

Contents

Preface	xi
Conference participants	xiii
Part 1. STIS	
STIS Overview; Capabilities and Basic Operations	3
<i>S. A. Baum</i>	
The On-Orbit Performance of the STIS Detectors	8
<i>R. A. Kimble</i>	
The On-Orbit Optical Performance of STIS	18
<i>C. W. Bowers</i>	
The Flat Fielding and Achievable Signal-to-Noise of the MAMA Detectors	29
<i>M. E. Kaiser</i>	
STIS Target Acquisition	39
<i>S. Kraemer, R. Downes, R. Katsanis, M. Crenshaw, M. McGrath, and R. Robinson</i>	
The STIS Calibration Pipeline	47
<i>S. Hulbert and P. Hodge</i>	
The Cycle 7 Calibration Plan for STIS	52
<i>P. Goudfrooij, S. A. Baum, H. C. Ferguson, J. J. E. Hayes, S. J. Hulbert, C. Leitherer, M. A. McGrath, K. C. Sahu, and R. A. Shaw</i>	
STIS Capabilities: Current and Future Implementation	60
<i>B. Woodgate</i>	
STIS CCD Hot Pixel Annealing	65
<i>T. Beck and W. Landsman</i>	
STIS Observations of the Nuclear Ionized Gas in the Elliptical Galaxy M84	70
<i>G. A. Bower, R. F. Green, and D. Lindler</i>	
STIS First-Order Low-Resolution Mode Point-Source Sensitivity Curves	77
<i>N. Collins and R. Bohlin</i>	
Simulations of the STIS CCD Clear Imaging Mode PSF	84
<i>R. H. Cornett, A. Gruszczak, C. Ftaclas, S. R. Heap, and B. E. Woodgate</i>	
A Test of the STIS CCD Flatfielding Accuracy on Small Scales	90
<i>H. Ferguson</i>	
The STIS Parallel Survey: Introduction and First Results.	94
<i>J. Gardner, R. Hill, S. Baum, N. Collins, H. Ferguson, R. Fosbury, R. Gilliland, R. Green, T. Gull, S. Heap, D. Lindler, E. Malumuth, A. Micol, N. Pirzkal, J. Sandoval, E. Tolstoy, J. Walsh, and B. Woodgate</i>	
Fringe Correction for STIS Near-IR Long-Slit Spectra using Contemporaneous Tungsten Flat Fields	100
<i>P. Goudfrooij, S. Baum, and J. Walsh</i>	
Thermal Motion of the STIS Optical Bench	106
<i>T. R. Gull, M. J. Taylor, R. Shaw, R. Robinson, and R. S. Hill</i>	

Correction for the STIS Echelle Blaze Function	114
<i>S. R. Heap and T. M. Brown</i>	
Cosmic Ray and Hot Pixel Removal from STIS CCD Images	120
<i>R. S. Hill, W. B. Landsman, D. Lindler, and R. Shaw</i>	
Laboratory Test Data on the Stability of the STIS MAMAs	126
<i>C. L. Joseph</i>	
Scattered Light in the STIS Echelle Modes	132
<i>W. Landsman and C. Bowers</i>	
Analysis of STIS Time-Tag Data	138
<i>D. J. Lindler, T. R. Gull, S. B. Kraemer, and S. J. Hulbert</i>	
Determination of Geometric Distortion in STIS Images	144
<i>E. M. Malumuth and C. W. Bowers</i>	
Fringe Science: Creating a STIS CCD Fringe Flat Field	150
<i>P. Plait and R. Bohlin</i>	
Extraction of Point Source Spectra from STIS Long Slit Data	156
<i>J. R. Walsh</i>	
Part 2. NICMOS	
NICMOS Status and Plans	163
<i>R. I. Thompson</i>	
Characteristics of the NICMOS Detectors	171
<i>C. J. Skinner, L. E. Bergeron, and D. Daou</i>	
The Photometric Performance of NICMOS	182
<i>L. Colina and M. J. Rieke</i>	
NICMOS PSF Variations and Tiny Tim Simulations	192
<i>J. Krist and R. Hook</i>	
Narrow-Band Emission Line Imaging with NICMOS: Lessons Learned from the Data Reduction of OMC-1	202
<i>S. Stolovy</i>	
The NICMOS Grism Mode	207
<i>W. Freudling</i>	
The Polarimetric Capabilities of NICMOS	217
<i>D. C. Hines, G. D. Schmidt, and D. Lyer</i>	
The NICMOS CALNICA and CALNICB Pipelines	223
<i>H. Bushouse</i>	
Improving on the NICMOS Calibration Pipeline Products	233
<i>C. J. Skinner</i>	
Understanding the NICMOS Darks	240
<i>L. E. Bergeron and C. J. Skinner</i>	

