[] Dendrochronology Program Library Run FINAL Program COF 12:56 Fri 12 Jul 2013 Page 1

[]

[] P R O G R A M C O F E C H A Version 6.06P 28684

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QUALITY CONTROL AND DATING CHECK OF TREE-RING MEASUREMENTS

Title of run: Final

File of DATED series: BLTHigh\_PCRU\_COMPLETEdataset\_Final

CONTENTS:

Part 1: Title page, options selected, summary, absent rings by series

Part 2: Histogram of time spans

Part 3: Master series with sample depth and absent rings by year

Part 4: Bar plot of Master Dating Series

Part 5: Correlation by segment of each series with Master

Part 6: Potential problems: low correlation, divergent year-to-year changes, absent rings, outliers

Part 7: Descriptive statistics

RUN CONTROL OPTIONS SELECTED VALUE

1 Cubic smoothing spline 50% wavelength cutoff for filtering

32 years

2 Segments examined are 50 years lagged successively by 25 years

3 Autoregressive model applied A Residuals are used in master dating series and testing

4 Series transformed to logarithms Y Each series log-transformed for master dating series and testing

5 CORRELATION is Pearson (parametric, quantitative)

Critical correlation, 99% confidence level .3281

6 Master dating series saved N

7 Ring measurements listed N

8 Parts printed 1234567

9 Absent rings are omitted from master series and segment correlations (Y)

Time span of Master dating series is 1922 to 2012 91 years

Continuous time span is 1922 to 2012 91 years

Portion with two or more series is 1925 to 2012 88 years

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*C\* Number of dated series 33 \*C\*

\*O\* Master series 1922 2012 91 yrs \*O\*

\*F\* Total rings in all series 2630 \*F\*

\*E\* Total dated rings checked 2627 \*E\*

\*C\* Series intercorrelation .622 \*C\*

\*H\* Average mean sensitivity .235 \*H\*

\*A\* Segments, possible problems 2 \*A\*

\*\*\* Mean length of series 79.7 \*\*\*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ABSENT RINGS listed by SERIES: (See Master Dating Series for absent rings listed by year)

412B 1 absent rings: 1985

414A 1 absent rings: 1985

2 absent rings .076%

PART 2: TIME PLOT OF TREE-RING SERIES: Final 12:56 Fri 12 Jul 2013 Page 2

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1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1550 1600 1650 1700 1750 1800 1850 1900 1950 2000 2050 Ident Seq Time-span Yrs

