



ADE-4 MacOS X version

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Summary

This document gives information about the new version of ADE-4 for MacOS X. ADE-4 can be found at <http://pbil.univ-lyon1.fr/ADE-4/>

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1- Introduction

ADE-4 runs under MacOS 7, 8 and 9, but cannot run under the new MacOS X system, and it suffers from several problems in the «Classic» compatibility environment that allows to run old applications under MacOS X. So I decided to re-write the user interface, to be able to run it natively under MacOS X and to take advantage of MacOS X user interface and advanced features (protected memory and preemptive multitasking). I choosed to use the Carbon (instead of Cocoa) API because it was simpler and faster for me.

The MacOS X version of ADE-4 user interface is quite different from the previous one. Indeed, in this version there are only two applications, instead of tens of executable modules. These two applications are ADE4-Compute, to perform computations, and ADE4-Graph to do the graphics.

Both applications support drag and drop operations and can be used in place of the old ADEBin, ADEPict and ADETrans modules to edit ADE4 binary format files and graphic files. Here are some examples of how this possibility can be used.

- When an ADE4 graphic file (PICT format) is dropped onto ADE4-Graph (or on its Dock icon), the application opens it and displays it in a graphic window. This graphic can then be copied and pasted into other applications, like Word or PowerPoint for editing. This is equivalent to the use of the old ADEPict module.

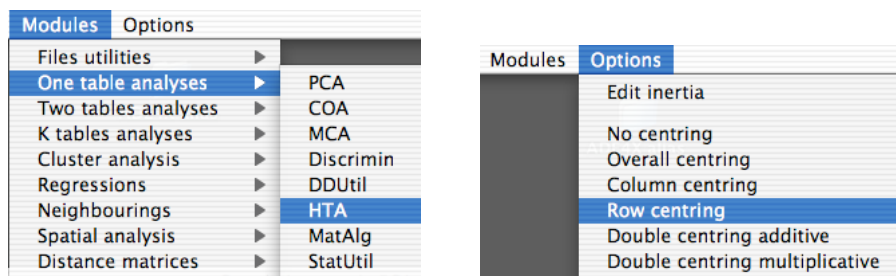


- When an ADE4 binary file is dropped onto ADE4-Compute (or on its Dock icon), the application opens it and displays it in a text window, where it can be copied and pasted into other applications. Text files can also be dropped onto ADE4-Compute and they are also displayed in a text window. This is equivalent to the use of the old ADEBin module, and it can be used for example to copy the contents of an ADE4 binary file and paste it directly into Excel.

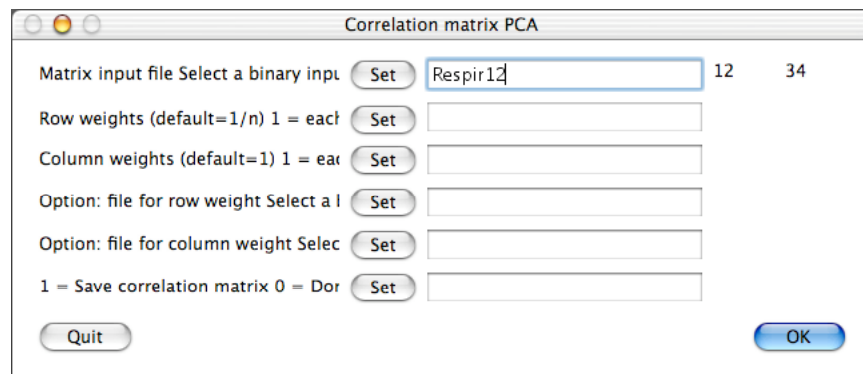
- If the **option key** is held down while dropping a text file onto ADE4-Compute, then the file is translated into an ADE4 binary format file. Symmetrically, if the option key is held down while dropping a binary file onto ADE4-Compute, the file is translated into a text file. This is equivalent to the use of the old ADETrans module and it is very handy to switch between text and ADE4 binary file format.

