Geophysical Research Abstracts
Vol. 16, EGU2014-2138, 2014
EGU General Assembly 2014

The art of visualising dose distributions: Improved plotting flexibility for the R-package 'Luminescence'

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Luminescence dating profoundly relies on the compelling presentation of equivalent doses. However, there is no perfect way to depict equivalent dose distributions with all their measures of uncertainty. Amongst others, most common approaches are the Radial Plot and kernel density estimate (KDE) graphs. Both plot types are supported by the R-package 'Luminescence', a comprehensive and flexible compilation of functions for convenient analysis and presentation of luminescence dating data.

In its upcoming version, the package comprises updated versions of these two most popular plot functions to allow the user sound control over a wide variety of graphical parameters. Furthermore, a new plot type is added: The Abanico Plot (plot_AbanicoPlot()). It combines the strengths of both, the classic Radial Plot and a KDE plot. Our contribution will show all updated data visualisation approaches and provide a quick guide (workflow chart) on how to get from measurement data to high-quality dose distribution plots. It may serve to raise further discussions about the package in general and specific plot approaches in particular.