[] Dendrochronology Program Library Run 158 Program COF 14:41 Fri 08 Apr 2011 Page 1

[]

[] P R O G R A M C O F E C H A Version 6.06P 27858

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

QUALITY CONTROL AND DATING CHECK OF TREE-RING MEASUREMENTS

File of DATED series: 158\_MOO

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 1923 to 2010 88 years

Continuous time span is 1923 to 2010 88 years

Portion with two or more series is 1927 to 2010 84 years

>> 363B 1965 absent in 1 of 20 series, but is not usually narrow: master index is -.325

>> 370B 1971 absent in 1 of 20 series, but is not usually narrow: master index is .730

>> 370B 1973 absent in 1 of 20 series, but is not usually narrow: master index is .080

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

\*C\* Number of dated series 20 \*C\*

\*O\* Master series 1923 2010 88 yrs \*O\*

\*F\* Total rings in all series 1470 \*F\*

\*E\* Total dated rings checked 1466 \*E\*

\*C\* Series intercorrelation .448 \*C\*

\*H\* Average mean sensitivity .192 \*H\*

\*A\* Segments, possible problems 9 \*A\*

\*\*\* Mean length of series 73.5 \*\*\*

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

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

363B 2 absent rings: 1964 1965

370B 3 absent rings: 1971 1972 1973

5 absent rings .340%

PART 2: TIME PLOT OF TREE-RING SERIES: 14:41 Fri 08 Apr 2011 Page 2

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

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

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

. . . . . . . . . . . . . . . . . . <=======> . 362A 1 1938 2010 73

. . . . . . . . . . . . . . . . . . <=======> . 362B 2 1938 2010 73

. . . . . . . . . . . . . . . . . . <======> . 363A 3 1940 2010 71

. . . . . . . . . . . . . . . . . . <=======> . 363B 4 1935 2010 76

. . . . . . . . . . . . . . . . . . <=======> . 364A 5 1932 2010 79

. . . . . . . . . . . . . . . . . . <=======> . 364B 6 1935 2010 76

. . . . . . . . . . . . . . . . . . <========> . 365A 7 1928 2010 83

. . . . . . . . . . . . . . . . . . <=======> . 365B 8 1931 2010 80

. . . . . . . . . . . . . . . . . . <=====> . 366A 9 1950 2010 61

. . . . . . . . . . . . . . . . . . <=====> . 366B 10 1951 2010 60

. . . . . . . . . . . . . . . . . . <========> . 367A 11 1928 2010 83

. . . . . . . . . . . . . . . . . . <========> . 367B 12 1923 2010 88

. . . . . . . . . . . . . . . . . . <=====> . 368A 13 1953 2010 58

. . . . . . . . . . . . . . . . . . <======> . 368B 14 1944 2010 67

. . . . . . . . . . . . . . . . . . <=======> . 369A 15 1931 2010 80

. . . . . . . . . . . . . . . . . . <=======> . 369B 16 1931 2010 80

. . . . . . . . . . . . . . . . . . <========> . 370A 17 1927 2010 84

. . . . . . . . . . . . . . . . . . <======> . 370B 18 1944 2010 67

. . . . . . . . . . . . . . . . . . <======> . 371A 19 1948 2010 63

. . . . . . . . . . . . . . . . . . <======> . 371B 20 1943 2010 68

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

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: 14:41 Fri 08 Apr 2011 Page 3

