As discussed in the NOAO Director’s section, the National Science Foundation (NSF) Astronomical Sciences Division has announced that they will be holding a Senior Review of many of their currently operating facilities around the middle of this calendar year. There is no doubt that consideration of the level of continuing national investment in telescopes on Kitt Peak will be a part of the review. With the Astronomy Division’s stated target of reprogrammed funding to support development of new major initiatives from the Decadal Survey, the review panel will in all likelihood consider the entire range of possibilities for KPNO, from full funding to no further base support in the NOAO budget. The initial impact of any decision will probably be felt no earlier than FY 2007. The practical consequence will be the pace and degree of privatization of the public share of current facilities.

We are certain that KPNO will receive high marks on criteria such as scientific productivity (papers produced and citation rates per observing night awarded), support of technical innovation in university instrument groups, impact on graduate and undergraduate astronomy education, and cost effectiveness. We are preparing to make that case clearly and forcefully.

It is your voice, however, that must ultimately be heard for the continuing value of proposal-driven access to Kitt Peak telescopes. Do you see a successful proposal for Mayall or WIYN telescope time as a useful or even essential component of your research program? Are you anticipating new observing opportunities with NEWFIRM, IRMOS, QUOTA, or the upgraded Hydra+Bench spectrograph? Were you planning on making KPNO data a part of your graduate student’s thesis work or advanced undergraduate training? Do you think that, in principle, wide-field 4-meter telescopes continue to play a vital role in the system of US telescopes for which time can be won by competitive proposal? If your answer is yes to any or all of these questions, we would like to hear from you. A thick appendix of personal expressions about the future value of national time on Kitt Peak telescopes will be a powerful statement to the panel. With thanks, we anticipate your e-mails to rgreen@noao.edu or jannuzi@noao.edu.

“Don’t mess with Kitt Peak—we have aerial protection!”

The observatory served as a striking backdrop for a photo flyby last November of F-16s from the Arizona Air National Guard. We are grateful for their permission to share the image with you.
Conceptual Design Review for the WIYN One-Degree Imager

Richard Green & Patricia Knezek (WIYN)

An expert review panel has given the WIYN One-Degree Imager (ODI) project a “green light” to proceed with preliminary design and further detector development. Dennis Crabtree (NRC-HIA) served as the chairman of the review, which was held in Tucson 6–7 January 2005. He was joined by John Geary (SAO) and Stephen Holland (Lawrence Berkeley Laboratory), who have expertise in CCD and controller development; Tom O’Brien (Ohio State University), who is experienced in the mechanical design of astronomical instrumentation; and Lynn Seppala (Lawrence Livermore National Laboratory), who is the optical designer responsible for the current baseline design of the Large Synoptic Survey Telescope (LSST).

The review panel’s most important conclusion was that “the conceptual designs presented in the review material appear likely to meet the scientific and technical requirements as presented.”

The panel’s view was that the highest risk lay in developing the new CCD architecture for orthogonal transfer arrays (OTAs) to the point of routine production of sufficient devices to meet the required performance. They recognized that the highly productive interaction between the PanSTARRS team plus MIT Lincoln Labs and the WIYN project plus Semi-Conductor Technology Associates and Dalsa was proceeding rapidly with positive outcomes—the first lots of both (complementary) designs produced devices that image.

Their constructive suggestion was that the Preliminary Design Review be scheduled when the project can demonstrate a likely expectation for full production of science-grade devices. The project goal is to hold the review near the end of this calendar year, pending successful outcome of upcoming foundry runs.

Other useful recommendations included early investment in technology leading to large filter production; timely completion of the optical design to initiate purchases of the large elements with long lead times; characterization of the as-built telescope over the full field of view to assure good optical performance; gaining further experience with the CCD version of the Monsoon controller; attending to some specific mechanical design considerations; and, carefully scoping the software efforts required. The report contains a wealth of other technical and staffing recommendations that will be very valuable to the project and to the WIYN Board, to whom the report was delivered.

The success of community projects like this one depends on careful and constructive reviews. The WIYN Consortium is very grateful to this panel for their time and their thoughts, which will lead to real improvements in the design and execution of this exciting instrument.

An image from the STA/Dalsa device (left) and the MIT Lincoln device (right). All 64 cells on the STA device work, but one of them is not turned on in this image due to limited control of the clock voltages through the logic circuit. The MIT device has four dead cells, although another OTA from the MIT run has all 64 cells operable at once.