

ASTR 288C

Homework 4

Due: 3:30pm, Oct. 2, 2017

- Write everything in this homework assignment in a LaTeX file using the LaTeX template from `/n/ursa/A288C/alien/lab04/Homework4_latex_form/`.
 - Print out BOTH the original LaTeX file and the output pdf file and turn them in.
1. Copy the folder `/n/ursa/A288C/alien/lab04/Homework4_latex_form/` to your home directory or your own computer. Using the LaTeX template called `Proposal.tex` to write your proposal. Note that this is a different template than the one you used in the previous homework.
 2. Pick a topic about gamma-ray bursts (GRBs) that you are interested in doing as your final project. You can either pick a topic from the list below or you can pick your own topic. If you select your own topic, please discuss your subject with the instructor (either via email or during office hour) to make sure your topic is relate to gamma-ray bursts and will be able to use *Swift* BAT and/or XRT data.

It is okay to select the same topic as your classmates. However, everyone has to write their own proposal and do their own project. In other words, even if you pick the same topic as others, you need to write in your own words why you think this topic is scientifically important. Also, you will develop your own method for your research project later in the semester. Different people will develop different methods, even on the same topic.

A list of potential topics for your proposal (and later for your research project):

- Distinguishing short and long GRBs
 - Identifying high redshift GRBs for spectroscopic followups
 - Investigating GRB spectra and their time evolution
 - Searching for coincidental GRB signals with gravitational wave detections
3. Write the “Scientific Rationale” section of the proposal about your project. That is, your proposal should include the following subjects:
 - **[2 points]** Proposal title (this is the title of your topic), your name and affiliation.

- **[10 points]** Clearly explain why you think this project is scientifically important and worth doing.
- **[10 points]** Include a figure with figure caption that can help clarify and strengthen your argument in the proposal. You can adjust the figure size and decide whether or not to make the figure wrap around the text (that is, whether to use the “figure” or “wrapfigure” command), as long as the text and figure clearly explain the science rationale of this project.
- **[10 points]** Add related references, including major works that have been done before about this subject.

Page limit: Your proposal (the Science Rationale section) should be no more than 1 page in the output pdf file. The “Reference” section does not count into the page limit.

Your proposal will be judged based on its strengths and weaknesses, similar to the criteria we discussed in class.