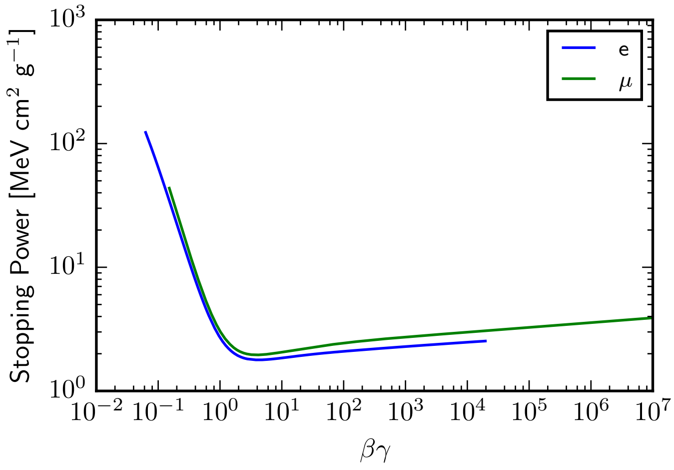

Figure 1: Stopping power of electrons and muons in a plastic scintillator. Matplotlib-style.

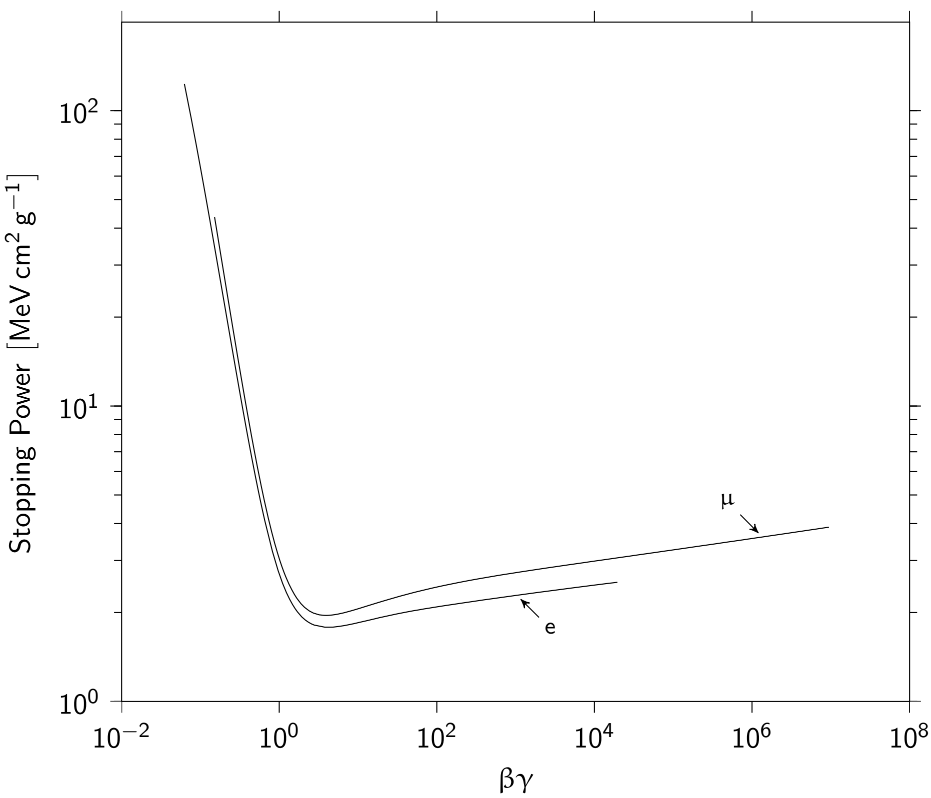

Figure 2: Stopping power of electrons and muons in a plastic scintillator.

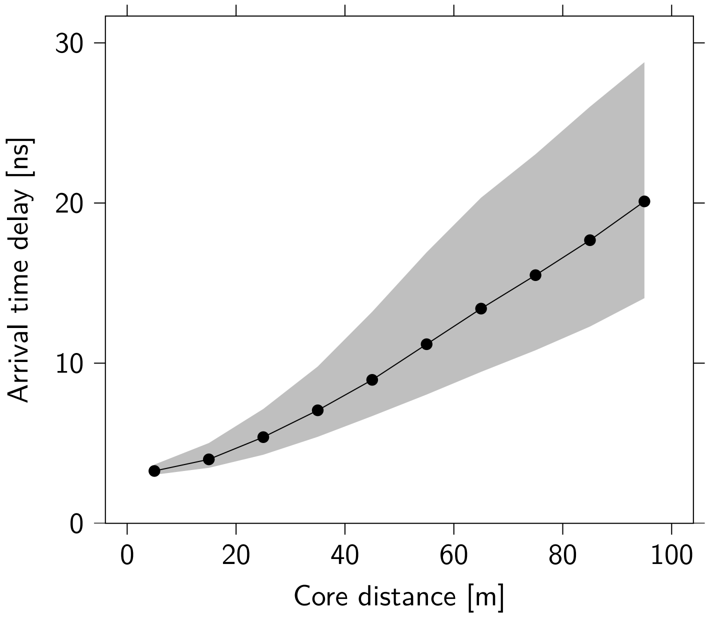

Figure 3: The measured arrival time distributions of vertical showers. The showers are generated by a 1PeV proton.

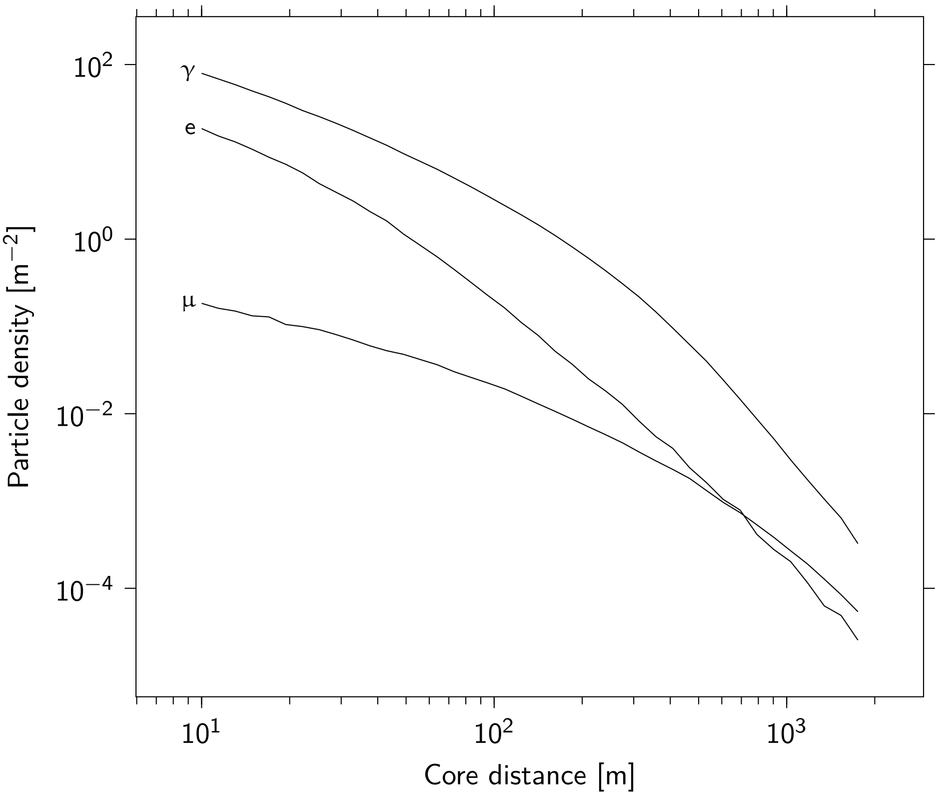

Figure 4: Lateral distribution of particles at sea level of an EAS initiated by a 1 PeV proton.

