# Online Supplementary Information 4

## Bayesian modelling of wood-age offsets in cremated bone

*Helene Agerskov Rose, John Meadows, Mogens Bo Henriksen*

## Post-bomb calibration data set

The following radiocarbon calibration data set are used to calibrate post-bomb radiocarbon dates in OxCal v4 (Bronk Ramsey 2009). We use the Bomb13NH1 (AD1650-2010) **radiocarbon data set** (Hua et al. 2013) with additional data points from the Hammer and Levin datasets of atmospheric 14C activity from Jungfraujoch in the Swiss Alps (Levin et al. 2013; Hammer and Levin 2017). Please note that use of the Hammer & Levin data is restricted: any publication using data from the individual station, please contact the data submitters concerning co‐authorship or acknowledgements, and make proper descriptions on the data sources in the references.

##Post-bomb atmospheric NH1 curve (Hua et al., 2013) with added mean summer values from year 2010.5 onwards from the Hammer and Levin datasets of atmospheric 14C activity from Jungfraujoch in the Swiss Alps (Levin et al. 2013; Hammer and Levin 2017).

#Prefix from IntCal13

300,252,7,4.9,0.9

295,239,7,6.0,0.9

290,233,7,6.1,0.9

285,215,7,7.7,0.9

280,181,8,11.4,1.0

275,176,7,11.4,0.9

270,167,8,11.9,1.0

265,141,7,14.6,0.9

260,133,6,15.0,0.8

255,118,5,16.3,0.6

250,103,6,17.6,0.8

245,105,6,16.7,0.8

240,97,6,17.1,0.8

235,93,7,17.0,0.9

230,105,6,14.9,0.8

225,113,6,13.2,0.8

220,137,8,9.6,1.0

215,152,8,7.1,1.0

210,167,7,4.6,0.9

205,163,7,4.5,0.9

200,163,7,3.9,0.9

195,161,7,3.6,0.9

190,155,7,3.7,0.9

185,172,8,1.0,1.0

180,176,8,-0.1,1.0

175,168,7,0.3,0.9

170,185,7,-2.5,0.9

165,215,8,-6.8,1.0

160,219,8,-7.9,1.0

155,212,8,-7.6,1.0

150,170,7,-3.0,0.9

145,154,8,-1.6,1.0

140,132,8,0.5,1.0

135,111,8,2.5,1.0

130,102,6,3.0,0.7

125,103,7,2.3,0.9

120,95,7,2.7,0.9

115,113,8,-0.2,1.0

110,122,8,-1.9,1.0

105,114,8,-1.5,1.0

100,114,9,-2.1,1.1

95,122,8,-3.7,1.0

90,119,6,-3.9,0.7

85,123,6,-5.0,0.7

80,114,6,-4.5,0.7

75,119,7,-5.7,0.9

70,104,7,-4.5,0.9

65,102,7,-4.8,0.9

60,98,7,-4.9,0.9

55,78,7,-3.1,0.9

50,71,7,-2.8,0.9

45,83,7,-4.9,0.9

40,99,7,-7.5,0.9

35,104,7,-8.7,0.9

30,129,7,-12.4,0.9

25,132,6,-13.3,0.7

20,152,7,-16.4,0.9

15,154,8,-17.2,1.0

10,172,8,-20.0,1.0

5,188,8,-22.5,1.0

0,199,8,-24.5,1.0

#Year D14C 1sigma F14C 1sigma

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1951.5 -25.5 1.7 0.9747 0.0017

