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## SeaWiFS Postlaunch Technical Report Series

*Stanford B. Hooker and Elaine R. Firestone, Editors*

### Volume 18, SeaWiFS Postlaunch Technical Report Series Cumulative Index: Volumes 1–17

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Greenbelt, Maryland 20771

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February 2003

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## SeaWiFS Postlaunch Technical Report Series

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## ABSTRACT

The Sea-viewing Wide Field-of-view Sensor (SeaWiFS) is the follow-on ocean color instrument to the Coastal Zone Color Scanner (CZCS), which ceased operations in 1986, after an eight-year mission. SeaWiFS was launched on 1 August 1997, onboard the OrbView-2 satellite, built by Orbital Sciences Corporation (OSC). The SeaWiFS Project at the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC), undertook the responsibility of documenting all aspects of this mission, which is critical to the ocean color and marine science communities. The start of this documentation was titled the *SeaWiFS Technical Report Series*, which ended after 43 volumes were published. A follow-on series was started, titled the *SeaWiFS Postlaunch Technical Report Series*. This particular volume of the so-called *Postlaunch Series* serves as a reference, or guidebook, to the previous 17 volumes and consists of 4 sections including an errata, an index to key words and phrases, a list of acronyms used, and a list of all references cited. The editors will publish a cumulative index of this type after every five volumes.

## 1. INTRODUCTION

This is the second in a series of indexes, published as a separate volume in the *SeaWiFS Postlaunch Technical Report Series*, and includes information found in the previous 17 volumes of the series. The *SeaWiFS Postlaunch Technical Report Series* has been written under National Aeronautics and Space Administration (NASA) Technical Memorandum (TM) numbers 1998–206892, 1999–206892, and so on, up to the present numbering of 2003–206892, with the year part of the TM number changing with each calendar year of its existence. The volume numbers, authors, and titles of the volumes covered in this index are the following:

- Vol. 1: Johnson, B.C., J.B. Fowler, and C.L. Cromer, *The SeaWiFS Transfer Radiometer (SXR)*.
- Vol. 2: Aiken, J., D.G. Cummings, S.W. Gibb, N.W. Rees, R. Woodd-Walker, E.M.S. Woodward, J. Woolfenden, S.B. Hooker, J-F. Berthon, C.D. Dempsey, D.J. Suggett, P. Wood, C. Donlon, N. González-Benítez, I. Huskin, M. Quevedo, R. Barciela-Fernandez, C. de Vargas, and C. McKee, *AMT-5 Cruise Report*.
- Vol. 3: Hooker, S.B., G. Zibordi, G. Lazin, and S. McLean, *The SeaBOARR-98 Field Campaign*.
- Vol. 4: Johnson, B.C., E.A. Early, R.E. Eplee, Jr., R.A. Barnes, and R.T. Caffrey, *The 1997 Pre-launch Radiometric Calibration of SeaWiFS*.
- Vol. 5: Barnes, R.A., R.E. Eplee, Jr., S.F. Biggar, K.J. Thome, E.F. Zalewski, P.N. Slater, and A.W. Holmes, *The SeaWiFS Solar Radiation-Based Calibration and the Transfer-to-Orbit Experiment*.
- Vol. 6: Firestone, E.R., and S.B. Hooker, *SeaWiFS Postlaunch Technical Report Series Cumulative Index: Volumes 1–5*.

- Vol. 7: Johnson, B.C., H.W. Yoon, S.S. Bruce, P-S. Shaw, A. Thompson, S.B. Hooker, R.E. Eplee, Jr., R.A. Barnes, S. Maritorena, and J.L. Mueller, *The Fifth SeaWiFS Intercalibration Round-Robin Experiment (SIRREX-5), July 1996*.
- Vol. 8: Hooker, S.B., and G. Lazin, *The SeaBOARR-99 Field Campaign*.
- Vol. 9: McClain, C.R., E.J. Ainsworth, R.A. Barnes, R.E. Eplee, Jr., F.S. Patt, W.D. Robinson, M. Wang, and S.W. Bailey, *SeaWiFS Postlaunch Calibration and Validation Analyses, Part 1*.
- Vol. 10: McClain, C.R., R.A. Barnes, R.E. Eplee, Jr., B.A. Franz, N.C. Hsu, F.S. Patt, C.M. Pietras, W.D. Robinson, B.D. Schieber, G.M. Schmidt, M. Wang, S.W. Bailey, and P.J. Wendell, *SeaWiFS Postlaunch Calibration and Validation Analyses, Part 2*.
- Vol. 11: O'Reilly, J.E., and 24 Coauthors, *SeaWiFS Post-launch Calibration and Validation Analyses, Part 3*.
- Vol. 12: Firestone, E.R., and S.B. Hooker, *SeaWiFS Postlaunch Technical Report Series Cumulative Index: Volumes 1–11*.
- Vol. 13: Hooker, S.B., G. Zibordi, J-F. Berthon, S.W. Bailey, and C.M. Pietras, *The SeaWiFS Photometer Revision for Incident Surface Measurement (SeaPRISM) Field Commissioning*.
- Vol. 14: Hooker, S.B., H. Claustre, J. Ras, L. Van Heukelom, J-F. Berthon, C. Targa, D. van der Linde, R. Barlow, and H. Sessions, *The First SeaWiFS HPLC Analysis Round-Robin Experiment (Sea-HARRE-1)*.
- Vol. 15: Hooker, S.B., G. Zibordi, J-F. Berthon, D. D'Alimonte, S. Maritorena, S. McLean, and J. Sildam, *Results of the Second SeaWiFS Data Analysis Round Robin, March 2000 (DARR-00)*.

Vol. 16: Patt, F.S., *Navigation Algorithms for the SeaWiFS Mission*.

Vol. 17: Hooker, S.B., S. McLean, J. Sherman, M. Small, G. Lazin, G. Zibordi, and J.W. Brown, *The Seventh SeaWiFS Intercalibration Round-Robin Experiment (SIRREX-7), March 1999.*

This volume serves as a reference, or guidebook, to the preceding volumes of the so-called *Postlaunch Series*. It consists of three main sections: a cumulative index to key words and phrases, a glossary of acronyms, and a bibliography of all references cited in the series. An errata section has been added to address issues and needed corrections which have come to the editors' attention since the volumes were first published.

The nomenclature of the index section is a familiar one, in the sense that it is a sequence of alphabetical entries, but it uses a unique format because multiple volumes are involved. Unless indicated otherwise, the index entries refer to some aspect of the SeaWiFS Project or instrument. An index entry is composed of a keyword or phrase followed by an entry field that directs the reader to the possible locations where a discussion of the keyword can be found. The entry field is normally made up of a volume identifier shown in bold face, followed by a page identifier, which is always enclosed in parentheses:

keyword, **volume**(pages).

If an entry is the subject of an entire volume, the volume field is shown in slanted type without a page field:

keyword, Vol. #.

An entry can also be the subject of a complete chapter. In this instance, both the volume number and chapter number appear without a page field:

keyword, **volume**(ch. #).

Figures or tables that provide particularly important summary information are also indicated as separate entries in the page field—even if they fall within an already specified page range. In this case, the figure or table number is given with the page number on which it appears:

keyword, **volume**(Fig. # p. #).

or

keyword, **volume**(Table # p. #).

Furthermore, because of the recursive nature of various topics, an index subentry may be repeated at the bottom of a main heading with the “*see also*” nomenclature. This directs the reader to a main entry elsewhere in the index for a more in-depth treatment of the topic.

## 2. ERRATA

Since the issuance of previous volumes, a number of the references cited have changed their publication status, e.g., they have gone from “submitted” to “accepted,” or “in press” to printed matter. In other instances, some part (or parts) of the citation, e.g., the title or year, has changed. In still others, the scope of a publication might have changed to the extent where it was more appropriate to publish it in a different venue. Listed below are the references in question as they were cited in one or more of the first 17 volumes in the series, along with how they now appear in the references section of *this* volume.

### *Original Citation*

Barlow, R.G., D.G. Cummings, and S.W. Gibb, 1998: Improved resolution of mono- and divinyl chlorophylls *a* and *b* and zeaxanthin and lutein in phytoplankton extracts using reverse phase C-8 HPLC. *Mar. Ecol. Prog. Ser.*, **161**, 303–307.

### *Revised Citation*

Barlow, R.G., D.G. Cummings, and S.W. Gibb, 1997: Improved resolution of mono- and divinyl chlorophylls *a* and *b* and zeaxanthin and lutein in phytoplankton extracts using reverse phase C-8 HPLC. *Mar. Ecol. Prog. Ser.*, **161**, 303–307.

### *Original Citation*

Holben, B.N., T.F. Eck, I. Slutsker, D. Tanré, J.P. Buis, A. Setzer, E. Vermote, J.A. Reagan, Y.I. Kaufman, T. Nakajima, F. Lavenu, I. Jankowiak, and A. Smirnov, 1998: AERONET—A federal instrument network and data archive for aerosol characterization. *Remote Sens. Environ.*, **66**, 1–16.

### *Revised Citation*

Holben, B.N., T.F. Eck, I. Slutsker, D. Tanré, J.P. Buis, A. Setzer, E. Vermote, J.A. Reagan, Y.I. Kaufman, T. Nakajima, F. Lavenu, I. Jankowiak, and A. Smirnov, 1998: AERONET—A federated instrument network and data archive for aerosol characterization. *Remote Sens. Environ.*, **66**, 1–16.

### *Original Citation*

Hooker, S.B., G. Lazin, G. Zibordi, and S. McLean, 2000: An evaluation of above- and in-water methods for determining water-leaving radiances. *J. Atmos. Ocean. Technol.*, (submitted).

### *Revised Citation*

Hooker, S.B., G. Lazin, G. Zibordi, and S. McLean, 2002: An evaluation of above- and in-water methods for determining water-leaving radiances. *J. Atmos. Ocean. Technol.*, **19**, 486–515.

*Original Citation*

Karsten, F., 1966: A new table and approximate formula for relative optical air mass. *Arch. Meteorol. Geophys. Bioklimatol. Ser. B*, **14**, 206–223.

*Revised Citation*

Kasten, F., 1966: A new table and approximate formula for relative optical air mass. *Arch. Meteorol. Geophys. Bioklimatol. Ser. B*, **14**, 206–223.

*Original Citation*

Subramaniam, A., R.R. Hood, C.W. Brown, E.J. Carpenter, and D.G. Capone, 2001: Detecting *Trichodesmium* blooms in SeaWiFS imagery. *Deep-Sea Res.*, (in press).

*Revised Citation*

Subramaniam, A., R.R. Hood, C.W. Brown, E.J. Carpenter, and D.G. Capone, 2002: Detecting *Trichodesmium* blooms in SeaWiFS imagery. *Deep-Sea Res.*, **49**, 107–121.

*Original Citation*

Zibordi, G., J-F. Berthon, J.P. Doyle, S. Grossi, D.W. van der Linde, C. Targa, L. Alberotanza, and P. Cova, 2000: Coastal Atmosphere and Sea Time Series (CoASTS): A long-term field project for satellite color data validation in the North Adriatic Sea. *J. Geophys. Res.*, (submitted).

and

Zibordi, G., J-F. Berthon, J.P. Doyle, S. Grossi, D. van der Linde, C. Targa and L. Alberotanza, 2001: Coastal Atmosphere and Sea Time Series (CoASTS): A tower based long-term measurement project supporting bio-optical modeling and ocean color cal/val in the North Adriatic Sea. *J. Atmos. Ocean. Technol.*, (submitted).

*Revised Citation*

Zibordi, G., J-F. Berthon, J.P. Doyle, S. Grossi, D. van der Linde, C. Targa, and L. Alberotanza 2002: Coastal Atmosphere and Sea Time Series (CoASTS), Part 1: A Tower-Based Long-Term Measurement Program. *NASA Tech. Memo. 2002-206892*, Vol. 19, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 29 pp.

## CUMULATIVE INDEX

Unless otherwise indicated, the index entries that follow refer to some aspect of the SeaWiFS instrument or Project.

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## GLOSSARY

**6S** Not an acronym, but an atmospheric photochemical and radiative transfer model.

## — A —

AAOT	<i>Acqua Alta</i> Oceanographic Tower
AC	Alternating Current
ACS	Average Calibration Slope or Attitude Control System (depending on usage).
A/D	Analog-to-Digital
ADCP	Acoustic Doppler Current Profiler
AERONET	Aerosol Robotic Network
AI	Absorbing Aerosol Index
AI9901	Atlantic–Indian Ocean Cruise, 1999
ALOHA	A Long-term Oligotrophic Habitat Assessment
AMT	Atlantic Meridional Transect
AMT-1	The First AMT Cruise
AMT-2	The Second AMT Cruise
AMT-3	The Third AMT Cruise
AMT-5	The Fifth AMT Cruise
AMT-8	The Eighth AMT Cruise
AOP	Apparent Optical Property
AOT	Aerosol Optical Thickness
ASAP	Artificial Satellite Analysis Program
ASCII	American Standard Code for Information Interchange
ASD	Analytical Spectral Devices
ASTER	Advanced Spaceborne Thermal Emission and Reflection Radiometer
ASTM	American Society for Testing and Materials
ATA	Ambient Temperature Plate Assembly
ATSR	Along-Track Scanning Radiometer
AU	Astronomical Unit
AVHRR	Advanced Very High Resolution Radiometer

## — B —

BAS	British Antarctic Survey
BATS	Bermuda Atlantic Time-series Study
BBOP	Bermuda BioOptics Project
BCD	Binary Coded Decimal
Ber95	Bering Sea Cruise, 1995
Ber96	Bering Sea Cruise, 1996
BNC	Bayonet Nut Connector
BNL	Brookhaven National Laboratory
BOPSII	Bio-Optical Profiling System II (second generation)
BPA	Back Plate Assembly
BRDF	Bidirectional Reflectance Distribution Function
BSI	Biospherical Instruments, Inc.
BSST	Bulk Sea Surface Temperature
BTBM	Bermuda Test Bed Mooring

## — C —

CalCOFI	California Cooperative Fisheries Institute
CANIGO	Canary Islands, Azores, Gibraltar Observations
CARIACO	Carbon Retention in a Colored Ocean
CB-MAB	Chesapeake Bay–Middle Atlantic Bight
CC	Cloud Cover
CCAR	Colorado Center for Astrodynamics Research
CCD	Charge-Coupled Device
CCMS	Centre for Coastal and Marine Studies
CCN	Cloud Condensation Nuclei