: : : : : : : : : : : : : : : : : : : : : -------- --- ---- ---- ----

. . . . . . . . . . . . . . . . . . <=======> . 402A 1 1939 2012 74

. . . . . . . . . . . . . . . . . . <=======> . 402B 2 1932 2012 81

. . . . . . . . . . . . . . . . . . <========> . 403A 3 1925 2010 86

. . . . . . . . . . . . . . . . . . <========> . 403B 4 1928 2012 85

. . . . . . . . . . . . . . . . . . <=======> . 404A 5 1933 2012 80

. . . . . . . . . . . . . . . . . . <========> . 404B 6 1929 2012 84

. . . . . . . . . . . . . . . . . . <========> . 405A 7 1927 2010 84

. . . . . . . . . . . . . . . . . . <=======> . 405B 8 1931 2012 82

. . . . . . . . . . . . . . . . . . <========> . 406A 9 1925 2012 88

. . . . . . . . . . . . . . . . . . <=======> . 406B 10 1931 2010 80

. . . . . . . . . . . . . . . . . . <========> . 407A 11 1928 2012 85

. . . . . . . . . . . . . . . . . . <========> . 407B 12 1926 2012 87

. . . . . . . . . . . . . . . . . . <========> . 408A 13 1929 2012 84

. . . . . . . . . . . . . . . . . . <=======> . 408B 14 1931 2012 82

. . . . . . . . . . . . . . . . . . <======> . 409A 15 1944 2012 69

. . . . . . . . . . . . . . . . . . <=====> . 409B 16 1952 2012 61

. . . . . . . . . . . . . . . . . . <=======> . 410A 17 1935 2012 78

. . . . . . . . . . . . . . . . . . <=======> . 410B 18 1932 2012 81

. . . . . . . . . . . . . . . . . . <========> . 411A 19 1928 2010 83

. . . . . . . . . . . . . . . . . . <========> . 411B 20 1928 2012 85

. . . . . . . . . . . . . . . . . . <======> . 412A 21 1947 2012 66

. . . . . . . . . . . . . . . . . . <======> . 412B 22 1941 2012 72

. . . . . . . . . . . . . . . . . . <========> . 413A 23 1929 2012 84

. . . . . . . . . . . . . . . . . . <=======> . 413B 24 1935 2012 78

. . . . . . . . . . . . . . . . . . <========> . 414A 25 1928 2012 85

. . . . . . . . . . . . . . . . . . <=======> . 414B 26 1933 2012 80

. . . . . . . . . . . . . . . . . . <=======> . 444A 27 1938 2012 75

. . . . . . . . . . . . . . . . . . <=======> . 444B 28 1933 2012 80

. . . . . . . . . . . . . . . . . . <=======> . 445A 29 1936 2012 77

. . . . . . . . . . . . . . . . . . <======> . 445B 30 1941 2012 72

. . . . . . . . . . . . . . . . . . <======> . 446A 31 1946 2012 67

. . . . . . . . . . . . . . . . . . <========> . 447A 32 1929 2012 84

. . . . . . . . . . . . . . . . . . <========> . 447B 33 1922 2012 91

: : : : : : : : : : : : : : : : : : : : :

1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1550 1600 1650 1700 1750 1800 1850 1900 1950 2000 2050

PART 3: Master Dating Series: Final 12:56 Fri 12 Jul 2013 Page 3

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Year Value No Ab Year Value No Ab Year Value No Ab Year Value No Ab Year Value No Ab Year Value No Ab

------------------ ------------------ ------------------ ------------------ ------------------ ------------------

1950 -.723 32 2000 .181 33

1951 .634 32 2001 1.515 33

1952 .457 33 2002 .727 33

1953 .044 33 2003 -.375 33

1954 1.316 33 2004 -2.040 33

1955 1.677 33 2005 -1.325 33

1956 -2.752 33 2006 -1.062 33

1957 .806 33 2007 -.633 33

1958 1.459 33 2008 -.635 33

1959 .957 33 2009 -.329 33

1960 -.417 33 2010 .725 33

1961 1.028 33 2011 .898 29

1962 -.274 33 2012 1.938 29

1963 -.042 33

1964 .173 33

1965 -1.262 33

1966 -.883 33

1967 -.756 33

1968 -1.866 33

1969 -.760 33

1970 .294 33

1971 1.518 33

1922 -2.942 1 1972 .535 33

1923 -.914 1 1973 .441 33

1924 -.874 1 1974 .019 33

1925 -.765 3 1975 1.212 33

1926 -1.318 4 1976 .467 33

1927 -1.145 5 1977 -.269 33

1928 -.489 10 1978 .621 33

1929 -.440 14 1979 .636 33

1930 -.192 14 1980 1.278 33

1931 .754 17 1981 -.182 33

1932 1.483 19 1982 -1.458 33

1933 -.354 22 1983 -.119 33

1934 .576 22 1984 -.849 33

1935 1.023 24 1985 -1.317 33 2

1936 -1.376 25 1986 -1.756 33

1937 -.007 25 1987 .098 33

1938 1.498 26 1988 .374 33

1939 .925 27 1989 .093 33

1940 -.431 27 1990 .310 33

1941 -.474 29 1991 -.361 33

1942 -.122 29 1992 .473 33

1943 -.134 29 1993 1.264 33

1944 -.658 30 1994 1.354 33

1945 .408 30 1995 1.101 33

1946 -.081 31 1996 -.565 33

1947 .256 32 1997 .927 33

1948 -.955 32 1998 .131 33

1949 .470 32 1999 1.608 33

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PART 4: Master Bar Plot: Final 12:56 Fri 12 Jul 2013 Page 4

