NASA Technical Memorandum 104566, Vol. 30

SeaWiFS Technical Report Series

Stanford B. Hooker and Elaine R. Firestone, Editors

Volume 30, SeaWiFS Technical Report Series Cumulative Index: Volumes 1–29

Elaine R. Firestone and Stanford B. Hooker

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1996

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 is expected to be launched in 1996, on the SeaStar satellite, being built by Orbital Sciences Corporation (OSC). The SeaWiFS Project at the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC), has undertaken the responsibility of documenting all aspects of this mission, which is critical to the ocean color and marine science communities. This documentation, entitled the *SeaWiFS Technical Report Series,* is in the form of NASA Technical Memorandum Number 104566. All reports published are volumes within the series. This particular volume serves as a reference, or guidebook, to the previous 29 volumes and consists of 5 sections including: an errata, an index to key words and phrases, a list of all references cited, and lists of acronyms and symbols used. It is the editors' intention to publish a cumulative index of this type after every five volumes in the series. Each index covers the reference topics published in all previous editions, that is, each new index will include all of the information contained in the preceeding indices.

1. INTRODUCTION

This is the fifth in a series of indices, published as a separate volume in the Sea-viewing Wide Field-of-view (SeaWiFS) Technical Report Series, and includes information found in the first 29 volumes of the series. The Report Series is written under the National Aeronautics and Space Administration's (NASA) Technical Memorandum (TM) Number 104566. The volume numbers, authors, and titles of the volumes covered in this index are:

Vol. 1: S.B. Hooker, W.E. Esaias, G.C. Feldman, W.W. Gregg, and C.R. McClain, *An Overview of SeaWiFS and Ocean Color.*

Vol. 2: W.W. Gregg, *Analysis of Orbit Selection for SeaWiFS: Ascending vs. Descending Node.*

Vol. 3: C.R. McClain, W.E. Esaias, W. Barnes, B. Guenther, D. Endres, S.B. Hooker, B.G. Mitchell, and R. Barnes, *SeaWiFS Calibration and Validation Plan.*

Vol. 4: C.R. McClain, E. Yeh, and G. Fu, *An Analysis of GAC Sampling Algorithms: A Case Study.*

Vol. 5: J.L. Mueller and R.W. Austin, *Ocean Optics Protocols for SeaWiFS Validation.*

Vol. 6: E.R. Firestone and S.B. Hooker, *SeaWiFS Technical Report Series Cumulative Index: Volumes 1–5.*

Vol. 7: M. Darzi, *Cloud Screening for Polar Orbiting Visible and IR Satellite Sensors.*

Vol. 8: S.B. Hooker, W.E. Esaias, and L.A. Rexrode, *Proceedings of the First SeaWiFS Science Team Meeting.*

Vol. 9: W.W. Gregg, F. Chen, A. Mezaache, J. Chen, and J. Whiting, *The Simulated SeaWiFS Data Set.*

Vol. 10: R.H. Woodward, R.A. Barnes, W.E. Esaias, W.L. Barnes, A.T. Mecherikunnel, *Modeling of the SeaWiFS Solar and Lunar Observations.*

Vol. 11: F.S. Patt, C.M. Hoisington, W.W. Gregg, and P.L. Coronado, *Analysis of Selected Orbit Propagation Models.*

Vol. 12: E.R. Firestone and S.B. Hooker, *SeaWiFS Technical Report Series Cumulative Index: Volumes 1–11.*

Vol. 13: C.R. McClain, J.C. Comiso, R.S. Fraser, J.K. Firestone, B.D. Schieber, E-n. Yeh, K.R. Arrigo, and C.W. Sullivan, *Case Studies for SeaWiFS Calibration and Validation, Part 1.*

Vol. 14: J.L. Mueller, *The First SeaWiFS Intercalibration Round-Robin Experiment, SIRREX-1, July 1992.*

Vol. 15: W.W. Gregg, F.S. Patt, and R.H. Woodward, *The Simulated SeaWiFS Data Set, Version 2.*

Vol. 16: Mueller, J.L., B.C. Johnson, C.L. Cromer, J.W. Cooper, J.T. McLean, S.B. Hooker, and T.L. Westphal, *The Second SeaWiFS Intercalibration Round-Robin Experiment, SIRREX-2, June 1993.*

Vol. 17: Abbott, M.R., O.B. Brown, H.R. Gordon, K.L. Carder, R.E. Evans, F.E. Muller-Karger, and W.E. Esaias, *Ocean Color in the 21st Century: A Strategy for a 20-Year Time Series.*

