A. Briefly describe overall research program at your laboratory.

We are involved in ground and space-based studies of variable and peculiar stars. We analyze light curves and spectra that have been gathered from observatories in Arizona and other sites as well as by NASA satellite observatories. We apply computational techniques to the data to better understand the physical properties of the stars and their surroundings.

B. Briefly describe specific project(s) for your teacher:

We will use data as described in Part A along with computer programs to analyze the data. We would like to have the teacher learn the Python computing language during the summer program in order to better understand the material and take that skill set back to their classroom. This project involves both astronomy and computer applications to analyzing data.

C. Will any other people (post docs, grad students, undergraduate students, colleagues, etc.) be involved directly with your teacher?

We will have 1-3 undergraduate students working with us on this project and they would interact with the teacher on a daily basis.

D. Will you require any advanced reading/preparation for the teacher? If yes, please briefly describe.

Some background reading on variable and peculiar stars will help jump start the teacher and better prepare them for the project. We will provide the necessary reading materials in advance.