CCPO	Center for Coastal Physical Oceanography
C/CSC	NOAA Coastal Services Center, Charleston, South Carolina
CDOM	Colored Dissolved Organic Matter
CEC	Commission of the European Communities
CERT	Calibration Evaluation and Radiometric Testing
C-FALLS	Combined (software package for logging) Sea-FALLS data.
CHN	Carbon-Hydrogen-Nitrogen
CHORS	Center for Hydro-Optics and Remote Sensing
C-mount	Not an acronym, but a mounting system for camera lenses.
CNR	<i>Consiglio Nazionale delle Ricerche</i> (the Italian National Research Council)
CNRS	<i>Centre National de la Recherche Scientifique</i> (the French National Institute of Scientific Research)
COARE	Coupled Ocean Atmosphere Response Experiment
CoASTS	Coastal Atmosphere and Sea Time Series
CoBOP	Coastal Benthic Optical Properties (Bahamas)
COLORS	Coastal Region Long-Term Measurements for Col-our Remote Sensing Development and Validation
C-OPS	Combined (software package for logging) Sea-OPS data.
COSMIC	Computer Software Management and Information Center
COTS	Commercial Off-The-Shelf
CSC	Coastal Service Center
CSH	UNIX “C-shell” (script programming utility)
CT	Cylindrical Tube or Conductivity and Temperature (depending on usage).
CTD	Conductivity, Temperature, and Depth
CV	Coefficient of Variation
CVE	Calibration and Validation Element
CVT	Calibration and Validation Team
CZCS	Coastal Zone Color Scanner

## — D —

DAAC	Distributed Active Archive Center
DAD	Diode Array Detector
DalBOSS	Dalhousie Buoyant Optical Surface Sensor
DalSAS	Dalhousie SeaWiFS Aircraft Simulator
DARR	Data Analysis Round-Robin
DARR-94	The first DARR (1994)
DARR-00	The Second DARR (March 2000)
DAS	Data Acquisition Sequence
DATA	Not an acronym, but a designator for the Satlantic, Inc., series of power and telemetry units.
DATA-100	(Satlantic) Data (acquisition) Series 100 (unit)
dc	Direct Current
DC	Direct Current
DCC	Dark Current Correction
DCM	Deep Chlorophyll Maximum or Depth of the Chlorophyll Maximum (depending on usage).
DCP	Data Collection Platform
DIO	Digital Input-Output
DIR	Not an acronym, but a designator for the Satlantic, Inc., series of directional units.
DMA	Dimethylamine

DMM	Digital Multimeter
DMS	Dimethylsulfide
DMSP	Dimethylsulphoniopropionate
DMSPd	Dissolved DMSP
DMSPp	DMSP within phytoplankton cells
DNA	Deoxyribonucleic Acid
DO	Deep Ocean
DOC	Dissolved Organic Carbon
DPA	Detector Plate Assembly
DSS	Digital Sun Sensor
DU	Dobson Unit (of total ozone)
DUT	Device Under Test
DVM	Digital Voltmeter
DYF	DYFAMED
DYFAMED	<i>Dynamique des Flux en Méditerranée</i> (Dynamics of fluxes in the Mediterranean)

- E -

E	East
ECEF	Earth-Centered Earth-Fixed
ECI	Earth-Centered Inertial
EcoHAB	Ecology of Harmful Algal Blooms
ECR	Earth-Centered Rotating
EDTA	Ethylenediaminetetraacetic Acid
EEZ	Exclusive Economic Zone
e-mail	Electronic Mail
EOF	End-of-File
EOS	Earth Observing System
EP	Entrance Pupil
EqPac	Equatorial Pacific
ERS-2	The Second Earth Resources Satellite
ET	Eutrophic
EU	European Union
EUC	Equatorial Under Current

- F -

FAFOV	Full Angle Field of View
FARCAL	Facility for Advanced Radiometric Calibrations
FASCAL	Facility for Automated Spectroradiometric Calibrations
FEL	Not an acronym, but a lamp designator.
FET	Field-Effect Transistor
FF	Free-Fall
FFT	Fast Fourier Transform
FIGD-IC	Flow Injection Gas-Diffusion Coupled to Ion Chromatography
FL-Cuba	Florida-Cuba (cruise)
F-mount	Not an acronym, but a mounting system for camera lenses.
FORTRAN	Formula Translation (computer language)
FOV	Field of View
FRRF	Fast Repetition Rate Fluorometer
FS	Field Stop
FWHM	Full-Width at Half-Maximum

- G -

GAC	Global Area Coverage
GF/F	Not an acronym, but a specific type of glass fiber filter manufactured by Whatman.
GLOBEC	Global Ocean System Eco-Dynamics
GMT	Greenwich Mean Time
GoA97	Gulf of Alaska 1997 (cruise)
GoCal	Gulf of California

GOES-8	The Eighth Geostationary Operational Environmental Satellite
GOM	Gulf of Maine
GPIB	General Purpose Interface Bus
GPS	Global Positioning System
GS	GSFC and Satlantic (comparison)
GSE	Ground Support Equipment
GSFC	Goddard Space Flight Center
GUI	Graphical User Interface

- H -

HACR	High-Accuracy Cryogenic Radiometer
HDF	Hierarchical Data Format
HEPA	High Efficiency Particle Arrestor
HMS	Her Majesty's Ship
HOT	Hawaii Optical Time-series
HP	Hewlett-Packard
HPL	Horn Point Laboratory
HPLC	High Performance Liquid Chromatography
HRPT	High Resolution Picture Transmission
HS	Horizon Scanner
HTCO	High Temperature Catalytic Oxidation

- I -

IAD	Ion-Assisted Beam Deposition
IC	Integrated Circuit
ICESS	Institute for Computational Earth System Science
ID	Identification or Inside Diameter (depending on usage).
IDL	International Date Line or Interactive Data Language (depending on usage).
IEEE	Institute of Electrical and Electronic Engineers
IF	Interference Filter
ILX	Not an acronym, but part of the name of ILX Lightwave Corporation of Bozeman, Montana.
IMSL	International Mathematical and Statistical Libraries
INSU	<i>Institut National des Sciences de l'Univers</i> (the French National Institute of the Science of the Universe)
IOP	Inherent Optical Property
IOS	(SOC) Institute of Oceanographic Sciences
IQR	Interquartile Range
ISDGM	<i>Istituto per lo Studio della Dinamica delle Grandi Masse</i> (Italy)
ISIC	Integrating Sphere Irradiance Collector

- J -

JCR (RRS)	<i>James Clark Ross</i>
JES9906	Japan East Sea Cruise, 1999-06
JG	JRC and GSFC (comparison)
JGOFS	Joint Global Ocean Flux Study
JRC	Joint Research Centre
JUL98NAN	A NOAA-sponsored cruise off Nantucket Island, Massachusetts in July 1998.
JS	JRC and Satlantic (comparison)

- K -

KMR	<i>K</i> from Multiresolution (wavelet analysis)
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## — L —

L1	Level-1 SeaWiFS data product
L1A	Level-1a SeaWiFS data product with navigation information
L2	Level-2 SeaWiFS data product
L3	Level-3 SeaWiFS data product
Lab96	Labrador Sea Cruise, 1996
Lab97	Labrador Sea Cruise, 1997
Lab98	Labrador Sea Cruise, 1998
LAC	Local Area Coverage
LANDSAT	Land Satellite
LLR	Low Level Radiance
LN	LOCNESS
LoCNESS	Low-Cost NASA Environmental Sampling System
LPCM	<i>Laboratoire de Physique et Chimie Marines</i> (the French Laboratory of Marine Physics and Chemistry)
LS	Light Stability
LSB	Least Significant Bit
LTER	Long Term Ecological Research
LXR	LANDSAT Transfer Radiometer

## — M —

MA	Methylamine
MBARI	Monterey Bay Aquarium Research Institute
MBR	Maximum Band Ratio
MCM	Marine and Coastal Management (South Africa)
MCP	Modified Cubic Polynomial
MER	Marine Environmental Radiometer
MERIS	Medium Resolution Imaging Spectrometer
METEOSAT	Meteorological Satellite
MF0796	R/V <i>Miller Freeman</i> Cruise, 1996-07
MFR-6	Multi-Filter Rotating Shadow-Band Radiometer
miniNESS	miniature NASA Environmental Sampling System
MIO	<i>Mer Ionienne</i> (Ionian Sea)
MISR	Multiangle Imaging Spectroradiometer
MLD	Mixed Layer Depth
MLML	Moss Landing Marine Laboratory
MMA	Mirror Mount Assembly or Monomethylamine, depending on usage.
MN	miniNESS
MOBY	Marine Optical Buoy
MOCE	Marine Optical Characterization Experiment
MODIS	Moderate Resolution Imaging Spectroradiometer
MODTRAN	Not an acronym, but an atmospheric photochemical and radiative transfer model.
MOS	Modular Optoelectronic Scanner (spaceborne sensor) or Marine Optical Spectroradiometer (depending on usage)
MSB	Most Significant Bit
MT	Mesotrophic
MVDS	Multichannel Visible Detector System

## — N —

N	North
NABE	North Atlantic Bloom Experiment
NASA	National Aeronautics and Space Administration

NCEP	National Center for Environmental Prediction
NCSA	National Center for Supercomputing Applications
NDVI	Normalized Difference Vegetation Index
NEC	Not an acronym, but the present name for the Nippon Electric Company (Japan)
NECC	North Equatorial Counter Current
NEGOM	Northeast Gulf of Mexico
NEUC	North Equatorial Undercurrent
NIR	Near-Infrared
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NR	Not Resolved
NRL	Naval Research Laboratory
NRSR	Normalized Remote Sensing Reflectance
NSD	Normalized Standard Deviation

## — O —

OC	Ocean Color
OC2	Ocean Chlorophyll 2 (algorithm)
OC2v1	OC2 version 1
OC2v2	OC2 version 2
OC4	Ocean Chlorophyll 4 (algorithm)
OC4v2	OC4 version 2
OC4v3	OC4 version 3
OC4v4	OC4 version 4
OCI	Ocean Color Irradiance (sensor)
OCI-200	Ocean Color Irradiance series 200 (sensor)
OCP	Ocean Color Profiler
OCR	Ocean Color Radiance (sensor)
OCR-200	Ocean Color Radiance series 200 (sensor)
OCR-250	Ocean Color Radiance Series 250 (sensor)
OCR-1000	Ocean Color Radiance Series 1000 (sensor)
OCR-2000	Ocean Color Radiance Series 2000 (sensor)
OCTS	Ocean Color Temperature Scanner
OD	Outside Diameter
OL	Optronic Laboratories, Inc.
OLL	One-Percent Light Level
OPC	Optical Plankton Counter
OrbView-2	Not an acronym, but the current name for the SeaStar satellite.
ORINOCO	Orinoco River Plume
OSC	Orbital Sciences Corporation
OT	Oligotrophic
OV2	OrbView-2

## — P —

PAR	Photosynthetically Available Radiation
PC	Personal Computer or Percent Contribution Ratio (depending on usage).
PCR	Polymerase Chain Reaction
PD	Percent Difference
PI	Principal Investigator
P-I	Photosynthesis-Irradiance
PID	Proportional, Integral, Differential
PlyMBODy	Plymouth Marine Bio-Optical Data Buoy
PM	Particulate Matter
PML	Plymouth Marine Laboratory
POC	Particulate Organic Carbon
POLDER	Polarization Detecting Environmental Radiometer

PRIME Plankton Reactivity in the Marine Environment  
 PROSOPE *Productivité des Systèmes Océaniques Pélagiques* (Productivity of Pelagic Oceanic Systems)

PRR Profiling Reflectance Radiometer  
 PRT Platinum Resistance Temperature (sensor)  
 PST Pacific Standard Time  
 PSU Practical Salinity Units  
 PTFE Polyfluorotetraethylene  
 PVC Polyvinylchloride

## - Q -

QC Quality Control

## - R -

RAM Random Access Memory  
 RE Ramsden Eyepiece  
 RED9503 Red Tide Cruise, 1995-03  
 Res94 Resolute Cruise, 1994  
 Res95-2 Resolute Cruise, 1995  
 Res96 Resolute Cruise, 1996  
 Res98 Resolute Cruise, 1998  
 RF Response Factor  
 RH Relative Humidity  
 RL Relay Lens  
 RMS Root Mean Square  
 RMSD Root Mean Square Difference  
 ROAVERRS Research on Ocean–Atmosphere Variability and Ecosystem Response in the Ross Sea  
 ROSSA Radiometric Observations of the Sea Surface and Atmosphere  
 RPD Relative Percent Difference  
 RRS Royal Research Ship  
 RSG (PML) Remote Sensing Group  
 RSMAS Rosenstiel School for Marine and Atmospheric Science  
 RSR Relative Spectral Response  
 RSS Root-Sum Square  
 RTV Room Temperature Vulcanizing  
 RVS (BAS) Research Vessel Services

## - S -

S South  
 SACZ Sub-Antarctic Convergence Zone  
 SAI Space Applications Institute  
 SAS Surface Acquisition System  
 SAS-II Satlantic Airborne Sensor  
 SAT Short Along-Track (station)  
 SatView The Satlantic data acquisition and visualization software package.  
 SBE Sea-Bird Electronics  
 SBRC Santa Barbara Research Center (Raytheon)  
 SBRS Santa Barbara Remote Sensing (Hughes)  
 SBUV Solar Backscatter Ultraviolet Radiometer  
 SC Shallow Coastal  
 SCOR Scientific Committee on Oceanographic Research  
 S/CSC Stennis (Space Center) Coastal Services Center  
 SDSU San Diego State University  
 SDY Sequential Day of the Year  
 SeaACE SeaWiFS Atlantic Characterization Experiment