1952.5 -25.8 1.6 0.9745 0.0016

1953.5 -24.1 1.8 0.9763 0.0018

1954.5 -22.8 2.6 0.9777 0.0026

1955.5 17.2 5.3 1.0178 0.0053

1956.5 24.4 7.5 1.0252 0.0076

1957.5 98.3 37.0 1.0993 0.0370

1958.5 168.2 9.3 1.1694 0.0093

1959.12 180.5 7.5 1.1818 0.0075

1959.20 196.0 4.9 1.1973 0.0050

1959.28 228.0 7.0 1.2294 0.0070

1959.37 232.0 9.0 1.2334 0.0090

1959.45 276.0 7.0 1.2775 0.0070

1959.53 248.0 7.0 1.2494 0.0070

1959.62 270.0 10.0 1.2715 0.0100

1959.70 250.0 6.0 1.2515 0.0060

1959.79 235.0 6.4 1.2365 0.0064

1959.87 227.0 4.0 1.2285 0.0040

1959.95 216.0 7.0 1.2175 0.0070

1960.04 198.0 7.0 1.1995 0.0070

1960.12 204.0 5.0 1.2055 0.0050

1960.20 204.4 5.3 1.2059 0.0053

1960.28 202.0 7.0 1.2035 0.0070

1960.37 219.0 6.0 1.2205 0.0060

1960.45 234.0 5.0 1.2356 0.0050

1960.53 231.0 6.0 1.2326 0.0060

1960.62 221.0 7.0 1.2226 0.0070

1960.70 215.0 8.0 1.2166 0.0080

1960.79 209.0 7.0 1.2106 0.0070

1960.87 205.0 7.0 1.2066 0.0070

1960.95 209.0 7.0 1.2106 0.0070

1961.04 202.0 7.0 1.2036 0.0070

1961.12 205.0 9.0 1.2066 0.0090

1961.20 220.0 8.0 1.2217 0.0080

1961.28 212.0 7.0 1.2137 0.0070

1961.37 215.0 8.0 1.2167 0.0080

1961.45 247.0 8.0 1.2487 0.0080

1961.53 227.0 7.0 1.2287 0.0070

1961.62 240.0 6.0 1.2417 0.0060

1961.70 205.0 7.0 1.2067 0.0070

1961.79 217.0 6.0 1.2187 0.0060

1961.95 238.0 6.0 1.2398 0.0060

1962.04 262.0 7.0 1.2638 0.0070

1962.12 286.0 5.0 1.2879 0.0050

1962.20 304.0 6.0 1.3059 0.0060

1962.37 366.0 6.0 1.3680 0.0060

1962.53 393.0 6.0 1.3951 0.0060

1962.62 416.0 6.0 1.4182 0.0060

1962.70 393.0 8.0 1.3951 0.0080

1962.79 382.0 6.0 1.3841 0.0060

1962.87 408.0 6.0 1.4102 0.0060

1962.95 422.5 10 1.4247 0.0100

1963.04 415.7 7.8 1.4179 0.0078

1963.12 461.0 17.0 1.4633 0.0170

1963.20 485.9 9.6 1.4883 0.0097

1963.28 558.0 13.6 1.5605 0.0136

1963.37 647.4 3.8 1.6501 0.0038

1963.45 762.0 40.4 1.7649 0.0405

1963.53 880.4 12.7 1.8835 0.0127

1963.62 980.4 21.5 1.9836 0.0215

1963.70 974.2 41.2 1.9775 0.0413

1963.79 851.2 53.8 1.8543 0.0539

1963.87 821.3 43.7 1.8243 0.0438

1963.95 813.2 50.8 1.8163 0.0509

1964.04 804.0 18.9 1.8071 0.0189

1964.12 797.7 26.4 1.8008 0.0264

1964.20 798.8 23.6 1.8019 0.0237

1964.28 834.8 8.3 1.8380 0.0083

1964.37 891.7 15.4 1.8950 0.0154

1964.45 916.4 4.4 1.9197 0.0045

1964.53 912.1 49.5 1.9155 0.0495

1964.62 897.3 21.3 1.9007 0.0214

1964.70 861.0 34.1 1.8643 0.0342

1964.79 835.8 5.8 1.8391 0.0058

1964.87 787.5 23.8 1.7908 0.0239

1964.95 774.6 17.5 1.7778 0.0175

1965.04 775.7 13.6 1.7789 0.0137

1965.12 742.5 5.5 1.7457 0.0055

1965.20 752.6 11.8 1.7558 0.0118

1965.28 759.6 8.4 1.7629 0.0084