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Year Rel value Year Rel value Year Rel value Year Rel value Year Rel value Year Rel value Year Rel value Year Rel value

1950--c 2000------A

1951-------C 2001----------F

1952-------B 2002--------C

1953-----@ 2003---b

1954---------E 2004h

1955----------G 2005-e

1956k 2006-d

1957--------C 2007--c

1958----------F 2008--c

1959--------D 2009---a

1960---b 2010--------C

1961--------D 2011--------D

1962----a 2012----------H

1963-----@

1964------A

1965-e

1966--d

1967--c

1968g

1969--c

1970------A

1971----------F

1922l 1972-------B

1923-d 1973-------B

1924--c 1974-----@

1925--c 1975---------E

1926-e 1976-------B

1927-e 1977----a

1928---b 1978-------B

1929---b 1979-------C

1930----a 1980---------E

1931--------C 1981----a

1932----------F 1982f

1933---a 1983----@

1934-------B 1984--c

1935--------D 1985-e

1936-f 1986g

1937-----@ 1987-----@

1938----------F 1988------A

1939--------D 1989-----@

1940---b 1990------A

1941---b 1991---a

1942----@ 1992-------B

1943----a 1993---------E

1944--c 1994---------E

1945------B 1995---------D

1946-----@ 1996---b

1947------A 1997--------D

1948-d 1998-----A

1949-------B 1999----------F

PART 5: CORRELATION OF SERIES BY SEGMENTS: Final 12:56 Fri 12 Jul 2013 Page 5

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Correlations of 50-year dated segments, lagged 25 years

Flags: A = correlation under .3281 but highest as dated; B = correlation higher at other than dated position

Seq Series Time\_span 1925 1950 1975

1974 1999 2024

--- -------- --------- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----

1 402A 1939 2012 .72 .77 .72

2 402B 1932 2012 .72 .84 .69

3 403A 1925 2010 .80 .89 .74

4 403B 1928 2012 .75 .86 .78

5 404A 1933 2012 .53 .56 .50

6 404B 1929 2012 .67 .72 .56

7 405A 1927 2010 .49 .53 .55

8 405B 1931 2012 .73 .79 .53

9 406A 1925 2012 .72 .61 .60

10 406B 1931 2010 .47 .27A .35

11 407A 1928 2012 .66 .60 .65

12 407B 1926 2012 .73 .67 .57

13 408A 1929 2012 .74 .71 .51

14 408B 1931 2012 .81 .76 .65

15 409A 1944 2012 .53 .56 .43

16 409B 1952 2012 .55 .25A

17 410A 1935 2012 .78 .80 .66

18 410B 1932 2012 .71 .79 .62

19 411A 1928 2010 .59 .74 .74

20 411B 1928 2012 .65 .76 .68

21 412A 1947 2012 .44 .44 .36

22 412B 1941 2012 .67 .76 .63

23 413A 1929 2012 .73 .69 .44

24 413B 1935 2012 .47 .55 .50

25 414A 1928 2012 .64 .78 .66

26 414B 1933 2012 .75 .82 .59

27 444A 1938 2012 .54 .65 .73

28 444B 1933 2012 .49 .63 .80

29 445A 1936 2012 .54 .49 .43

30 445B 1941 2012 .61 .63 .49

31 446A 1946 2012 .45 .52 .63

32 447A 1929 2012 .64 .76 .48

33 447B 1922 2012 .51 .70 .64

Av segment correlation .63 .67 .58

PART 6: POTENTIAL PROBLEMS: Final 12:56 Fri 12 Jul 2013 Page 5

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For each series with potential problems the following diagnostics may appear:

[A] Correlations with master dating series of flagged 50-year segments of series filtered with 32-year spline,

at every point from ten years earlier (-10) to ten years later (+10) than dated

[B] Effect of those data values which most lower or raise correlation with master series

