Supplemental Text 4. Code for OxCal Models.

*Averbuch (40DV60) (primary model)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Averbuch");

 Phase()

 {

 R\_Date("Structure 11: GX-7752", 660, 125)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 4: Beta-342427", 610, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 16: GX-7753", 805, 130);

 Phase("Structure 3")

 {

 First("start Structure 3");

 R\_Date("Beta-346184", 460, 30);

 R\_Date("GX-7750", 610, 120)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("GX-7755", 440, 120)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Structure 3");

 };

 Phase("Structure 1")

 {

 First("start Structure 1");

 R\_Date("UGa-2004", 525, 55)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("UGa-2005", 695, 50)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Structure 1");

 };

 R\_Date("Cemetery 2: Beta-383166", 710, 30)

 {

 Outlier("Charcoal", 1);

 };

 Sequence()

 {

 R\_Date("Structure 8: GX-7751", 660, 125)

 {

 Outlier("Charcoal", 1);

 };

 Phase("Palisade")

 {

 First("start Palisade");

 R\_Date("Beta-342426", 560, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("GX-7754", 565, 120)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-346182", 670, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-331859", 420, 30)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Palisade");

 Span("Palisade\_span");

 };

 };

 Sequence()

 {

 R\_Date("Structure 5: Beta-335225", 670, 30)

 {

 };

 Phase("Cemetery 1")

 {

 First("start Cemetery 1");

 R\_Date("Beta-335226", 520, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-331858", 460, 30)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Cemetery 1");

 };

 };

 R\_Date("Structure 15: Beta-342425", 480, 30);

 };

 Boundary("Primary Model: end Averbuch");

 Span("Primary Model: span Averbuch");

 };

 };

*Averbuch (40DV60; alternative model)*

Plot()

 {

 Sequence()

 {

 Boundary("Alternative Model: start Averbuch");

 Phase()

 {

 R\_Date("Structure 11: GX-7752", 660, 125);

 R\_Date("Structure 4: Beta-342427", 610, 30);

 R\_Date("Feature 16: GX-7753", 805, 130);

 Phase("Structure 3")

 {

 First("start Structure 3");

 R\_Date("Beta-346184", 460, 30);

 R\_Date("GX-7750", 610, 120);

 R\_Date("GX-7755", 440, 120);

 Last("end Structure 3");

 };

 Phase("Structure 1")

 {

 First("start Structure 1");

 R\_Date("UGa-2004", 525, 55);

 R\_Date("UGa-2005", 695, 50);

 Last("end Structure 1");

 };

 R\_Date("Cemetery 2: Beta-383166", 710, 30);

 Sequence()

 {

 R\_Date("Structure 8: GX-7751", 660, 125);

 Phase("Palisade")

 {

 First("Alternative Model: start Palisade");

 R\_Date("Beta-342426", 560, 30);

 R\_Date("GX-7754", 565, 120);

 R\_Date("Beta-346182", 670, 30);

 R\_Date("Beta-331859", 420, 30);

 Last("Alternative Model: end Palisade");

 Span("Alternative Model: Palisade span");

 };

 };

 Sequence()

 {

 R\_Date("Structure 5: Beta-335225", 670, 30);

 Phase("Cemetery 1")

 {

 First("start Cemetery 1");

 R\_Date("Beta-335226", 520, 30);

 R\_Date("Beta-331858", 460, 30);

 Last("end Cemetery 1");

 };

 };

 R\_Date("Structure 15: Beta-342425", 480, 30);

 };

 Boundary("Alternative Model: end Averbuch");

 Span("Alternative Model: span Averbuch");

 };

 };

*Averbuch (40DV60; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 68% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Averbuch");

 Phase()

 {

 R\_Simulate("1", 1360, 35);

 R\_Simulate("2", 1365, 35);

 R\_Simulate("3", 1370, 35);

 R\_Simulate("4", 1375, 35);

 R\_Simulate("5", 1380, 35);

 R\_Simulate("6", 1385, 35);

 R\_Simulate("7", 1390, 35);

 R\_Simulate("8", 1395, 35);

 R\_Simulate("9", 1400, 35);

 R\_Simulate("10", 1405, 35);

 R\_Simulate("11", 1410, 35);

 R\_Simulate("12", 1415, 35);

 R\_Simulate("13", 1420, 35);

 R\_Simulate("14", 1425, 35);

 R\_Simulate("15", 1430, 35);

 R\_Simulate("16", 1435, 35);

 R\_Simulate("17", 1440, 35);

 R\_Simulate("18", 1445, 35);

 R\_Simulate("19", 1450, 35);

 R\_Simulate("20", 1455, 35);

 R\_Date("Structure 11: GX-7752", 660, 125)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 4: Beta-342427", 610, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 16: GX-7753", 805, 130);

 Phase("Structure 3")

 {

 First("start Structure 3");

 R\_Date("Beta-346184", 460, 30);

 R\_Date("GX-7750", 610, 120)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("GX-7755", 440, 120)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Structure 3");

 };

 Phase("Structure 1")

 {

 First("start Structure 1");

 R\_Date("UGa-2004", 525, 55)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("UGa-2005", 695, 50)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Structure 1");

 };

 R\_Date("Cemetery 2: Beta-383166", 710, 30)

 {

 Outlier("Charcoal", 1);

 };

 Sequence()

 {

 R\_Date("Structure 8: GX-7751", 660, 125)

 {

 Outlier("Charcoal", 1);

 };

 Phase("Palisade")

 {

 First("start Palisade");

 R\_Date("Beta-342426", 560, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("GX-7754", 565, 120)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-346182", 670, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-331859", 420, 30)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Palisade");

 Span("Palisade\_span");

 };

 };

 Sequence()

 {

 R\_Date("Structure 5: Beta-335225", 670, 30)

 {

 };

 Phase("Cemetery 1")

 {

 First("start Cemetery 1");

 R\_Date("Beta-335226", 520, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-331858", 460, 30)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Cemetery 1");

 };

 };

 R\_Date("Structure 15: Beta-342425", 480, 30);

 };

 Boundary("Primary Model: end Averbuch");

 Span("Primary Model: span Averbuch");

 };

 };

*Averbuch (40DV60; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 95% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Averbuch");

 Phase()

 {

 R\_Simulate("1", 1360, 35);

 R\_Simulate("2", 1362, 35);

 R\_Simulate("3", 1364, 35);

 R\_Simulate("4", 1365, 35);

 R\_Simulate("5", 1367, 35);

 R\_Simulate("6", 1369, 35);

 R\_Simulate("7", 1371, 35);

 R\_Simulate("8", 1372, 35);

 R\_Simulate("9", 1374, 35);

 R\_Simulate("10", 1376, 35);

 R\_Simulate("11", 1378, 35);

 R\_Simulate("12", 1379, 35);

 R\_Simulate("13", 1381, 35);

 R\_Simulate("14", 1383, 35);

 R\_Simulate("15", 1385, 35);

