

This Python tutorial is a relatively superficial introduction to the following Python topics:

- Anaconda Python 3.6 installation; Jupyter notebooks
 - The numpy library; basic mathematical calculations
 - Reading / writing of text files
 - The matplotlib library; scatter plots; line plots (connecting points ordered by abscissa value)
 - Boolean variables/arrays; selecting a subset of the full data set
 - Looping through the elements of an array
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Most of the above material is covered in the context on a [paper that Claire Dorman published in the Astrophysical Journal in February 2015](#). The astronomy topics covered by the tutorial include (topics in parenthesis will require some deeper digging by the student):

- Color-magnitude diagrams (phases of stellar evolution)
 - Spectra; Doppler shift (cross-correlation based measurement of radial velocity)
 - Galaxy disk kinematics; toy models
 - Evidence of continuous heating of M31's stellar disk (heating of disks by satellite accretion)
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