Symbol following year indicates value in series is greater (>) or lesser (<) than master series value

[C] Year-to-year changes very different from the mean change in other series

[D] Absent rings (zero values)

[E] Values which are statistical outliers from mean for the year

====================================================================================================================================

402A 1939 to 2012 74 years Series 1

[B] Entire series, effect on correlation ( .744) is:

Lower 1973< -.023 1950> -.016 1984< -.013 1940< -.011 2005> -.009 1941> -.009 Higher 1956 .052 2004 .012

====================================================================================================================================

402B 1932 to 2012 81 years Series 2

[B] Entire series, effect on correlation ( .728) is:

Lower 1932< -.033 1940> -.027 1973< -.014 1966> -.014 2004> -.009 1936> -.007 Higher 1956 .117 2012 .008

====================================================================================================================================

403A 1925 to 2010 86 years Series 3

[B] Entire series, effect on correlation ( .780) is:

Lower 2004> -.016 1943< -.009 1928> -.009 2002< -.009 1946< -.008 1939< -.008 Higher 1956 .102 1999 .006

====================================================================================================================================

403B 1928 to 2012 85 years Series 4

[B] Entire series, effect on correlation ( .758) is:

Lower 1929< -.028 1937< -.010 1930> -.009 1944> -.009 1948> -.008 1957< -.007 Higher 1956 .100 2012 .007

====================================================================================================================================

404A 1933 to 2012 80 years Series 5

[B] Entire series, effect on correlation ( .530) is:

Lower 1960> -.027 2004> -.026 1945< -.022 1981> -.017 1951< -.015 1971< -.014 Higher 1956 .057 1936 .029

====================================================================================================================================

404B 1929 to 2012 84 years Series 6

[B] Entire series, effect on correlation ( .618) is:

Lower 2004> -.026 2002< -.018 1962> -.016 1945< -.013 1950> -.013 1986> -.012 Higher 1956 .119 1938 .009

====================================================================================================================================

405A 1927 to 2010 84 years Series 7

[B] Entire series, effect on correlation ( .493) is:

Lower 1927< -.036 1956> -.013 1995< -.011 1938< -.011 1977< -.009 1985> -.009 Higher 2004 .039 1965 .014

====================================================================================================================================

405B 1931 to 2012 82 years Series 8

[B] Entire series, effect on correlation ( .660) is:

Lower 2004> -.047 2005> -.016 1936> -.011 2006< -.010 1960> -.009 1964< -.008 Higher 1956 .108 2012 .010

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406A 1925 to 2012 88 years Series 9

[B] Entire series, effect on correlation ( .654) is:

Lower 1984> -.023 1982> -.018 1996> -.014 1975< -.011 1950< -.011 1927> -.007 Higher 1956 .024 2004 .014

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1984 +3.2 SD

====================================================================================================================================

406B 1931 to 2010 80 years Series 10

[A] Segment High -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 +0 +1 +2 +3 +4 +5 +6 +7 +8 +9 +10

--------- ---- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

1950 1999 0 -.10 .22 -.04 -.02 .06 -.13 .06 .13 .13 -.27 .27\* .02 -.26 -.04 .04 -.02 -.05 -.08 .11 -.01 .12

[B] Entire series, effect on correlation ( .358) is:

Lower 1945< -.030 1988< -.028 1956> -.028 1984> -.020 2003> -.017 1982> -.016 Higher 2004 .035 1936 .026

1950 to 1999 segment:

Lower 1988< -.041 1984> -.028 1982> -.020 1996> -.019 1958< -.017 1959< -.013 Higher 1968 .038 1954 .021

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1984 +3.3 SD

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407A 1928 to 2012 85 years Series 11

[B] Entire series, effect on correlation ( .645) is:

Lower 1996< -.045 1956> -.019 1928< -.017 1976> -.010 1984> -.006 1950> -.006 Higher 1936 .023 2004 .014