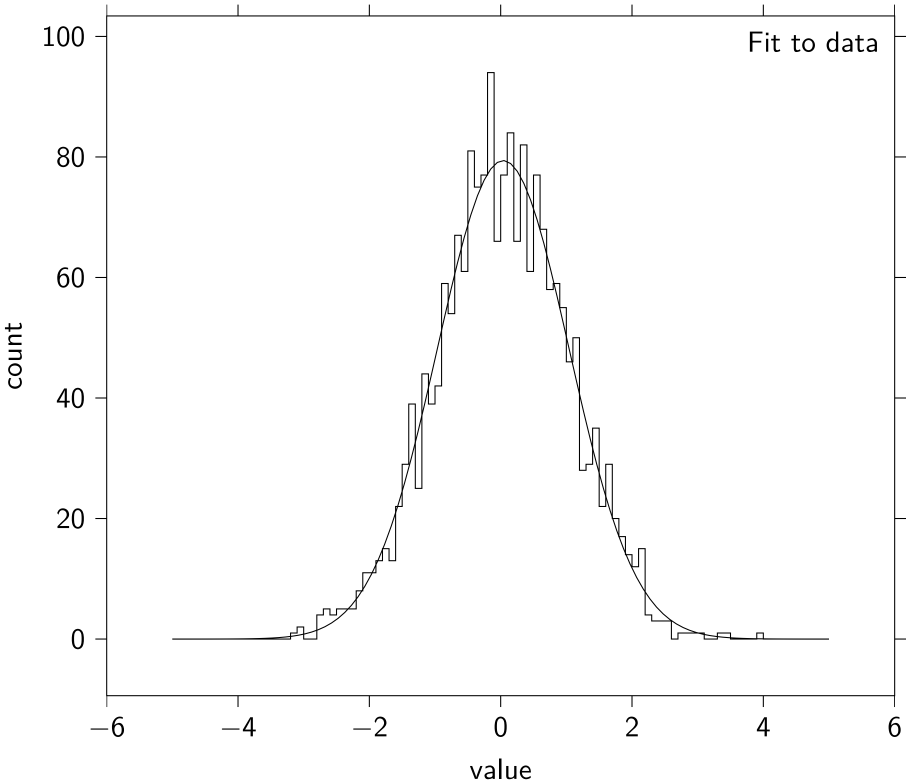

Figure 5: Histogram of a sample of 2000 random numbers from a normal distribution ($\mu = 0$, $\sigma = 1$). The bin width is 0.1. The histogram is fitted with the pdf of the normal distribution, with parameters $\mu = 3.9 \times 10^{-2}$, $\sigma = 1.0$.

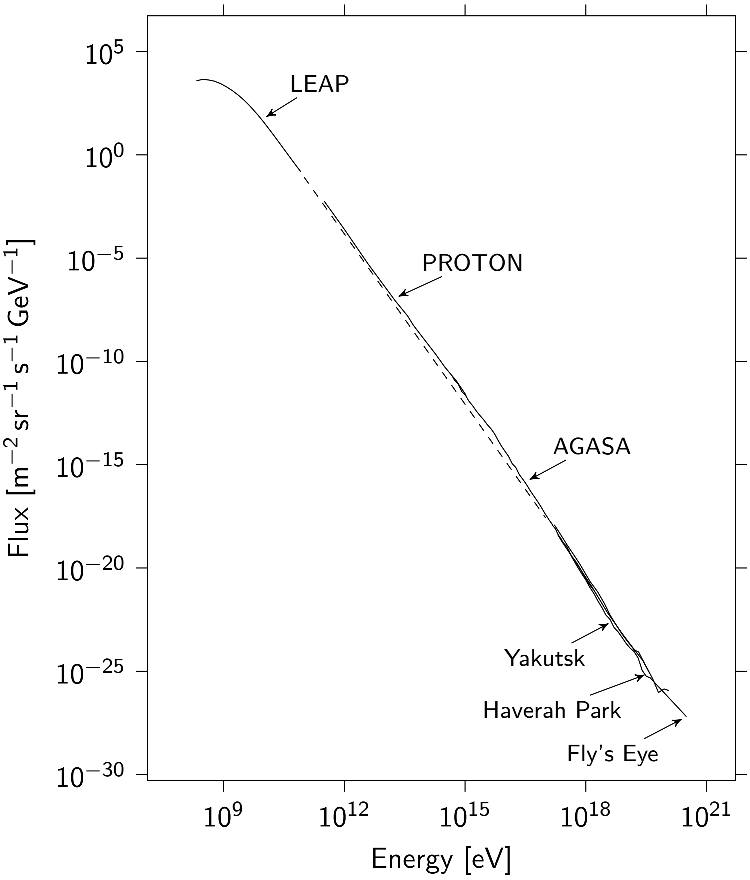

Figure 6: Differential flux of primary cosmic rays as a function of particle energy. Figure is redrawn from Cronin, Swordy and Gaisser (Sci. Am. 1, 1997).