1965.37 759.5 13.5 1.7628 0.0136

1965.45 794.9 18.3 1.7983 0.0184

1965.53 799.3 17.3 1.8026 0.0174

1965.62 783.4 31.4 1.7868 0.0314

1965.70 757.6 8.2 1.7609 0.0082

1965.79 745.8 26.0 1.7492 0.0261

1965.87 725.0 7.4 1.7283 0.0074

1965.95 702.9 7.4 1.7062 0.0074

1966.04 697.5 5.0 1.7007 0.0050

1966.12 689.7 6.2 1.6930 0.0062

1966.20 688.6 9.1 1.6919 0.0091

1966.28 690.2 19.7 1.6936 0.0197

1966.37 698.2 14.9 1.7016 0.0149

1966.45 717.5 8.6 1.7209 0.0086

1966.53 717.2 8.0 1.7207 0.0080

1966.62 711.1 6.7 1.7145 0.0067

1966.70 705.4 15.6 1.7089 0.0157

1966.79 670.9 23.3 1.6743 0.0234

1966.87 647.1 23.9 1.6504 0.0239

1966.95 659.3 3.9 1.6627 0.0040

1967.04 645.8 19.9 1.6492 0.0199

1967.12 649.9 22.4 1.6533 0.0224

1967.20 642.0 12.6 1.6454 0.0126

1967.28 642.0 11.9 1.6455 0.0119

1967.37 646.1 4.8 1.6496 0.0048

1967.45 652.7 13.0 1.6562 0.0130

1967.53 646.6 21.6 1.6501 0.0217

1967.62 635.8 16.9 1.6393 0.0169

1967.70 619.3 26.2 1.6228 0.0263

1967.79 624.8 13.1 1.6283 0.0132

1967.87 607.4 5.7 1.6109 0.0057

1967.95 590.6 7.6 1.5941 0.0076

1968.04 592.6 7.2 1.5961 0.0072

1968.12 576.5 7.3 1.5799 0.0074

1968.20 573.5 6.5 1.5770 0.0065

1968.28 583.5 15.9 1.5870 0.0159

1968.37 578.9 26.4 1.5824 0.0265

1968.45 575.1 5.1 1.5786 0.0052

1968.53 589.8 17.8 1.5934 0.0178

1968.62 583.6 45.5 1.5872 0.0456

1968.70 572.9 23.7 1.5765 0.0238

1968.79 559.2 23.3 1.5627 0.0233

1968.87 547.8 12.3 1.5513 0.0123

1968.95 555.3 10.3 1.5588 0.0104

1969.04 573.1 29.2 1.5767 0.0293

1969.12 540.0 19.5 1.5436 0.0196

1969.20 540.0 7.0 1.5436 0.0070

1969.28 553.5 34.9 1.5571 0.0350

1969.37 557.8 5.1 1.5614 0.0052

1969.45 558.0 5.1 1.5617 0.0052

1969.53 555.3 17.3 1.5590 0.0173

1969.62 550.5 32.1 1.5541 0.0322

1969.70 539.5 12.6 1.5431 0.0126

1969.79 565.8 25.2 1.5696 0.0252

1969.87 552.2 6.5 1.5559 0.0065

1969.95 535.2 7.9 1.5389 0.0080

1970.04 546.0 6.1 1.5498 0.0062

1970.12 546.3 11.2 1.5501 0.0112

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1970.45 544.8 10.2 1.5486 0.0102

1970.53 539.5 5.9 1.5433 0.0059

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1970.70 538.1 17.3 1.5420 0.0174

1970.79 535.4 22.2 1.5393 0.0223

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1971.70 496.8 21.2 1.5007 0.0213

1971.79 514.2 23.8 1.5182 0.0239

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1972.04 505.0 11.3 1.5090 0.0113

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1973.87 438.7 5.6 1.4428 0.0056

1973.95 399.7 4.7 1.4038 0.0047

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1975.04 374.6 21.5 1.3788 0.0216

