estimator_simple

From a given vector a of measurements and a second vector p with relative probabilities for each measure, we build the probability distribution for the measured quantity. Then we output just three quantities the mean and the 2-sigma low and high errors.

The limit is the one-side Gaussian integrated probability to be reached for 1-sigma limits p=0.68 and limit=0.34, for 3-sigma limits p=0.997 and limit=0.499, for 2-sigma limits p=0.955 and limit=p/2. in general n-sigma=gauss_cvf((1.-p)/2)

Syntax

ESTIMATOR_SIMPLE,a,p,m,low,high[,plot=plot]

Return Values

m - float mean

low - float 2-sigma error on the left

high -float 2-sigma error on the right side

Arguments

a - (float array) Measurements

p - (float array) Relative prob. for each measurement (normalization NOT required)

binsize - (float) Binsize for grouping the measurements

Keywords

- plot - produces plots of the distributions and the statistics.

Discussion

This routine is intended for measuring, in an automated fashion, the most basic and robust properties of a distribution of values: a mean value and 'Gaussian-equivalent' 2-sigma error bars on each side.

Version History

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