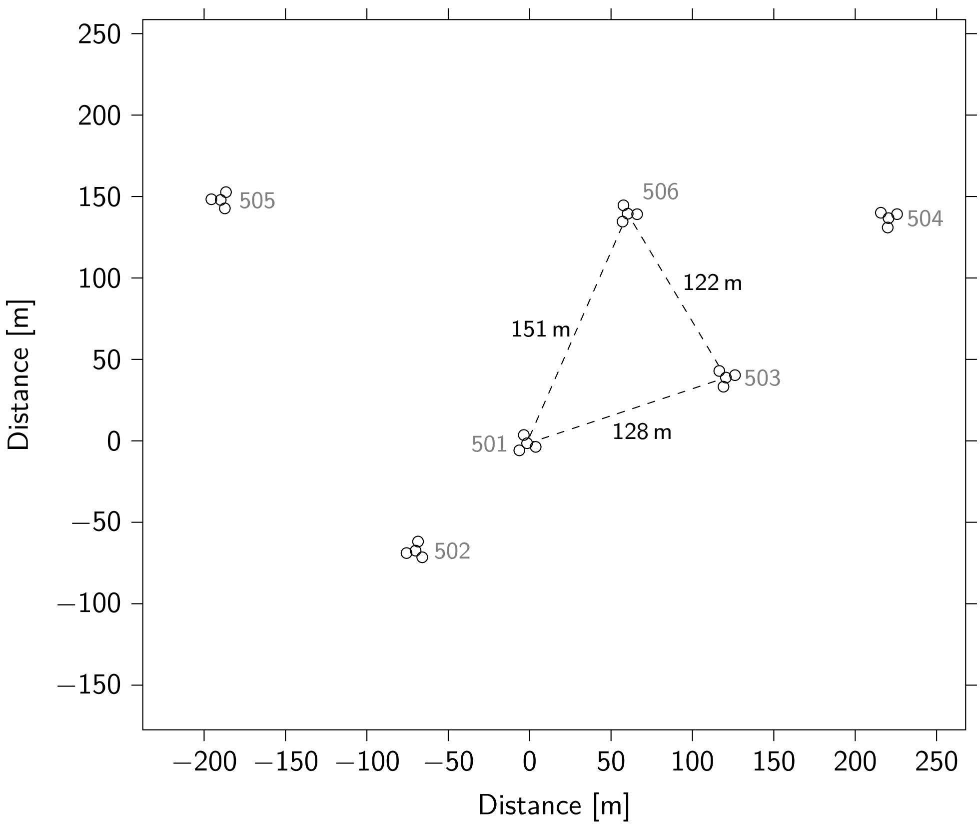

Figure 7: Locations of stations and detectors in the Science Park Array.

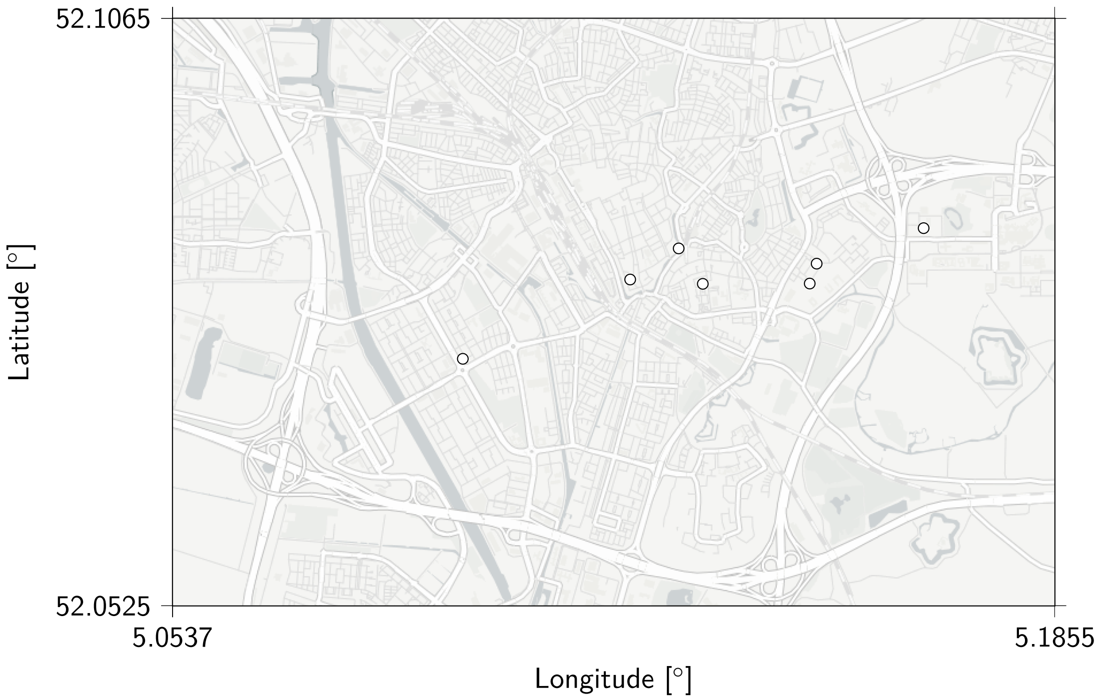

Figure 8: Locations of stations in the Utrecht HiSPARC cluster. Using map tile images as background. Map tiles by CartoDB, under CC BY 3.0. Data by OpenStreetMap, under ODbL

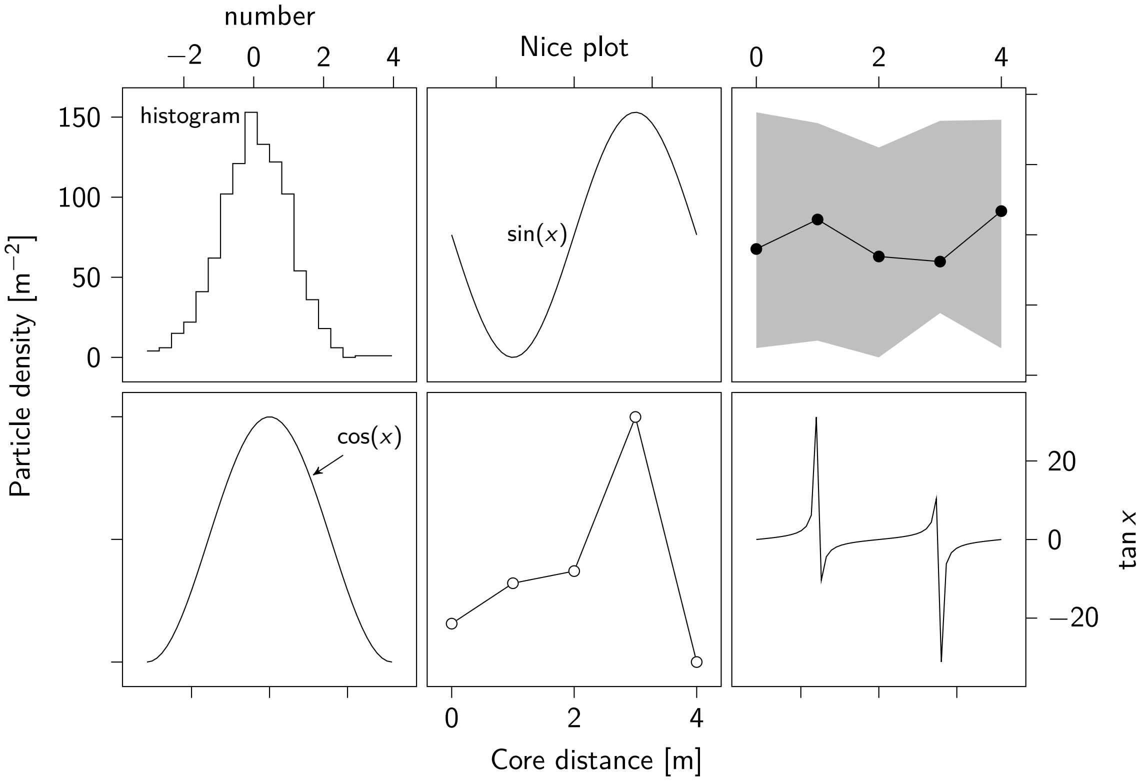

Figure 9: Example of a multiplot.