SeaARCS SeaWiFS Advanced Radiometer Control System  
 SeaBAM SeaWiFS Bio-optical Algorithm Mini-workshop  
 SeaBASS SeaWiFS Bio-Optical Archive and Storage System  
 SeaBOARR SeaWiFS Bio-Optical Algorithm Round-Robin  
 SeaBOARR-98 The First SeaBOARR (1998)  
 SeaBOARR-99 The Second SeaBOARR (1999)  
 SeaBOSS SeaWiFS Buoyant Optical Surface Sensor  
 SeaDAS SeaWiFS Data Analysis System  
 SeaHARRE SeaWiFS HPLC Analysis Round-Robin Experiment  
 SeaHARRE-1 The First SeaWiFS HPLC Analysis Round-Robin Experiment  
 SeaFALLS SeaWiFS Free-Falling Advanced Light Level Sensors  
 SeaLaMP SeaWiFS Lamp Monitoring and Performance  
 SeaOPS SeaWiFS Optical Profiling System  
 SeaPRISM SeaWiFS Photometer Revision for Incident Surface Measurement  
 SeaSAS SeaWiFS Surface Acquisition System  
 SeaSHADE SeaWiFS Shadow Band (radiometer)  
 SeaStar Not an acronym, but the former name of the satellite on which SeaWiFS was launched, now known as OrbView-2.  
 SeaSURF SeaWiFS Square Underwater Reference Frame  
 SeaWiFS Sea-viewing Wide Field-of-view Sensor  
 SEC South Equatorial Current  
 SEM Scanning Electronic Microscopy  
 SEUC South Equatorial Undercurrent  
 SIFS Satlantic Instrument Files Standard  
 SIMBAD Satellite Validation for Marine Biology and Aerosol Determination  
 SIMBIOS Sensor Intercomparison and Merger for Biological and Interdisciplinary Oceanic Studies  
 SIO Scripps Institution of Oceanography  
 SIRREX SeaWiFS Intercalibration Round-Robin Experiment  
 SIRREX-1 The First SIRREX (July 1992)  
 SIRREX-2 The Second SIRREX (June 1993)  
 SIRREX-3 The Third SIRREX (September 1994)  
 SIRREX-4 The Fourth SIRREX (May 1995)  
 SIRREX-5 The Fifth SIRREX (July 1996)  
 SIRREX-6 The Sixth SIRREX (August–December 1997)  
 SIRREX-7 The Seventh SIRREX (March 1999)  
 SIS Spherical Integrating Source  
 SMAB Southern Mid-Atlantic Bight  
 SMSR SeaWiFS Multichannel Surface Reference  
 S/N Serial Number  
 SNR Signal-to-Noise Ratio  
 S/NRL Stennis Space Center, Naval Research Laboratory  
 SO SeaOPS  
 SOC Southampton Oceanography Centre  
 SOMARE Sampling, Observations and Modelling of Atlantic Regional Ecosystems  
 SOOP SeaWiFS Ocean Optics Protocols  
 SOSSTR Ship of Opportunity Sea Surface Temperature Radiometer  
 SPMR SeaWiFS Profiling Multichannel Radiometer  
 SPO SeaWiFS Project Office  
 SQM SeaWiFS Quality Monitor  
 SQM-II The Second Generation SQM  
 SRF Spectral Response Function

SS Sea State  
 SSE Size-of-Source Effect  
 SSH Sea Surface Height  
 SSM/I Special Sensor for Microwave/Imaging  
 SSST Sea Surface Skin Temperature  
 SUNSAS SeaWiFS Underway Surface Acquisition System  
 SXR SeaWiFS Transfer Radiometer

— T —

TAO Tropical Atmosphere–Ocean  
 TBAA Tetrabutyl Ammonium Acetate  
 TEC Thermoelectric Cooler  
 THOR Three-Headed Optical Recorder  
 TIROS Television Infrared Observation Satellite  
 TMA Trimethylamine  
 T/N Temporary (identification) Number  
 TOA Top of the Atmosphere  
 TOC Total Organic Carbon  
 TOGA Tropical Ocean Global Atmosphere  
 TOMS Total Ozone Mapping Spectrometer  
 TSM Total Suspended Matter  
 TOPEX Topography Experiment  
 TOTO Tongue of the Ocean (Bahamas)  
 TOVS TIROS Operational Vertical Sounder  
 TSG Thermosalinograph  
 TSM Total Suspended Matter  
 TSP Thermo Separation Products  
 TTL Transistor–Transistor Logic

— U —

UA University of Arizona  
 UCSB University of California, Santa Barbara  
 UIC Underway Instrumentation and Control  
 UK United Kingdom  
 UM University of Miami  
 UMCES University of Maryland Center for Environmental Science  
 UNC Unified Course  
 UNESCO United Nations Educational, Scientific, and Cultural Organization  
 UOR Undulating Oceanographic Recorder  
 UPD Unbiased Percent Difference

UPS Uninterruptable Power Supply  
 UPW Upwelling  
 URL Universal Resource Locator  
 USF University of South Florida  
 USN United States Navy  
 UTC Coordinated Universal Time (definition reflects actual usage instead of following the letters of the acronym)  
 UV Ultraviolet  
 UVA Ultraviolet-A

— V —

V1 Version 1  
 V2 Version 2  
 V3 Version 3  
 V4 Version 4  
 V5 Version 5  
 VAFB Vandenberg Air Force Base  
 VisSCF Visible Spectral Comparator Facility (NIST)  
 VXR Visible Transfer Radiometer

— W —

W West  
 WC Winch and Crane  
 WETLabs Western Environmental Technology Laboratories (Inc.)  
 WG Working Group  
 WiSPER Wire-Stabilized Profiling Environmental Radiometer  
 WM Spherical Mirror Wedge Section  
 WMO World Meteorological Organization  
 WOCE World Ocean Circulation Experiment  
 WP WiSPER  
 WS Wind Speed  
 WSSC Washington Suburban Sanitary Commission

— X —

XBT Expendable Bathythermograph  
 XOTD Expendable Optical, Temperature, and Depth

— Y, Z —

YB71 Not an acronym, but a type of paint for solar diffusers.

## REFERENCES

— A —

- Aas, E., 1981: The refractive index of phytoplankton. *Institute for Geophysikk Report Series, No. 46*, Oslo University, 61 pp.
- Aiken, J., G.F. Moore, and P.M. Holligan, 1992: Remote-sensing of oceanic biology in relation to global climate change. *J. Phycol.*, **28**, 579–590.
- , and S.B. Hooker, 1997: The Atlantic Meridional Transect: Spatially extensive calibration and validation of optical properties and remotely-sensed measurements of ocean color. *Backscatter*, **8**, 8–11.
- , D.G. Cummings, S.W. Gibb, N.W. Rees, R. Wood-Walker, E.M.S. Woodward, J. Woolfenden, S.B. Hooker, J-F. Berthon, C.D. Dempsey, D.J. Suggett, P. Wood, C. Donlon, N. González-Benítez, I. Huskin, M. Quevedo, R. Barciela-Fernandez, C. de Vargas, and C. McKee, 1998: AMT-5 Cruise Report. *NASA Tech. Memo. 1998–206892, Vol. 2*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 113 pp.
- , N.W. Rees, S. Hooker, P. Holligan, A. Bale, D. Robins, G. Moore, R. Harris, and D. Pilgrim, 2000: The Atlantic Meridional Transect: overview and synthesis of data. *Prog. Oceanogr.*, **45**, 257–312.
- Ainsworth, E.J., and F.S. Patt, 2000: “Modifications to the TOMS ozone ancillary data interpolation.” In: McClain, C.R., E.J. Ainsworth, R.A. Barnes, R.E. Eplee, Jr., F.S. Patt, W.D. Robinson, M. Wang, and S.W. Bailey, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 1. *NASA Tech. Memo. 2000–206892, Vol. 9*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 69–73.
- Ångström, A., 1929: On the atmospheric transmission of sun radiation and on dust in the air. *Geogr. Ann.*, **12**, 130–159.
- , 1961: Techniques of determining the turbidity of the atmosphere. *Tellus*, **13**, 214–223.
- ASTM, 1997: “E1256–95, standard test methods for radiation thermometers (single waveband type).” Temperature Measurement, Vol. 14.03, Sect. 14, General Methods and Instrumentation, *Annual Book of ASTM Standards*, American Society of Testing and Materials, Philadelphia, Pennsylvania, 437–443.
- Austin, R.W., 1974: The remote sensing of spectral radiance from below the ocean surface. In: *Optical Aspects of Oceanography*, N.G. Jerlov and E.S. Nielsen, Eds., Academic Press, London, 317–344.
- , 1980: Gulf of Mexico, ocean color surface truth measurements. *Bound.-Layer Meteorol.*, **18**, 269–285.
- , and T.J. Petzold, 1981: The determination of the diffuse attenuation coefficient of sea water using the Coastal Zone Color Scanner. In: *Oceanography from Space*, J.F.R. Gower, Ed., Plenum Press, 239–256.
- B —
- Bailey, S.W., C.R. McClain, P.J. Werdell, and B.D. Schieber, 2000: “Normalized water-leaving radiance and chlorophyll *a* match-up analyses.” In: McClain, C.R., R.A. Barnes, R.E. Eplee, Jr., B.A. Franz, N.C. Hsu, F.S. Patt, C.M. Pietras, W.D. Robinson, B.D. Schieber, G.M. Schmidt, M. Wang, S.W. Bailey, and P.J. Werdell, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 2. *NASA Tech. Memo. 2000–206892, Vol. 10*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 45–52.
- Barlow, R.G., R.F.C. Mantoura, M.A. Gough, and T.W. Fileman, 1993: Pigment signatures of the phytoplankton composition in the northeastern Atlantic during the 1990 spring bloom. *Deep-Sea Res. II*, **40**, 459–477.
- , D.G. Cummings, and S.W. Gibb, 1997: Improved resolution of mono- and divinyl chlorophylls *a* and *b* and zeaxanthin and lutein in phytoplankton extracts using reverse phase C-8 HPLC. *Mar. Ecol. Prog. Ser.*, **161**, 303–307.
- Barnes, R.A., 1994: *SeaWiFS Data: Actual and Simulated*. [World Wide Web page.] From URLs: <http://seawifs.gsfc.nasa.gov/SEAWIFS/IMAGES/spectra1.dat> and [/spectra2.dat](http://seawifs.gsfc.nasa.gov/SEAWIFS/IMAGES/spectra2.dat) NASA Goddard Space Flight Center, Greenbelt, Maryland.
- , 1996a: “Calculation of an equivalent blackbody temperature for the GSFC sphere.” In: Barnes, R.A., E-n. Yeh, and R.E. Eplee, SeaWiFS Calibration Topics, Part 1. *NASA Tech. Memo. 104566, Vol. 39*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 5–17.
- , 1996b: “A comparison of the spectral responses of SeaWiFS and the SeaWiFS Transfer Radiometer.” In: Barnes, R.A., E-n. Yeh, and R.E. Eplee, SeaWiFS Calibration Topics, Part 1. *NASA Tech. Memo. 104566, Vol. 39*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 39–48.
- , 1996c: “SeaWiFS center wavelengths.” In: Barnes, R.A., E-n. Yeh, and R.E. Eplee, SeaWiFS Calibration Topics, Part 1. *NASA Tech. Memo. 104566, Vol. 39*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 49–53.
- , 1997: “SeaWiFS measurements in orbit: Band-averaged spectral radiance.” In: Barnes, R.A., R.E. Eplee, E-n. Yeh, and W.E. Esaias, SeaWiFS Calibration Topics, Part 2. *NASA Tech. Memo. 104566, Vol. 40*, S.B. Hooker and E.R. Firestone Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 48–55.
- , and A.W. Holmes, 1993: Overview of the SeaWiFS ocean sensor. *Proc. SPIE*, **1939**, 224–232.
- , W.L. Barnes, W.E. Esaias, and C.R. McClain, 1994a: Prelaunch Acceptance Report for the SeaWiFS Radiometer. *NASA Tech. Memo. 104566, Vol. 22*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 32 pp.
- , A.W. Holmes, W.L. Barnes, W.E. Esaias, C.R. McClain, and T. Svitek, 1994b: SeaWiFS Prelaunch Radiometric Calibration and Spectral Characterization. *NASA Tech. Memo. 104566, Vol. 23*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 55 pp.

