

Version 4.0, 7 November 2015 (Great October Revolution)

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New features:

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+ At last, the package has got its NAMESPACE, which means that it became available for R 3.2 and higher

+ Improved help system, including figures

+ Newly can be set transparency of plotting symbols (through function setTransparency)

+ New geotectonic diagrams of Muller et al. (1992) for potassic igneous rocks

+ New diagrams of Pearce (2008): Nb/Yb-Th/Yb and Nb/Yb-TiO<sub>2</sub>/Yb plots

+ New function plateLabelSlots to annotate individual slots by letters, numbers or Roman numerals

+ Rutile saturation algorithms of Ryerson & Watson (1987) and Hayden & Watson (2007)

+ Possibility to assign colours according to values of a variable (assignColVar)

Bug fixes, performance improvements:

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+ this is the version accompanying the book:

Janoušek V, Moyen JF, Martin H, Erban V, Farrow C (2016) Geochemical Modelling of Igneous Processes - Principles and Recipes in R Language. Bringing the Power of R to a Geochemical Community. Springer-Verlag, Berlin, Heidelberg, pp 1-346

<http://www.springer.com/gp/book/9783662467916>

which brought about numerous small changes to the code, esp. batch mode.

+ fixed problems with installation (when there has been a personal R library folder created)

+ numerous changes in the code facilitating the work in batch mode

+ improved import from GeoRock, references in the end saved into file references.txt and shown in a separate window upon load

+ reading ROC, PEG, CSV files even on 64bit systems

+ spiderByGroupFields draws semitransparent fields,

+ fousy now (only) Figaro compatible

- + addResults replaces already existing variables of the given name
- + addResults was rewriting some variable names, such as Pr, Cs (CIPW, CIPW with Hbl), Ho (CIPW with Hbl). Variable names in the CIPW norm were thus changed to Py (Pyrite), Dcs (Dicalcium silicate) and Hbl (hornblende)
- + fixed not functional cutMy()
- + summaryRangesByGroup() and strip() function correctly even for subsets
- + calcCore did not work correctly for fractions. For instance, Nb/Ta ratios were Inf for Ta contents that were not determined. This affected scaling of plots etc.
- + binary log - was not working properly
- + improved merging of files
- + fixed problems with comments in data files
- + binary and plotWithLimits - allow linear fits also when some (or both) of the axes is/are logarithmic
- + binary and plotWithLimits - IDlabels was not working
- + fixed legend in spider.contour and spiderByGroupFields
- + fixed legends in figMulti, in addition they became semitransparent
- + millications can be newly calculated from any matrix/vector
- + new table of molecular weights from a CIAAW official web site - <http://www.ciaaw.org>
- + improved appearance of legends, esp. for single colour and/or single plotting symbol
- + contourGroups() now more robust - works better on datasets with missing values
- + groupsByLabel() assigns a value (Undefined) to analyses for which the grouping information is missing
- + printSamples() got a new parameter, print=FALSE, that allows to use the function just for calculations, skipping the printing