

## Preface

More than a dozen years have passed since the launch of the Hubble Space Telescope (*HST*). The telescope, like a fine wine, continues to improve with age. The installation of the Advanced Camera for Surveys (ACS), with its factor of ten improvement in discovery efficiency, and the NICMOS Cooling System (NCS), which resuscitated *HST*'s IR capabilities, means that the telescope is currently more capable than it has ever been.

With new instruments come new challenges: charge-transfer efficiency, point-spread functions, pedestal effects, scattered light, line-spread functions, cosmic-rays, etc. The astronomical knowledge that will appear in tomorrow's textbooks hinges on understanding our sometimes imperfect sensory apparatus. Pushing the forefront of science often means pushing the instruments to their limits, where many calibration "gotchas" may be hiding.

The fourth *HST* Calibration Workshop was held October 17–18, 2002 at the Space Telescope Science Institute to help address these new challenges. The workshop featured reports from the commissioning of ACS and the re-commissioning of NICMOS. New calibrations and advances in the understanding of STIS, WFPC2, FOS, and the FGS were also presented, as well as previews of calibration plans for COS and WFC3 which are scheduled to be launched in approximately two years. The workshop was designed to foster the sharing of information and techniques between observers, instrument developers, and instrument support teams. Approximately 120 astronomers attended the workshop which included 32 talks, 40 posters, and time for demos and splinter groups on various topics.

An electronic copy of these proceedings and the Abstract Booklet are available at the 2002 Calibration Workshop Web site.<sup>1</sup> In a few cases, a talk or poster presented at the workshop is not in these proceedings. We also remind our readers that as our understanding of the instruments continues to improve, and as the instruments themselves evolve, some of the information in these proceedings will be superseded. For the latest calibration information the reader should check the instrument Web sites.<sup>2</sup>

The workshop represents a great deal of work by a number of dedicated and talented individuals. Foremost amongst these were Dixie Shipley, the primary contact and logistical coordinator for the meeting, and Matt Lallo, the technical support coordinator. We would also like to thank Robin Auer, Stefano Casertano, Matt Czpanskiy, Helmut Jenkner, Steve Hulbert, Calvin Tullos, Ed Weibe, and Mike Wiggs for a wide range of items ranging from WWW support to web-casting to general consulting. In addition, we thank Harry Payne, Susan Rose (lead), and Sharon Toolan for an excellent job supporting the production of this book, as well as all the people that gave talks, presented posters, and wrote up the contributions that made these proceedings possible.

We would like to dedicate these proceedings to the Instrument Definition Teams that built the incredible instruments aboard the Hubble Space Telescope. We also wish to thank NASA Headquarters, the *HST* Project at the Goddard Space Flight Center, and the Shuttle Program support staff at Johnson Space Flight Center and Kennedy Space Center for their outstanding support of *HST* servicing activities. Finally, we would like to express our gratitude to the astronaut crew of Servicing Mission 3b for their commitment to the Hubble mission, recognizing the risks they take in helping us explore the universe. The tragic loss of the space shuttle Columbia crew during mission STS-107 remind us of the tremendous debt that the science community owes these brave individuals.

The Editors

Santiago Arribas, Anton Koekemoer, and Brad Whitmore

January 2003

---

<sup>1</sup>[http://www.stsci.edu/stsci/hst/HST\\_overview/documents/calworkshop/workshop2002](http://www.stsci.edu/stsci/hst/HST_overview/documents/calworkshop/workshop2002)

<sup>2</sup>[http://www.stsci.edu/hst/HST\\_overview/instruments](http://www.stsci.edu/hst/HST_overview/instruments)