- , —, and W.E. Esaias, 1995: Stray Light in the SeaWiFS Radiometer. *NASA Tech. Memo. 104566, Vol. 31*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 76 pp.
- , and R.E. Eplee, Jr., 1996: “The SeaWiFS solar diffuser.” In: Barnes, R.A., E-n. Yeh, and R.E. Eplee, SeaWiFS Calibration Topics, Part 1. *NASA Tech. Memo. 104566, Vol. 39*, S.B. Hooker and E.R. Firestone Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 54–61.
- , and E-n. Yeh, 1996: “Effects of source spectral shape in SeaWiFS radiance measurements.” In: Barnes, R.A., E-n. Yeh, and R.E. Eplee, SeaWiFS Calibration Topics, Part 1. *NASA Tech. Memo. 104566, Vol. 39*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 18–38.
- , and R.E. Eplee, 1997a: “The 1993 SeaWiFS calibration using band-averaged spectral radiances.” In: Barnes, R.A., R.E. Eplee, E-n. Yeh, and W.E. Esaias, SeaWiFS Calibration Topics, Part 2. *NASA Tech. Memo. 104566, Vol. 40*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 39–46.
- , and —, 1997b: “The 1993 SeaWiFS calibration using band-averaged spectral radiances.” In: Barnes, R.A., R.E. Eplee, E-n. Yeh, and W.E. Esaias, SeaWiFS Calibration Topics, Part 2. *NASA Tech. Memo. 104566, Vol. 40*, S.B. Hooker and E.R. Firestone Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 39–47.
- , and W.E. Esaias, 1997: “A nominal top-of-the-atmosphere spectrum for SeaWiFS.” In: Barnes, R.A., R.E. Eplee, E-n. Yeh, and W.E. Esaias, SeaWiFS Calibration Topics, Part 2. *NASA Tech. Memo. 104566, Vol. 40*, S.B. Hooker and E.R. Firestone Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 3–11.
- , R.E. Eplee, and F.S. Patt, 1998: “SeaWiFS measurements of the moon.” In: Sensors, Systems, and Next-Generation Satellites II, *SPIE*, **3498**, 311–324.
- , and C.R. McClain, 1999: “The calibration of SeaWiFS after two years on orbit.” In: Sensors, Systems, and Next-Generation Satellites V, *SPIE*, **3870**, 214–227.
- , R.E. Eplee, Jr., F.S. Patt, and C.R. McClain, 1999a: Changes in the radiometric sensitivity of SeaWiFS determined from lunar and solar-based measurements. *Appl. Opt.*, **38**, 4,649–4,664.
- , —, S.F. Biggar, K.J. Thome, E.F. Zalewski, P.M. Slater, and A.W. Holmes, 1999b: The SeaWiFS Solar Radiation-Based Calibration and the Transfer-to-Orbit Experiment. *NASA Tech. Memo. 1999-206892, Vol. 5*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 28 pp.
- Bidigare, R.R., 1991: “Analysis of algal chlorophylls and carotenoids.” In: Marine Particles: Analysis and Characterization. *Geophysical Monograph 63*, D.C. Hurd and D.W. Spencer, Eds., American Geophysical Union, Washington, DC, 119–123.
- Biggar, S.F., 2001: A method for correcting the irradiance of standards of spectral irradiance (lamps) operated at non-standard distances. *Opt. Photonics News*, (withdrawn).
- , D.I. Gelman, and P.N. Slater, 1990: Improved evaluation of optical depth components from Langley plot data. *Remote Sens. Environ.*, **32**, 91–101.
- , K.J. Thome, P.N. Slater, A.W. Holmes, and R.A. Barnes, 1993: Preflight solar radiation-based calibration of SeaWiFS. *SPIE*, **1939**, 233–242.
- , P.N. Slater, K.J. Thome, A.W. Holmes, and R.A. Barnes, 1994: “Preflight solar-based calibration of SeaWiFS.” In: McClain, C.R., R.S. Fraser, J.T. McLean, M. Darzi, J.K. Firestone, F.S. Patt, B.D. Schieber, R.H. Woodward, E-n. Yeh, S. Mattoo, S.F. Biggar, P.N. Slater, K.J. Thome, A.W. Holmes, R.A. Barnes, and K.J. Voss, Case Studies for SeaWiFS Calibration and Validation, Part 2. *NASA Tech. Memo. 104566, Vol. 19*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 25–32.
- , K.J. Thome, P.N. Slater, A.W. Holmes, and R.A. Barnes, 1995: “Second SeaWiFS preflight solar radiation-based calibration experiment.” In: Mueller, J.L., R.S. Fraser, S.F. Biggar, K.J. Thome, P.N. Slater, A.W. Holmes, R.A. Barnes, C.T. Weir, D.A. Siegel, D.W. Menzies, A.F. Michaels, and G. Podesta, Case Studies for SeaWiFS Calibration and Validation, Part 3. *NASA Tech. Memo. 104566, Vol. 27*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 20–24.
- , P.N. Slater, J.M. Palmer, and K.J. Thome, 2001: Unified approach to absolute radiometric calibration in the solar-reflective range. *Remote Sens. Environ.*, (accepted).
- Berk, A., L.S. Bernstein, and D.C. Robertson, 1989: MODTRAN: A moderate resolution model for LOWTRAN7. *Tech. Report GL-TR-90-0122*, Geophysical Directorate Phillips Laboratory, Hanscom AFB, Massachusetts, 44 pp.
- Bjornland, T., and S. Liaaen-Jensen, 1989: Distribution patterns of carotenoids in relation to chromophyte phylogeny and systematics. In: *The Chromophyte Algae: Problems and Perspectives*. J.C. Green, B.S.C. Leadbeater, and W.L. Diver, Eds., Clarendon Press, Oxford, 37–61.
- Brewer, P.G., and J.P. Riley, 1965: The automatic determination of nitrate in sea water. *Deep-Sea Res.*, **12**, 765–772.
- Brown, C.W., 1995: “Classification of coccolithophore blooms in ocean color imagery.” In: McClain, C.R., W.E. Esaias, M. Darzi, F.S. Patt, R.H. Evans, J.W. Brown, K.R. Arrigo, C.W. Brown, R.A. Barnes, and L. Kumar, Case Studies for SeaWiFS Calibration and Validation, Part 4. *NASA Tech. Memo. 104566, Vol. 28*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 13–19.
- , and J.A. Yoder, 1994: Coccolithophorid blooms in the global ocean. *J. Geophys. Res.*, **99**, 7,467–7,482.
- Bruegge, C.J., V.G. Duval, N.L. Chrien, and D.J. Diner, 1993: Calibration plans for the multi-angle, imaging spectroradiometer (MISR). *Metrologia*, **30**, 231–221.
- Bukata, R.P., J.H. Jerome, and J.E. Bruton, 1988: Particulate concentrations in Lake St. Clair as recorded by a shipborne multispectral optical monitoring system. *Remote Sens. Environ.*, **25**, 201–229.

- , —, K.Y. Kondratyev, and D.V. Pozdnyakov, 1995: *Optical Properties and Remote Sensing of Inland and Coastal Waters*. CRC Press, Boca Raton, Florida, 362 pp.
- Butler, J.J., and B.C. Johnson, 1996: EOS radiometric measurement comparisons at Hughes Santa Barbara Remote Sensing and NASA's Jet Propulsion Laboratory. *The Earth Observer*, **8**(5), 17–19.
- C —
- Carder, K.L., and R.G. Steward, 1985: A remote sensing reflectance model of a red tide dinoflagellate off West Florida. *Limnol. Oceanogr.*, **30**, 286–298.
- Charlson, R.J., J.E. Lovelock, M.O. Andreae, and S.G. Warren, 1987: Oceanic phytoplankton, atmospheric sulphur, cloud albedo, and climate. *Nature*, **326**, 655–661.
- , S.E. Schwartz, J.M. Hales, R.D. Cess, J.A. Coakley, J.E. Hansen, and D.J. Hofmann, 1992: Climate forcing by anthropogenic aerosols. *Science*, **255**, 423–430.
- Chen, L.C., and G.M. Lerner, 1978: "Sun sensor models." In: Wertz, J.R., *Spacecraft Attitude Determination and Control*. D. Reidel Publishing Company, Dordrecht, Holland, 224–227.
- Chisholm, S.W., R.J. Olson, E.R. Zettler, R. Goericke, J.B. Waterbury, and N.A. Welschmeyer, 1988: A novel free-living prochlorophyte abundant in the oceanic euphotic zone. *Nature*, **334**, 340–343.
- Clark, D., H.R. Gordon, K.J. Voss, Y. Ge, W. Broenkow, and C. Trees, 1997: Validation of atmospheric correction over the oceans. *J. Geophys. Res.*, **102**, 17,209–17,217.
- Claustre, H., 1994: Phytoplankton pigment signatures of the trophic status in various oceanic regimes. *Limnol. Oceanogr.*, **39**, 1,207–1,211.
- Cox, C., and W. Munk, 1954: Measurements of the roughness of the sea surface from photographs of the sun's glitter. *J. Opt. Soc. Am.*, **44**, 838–850.
- D —
- Darzi, M., 1998: SeaWiFS Algorithm Flow Chart. *NASA Contractor Report 1998–206848*, NASA Goddard Space Flight Center, Greenbelt, Maryland, 36 pp.
- , F.S. Patt, and L. Kumar, 1995: "Algorithm for the application of the sensor calibration for SeaWiFS level-2 processing." In: McClain, C.R., K. Arrigo, W.E. Esaias, M. Darzi, F.S. Patt, R.H. Evans, J.W. Brown, C.W. Brown, R.A. Barnes, and L. Kumar, SeaWiFS Algorithms, Part 1. *NASA Tech. Memo. 104566, Vol. 28*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 26–32.
- Dave, J.V., 1972: Development of programs for computing characteristics of ultraviolet radiation, *Tech. Rept.*, Vector Case, IBM Corp., Fed. Syst. Div., Gaithersburg, Maryland, 337 pp.
- Davies, B.H., 1976: Carotenoids. In: *Chemistry and Biochemistry of Plant Pigments, Volume 2, 2nd Edition*. T.W. Goodwin, Ed., Academic Press, London, 38–165.
- Deschamps, P.Y., M. Herman, and D. Tanré, 1983: Modeling of the atmospheric effects and its application to the remote sensing of ocean color. *Appl. Opt.*, **22**, 3,751–3,758.
- DeWitt, D.P., and J.C. Richmond, 1988: "Thermal radiative properties of materials." In: *Theory and Practice of Radiation Thermometry*, D.P. DeWitt and G.D. Nutter, Eds., John Wiley and Sons, Inc., New York, 91–187.
- Ding, K., and H.R. Gordon, 1994: Atmospheric correction of ocean-color sensors: effects of the Earth's curvature., *Appl. Opt.*, **33**, 7,096–7,106.
- Doyle, J.P., and G. Zibordi, 1998: Correction of oceanographic tower-shading effects on in-water optical measurements. *Proc. Ocean Optics XIV*, [Available on CD-ROM], Office of Naval Research, Washington, DC.
- E —
- Early, E.A., and B.C. Johnson, 1997: "Calibration and characterization of the GSFC sphere." In: Yeh, E.-n., R.A. Barnes, M. Darzi, L. Kumar, E.A. Early, B.C. Johnson, and J.L. Mueller, Case Studies for SeaWiFS Calibration and Validation, Part 4. *NASA Tech. Memo. 104566, Vol. 41*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 3–17.
- , E.A. Thompson, and P. Disterhoft, 1998a: A field calibration unit for ultraviolet spectroradiometers. *Appl. Opt.*, **37**, 6,664–6,670.
- , A. Thompson, B.C. Johnson, J. DeLuisi, P. Disterhoft, D. Wardle, E. Wu, W. Mou, J. Ehramjian, J. Tusson, T. Mestechkina, M. Beaubian, J. Gibson, and D. Hayes, 1998b: The 1996 North American interagency intercomparison of ultraviolet monitoring spectroradiometers. *J. Res. NIST*, **103**, 449–482.
- , —, —, —, —, —, —, —, —, Y. Sun, T. Lucas, T. Mestechkina, L. Harrison, J. Berndt, and D. Hayes, 1998c: The 1995 North American interagency intercomparison of ultraviolet monitoring spectroradiometers. *J. Res. NIST*, **103**, 15–62.
- , P.Y. Barnes, B.C. Johnson, J.J. Butler, C.J. Bruegge, S.F. Biggar, P.R. Spyak, and M.M. Pavlov, 2000: Bidirectional reflectance round-robin in support of the Earth Observing System Program. *J. Atmos. Ocean. Technol.*, **17**, 1,077–1,091.
- Emery, W.J., and J.S. Dewar, 1982: Mean temperature and salinity-depth and temperature-depth curves for the North Atlantic and the North Pacific. *Prog. Oceanogr.*, **11**, 219–305.
- Eplee, R.E., Jr., and R.A. Barnes, 1997: "The SeaWiFS temperature calibration." In: Barnes, R.A., R.E. Eplee, E-n. Yeh, and W.E. Esaias, SeaWiFS Calibration Topics, Part 2. *NASA Tech. Memo. 104566, Vol. 40*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 56–62.
- , and R.A. Barnes, 2000: "Lunar data analysis for SeaWiFS calibration." In: McClain, C.R., E.J. Ainsworth, R.A. Barnes, R.E. Eplee, Jr., F.S. Patt, W.D. Robinson, M. Wang, and S.W. Bailey, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 1. *NASA Tech. Memo. 2000–206892, Vol. 9*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 17–27.

