corner.py: Scatterplot matrices in Python

Daniel Foreman-Mackey[1]

**1** Sagan Fellow, University of Washington

Summary

This Python module uses matplotlib (Hunter 2007) to visualize multidimensional samples using a scatterplot matrix. In these visualizations, each one- and two-dimensional projection of the sample is plotted to reveal covariances. *corner* was originally conceived to display the results of Markov Chain Monte Carlo simulations and the defaults are chosen with this application in mind but it can be used for displaying many qualitatively different samples.

Development of *corner* happens on GitHub and any issues can be raised there (Foreman-Mackey 2016). *corner* has been used extensively in the astronomical literature and it has occasionally been cited as `corner.py` or using its previous name `triangle.py`. The source code for *corner* has been archived to Zenodo and it has the DOI (Zenodo Archive 2016)

The following is a simple demonstration of a visualization made with *corner*:

References

Foreman-Mackey, Daniel. 2016. "Corner.py on Github." https://github.com/dfm/corner.py.

Hunter, John D. 2007. "Matplotlib: A 2d Graphics Environment." *Computing in Science and Engineering* 9 (3): 90–95. doi:10.1109/MCSE.2007.55.

Zenodo Archive. 2016. "Corner.py: Scatterplot Matrices in Python." http://dx.doi.org/10.5281/zenodo.53155. doi:10.5281/zenodo.53155.
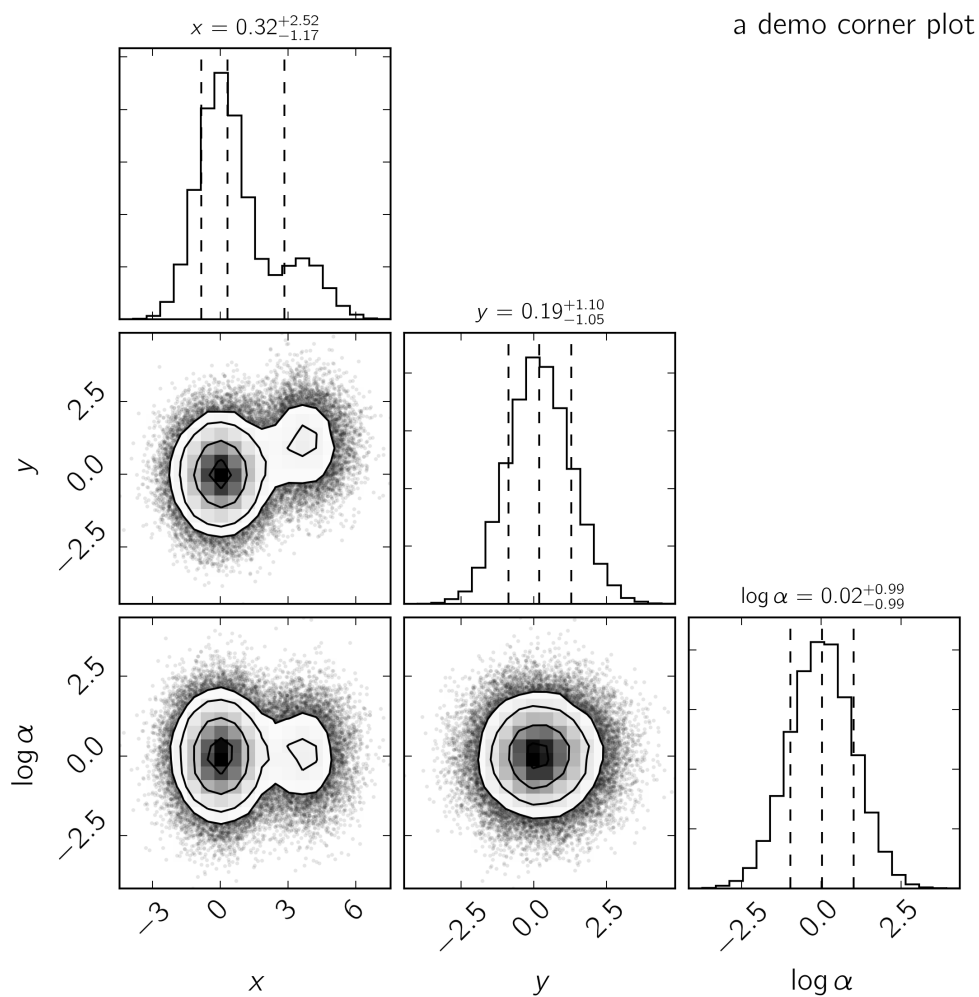
Figure 1: A scatterplot matrix generated by *corner*.