**Supplementary Information, File 4**

Oxcal 4.3 source code for the Markov Chain Montel Carlo radiocarbon calibration analysis

Options()

{

Curve="SHCal13.14c";

BCAD=FALSE;

};

Plot()

{

Sequence("LBCS-Kate")

{

Boundary("Start of Kate");

Phase("Kate")

{

R\_Date("23501", 27429, 112);

R\_Date("23504", 26630, 100);

Span("Span of dates for Kate");

Interval("Duration of Kate");

};

Boundary("End of Kate");

};

Sequence("LBCS-Hayley")

{

Boundary("Start of Hayley");

Phase("Hayley")

{

R\_Date("34326\_LBCS\_Hayley", 23025, 154);

R\_Date("33025\_LBCS\_Hayley", 21250, 108);

R\_Date("27699\_LBCS\_Hayley", 20779, 144);

R\_Date("27700\_LBCS\_Hayley", 20736, 110);

R\_Date("34933\_LBCS\_Hayley", 20058, 96);

R\_Date("34957\_LBCS\_Hayley", 19972, 88);

Span("Span of dates for Hayley");

Interval("Duration of Hayley");

};

Boundary("End of Hayley");

};

Sequence("LBCS-SRCS")

{

Boundary("Start of Otis");

Phase("Otis")

{

R\_Date("18702\_LBCS\_Otis", 18980, 50);

R\_Date("22305\_LBCS\_Otis", 18690, 60);

Span("Span of dates for Otis");

Interval("Duration of Otis");

};

Boundary("End of Otis");

Phase("Lily")

{

R\_Date("17923\_LBCS\_Lily", 17840, 50);

R\_Date("36264\_LBCS\_Lily", 17823, 83);

R\_Date("31390\_LBCS\_Lily", 17101, 119);

R\_Date("32455\_LBCS\_Lily", 16704, 70);

Span("Span of dates for Lily");

Interval("Duration of Lily");

};

Boundary("End of Lily");

Interval("Lily2Chopi");

Boundary( "Start of Chopi");

Phase("Chopi")

{

R\_Date("30258\_SRCS\_Chopi", 14230, 59);

R\_Date("30224\_SRCS\_Chopi", 14204, 55);

R\_Date("30270\_SRCS\_Chopi", 13594, 59);

R\_Date("34911\_LBCS\_Chopi", 13118, 59);

R\_Date("35716\_LBCS\_Chopi", 12656, 47);

Span("Span of dates for Chopi");

Interval("Duration of Chopi");

};

Boundary("End of Chopi");

Interval("Chopi2Kuka");

Boundary("Start of Kuka");

Phase("Kuka")

{

R\_Date("34285\_LBCS\_Kuka", 11857, 43);

R\_Date("26617\_LBCS\_Kuka", 11655, 38);

R\_Date("35722\_LBCS\_Kuka", 11645, 43);

Span("Span of dates for Kuka");

Interval("Duration of Kuka");

};

Boundary("End of Kuka");

Interval("Kuka2Courtney");

Boundary("Start of Courtney");

Phase("Courtney")

{

R\_Date("17125\_LBCS\_Courtney", 9680, 30);

R\_Date("31884\_SRCS\_Courtney", 9665, 36);

R\_Date("33382\_SRCS\_Courtney", 9553, 36);

R\_Date("33381\_SRCS\_Courtney", 9489, 37);

Span("Span of dates of Courtney");

Interval("Duration of Courtney");

};

Boundary("End of Courtney");

Phase("Irene")

{

R\_Date("31813\_SRCS\_Irene", 9640, 44);

R\_Date("30624\_SRCS\_Irene", 9598, 38);

R\_Date("33766\_LBCS\_Irene", 9577, 46);

R\_Date("32294\_SRCS\_Irene", 9568, 38);

R\_Date("30657\_SRCS\_Irene", 9560, 54);

R\_Date("27605\_SRCS\_Irene", 9559, 43);

R\_Date("33274\_SRCS\_Irene", 9581, 45);

R\_Date("27694\_SRCS\_Irene", 9522, 45);

R\_Date("27014\_SRCS\_Irene", 9534, 46);

R\_Date("27019\_SRCS\_Irene", 9496, 49);

Span("Span of dates of Irene");

Interval("Duration of Irene");

};

Boundary("End of Irene");

Phase("Irit")

{

R\_Date("30048\_SRCS\_Irit", 9600, 44);

R\_Date("30047\_SRCS\_Irit", 9568, 49);

R\_Date("20408\_SRCS\_Irit", 9540, 30);

Span("Span of dates of Irit");

Interval("Duration of Irit");

};

Boundary ("End of Irit");

R\_Combine("501\_SRCS\_Bonile")

{

R\_Date("iThemba-501", 9617, 41);

R\_Date("beta-501", 9640, 30);

};

Interval("Bonile");

Boundary("Start of Lwando");

Phase("Lwando")

{

R\_Date("22339\_SRCS\_Lwando", 9515, 51);

R\_Date("21323\_SRCS\_Lwando", 9499, 45);

R\_Date("18638\_SRCS\_Lwando", 9469, 43);

Span("Span of Dates of Lwando");

Interval("Duration of Lwando");

};

Boundary("End of Lwando");

Phase("Jess")

{

R\_Date("20608\_SRCS\_Jess", 9561, 46);

R\_Date("7618\_SRCS\_Jess", 9548, 48);

R\_Date("4944\_SRCS\_Jess", 9543, 47);

R\_Date("8098\_SRCS\_Jess", 9529, 69);

R\_Date("4945", 9640, 30);

Span("Span of dates of Jess");

Interval("Duration of Jess");

};

Boundary("End of Jess");

Phase("Justin")

{

R\_Combine("1503\_SRCS\_Justin")

{

R\_Date("iThemba-1503", 9602, 36);

R\_Date("beta-1503", 9520, 30);

};

R\_Date("6666\_SRCS\_Justin", 9550, 30);

Span("Span of dates of Bonile-Justin");

Interval("Duration of Justin");

};

Boundary("End of Justin");

Difference("Duration of SRCS", "Start of Lwando", "End of Irit");

Difference("Duration of SRCS", "End of Justin", "Start of Courtney");

};

};