- , and C.R. McClain, 2000a: “MOBY data analysis for vicarious calibration of SeaWiFS bands 1–6.” In: McClain, C.R., E.J. Ainsworth, R.A. Barnes, R.E. Eplee, Jr., F.S. Patt, W.D. Robinson, M. Wang, and S.W. Bailey, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 1. *NASA Tech. Memo. 2000-206892, Vol. 9*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 43–50.
- , and —, 2000b: “SeaWiFS global clear-water analysis.” In: McClain, C.R., R.A. Barnes, R.E. Eplee, Jr., B.A. Franz, N.C. Hsu, F.S. Patt, C.M. Pietras, W.D. Robinson, B.D. Schieber, G.M. Schmidt, M. Wang, S.W. Bailey, and P.J. Werdell, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 2. *NASA Tech. Memo. 2000-206892, Vol. 10*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 29–33.
- , and F.S. Patt, 2000: “Cloud-top radiance analysis for SeaWiFS bilinear gain knee calibration.” In: McClain, C.R., E.J. Ainsworth, R.A. Barnes, R.E. Eplee, Jr., F.S. Patt, W.D. Robinson, M. Wang, and S.W. Bailey, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 1. *NASA Tech. Memo. 2000-206892, Vol. 9*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 13–16.
- , R.A. Barnes, and F.S. Patt, 2000: “Solar data analysis for SeaWiFS calibration.” In: McClain, C.R., E.J. Ainsworth, R.A. Barnes, R.E. Eplee, Jr., F.S. Patt, W.D. Robinson, M. Wang, and S.W. Bailey, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 1. *NASA Tech. Memo. 2000-206892, Vol. 9*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 28–37.
- Eppeldauer, G., 1991: Temperature monitored/controlled silicon photodiodes for standardization. *SPIE*, **1479**, 71–77.
- , and J.E. Hardis, 1991: Fourteen decade photocurrent measurements with large area silicon photodiodes at room temperature. *Appl. Opt.*, **30**, 3,091–3,099.
- Evans, R.H., and H.R. Gordon, 1994: Coastal zone color scanner “system calibration”: A retrospective examination. *J. Geophys. Res.*, **99**, 7,293–7,307.
- F —
- Fallon, L., 1978: “Recursive least-squares estimators and Kalman filters.” In: Wertz, J.R., *Spacecraft Attitude Determination and Control*, D. Reidel Publishing Company, Dordrecht, Holland, 459–469.
- , and P.V. Rigterink, 1978: “Introduction to estimation theory.” In: Wertz, J.R., *Spacecraft Attitude Determination and Control*, D. Reidel Publishing Company, Dordrecht, Holland, 447–451.
- Fargion, G.S., and J.L. Mueller, 2000: Ocean Optics Protocols for Satellite Ocean Color Sensor Validation, Revision 2, *NASA Tech. Memo. 2000-209966*, NASA Goddard Space Flight Center, Greenbelt, Maryland, 184 pp.
- , and C.R. McClain, 2001: SIMBIOS Project 2000 Annual Report, *NASA Tech. Memo. 2001-209976* NASA Goddard Space Flight Center, Greenbelt, Maryland, 164 pp.
- Ferrari, G.M., M.D. Dowell, S. Grossi, and C. Targa, 1996: Relationship between the optical properties of chromophoric dissolved organic matter and total concentration of dissolved organic carbon in the southern Baltic Sea region. *Mar. Chem.*, **55**, 299–316.
- Firestone, E.R., and S.B. Hooker, 1998: SeaWiFS Prelaunch Technical Report Series Final Cumulative Index. *NASA Tech. Memo. 1998-104566, Vol. 43*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 4–8.
- Firestone, J.K., R.H. Woodward, and C.R. McClain, 1994: “An evaluation of surface wind products for use in SeaWiFS.” In: McClain, C.R., R.S. Fraser, J.T. McLean, M. Darzi, J.K. Firestone, F.S. Patt, B.D. Schieber, R.H. Woodward, E-n. Yeh, S. Mattoo, S.F. Biggar, P.N. Slater, K.J. Thome, A.W. Holmes, R.A. Barnes, and K.J. Voss, Case Studies for SeaWiFS Calibration and Validation, Part 2. *NASA Tech. Memo. 104566, Vol. 19*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 50–64.
- Flittner, D.E., and P.N. Slater, 1991: Stability of narrow-band filter radiometers in the solar-reflected range. *Photogramm. Eng. Remote Sens.*, **57**, 165–171.
- Fougne, B., R. Frouin, P. Lecompte, P-Y. Deschamps, 1999a: Reduction of skylight reflection effects in the above-water measurements of diffuse marine reflectance. *Appl. Opt.*, **38**, 3,844–3,856.
- , P-Y. Deschamps, R. Frouin, 1999b: Vicarious calibration of the POLDER ocean color spectral bands using *in situ* measurements. *IEEE Trans. Geosci. Remote Sens.*, **37**, 1,567–1,574.
- Fowler, J.B., 1977: The electronic aspects of the NBS detector response and intercomparison package and laser stabilization facility. *Electro-Optics/Laser 77 Conference and Exposition*, Industrial and Scientific Conference Management, Chicago, Illinois, 689–695.
- Fraser, R.S., S. Mattoo, E-n. Yeh, and C.R. McClain, 1997: Algorithm for atmospheric and glint corrections of satellite measurements of ocean pigment. *J. Geophys. Res.*, **102**, 17,107–17,118.
- Fröhlich, C., and G.E. Shaw, 1980: New determination of Rayleigh scattering in the terrestrial atmosphere. *Appl. Opt.*, **19**, 1,773–1,775.
- Frouin, R., M. Schwindling, and P.Y. Deschamps, 1996: Spectral reflectance of sea foam in the visible and near infrared: *In situ* measurements and remote sensing implications. *J. Geophys. Res.*, **101**, 14,361–14,371.
- Fukushima, H., M. Schmidt, B.J. Sohn, M. Toratani, and I. Uno, 1999: Detection of dust loaded airmass in SeaWiFS Imagery: an empirical dust index in comparison with model-predicted dust distribution over the Pacific in April 1998, *Proc. Int. Symp. Remote Sens. '99*, Korean Society of Remote Sensing, ISSN 1226-9743, 89–94.
- Furnas, M.J., 1990: *In situ* growth rates of marine phytoplankton: approaches to measurement, community and species growth rates. *J. Plank. Res.*, **12**, 1,117–1,151.

## - G -

- Garside, C., 1982: Chemiluminescent technique for the determination of nanomolar concentrations of nitrate and nitrite in seawater. *Mar. Chem.*, **11**, 159–167.
- Gentile, T.R., and J.M. Houston, J.E. Hardis, C.L. Cromer, and A.C. Parr, 1996: National Institute of Standards and Technology High-accuracy Cryogenic Radiometer. *Appl. Opt.*, **35**, 1,056–1,068.
- Gibb, S.W., J.W. Wood, and R.F.C. Mantoura, 1995: Automation of flow injection gas diffusion-ion chromatography for the nanomolar determination of methylamines and ammonia in seawater and atmospheric samples. *J. Autom. Chem.*, **17**, 205–212.
- , R.F.C. Mantoura, P.S. Liss, and R.G. Barlow, 1998: Distribution and biogeochemistry of methylamines and ammonia in the Arabian Sea. *Deep-Sea Res.*, **46**, 593–615.
- Gordon, H.R., 1981: A preliminary assessment of the Nimbus-7 CZCS atmospheric correction algorithm in a horizontally inhomogeneous atmosphere. In: *Oceanography from Space*, J.F.R. Gower, Ed., Plenum Press, 257–266.
- , 1995: Remote sensing of ocean color: A methodology for dealing with broad spectral bands and significant out-of-band response. *Appl. Opt.*, **34**, 8,363–8,374.
- , 1998: In-orbit calibration strategy for ocean color sensors. *Remote Sens. Environ.*, **63**, 265–278.
- , and W.R. McCluney, 1975: Estimation of the depth of sunlight penetration in the sea for remote sensing. *Appl. Opt.*, **14**, 413–416.
- , and D.K. Clark, 1981: Clear water radiances for atmospheric correction of coastal zone color scanner imagery. *Appl. Opt.*, **20**, 4,175–4,180.
- , J.W. Brown, and R.H. Evans, 1988a: Exact Rayleigh scattering calculations for use with the Nimbus-7 Coastal Zone Color Scanner. *Appl. Opt.*, **27**, 862–871.
- , O.B. Brown, R.H. Evans, J.W. Brown, R.C. Smith, K.S. Baker, and D.K. Clark, 1988b: A semianalytic radiance model of ocean color, *J. Geophys. Res.*, **93**, 10,909–10,924.
- , and K. Ding, 1992: Self shading of in-water optical instruments. *Limnol. Oceanogr.*, **37**, 491–500.
- , and M. Wang, 1992: Surface roughness considerations for atmospheric correction of ocean color sensors. 1: Rayleigh scattering component. *Appl. Opt.*, **31**, 4,247–4,260.
- , and —, 1994a: Retrieval of water-leaving radiance and aerosol optical thickness over the oceans with SeaWiFS: a preliminary algorithm. *Appl. Opt.*, **33**, 443–452.
- , and —, 1994b: Influence of oceanic whitecaps on atmospheric correction of ocean color sensors. *Appl. Opt.*, **33**, 7,354–7,763.
- Graeme, J.G., 1995: *Photodiode Amplifiers: Operational Amplifier Solutions*, McGraw-Hill, New York, 252 pp.
- Grasshoff, K., 1976: *Methods of Seawater Analysis*. Verlag Chemie, Weilheim, Germany, 317 pp.
- Gregg, W.W., F.S. Patt, and R.H. Woodward, 1993: The Simulated SeaWiFS Data Set, Version 1. *NASA Tech. Memo. 104566*, Vol. 9, S.B. Hooker, E.R. Firestone, and A.W. Indest, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 17 pp.
- , —, A.L. Mezaache, J.D. Chen, J.A. Whiting, 1994: The Simulated SeaWiFS Data Set, Version 2. *NASA Tech. Memo. 104566*, Vol. 15, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 42 pp., plus color plates.
- , and R.H. Woodward, 1998: Improvements in high frequency ocean color observations: Combining data from SeaWiFS and MODIS, *IEEE Trans. Geosci. Remote Sens.*, **36**, 1,350–1,353.
- Greenberg, A.E., L.S. Clesceri, and A.D. Eaton (Eds.), 1992: *Standard Methods for the Examination of Water and Wastewater, 18th Edition*. American Public Health Association, Washington, DC, 10–19.

## - H -

- Hapke, B., 1986: Bidirectional reflectance spectroscopy. 4. Extinction and the opposition effect. *Icarus*, **67**, 246–280.
- Harrison, L., J. Michalsky, and J. Berndt, 1994: Automatic multifilter rotating shadow-band radiometer: An instrument for optical depth and radiation measurements. *Appl. Opt.*, **33**, 5,118–5,125.
- Heath, D.F., Z. Wei, W.K. Fowler, and V.W. Nelson, 1993: Comparison of spectral radiance calibrations of SBUV-2 satellite ozone monitoring instruments using integrating sphere and flat-plate diffuser techniques. *Metrologia*, **30**, 259–264.
- Helfenstein, P., and J. Veverka, 1987: Photometric properties of lunar terrains derived from Hapke's equation. *Icarus*, **72**, 342–357.
- Herman, J.R., P.K. Bhartia, O. Torres, N.C. Hsu, C.J. Seftor, and E. Celarier, 1997: Global distribution of UV-absorbing aerosols from Nimbus-7/TOMS data, *J. Geophys. Res.*, **102**, 16,911–16,922.
- Holben, B.N., T.F. Eck, I. Slutsker, D. Tanré, J.P. Buis, A. Setzer, E. Vermote, J.A. Reagan, Y.I. Kaufman, T. Nakajima, F. Lavenu, I. Jankowiak, and A. Smirnov, 1998: AERONET—A federated instrument network and data archive for aerosol characterization. *Remote Sens. Environ.*, **66**, 1–16.
- Holm-Hansen, O., C.J. Lorenzen, R.W. Holmes, and J.D.H. Strickland, 1965: Fluorometric determination of chlorophyll. *J. du Cons. Int'l. pour l'Explor. de la Mer*, **30**, 3–15.
- Hooker, S.B., W.E. Esaias, G.C. Feldman, W.W. Gregg, and C.R. McClain, 1992: An Overview of SeaWiFS and Ocean Color. *NASA Tech. Memo. 104566*, Vol. 1, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 24 pp., plus color plates.
- , and —, 1993: An overview of the SeaWiFS project. *Eos, Trans., Amer. Geophys. Union*, **74**, 241–246.
- , C.R. McClain, and A. Holmes, 1993a: Ocean color imaging: CZCS to SeaWiFS. *Marine Tech. Soc. J.*, **27**, 3–15.
- , W.E. Esaias, and L.A. Rexrode, 1993b: Proceedings of the First SeaWiFS Science Team Meeting. *NASA Tech. Memo. 104566*, Vol. 8, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 61 pp.

- , —, J.K. Firestone, T.L. Westphal, E. Yeh, and Y. Ge, 1994a: The SeaWiFS Bio-Optical Archive and Storage System (SeaBASS), Part 1. *NASA Tech. Memo. 104566, Vol. 20*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 40 pp.
- , T.L. Westphal, Y. Ge, 1994b: “The SIRREX database.” In: Hooker, S.B., C.R. McClain, J.K. Firestone, T.L. Westphal, E. Yeh, and Y. Ge, The SeaWiFS Bio-Optical Archive and Storage System (SeaBASS), Part 1. *NASA Tech. Memo. 104566, Vol. 20*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 23–30.
- , C.R. McClain, J.K. Firestone, T.L. Westphal, E-n. Yeh, and Y. Ge, 1994c: The SeaWiFS Bio-Optical Archive and Storage System (SeaBASS), Part 1. *NASA Tech. Memo. 104566, Vol. 20*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 40 pp.
- , and J. Aiken, 1998: Calibration evaluation and radiometric testing of field radiometers with the SeaWiFS Quality Monitor (SQM). *J. Atmos. Ocean. Technol.*, 995–1,007.
- , G. Zibordi, G. Lazin, and S. McLean, 1999: The SeaBOARR-98 Field Campaign. *NASA Tech. Memo. 1999–206892, Vol. 3*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 40 pp.
- , and G. Lazin, 2000: The SeaBOARR-99 Field Campaign. *NASA Tech. Memo. 2000–206892, Vol. 8*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, 46 pp.
- , and S. Maritorena, 2000: An evaluation of oceanographic radiometers and deployment methodologies. *J. Atmos. Ocean. Technol.*, **17**, 811–830.
- , and C.R. McClain, 2000: The calibration and validation of SeaWiFS data. *Prog. Oceanogr.*, **45**, 427–465.
- , G. Lazin, G. Zibordi, and S. McLean, 2002: An evaluation of above- and in-water methods for determining water-leaving radiances. *J. Atmos. Ocean. Technol.*, **19**, 486–515.
- Hsu, N.C., J.R. Herman, P.K. Bhartia, C.J. Seftor, O. Torres, A.M. Thompson, J.F. Gleason, T.F. Eck, and B.N. Holben, 1996: Detection of biomass burning smoke from TOMS measurements. *Geophys. Res. Lett.*, **23**, 745–748.
- , —, O. Torres, B.N. Holben, D. Tanre, T.F. Eck, A. Smirnov, B. Chatenet, and F. Lavenu, 1999: Comparisons of the TOMS aerosol index with sun photometer aerosol optical thickness: results and applications. *J. Geophys. Res.*, **104**, 6,269–6,279.
- , W.D. Robinson, S.W. Bailey, and P.J. Werdell, 2000: “The description of the SeaWiFS absorbing aerosol index.” In: McClain, C.R., R.A. Barnes, R.E. Eplee, Jr., B.A. Franz, N.C. Hsu, F.S. Patt, C.M. Pietras, W.D. Robinson, B.D. Schieber, G.M. Schmidt, M. Wang, S.W. Bailey, and P.J. Werdell, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 2. *NASA Tech. Memo. 2000–206892, Vol. 10*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 3–5.
- Iraqi, M., 1983: *An Introduction to Solar Radiation*. Academic Press, New York, 390 pp.
- Jeffrey, S.W., 1972: Preparation and some properties of crystalline chlorophyll *c*<sub>1</sub> and chlorophyll *c*<sub>2</sub> from marine algae. *Biochim. Biophys. Acta.*, **279**, 15–33.
- , and F.T. Haxo, 1968: Photosynthetic pigments of symbiotic dinoflagellates (zooxanthallae) from corals and clams. *Biol. Bull.*, **135**, 149–165.
- , and J-M. LeRoi, 1997: Simple procedures for growing SCOR reference microalgal cultures. In: *Phytoplankton Pigments in Oceanography: Guidelines to Modern Methods*. S.W. Jeffrey, R.F.C. Mantoura, and S.W. Wright, Eds., UNESCO Publishing, Paris, 181–205.
- , and R.F.C. Mantoura, 1997: Appendix A: Pigment abbreviations used by SCOR WG 78. In: *Phytoplankton Pigments in Oceanography: Guidelines to Modern Methods*. S.W. Jeffrey, R.F.C. Mantoura, and S.W. Wright, Eds., UNESCO Publishing, Paris, 447–559.
- , —, and S.W. Wright, Eds., 1997a: “Phytoplankton Pigments in Oceanography: Guidelines to Modern Methods.” UNESCO Monograph in Oceanographic Methods. *Report for SCOR WH 78, SCOR UNESCO Monographs on Oceanographic Methodology*. Paris, France.
- , —, and —, 1997b: *Phytoplankton Pigments in Oceanography: Guidelines to Modern Methods*. UNESCO Publishing, Paris, 661 pp.
- Johnson, B.C., S.S. Bruce, E.A. Early, J.M. Houston, T.R. O’Brian, A. Thompson, S.B. Hooker, and J.L. Mueller, 1996: The Fourth SeaWiFS Intercalibration Round-Robin Experiment, SIRREX-4, May 1995. *NASA Tech. Memo. 104566, Vol. 37*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 66 pp.
- , F. Sakuma, J.J. Butler, S.F. Biggar, J.W. Cooper, J. Ishida, and K. Suzuki, 1997: Radiometric measurement comparison using the Ocean Color and Temperature Scanner (OCTS) visible and near infrared integrating sphere. *J. Res. NIST*, **102**, 627–646.
- , P.-S. Shaw, S.B. Hooker, and D. Lynch, 1998a: Radiometric and engineering performance of the SeaWiFS Quality Monitor (SQM): A portable light source for field radiometers. *J. Atmos. Ocean. Technol.*, **15**, 1,008–1,022.
- , J.B. Fowler, and C.L. Cromer, 1998b: The SeaWiFS Transfer Radiometer (SXR). *NASA Tech. Memo. 1998–206892, Vol. 1*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 58 pp.
- , E.A. Early, R.E. Eplee, Jr., R.A. Barnes, and R.T. Cafrey, 1999a: The 1997 Prelaunch Calibration of SeaWiFS. *NASA Tech. Memo. 1999–206892, Vol. 4*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 51 pp.

