

SOFTWARE USED IN DENDROCHRONOLOGY

Web resources:

Henri D. Grissino-Mayer's - *Science of Dendrochronology Web Pages*
(<http://web.utk.edu/~grissino/>)

- Software Used In Dendrochronology (<http://web.utk.edu/~grissino/software.htm>)
All software discussed below available at above web page

Software useful for Cross-dating

- PAST - Personal Analysis System for Tree-Ring Research
www.sciem.com/main.html
- CDendro - Cybis dendro dating program
www.cybis.se/forfun/dendro/index.htm
- Cybis CooRecorder - Image Coordinate Recording program
www.cybis.se/forfun/digfoto/CRecorder/mease.htm

Software useful for Standardization and Chronology building

The Dendrochronology Program Library (<http://www.ltrr.arizona.edu/pub/dpl/>)

- Individual program descriptions (<http://www.ltrr.arizona.edu/pub/dpl/A-INFO.HTM>)

Cross-dating and standardization

- COFECHA Dating & measurement quality control
- ARSTAN Chronology development with statistical analysis

Data management and format conversion

- FMT Manipulate data, change format
- CASE Convert column (casewise) data to compact format
- YUX Produce column (casewise) file

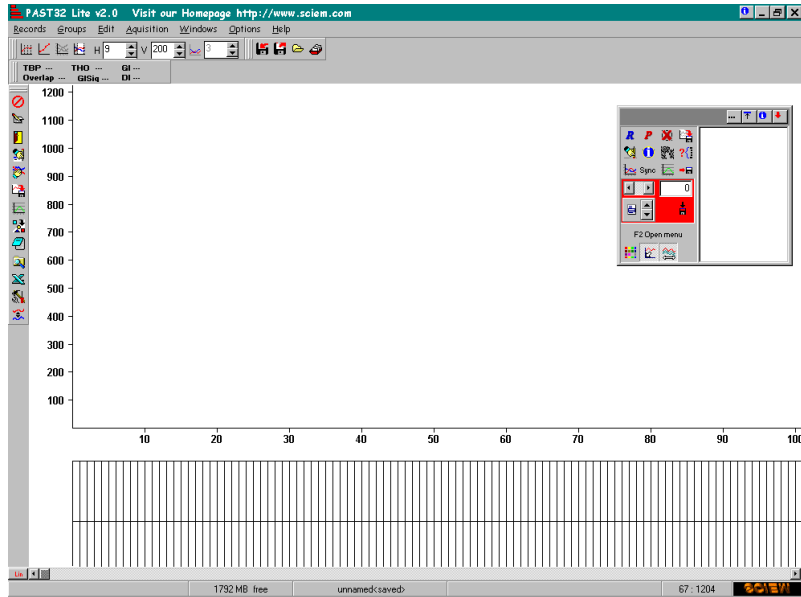
PAST32 - Personal Analysis System for Treering Research

Opening Screen

Menu →
 File & Graphs toolbars →
 Stats toolbar →

YT-graph →

Skeleton Plot →



← Record List
 Toolbar

File Toolbar



Toggle record list on/off
 Load records
 Load group
 Save group

Graphs Toolbar



Vertical Spacing
 Graph Mode
 Vertical zoom factor
 Horizontal zoom factor
 Toggle marks on/off
 Change screen Mode
 Toggle points on/off
 Toggle grid lines on/off

Stats Toolbar



When this area is docked to the toolbar it shows a summary of the statistical results calculated for the current position of the reference and sample record.

- TBP T-Test (Baillie/Pilcher)
- THO T-Test (Hollstein)
- GL Gleichlaufigkeit
- Overlap Number of overlapping years of reference and sample
- GISig Gleichlaufigkeit of Weiser years. The reference must be a chrono file.
- DI Date Index

See *Appendix A* for calculation of the tests.

RECORD LIST OPTIONS

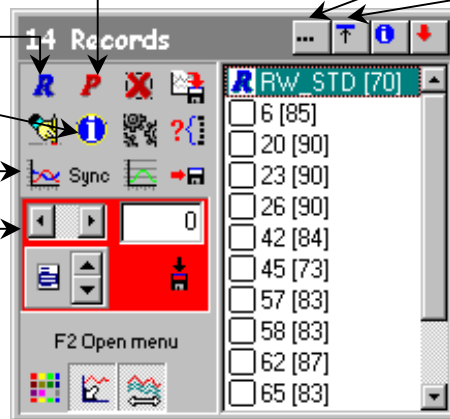
P - Select as sample

R - Select as reference

Information on sample

Synchronize reference and sample

Move sample curve



Toggle record list on/off
Minimize record list window

List of records

Example File Formats

1) Compact File Format

Data file starts below:

```
RW_STD
  75=N      1905=I RW_STD                      -3(20F4.0)~
  976 91011521009101911531127111091072 796 993109511451115 791 897 766 836 893 984
1013 852 765 849 956 821 739 969 868 851 8681082119213641226 951116811671189 912
11001117 869 85710271232 886 993119611541113 734 90610781157 834 874 884 8931183
125810891080 8821031 93512001081 9311114 964 688 911 837 881
```

2) Tucson File Format (*.RWL)

<i>Col</i>	<i>Col</i>	<i>Col</i>
<i>1-6</i>	<i>9-12</i>	<i>13-73</i>
<i>ID info</i>	<i>Decade</i>	<i>Data values (6 characters/year; -9999 to indicate end of data values)</i>

Data file starts below:

```
RW_STD 1905  976  910 1152 1009 1019
RW_STD 1910 1153 1127 1109 1072  796  993 1095 1145 1115  791
RW_STD 1920  897  766  836  893  984 1013  852  765  849  956
RW_STD 1930  821  739  969  868  851  868 1082 1192 1364 1226
RW_STD 1940  951 1168 1167 1189  912 1100 1117  869  857 1027
RW_STD 1950 1232  886  993 1196 1154 1113  734  906 1078 1157
RW_STD 1960  834  874  884  893 1183 1258 1089 1080  882 1031
RW_STD 1970  935 1200 1081  931 1114  964  688  911  837  881
RW_STD 1980 -9999
```

3) Heidelberg File Format (*.FH)

Header information describing sample, followed by data (10 data values per line, three blank spaces between each data value)

Data file starts below:

HEADER:

KeyCode=RW_STD

Length=70

Location=

Species=

WaldKante=

TreeNo=0

CoreNo=0

DateEnd=1979

DATA:Tree

```
  976  910 1152 1009 1019 1153 1127 1109 1072  796
  993 1095 1145 1115  791  897  766  836  893  984
1013  852  765  849  956  821  739  969  868  851
  868 1082 1192 1364 1226  951 1168 1167 1189  912
1100 1117  869  857 1027 1232  886  993 1196 1154
1113  734  906 1078 1157  834  874  884  893 1183
1258 1089 1080  882 1031  935 1200 1081  931 1114
  964  688  911  837  881    0    0    0    0    0
```