Exercise 2b : various

- 1) JD to Date converter
- Write a python code to convert Julian Date to YYYY/MM/DD and vice versa. The input can be accepted through keyboard, or read from a file. Now, try writing a program that can judge whether the input provided by the user is JD or YYYY/MM/DD instead of asking the user to choose which way the conversion should happen.
- 2) Write a program to do the cross product. (i) Do not use numpy. (ii) Find out how to do with numpy.
- 3) Do Matrix multiplication without numpy. Does numpy have a function to do this? Cross check the results.
- 4) Have a look at masked arrays. Create a masked array using arange(9) with a fill value of -999. Mask the 3rd value in the array and see how it has changed.
- 5) Load the given data file and plot magnitude vs time for both photometric bands (V and I) separately. The y-axis has to be reversed to indicate that increase in the numerical value of magnitude corresponds to lower flux (see the figure below for a demo).
- 6) Use the random module of numpy or scipy, and learn how to plot histograms using matplotlib.

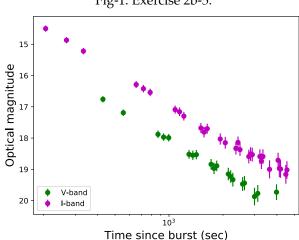


Fig-1. Exercise 2b-5.