— I —

International Organization for Standardization, 1993: *Guide to the Expression of Uncertainty in Measurement*, International Organization for Standardization, Geneva, Switzerland, 101 pp.Iqbal, M., 1983: *An Introduction to Solar Radiation*. Academic Press, New York, 390 pp.

— J —

Jeffrey, S.W., 1972: Preparation and some properties of crystalline chlorophyll *c*<sub>1</sub> and chlorophyll *c*<sub>2</sub> from marine algae. *Biochim. Biophys. Acta.*, **279**, 15–33.—, and F.T. Haxo, 1968: Photosynthetic pigments of symbiotic dinoflagellates (zooxanthallae) from corals and clams. *Biol. Bull.*, **135**, 149–165.—, and J-M. LeRoi, 1997: Simple procedures for growing SCOR reference microalgal cultures. In: *Phytoplankton Pigments in Oceanography: Guidelines to Modern Methods*. S.W. Jeffrey, R.F.C. Mantoura, and S.W. Wright, Eds., UNESCO Publishing, Paris, 181–205.—, and R.F.C. Mantoura, 1997: Appendix A: Pigment abbreviations used by SCOR WG 78. In: *Phytoplankton Pigments in Oceanography: Guidelines to Modern Methods*. S.W. Jeffrey, R.F.C. Mantoura, and S.W. Wright, Eds., UNESCO Publishing, Paris, 447–559.—, —, and S.W. Wright, Eds., 1997a: “Phytoplankton Pigments in Oceanography: Guidelines to Modern Methods.” UNESCO Monograph in Oceanographic Methods. *Report for SCOR WH 78, SCOR UNESCO Monographs on Oceanographic Methodology*. Paris, France.—, —, and —, 1997b: *Phytoplankton Pigments in Oceanography: Guidelines to Modern Methods*. UNESCO Publishing, Paris, 661 pp.Johnson, B.C., S.S. Bruce, E.A. Early, J.M. Houston, T.R. O’Brian, A. Thompson, S.B. Hooker, and J.L. Mueller, 1996: The Fourth SeaWiFS Intercalibration Round-Robin Experiment, SIRREX-4, May 1995. *NASA Tech. Memo. 104566, Vol. 37*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 66 pp.—, F. Sakuma, J.J. Butler, S.F. Biggar, J.W. Cooper, J. Ishida, and K. Suzuki, 1997: Radiometric measurement comparison using the Ocean Color and Temperature Scanner (OCTS) visible and near infrared integrating sphere. *J. Res. NIST*, **102**, 627–646.—, P.-S. Shaw, S.B. Hooker, and D. Lynch, 1998a: Radiometric and engineering performance of the SeaWiFS Quality Monitor (SQM): A portable light source for field radiometers. *J. Atmos. Ocean. Technol.*, **15**, 1,008–1,022.—, J.B. Fowler, and C.L. Cromer, 1998b: The SeaWiFS Transfer Radiometer (SXR). *NASA Tech. Memo. 1998–206892, Vol. 1*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 58 pp.—, E.A. Early, R.E. Eplee, Jr., R.A. Barnes, and R.T. Cafrey, 1999a: The 1997 Prelaunch Calibration of SeaWiFS. *NASA Tech. Memo. 1999–206892, Vol. 4*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 51 pp.

- , H.W. Yoon, S.S. Bruce, P-S. Shaw, A. Thompson, S.B. Hooker, R.E. Eplee, Jr., R.A. Barnes, S. Maritorena, and J.L. Mueller, 1999b: The Fifth SeaWiFS Intercalibration Round-Robin Experiment (SIRREX-5), July 1996. *NASA Tech. Memo. 1999-206892, Vol. 7*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, 75 pp.
- Joint Global Ocean Flux Study, 1991: JGOFS Core Measurements Protocols. *JGOFS Report No. 6*, Scientific Committee on Oceanic Research, 40 pp.
- , 1994: Protocols for the Joint Global Ocean Flux Study Core Measurements. Intergovernmental Oceanographic Commission, Scientific Committee on Oceanic Research. *Manual and Guides, UNESCO*, **29**, 91–96.
- Jones, R.D., 1991: An improved fluorescence method for the determination of nanomolar concentrations of ammonium in natural waters. *Limnol. Oceanogr.*, **36**, 814–819.
- K —
- Kahru, M., and B.G. Mitchell, 1998a: Spectral reflectance and absorption of a massive red tide off Southern California. *J. Geophys. Res.*, **103**, 21,601–21,609.
- , and —, 1998b: Evaluation of instrument self-shading and environmental errors on ocean color algorithms. *Proc. Ocean Optics XIV*, Kona, Hawaii, S. Ackleson and J. Campbell, Eds., [Available on CD-ROM.]
- Kasten, F., 1966: A new table and approximate formula for relative optical air mass. *Arch. Meteorol. Geophys. Bioklimatol. Ser. B*, **14**, 206–223.
- , and A.T. Young, 1989: Revised optical air mass tables: An approximation formula. *Appl. Opt.*, **28**, 4,735–4,738.
- Keller, M.D., W.K. Bellows, and R.R.L. Guillard, 1989: Dimethylsulphide production in marine phytoplankton. In: *Biogenic Sulphur in the Environment*. E.S. Saltzman and W.J. Cooper, Eds., American Chemical Society, Washington, DC, 167–182.
- Kieffer, H.H., and J.M. Anderson, 1998: “Use of the moon for spacecraft calibration over 350–2500 nm.” In: Sensors, Systems, and Next-Generation Satellites II, *SPIE*, **3498**, 325–336.
- King, G.M., 1988: Distribution and metabolism of quaternary amines in marine sediments. In: *Nitrogen Cycling in Coastal Marine Environments*. T.H. Blackburn and J. Sorenson, Eds., John Wiley and Sons, Chichester, United Kingdom, 143–173.
- Kiorbe, T., 1993: Turbulence, phytoplankton cell size, and the structure of pelagic food webs. *Adv. Mar. Biol.*, **29**, 1–72.
- Kirkwood, D.S., 1989: Simultaneous determination of selected nutrients in seawater. *ICES CM1989*, **29**, 12 pp.
- Koepke, P., 1984: Effective reflectance of oceanic whitecaps. *Appl. Opt.*, **23**, 1,816–1,824.
- Kostkowski, H.J., and F.E. Nicodemus, 1978: “An introduction to the measurement equation.” In: F.E. Nicodemus, Ed., Self-Study Manual on Optical Radiation Measurements, Part 1–Concepts, *NBS Tech. Note 910-2*, U.S. Department of Commerce, National Institute of Standards and Technology, Washington, DC, 58–104.
- Kwok, J., 1987: *The Artificial Satellite Analysis Program*, Computer Software Management and Information Center, Athens, Georgia, 92 pp.
- L —
- Landry, M.R., 1993: Estimating rates of growth and grazing mortality of phytoplankton by the dilution method. In: *Handbook of Methods in Aquatic Microbial Ecology*, P.F. Kemp, B.F. Sherr, E.B. Sherr, and J.J. Cole, Eds., Lewis Publishers, Boca Raton, Florida, 714–722.
- Lane, A.P., and W.M. Irvine, 1973: Monochromatic phase curves and albedos for the lunar disk. *Astron. J.*, **78**, 267–277.
- Lang, K.R., 1980: *Astrophysical Formulae*, Second Edition, Springer-Verlag, New York, 783 pp.
- Larason, T.C., S.B. Bruce, and C.L. Cromer, 1996: The NIST high accuracy scale for absolute spectral response from 406 nm to 920 nm. *J. Res. NIST*, **101**, 133–140.
- Latasa, M., R.R. Bidigare, M.E. Ondrusek, M.C. Kennicutt II, 1996: HPLC analysis of algal pigments: A comparison exercise among laboratories and recommendations for improved analytical performance. *Mar. Chem.*, **51**, 315–324.
- , —, —, and —, 1999: On the measurement of pigment concentrations by monochromator and diode-array spectrophotometers. *Mar. Chem.*, **66**, 253–254.
- Lazin, G., 1998: Correction Methods for Low-Altitude Remote Sensing of Ocean Color. *M.Sc. Thesis*, Dalhousie University, Halifax, Nova Scotia, 98 pp.
- , S. Hooker, G. Zibordi, S. McLean, and M.R. Lewis, 1998: In-water and above-water measurements of ocean color. *Proc. Ocean Optics XIV*, Office of Naval Research, Washington, DC, [Available on CD-ROM].
- Leckner, B., 1978: The spectral distribution of solar radiation at the Earth’s surface—Elements of a model. *Solar Energy*, **20**, 143–150.
- Lee, Z.P., K.L. Carder, R.G. Steward, T.G. Peacock, C.O. Davis, and J.L. Mueller, 1996: Remote sensing reflectance and inherent optical properties of oceanic waters derived from above-water measurements. *Proc. SPIE*, **2963**, 160–166.
- Liu, B.Y.H., and K.W. Lee, 1976: Efficiency of membrane Nucleopore filters for submicrometer aerosols. *Env. Sci. Tech.*, **10**, 345–50.
- Liu, K., 1978: “Earth oblateness modeling.” In: Wertz, J.R., *Spacecraft Attitude Determination and Control*, D. Reidel Publishing Company, Dordrecht, Holland, 98–102.
- Loisel, H., and A. Morel, 1998: Light scattering and chlorophyll concentration in case 1 waters: A reexamination. *Limnol. Oceanogr.*, **43**, 847–858.
- M —
- Mantoura, R.F.C., and E.M.S. Woodward, 1983: Optimization of the indophenol blue method for the automated determination of ammonia in estuarine waters. *Estuar. Coastal Shelf Sci.*, **17**, 219–224.