Vol. 18: Firestone, E.R., and S.B. Hooker, *SeaWiFS Technical Report Series Summary Index: Volumes 1–17.*

Vol. 19: 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.*

Vol. 20: Hooker, S.B., C.R. McClain, J.K. Firestone, T.L. Westphal, E-n. Yeh, and Y. Ge, *The SeaWiFS Bio-Optical Archive and Storage System (SeaBASS), Part 1.*

Vol. 21: Acker, J.G., *The Heritage of SeaWiFS: A Retrospective on the CZCS NIMBUS Experiment Team (NET) Program.*

Vol. 22: Barnes, R.A., W.L. Barnes, W.E. Esaias, and C.R. McClain, *Prelaunch Acceptance Report for the SeaWiFS Radiometer.*

Vol. 23: Barnes, R.A., A.W. Holmes, W.L. Barnes, W.E. Esaias, C.R. McClain, and T. Svitek, *SeaWiFS Prelaunch Radiometric Calibration and Spectral Characterization.*

Vol. 24: Firestone, E.R., and S.B. Hooker, *SeaWiFS Technical Report Series Summary Index: Volumes 1–23.*

Vol. 25: Mueller, J.L., and R.W. Austin, *Ocean Optics Protocols for SeaWiFS Validation, Revision 1.*

Vol. 26: Siegel, D.A., M.C. O'Brien, J.C. Sorensen, 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.*

Vol. 27: J.L. Mueller, 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.*

Vol. 28: McClain, C.R., K.R. 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.*

Vol. 29: Aiken, J., G.F. Moore, C.C. Trees, S.B. Hooker, and D.K. Clark, *The SeaWiFS CZCS-Type Pigment Algorithm.*

This volume within the series serves as a reference, or guidebook, to the aforementioned volumes. It consists of the four main sections included with the first two indices published, Volumes 6 and 12, in the series: a cumulative index to key words and phrases, a glossary of acronyms, a list of symbols used, and a bibliography of all references cited in the series. In addition, as in Volumes 12, 18, and 24, an errata section has been added to address issues and needed corrections that have come to the editors' attention since the volumes were first published.

The nomenclature of the index is a familiar one, in the sense that it is a sequence of alphabetical entries, but it utilizes a unique format since multiple volumes are involved. Unless indicated otherwise, the index entries refer to some aspect of the SeaWiFS instrument or project, for example, the *mission overview* index entry refers to an overview of the SeaWiFS mission. 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, as is the case in Volumes 13 and 19, to name a few. 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. In this case, the figure or table number is given with the page number on which it appears.

2. ERRATA

1. In the Table of Contents in Volume 19, Chapter 7's title was incorrectly printed as "The Generation of CZCS Near-Real Time Ancillary Data Files." The correct title is "The Generation of SeaWiFS Near-Real Time Ancillary Data Files."
2. In Volume 29, all the ratios in Fig. 5 were transposed—that is, the y axis for panel **a** should be C_{aa}/C_{TP}, for panel **b** C_{PS}/C_{TP}, and so on for all the graph figures. The legend for the figure has the same error. The first sentence of the legend should read (with the panel equations listed here for ease of reading): "Global total pigment ratios for a variety of biogeochemical provinces:
   - **a)** C_{aa}/C_{TP},
   - **b)** C_{PS}/C_{TP},
   - **c)** $(C_{PS}+C_{PP})/C_{TP}$,
   - **d)** C_c/C_{TP},
   - **e)** C_b/C_{TP},
   - **f)** C_{PP}/C_{TP},
   - **g)** $C_{abc}/(C_{PS}+C_{PP})$,
   - **h)** $C_{aa}/(C_{PS}+C_{PP})$, and
   - **i)** $(C_{PS}+C_{PP})/C_{PP}$."
3. In Volume 29, page 29, first sentence under (29) should read: "The correction is applied to the chlorophyll and pigment, determined using (23) and (24), where the pigment concentration is less than $2\,\mathrm{mg\,m^{-3}}$, i.e., when $L_{WN}(443)$ is valid."

4. Note: Since the issuance of previous volumes, a number of the references cited have changed their publication status, i.e., they have gone from "submitted" or "in press" to printed matter. In other instances, some part (or parts) of the citation, e.g., the title or year of publication, has changed or was printed incorrectly. Listed below are the references in question as they were cited in one or more of the first 29 volumes in the series, along with how they now appear in the references section of this volume.