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1975.20 364.2 16.4 1.3684 0.0165

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1975.37 377.4 18.9 1.3816 0.0189

1975.45 393.8 8.0 1.3981 0.0080

1975.53 403.0 12.0 1.4073 0.0120

1975.62 382.0 15.0 1.3863 0.0150

1975.70 393.0 11.0 1.3973 0.0110

1975.79 392.0 14.0 1.3963 0.0140

1975.87 369.2 4.6 1.3734 0.0046

1975.95 372.7 4.7 1.3770 0.0048

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1976.12 358.8 6.2 1.3631 0.0063

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1976.53 357.2 5.1 1.3615 0.0051

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1976.70 348.9 5.3 1.3533 0.0053

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1976.87 346.5 4.3 1.3509 0.0043

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1977.37 331.7 8.0 1.3361 0.0080

1977.45 334.6 8.8 1.3391 0.0088

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1979.28 294.6 8.8 1.2992 0.0089

1979.37 292.9 11.7 1.2975 0.0117

1979.45 289.9 8.6 1.2945 0.0087

1979.53 287.0 10.6 1.2916 0.0106

1979.62 299.1 4.4 1.3038 0.0044

1979.70 289.3 9.7 1.2939 0.0097

1979.79 288.0 7.3 1.2927 0.0073

1979.87 285.8 8.2 1.2905 0.0082

1979.95 271.5 10.3 1.2761 0.0103

1980.04 270.5 5.6 1.2751 0.0056

1980.12 266.3 9.6 1.2710 0.0097

1980.20 257.9 12.3 1.2625 0.0124

1980.28 264.7 9.8 1.2694 0.0098

1980.37 263.8 9.2 1.2685 0.0092

1980.45 270.0 6.6 1.2747 0.0067

1980.53 276.4 5.1 1.2811 0.0051

1980.62 268.1 4.5 1.2728 0.0046

1980.70 268.9 12.5 1.2736 0.0125

1980.79 265.0 10.3 1.2697 0.0103

1980.87 257.6 5.5 1.2624 0.0055

1980.95 253.2 7.6 1.2579 0.0076

1981.04 250.7 8.1 1.2554 0.0081

1981.12 261.5 8.2 1.2663 0.0082

1981.20 248.4 5.1 1.2532 0.0052

1981.28 248.0 4.9 1.2528 0.0049

1981.37 253.1 7.7 1.2579 0.0077

1981.45 262.9 7.4 1.2677 0.0074

1981.53 259.0 10.7 1.2638 0.0107

1981.62 254.9 8.2 1.2598 0.0082

1981.70 254.1 6.6 1.2589 0.0067

1981.79 264.0 4.0 1.2689 0.0040

1981.87 244.0 4.0 1.2488 0.0040

1981.95 254.7 12.7 1.2596 0.0128

1982.04 246.6 1.8 1.2514 0.0018

1982.12 242.4 2.6 1.2473 0.0026

1982.20 238.3 6.0 1.2432 0.0061

1982.28 238.4 8.0 1.2432 0.0080

1982.37 242.6 6.5 1.2475 0.0065

1982.45 239.3 6.5 1.2441 0.0065

1982.53 236.2 9.2 1.2411 0.0092

1982.62 240.6 4.7 1.2455 0.0047

1982.70 238.3 2.6 1.2433 0.0026

1982.79 238.3 6.3 1.2432 0.0063

1982.87 232.2 7.8 1.2371 0.0079

1982.95 231.5 5.0 1.2365 0.0050

1983.04 226.4 9.6 1.2313 0.0097

1983.12 224.7 3.0 1.2296 0.0030

1983.20 231.8 2.9 1.2367 0.0030