2- The ADE4-Compute application

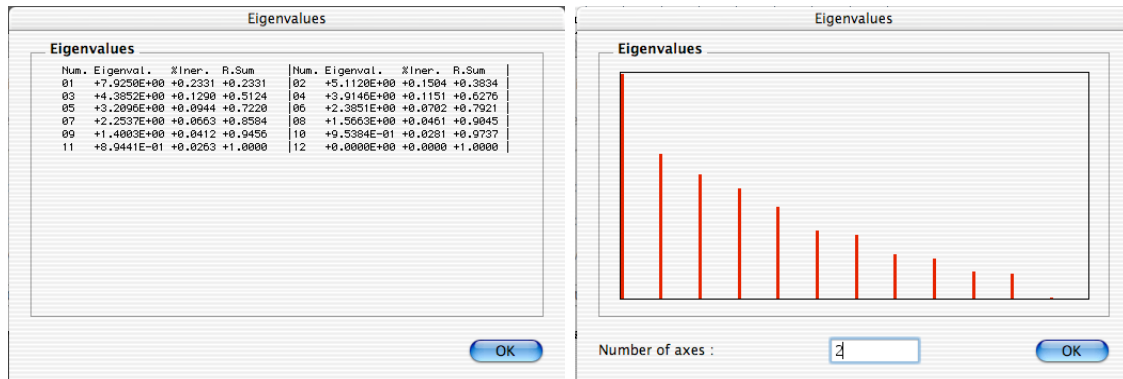
In ADE4-Compute, there is a «**Modules**» menu that allows to choose among the computation modules. Modules are grouped in sub-menus, according to the category to which they belong: utilities, one table analyses, two tables analyses, etc.



Once a module has been chosen, the «**Options**» menu can be used to choose a particular option in this module (like in the old ADE-4 executable modules). By default, when ADE4-Compute is launched, it is the «**Correlation matrix PCA**» option of the PCA module that is selected.



The main dialog window, which is very similar to the old version dialog window, reflects the choices made by the user in the modules and options menus. After the computations have been performed, the list of eigenvalues is displayed as usual, with text and graphic, and a listing window displays the text of the report.



```

I-PCA-08-21-10
-----*
| ADE-4 * Apple Project Builder C * CNRS-Lyon 1 * JT & DC |
| PCA: Correlation matrix PCA          20/08/03  08h21  |
-----*
Classical Principal Component Analysis (Hotelling 1933)
Input file: Respir12
---- Row weight:
File Respir12.cnpl contains the row weight
It has 12 rows and 1 column
Each row has 8.3333e-02 weight (Sum = 1)
---- Column weights:
File Respir12.cnpc contains the column weights
It has 34 rows and 1 column
Each column has unit weight (Sum = 34)
---- Table:
File Respir12.cnta contains the centred and normed table
Zero mean and unit variance for each column
It has 12 rows and 34 columns
File :Respir12.cnta
|Col.|  Mini  |  Maxi  |
|----|-----|-----|
|  1|-8.750e-01| 1.457e+00|
|  2|-3.542e-01| 3.280e+00|
|  3|-1.510e+00| 1.780e+00|
|  4|-1.757e+00| 2.373e+00|
|  5|-8.234e-01| 2.085e+00|

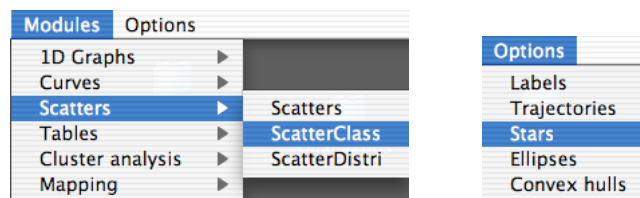
```

Other modules can then be used, without quitting the ADE4-Compute application.

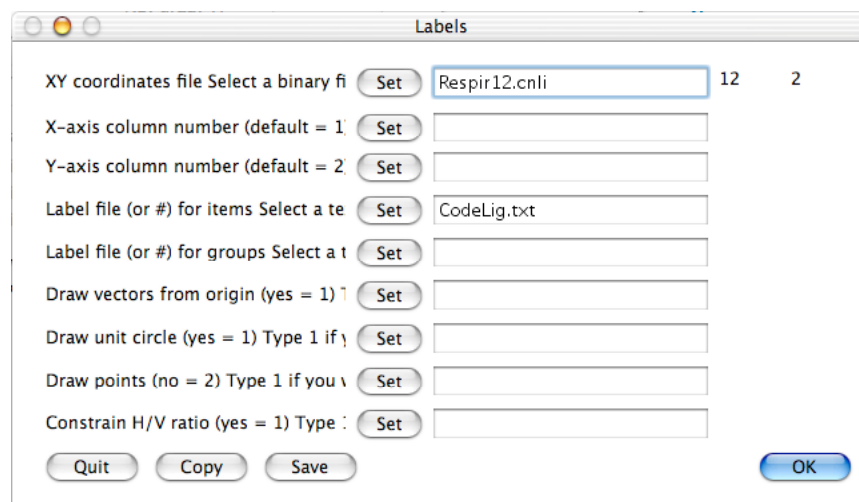
The details of the use of each module is explained in the documentation of ADE-4 modules (please see <http://pbil.univ-lyon1.fr/ADE-4/DownloadDoc2.html>).