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407B 1926 to 2012 87 years Series 12

[B] Entire series, effect on correlation ( .663) is:

Lower 1984< -.025 1944< -.016 1972> -.011 1961< -.010 1941< -.010 2000< -.009 Higher 1956 .057 1936 .022

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408A 1929 to 2012 84 years Series 13

[B] Entire series, effect on correlation ( .690) is:

Lower 1996> -.021 1997< -.014 1977> -.013 1970< -.013 2000> -.013 1948> -.011 Higher 1956 .099 1936 .020

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408B 1931 to 2012 82 years Series 14

[B] Entire series, effect on correlation ( .718) is:

Lower 1981> -.034 2003> -.019 1948> -.010 1944> -.010 1997< -.006 1977> -.006 Higher 1956 .048 1968 .009

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1981 +3.5 SD

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409A 1944 to 2012 69 years Series 15

[B] Entire series, effect on correlation ( .537) is:

Lower 1985> -.026 2004> -.024 1962< -.020 1946> -.015 1991< -.014 1968> -.011 Higher 1956 .073 2012 .015

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409B 1952 to 2012 61 years Series 16

[A] Segment High -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 +0 +1 +2 +3 +4 +5 +6 +7 +8 +9 +10

--------- ---- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

1963 2012 0 .02 .19 -.02 .10 -.12 -.10 .04 -.26 .10 -.10 .25\* - - - - - - - - - -

[B] Entire series, effect on correlation ( .558) is:

Lower 1993< -.078 1968> -.048 1996> -.022 1985> -.019 1994< -.015 2004> -.013 Higher 1956 .259 1999 .014

1963 to 2012 segment:

Lower 1993< -.122 1968> -.071 1996> -.030 1985> -.027 1994< -.024 1984> -.011 Higher 1999 .043 1986 .042

[E] Outliers 2 3.0 SD above or -4.5 SD below mean for year

1968 +3.1 SD; 1993 -4.8 SD

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410A 1935 to 2012 78 years Series 17

[B] Entire series, effect on correlation ( .744) is:

Lower 1937< -.023 1986< -.018 2000> -.013 1982> -.011 1941> -.010 1964< -.009 Higher 1956 .079 1936 .018

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410B 1932 to 2012 81 years Series 18

[B] Entire series, effect on correlation ( .684) is:

Lower 1948> -.045 2010< -.015 1996> -.013 1944> -.013 2008> -.008 1998< -.007 Higher 1956 .069 2004 .017

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1948 +3.6 SD

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411A 1928 to 2010 83 years Series 19

[B] Entire series, effect on correlation ( .641) is:

Lower 1948< -.047 1956> -.021 1936> -.014 1930< -.013 2003> -.008 1969< -.007 Higher 2004 .012 1968 .010

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1948 -5.3 SD

====================================================================================================================================

411B 1928 to 2012 85 years Series 20

[B] Entire series, effect on correlation ( .693) is:

Lower 1948< -.038 1936> -.017 1965> -.016 1970< -.012 1928< -.011 1971< -.010 Higher 1956 .093 2004 .014

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412A 1947 to 2012 66 years Series 21

[B] Entire series, effect on correlation ( .415) is:

Lower 1976< -.048 1978< -.035 1965> -.020 1999< -.016 1949< -.016 2004> -.014 Higher 1956 .052 1982 .023

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412B 1941 to 2012 72 years Series 22

[B] Entire series, effect on correlation ( .693) is:

Lower 1981> -.020 1960> -.020 1946< -.018 1945< -.016 1969< -.014 1977> -.012 Higher 1956 .160 1968 .011

[D] 1 Absent rings: Year Master N series Absent

1985 -1.317 33 2

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1969 -4.9 SD

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413A 1929 to 2012 84 years Series 23

[B] Entire series, effect on correlation ( .649) is:

Lower 1950> -.016 1966> -.016 1967> -.013 1985> -.012 1988< -.011 1998> -.010 Higher 1956 .141 1968 .012