 R\_Simulate("16", 1386, 35);

 R\_Simulate("17", 1388, 35);

 R\_Simulate("18", 1390, 35);

 R\_Simulate("19", 1392, 35);

 R\_Simulate("20", 1393, 35);

 R\_Simulate("21", 1395, 35);

 R\_Simulate("22", 1397, 35);

 R\_Simulate("23", 1399, 35);

 R\_Simulate("24", 1400, 35);

 R\_Simulate("25", 1402, 35);

 R\_Simulate("26", 1404, 35);

 R\_Simulate("27", 1406, 35);

 R\_Simulate("28", 1408, 35);

 R\_Simulate("29", 1409, 35);

 R\_Simulate("30", 1411, 35);

 R\_Simulate("31", 1413, 35);

 R\_Simulate("32", 1415, 35);

 R\_Simulate("33", 1416, 35);

 R\_Simulate("34", 1418, 35);

 R\_Simulate("35", 1420, 35);

 R\_Simulate("36", 1422, 35);

 R\_Simulate("37", 1423, 35);

 R\_Simulate("38", 1425, 35);

 R\_Simulate("39", 1427, 35);

 R\_Simulate("40", 1429, 35);

 R\_Simulate("41", 1430, 35);

 R\_Simulate("42", 1432, 35);

 R\_Simulate("43", 1434, 35);

 R\_Simulate("44", 1436, 35);

 R\_Simulate("45", 1437, 35);

 R\_Simulate("46", 1439, 35);

 R\_Simulate("47", 1441, 35);

 R\_Simulate("48", 1443, 35);

 R\_Simulate("49", 1444, 35);

 R\_Simulate("50", 1446, 35);

 R\_Simulate("51", 1448, 35);

 R\_Simulate("52", 1450, 35);

 R\_Simulate("53", 1451, 35);

 R\_Simulate("54", 1453, 35);

 R\_Simulate("55", 1455, 35);

 R\_Date("Structure 11: GX-7752", 660, 125)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 4: Beta-342427", 610, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 16: GX-7753", 805, 130);

 Phase("Structure 3")

 {

 First("start Structure 3");

 R\_Date("Beta-346184", 460, 30);

 R\_Date("GX-7750", 610, 120)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("GX-7755", 440, 120)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Structure 3");

 };

 Phase("Structure 1")

 {

 First("start Structure 1");

 R\_Date("UGa-2004", 525, 55)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("UGa-2005", 695, 50)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Structure 1");

 };

 R\_Date("Cemetery 2: Beta-383166", 710, 30)

 {

 Outlier("Charcoal", 1);

 };

 Sequence()

 {

 R\_Date("Structure 8: GX-7751", 660, 125)

 {

 Outlier("Charcoal", 1);

 };

 Phase("Palisade")

 {

 First("start Palisade");

 R\_Date("Beta-342426", 560, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("GX-7754", 565, 120)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-346182", 670, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-331859", 420, 30)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Palisade");

 Span("Palisade\_span");

 };

 };

 Sequence()

 {

 R\_Date("Structure 5: Beta-335225", 670, 30)

 {

 };

 Phase("Cemetery 1")

 {

 First("start Cemetery 1");

 R\_Date("Beta-335226", 520, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-331858", 460, 30)

 {

 Outlier("Charcoal", 1);

 };

 Last("end Cemetery 1");

 };

 };

 R\_Date("Structure 15: Beta-342425", 480, 30);

 };

 Boundary("Primary Model: end Averbuch");

 Span("Primary Model: span Averbuch");

 };

 };

*Brentwood Library (40WM210; primary model)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Brentwood Library");

 Phase()

 {

 R\_Date("Feature 10: Beta-186722", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 60 (refuse-filled pit): Beta-186725", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 Phase("palisade")

 {

 First("start palisade");

 R\_Date("Feature 279: Beta-186724", 630, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 402: Beta-364007", 370, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 411: Beta-364008", 530, 30)

 {

 Outlier("Charcoal", 1);

 };

 Last("end palisade");

 Span("palisade span");

 };

 R\_Date("Structure 2 (charred post on floor): Beta-186723", 480, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 3 (Feature 530): Beta-186727", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 4 (Feature 620): Beta-186726", 610, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("Primary Model: end Brentwood Library");

 Span("Primary Model: Brentwood Library span");

 };

 };

*Brentwood Library (40WM210; alternative model)*

Plot()

 {

 Sequence()

 {

 Boundary("Alternative Model: start Brentwood Library");

 Phase()

 {

 R\_Date("Feature 10: Beta-186722", 580, 50);

 R\_Date("Feature 60 (refuse-filled pit): Beta-186725", 570, 60);

 Phase("palisade")

 {

 First("Alternative Model: start palisade");

 R\_Date("Feature 279: Beta-186724", 630, 60);

 R\_Date("Feature 402: Beta-364007", 370, 30);

 R\_Date("Feature 411: Beta-364008", 530, 30);

 Last("Alternative Model: end palisade");

 Span("Alternative Model: palisade span");

 };

 R\_Date("Structure 2 (charred post on floor): Beta-186723", 480, 50);

 R\_Date("Structure 3 (Feature 530): Beta-186727", 570, 60);

 R\_Date("Structure 4 (Feature 620): Beta-186726", 610, 50);

 };

 Boundary("Alternative Model: end Brentwood Library");

 Span("Alternative Model: Brentwood Library span");

 };

 };

*Brentwood Library (40WM210; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 68% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Brentwood Library");

 Phase()

 {

 R\_Simulate("1", 1335, 35);

 R\_Simulate("2", 1342, 35);

 R\_Simulate("3", 1349, 35);

 R\_Simulate("4", 1356, 35);

 R\_Simulate("5", 1363, 35);

 R\_Simulate("6", 1369, 35);

 R\_Simulate("7", 1376, 35);

 R\_Simulate("8", 1383, 35);

 R\_Simulate("9", 1390, 35);

 R\_Simulate("10", 1397, 35);

 R\_Simulate("11", 1404, 35);

 R\_Simulate("12", 1411, 35);

 R\_Simulate("13", 1418, 35);

 R\_Simulate("14", 1424, 35);

 R\_Simulate("15", 1431, 35);

 R\_Simulate("16", 1438, 35);

 R\_Simulate("17", 1445, 35);

 R\_Simulate("18", 1452, 35);

 R\_Simulate("19", 1459, 35);

 R\_Simulate("20", 1466, 35);

 R\_Simulate("21", 1473, 35);

 R\_Simulate("22", 1479, 35);

 R\_Simulate("23", 1486, 35);

 R\_Simulate("24", 1493, 35);

 R\_Simulate("25", 1500, 35);

 R\_Date("Feature 10: Beta-186722", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 60 (refuse-filled pit): Beta-186725", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 Phase("palisade")

 {

 First("start palisade");

 R\_Date("Feature 279: Beta-186724", 630, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 402: Beta-364007", 370, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 411: Beta-364008", 530, 30)

