

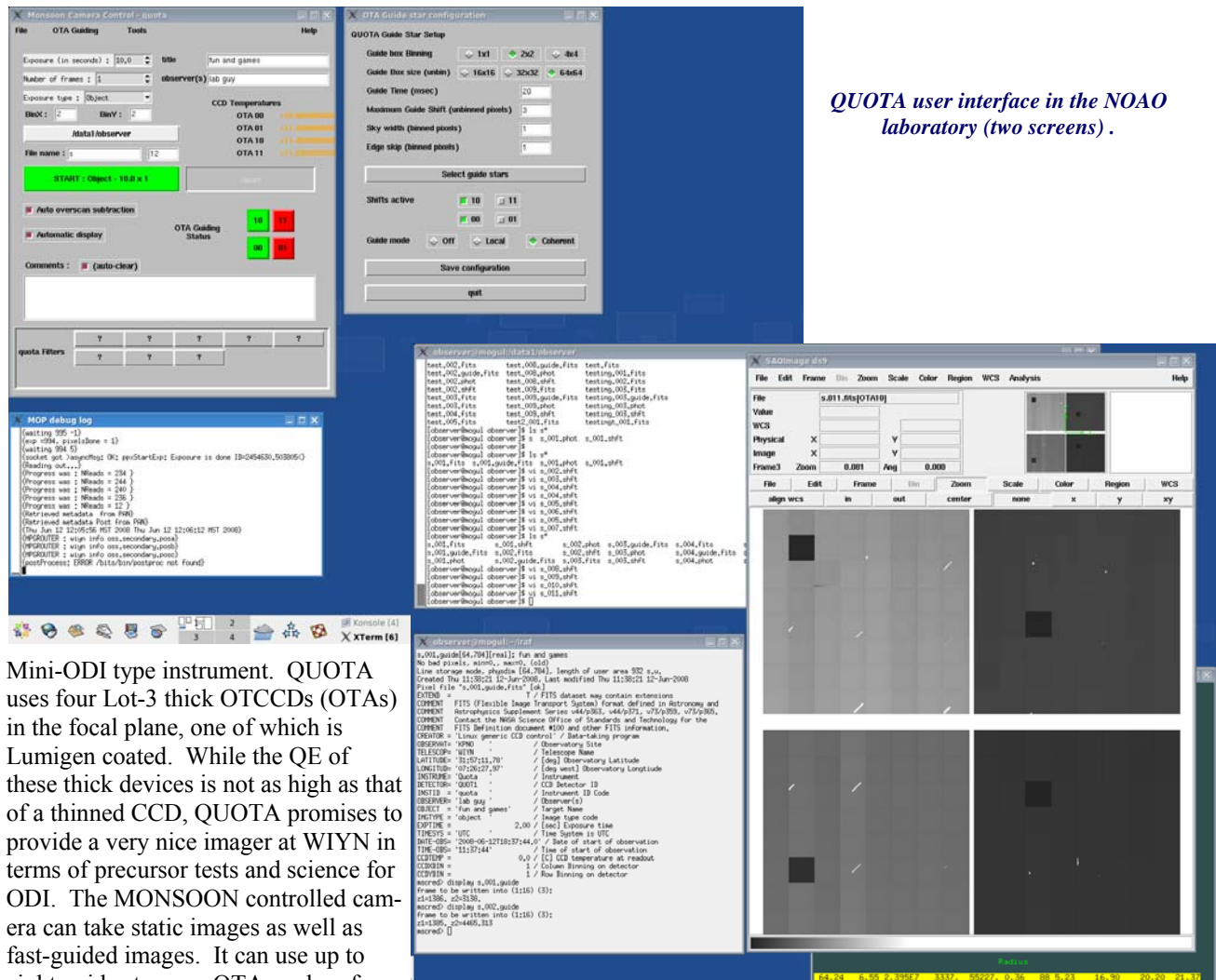
QUOTA Lives!

Steve Howell & George Jacoby

Hey! Remember QUOTA? The instrument is nearing its laboratory completion and will be tested at WIYN in late July. QUOTA is a Quad-OTA camera built as a prototype for the WIYN One-Degree Imager (ODI). The focal plane consists of four approximately 4096 X 4096 orthogonal transfer CCD detectors of the same size and design as those to be used in ODI. To refresh your memory about this new imager, see past editions of this *Newsletter* at <http://www.noao.edu/wiyn/>.

The current version of QUOTA is far beyond what we previously tested at WIYN and is very close to being a

The figure shows the MOP and guide star configuration GUI on the left and a DS9 display of a full QUOTA image on the right. The other open windows are a MOP debug window, and user and IRAF sessions. Note that in this image, the OTAs on the right show round “guide stars” (lab illuminated pinholes) while those on the left are trailed as they have been shifted during the guiding process. The diagonal trail here was caused by a software bug that set x=y at all times – it has since been fixed. The four dark “cells” (one per OTA) are the cells containing the “guide stars.”



QUOTA user interface in the NOAO laboratory (two screens) .

Mini-ODI type instrument. QUOTA uses four Lot-3 thick OTCCDs (OTAs) in the focal plane, one of which is Lumigen coated. While the QE of these thick devices is not as high as that of a thinned CCD, QUOTA promises to provide a very nice imager at WIYN in terms of precursor tests and science for ODI. The MONSOON controlled camera can take static images as well as fast-guided images. It can use up to eight guide stars per OTA, and perform local or coherent guiding. This means that it can collect fast photometry for up to 32 stars at a time.

Active guiding of the individual OTAs can be switched on or off, and the user GUI (MOP) interface allows the user considerable flexibility in the use of the camera. QUOTA can guide at rates up to 30 Hz, depending on the number, location, exposure time, and details of the selected guide star parameters.

The figure shows a recent screen shot from the lab where we are testing all the modes and abilities of QUOTA.

The Lot-3 OTAs are cosmetically very nice and have an apparent read noise of ~6 electrons with a gain of ~1.2 e-/ADU.

We have completed the software and MONSOON tests in the lab and are well prepared for our two T&E runs in late July at WIYN. We wish to thank Dave Sawyer, Nick Buchholz, and Dave Mills for their exceptional work on QUOTA over the past few months, making it possible to go to WIYN and begin observatory testing and engineering.~