1983.28 226.6 5.2 1.2315 0.0052

1983.37 224.2 7.2 1.2291 0.0072

1983.45 232.8 6.1 1.2378 0.0061

1983.53 231.0 6.0 1.2360 0.0060

1983.62 231.7 5.3 1.2368 0.0053

1983.70 229.6 4.3 1.2346 0.0043

1983.79 225.9 5.5 1.2309 0.0055

1983.87 216.5 6.0 1.2215 0.0060

1983.95 216.0 9.1 1.2210 0.0092

1984.04 221.5 12.3 1.2265 0.0123

1984.12 212.1 13.1 1.2171 0.0131

1984.20 206.6 7.1 1.2116 0.0071

1984.28 208.8 4.0 1.2138 0.0040

1984.37 209.9 6.4 1.2150 0.0064

1984.45 214.3 1.3 1.2194 0.0013

1984.53 211.6 6.5 1.2167 0.0066

1984.62 212.1 6.2 1.2171 0.0062

1984.70 213.9 4.8 1.2190 0.0048

1984.79 212.4 1.6 1.2175 0.0016

1984.87 208.2 6.1 1.2133 0.0061

1984.95 216.4 21.3 1.2215 0.0214

1985.04 199.7 10.4 1.2047 0.0105

1985.12 197.1 8.9 1.2022 0.0089

1985.20 202.8 10.0 1.2080 0.0100

1985.28 200.6 4.9 1.2057 0.0050

1985.37 201.9 4.8 1.2071 0.0048

1985.45 205.1 2.9 1.2103 0.0029

1985.53 207.9 5.8 1.2131 0.0058

1985.62 207.5 2.8 1.2127 0.0028

1985.70 206.4 6.3 1.2116 0.0064

1985.79 193.8 6.1 1.1990 0.0061

1985.87 186.2 14.1 1.1913 0.0142

1985.95 193.1 8.4 1.1983 0.0084

1986.04 195.9 6.0 1.2011 0.0060

1986.12 194.6 10.6 1.1998 0.0107

1986.20 192.8 5.8 1.1980 0.0058

1986.28 185.5 12.7 1.1907 0.0128

1986.37 188.8 6.3 1.1941 0.0063

1986.45 187.8 5.7 1.1931 0.0058

1986.53 189.9 3.5 1.1952 0.0035

1986.62 191.9 2.6 1.1972 0.0026

1986.70 191.2 6.3 1.1965 0.0064

1986.79 190.1 4.1 1.1954 0.0041

1986.87 186.6 3.4 1.1919 0.0034

1986.95 181.1 3.6 1.1864 0.0036

1987.04 182.7 3.6 1.1880 0.0036

1987.12 182.2 10.9 1.1875 0.0110

1987.20 174.7 7.5 1.1800 0.0075

1987.28 179.2 8.6 1.1845 0.0087

1987.37 183.4 5.6 1.1888 0.0056

1987.45 183.5 4.7 1.1889 0.0047

1987.53 186.2 3.7 1.1916 0.0037

1987.62 186.3 3.2 1.1917 0.0032

1987.70 185.5 2.7 1.1910 0.0027

1987.79 179.0 2.7 1.1844 0.0027

1987.87 176.8 4.6 1.1822 0.0046

1987.95 174.4 9.4 1.1798 0.0094

1988.04 177.4 1.6 1.1828 0.0017

1988.12 170.3 2.3 1.1757 0.0023

1988.20 173.5 2.0 1.1789 0.0020

1988.28 167.7 2.7 1.1731 0.0027

1988.37 169.0 4.5 1.1745 0.0045

1988.45 172.5 2.5 1.1779 0.0025

1988.53 173.5 5.6 1.1790 0.0057

1988.62 175.1 5.8 1.1806 0.0058

1988.70 170.0 4.7 1.1755 0.0047

1988.79 171.4 3.8 1.1770 0.0038

1988.87 161.2 4.9 1.1667 0.0050

1988.95 165.6 4.2 1.1711 0.0042

1989.04 169.3 1.5 1.1748 0.0015

1989.12 166.6 3.7 1.1722 0.0037

1989.20 162.8 1.8 1.1683 0.0018

1989.28 159.1 3.4 1.1647 0.0034

1989.37 163.2 4.1 1.1688 0.0041

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