Period04 - A successor to Period98 to be completed this year

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Abstract

In this article we want to announce the early completion of Period04 - a reworked and extended version of Period98 by Sperl (1998). The new program will be presented at the IAU Symposium No. 224 in Poprad, Slovakia.

Over the last 2 decades the Vienna Asteroseismology Group has consequently developed statistical reduction packages for fitting and extracting frequencies from large astronomical data sets containing gaps. Two packages, PERIOD/PERDET by Breger (1990b) and Period98 by Sperl (1998), have already been made available to the scientific community.

The upcoming release of Period04 is widely based upon Period98, it uses the classical discrete Fourier transform for the detection of sinusoidal patterns in a time series and offers a powerful tool to perform a least-squares fit to the data.

Improvement of usability

In order to provide more comfort of use for less experienced users the Graphical User Interface has been reworked and does now include the following convenient features:
- short cuts for the most important functions
- pop-up menus to edit the items in time string lists and the fourier list
- plots can be exported in eps and jpg-format
- the labels of the axes of plots are editable
- the help system has been reworked and is now more problem-oriented
- the Period04 default-settings can be changed by editing the new preferences file

- easy and quick access to recent project files
- and many other convenient changes

Extensions

Period04 now offers a special calculation mode to fit data containing a periodic time shift, a feature that is intended for the examination of pulsating binary stars. Furthermore, the formal uncertainties for the calculated least-squares fit will be displayed.

Further extensions are planned. We intend to implement a three-dimensional-visualisation-tool which should provide some indication on the interdependencies of frequency peaks caused by aliasing. Moreover, we will extend the program to handle time series of spectra. Those extensions will be part of a second release later this year.

Period04 will be available for both Windows and Unix operating systems. For more information on the current status of the program and the expected release date please visit the Period04 website:
(http://www.astro.univie.ac.at/~dsn/dsn/Period04/)
Comments and suggestions may be sent via email to:
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References

Breger, M. 1990b, CoAst 20, 1
Sperl, M. 1998, CoAst 111, 1