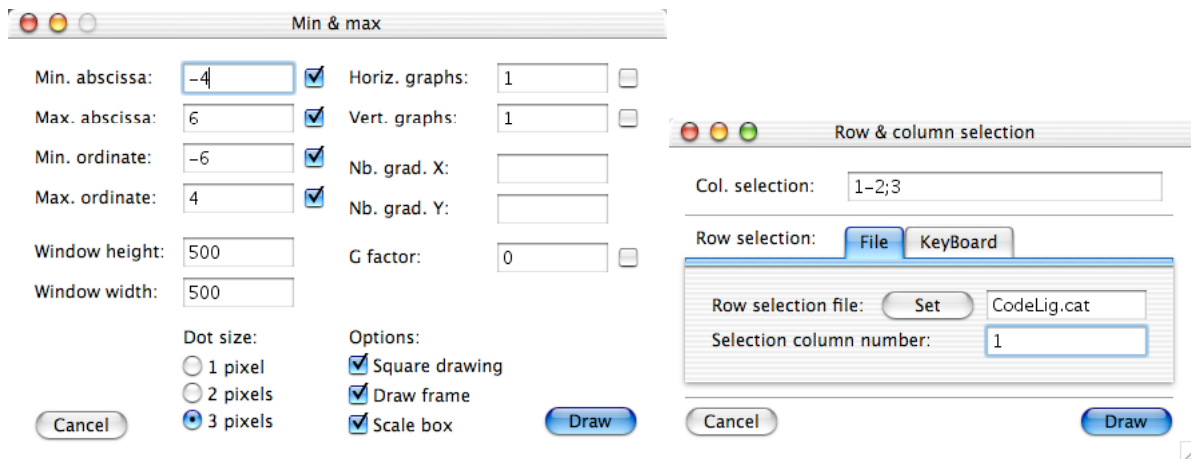
3- The ADE4-Graph application

The ADE4-Graph application also have a hierarchical «Modules» menu, allowing to choose the needed module among six categories: one dimensional graphics, curves, scatters, tables, cluster analysis and mapping. Once a module has been chosen, one can use the «Options» menu to choose the desired option. By default, when ADE4-Graph is launched, it is the «Labels» option of the «Scatters» module that is selected.

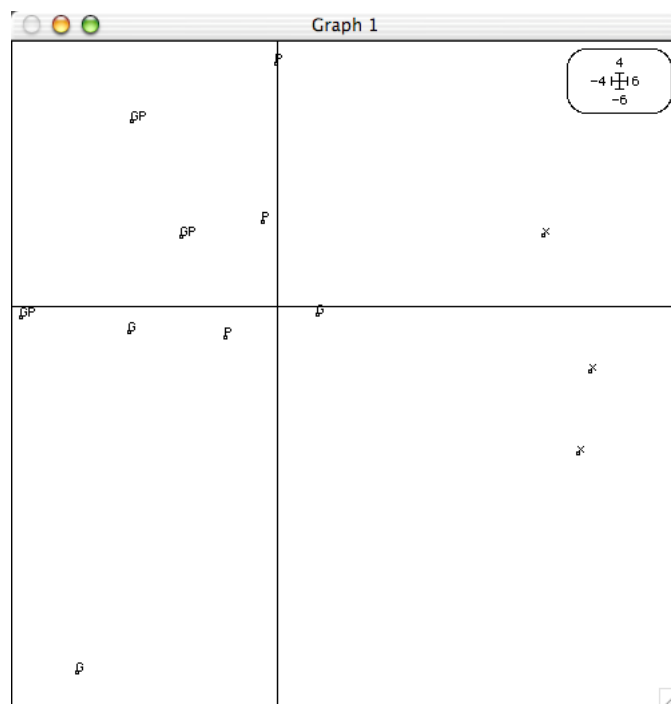


The main dialog window allows to choose the files containing the graphic data files, and several graphical parameters. As in the old modules, two other dialog windows allow to modify the minimum and maximum of abscissae and ordinates, the selection of rows and columns of data files, and several other parameters.





The graphic is drawn in a new window, and it can then be saved into a PICT file, or Copied to the clipboard with the «Save» and «Copy» buttons of the main dialog window. These graphics can then be pasted or imported into publishing software, like Word or PowerPoint. If needed, the «New graph window» option of the «Windows» menu can be used to obtain several other graphic windows.



The details of the use of each module is explained in the documentation of ADE-4 modules (please see <http://pbil.univ-lyon1.fr/ADE-4/DownloadDoc2.html>).