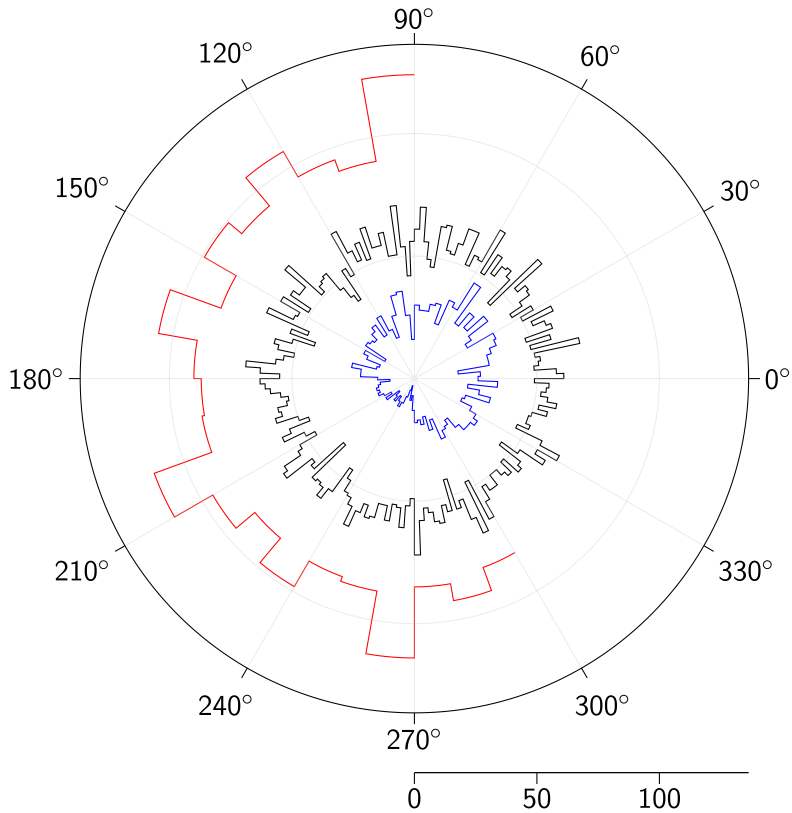

Figure 10: Example of histograms in a polar plot.

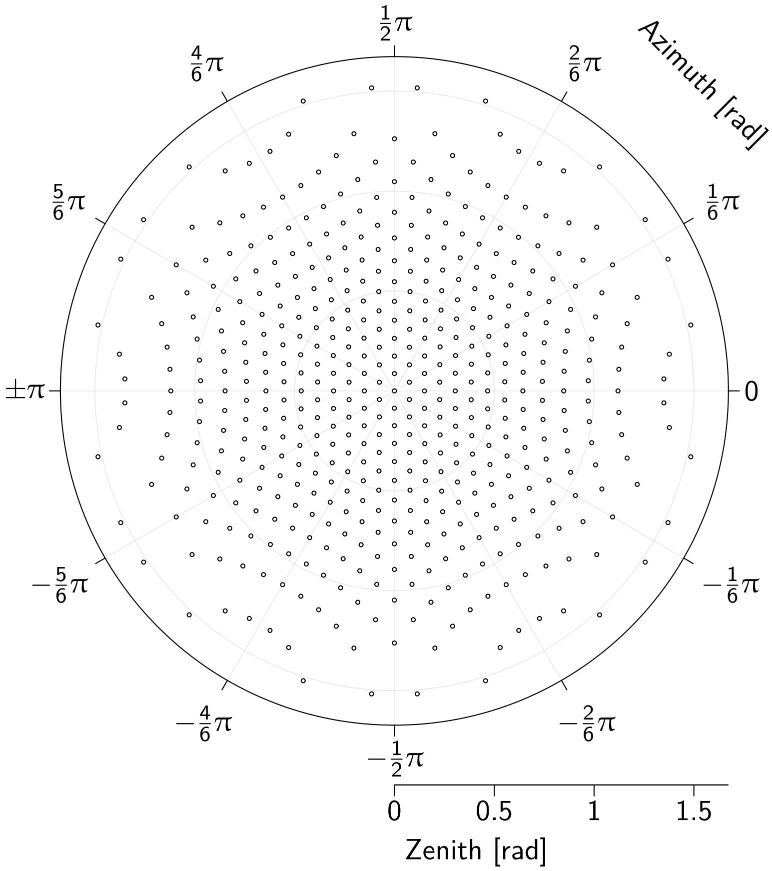

Figure 11: All possible direction reconstructions with detectors in a 10 m equilateral triangle and 2.5 ns time sampling. Example of radian units in polar plot.

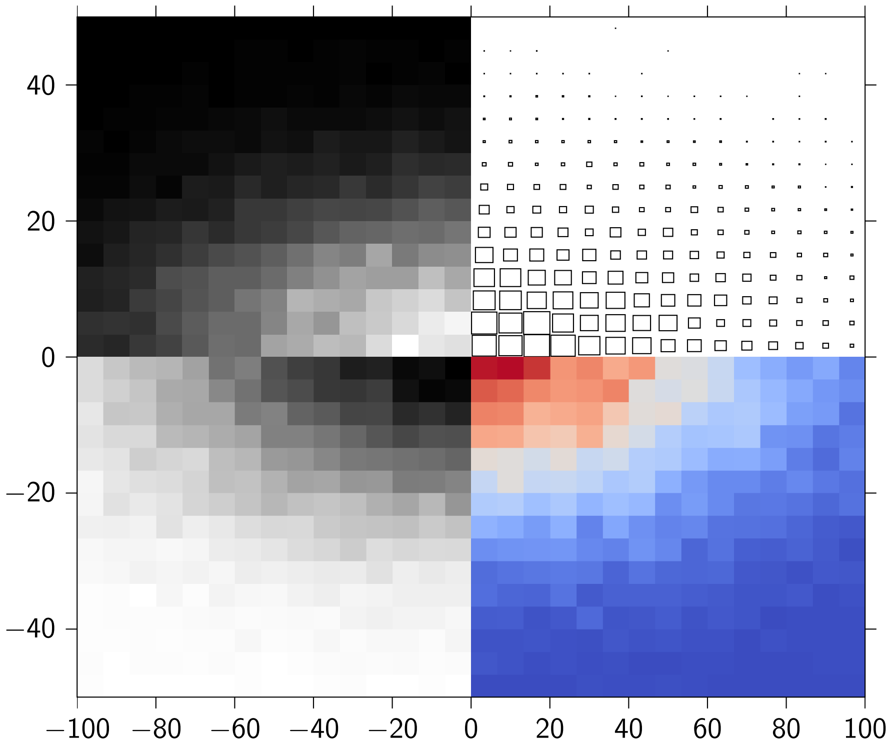

Figure 12: 2D histograms. Top: vectorized, bottom: bitmap, left: reverse_bw, and right: bw.