 {

 Outlier("Charcoal", 1);

 };

 Last("end palisade");

 Span("palisade span");

 };

 R\_Date("Structure 2 (charred post on floor): Beta-186723", 480, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 3 (Feature 530): Beta-186727", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 4 (Feature 620): Beta-186726", 610, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("Primary Model: end Brentwood Library");

 Span("Primary Model: Brentwood Library span");

 };

 };

*Brentwood Library (40WM210; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 95% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Brentwood Library");

 Phase()

 {

 R\_Simulate("1", 1335, 35);

 R\_Simulate("2", 1336, 35);

 R\_Simulate("3", 1337, 35);

 R\_Simulate("4", 1338, 35);

 R\_Simulate("5", 1339, 35);

 R\_Simulate("6", 1341, 35);

 R\_Simulate("7", 1342, 35);

 R\_Simulate("8", 1343, 35);

 R\_Simulate("9", 1344, 35);

 R\_Simulate("10", 1345, 35);

 R\_Simulate("11", 1346, 35);

 R\_Simulate("12", 1347, 35);

 R\_Simulate("13", 1348, 35);

 R\_Simulate("14", 1349, 35);

 R\_Simulate("15", 1351, 35);

 R\_Simulate("16", 1352, 35);

 R\_Simulate("17", 1353, 35);

 R\_Simulate("18", 1354, 35);

 R\_Simulate("19", 1355, 35);

 R\_Simulate("20", 1356, 35);

 R\_Simulate("21", 1357, 35);

 R\_Simulate("22", 1358, 35);

 R\_Simulate("23", 1359, 35);

 R\_Simulate("24", 1360, 35);

 R\_Simulate("25", 1362, 35);

 R\_Simulate("26", 1363, 35);

 R\_Simulate("27", 1364, 35);

 R\_Simulate("28", 1365, 35);

 R\_Simulate("29", 1366, 35);

 R\_Simulate("30", 1367, 35);

 R\_Simulate("31", 1368, 35);

 R\_Simulate("32", 1369, 35);

 R\_Simulate("33", 1370, 35);

 R\_Simulate("34", 1372, 35);

 R\_Simulate("35", 1373, 35);

 R\_Simulate("36", 1374, 35);

 R\_Simulate("37", 1375, 35);

 R\_Simulate("38", 1376, 35);

 R\_Simulate("39", 1377, 35);

 R\_Simulate("40", 1378, 35);

 R\_Simulate("41", 1379, 35);

 R\_Simulate("42", 1380, 35);

 R\_Simulate("43", 1382, 35);

 R\_Simulate("44", 1383, 35);

 R\_Simulate("45", 1384, 35);

 R\_Simulate("46", 1385, 35);

 R\_Simulate("47", 1386, 35);

 R\_Simulate("48", 1387, 35);

 R\_Simulate("49", 1388, 35);

 R\_Simulate("50", 1389, 35);

 R\_Simulate("51", 1390, 35);

 R\_Simulate("52", 1391, 35);

 R\_Simulate("53", 1393, 35);

 R\_Simulate("54", 1394, 35);

 R\_Simulate("55", 1395, 35);

 R\_Simulate("56", 1396, 35);

 R\_Simulate("57", 1397, 35);

 R\_Simulate("58", 1398, 35);

 R\_Simulate("59", 1399, 35);

 R\_Simulate("60", 1400, 35);

 R\_Simulate("61", 1401, 35);

 R\_Simulate("62", 1403, 35);

 R\_Simulate("63", 1404, 35);

 R\_Simulate("64", 1405, 35);

 R\_Simulate("65", 1406, 35);

 R\_Simulate("66", 1407, 35);

 R\_Simulate("67", 1408, 35);

 R\_Simulate("68", 1409, 35);

 R\_Simulate("69", 1410, 35);

 R\_Simulate("70", 1411, 35);

 R\_Simulate("71", 1413, 35);

 R\_Simulate("72", 1414, 35);

 R\_Simulate("73", 1415, 35);

 R\_Simulate("74", 1416, 35);

 R\_Simulate("75", 1417, 35);

 R\_Simulate("76", 1418, 35);

 R\_Simulate("77", 1419, 35);

 R\_Simulate("78", 1420, 35);

 R\_Simulate("79", 1421, 35);

 R\_Simulate("80", 1422, 35);

 R\_Simulate("81", 1424, 35);

 R\_Simulate("82", 1425, 35);

 R\_Simulate("83", 1426, 35);

 R\_Simulate("84", 1427, 35);

 R\_Simulate("85", 1428, 35);

 R\_Simulate("86", 1429, 35);

 R\_Simulate("87", 1430, 35);

 R\_Simulate("88", 1431, 35);

 R\_Simulate("89", 1432, 35);

 R\_Simulate("90", 1434, 35);

 R\_Simulate("91", 1435, 35);

 R\_Simulate("92", 1436, 35);

 R\_Simulate("93", 1437, 35);

 R\_Simulate("94", 1438, 35);

 R\_Simulate("95", 1439, 35);

 R\_Simulate("96", 1440, 35);

 R\_Simulate("97", 1441, 35);

 R\_Simulate("98", 1442, 35);

 R\_Simulate("99", 1444, 35);

 R\_Simulate("100", 1445, 35);

 R\_Simulate("101", 1446, 35);

 R\_Simulate("102", 1447, 35);

 R\_Simulate("103", 1448, 35);

 R\_Simulate("104", 1449, 35);

 R\_Simulate("105", 1450, 35);

 R\_Simulate("106", 1451, 35);

 R\_Simulate("107", 1452, 35);

 R\_Simulate("108", 1453, 35);

 R\_Simulate("109", 1455, 35);

 R\_Simulate("110", 1456, 35);

 R\_Simulate("111", 1457, 35);

 R\_Simulate("112", 1458, 35);

 R\_Simulate("113", 1459, 35);

 R\_Simulate("114", 1460, 35);

 R\_Simulate("115", 1461, 35);

 R\_Simulate("116", 1462, 35);

 R\_Simulate("117", 1463, 35);

 R\_Simulate("118", 1465, 35);

 R\_Simulate("119", 1466, 35);

 R\_Simulate("120", 1467, 35);

 R\_Simulate("121", 1468, 35);

 R\_Simulate("122", 1469, 35);

 R\_Simulate("123", 1470, 35);

 R\_Simulate("124", 1471, 35);

 R\_Simulate("125", 1472, 35);

 R\_Simulate("126", 1473, 35);

 R\_Simulate("127", 1475, 35);

 R\_Simulate("128", 1476, 35);

 R\_Simulate("129", 1477, 35);

 R\_Simulate("130", 1478, 35);

 R\_Simulate("131", 1479, 35);

 R\_Simulate("132", 1480, 35);

 R\_Simulate("133", 1481, 35);

 R\_Simulate("134", 1482, 35);

 R\_Simulate("135", 1483, 35);

 R\_Simulate("136", 1484, 35);

 R\_Simulate("137", 1486, 35);