- , and D.J. Repeta, 1997: Calibration method for HPLC. In: *Phytoplankton Pigments in Oceanography: Guidelines to Modern Methods*. S.W. Jeffrey, R.F.C. Mantoura, and S.W. Wright, Eds., UNESCO Publishing, Paris, 407–428.
- , S.W. Wright, S.W. Jeffrey, R.G. Barlow, and D.G. Cummings, 1997: “Phytoplankton pigments in oceanography: Guidelines to modern methods.” In: S.W. Jeffrey, R.F.C. Mantoura, and S.W. Wright, Eds., UNESCO Monograph in Oceanographic Methods. *Report for SCOR WH 78, SCOR-UNESCO Monographs on Oceanographic Methodology*. Paris, France, 662 pp.
- Marggraf, W.A., and M. Griggs, 1969: Aircraft measurements and calculations of the total downward flux of solar radiation as a function of altitude. *J. Atmos. Sci.*, **26**, 469–477.
- Maritorena, S., A. Morel, and B. Gentili, 1994: Diffuse reflectance of oceanic shallow water: Influence of water depth and bottom albedo. *Limnol. Oceanogr.*, **39**, 1,689–1,703.
- , and J.E. O'Reilly, 2000: “OC2v2: Update on the initial operational SeaWiFS chlorophyll *a* algorithm.” In: O'Reilly, J.E., and 24 Coauthors, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 3. *NASA Tech. Memo. 2000-206892, Vol. 11*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 3–8.
- McClain, C.R., 2000: “SeaWiFS postlaunch calibration and validation overview.” In: McClain, C.R., E.J. Ainsworth, R.A. Barnes, R.E. Eplee, Jr., F.S. Patt, W.D. Robinson, M. Wang, and S.W. Bailey, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 1. *NASA Tech. Memo. 2000-206892, Vol. 9*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 4–12.
- , W.E. Esaias, W. Barnes, B. Guenther, D. Endres, S.B. Hooker, B.G. Mitchell, and R. Barnes, 1992: SeaWiFS Calibration and Validation Plan. *NASA Tech. Memo. 104566, Vol. 3*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 41 pp.
- , R.H. Evans, J.W. Brown, and M. Darzi, 1995: “SeaWiFS quality control masks and flags: initial algorithms and implementation strategy.” In: McClain, C.R., W.E. Esaias, M. Darzi, F.S. Patt, R.H. Evans, J.W. Brown, K.R. Arrigo, C.W. Brown, R.A. Barnes, and L. Kumar, Case Studies for SeaWiFS Calibration and Validation, Part 4. *NASA Tech. Memo. 104566, Vol. 28*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 3–7.
- , M. Darzi, R.A. Barnes, R.E. Eplee, Jr., J.K. Firestone, F.S. Patt, W.D. Robinson, B.D. Schieber, R.H. Woodward, and E-n. Yeh, 1996: SeaWiFS Calibration and Validation Quality Control Procedures. *NASA Tech. Memo. 104566, Vol. 38*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 68 pp.
- , M.L. Cleave, G.C. Feldman, W.W. Gregg, S.B. Hooker, and N. Kuring, 1998: Science quality SeaWiFS data for global biosphere research. *Sea Technol.*, **39**, 10–16.
- , and G.S. Fargion, 1999a: SIMBIOS Project 1998 Annual Report. *NASA Tech. Memo. 1999-208645*, NASA Goddard Space Flight Center, Greenbelt, Maryland, 105 pp.
- , and —, 1999b: SIMBIOS Project 1999 Annual Report, *NASA Tech. Memo. 1999-209486*, NASA Goddard Space Flight Center, Greenbelt, Maryland, 128 pp.
- McLean, S., S. Feener, J. Scrutton, M. Small, S. Hooker, and M. Lewis, 1998: SQM-II: A commercial portable light source for field radiometer quality assurance. *Proc. Ocean Opt. XIV*, [Available on CD-ROM], Office of Naval Research, Washington, DC.
- Mobley, C.D., 1999: Estimation of the remote-sensing reflectance from above-surface measurements. *Appl. Opt.*, **38**, 7,442–7,455.
- Monahan, E.C., 1971: Oceanic whitecaps. *J. Phys. Oceanogr.*, **1**, 139–144.
- Moore, G., J. Aiken, N. Rees, and S. Hooker, 1997: Remote Sensing of Bio-Optical Provinces. Abstract. *Proc. 23rd Annual Conf. Exhib. Remote Sens. Soc.*, 545–550.
- Moore, K.D., K.J. Voss, and H.R. Gordon, 1998: Spectral reflectance of whitecaps: Instrumentation, calibration, and performance in coastal waters. *J. Atmos. Ocean. Technol.*, **15**, 496–509.
- , —, and —, 2000: Spectral reflectance of whitecaps: Their contribution to water-leaving radiance. *J. Geophys. Res.*, **105**, 6,493–6,499.
- Morel, A., 1974: “Optical properties of pure water and pure seawater.” In: *Optical Aspects of Oceanography*, N.G. Jerlov and E. Steemann Nielsen, Eds., Academic Press, San Diego, California, 1–24.
- , 1980: In-water and remote measurements of ocean color. *Bound.-Layer Meteorol.*, **18**, 177–201.
- , 1988: Optical modeling of the upper ocean in relation to its biogenous matter content (Case I waters). *J. Geophys. Res.*, **93**, 10,749–10,768.
- , and L. Prieur, 1977: Analysis of variations in ocean color. *Limnol. Oceanogr.*, **22**, 709–722.
- , and B. Gentili, 1996: Diffuse reflectance of oceanic waters. III. Implication of bidirectionality for the remote sensing problem, *Appl. Opt.*, **35**, 4,850–4,862.
- , and S. Maritorena, 2001: Bio-optical properties of oceanic waters: a reappraisal. *J. Geophys. Res.*, **106**, 7,163–7,180.
- Morris, A.W., R.J.M. Howland, and A.J. Bale, 1978: A filtration unit for use with continuous autoanalytical systems applied to highly turbid waters. *Estuar. Coastal Mar. Sci.*, **6**, 105–109.
- Mueller, J.L., 1993: The First SeaWiFS Intercalibration Round-Robin Experiment, SIRREX-1, July 1992. *NASA Tech. Memo. 104566, Vol. 14*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 60 pp.
- , 1995a: “An integral method for analyzing irradiance and radiance attenuation profiles.” In: Siegel, D.A., M.C. O'Brien, J.C. Sorenson, D.A. Konnoff, E.A. Brody, J.L. Mueller, C.O. Davis, W.J. Rhea, and S.B. Hooker, Results of the SeaWiFS Data Analysis Round-Robin (DARR-94), July 1994. *NASA Tech. Memo. 104566, Vol. 26*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 44–52.

- , 1995b: “Comparison of irradiance immersion coefficients for several Marine Environmental Radiometers (MERs).” In: Mueller, J.L., R.S. Fraser, S.F. Biggar, K.J. Thome, P.N. Slater, A.W. Holmes, R.A. Barnes, C.T. Weir, D.A. Siegel, D.W. Menzies, A.F. Michaels and G. Podesta, Case Studies for SeaWiFS Calibration and Validation, Part 3. *NASA Tech. Memo. 104566, Vol. 27*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 3–15.
- , 1996: MER-2040 SN 8728: Irradiance Immersion Factors, *CHORS Tech. Memo. 004-96*, Center for Hydro-Optics and Remote Sensing, San Diego State University, San Diego, California, 3 pp.
- , 2000a: “SeaWiFS algorithm for the diffuse attenuation coefficient,  $K(490)$ , using water-leaving radiances at 490 and 555 nm.” In: O'Reilly, J.E., and 24 Coauthors, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 3. *NASA Tech. Memo. 2000-206892, Vol. 11*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 24–27.
- , 2000b: “In-water radiometric profile measurements and data analysis protocols.” In: Fargion, G.S., and J.L. Mueller, Ocean Optics Protocols for Satellite Ocean Color Sensor Validation, Revision 2. *NASA Tech. Memo. 2000-209966*, NASA Goddard Space Flight Center, Greenbelt, Maryland, 87–97.
- , and R.W. Austin, 1992: Ocean Optics Protocols for SeaWiFS Validation. *NASA Tech. Memo. 104566, Vol. 5*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 43 pp.
- , B.C. Johnson, C.L. Cromer, J.W. Cooper, J.T. McLean, S.B. Hooker, and T.L. Westphal, 1994: The Second SeaWiFS Intercalibration Round-Robin Experiment, SIRREX-2, June 1993. *NASA Tech. Memo. 104566, Vol. 16*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 121 pp.
- , and R.W. Austin, 1995: Ocean Optics Protocols for SeaWiFS Validation, Revision 1. *NASA Tech. Memo. 104566, Vol. 25*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 67 pp.
- , B.C. Johnson, C.L. Cromer, S.B. Hooker, J.T. McLean, and S.F. Biggar, 1996: The Third SeaWiFS Intercalibration Round-Robin Experiment, SIRREX-3, September 1994. *NASA Tech. Memo. 104566, Vol. 34*, S.B. Hooker, E.R. Firestone, and J.G. Acker, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 78 pp.
- , and C.C. Trees, 1997: “Revised SeaWiFS prelaunch algorithm for the diffuse attenuation coefficient  $K(490)$ .” In: Yeh, E.-n., R.A. Barnes, M. Darzi, L. Kumar, E.A. Early, B.C. Johnson, and J.L. Mueller, Case Studies for SeaWiFS Calibration and Validation, Part 4. *NASA Tech. Memo. 104566, Vol. 41*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 18–21.
- Muller-Karger, F., C.R. McClain, and P. Richardson, 1988: The dispersal of the Amazon water. *Nature*, **333**, 56–59.
- Neckel, H., and D. Labs, 1984: The solar radiation between 3,300 and 12,500 Å. *Solar Physics*, **90**, 205–258.
- Nicodemus, F.E., 1978: “More on the distribution of optical radiation with respect to position and direction.” In: F.E. Nicodemus, Ed., Self-Study Manual on Optical Radiation Measurements, Part 1—Concepts, *NBS Tech. Note 910-2*, U.S. Department of Commerce, National Institute of Standards and Technology, Washington, DC, 1–57.
- O'Reilly, J.E., S. Maritorena, B.G. Mitchell, D.A. Siegel, K.L. Carder, S.A. Garver, M. Kahru, and C. McClain, 1998: Ocean color chlorophyll algorithms for SeaWiFS. *J. Geophys. Res.*, **103**, 24,937–24,953.
- , and 21 Coauthors, 2000: “Ocean color chlorophyll *a* algorithms for SeaWiFS, OC2, and OC4: Version 4,” In: O'Reilly, J.E., and 24 Coauthors, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 3. *NASA Tech. Memo. 2000-206892, Vol. 11*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 9–23.
- O'Shea, D.C., 1985: *Elements of Modern Optical Design*, John Wiley and Sons, New York, 402 pp.
- Owens, N.J.P., and A.P. Rees, 1989: Determination of Nitrogen-15 at submicrogram levels of nitrogen using automated continuous-flow isotope ratio mass spectrometry. *Analyst*, **114**, 1,655–1,657.
- Pagano, T.S., and R.M. Durham, 1993: Moderate Resolution Imaging Spectroradiometer (MODIS). *SPIE*, **1939**, 2–17.
- Partensky, F., N. Hoepffner, W.K.W. Li, O. Ulloa, and D. Vaulot, 1993: Photoacclimation of *Prochlorococcus sp.* (Prochlorophyta) strains isolated from the North Atlantic and the Mediterranean Sea. *Plant Physiol.*, **101**, 285–296.
- Patt, F.S., and W.W. Gregg, 1994: Exact closed-form geolocation algorithm for Earth survey sensors. *Inter. J. Remote Sens.*, **15**, 3,719–3,734.
- , R.H. Woodward, and W.W. Gregg, 1997: An automated method for navigation assessment for Earth survey sensors using island targets. *Inter. J. Remote Sens.*, **18**, 3,311–3,336.
- , and S. Bilanow, 2001: “Horizon scanner triggering height analysis for OrbView-2.” Proc. 2001 Flight Mechanics Symp., *NASA Contractor Rept., 2001-209986*, NASA Goddard Space Flight Center, Greenbelt, Maryland, 559–573.
- Pope, R.M., and E.S. Fry, 1997: Absorption spectrum (380–700 nm) of pure water, II. Integrating cavity measurements, *Appl. Opt.*, **36**, 8,710–8,723.
- Press, W.H., and S.A. Teukolsky, 1992: Fitting straight line data with errors in both coordinates. *Computers in Phys.*, **6**, 274–276.

## —N—

## —O—

—, —, W.T. Vettering, and B.P. Flannery, 1992: *Numerical Recipes in C: The Art of Scientific Computing*. Cambridge University Press, 994 pp.

Priesendorfer, R.W., and C.D. Mobley, 1986: Albedos and glitter patterns of a wind roughened sea surface. *J. Phys. Oceanogr.*, 16, 1,293–1,316.

## —Q—

Quinn, P.K., 1988: Simultaneous observations of ammonia in the ocean and atmosphere in the remote marine environment. *Ph.D. Thesis*, University of Washington, Seattle, Washington, 138 pp.

—, R.J. Charlson, and T.S. Bates, 1988: Simultaneous observations of ammonia in the atmosphere and ocean. *Nature*, 335, 336–338.

—, T.S. Bates, J.E. Johnson, J.E. Covert, and R.J. Charlson, 1990: Interactions between the sulfur and reduced nitrogen cycles over the central Pacific Ocean. *J. Geophys. Res.*, 95, 16,405–16,416.

## —R—

Remer, L.A., Y.J. Kaufman, and B.N. Holben, 1996: “The size distribution of ambient aerosol particles: smoke vs. urban/industrial aerosol.” In: *Biomass Burning and Global Change*, J.S. Levine, Ed., MIT Press, Cambridge, Massachusetts, 519–530.

Ricker, W.E., 1973: Linear regressions in fishery research. *J. Fish. Res. Board Canada*, 30, 409–434.

Riley, T., and S. Bailey, 1998: The Sixth SeaWiFS/SIMBIOS Intercalibration Round-Robin Experiment (SIRREX-6) August–December 1997. *NASA Tech. Memo. 1998-206878*, NASA Goddard Space Flight Center, Greenbelt, Maryland, 26 pp.

Robins, D.B., A.J. Bale, G.F. Moore, N.W. Rees, S.B. Hooker, C.P. Gallienne, A.G. Westbrook, E. Marañón, W.H. Spooner, and S.R. Laney, 1996: AMT-1 Cruise Report and Preliminary Results. *NASA Tech. Memo. 104566, Vol. 35*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 87 pp.

Robinson, N., 1966: *Solar Radiation*. American Elsevier, New York, 347 pp.

Robinson, W.D., and M. Wang, 2000: “Vicarious calibration of SeaWiFS band 7.” In: McClain, C.R., E.J. Ainsworth, R.A. Barnes, R.E. Eplee, Jr., F.S. Patt, W.D. Robinson, M. Wang, and S.W. Bailey, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 1. *NASA Tech. Memo. 2000-206892, Vol. 9*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, 38–42.

—, G.M. Schmidt, C.R. McClain, and P.J. Werdell, 2000: “Changes made in the operational SeaWiFS processing.” In: McClain, C.R., R.A. Barnes, R.E. Eplee, Jr., B.A. Franz, N.C. Hsu, F.S. Patt, C.M. Pietras, W.D. Robinson, B.D. Schieber, G.M. Schmidt, M. Wang, S.W. Bailey, and P.J. Werdell, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 2. *NASA Tech. Memo. 2000-206892, Vol. 10*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 12–28.

## —S—

Sakuma, F., B.C. Johnson, S.F. Biggar, J.J. Butler, J.W. Cooper, M. Hiramatsu, and K. Suzuki, 1996: EOS AM-1 pre-flight radiometric measurement comparison using the Advanced Spaceborne Thermal Emission and Reflection radiometer (ASTER) visible/near-infrared integrating sphere. *SPIE*, 2820, 184–196.

Saunders, R.D., and J.B. Shumaker, 1977: Optical Radiation Measurements: The 1973 NBS Scale of Spectral Irradiance. *NBS Tech. Note 594-13*, National Bureau of Standards, Gaithersburg, Maryland, 29 pp.

—, and —, 1984: Automated radiometric linearity tester. *Appl. Opt.*, 23, 3,504–3,506.

Shaw, P-S., B.C. Johnson, S.B. Hooker, and D. Lynch, 1997: The SeaWiFS Quality Monitor—a portable field calibration light source. *Proc. SPIE*, 2963, 772–776.

Shettle, E.P., and R.W. Fenn, 1979: Models for the Aerosols of the Lower Atmosphere and the Effects of Humidity Variations on Their Optical Properties. *AFGL-TR-79-0214*, U.S. Air Force Geophysics Laboratory, Hanscom Air Force Base, Massachusetts, 94 pp.

