Mt. Stony Brook Observing Proposal
Date: February 21, 2022

Panel: *For office use.*
Category: Star Clusters

Catchy Title

PI: put your SBU ID here

Abstract of Scientific Justification *(will be made publicly available for accepted proposals)***:**

Your abstract is the review panel's window into your proposal: the abstract provides an initial impression about your proposal and it is also what panel members refer to at the review meeting to remind themselves about the content of your proposal. Take advantage of the opportunity to give the panel members an understandable and concise summary of what you want to do, and why. Write your abstract so that non-specialists can quickly understand why the observations you want to make are important.

Summary of observing runs requested for this project

Run	Telescope	Instrument	Time Request	Moon	Optimal months	Accept. months
1	14-inch	imaging	3x 2 hours	dark	Oct	Oct - Nov
2	14-inch	spectrograph	1 night	grey	Mar	Mar - Apr
3						
4						
5						
6						

Scheduling constraints and non-usable dates *(up to six lines).*

Run 1 needs to be scheduled to catch phase 0 of the eclipsing binary, on Oct. 20, Oct. 25, Oct. 30 or Nov. 4. Run 2: please avoid Apr. 1 (proposers have a mid-term the next morning).

Scientific Justification *Be sure to include overall significance to astronomy. For standard proposals limit text to one page with figures, captions and references on no more than two additional pages.*

The scientific justification should explain the overall goals of your program in the context of your field, as well as the importance of your program to astronomy. Writing a good scientific justification is an art. It takes skill and practice. And it requires a good scientific idea. This last you must supply but a few general guidelines about proposal writing might still be helpful...

- State succinctly and clearly the problem you are trying to solve and the progress that will be made toward doing so if the proposed observations are successful. If the review panel members have to work hard even to understand what you want to do, they are unlikely to be sympathetic to your proposal.
- Explain clearly why the project is important and how it relates to the broad context and important issues in your field. Many proposals focus too tightly on a specific observational goal (e.g. "measure the velocity dispersion of this cluster of galaxies") without explaining why it is important or how it relates to a significant question about the Universe.
- Be specific. If your observations will "constrain theoretical models," then discuss what will be constrained and why those constraints matter. Make sure the review panel understands exactly why the observations you propose will make a difference in your field, and exactly how the observations will refine or require changes in the theory.
- Keep it simple. Try to focus on the central idea of your proposal. Complex arguments are hard to explain and hard for the panel members to follow. Distracting tangential arguments obscure the theme of your proposal.
- Include a figure to help explain what you want to do. Sample data or model predictions shown in a figure often help clarify complex arguments for the panel members. A sample figure is included below with this proposal.
- Keep it short. Never exceed a page for the text of the scientific justification, and never reduce the font size. It may even help to be a little under a page, and increase the font size a little! Organize your presentation with paragraphs, headings, and bullets so it is easy to read.
- Include and check references as appropriate [Bell et al., 1996].
- Print out the proposal to be sure your LaTeX is correct. Proofread it. Make sure the proposal is correct scientifically, technically, and grammatically. Run a spellchecker.

Finally, when an opportunity arises, volunteer to serve on a TAC or review panel. The experience is a great help in learning how to write a good scientific justification.

References

D. J. Bell, C. D. Biemesderfer, J. Barnes, and P. Massey. An Automated System for Receiving KPNO Proposals by Electronic Mail. In G. H. Jacoby and J. Barnes, editors, *Astronomical Data Analysis Software and Systems V*, volume 101 of *Astronomical Society of the Pacific Conference Series*, page 451, 1996.