 R\_Simulate("138", 1487, 35);

 R\_Simulate("139", 1488, 35);

 R\_Simulate("140", 1489, 35);

 R\_Simulate("141", 1490, 35);

 R\_Simulate("142", 1491, 35);

 R\_Simulate("143", 1492, 35);

 R\_Simulate("144", 1493, 35);

 R\_Simulate("145", 1494, 35);

 R\_Simulate("146", 1496, 35);

 R\_Simulate("147", 1497, 35);

 R\_Simulate("148", 1498, 35);

 R\_Simulate("149", 1499, 35);

 R\_Simulate("150", 1500, 35);

 R\_Date("Feature 10: Beta-186722", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 60 (refuse-filled pit): Beta-186725", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 Phase("palisade")

 {

 First("start palisade");

 R\_Date("Feature 279: Beta-186724", 630, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 402: Beta-364007", 370, 30)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 411: Beta-364008", 530, 30)

 {

 Outlier("Charcoal", 1);

 };

 Last("end palisade");

 Span("palisade span");

 };

 R\_Date("Structure 2 (charred post on floor): Beta-186723", 480, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 3 (Feature 530): Beta-186727", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 4 (Feature 620): Beta-186726", 610, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("Primary Model: end Brentwood Library");

 Span("Primary Model: Brentwood Library span");

 };

 };

*East Nashville Mounds (40DV4; primary model)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start East Nashville Mounds");

 Phase()

 {

 Phase("Feature 11: Large subrectangular feature")

 {

 R\_Date("Beta-61242", 750, 70)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("TX-7855", 670, 60)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Feature 18: Beta-61243", 660, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("General midden (Level 2): TX-7860", 600, 40)

 {

 Outlier("Charcoal", 1);

 };

 Sequence()

 {

 R\_Date("Posthole 15: Beta-61246", 530, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("ceramic grave good (Burial 4a,4b,9): TX-7859", 440, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 Phase("Feature 57: Subrectangular pit")

 {

 R\_Date("Beta-61250", 640, 70)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("TX-7866", 910, 140)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Possible house floor (Feature 36): TX-7856", 890, 100)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 37: TX-7857", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 Phase("Feature 58: Subrectangular pit")

 {

 R\_Date("Beta-61245", 530, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("TX-7858", 380, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Feature 24: Beta-61244", 550, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("Primary Model: end East Nashville Mounds");

 Span("Primary Model: East Nashville Mounds span");

 };

 };

*East Nashville Mounds (40DV4; alternative model)*

Plot()

 {

 Sequence()

 {

 Boundary("Alternative Model: start East Nashville Mounds");

 Phase()

 {

 Phase("Feature 11: Large subrectangular feature")

 {

 R\_Date("Beta-61242", 750, 70);

 R\_Date("TX-7855", 670, 60);

 };

 R\_Date("Feature 18: Beta-61243", 660, 60);

 R\_Date("General midden (Level 2): TX-7860", 600, 40);

 Sequence()

 {

 R\_Date("Posthole 15: Beta-61246", 530, 60);

 R\_Date("ceramic grave good (Burial 4a,4b,9): TX-7859", 440, 50);

 };

 Phase("Feature 57: Subrectangular pit")

 {

 R\_Date("Beta-61250", 640, 70);

 R\_Date("TX-7866", 910, 140);

 };

 R\_Date("Possible house floor (Feature 36): TX-7856", 890, 100);

 R\_Date("Feature 37: TX-7857", 580, 50);

 Phase("Feature 58: Subrectangular pit")

 {

 R\_Date("Beta-61245", 530, 50);

 R\_Date("TX-7858", 380, 50);

 };

 R\_Date("Feature 24: Beta-61244", 550, 50);

 };

 Boundary("Alternative Model: end East Nashville Mounds");

 Span("Alternative Model: East Nashville Mounds span");

 };

 };

*East Nashville Mounds (40DV4; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 68% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start East Nashville Mounds");

 Phase()

 {

 R\_Simulate("1", 1255, 35);

 R\_Simulate("2", 1282, 35);

 R\_Simulate("3", 1308, 35);

 R\_Simulate("4", 1335, 35);

 R\_Simulate("5", 1362, 35);

 R\_Simulate("6", 1388, 35);

 R\_Simulate("7", 1415, 35);

 R\_Simulate("8", 1442, 35);

 R\_Simulate("9", 1468, 35);

 R\_Simulate("10", 1495, 35);

 Phase("Feature 11: Large subrectangular feature")

 {

 R\_Date("Beta-61242", 750, 70)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("TX-7855", 670, 60)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Feature 18: Beta-61243", 660, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("General midden (Level 2): TX-7860", 600, 40)

 {

 Outlier("Charcoal", 1);

 };

 Sequence()

 {

 R\_Date("Posthole 15: Beta-61246", 530, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("ceramic grave good (Burial 4a,4b,9): TX-7859", 440, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 Phase("Feature 57: Subrectangular pit")

 {

 R\_Date("Beta-61250", 640, 70)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("TX-7866", 910, 140)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Possible house floor (Feature 36): TX-7856", 890, 100)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 37: TX-7857", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 Phase("Feature 58: Subrectangular pit")

 {

 R\_Date("Beta-61245", 530, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("TX-7858", 380, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Feature 24: Beta-61244", 550, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("Primary Model: end East Nashville Mounds");

 Span("Primary Model: East Nashville Mounds span");

 };

 };

*East Nashville Mounds (40DV4; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 95% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start East Nashville Mounds");

 Phase()

 {

 R\_Simulate("1", 1255, 35);

 R\_Simulate("2", 1260, 35);

 R\_Simulate("3", 1265, 35);

 R\_Simulate("4", 1270, 35);

 R\_Simulate("5", 1275, 35);

 R\_Simulate("6", 1279, 35);

 R\_Simulate("7", 1284, 35);

 R\_Simulate("8", 1289, 35);

 R\_Simulate("9", 1294, 35);

 R\_Simulate("10", 1299, 35);

 R\_Simulate("11", 1304, 35);

 R\_Simulate("12", 1309, 35);

 R\_Simulate("13", 1314, 35);

 R\_Simulate("14", 1319, 35);

 R\_Simulate("15", 1324, 35);

 R\_Simulate("16", 1328, 35);

 R\_Simulate("17", 1333, 35);

 R\_Simulate("18", 1338, 35);

 R\_Simulate("19", 1343, 35);

 R\_Simulate("20", 1348, 35);

 R\_Simulate("21", 1353, 35);

 R\_Simulate("22", 1358, 35);

 R\_Simulate("23", 1363, 35);

 R\_Simulate("24", 1368, 35);

 R\_Simulate("25", 1373, 35);

 R\_Simulate("26", 1377, 35);

 R\_Simulate("27", 1382, 35);

 R\_Simulate("28", 1387, 35);

 R\_Simulate("29", 1392, 35);

 R\_Simulate("30", 1397, 35);

 R\_Simulate("31", 1402, 35);