Original Citation

Ding, K., and H.R. Gordon, 1995: Analysis of the influence of O_2 "A" band absorption on atmospheric correction of ocean color imagery. *Appl. Opt.,* (submitted).

Revised Citation

Ding, K., and H.R. Gordon, 1995: Analysis of the influence of O_2 "A" band absorption on atmospheric correction of ocean color imagery. *Appl. Opt.,* **34,** 2,068–2,080.

Original Citation

Duysens, L.N.M., 1956: The flattening of the absorption spectrum of suspensions as compared with that of solutions. *Biochim. Biophys. Acta.,* **19,** 255, 257, 261.

Revised Citation

Duysens, L.N.M., 1956: The flattening of the absorption spectrum of suspensions as compared with that of solutions. *Biochim. Biophys. Acta.,* **19,** 1–12.

Original Citation

Gordon, H.R., and K. Ding, 1991: Self shading of in-water optical instruments. *Limnol. Oceanogr.,* **37,** 491–500.

Revised Citation

Gordon, H.R., and K. Ding, 1992: Self shading of in-water optical instruments. *Limnol. Oceanogr.,* **37,** 491–500.

Original Citation

Gregg, W.W., 1993: The Simulated SeaWiFS Data Set, Version 1. *NASA Tech. Memo. 104566, Vol. 9,* S.B. Hooker and E.R. Firestone, Eds., NASA Goddard Space Flight Center, Greenbelt, Maryland, 17 pp.

Revised Citation

Gregg, W.W., F.C. Chen, A.L. Mezaache, J.D. Chen, and J.A. Whiting, 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.

Original Citation

McClain, C.R., G. Feldman, and W. Esaias, 1993: Oceanic primary production. *Global Change Atlas,* C. Parkinson, J. Foster, and R. Gurney, Eds., Cambridge University Press, 251–263.

Revised Citation

McClain, C.R., G. Feldman, and W. Esaias, 1993: Oceanic biological productivity. *Atlas of Satellite Observations Related to Global Change,* R.J. Gurney, J.L. Foster, and C.L. Parkinson, Eds., Cambridge University Press, 251–263.

Original Citation

Pegau, W.S., J.S. Cleveland, W. Doss, C.D. Kennedy, R.A. Maffione, J.L. Mueller, R. Stone, C.C. Trees, A.D. Weidemann, W.H. Wells, and J.R.V. Zaneveld, 1995: A comparison of methods for the measurement of the absorption coefficient in natural waters. *J. Geophys. Res.,* (submitted).

Revised Citation

Pegau, W.S., J.S. Cleveland, W. Doss, C.D. Kennedy, R.A. Maffione, J.L. Mueller, R. Stone, C.C. Trees, A.D. Weidemann, W.H. Wells, and J.R.V. Zaneveld, 1995: A comparison of methods for the measurement of the absorption coefficient in natural waters. *J. Geophys. Res.,* **100,** 13,201–13,220.

Original Citation

Siegel, D.A., A.F. Michaels, J. Sorensen, M.C. O'Brien, and M. Hammer, 1995: Seasonal variability of light availability and its utilization in the Sargasso Sea. *J. Geophys. Res.,* **100,** 8,695–8,713.

Revised Citation

Siegel, D.A., A.F. Michaels, J. Sorensen, M.C. O'Brien, and M. Hammer, 1995: Seasonal variability of light availability and its utilization in the Sargasso Sea. *J. Geophys. Res.,* **100,** 8,695–8,713.

Original Citation

Sorensen, J., D. Konnoff, M.C. O'Brien, E. Fields, and D.A. Siegel, 1994: The BBOP data processing system. *Ocean Optics XII,* SPIE, **2,258,** 539–546.

Revised Citation

Sorensen, J.C., M. O'Brien, D. Konoff, and D.A. Siegel, 1994: The BBOP data processing system. *Ocean Optics XII,* J.S. Jaffe, Ed., *SPIE,* **2,258,** 539–546.

Original Citation

Sosik, H.M., and B.G. Mitchell, 1995: Light absorption by phytoplankton, photosynthetic pigments, and detritus in the California Current System. *Deep-Sea Res.,* (in press).

Revised Citation

Sosik, H.M., and B.G. Mitchell, 1996: Light absorption by phytoplankton, photosynthetic pigments, and detritus in the California Current System. *Deep-Sea Res.,* **42,** 1,717–1,748.

Original Citation

Zibordi, G., and G.M. Ferrari, 1995: Instrument self-shading in underwater optical measurements: experimental data. *Appl. Opt.,* (submitted).