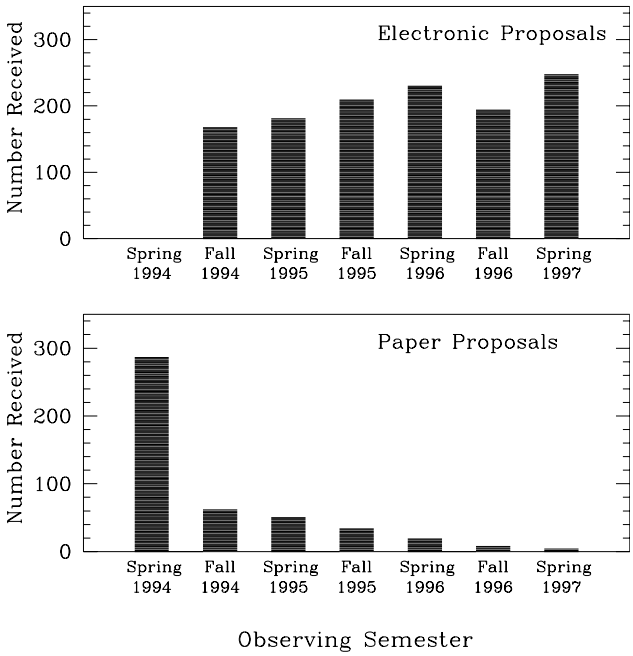

Figure 1: This sample figure shows how quickly electronic proposals for telescope time replaced paper ones.

Experimental Design *Describe your overall observational program. How will these observations contribute toward the accomplishment of the goals outlined in the science justification? If you've requested long-term status, justify why this is necessary for successful completion of the science. (limit text to one page)*

The review panel looks to this section to find out about the overall strategy of your data analysis. You need to convince the panel that your strategy will be successful. If the strategy is found to be infeasible, the proposal will be outright rejected.

- What are the target objects and target datasets, and how were they selected?
- Comment on the observability of your targets.
- Provide a **detailed explanation of the exposure time estimate**. Where possible, scale from your existing data to calculate the required exposure time. Also provide an estimate of how long your total observing session will take (with multiple exposures, calibration, etc.).
- Provide an explanation of which filter(s) you will use.
- What calibration data will you require?
- Will you require external data? If so, describe the nature of that dataset, and how you will analyze it.
- What do you plan to measure, and how?

Observing Run Details for Run 1: 14-inch/STL-1001E

Technical Description *Describe the observations to be made during this observing run. Justify specific instrument choices such as the required filter, or the grating choice, as well as the requested lunar phase. List targets, coordinates, and magnitudes (or surface brightness, if appropriate) in the Target Tables section below.*

Create a separate "run" page for each telescope/instrument combination being used for your project.

Instrument Configuration

Filters: B,V,R,I,Ha
Grating/grism: -
Order: -
Cross disperser: -

Slit: -
Multislit: -
λ_{start}: -
λ_{end}: -

Fiber cable: -
Corrector: -
Collimator: -
Atmos. disp. corr.: -

R.A. range of principal targets (hours): 12 to 13

Dec. range of principal targets (degrees): 10 to 15

Special Instrument Requirements *Describe briefly any special or non-standard usage of instrumentation.*

Target Table for Run 1: DECam

Obj ID	Object	α	δ	Epoch	Mag.	Filter	Exp. time	# of exp.	Lunar days	Sky	Seeing	Comment
777	**NGC 7078**	**21:30:10**	**12:10:03**	**2000.0**	**18.6**	**g**	**1000**	**5**	**4**			**globular cluster**
778	**NGC 7078**	**21:30:10**	**12:10:03**	**2000.0**	**18.6**	**r**	**1000**	**5**	**4**			**same cluster**
779	**NGC 7078**	**21:30:10**	**12:10:03**	**2000.0**	**18.6**	**i**	**1000**	**5**	**4**			

Observing Run Details for Run 2: 14-inch/Spectrograph

Technical Description *Describe the observations to be made during this observing run. Justify specific instrument choices such as the required filter, or the grating choice, as well as the requested lunar phase. List targets, coordinates, and magnitudes (or surface brightness, if appropriate) in the Target Tables section below.*

Instrument Configuration

Filters: -
Grating/grism: 900l/mm
Order: -
Cross disperser: -

Slit: 25μm
Multislit: -
λ_{start}: 5300
λ_{end}: 6000

Fiber cable: -
Corrector: -
Collimator: -
Atmos. disp. corr.: -

R.A. range of principal targets (hours): 12 to 17

Dec. range of principal targets (degrees): 40 to 50

Special Instrument Requirements *Describe briefly any special or non-standard usage of instrumentation.*

Target Table for Run 2: Spectrograph

Obj ID	Object	α	δ	Epoch	Mag.	Filter	Exp. time	# of exp.	Lunar days	Sky	Seeing	Comment
777	**NGC 7078**	**21:30:10**	**12:10:03**	**2000.0**	**18.6**		**1000**	**5**	**4**			