 R\_Simulate("32", 1407, 35);

 R\_Simulate("33", 1412, 35);

 R\_Simulate("34", 1417, 35);

 R\_Simulate("35", 1422, 35);

 R\_Simulate("36", 1426, 35);

 R\_Simulate("37", 1431, 35);

 R\_Simulate("38", 1436, 35);

 R\_Simulate("39", 1441, 35);

 R\_Simulate("40", 1446, 35);

 R\_Simulate("41", 1451, 35);

 R\_Simulate("42", 1456, 35);

 R\_Simulate("43", 1461, 35);

 R\_Simulate("44", 1466, 35);

 R\_Simulate("45", 1471, 35);

 R\_Simulate("46", 1475, 35);

 R\_Simulate("47", 1480, 35);

 R\_Simulate("48", 1485, 35);

 R\_Simulate("49", 1490, 35);

 R\_Simulate("50", 1495, 35);

 Phase("Feature 11: Large subrectangular feature")

 {

 R\_Date("Beta-61242", 750, 70)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("TX-7855", 670, 60)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Feature 18: Beta-61243", 660, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("General midden (Level 2): TX-7860", 600, 40)

 {

 Outlier("Charcoal", 1);

 };

 Sequence()

 {

 R\_Date("Posthole 15: Beta-61246", 530, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("ceramic grave good (Burial 4a,4b,9): TX-7859", 440, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 Phase("Feature 57: Subrectangular pit")

 {

 R\_Date("Beta-61250", 640, 70)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("TX-7866", 910, 140)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Possible house floor (Feature 36): TX-7856", 890, 100)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 37: TX-7857", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 Phase("Feature 58: Subrectangular pit")

 {

 R\_Date("Beta-61245", 530, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("TX-7858", 380, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Feature 24: Beta-61244", 550, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("Primary Model: end East Nashville Mounds");

 Span("Primary Model: East Nashville Mounds span");

 };

 };

*Gordontown (40DV4; primary model with minimum number of simulated dates to achieve the desired result in the simulation experiment at 68% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("start Gordontown");

 Phase()

 {

 R\_Simulate("1", 1250, 35);

 R\_Simulate("2", 1272, 35);

 R\_Simulate("3", 1294, 35);

 R\_Simulate("4", 1317, 35);

 R\_Simulate("5", 1339, 35);

 R\_Simulate("6", 1361, 35);

 R\_Simulate("7", 1383, 35);

 R\_Simulate("8", 1406, 35);

 R\_Simulate("9", 1428, 35);

 R\_Simulate("10", 1450, 35);

 R\_Date("Structure 1 (SE quadrant): TX-5551", 640, 70)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 3 (floor): TX-5550", 530, 60)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("end Gordontown");

 };

 };

*Gordontown (40DV4; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 95% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("start Gordontown");

 Phase()

 {

 R\_Simulate("1", 1250, 35);

 R\_Simulate("2", 1256, 35);

 R\_Simulate("3", 1262, 35);

 R\_Simulate("4", 1268, 35);

 R\_Simulate("5", 1274, 35);

 R\_Simulate("6", 1279, 35);

 R\_Simulate("7", 1285, 35);

 R\_Simulate("8", 1291, 35);

 R\_Simulate("9", 1297, 35);

 R\_Simulate("10", 1303, 35);

 R\_Simulate("11", 1309, 35);

 R\_Simulate("12", 1315, 35);

 R\_Simulate("13", 1321, 35);

 R\_Simulate("14", 1326, 35);

 R\_Simulate("15", 1332, 35);

 R\_Simulate("16", 1338, 35);

 R\_Simulate("17", 1344, 35);

 R\_Simulate("18", 1350, 35);

 R\_Simulate("19", 1356, 35);

 R\_Simulate("20", 1362, 35);

 R\_Simulate("21", 1368, 35);

 R\_Simulate("22", 1374, 35);

 R\_Simulate("23", 1379, 35);

 R\_Simulate("24", 1385, 35);

 R\_Simulate("25", 1391, 35);

 R\_Simulate("26", 1397, 35);

 R\_Simulate("27", 1403, 35);

 R\_Simulate("28", 1409, 35);

 R\_Simulate("29", 1415, 35);

 R\_Simulate("30", 1421, 35);

 R\_Simulate("31", 1426, 35);

 R\_Simulate("32", 1432, 35);

 R\_Simulate("33", 1438, 35);

 R\_Simulate("34", 1444, 35);

 R\_Simulate("35", 1450, 35);

 R\_Date("Structure 1 (SE quadrant): TX-5551", 640, 70)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Structure 3 (floor): TX-5550", 530, 60)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("end Gordontown");

 };

 };

*Rutherford-Kizer (40SU15; primary model)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Rutherford-Kizer");

 Phase()

 {

 Phase("Feature 101: large refuse pit")

 {

 R\_Date("Beta-70873", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-70872", 550, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Feature 15: Beta-70876", 970, 50)

 {

 };

 R\_Date("Feature 738: Beta-90627", 1320, 60)

 {

 Outlier();

 };

 Phase("palisade")

 {

 First("start palisade");

 R\_Date("Feature 528: Beta-90625", 780, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 708: Beta-90626", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 733: Beta-90024", 590, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 832: Beta-90025", 540, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 867: Beta-90023", 500, 50)

 {

 Outlier("Charcoal", 1);

 };

 Last("end palisade");

 Span("palisade span");

 };

 Sequence()

 {

 Phase("structure 1")

 {

 First("start structure 1");

 R\_Date("Feature 34: Beta-70878", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 88: Beta-70879", 540, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 96: Beta-70880", 640, 50)

 {

 Outlier("Charcoal", 1);

 };

 Last("end structure 1");

 Span("structure 1 span");

 };

 Phase()

 {

 R\_Date("Feature 36: Beta-70877", 630, 50)

 {

 Outlier("Charcoal", 1);

 };

 Phase("Feature 20: large refuse pit")

 {

 R\_Date("Beta-70874", 630, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-70875", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 };

 };

 };

 Boundary("Primary Model: end Rutherford-Kizer");

 Span("Primary Model: Rutherford-Kizer span");

 };

 };

*Rutherford-Kizer (40SU15; alternative model)*

Plot()

 {

 Sequence()

 {

 Boundary("Alternative Model: start Rutherford-Kizer");

 Phase()

 {

 Phase("Feature 101: large refuse pit")

 {

 R\_Date("Beta-70873", 580, 50);

 R\_Date("Beta-70872", 550, 50);

 };

 R\_Date("Feature 15: Beta-70876", 970, 50);

 R\_Date("Feature 738: Beta-90627", 1320, 60)

 {

 Outlier();

 };

 Phase("palisade")

 {

 First("Alternative Model: start palisade");

 R\_Date("Feature 528: Beta-90625", 780, 60);

 R\_Date("Feature 708: Beta-90626", 570, 60);

 R\_Date("Feature 733: Beta-90024", 590, 60);

