INTRODUCTION
The purpose of this Mini grant is to engage GPC students in observational Astronomy and promote STEM research. This grant is open to any Physics or Astronomy student.

Students in Physics and Astronomy courses will engage in service learning activities such as educating the GPC community and the public about solar activity (solar storms, sunspots, etc). Other activities include learning how to operate the telescope, project images of the Sun and identify solar features. Courses impacted by this grant include PHYS 1111, 1112, 2211 & 2212 and ASTR 1010 & 1020. Students will apply Physics equations to determine rotational speed of the Sun, relate the rotation of the Earth to the apparent motion of the Sun and analyze the features on the Sun’s face.

My main goal is to detect improved class scores of students involved in the project and encourage them to pursue STEM careers. I hope to foster a desire to pursue STEM fields for all participants.

LITERATURE REVIEW
According to the National Science Foundation, NSF 12-311 (March 12, 2012) statistics, women and minority groups are still underrepresented in the sciences. Out of the 10 million scientists surveyed in 2008 only 4.6% are African American, 5.3% are Hispanic and 35% are female. There is a need to promote science to women and minorities to encourage greater diversity.

RESEARCH PLAN
There will be several meetings which will focus on telescope operation with the students. Once students become familiar with handling the telescope, we will then spend time observing the Sun and assist with public solar observations throughout the semester. I plan to have at least one public observation per week. Student observations, which will involve measurements, will take place more often- two or more times per week.

Students will create drawings of sunspots using the Sunspotter and observe the motion of the sunspots over time. Calculations of the Sun’s rotational speed will be compared with NASA published values. These drawings and calculations will be displayed on the Decatur campus.

Students will also help with public observations and educate the community about the Sun. Solar glasses will be handed out to the public to use in solar observation. These glasses will include contact information for the Decatur Science Department.
EVALUATION PLAN
The students involved in the project will be surveyed at the end of the semester to gauge their interest in the project and the likelihood of pursuing a STEM career. Grades of students involved in the project will be compared with those of students not involved in the project to determine if the project affected their study habits and interest in science. Statistics will be calculated. Assessment test data may be evaluated and compared with past student data.

DISSEMINATION
Results will be shared with GPC faculty at the STEM Faculty Retreat. Students may also present their solar measurements to the public.