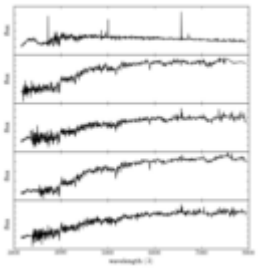
Data set Examples

These plots show some of the data set loaders available in astroML, and some of the ways that astronomical data can be visualized and processed using open source python tools. The dataset loaders are in the submodule **`astroML.datasets`**, and start with the word `fetch_`.

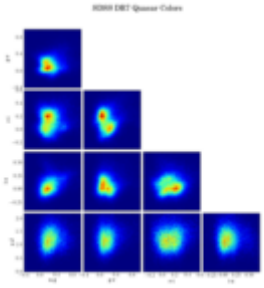
The first time a dataset loader is called, it will attempt to download the dataset from the web and store it locally on disk. The default location is `~/astroML_data`, but this location can be changed by specifying an alternative directory in the `ASTROML_DATA` environment variable. On subsequent calls, the cached version of the data is used.

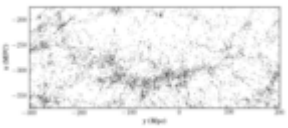
For more examples, see the *figures* from the textbook.



Example of downloading and processing SDSS spectra

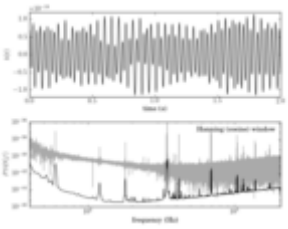
Corrected Spectra



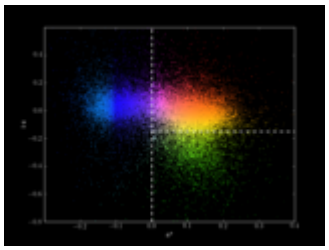


SDSS Data Release 7 Quasar catalog

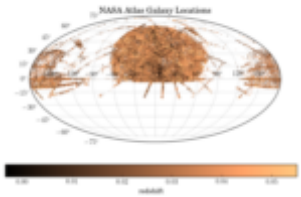
SDSS “Great Wall”



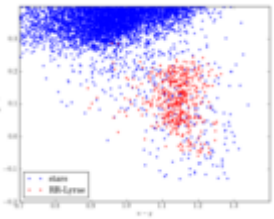
Plot the power spectrum of LIGO



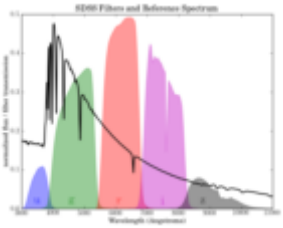
SDSS Stripe 82 Moving Object Catalog



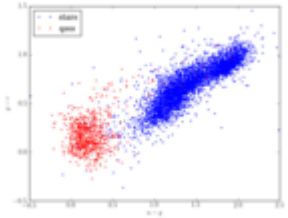
NASA Sloan Atlas



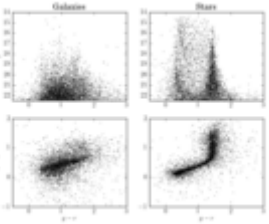
RR-Lyrae Magnitudes



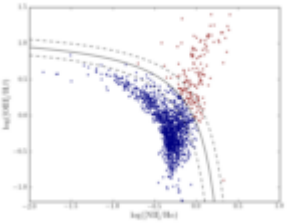
SDSS Filters



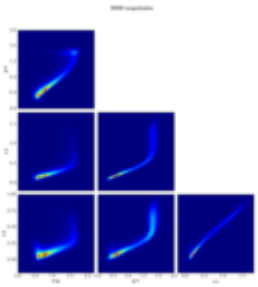
SDSS Galaxy Colors



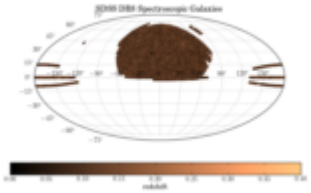
SDSS Imaging



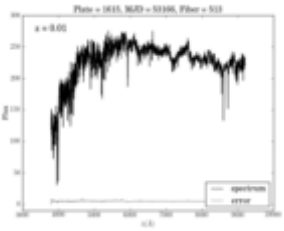
SDSS Line-ratio Diagrams



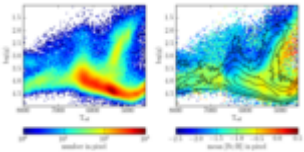
SDSS Standard Star catalog



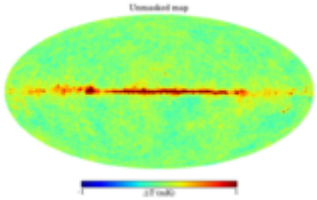
SDSS Spectroscopic Galaxy Sample



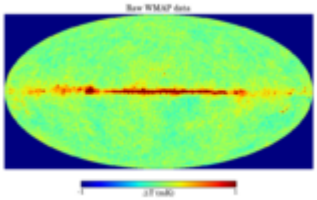
SDSS Spectrum Example



Stellar Parameters Hess Diagram



WMAP power spectrum analysis with HealPy



WMAP plotting with HEALPix