 R\_Date("Feature 832: Beta-90025", 540, 60);

 R\_Date("Feature 867: Beta-90023", 500, 50);

 Last("Alternative Model: end palisade");

 Span("Alternative Model: palisade span");

 };

 Sequence()

 {

 Phase("structure 1")

 {

 First("start structure 1");

 R\_Date("Feature 34: Beta-70878", 570, 60);

 R\_Date("Feature 88: Beta-70879", 540, 50);

 R\_Date("Feature 96: Beta-70880", 640, 50);

 Last("end structure 1");

 Span("structure 1 span");

 };

 Phase()

 {

 R\_Date("Feature 36: Beta-70877", 630, 50);

 Phase("Feature 20: large refuse pit")

 {

 R\_Date("Beta-70874", 630, 60);

 R\_Date("Beta-70875", 580, 50);

 };

 };

 };

 };

 Boundary("Alternative Model: end Rutherford-Kizer");

 Span("Alternative Model: Rutherford-Kizer span");

 };

 };

*Rutherford-Kizer (40SU15; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 68% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Rutherford-Kizer");

 Phase()

 {

 R\_Simulate("1", 1190, 35);

 R\_Simulate("2", 1208, 35);

 R\_Simulate("3", 1225, 35);

 R\_Simulate("4", 1243, 35);

 R\_Simulate("5", 1260, 35);

 R\_Simulate("6", 1278, 35);

 R\_Simulate("7", 1295, 35);

 R\_Simulate("8", 1313, 35);

 R\_Simulate("9", 1330, 35);

 R\_Simulate("10", 1348, 35);

 R\_Simulate("11", 1365, 35);

 R\_Simulate("12", 1383, 35);

 R\_Simulate("13", 1400, 35);

 R\_Simulate("14", 1418, 35);

 R\_Simulate("15", 1435, 35);

 Phase("Feature 101: large refuse pit")

 {

 R\_Date("Beta-70873", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-70872", 550, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Feature 15: Beta-70876", 970, 50)

 {

 };

 R\_Date("Feature 738: Beta-90627", 1320, 60)

 {

 Outlier();

 };

 Phase("palisade")

 {

 First("start palisade");

 R\_Date("Feature 528: Beta-90625", 780, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 708: Beta-90626", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 733: Beta-90024", 590, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 832: Beta-90025", 540, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 867: Beta-90023", 500, 50)

 {

 Outlier("Charcoal", 1);

 };

 Last("end palisade");

 Span("palisade span");

 };

 Sequence()

 {

 Phase("structure 1")

 {

 First("start structure 1");

 R\_Date("Feature 34: Beta-70878", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 88: Beta-70879", 540, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 96: Beta-70880", 640, 50)

 {

 Outlier("Charcoal", 1);

 };

 Last("end structure 1");

 Span("structure 1 span");

 };

 Phase()

 {

 R\_Date("Feature 36: Beta-70877", 630, 50)

 {

 Outlier("Charcoal", 1);

 };

 Phase("Feature 20: large refuse pit")

 {

 R\_Date("Beta-70874", 630, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-70875", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 };

 };

 };

 Boundary("Primary Model: end Rutherford-Kizer");

 Span("Primary Model: Rutherford-Kizer span");

 };

 };

*Rutherford-Kizer (40SU15; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 95% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Rutherford-Kizer");

 Phase()

 {

 R\_Simulate("1", 1190, 35);

 R\_Simulate("2", 1194, 35);

 R\_Simulate("3", 1198, 35);

 R\_Simulate("4", 1202, 35);

 R\_Simulate("5", 1207, 35);

 R\_Simulate("6", 1211, 35);

 R\_Simulate("7", 1215, 35);

 R\_Simulate("8", 1219, 35);

 R\_Simulate("9", 1223, 35);

 R\_Simulate("10", 1227, 35);

 R\_Simulate("11", 1232, 35);

 R\_Simulate("12", 1236, 35);

 R\_Simulate("13", 1240, 35);

 R\_Simulate("14", 1244, 35);

 R\_Simulate("15", 1248, 35);

 R\_Simulate("16", 1252, 35);

 R\_Simulate("17", 1256, 35);

 R\_Simulate("18", 1261, 35);

 R\_Simulate("19", 1265, 35);

 R\_Simulate("20", 1269, 35);

 R\_Simulate("21", 1273, 35);

 R\_Simulate("22", 1277, 35);

 R\_Simulate("23", 1281, 35);

 R\_Simulate("24", 1286, 35);

 R\_Simulate("25", 1290, 35);

 R\_Simulate("26", 1294, 35);

 R\_Simulate("27", 1298, 35);

 R\_Simulate("28", 1302, 35);

 R\_Simulate("29", 1306, 35);

 R\_Simulate("30", 1310, 35);

 R\_Simulate("31", 1315, 35);

 R\_Simulate("32", 1319, 35);

 R\_Simulate("33", 1323, 35);

 R\_Simulate("34", 1327, 35);

 R\_Simulate("35", 1331, 35);

 R\_Simulate("36", 1335, 35);

 R\_Simulate("37", 1339, 35);

 R\_Simulate("38", 1344, 35);

 R\_Simulate("39", 1348, 35);

 R\_Simulate("40", 1352, 35);

 R\_Simulate("41", 1356, 35);

 R\_Simulate("42", 1360, 35);

 R\_Simulate("43", 1364, 35);

 R\_Simulate("44", 1369, 35);

 R\_Simulate("45", 1373, 35);

 R\_Simulate("46", 1377, 35);

 R\_Simulate("47", 1381, 35);

 R\_Simulate("48", 1385, 35);

 R\_Simulate("49", 1389, 35);

 R\_Simulate("50", 1393, 35);

 R\_Simulate("51", 1398, 35);

 R\_Simulate("52", 1402, 35);

 R\_Simulate("53", 1406, 35);

 R\_Simulate("54", 1410, 35);

 R\_Simulate("55", 1414, 35);

 R\_Simulate("56", 1418, 35);

 R\_Simulate("57", 1423, 35);

 R\_Simulate("58", 1427, 35);

 R\_Simulate("59", 1431, 35);

 R\_Simulate("60", 1435, 35);

 Phase("Feature 101: large refuse pit")

 {

 R\_Date("Beta-70873", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-70872", 550, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 R\_Date("Feature 15: Beta-70876", 970, 50)

 {

 };

 R\_Date("Feature 738: Beta-90627", 1320, 60)

 {

 Outlier();

 };

 Phase("palisade")

 {

 First("start palisade");

 R\_Date("Feature 528: Beta-90625", 780, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 708: Beta-90626", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 733: Beta-90024", 590, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 832: Beta-90025", 540, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 867: Beta-90023", 500, 50)

 {

 Outlier("Charcoal", 1);

 };

 Last("end palisade");

 Span("palisade span");

 };

 Sequence()

 {

 Phase("structure 1")

 {

 First("start structure 1");