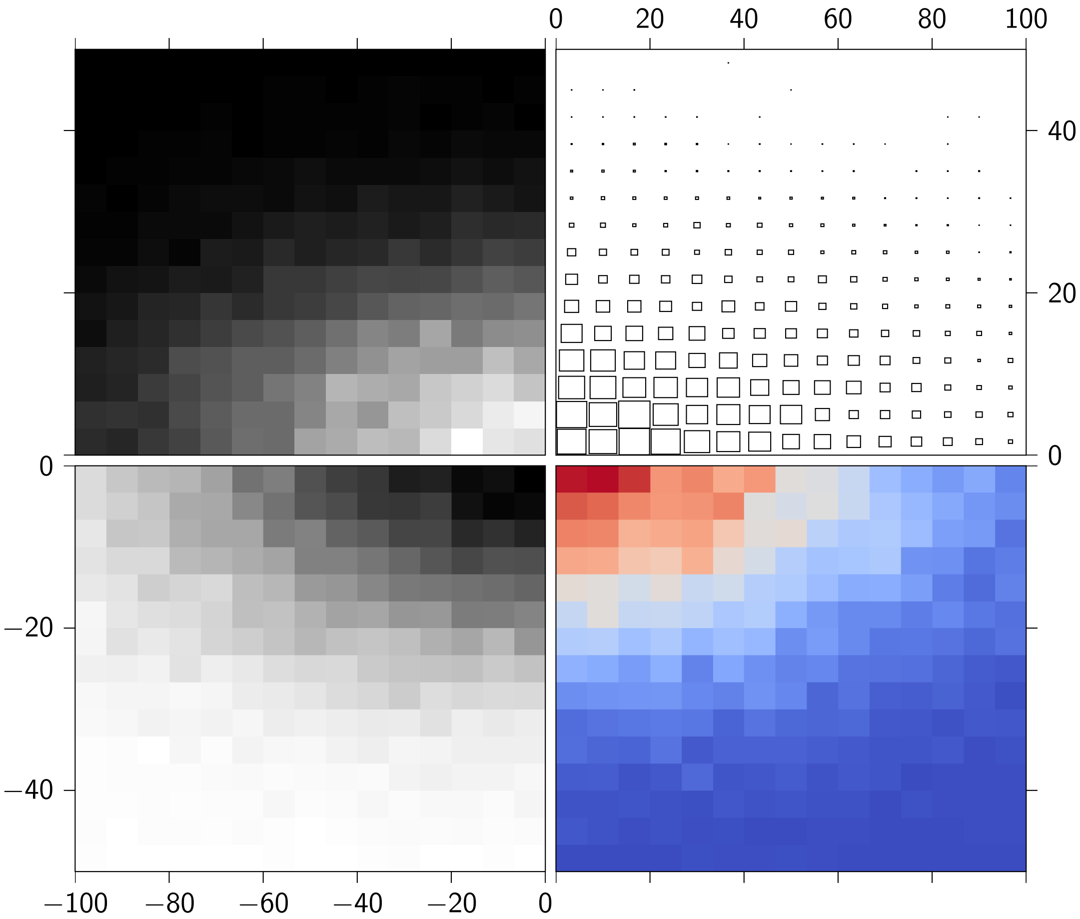

Figure 13: 2D histograms (MultiPlot version). Top: vectorized, bottom: bitmap, left: reverse_bw, and right: bw.

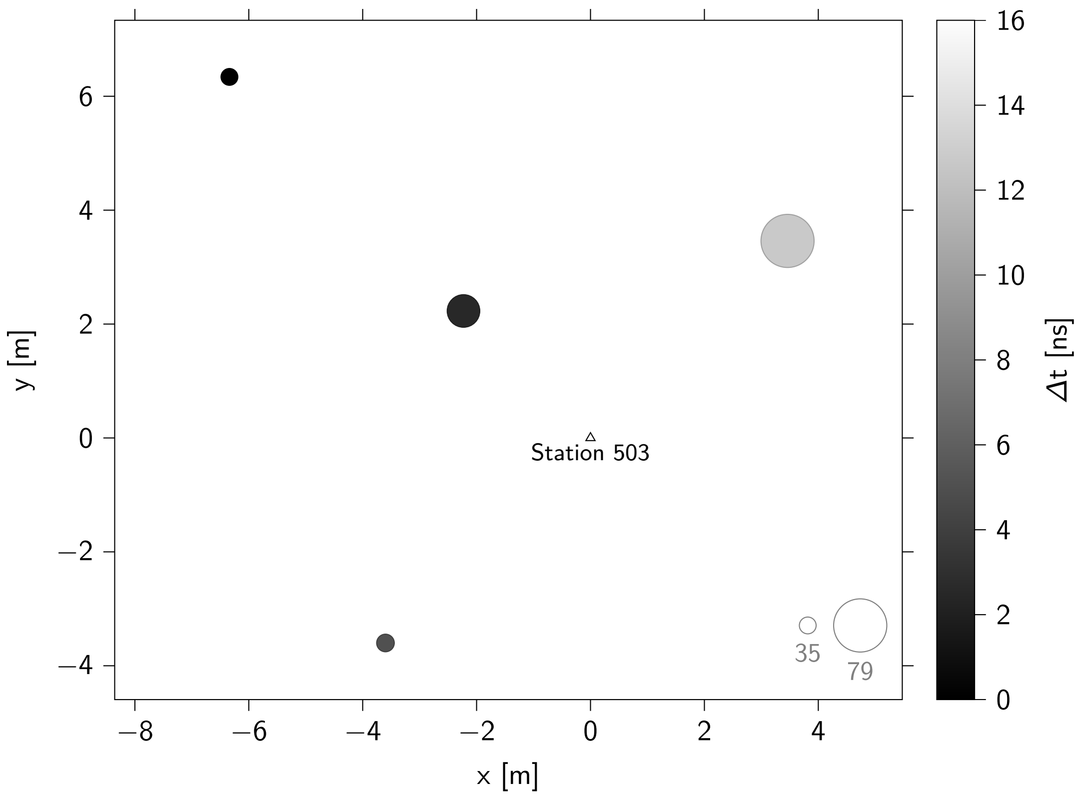

Figure 14: A detected air shower by station 503. The size of the points indicates the number of particles in each detector. The color is based on the arrival time of the particles.

