NOAO Observing Proposal
Date: February 28, 2021

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

A Sample NOAO Telescope Proposal

Abstract of Scientific Justification *(will be made publicly available for accepted proposals)*:
This sample proposal offers tips on how to prepare your telescope proposal for observing on facilities available through NOAO. With the NOAO Proposal Form, you can apply for time on the Gemini North and South Telescopes, the Hobby-Eberly Telescope, the 6.5-m telescope of the MMT Observatory, and the telescopes at the Cerro Tololo Inter-American Observatory and the Kitt Peak National Observatory.

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	No. Nights	Moon	Optimal months	Accept. months
1	CT-4m	DECam	2	grey	Mar - Apr	Feb - Jul
2	AAT	AAOmega + 2dF	3x0.5	dark	Feb - May	Feb - Jul
3	CT-4m	COSMOS	3	grey	Jun - Jul	May - Jul
4	WIYN	HYDRR + STA1	2	grey	Feb - Feb	Feb - Feb
5						
6						

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.

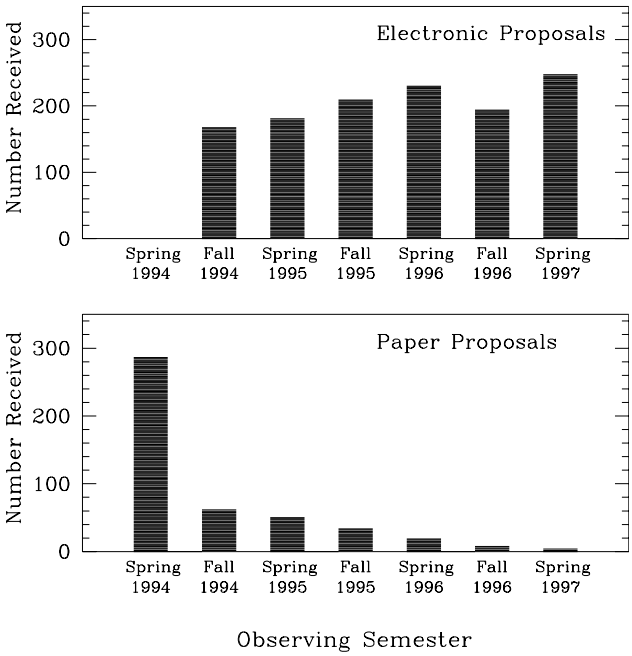

Figure 1: This sample figure shows how quickly electronic proposals for telescope time replaced paper ones.

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. What are the target objects and target datasets, and how were they selected? What calibration data will you analyze? What do you plan to measure, and how?