 R\_Date("Feature 34: Beta-70878", 570, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 88: Beta-70879", 540, 50)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 96: Beta-70880", 640, 50)

 {

 Outlier("Charcoal", 1);

 };

 Last("end structure 1");

 Span("structure 1 span");

 };

 Phase()

 {

 R\_Date("Feature 36: Beta-70877", 630, 50)

 {

 Outlier("Charcoal", 1);

 };

 Phase("Feature 20: large refuse pit")

 {

 R\_Date("Beta-70874", 630, 60)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Beta-70875", 580, 50)

 {

 Outlier("Charcoal", 1);

 };

 };

 };

 };

 };

 Boundary("Primary Model: end Rutherford-Kizer");

 Span("Primary Model: Rutherford-Kizer span");

 };

 };

*Sellars (40WI1; primary model)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Sellars");

 Phase()

 {

 R\_Date("Feature 4: UGa-945", 705, 65)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 67: UGa-4552", 730, 80)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 7: UGa-4553", 965, 55)

 {

 Outlier();

 };

 Phase("palisade")

 {

 First("start palisade");

 R\_Date("Feature 22: UGa-946", 800, 65)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 39: UGa-948", 1545, 110)

 {

 Outlier();

 };

 R\_Date("Feature 6: UGa-947", 975, 235)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Posthole 48: UGa-4551", 1160, 100)

 {

 Outlier();

 };

 R\_Date("Posthole 36: Beta-364010", 510, 30)

 {

 };

 Last("end palisade");

 Span("palisade span");

 };

 R\_Date("Feature 33: Beta-364009", 540, 30)

 {

 };

 R\_Date("Structure 1 (Feature 2): UGa-944", 900, 110)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("Primary Model: end Sellars");

 Span("Primary Model: Sellars span");

 };

 };

*Sellars (40WI1; alternative model)*

Plot()

 {

 Sequence()

 {

 Boundary("Alternative Model: start Sellars");

 Phase()

 {

 R\_Date("Feature 4: UGa-945", 705, 65);

 R\_Date("Feature 67: UGa-4552", 730, 80);

 R\_Date("Feature 7: UGa-4553", 965, 55)

 {

 Outlier();

 };

 Phase("palisade")

 {

 First("Alternative Model: start palisade");

 R\_Date("Feature 22: UGa-946", 800, 65);

 R\_Date("Feature 39: UGa-948", 1545, 110)

 {

 Outlier();

 };

 R\_Date("Feature 6: UGa-947", 975, 235);

 R\_Date("Posthole 48: UGa-4551", 1160, 100)

 {

 Outlier();

 };

 R\_Date("Posthole 36: Beta-364010", 510, 30);

 Last("Alternative Model: end palisade");

 Span("Alternative Model: palisade span");

 };

 R\_Date("Feature 33: Beta-364009", 540, 30);

 R\_Date("Structure 1 (Feature 2): UGa-944", 900, 110);

 };

 Boundary("Alternative Model: end Sellars");

 Span("Alternative Model: Sellars span");

 };

 };

*Sellars (40WI1; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 68% probability)*

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Sellars");

 Phase()

 {

 R\_Simulate("1", 1305, 35);

 R\_Simulate("2", 1308, 35);

 R\_Simulate("3", 1312, 35);

 R\_Simulate("4", 1315, 35);

 R\_Simulate("5", 1318, 35);

 R\_Simulate("6", 1322, 35);

 R\_Simulate("7", 1325, 35);

 R\_Simulate("8", 1328, 35);

 R\_Simulate("9", 1332, 35);

 R\_Simulate("10", 1335, 35);

 R\_Simulate("11", 1338, 35);

 R\_Simulate("12", 1342, 35);

 R\_Simulate("13", 1345, 35);

 R\_Simulate("14", 1348, 35);

 R\_Simulate("15", 1352, 35);

 R\_Simulate("16", 1355, 35);

 R\_Simulate("17", 1358, 35);

 R\_Simulate("18", 1362, 35);

 R\_Simulate("19", 1365, 35);

 R\_Simulate("20", 1368, 35);

 R\_Simulate("21", 1372, 35);

 R\_Simulate("22", 1375, 35);

 R\_Simulate("23", 1378, 35);

 R\_Simulate("24", 1382, 35);

 R\_Simulate("25", 1385, 35);

 R\_Simulate("26", 1388, 35);

 R\_Simulate("27", 1392, 35);

 R\_Simulate("28", 1395, 35);

 R\_Simulate("29", 1398, 35);

 R\_Simulate("30", 1402, 35);

 R\_Simulate("31", 1405, 35);

 R\_Simulate("32", 1408, 35);

 R\_Simulate("33", 1412, 35);

 R\_Simulate("34", 1415, 35);

 R\_Simulate("35", 1418, 35);

 R\_Simulate("36", 1422, 35);

 R\_Simulate("37", 1425, 35);

 R\_Simulate("38", 1428, 35);

 R\_Simulate("39", 1432, 35);

 R\_Simulate("40", 1435, 35);

 R\_Date("Feature 4: UGa-945", 705, 65)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 67: UGa-4552", 730, 80)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 7: UGa-4553", 965, 55)

 {

 Outlier();

 };

 Phase("palisade")

 {

 First("start palisade");

 R\_Date("Feature 22: UGa-946", 800, 65)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 39: UGa-948", 1545, 110)

 {

 Outlier();

 };

 R\_Date("Feature 6: UGa-947", 975, 235)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Posthole 48: UGa-4551", 1160, 100)

 {

 Outlier();

 };

 R\_Date("Posthole 36: Beta-364010", 510, 30)

 {

 };

 Last("end palisade");

 Span("palisade span");

 };

 R\_Date("Feature 33: Beta-364009", 540, 30)

 {

 };

 R\_Date("Structure 1 (Feature 2): UGa-944", 900, 110)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("Primary Model: end Sellars");

 Span("Primary Model: Sellars span");

 };

 };

*Sellars (40WI1; primary model with minimum number of simulated dates needed to achieve the desired result in the simulation experiment at 95% probability*)

Plot()

 {

 Outlier\_Model("Charcoal",Exp(1,-10,0),U(0,3),"t");

 Sequence()

 {

 Boundary("Primary Model: start Sellars");

 Phase()

 {

 R\_Simulate("1", 1305, 35);

 R\_Simulate("2", 1306, 35);

 R\_Simulate("3", 1307, 35);

 R\_Simulate("4", 1308, 35);

 R\_Simulate("5", 1309, 35);

 R\_Simulate("6", 1310, 35);

 R\_Simulate("7", 1311, 35);

 R\_Simulate("8", 1312, 35);

 R\_Simulate("9", 1312, 35);

 R\_Simulate("10", 1313, 35);

 R\_Simulate("11", 1314, 35);

 R\_Simulate("12", 1315, 35);

 R\_Simulate("13", 1316, 35);

 R\_Simulate("14", 1317, 35);

 R\_Simulate("15", 1318, 35);

 R\_Simulate("16", 1319, 35);

