

A. Salaries and Wages

The normal course load at Siena College is 4 classes per semester. Siena has agreed to a 25% course reduction to increase the amount of time that research-active faculty can allot to research. We have requested additional funds to reduce Finn’s teaching load by one course during the spring semester for the first two years so that she can focus half of her time on research. The $H\alpha$ imaging campaigns will occur during the spring semester, and the course release will provide valuable time for the PI to develop the $H\alpha$ reduction pipeline and observe, reduce and analyze the $H\alpha$ imaging data. In addition, she will prepare the summer research projects for participating undergraduates.

We request 2 months summer salary each year of the grant for PI Finn to oversee the reduction and analysis of the $H\alpha$ and WISE images, and to supervise the ten-week research experience four undergraduate students. Salaries are assumed to increase by 3% per year.

B. Other Personnel

We have included one month of summer salary for Graziano Vernizzi during the first year of this grant. During this time, he will develop the code to stochastically sample parameter space when fitting two-dimensional models to the WISE images that will run at Siena’s High Performance Computing Center.

The PI will employ 4 undergraduates during summer months for the 3 years covered by this proposal. The current rate is \$10.50 per hour, and the undergraduate salaries include 35 hours per week for 8 weeks during the summer. We have also included funds to cover the cost of housing for the summer students (\$135/week). This helps defray the expense of participating in summer research.

We have included funds for 2 students to continue work during the academic year (10 hrs per week).

C. Fringe Benefits

The fringe rate for full-time faculty is 42.2% for the academic and 8.6% for summer salary.

The fringe rate for undergraduate students is 5.1% for summer research and for work completed during the academic year.

D. Equipment

We have requested funding \$5000 the first year to purchase two computers, one for the PI and the second to be used by undergraduates. We request an additional \$2000 to purchase external hard drives to back up all imaging data.

E. Travel

The PI and two undergraduate student will attend the winter meeting of the American Astronomical Society during the second and third years to present results from this survey. The allowance per participant includes: \$500 for airfare; registration fee (\$500 for PI, \$200 for undergraduates); \$250 for hotel times 5 nights (double occupancy for undergraduates); \$60 per day allowance for food.

This proposal will fund travel for the PI, one co-I and two undergraduate students to Kitt Peak National Observatory for one observing trip each year, with an allowance per participant per trip of: \$500 for airfare; \$125 per night for room and board at the observatory. We include an additional \$200 for a rental car or alternate transportation to and from the airport. If we have perfect weather during the first two years, we won't need to observe during the third year. However, 100% clear weather is not realistic, and technical issues sometimes arise at the telescope. We therefore plan for an additional observing trip during the third year.

This proposal will fund travel for the PI and co-I Desai to an international team meeting during the second year with an allowance of: \$1400 for airfare; \$160 for hotel times 7 nights; \$75 per day allowance for food.

We will hold a team meeting at Siena College during the first and third years of the grant. The proposal will fund travel for co-I Desai including \$500 for airfare, \$150 per night for 4 nights for a hotel, and \$60 per diem.

F. Participant Support Costs

G. Other Direct Costs

Funds for publication are requested at the *Astrophysical Journal* rate of approximately \$150 per page. We expect a total of six publications to result from this proposal. In his collaborative proposal, co-PI Greg Rudnick has budgeted for the first three papers, and here we budget for the last three papers which we expect to publish in the third year of the grant. We estimate 10 page papers (\$125 per page), for a total publication cost of \$3750 per paper.

G. Indirect Costs

The indirect cost rate at Siena College is 21.3%, excluding equipment, Participant Support, and Subawards.