Revised Citation

Zibordi, G., and G.M. Ferrari, 1995: Instrument self-shading in underwater optical measurements: experimental data. *Appl. Opt.,* **34,** 2,750–2,754.

CUMULATIVE INDEX

Unless indicated otherwise, the index entries that follow refer to some aspect of the SeaWiFS instrument or project. For example, the *mission overview* index entry refers to an overview of the SeaWiFS mission.

– A –

– B –

– D –

– E –

– F –

– G –

– T, U –

– V –

– W, X, Y –

– Z –

Glossary

– A –

A-band Absorption Band
A/D Analog-to-Digital (also written as AD)
A&M (Texas) Agriculture and Mechanics (University)
AC Alternating Current
ACC Antarctic Circumpolar Current
ACRIM Active Cavity Radiometer Irradiance Monitor
ACS Attitude Control System
ADC Analog-to-Digital Converter
ADEOS Advanced Earth Observation Satellite (Japan)
AE Ångström Exponent
AIBOP Automated and Interactive Bio-Optical Processing
ALSCAT ALPHA and Scattering Meter [Note: the symbol α corresponds to $c(\lambda)$, the beam attenuation coefficient, in present usage.]
AM-1 Not an acronym, used to designate the morning platform of EOS.
AMC Angular Momentum Compensation
ANSI American National Standards Institute
AOCI Airborne Ocean Color Imager
AOL Airborne Oceanographic Lidar
AOP Apparent Optical Property
AOS/LOS Acquisition of Signal/Loss of Signal
APL Applied Physics Laboratory
ARGOS Not an acronym, but the name given to the data collection and location system on the NOAA Operational Satellites.
ARI Accelerated Research Initiative
ASCII American Standard Code for Information Interchange
ASI Italian Space Agency
ASR Absolute Spectral Response
AT Along-Track
AU Astronomical Unit
AVHRR Advanced Very High Resolution Radiometer
AVIRIS Advanced Visible and Infrared Imaging Spectrometer
AXBT Airborne Expendable Bathythermograph

– B –

BAOPW-1 First Bio-optical Algorithm and Optical Protocols Workshop
BAOPW-2 Second Bio-optical Algorithm and Optical Protocols Workshop
BAOPW-3 Third Bio-optical Algorithm and Optical Protocols Workshop
BAOPW-4 Fourth Bio-optical Algorithm and Optical Protocols Workshop
BAOPW-5 Fifth Bio-optical Algorithm and Optical Protocols Workshop
BAS British Antarctic Survey
BATS Bermuda Atlantic Time-Series Station
BBOP Bermuda Bio-Optical Profiler
BBR Band-to-Band Registration
BCRS Dutch Remote Sensing Board
BEP Benguela Ecology Program
BER Bit Error Rate
BMFT Minister for Research and Technology (Germany)
BOAWG Bio-Optical Algorithm Working Group
BOFS British Ocean Flux Study
BOMS Bio-Optical Moored Systems
BOPS Bio-Optical Profiling System
bpi bits per inch
BRDF Bidirectional Reflectance Distribution Function
BSI Biospherical Instruments, Incorporated
BSIXR BSI's Transfer Radiometer
BSM Bio-Optical Synthetic Model
BTR Bright Target Recovery
BUV Backscatter Ultraviolet Spectrometer
BWI Baltimore-Washington International (airport)

– C –

CalCoFI California Cooperative Fisheries Institute
Cal/Val Calibration and Validation
CALVAL Calibration and Validation
Case-1 Water whose reflectance is determined solely by absorption.
Case-2 Water whose reflectance is significantly influenced by scattering.
CCD Charge Coupled Device
CCPO Center for Coastal Physical Oceanography (Old Dominion University)
CDF (NASA) Common Data Format
CDOM Colored Dissolved Organic Material
CD-ROM Compact Disk-Read Only Memory
CDR Critial Design Review
CEC Commission of the European Communities
CENR Committee on Environment and Natural Resources
CHN Carbon, Hydrogen, and Nitrogen
CHORS Center for Hydro-Optics and Remote Sensing (San Diego State University)
c.i. confidence interval
CICESE *Centro de Investigación Científica y de Educación Superior de Ensenada* (Mexico)
CIRES Cooperative Institute for Research in Environmental Sciences
COADS Comprehensive Ocean-Atmosphere Data Set
COARE Coupled Ocean-Atmosphere Response Experiment
COOP Coastal Ocean Optics Program
COTS Commercial Off-The-Shelf (software)
CPR Continuous Plankton Recorder
cpu Central Processing Unit
CRM Contrast Reduction Meter
CRN Italian Research Council
CRSEO Center for Remote Sensing and Environmental Optics (University of California at Santa Barbara)
CRT Calibrated Radiance Tapes or Cathode Ray Tube (depending on usage).
CRTT CZCS Radiation and Temperature Tape
CSC Computer Sciences Corporation
CSIRO Commonwealth Scientific and Industrial Research Organization (of Australia)
CSL Computer Systems Laboratory
CT Cross-Track
CTD Conductivity, Temperature, and Depth
c.v. coefficient of variation
CVT Calibration and Validation Team
CW Continuous Wave
CWR Clear Water Radiance
CZCS Coastal Zone Color Scanner