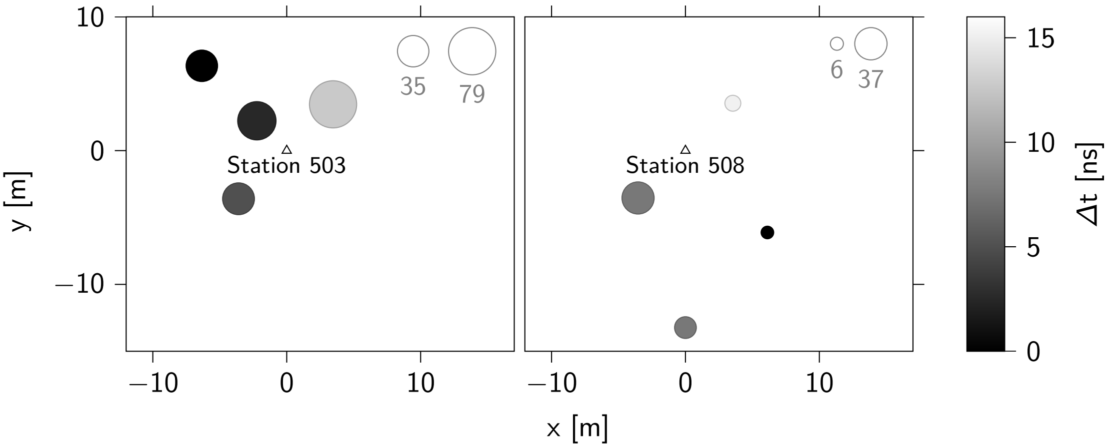

Figure 15: Two detected air showers, one by station 503 and one by station 508. The size of the points indicates the number of particles in each detector. The color is based on the arrival time of the particles.

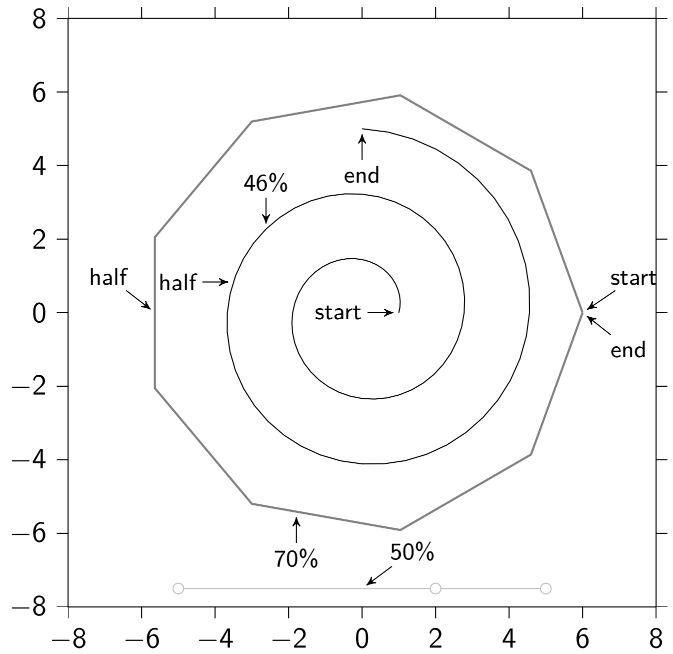

Figure 16: This shows how the relative position for pins can be used. The value (between 0 and 1) is a fraction of the path length described by the x, y values. So .5 is at 50% of the path length.

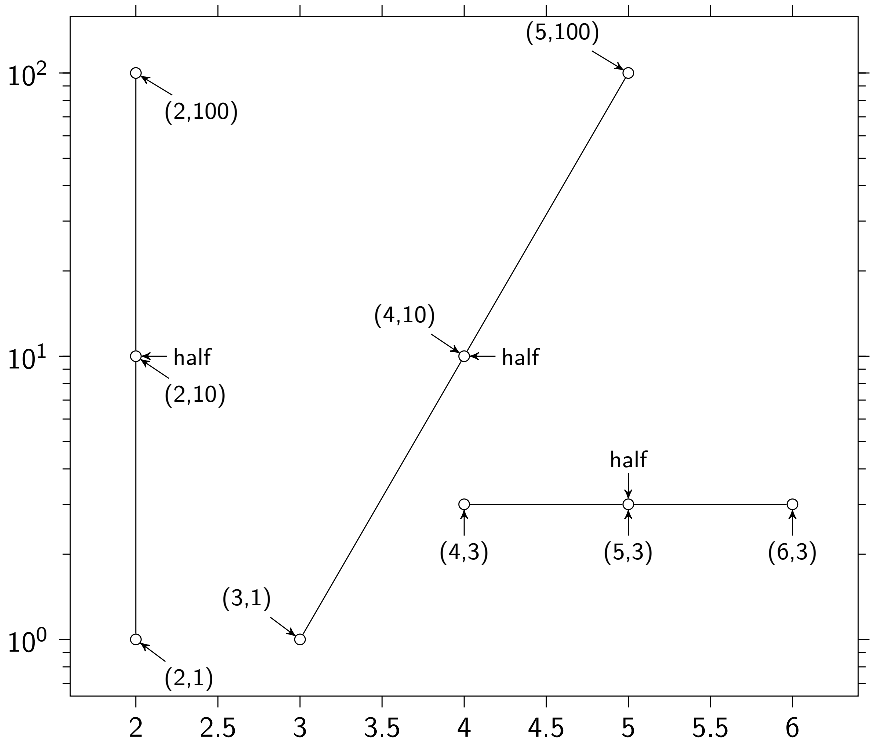

Figure 17: This shows how the relative positions are calculated for logarithmic plots. The 'seen' path length is used to determine the relative position.

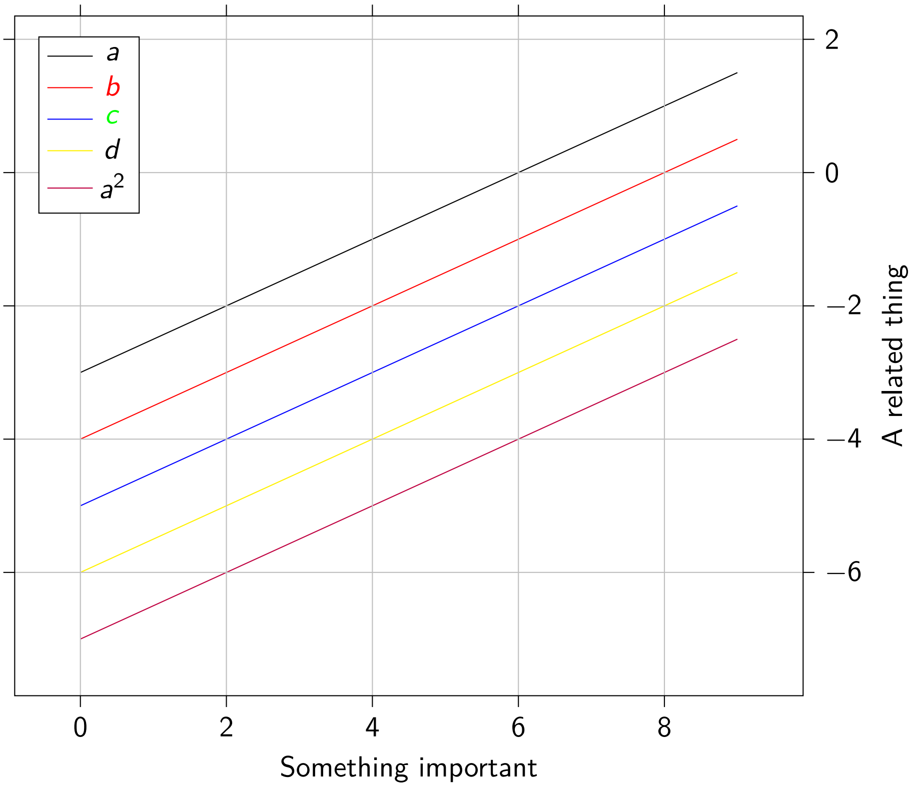

Figure 18: This shows that any other pgfplots option like legends and grids can be enabled manually.