 R\_Simulate("17", 1320, 35);

 R\_Simulate("18", 1321, 35);

 R\_Simulate("19", 1322, 35);

 R\_Simulate("20", 1323, 35);

 R\_Simulate("21", 1324, 35);

 R\_Simulate("22", 1325, 35);

 R\_Simulate("23", 1326, 35);

 R\_Simulate("24", 1327, 35);

 R\_Simulate("25", 1327, 35);

 R\_Simulate("26", 1328, 35);

 R\_Simulate("27", 1329, 35);

 R\_Simulate("28", 1330, 35);

 R\_Simulate("29", 1331, 35);

 R\_Simulate("30", 1332, 35);

 R\_Simulate("31", 1333, 35);

 R\_Simulate("32", 1334, 35);

 R\_Simulate("33", 1335, 35);

 R\_Simulate("34", 1336, 35);

 R\_Simulate("35", 1337, 35);

 R\_Simulate("36", 1338, 35);

 R\_Simulate("37", 1339, 35);

 R\_Simulate("38", 1340, 35);

 R\_Simulate("39", 1341, 35);

 R\_Simulate("40", 1341, 35);

 R\_Simulate("41", 1342, 35);

 R\_Simulate("42", 1343, 35);

 R\_Simulate("43", 1344, 35);

 R\_Simulate("44", 1345, 35);

 R\_Simulate("45", 1346, 35);

 R\_Simulate("46", 1347, 35);

 R\_Simulate("47", 1348, 35);

 R\_Simulate("48", 1349, 35);

 R\_Simulate("49", 1350, 35);

 R\_Simulate("50", 1351, 35);

 R\_Simulate("51", 1352, 35);

 R\_Simulate("52", 1353, 35);

 R\_Simulate("53", 1354, 35);

 R\_Simulate("54", 1355, 35);

 R\_Simulate("55", 1356, 35);

 R\_Simulate("56", 1356, 35);

 R\_Simulate("57", 1357, 35);

 R\_Simulate("58", 1358, 35);

 R\_Simulate("59", 1359, 35);

 R\_Simulate("60", 1360, 35);

 R\_Simulate("61", 1361, 35);

 R\_Simulate("62", 1362, 35);

 R\_Simulate("63", 1363, 35);

 R\_Simulate("64", 1364, 35);

 R\_Simulate("65", 1365, 35);

 R\_Simulate("66", 1366, 35);

 R\_Simulate("67", 1367, 35);

 R\_Simulate("68", 1368, 35);

 R\_Simulate("69", 1369, 35);

 R\_Simulate("70", 1370, 35);

 R\_Simulate("71", 1370, 35);

 R\_Simulate("72", 1371, 35);

 R\_Simulate("73", 1372, 35);

 R\_Simulate("74", 1373, 35);

 R\_Simulate("75", 1374, 35);

 R\_Simulate("76", 1375, 35);

 R\_Simulate("77", 1376, 35);

 R\_Simulate("78", 1377, 35);

 R\_Simulate("79", 1378, 35);

 R\_Simulate("80", 1379, 35);

 R\_Simulate("81", 1380, 35);

 R\_Simulate("82", 1381, 35);

 R\_Simulate("83", 1382, 35);

 R\_Simulate("84", 1383, 35);

 R\_Simulate("85", 1384, 35);

 R\_Simulate("86", 1384, 35);

 R\_Simulate("87", 1385, 35);

 R\_Simulate("88", 1386, 35);

 R\_Simulate("89", 1387, 35);

 R\_Simulate("90", 1388, 35);

 R\_Simulate("91", 1389, 35);

 R\_Simulate("92", 1390, 35);

 R\_Simulate("93", 1391, 35);

 R\_Simulate("94", 1392, 35);

 R\_Simulate("95", 1393, 35);

 R\_Simulate("96", 1394, 35);

 R\_Simulate("97", 1395, 35);

 R\_Simulate("98", 1396, 35);

 R\_Simulate("99", 1397, 35);

 R\_Simulate("100", 1398, 35);

 R\_Simulate("101", 1399, 35);

 R\_Simulate("102", 1399, 35);

 R\_Simulate("103", 1400, 35);

 R\_Simulate("104", 1401, 35);

 R\_Simulate("105", 1402, 35);

 R\_Simulate("106", 1403, 35);

 R\_Simulate("107", 1404, 35);

 R\_Simulate("108", 1405, 35);

 R\_Simulate("109", 1406, 35);

 R\_Simulate("110", 1407, 35);

 R\_Simulate("111", 1408, 35);

 R\_Simulate("112", 1409, 35);

 R\_Simulate("113", 1410, 35);

 R\_Simulate("114", 1411, 35);

 R\_Simulate("115", 1412, 35);

 R\_Simulate("116", 1413, 35);

 R\_Simulate("117", 1413, 35);

 R\_Simulate("118", 1414, 35);

 R\_Simulate("119", 1415, 35);

 R\_Simulate("120", 1416, 35);

 R\_Simulate("121", 1417, 35);

 R\_Simulate("122", 1418, 35);

 R\_Simulate("123", 1419, 35);

 R\_Simulate("124", 1420, 35);

 R\_Simulate("125", 1421, 35);

 R\_Simulate("126", 1422, 35);

 R\_Simulate("127", 1423, 35);

 R\_Simulate("128", 1424, 35);

 R\_Simulate("129", 1425, 35);

 R\_Simulate("130", 1426, 35);

 R\_Simulate("131", 1427, 35);

 R\_Simulate("132", 1428, 35);

 R\_Simulate("133", 1428, 35);

 R\_Simulate("134", 1429, 35);

 R\_Simulate("135", 1430, 35);

 R\_Simulate("136", 1431, 35);

 R\_Simulate("137", 1432, 35);

 R\_Simulate("138", 1433, 35);

 R\_Simulate("139", 1434, 35);

 R\_Simulate("140", 1435, 35);

 R\_Date("Feature 4: UGa-945", 705, 65)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 67: UGa-4552", 730, 80)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 7: UGa-4553", 965, 55)

 {

 Outlier();

 };

 Phase("palisade")

 {

 First("start palisade");

 R\_Date("Feature 22: UGa-946", 800, 65)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Feature 39: UGa-948", 1545, 110)

 {

 Outlier();

 };

 R\_Date("Feature 6: UGa-947", 975, 235)

 {

 Outlier("Charcoal", 1);

 };

 R\_Date("Posthole 48: UGa-4551", 1160, 100)

 {

 Outlier();

 };

 R\_Date("Posthole 36: Beta-364010", 510, 30)

 {

 };

 Last("end palisade");

 Span("palisade span");

 };

 R\_Date("Feature 33: Beta-364009", 540, 30)

 {

 };

 R\_Date("Structure 1 (Feature 2): UGa-944", 900, 110)

 {

 Outlier("Charcoal", 1);

 };

 };

 Boundary("Primary Model: end Sellars");

 Span("Primary Model: Sellars span");

 };

 };