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

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 -.004 18 2000 -.758 20

1951 .256 19 2001 .206 20

1952 -.827 19 2002 .724 20

1953 .664 20 2003 -1.234 20

1954 .806 20 2004 -.307 20

1955 2.123 20 2005 -.896 20

1956 .076 20 2006 -1.626 20

1957 .598 20 2007 .009 20

1958 1.158 20 2008 -.772 20

1959 .684 20 2009 .893 20

1960 -.647 20 2010 1.666 20

1961 .584 20

1962 -.321 20

1963 .377 20

1964 -.868 20 1

1965 -.325 20 1<<

1966 -.790 20

1967 -.882 20

1968 -1.288 20

1969 -.622 20

1970 .080 20

1971 .730 20 1<<

1972 -.718 20 1

1923 1.661 1 1973 .080 20 1<<

1924 2.265 1 1974 -.633 20

1925 -.081 1 1975 .874 20

1926 -2.923 1 1976 .552 20

1927 .690 2 1977 .864 20

1928 .174 4 1978 .547 20

1929 -.543 4 1979 .435 20

1930 -1.826 4 1980 .923 20

1931 1.331 7 1981 -1.511 20

1932 .742 8 1982 -2.053 20

1933 1.015 8 1983 -1.939 20

1934 .535 8 1984 -1.013 20

1935 -.852 10 1985 -.259 20

1936 -.806 10 1986 .193 20

1937 .690 10 1987 1.046 20

1938 .148 12 1988 1.525 20

1939 -.439 12 1989 -.515 20

1940 -.710 13 1990 1.105 20

1941 -.833 13 1991 1.836 20

1942 -.434 13 1992 1.453 20

1943 -.966 14 1993 1.124 20

1944 -.024 16 1994 -.950 20

1945 .592 16 1995 -.822 20

1946 -.457 16 1996 -.991 20

1947 .701 16 1997 -.341 20

1948 -1.597 17 1998 .701 20

1949 .091 17 1999 .871 20

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

PART 4: Master Bar Plot: 14:41 Fri 08 Apr 2011 Page 4

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

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-----@ 2000--c

1951------A 2001-----A

1952--c 2002--------C

1953-------C 2003-e

1954--------C 2004----a

1955----------H 2005-d

1956-----@ 2006g

1957-------B 2007-----@

1958---------E 2008--c

1959-------C 2009--------D

1960---c 2010----------G

1961-------B

1962----a

1963------B

1964--c

1965----a

1966--c

1967-d

1968e

1969---b

1970-----@

1971--------C

1972--c

1923----------G 1973-----@

1924----------I 1974---c

1925-----@ 1975--------C

1926l 1976-------B

1927-------C 1977--------C

1928-----A 1978-------B

1929---b 1979------B

1930g 1980---------D

1931---------E 1981f

1932--------C 1982h

1933---------D 1983h

1934-------B 1984-d

1935--c 1985----a

1936--c 1986-----A

1937-------C 1987---------D

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

1939----b 1989---b

1940---c 1990---------D

1941--c 1991----------G

1942----b 1992----------F

1943-d 1993---------D

1944-----@ 1994-d

1945-------B 1995--c

1946----b 1996-d

1947-------C 1997----a

1948f 1998-------C

1949-----@ 1999--------C

PART 5: CORRELATION OF SERIES BY SEGMENTS: 14:41 Fri 08 Apr 2011 Page 5

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

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 362A 1938 2010 .33B .56 .48

2 362B 1938 2010 .31B .46 .37

3 363A 1940 2010 .43 .58 .59

4 363B 1935 2010 .45 .33B .37

5 364A 1932 2010 .38 .46 .51

6 364B 1935 2010 .52 .59 .45

7 365A 1928 2010 .33B .53 .60

8 365B 1931 2010 .40 .35B .37

9 366A 1950 2010 .45 .49

10 366B 1951 2010 .43 .46

11 367A 1928 2010 .29A .46 .44

12 367B 1923 2010 .32A .54 .54

13 368A 1953 2010 .47 .62

14 368B 1944 2010 .65 .59 .57

15 369A 1931 2010 .35 .43 .39

16 369B 1931 2010 .49 .37 .58

17 370A 1927 2010 .34 .46 .58

18 370B 1944 2010 .43 .49 .57

19 371A 1948 2010 .40 .48 .51

20 371B 1943 2010 .20A .23A .38

Av segment correlation .39 .46 .49

PART 6: POTENTIAL PROBLEMS: 14:41 Fri 08 Apr 2011 Page 5

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

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

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

362A 1938 to 2010 73 years Series 1

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

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

1938 1987 -8 .03 -.05 .38\*-.33 -.08 -.13 .24 -.18 .16 -.16 .33|-.14 .06 -.08 .15 -.17 -.11 -.07 .24 -.20 .24