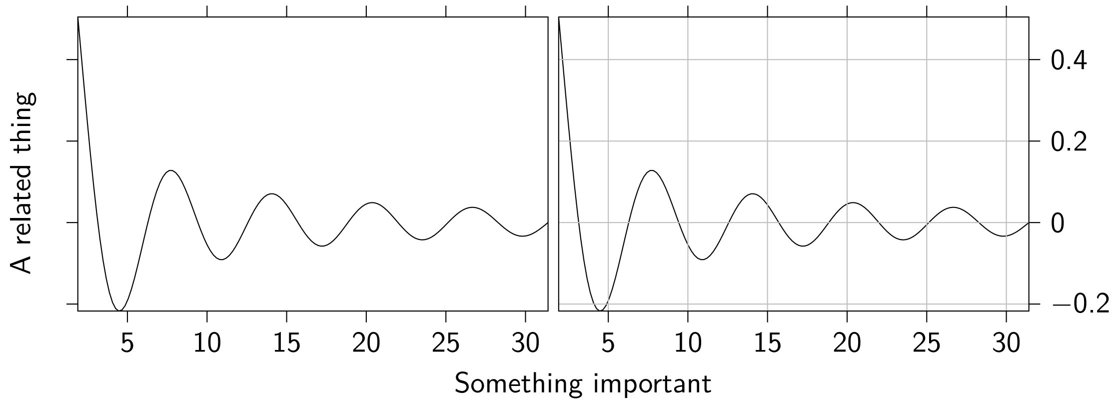

Figure 19: This shows that pgfplots axis option like grids and automatic limit enlargement can be set manually for individual subplots and globally for all subplots.

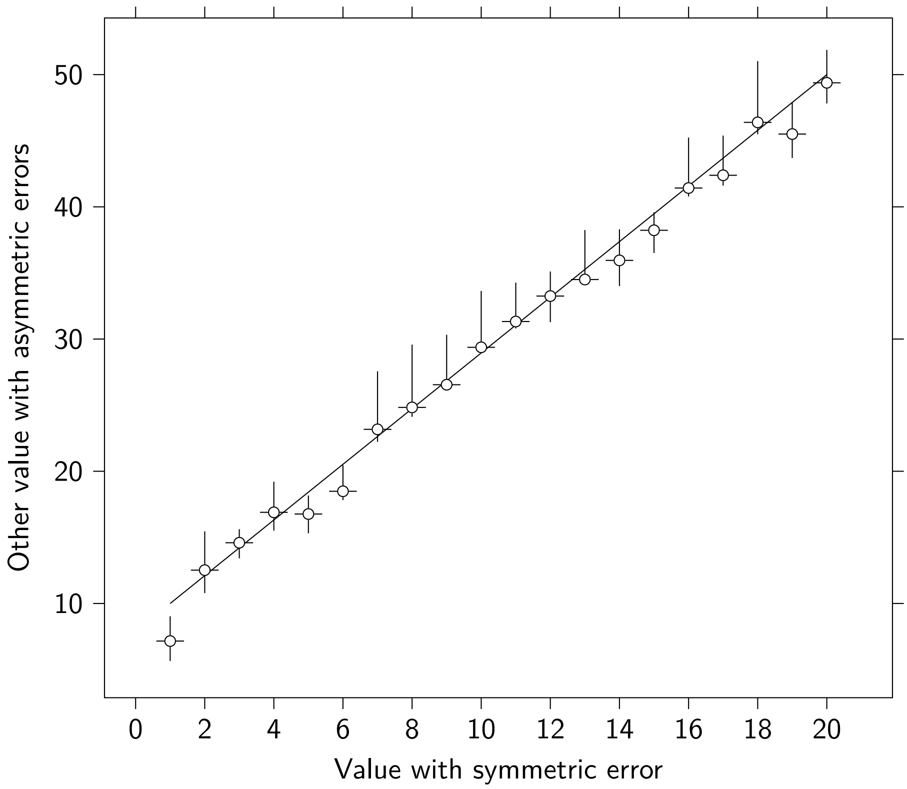

Figure 20: This shows an example of symmetric and asymmetric error bars.

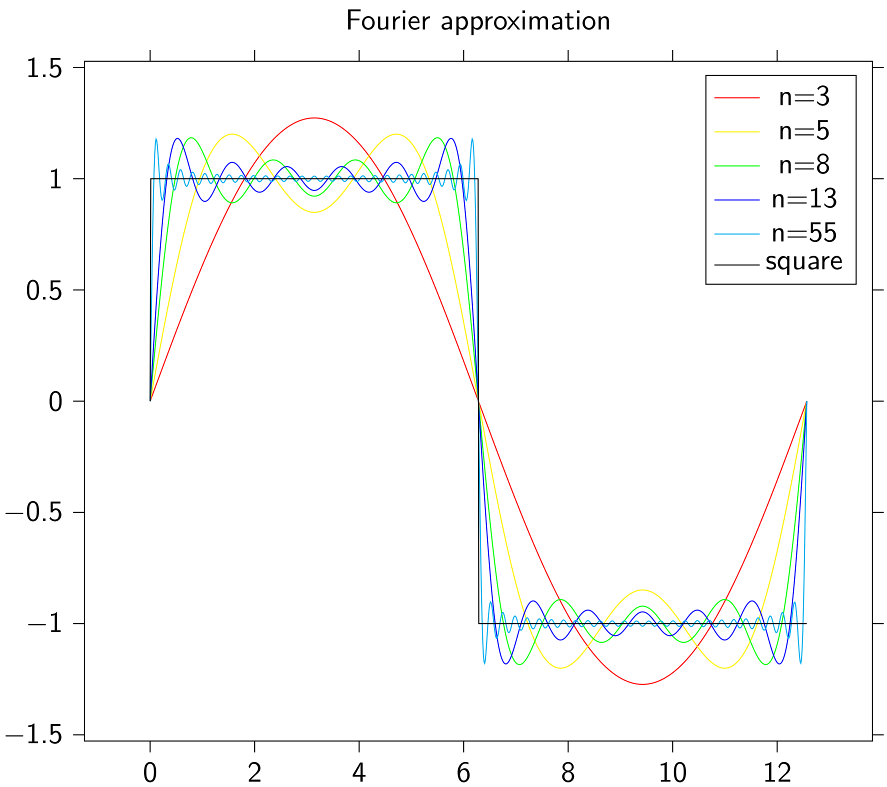

Figure 21: You can add a legend to a plot by using the legend parameter.