NICMOS Data Processing Software in STSDAS	245
<i>I. Busko</i>	
NICMOS Sensitivity to Cosmic Rays	250
<i>D. Calzetti</i>	
The NICMOS Data Handbook	255
<i>D. Calzetti and H. Bushouse</i>	
NICMOS Cycle7 Calibration Plan and Beyond	259
<i>L. Colina and A. Storrs</i>	
Persistence in NICMOS: Results from On-Orbit data	263
<i>D. Daou and C. Skinner</i>	
NICMOS Pointed Thermal Background: Results from On-Orbit data	267
<i>D. Daou, C. Skinner and D. Axon</i>	
Subtraction of Well-Exposed NICMOS 2 PSFs	271
<i>J. Krist</i>	
NICMOS File Formats	277
<i>D. Lytle, E. Stobie, A. Ferro, and I. Barg</i>	
NICRED: Reduction of NICMOS MULTIACCUM Data with IRAF	281
<i>B. A. McLeod</i>	
NICMOS Data Quality Control and Paper Products	287
<i>C. Ritchie, H. Bushouse, L. Colina, D. Calzetti, C. Skinner, and A. Storrs</i>	
Software Tools for NICMOS	297
<i>E. Stobie, D. Lytle, A. Ferro, and I. Barg</i>	
Making Maps and Mosaics	303
<i>A. Storrs</i>	
Long-Term and Short-Term Variations of NICMOS Foci	308
<i>A. A. Suchkov, L. Bergeron, and G. G. Galas</i>	
Part 3. WFPC2	
WFPC2 Status and Overview	317
<i>B. C. Whitmore</i>	
WFPC2 Photometric Calibration	327
<i>S. Casertano</i>	
WFPC2 Calibration for Emission Line Images	338
<i>G. Dudziak and J. R. Walsh</i>	
HST, uvby Photometry and System Calibration	343
<i>P. Linde, A. Ardeberg, T. Bensby, and R. Snel</i>	
Associations of WFPC2 Exposures	349
<i>A. Micol, P. Bristow, and B. Pirenne</i>	
Drizzling Dithered WFPC2 Images—A Demonstration	355
<i>M. Mutchler and A. Fruchter</i>	

Calibrating the WFPC2 Astrometry for MDS	361
<i>K. U. Ratnatunga, E. J. Ostrander, and R. E. Griffiths</i>	
HST Observations of the Gravitational Lens Systems HE 1104–1805 and J03.13 . . .	368
<i>M. Remy, J.-F. Claeskens, and J. Surdej</i>	
WFPC2 Photometry from Subtraction of TinyTim PSFs	374
<i>M. Remy, J. Surdej, S. Baggett, and M. Wiggs</i>	
Aperture Corrections for WFPC2 Stellar Photometry	378
<i>A. Suchkov and S. Casertano</i>	
WFPC2 Photometry from Subtraction of Observed PSFs	386
<i>J. Surdej, S. Baggett, M. Remy, and M. Wiggs</i>	
The WFPC2 PSF Library	392
<i>M. Wiggs, S. Baggett, J. Surdej, and C. Tullios</i>	
The WFPC2 Clearinghouse	398
<i>M. S. Wiggs, B. Whitmore, and I. Heyer</i>	
Part 4. Other Instruments	
FOC Status and Overview	405
<i>R. Jedrzejewski</i>	
F/48 Slit Spectroscopy	413
<i>R. Jedrzejewski and M. Voit</i>	
The Closeout State of the Faint Object Spectrograph	420
<i>C. D. Keyes</i>	
Average Inverse Sensitivity Recalibration of Pre-COSTAR Faint Object Spectrograph Data and Comparison with International Ultraviolet Explorer Data	430
<i>A. Koratkar and I. Evans</i>	
Estimating Scattered Light in the FOS	440
<i>J. J. E. Hayes and C. D. Keyes</i>	
The HST/FOS Wavelength Scale	443
<i>R. P. van der Marel</i>	
Astrometry with the FGS in POSITION Mode and TRANSFER Mode: Observing Strategies, Pipeline Processing and Data Reduction	449
<i>E. Nelan, O. Lupie, and L. Nagel</i>	
FGS1R: Potentially HST’s Astrometry Science Workhorse	463
<i>O. Lupie, E. Nelan, and L. Nagel</i>	
Maintaining the FGS3 Optical Field Angle Distortion Calibration	472
<i>B. McArthur, G. F. Benedict, W. H. Jefferys, and E. Nelan</i>	
Stability of FGS Photometry	481
<i>R. Kuschnig, W. W. Weiss, and K. Zwintz</i>	
The Goddard High Resolution Spectrograph	486
<i>D. R. Soderblom and L. E. Sherbert</i>	

GHRS Calibration Changes since February 1997	497
<i>L. E. Sherbert</i>	
Part 5. General	
The New HST FITS Format, the FITS Kernel and OpenIRAF	505
<i>P. Greenfield</i>	
New Calibration Systems Projects at STScI	513
<i>S. Lubow</i>	
A Package for the Reduction of Dithered Undersampled Images	518
<i>A. S. Fruchter, R. N. Hook, I. C. Busko, and M. Mutchler</i>	
Deconvolution of Substepped 1-D and 2-D HST Data	529
<i>N. Wu and J. Caldwell</i>	
Calibrating Echelle Spectra using Instrument Models	533
<i>M. Rosa and P. Ballester</i>	
Author index	537
Index	539