



National Optical Astronomy Observatory

Cerro Tololo Inter-American Observatory • Kitt Peak National Observatory
NOAO System Science Center • NOAO System Technology Center

16 April 2013

Dr. Luiz Nicolaci de Costa
Director
LINEA

Dear Dr. de Costa

I'm writing this letter to relay our appreciation for the Quick Reduce system you and your team delivered with the Dark Energy Camera (DECam), and the excellent level of support you've provided since its delivery. I have spoken with the Science Data Management group at NOAO, and there is interest in exploring the possibility of using the system more broadly at NOAO for community users of DECam.

With its 570 million pixel focal plane, the DECam is an extremely complex and challenging instrument to use and support. At the Cerro Tololo Inter-American Observatory, we must provide support for not only the users who form part of the Dark Energy Survey (of which your group forms an important part), but also support users who will be using the instrument for the first time without extensive preparation. The massive quantities of data (often half of terabyte per night!) can easily overwhelm even the most prepared astronomers, making it quite difficult to analyze the data quality as the data are taken. For many of our users, decisions must be made in real time based on the data quality.

The Quick Reduce (QR) system has quite impressively filled this need. It has provided a fast yet flexible tool for our users to get immediate feedback about the quality of the data they are obtaining throughout the night. With its default feedback of image size and ellipticity, an astronomer can quickly determine if there are problems with the telescope or camera that are affecting the data, or if the sky conditions are impacting the image quality. Beyond these quick results, the histograms and other statistical analysis tools based on detected stars and galaxies provide the user with critical information that can be used to modify and optimize observing strategies in real time.

The feedback we've received from our users, both those within the Dark Energy Survey collaboration and the visiting astronomers who have used the system, has been quite positive. Our users have been impressed not only with the excellent feedback, but also the reliability of the system. And we have only just begun to explore and take advantage of the flexibility that your team has built into the system.

Given this experience, we are interested in possibly making even further use of this system, not only at the telescope but also in conjunction with our archive systems as we expand our

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user base and improve the data products we can deliver. We hope to build on our current strong collaboration to gain experience with the system and work with you to improve and expand its abilities.

Sincerely,

R. Chris Smith
Director, AURA Observatory in Chile
Former Director, Cerro Tololo Inter-American Observatory

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