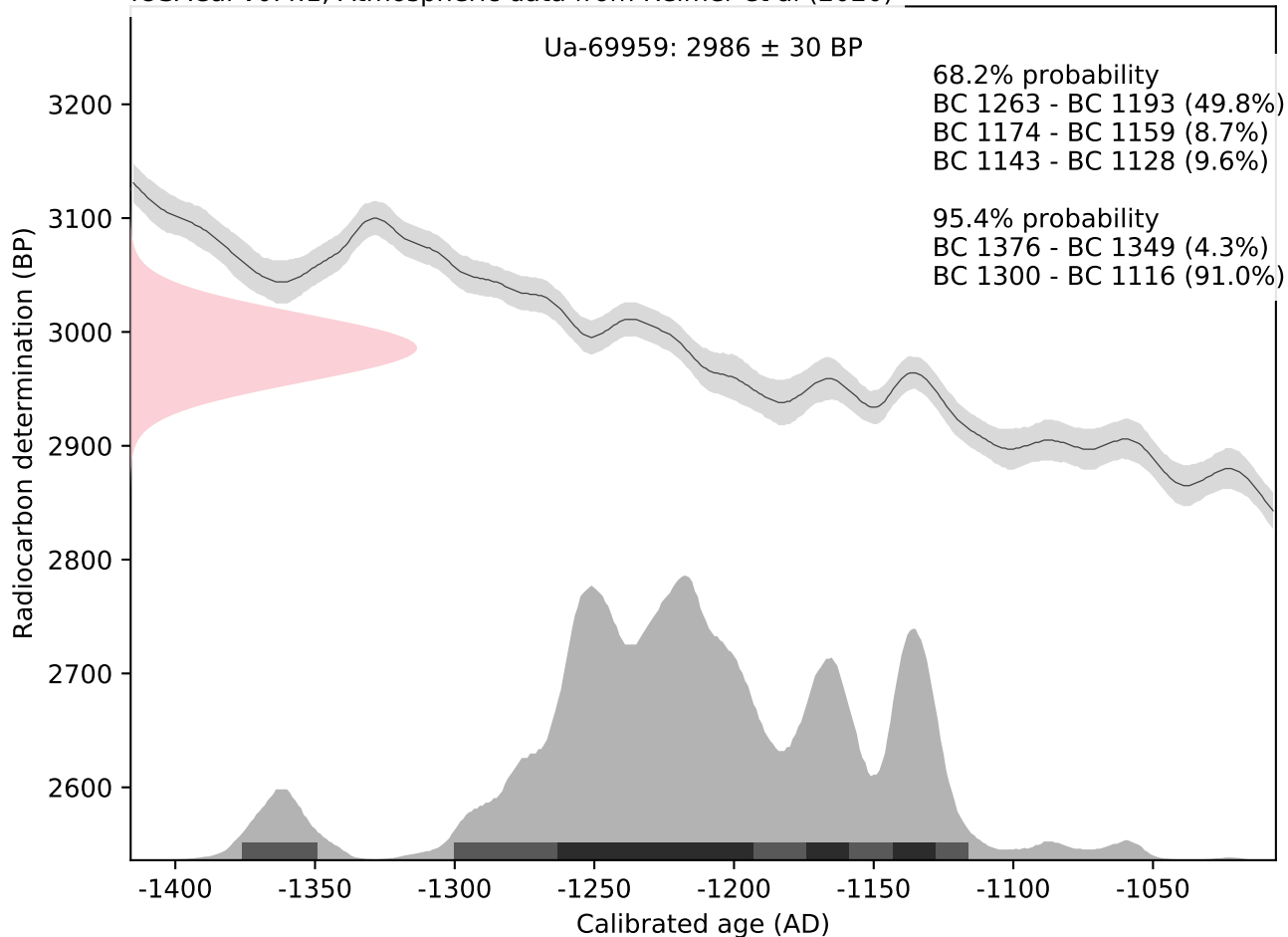
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