

ensuring that the scientific needs of the astronomers of UC are being met by the Observatory. During the review period, the Board of Directors of Keck implemented a change in the mode of operation of the Observatory. Since its inception, the SSC had full control of the instrumentation budget, while the Observatory had full control of development programs that took place there. Development programs included such things as upgrades to computers, upgrades to parts of the telescope, and related items. The Board decided the development programs were as important to the scientists in California as the instruments were. Furthermore, since funds were very tight, in some cases it could be more scientifically valuable to use instrument money for development rather than to build new instruments. The Board charged the SSC to work jointly with the Keck Observatory on a combined instrumentation-development budget to maximize the effectiveness of the overall Observatory budget. This was a major change and required a new way of doing business, involving sums of money of \$5 million to \$10 million per year. Dr. Bolte, with his co-chair from Caltech, Dr. Charles Steidel, put in a seemingly endless amount of effort to make the new way of doing business work. At times they worked more than half of all their time on this project for weeks on end, traveling to Hawaii to work there directly with the Director and his staff. This transition was difficult, as it took some things away from the complete control of the scientists, the instrumentation funds themselves, but put new things under the control of the scientists, the development money. But now everything was jointly shared, and new mechanisms had to be developed so that this could be done efficiently and effectively.

Dr. Bolte's skill and effectiveness, his statesman-like way of approaching challenging problems, had the result of making this transition work extraordinarily well. This was noted by the Board of Directors, as well as the Director of the Observatory. Letter writer G, who had an opportunity to observe this process in action, writes, "During the transition from the 'old' to the 'new' SSC, and especially during this strategic planning process, Mike emerged as a leader of great patience, insight, and breadth. He showed himself to be in my experience the best strategic thinker in the entire UC-Caltech community. Readily able to take the broad view of what is best for the long-term future of the Keck Observatory and the maintenance of its world leadership in astronomic research." Contrary to the expectations of some, who thought this new way of doing business would lead to significant problems, it has turned out to be a complete success, and Dr. Bolte deserves major credit for this.

A second major service that Dr. Bolte performed during the review period, at times even more time-consuming than the SSC chairmanship, was his co-chairing of the Steering and later Science Advisory Committee for the 30-meter telescope project (TMT). The TMT project began as a joint Caltech-UC project, and for the first two years of its existence, Caltech and UC astronomers worked jointly on a steering committee that was co-chaired for UC by Dr. Bolte. Getting what was largely a new group of scientists to work together on a new telescope and to work efficiently was a major challenge, but Dr. Bolte performed superbly. The group worked extremely well together, producing a final report that was highly comprehensive and very impressive in its discussion of how to go about building a 30-meter telescope. As a co-chair, Dr. Bolte had to do a great deal of work in organizing the efforts of everyone on the committee, arranging meetings, being sure that draft manuscripts were collected, being sure that the manuscripts were properly edited, and making sure that the final