

Physics 566 Problem Set #5

Reading: CP Chapters 7

Available March 1st

Due March 8th

Please follow the guidance of last week and, like before, please turn in (by attachment in the Sakai assignment) both a PDF exported version of the notebook and the .ipynb file itself. If you need to work out new equations etc for the problem please use LaTeX formatting to show what you did in your answers.

For these problems if you wish you can use the numpy FFT routines as described in 7.4.2.

- (1) **7.1** FTs of simple functions. As mentioned above, you can either write your own function as in `dft.py` as they mention, or use `rfft` from numpy.
- (2) **7.2** Sunspots!
- (3) **7.3** Musical instruments
- (4) **7.4** Smoothing
- (5) **7.5** Artifacts
- (6) **7.9** Image deconvolution.