

QUOTA and ODI News

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QUOTA. Since January, there have been two campaigns with QUOTA with some success. Observations during the T&E run at the beginning of February were restricted due to snow, so time was spent working on some software issues. The available open-dome time was dedicated to testing a new SDSS g'-band filter, which revealed substantial internal ghosting in this filter, and so was a valuable lesson for the design of large filters for ODI.

The overall progress of QUOTA as a science instrument was slow. We encountered issues like broken bond-wires on the detectors and two vacuum leaks. QUOTA returned to the telescope in April, although at that time we had only one detector available that was meeting science requirements. Some time was used for software testing, but we also obtained science observations. A light curve of EU Cnc, an X-ray selected variable star in the open star cluster M67, was recorded. It is known to be a short periodic, interacting binary consisting of a highly magnetic white dwarf orbiting an M star.

We also obtained a remarkable picture of M51 (see figure above). The 3-color composite image consists of a 50-minute exposure in the U-band, and 40-minute exposures in a newly received SDSS i' band filter, and in a filter that closely resembles a future Y-band filter (Windhorst p filter). The M51 picture summarizes three of ODI highlights: (i) blue sensitivity, demonstrated in the U-band, (ii) potential high red sensitivity in the Y-band, (iii) the remarkable image quality obtainable at WIYN. The combined 50-minute U-band exposure has a delivered image quality of 0.4"!!

While all T&E campaigns with QUOTA demonstrated the potential of this instrument in a very impressive manner, QUOTA will require more work before becoming a useable facility instrument. On the other hand, our work with QUOTA was valuable as a prototype for ODI. The availability of QUOTA for science in the future is a bit



Three-color composite of M51; blue: U-band; green: SDSS i' band, red: Windhorst p-band.

unclear, and we are working on a plan to advance QUOTA without conflicting with the work on ODI.

ODI. The ODI project made substantial progress during the last few months. The ODI team devoted several months this year revisiting the science requirements for ODI and creating a clear flow down of engineering requirements. This exercise helped us to identify loose ends, and will protect the project from changes in scope. The new science requirement document is now under version control by the WIYN Board. If you would like a copy, please ask your local SAC or ODI SWG member.

The foundry run for our Lot 3 OTA CCD devices finished production in March, and so far the detectors seem to be healthy and do produce images on a probe station. This is a very good sign as modifying CCD

designs and redoing lithographic masks bears risks. The next step is to package some devices and test them in the test dewar.

Two major contracts for ODI production were signed. First, we contracted with the Imaging Technology Laboratory (ITL) of the University of Arizona to process (i.e., to thin and connect), package, and mount ODI's OTA-CCDs on the focal plane within the flatness requirement. Secondly, we awarded a contract to SESO (France) to deliver the optics for the ODI corrector. This includes two lenses and the prisms for the atmospheric dispersion compensator. These two contracts mark major milestones toward making ODI a reality.

The ODI critical design review for instrument support package, HEMI (Housing for Elements and Mechanical Interface) was held in June. The panel, consisting of Bruce Bigelow (Panel Chair), Tom O'Brien, and Tim Pickering, concluded that the mechanical design is mature and that we should go ahead and build it! In fact, we have started construction. We thank all of the panelists for their support of the ODI project.~

PERSONNEL NEWS

Sheryl Falgout is now the full-time WIYN/ODI Administrative Coordinator. She will also continue her work with the NOAO PAEO office as managing editor of the *NOAO/NSO Newsletter*. Sheryl edits, designs and does the layout of the *WIYN Newsletter* as well.

Brian Brondel is returning to Indiana University to finish his Ph.D. thesis. He has worked on several projects during his stay in Tucson. His contribution to the ODI project was significant. Brian was part of a team building a reference implementation for the fast guiding functionality for QUOTA and ODI. He played an important role in defining the first software interface between the MON-

SOON CCD controller and the QUOTA fast guiding functionality, the "guide core." Brian also programmed a prototype user interface that will allow the developer, and eventually the observer, to see the guide process. Brian's data reduction skills were utilized to process the data from the QUOTA first light. The WIYN team is very grateful to Brian for his help, and we wish him much success in all his future endeavors.

Lou Nigra, a grad student from UW Madison, visited WIYN to work with the ODI team to help evaluate options for testing the large filters that will be needed for ODI. We thank Lou for his help!

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