

Version 3 (final release), 11 May 2013 (French connection)

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New features:

+ Loading data from Excel 2007 (xlsx) files (32bit systems only!).

+ Exporting data/results to Excel 2007 (xlsx) files (32bit systems only!).

+ New function HTMLtableOrdered, which enables to specify the width of the table (number of analyses across the page), as well as a primary and secondary keys for their ordering

+ A new mechanism for distribution of patches to the GCDkit code

+ Several new normalization schemes for spiderplots added, including e.g. PGE (thanks to L. Ackerman)

+ New function for selecting colour palettes, including their preview. It is used now for spider.contour, plotWithCircles etc.

+ sazava dataset is available now also through the data() function. See ?accessVar

Bug fixes, performance improvements:

+ better default scaling of binary and multiple plots

+ overwrite warnings while saving file under existing name

+ figAddReservoirs - positions labels correctly even on log plots

+ sometimes plates had too narrow margins, especially when plotting after one full of triangular diagrams

+ PopUp menu 'Data table|Save to text file' (menu attached to the R console) fixed

+ Help pages dealing with plates added to the Help system [PopUp]

+ 64bit version created and tested (some ODBC-related functions, such as import/export to Excel, Access and DBF files, not available)

Deprecated:

+ dropped was the function 'Add a new plot to a script' (customPlot), which is not needed anymore as most of the functions can be called from the command prompt now.

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Patch 2

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+ HTMLtableOrdered did not show groups of one member

Patch 1
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Bug fixes, performance improvements:

- + Redrawing plates in plateCexLab
- + crashing gcdOptions() (missing were some underlying TclTk functions)
- + Verma() was not working correctly for datasets with only total iron determined
- + multipleMjr and multipleTrc did not work at all from the command line

Version 3 beta, 2 February 2013 (Curry Chicken)

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Bug fixes, performance improvements:

- + GCDkit starts R in SDI mode, regardless that which was been installed
- + New form of spiders, colour-coded according to the independent variable, such as silica contents (spider.contour).
- + Fixed problems with figMulti() - plate sometimes failed to redraw after some changes were made to one or more of its diagrams
- + Anomaly plot was not assigning the plotting symbols correctly
- + Debon and Le Fort values were wrongly calculated if only total Fe (FeOt) was available
- + Numerous small amendments to the code

Version 3 beta, 18 March 2012 (Drunken Springbok)

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Bug fixes, performance improvements:

- + Single tectonic diagrams are now fully Figaro-compatible, multiple ones use the plates concept
- + Fixed Sr growth diagram which also became fully Figaro-compatible.
- + Fixed problems with figMulti() - it was producing the first plot of different geometry - gives a message when the number of slots (nrows x ncols) is less than the number of groups defined/diagrams to be produced - uses plate concept
- + Plates exported to PS were truncated
- + plotWithLimits was autsetting incorrectly the maximum of the yaxis

+ $^{87}\text{Sr}/^{86}\text{Sr}$ ratio of the (CH)UR was not correctly age-corrected on the $^{87}\text{Sr}/^{86}\text{Sr}$ - EpsNdi plot.

+ New diagram Zr-Ti of Pearce (1982)

+ Versioning by codenames

Version 3.0 beta, 21 September 2011 (On ski slopes of Moninec)

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New features:

+ Plates concept - multiple plots, such as Harker plots or individual graphs produced by Multiple plots by groups (figMulti) can be edited similarly to the stand alone, Figaro-compatible diagrams (through the menu Plot editing). Moreover, the properties of the whole plate or all its diagrams can be changed simultaneously. Such plates can be user-defined and contain any mixture of Figaro-compatible plots, e.g., binary, ternary, classification plots, spiderplots...

WARNING! For correct function, R needs to be installed in multiple windows (SDI interface, which is a default).

+ Persistent Options, that can be modified in a GUI and then saved to a configuration file.

+ French and Czech translations (locales) for classification plots. Other languages can be added easily.

+ Many plotting functions redesigned so that they can be run solely from the command line, without any GUI dialogues. This enables their use in a batch mode (by an external macro, Sweave etc.)

+ Help pages contain more examples that can run directly.

+ Naming the plotting windows for better orientation (if R is installed as SDI interface, i.e. each plotting window is separate).

+ New classification diagrams: - Ternary plot of $\text{Na}_2\text{O}-\text{Al}_2\text{O}_3-\text{K}_2\text{O}$ (mol. %) for judging the balance of alumina and the two alkali oxides.