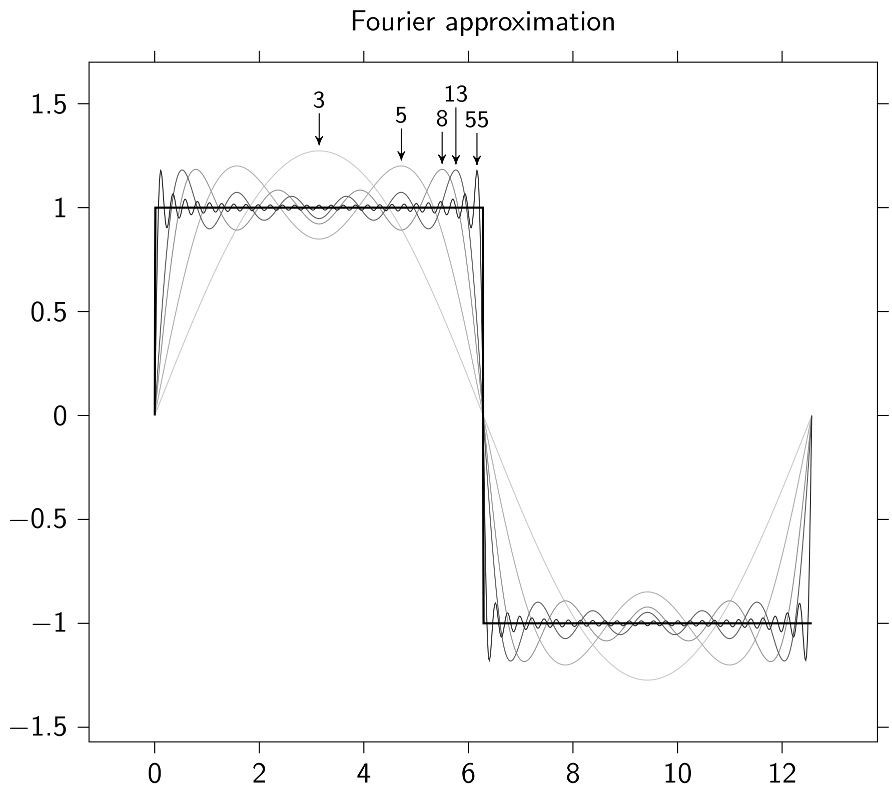

Figure 22: Or, if you prefer, you can use labels.

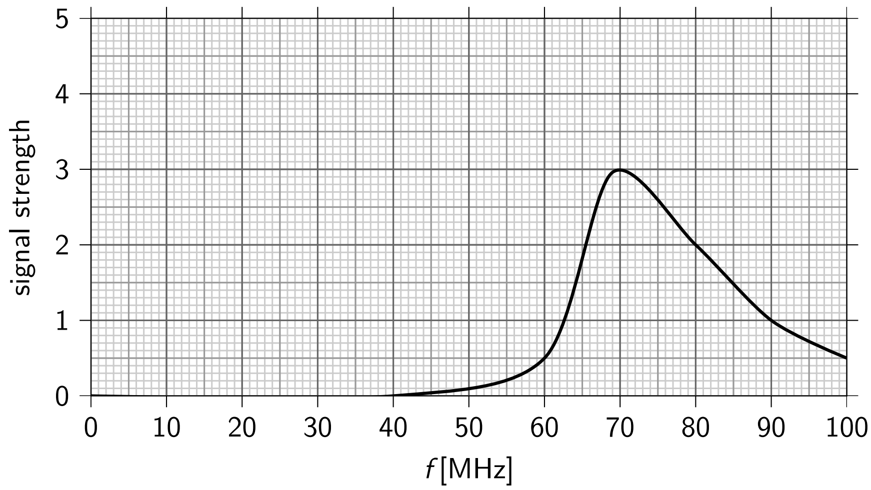

Figure 23: You can include graph paper as background for your plot. It is important that you correctly specify axis limits and scale to line up everything. This is, in fact, very intuitive. This is especially useful in high school physics tests and exams. This graph was included in an exam question on magnetic resonance imaging (MRI). An EM-pulse containing many frequencies is transmitted through a patient. Due to a gradient field, hydrogen nuclei resonance frequencies depend on the position inside the MRI-scanner. The decay signal from the nuclei show a peak at 70 MHz which can be translated into a position inside the patient's body.

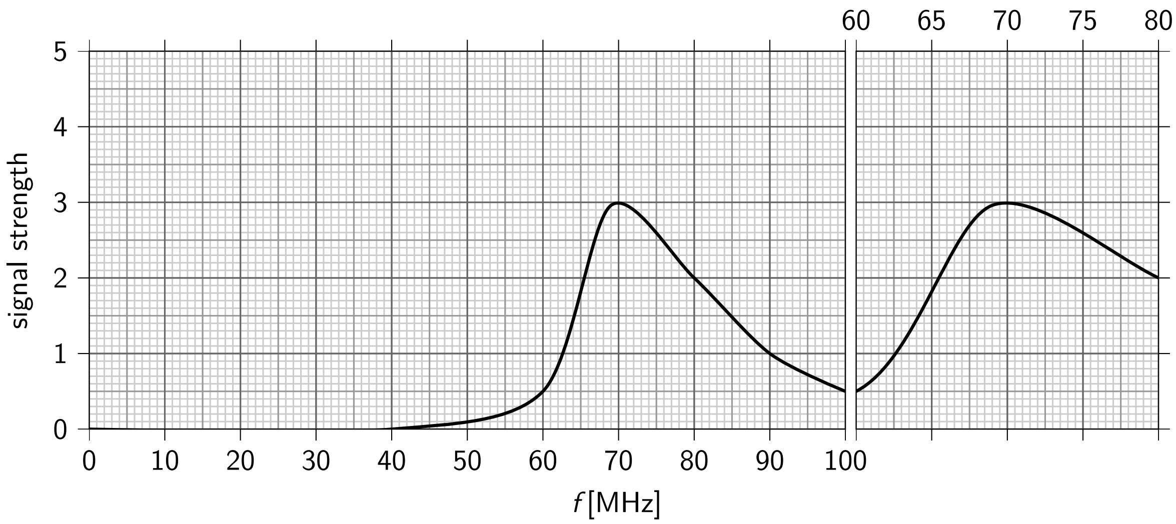

Figure 24: Graph paper is also supported for MultiPlots.