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1967 +3.1 SD

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413B 1935 to 2012 78 years Series 24

[B] Entire series, effect on correlation ( .474) is:

Lower 1936> -.040 2003< -.024 1939< -.018 1956> -.011 1973< -.009 1998> -.009 Higher 1982 .020 1938 .016

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414A 1928 to 2012 85 years Series 25

[B] Entire series, effect on correlation ( .645) is:

Lower 1932< -.027 1928> -.017 2003> -.014 1933> -.014 1960> -.013 1986> -.012 Higher 1956 .172 1982 .011

[D] 1 Absent rings: Year Master N series Absent

1985 -1.317 33 2

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1956 -4.8 SD

====================================================================================================================================

414B 1933 to 2012 80 years Series 26

[B] Entire series, effect on correlation ( .672) is:

Lower 2004> -.026 2003> -.021 1960> -.020 1933> -.016 1941> -.015 1935< -.014 Higher 1956 .144 1936 .015

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444A 1938 to 2012 75 years Series 27

[B] Entire series, effect on correlation ( .609) is:

Lower 1941< -.050 1956> -.031 1984> -.028 1938< -.013 1948> -.009 1960< -.008 Higher 2004 .024 1968 .015

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1984 +3.1 SD

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444B 1933 to 2012 80 years Series 28

[B] Entire series, effect on correlation ( .589) is:

Lower 1956> -.078 1933> -.022 1960< -.012 1937< -.010 1946> -.009 1936> -.008 Higher 2004 .015 1971 .011

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

2004 -4.5 SD

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445A 1936 to 2012 77 years Series 29

[B] Entire series, effect on correlation ( .556) is:

Lower 1997< -.022 1984> -.019 1975< -.017 1978< -.014 1937< -.013 1972< -.013 Higher 1956 .038 1936 .028

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445B 1941 to 2012 72 years Series 30

[B] Entire series, effect on correlation ( .642) is:

Lower 1976< -.047 1950> -.021 1968> -.020 1994< -.018 1986> -.014 1944> -.012 Higher 1956 .150 2004 .027

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

2004 -4.5 SD

====================================================================================================================================

446A 1946 to 2012 67 years Series 31

[B] Entire series, effect on correlation ( .497) is:

Lower 1956> -.089 1952< -.030 2003> -.026 1948> -.017 1982> -.015 1976> -.015 Higher 1968 .016 1996 .015

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1976 +3.3 SD

====================================================================================================================================

447A 1929 to 2012 84 years Series 32

[B] Entire series, effect on correlation ( .550) is:

Lower 1936> -.045 2011< -.034 2012< -.024 1935< -.015 1930< -.014 1960> -.012 Higher 1956 .099 2001 .011

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447B 1922 to 2012 91 years Series 33

[\*] Early part of series cannot be checked from 1922 to 1924 -- not matched by another series

[B] Entire series, effect on correlation ( .545) is:

Lower 1927> -.032 1935< -.028 1951< -.025 1946< -.013 1960> -.013 2011< -.012 Higher 1956 .111 2004 .029

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1945 +3.2 SD

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PART 7: DESCRIPTIVE STATISTICS: Final 12:56 Fri 12 Jul 2013 Page 6

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Corr //-------- Unfiltered --------\\ //---- Filtered -----\\

No. No. No. with Mean Max Std Auto Mean Max Std Auto AR

Seq Series Interval Years Segmt Flags Master msmt msmt dev corr sens value dev corr ()

--- -------- --------- ----- ----- ----- ------ ----- ----- ----- ----- ----- ----- ----- ----- --