+ New geotectonic diagrams: - Diagram of Sylvester (1989) to distinguish collision-related alkaline granites from calc-alkaline and peraluminous suites.

- Ternary plot Hf - Rb/30 - Ta^3 , proposed by Harris et al. (1986) for classification of collisional granites.

- Geotectonic diagrams for (ultra-) basic rocks of Verma (2006) based on natural log-transformed ratios of major and minor elements.

- Geotectonic diagrams for (ultra-) basic rocks of Agrawal (2008) based on natural log-transformed ratios of trace elements.

+ Function spider2norm for production of double normalized spider plots (see the help page for advantages of this approach; this double normalization is also newly implemented in spiderboxplots.

+ Plot editing - functions to outline groups on binary and ternary plots using contours and convex hulls (contourGroups and chulGroups).

+ Statistics: - Function summaryRangesbyGroup for printing ranges of selected geochemical parameters in individual groups of analyses.

- New function to plot so-called stripBoxplots - i.e. stripplots of selected parameter in individual groups, each underlain by a boxplot. Optionally also a second variable can be portrayed by various size of plotted circles.

- New parameters to summaryAll, summaryByGroup, aimed at batch mode use.

+ Choice of several styles of labeling x axis in spiderplot (e.g., rotated and/or offset labels).

+ Display variable (connected to the function printSamples) can handle formulae now.

+ New parameter to mergeDataCols(all.rows) that preserves all samples present in at least one of the files.

+ New in plugins: - Wedge diagrams and concentration ratio plots (Ague 1994) became an part of the isocon.r plugin to expand the range of tools available for addressing mass balance during open-system processes such as metasomatism, partial melting, migmatitization or metamorphism.

- JungAlTitemp.r: New plugin implements thermometer of Jung and Pfänder (2007) based on experimentally determined Al₂O₃/TiO₂ ratios in granitic magmas.

+ Help: links to original papers through the DOI system. Much more examples added.

Bug fixes, performance improvements:

+ Eliminated (hopefully) mysterious crashes upon repeated data loads.

+ The size of plotting characters is specified now directly in the data frame "labels", (column name "Size") removing many problems with functions previously not respecting the cex parameter.

+ Improved plotting of spiderplots, if the plotting symbols were specified for each sample individually (adding legend etc...).

+ Fixed bug in interpretation of negative values in loadData, when the minus sign was preceded by trailing spaces (thanks to J-F Moyen).

+ selectSubset and selectSamples can handle mg#, Mg# and extra spaces; they can be called from the command line now.

+ Multiple plots by groups (figMulti) - spider did not assign correctly the plotting symbols. For spiderplots, plotting symbols can be omitted altogether. for less cluttered diagrams. The function does plot legends if defined in the original template.

+ Appending several datasets by rows failed to merge the character expansion attribute (cex).

+ plotWithLimits and numerous other functions, calling it for plotting, did not assign cex parameter correctly.

+ Transparent background to classification, geotectonic, binary and ternary plots as well as spiderplots (for better export via the PostScript function).

+ Fixed problems with setting boundaries in classification diagrams to black.

+ Returned are correct initial isotopic ratios/epsilon Nd values even for age = 0 (present-day values).

+ figAddReservoirs can handle now any ratios, including isotopic data (such as 87Sr/86Sr)

+ LaRocheCalc did return 0 and not NA if no major-element data were available.

+ Merging a dataset did not work, when the previous data set was read from Clipboard

+ printSamples can handle formulae now.

+ printSamples did not format correctly the names for ratios (replaced slash by a dot)

+ Eu/Eu* and other variables containing asterisk were not accessible by some functions

+ Fixed was the function Frost which did not work at all if only FeOt was available (thanks to Jitendra Kumar for pointing out the problem).

+ Fixed and thoroughly checked the function mergeDataCols.

+ Spiderboxplot (including the box and percentile plots) can be called with several new parameters, such as range of y axis and fill colour. It can also produce double normalized plots.

+ summaryByGroup and its derivatives summaryByGroupMjr and summaryByGroupTrc can handle formulae now.

+ summaryAll and its derivatives summaryMajor and summaryTrace can handle formulae now.

+ figSelect did not respect the cex parameter, the correct number of selected samples is reported (originally it was from the dataset and from the number of samples actually plotted). For the spiderplots, the legend is redrawn so that it shows only the samples currently plotted.