

Title: Graphical methods for directional data

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Abstract: This work is focused on the improvement of knowledge about the graphical directional data visualizing using different kinds of boxplot. The method and restrictions of the boxplot construction are depicted in this work, especially the need of knowledge of the relationship of sample α -quantiles to the theoretical quantiles. The first part is focused on the most important information of the theoretical background, boxplot and its parts description. In the second part the construction of the circular boxplot for two-dimensional directional data and representation of their properties using von Mises distribution is described. The final part is consisted of a brief description of the method of construction of multidimensional boxplot or bagplot for three-dimensional Fisher distribution.

Keywords: boxplot, bagplot, directional data, von Mises distribution, Fisher distribution