Siegel, D.A., M.C. O’Brien, J.C. Sorenson, D.A. Konnoff, E.A. Brody, J.L. Mueller, C.O. Davis, W.J. Rhea, and S.B. Hooker, 1995: Results of the SeaWiFS Data Analysis Round-Robin (DARR-94), July 1994. *NASA Tech. Memo. 104566, Vol. 26*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 58 pp.

—, M. Wang, S. Maritorena, and W. Robinson, 2000: Atmospheric correction of satellite ocean color imagery: the black pixel assumption. *Appl. Opt.*, 39, 3,582–3,591.

Sildam, J., M.R. Lewis, and J.C. Cullen, 1998: Multiresolution analysis of diffuse attenuation coefficient with an emphasis on surface and deep layers, *Ocean Optics XIV*.

Slater, P.N., and J.M. Palmer, 1991: Solar-diffuser panel and ratioing radiometer approach to satellite sensor on-board calibration. *SPIE*, 1493, 100–105.

Smith, E.V.P., and D.M. Gottlieb, 1974: Solar flux and its variation. *Space Sci. Rev.*, 16, 771–802.

Smith, R.C., and K.S. Baker, 1981: Optical properties of the clearest natural waters (200–800 nm). *Appl. Opt.*, 20, 177–184.

—, and —, 1984: The analysis of ocean optical data. *Ocean Optics VII*, M. Blizzard, Ed., *SPIE*, 478, 119–126.

—, and —, 1986: Analysis of ocean optical data II. *Ocean Optics VIII*, P.N. Slater, Ed., *SPIE*, 637, 95–107.

—, D.A. Menzies, and C.R. Booth, 1997: Oceanographic Bio-Optical Profiling System II, *Ocean Optics XIII*, S.G. Ackelson and R. Frouin, Eds., *Proc. SPIE*, 2963, 777–789.

Stout, D.F., 1976: *Handbook of Operational Amplifier Design*, M. Kaufman, Ed., McGraw-Hill, New York, 317 pp.

Strickland, J.D.H., and T.R. Parsons, 1972: *A Practical Handbook of Sea Water Analysis*. Fish. Res. Board. Canada, 310 pp.

Subramaniam, A., R.R. Hood, C.W. Brown, E.J. Carpenter, and D.G. Capone, 2001: Detecting *Trichodesmium* blooms in SeaWiFS imagery. *Deep-Sea Res.*, 49, 107–121.

## — T, U —

Tanré, D., M. Herman, P.Y. Deschamps, and A. de Leffe, 1979: Atmospheric modeling for space measurements of ground reflectances, including bidirectional properties. *Appl. Opt.*, **18**, 213,587–213,597.

—, C. Deroo, P. Duhaut, M. Herman, J.J. Morcrette, J. Perbos, and P.Y. Deschamps, 1990: Description of a computer code to simulate the satellite signal in the solar spectrum: The 5S code. *Int. J. Remote Sens.*, **11**, 656–668.

Tassan, S., and M. Ferrari, 1995: An alternative approach to absorption measurements of aquatic particles retained on filters. *Limnol. Oceanogr.*, **40**, 1,358–1,368.

Taylor, B.N., and C.E. Kuyatt, 1994: Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results. *NIST Tech. Note 1297*, U.S. Department of Commerce, National Institute of Standards and Technology, Washington, DC, 20 pp.

Tegen, I., and A.A. Lacis, 1996: Modeling of particle size distribution and its influence on the radiative properties of mineral dust aerosol. *J. Geophys. Res.*, **101**, 19,237–19,244.

Thompson, A., and H-M. Chen, 1994: Beamcon III, a linearity measurement instrument for optical detectors. *J. Res. NIST*, **99**, 751–755.

Thuillier, G., M. Herse, P.C. Simon, D. Labs, H. Mandel, and D. Gillotay, 1998: Observation of the solar spectral irradiance from 200 to 870 nm during the ATLAS 1 and 2 missions by the SOLSPEC spectrometer. *Metrologia*, **35**, 689–695.

Tsai, B.K., and B.C. Johnson, 1998: Radiometric traceability for fundamental measurements: Estimation and evaluation of combined standard uncertainties. *Metrologia*, **35**, 587–593.

## — V —

Vance, T.C., J.D. Schumacher, P.J. Stabeno, C.T. Baier, T. Wyllie-Echeverria, C.T. Tynan, R.D. Brodeur, J.M. Napp, K.O. Coyle, M.B. Decker, G.L. Hunt, Jr., D. Stockwell, T.E. Whitledge, M. Jump, and S. Zeeman, 1998: Aquamarine waters recorded for the first time in the Eastern Bering Sea. *EOS*, **79**, 121 and 126.

Van Heukelem, L., and C.S. Thomas, 2000: Computer-assisted HPLC method development with applications to the isolation and analysis of marine phytoplankton pigments. *J. Chrom. A.*, (in press).

Van Neste, A., R.A. Duce, and C. Lee, 1987: Methylamines in the marine atmosphere. *Geophys. Res. Lett.*, **14**, 711–714.

Verity, P.G., D.K. Stoecker, M.E. Sieracki, and J.R. Nelson, 1996: Microzooplankton grazing of primary production at 140°W in the equatorial Pacific. *Deep-Sea Res. II*, **43**, 1,227–1,255.

Vermote, E.F., D. Tanre, J.L. Deuze, M. Herman, and J-J. Morcrette, 1997: Second simulation of the satellite signal in the solar spectrum, 6S: An Overview. *IEEE Trans. Geosci. Remote Sens.*, **35**, 675–686.

Vesk, M., and S.W. Jeffrey, 1987: Ultrastructure and pigments of two strains of the picoplanktonic alga *Pelagococcus subviridis* (Chrysophyceae). *J. Phycol.*, **23**, 322–336.

Vidussi, G., H. Claustre, J. Bustillos-Guzmàn, C. Cailliau, and J-C. Marty, 2000: Rapid HPLC method for determination of phytoplankton chemotaxonomic pigments: separation of chlorophyll *a* from divinyl-chlorophyll *a* and zeaxanthin from lutein. *J. Plankton Res.*, **18**, 2,377–2,382.

Vigroux, E., 1953: *Contribution à l'étude expérimentale de l'absorption de l'ozone. Ann. Phys.*, **8**, 709–762.

## — W, X —

Walker, J.H., R.D. Saunders, and A.T. Hattenburg, 1987a: Spectral Radiance Calibrations. *NBS Special Publication 250-1*, U.S. Department of Commerce, National Institute of Standards and Technology, Washington, DC, 68 pp.

—, —, J.K. Jackson, and D.A. McSparron, 1987b: Spectral Irradiance Calibrations. *NBS Special Publication 250-20*, U.S. Department of Commerce, National Institute of Standards and Technology, Washington, DC, 37 pp., plus Appendices.

—, and A. Thompson, 1994: Improved automated current control for standard lamps. *J. Res. NIST*, **99**, 255–261.

Wang, M., 1999a: Atmospheric correction of ocean color sensors: Computing atmospheric diffuse transmittance, *Appl. Opt.*, **38**, 451–455.

—, 1999b: A sensitivity study of the SeaWiFS atmospheric correction algorithm: Effects of spectral band variations. *Remote Sens. Environ.*, **67**, 348–359.

—, 2000: “The SeaWiFS atmospheric correction algorithm updates.” In: McClain, C.R., E.J. Ainsworth, R.A. Barnes, R.E. Eplee, Jr., F.S. Patt, W.D. Robinson, M. Wang, and S.W. Bailey, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 1. *NASA Tech. Memo. 2000-206892*, Vol. 9, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 57–63.

—, and H.R. Gordon, 1994: A simple, moderately accurate, atmospheric correction algorithm for SeaWiFS. *Remote Sens. Environ.*, **50**, 231–239.

—, and B. Franz, 2000: Comparing the ocean color measurements between MOS and SeaWiFS: A vicarious intercalibration approach for MOS. *IEEE Trans. Geosci. Remote Sens.*, **38**, 184–197.

—, and S.W. Bailey, 2000: “Correction of the sun glint contamination on the SeaWiFS aerosol optical thickness retrievals.” In: McClain, C.R., E.J. Ainsworth, R.A. Barnes, R.E. Eplee, Jr., F.S. Patt, W.D. Robinson, M. Wang, and S.W. Bailey, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 1. *NASA Tech. Memo. 2000-206892*, Vol. 9, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 64–68.

—, —, C.M. Pietras, and C.R. McClain, 2000a: “SeaWiFS aerosol optical thickness match-up analyses.” In: McClain, C.R., R.A. Barnes, R.E. Eplee, Jr., B.A. Franz, N.C. Hsu, F.S. Patt, C.M. Pietras, W.D. Robinson, B.D. Schieber, G.M. Schmidt, M. Wang, S.W. Bailey, and P.J. Werdell, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 2. *NASA Tech. Memo. 2000-206892*, Vol. 10, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 39–44.

- , B.A. Franz, and R.A. Barnes, 2000b: “Analysis of the SeaWiFS spectral band-pass effects.” In: McClain, C.R., R.A. Barnes, R.E. Eplee, Jr., B.A. Franz, N.C. Hsu, F.S. Patt, C.M. Pietras, W.D. Robinson, B.D. Schieber, G.M. Schmidt, M. Wang, S.W. Bailey, and P.J. Werdell, SeaWiFS Postlaunch Calibration and Validation Analyses, Part 2. *NASA Tech. Memo. 2000-206892, Vol. 10*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 6–11.
- Watanabe, T., A. Hongu, K. Honda, N. Masataka, M. Konno, and S. Saitoh, 1984: Preparation of chlorophylls and pheophytins by isocratic liquid chromatography. *Anal. Chem.*, **56**, 251–256.
- Waters, K.J., R.C. Smith, and M.R. Lewis, 1990: Avoiding ship-induced light-field perturbation in the determination of oceanic optical properties. *Oceanogr.*, **3**, 18–21.
- Wehrli, C., 1985: *Extraterrestrial Solar Spectrum*, Publ. 615, *Physikalisch-Meteorologisches Observatorium World Radiation Center*, Davos-Dorf, Switzerland, 23 pp.
- Welschmeyer, N.A., 1994: Fluorometric analysis of chlorophyll-a in the presence of chlorophyll-b and pheopigments. *Limnol. Oceanogr.*, **39**, 1,985–1,992.
- Wertz, J.R., 1978: Solar system constants (Appendix L). *Spacecraft Attitude Determination and Control*, D. Reidel Publishing Company, Dordrecht, Holland, 819.
- Woodward, R.H., R.A. Barnes, C.R. McClain, W.E. Esaias, W.L. Barnes, and A.T. Mecherikunnel, 1993: Modeling of the SeaWiFS Solar and Lunar Observations. *NASA Tech. Memo. 104566, Vol. 10*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 26 pp.
- Wright, S.W., S.W. Jeffrey, F.C. Mantoura, C.A. Llewellyn, T. Bjørnland, D. Repeta, and N. Welschmeyer, 1991: Improved HPLC method for the analysis of chlorophylls and carotenoids from marine phytoplankton. *Mar. Ecol. Prog. Ser.*, **77**, 183–196.
- Wyatt, C.L., 1978: *Radiometric Calibration: Theory and Methods*, Academic Press, New York, 200 pp.
- , 1987: *Radiometric System Design*, Macmillan Publishing Company, New York, 315 pp.
- Y —
- Yang, H., and H.R. Gordon, 1997: Remote sensing of ocean color: Assessment of water-leaving radiance bidirectional effects on atmospheric diffuse transmittance. *Appl. Opt.*, **36**, 7,887–7,897.
- Yeh, E-n., M. Darzi, and L. Kumar, 1997: “SeaWiFS stray light correction algorithm.” In: Yeh, E-n., R.A. Barnes, M. Darzi, L. Kumar, E.A. Early, B.C. Johnson, J.L. Mueller, and C.C. Trees, Case Studies for SeaWiFS Calibration and Validation, Part 4. *NASA Tech. Memo. 104566, Vol. 41*, S.B. Hooker, and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 24–30.
- Young, A.T., 1980: Revised depolarization corrections for atmospheric extinction. *Appl. Opt.*, **19**, 3,427–3,428.
- Z —
- Zaneveld, J.R., D.M. Roach, and H. Pak, 1974: The determination of the index of refraction distribution of oceanic particulates. *J. Geophys. Res.*, **79**, 4,091–4,095.
- , J.C. Kitchen, A. Bricaud, and C. Moore, 1992: Analysis of *in situ* spectral absorption meter data. *Ocean Optics XI, Proc. SPIE*, **1750**, 187–200.
- Zibordi, G., and M. Ferrari, 1995: Instrument self-shading in underwater optical measurements: Experimental data. *Appl. Opt.*, **34**, 2,750–2,754.
- , J.P. Doyle, and S.B. Hooker, 1999: Offshore tower shading effects on in-water optical measurements. *J. Atmos. Ocean. Technol.*, **16**, 1,767–1,779.
- , G., J-F. Berthon, J.P. Doyle, S. Grossi, D. van der Linde, C. Targa, and L. Alberotanza 2002: Coastal Atmosphere and Sea Time Series (CoASTS), Part 1: A Tower-Based Long-Term Measurement Program. *NASA Tech. Memo. 2002-206892, Vol. 19*, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 29 pp.

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Johnson, B.C., J.B. Fowler, and C.L. Cromer, 1998: The SeaWiFS Transfer Radiometer (SXR). *NASA Tech. Memo. 1998-206892*, Vol. 1, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 58 pp.

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Vol. 4

Johnson, B.C., E.A. Early, R.E. Eplee, Jr., R.A. Barnes, and R.T. Caffrey, 1999: The 1997 Prelaunch Radiometric Calibration of SeaWiFS. *NASA Tech. Memo. 1999-206892*, Vol. 4, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 51 pp.

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Firestone, E.R., and S.B. Hooker, 2000: SeaWiFS Postlaunch Technical Report Series Cumulative Index: Volumes 1–5. *NASA Tech. Memo. 2000-206892*, Vol. 6, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 14 pp.

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Hooker, S.B., and G. Lazin, 2000: The SeaBOARR-99 Field Campaign. *NASA Tech. Memo. 2000-206892*, Vol. 8, S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, 46 pp.

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