[B] Entire series, effect on correlation ( .351) is:

Lower 1938< -.086 2006> -.034 1953< -.021 1939> -.015 1980< -.014 1948> -.014 Higher 1955 .026 1990 .022

1938 to 1987 segment:

Lower 1938< -.119 1953< -.029 1948> -.024 1939> -.021 1980< -.021 1940> -.013 Higher 1955 .041 1956 .032

[C] Year-to-year changes diverging by over 4.0 std deviations:

1938 1939 4.2 SD

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

362B 1938 to 2010 73 years Series 2

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

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

1938 1987 -8 .11 -.02 .41\*-.23 .11 -.13 .13 -.18 -.01 -.27 .31|-.22 .02 -.05 .34 -.05 -.02 .01 .24 -.09 .19

[B] Entire series, effect on correlation ( .339) is:

Lower 2001< -.029 1940> -.021 1982> -.019 1948> -.018 1973< -.016 1983> -.014 Higher 1955 .024 1972 .021

1938 to 1987 segment:

Lower 1948> -.029 1982> -.028 1940> -.027 1973< -.023 1983> -.019 1975< -.019 Higher 1955 .038 1972 .031

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

363A 1940 to 2010 71 years Series 3

[B] Entire series, effect on correlation ( .481) is:

Lower 1948> -.066 2007< -.017 1953< -.015 1954< -.014 1956> -.014 1946> -.012 Higher 1981 .022 2006 .020

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

363B 1935 to 2010 76 years Series 4

[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 2 .07 .04 -.13 -.25 -.17 -.19 .20 -.29 .04 -.21 .33| .07 .37\*-.12 .03 .13 .05 .00 .10 -.02 -.05

[B] Entire series, effect on correlation ( .399) is:

Lower 2000> -.026 1976< -.023 1940> -.016 1956> -.016 1999< -.014 1965< -.012 Higher 1948 .081 1994 .016

1950 to 1999 segment:

Lower 1976< -.033 1956> -.029 1999< -.020 1982> -.018 1998< -.016 1989> -.016 Higher 1981 .034 1994 .033

[D] 2 Absent rings: Year Master N series Absent

1964 -.868 20 1

1965 -.325 20 1 >> WARNING: Ring is not usually narrow

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

364A 1932 to 2010 79 years Series 5

[B] Entire series, effect on correlation ( .499) is:

Lower 1933< -.028 1941> -.023 1974> -.022 1934< -.017 1951< -.011 1962< -.011 Higher 1948 .059 2006 .019

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

364B 1935 to 2010 76 years Series 6

[B] Entire series, effect on correlation ( .481) is:

Lower 1941< -.062 2006> -.033 1958< -.024 1943> -.015 1998< -.015 1961< -.014 Higher 1948 .040 1981 .025

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

365A 1928 to 2010 83 years Series 7

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

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

1928 1977 -4 - - - - - -.02 .39\*-.20 .17 -.19 .33|-.28 .06 .00 .08 -.11 .24 -.18 .31 -.16 .19

[B] Entire series, effect on correlation ( .479) is:

Lower 1935> -.028 1928> -.027 1972> -.023 1994> -.021 2009< -.020 1942< -.020 Higher 1981 .050 1948 .021

1928 to 1977 segment:

Lower 1928> -.043 1935> -.042 1942< -.038 1972> -.035 1933< -.035 1945< -.027 Higher 1948 .069 1930 .045

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

365B 1931 to 2010 80 years Series 8

[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 8 -.13 -.25 .12 .02 -.10 -.14 .17 -.06 .25 -.16 .35|-.02 -.02 -.11 .01 -.19 .08 -.05 .37\*-.14 .01

[B] Entire series, effect on correlation ( .405) is:

Lower 1998< -.025 1970< -.023 1994> -.019 1982> -.018 2006> -.018 1952> -.016 Higher 1948 .080 1981 .050

1950 to 1999 segment:

Lower 1998< -.045 1970< -.039 1994> -.031 1982> -.031 1952> -.028 1972> -.026 Higher 1981 .113 1956 .044

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

366A 1950 to 2010 61 years Series 9

[B] Entire series, effect on correlation ( .484) is:

Lower 1985< -.065 1960< -.049 1981> -.014 1972> -.013 2004< -.012 1964> -.010 Higher 2000 .017 2010 .017

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

366B 1951 to 2010 60 years Series 10

[B] Entire series, effect on correlation ( .513) is:

Lower 1977< -.094 1972> -.043 1981> -.028 1965< -.011 1975< -.010 1969> -.007 Higher 2003 .041 1991 .020

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

367A 1928 to 2010 83 years Series 11

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

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

1928 1977 0 - - - - - -.16 -.06 .05 .04 -.11 .29\*-.02 .05 -.09 -.15 .09 -.20 .22 -.01 .01 -.01

[B] Entire series, effect on correlation ( .351) is:

Lower 2003> -.071 1959< -.069 1949< -.030 2004< -.022 1935> -.014 1947< -.013 Higher 1994 .029 1981 .026

1928 to 1977 segment:

Lower 1959< -.111 1949< -.048 1935> -.023 1947< -.022 1956> -.016 1952> -.008 Higher 1955 .034 1930 .027

[C] Year-to-year changes diverging by over 4.0 std deviations:

2002 2003 4.1 SD

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

2003 +3.8 SD

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

367B 1923 to 2010 88 years Series 12

[\*] Early part of series cannot be checked from 1923 to 1926 -- not matched by another series

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

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

1927 1976 0 - - - - - - .00 -.04 .01 -.09 .32\*-.19 .14 -.21 -.06 -.06 -.20 .15 -.05 .16 .03

[B] Entire series, effect on correlation ( .454) is:

Lower 1930> -.033 1974< -.020 1949< -.018 1968> -.017 1966> -.013 1952> -.013 Higher 1981 .018 1994 .015

1927 to 1976 segment:

Lower 1930> -.050 1968> -.026 1949< -.024 1952> -.020 1966> -.019 1938> -.015 Higher 1972 .032 1955 .020

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

368A 1953 to 2010 58 years Series 13

[B] Entire series, effect on correlation ( .513) is:

Lower 1953< -.067 1964> -.032 1960> -.025 2000> -.013 2007< -.009 1969> -.008 Higher 2003 .045 1982 .027

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

368B 1944 to 2010 67 years Series 14

[B] Entire series, effect on correlation ( .634) is:

Lower 1952> -.021 1991< -.018 1983> -.014 2000> -.013 1981> -.012 1988< -.012 Higher 1948 .049 1982 .012

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

369A 1931 to 2010 80 years Series 15

[B] Entire series, effect on correlation ( .399) is:

Lower 2009< -.065 2008> -.035 1952> -.024 1960> -.022 1971< -.010 1968> -.009 Higher 2003 .040 1981 .028

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

369B 1931 to 2010 80 years Series 16

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

Lower 1952> -.038 1974> -.018 1934< -.015 1957< -.014 1994> -.014 1989> -.012 Higher 1948 .050 1982 .017

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

370A 1927 to 2010 84 years Series 17

[B] Entire series, effect on correlation ( .466) is:

Lower 1951< -.047 1960> -.021 1948> -.016 1988< -.016 2009< -.015 1929> -.013 Higher 1981 .052 1994 .026

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

370B 1944 to 2010 67 years Series 18

[B] Entire series, effect on correlation ( .458) is:

Lower 1971< -.077 1949< -.035 1974> -.029 1945< -.020 1962> -.019 1946> -.017 Higher 1948 .080 1994 .031

[D] 3 Absent rings: Year Master N series Absent

1971 .730 20 1 >> WARNING: Ring is not usually narrow

1972 -.718 20 1

1973 .080 20 1 >> WARNING: Ring is not usually narrow

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

371A 1948 to 2010 63 years Series 19

[B] Entire series, effect on correlation ( .441) is:

Lower 1948> -.061 1956> -.025 1966> -.019 2006> -.018 1994> -.015 1978< -.010 Higher 2003 .033 1955 .017

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

371B 1943 to 2010 68 years Series 20

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

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

1943 1992 0 -.23 -.09 .13 -.06 .02 -.05 .17 .07 .10 .10 .20\*-.10 .03 -.18 -.01 .08 .10 -.17 -.16 -.20 .04

1950 1999 0 -.26 .01 .15 -.05 .10 -.09 .10 .06 .18 .20 .23\*-.12 -.15 -.17 .06 .02 .02 -.22 -.07 -.18 -.10

[B] Entire series, effect on correlation ( .301) is:

Lower 1948> -.069 1968< -.054 1994> -.028 1956> -.027 1972> -.017 1987< -.015 Higher 2003 .026 2000 .022

1943 to 1992 segment:

Lower 1948> -.087 1956> -.035 1968< -.024 1972> -.022 1974> -.018 1987< -.017 Higher 1989 .029 1955 .025

1950 to 1999 segment:

Lower 1968< -.049 1956> -.039 1994> -.039 1972> -.024 1987< -.022 1974> -.019 Higher 1989 .034 1955 .024

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

PART 7: DESCRIPTIVE STATISTICS: 14:41 Fri 08 Apr 2011 Page 6

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

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 362A 1938 2010 73 3 1 .351 1.67 3.54 .828 .761 .244 2.65 .466 -.031 1

2 362B 1938 2010 73 3 1 .339 1.50 4.02 .972 .900 .168 2.62 .415 -.046 1

3 363A 1940 2010 71 3 0 .481 2.20 3.88 .696 .714 .185 2.72 .563 -.034 1

4 363B 1935 2010 76 3 1 .399 2.38 4.51 .950 .793 .249 2.41 .434 .033 1

5 364A 1932 2010 79 3 0 .499 1.82 3.86 .901 .882 .191 2.88 .569 .000 1

6 364B 1935 2010 76 3 0 .481 1.30 3.23 .772 .821 .234 2.51 .456 -.042 1

7 365A 1928 2010 83 3 1 .479 1.98 3.95 .725 .851 .139 2.50 .462 .038 1

8 365B 1931 2010 80 3 1 .405 2.10 4.11 .578 .725 .162 2.45 .471 -.069 1

9 366A 1950 2010 61 2 0 .484 3.22 6.71 1.389 .882 .156 2.46 .408 -.049 1

10 366B 1951 2010 60 2 0 .513 3.28 6.41 1.000 .815 .141 2.64 .496 -.099 1

11 367A 1928 2010 83 3 1 .351 1.97 3.74 .613 .601 .206 2.74 .482 -.013 1

12 367B 1923 2010 88 3 1 .454 1.43 3.35 .671 .674 .270 2.63 .518 -.054 2

13 368A 1953 2010 58 2 0 .513 3.25 5.66 1.089 .814 .173 2.59 .542 .018 3

14 368B 1944 2010 67 3 0 .634 2.30 4.68 1.040 .907 .156 2.43 .491 -.058 2

15 369A 1931 2010 80 3 0 .399 1.95 3.70 .738 .849 .190 2.65 .456 -.042 1

16 369B 1931 2010 80 3 0 .556 2.23 4.59 .904 .859 .167 2.73 .573 .055 2

17 370A 1927 2010 84 3 0 .466 1.96 3.26 .659 .731 .209 2.71 .468 .046 1

18 370B 1944 2010 67 3 0 .458 2.05 3.53 .767 .596 .273 2.55 .528 .098 1

19 371A 1948 2010 63 3 0 .441 2.35 3.65 .561 .749 .136 2.69 .489 .034 1

20 371B 1943 2010 68 3 2 .301 1.87 4.28 1.032 .952 .154 2.37 .363 .064 1

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

Total or mean: 1470 57 9 .448 2.09 6.71 .830 .791 .192 2.88 .483 -.007

- = [ COFECHA 158 COF ] = -