1 402A 1939 2012 74 3 0 .744 .86 1.98 .472 .904 .186 2.74 .551 -.139 1

2 402B 1932 2012 81 3 0 .728 1.10 2.31 .410 .720 .210 2.49 .380 -.071 1

3 403A 1925 2010 86 3 0 .780 .93 2.37 .616 .942 .167 2.46 .327 -.054 1

4 403B 1928 2012 85 3 0 .758 1.10 2.62 .861 .947 .231 2.45 .382 -.052 1

5 404A 1933 2012 80 3 0 .530 .79 3.69 .955 .944 .254 2.57 .408 -.069 1

6 404B 1929 2012 84 3 0 .618 .62 2.61 .660 .932 .348 2.70 .457 -.024 1

7 405A 1927 2010 84 3 0 .493 .92 4.27 1.075 .958 .233 3.00 .510 -.005 4

8 405B 1931 2012 82 3 0 .660 .89 3.27 .895 .954 .276 2.52 .457 -.026 2

9 406A 1925 2012 88 3 0 .654 1.09 3.66 .876 .917 .217 2.53 .453 -.004 1

10 406B 1931 2010 80 3 1 .358 1.05 2.89 .580 .855 .179 2.56 .481 -.013 1

11 407A 1928 2012 85 3 0 .645 .98 4.00 1.001 .916 .236 2.56 .396 -.089 1

12 407B 1926 2012 87 3 0 .663 .79 2.97 .754 .937 .212 2.63 .534 -.070 2

13 408A 1929 2012 84 3 0 .690 1.35 2.90 .784 .877 .226 2.56 .450 -.097 1

14 408B 1931 2012 82 3 0 .718 .98 2.29 .578 .830 .214 2.64 .462 -.027 1

15 409A 1944 2012 69 3 0 .537 .72 1.49 .242 .688 .206 2.60 .569 -.019 1

16 409B 1952 2012 61 2 1 .558 1.14 2.86 .615 .858 .177 2.46 .395 .011 2

17 410A 1935 2012 78 3 0 .744 .96 1.91 .464 .847 .210 2.72 .473 .001 1

18 410B 1932 2012 81 3 0 .684 .86 1.79 .405 .852 .210 2.61 .460 -.032 1

19 411A 1928 2010 83 3 0 .641 .82 2.40 .747 .936 .293 2.55 .412 -.037 2

20 411B 1928 2012 85 3 0 .693 .96 3.03 .856 .939 .296 2.60 .443 -.029 1

21 412A 1947 2012 66 3 0 .415 1.05 2.61 .770 .962 .192 2.91 .534 -.029 2

22 412B 1941 2012 72 3 0 .693 1.09 2.70 .826 .923 .274 2.49 .381 -.036 1

23 413A 1929 2012 84 3 0 .649 1.30 3.04 .733 .878 .175 2.41 .391 -.023 1

24 413B 1935 2012 78 3 0 .474 1.06 2.51 .586 .900 .167 2.76 .453 .031 1

25 414A 1928 2012 85 3 0 .645 .83 2.85 .757 .919 .362 2.55 .332 -.006 1

26 414B 1933 2012 80 3 0 .672 .99 3.05 .916 .940 .335 2.49 .378 -.037 1

27 444A 1938 2012 75 3 0 .609 1.29 3.40 .859 .890 .257 2.60 .515 -.014 1

28 444B 1933 2012 80 3 0 .589 1.14 3.66 .794 .852 .268 2.54 .403 .056 1

29 445A 1936 2012 77 3 0 .556 1.43 2.70 .638 .861 .211 2.56 .429 .057 3

30 445B 1941 2012 72 3 0 .642 1.18 3.16 .824 .903 .282 2.46 .436 -.034 1

31 446A 1946 2012 67 3 0 .497 1.32 3.49 .862 .897 .191 2.91 .705 -.091 1

32 447A 1929 2012 84 3 0 .550 1.31 3.48 .930 .925 .212 2.74 .551 -.007 1

33 447B 1922 2012 91 3 0 .545 1.22 4.07 .957 .936 .215 2.92 .516 -.020 1

--- -------- --------- ----- ----- ----- ------ ----- ----- ----- ----- ----- ----- ----- ----- --

Total or mean: 2630 98 2 .622 1.03 4.27 .741 .897 .235 3.00 .453 -.030

- = [ COFECHA FINALCOF ] = -