– D –

DAAC Distributed Active Archive Center
DAO Data Assimilation Office
DARR Data Analysis Round-Robin
DARR-94 First Data Analysis Round-Robin
DARR-2 Second Data Analysis Round-Robin
DAT Digital Audio Tape
DC Direct Current or Digital Count (depending on usage)
DCF Data Capture Facility
DCOM Dissolved Colored Organic Material
DCP Data Collection Platform
DEC Digital Equipment Corporation
DIW Distilled Water
DMS dimethyl sulfide
DOC Dissolved Organic Carbon
DoD Department of Defense
DOM Dissolved Organic Matter
DOS Disk Operating System
DSP Not an acronym, but an image display and analysis package developed at RSMAS University of Miami.
DU Dobson Units
DXW Not an acronym, but a lamp designator.

– E –

E-mail Electronic Mail
EAFB Edwards Air Force Base
EC Excluding CHORS (data)
ECEF Earth-Centered Earth-Fixed
ECMWF European Centre for Medium Range Weather Forecasts
ECT Equator Crossing Time
EDT Eastern Daylight Time
EEZ Exclusive Economic Zone
ENSO El Niño Southern Oscillation
ENVISAT Environmental Satellite
EOF Empirical Orthogonal Function
EOS Earth Observing System
EOSAT Earth Observation Satellite Company
EOSDIS EOS Data Information System
EPA Environmental Protection Agency
EP-TOMS Earth Probe-Total Ozone Mapping Spectroradiometer
EqPac Equatorial Pacific (Process Study)
ER-2 Earth Resources-2
ERBE Earth Radiation Budget Experiment
ERBS Earth Radiation Budget Sensor
ERL (NOAA) Environmental Research Laboratories
ERS Earth Resources Satellite
ESA European Space Agency
EST Eastern Standard Time
EURASEP European Association of Scientists in Environmental Pollution
EUVE Extreme Ultraviolet Explorer

– F –

FASCAL Fast Calibration (Facility)
FDDI Fiber Data Distribution Interface
FEL Not an acronym, but a lamp designator.
FGGE First GARP Global Experiment
FLUPAC (Geochemical) Fluxes in the Pacific (Ocean)
FNOC Fleet Numerical Oceanography Center
FORTRAN Formula Translation (computer language)
FOV Field-of-View
FPA Focal Point Assembly
FRD Federal Republic of Deutschland (Germany)
ftp File Transfer Protocol
FWHM Full-Width at Half-Maximum
FY Fiscal Year

– G –

GAC Global Area Coverage, coarse resolution satellite data with a nominal ground resolution at nadir of approximately 4 km.
GARP Global Atmospheric Research Program
GASM General Angle Scattering Meter
gcc GNU C Compiler
GF/F Not an acronym; a specific type of glass fiber filter manufactured by Whatman
GIN Greenland, Iceland, and Norwegian Seas
GISS Goddard Institute for Space Studies
GLI Global Imager
GLOBEC Global Ocean Ecosystems dynamics
GMT Greenwich Mean Time
GNU GNU's not UNIX
GOES Geostationary Operational Environmental Satellite
GOFS Global Ocean Flux Study
GOMEX Gulf of Mexico Experiment
GP Global Processing (algorithm)
GPM General Perturbations Model
GPS Global Positioning System
GRGS Groupe de Recherche de Geodesie Spatial
GRIB Gridded Binary
GRIDTOMS Gridded TOMS (data set)
GSFC Goddard Space Flight Center
GSO Graduate School of Oceanography (University of Rhode Island)
G/T System Gain/Total System Noise Temperature
GUI Graphical User Interface

– H –

HDF Hierarchical Data Format
HEI Hoffman Engineering, Incorporated
HeNe Helium-Neon
HHCRM Hand-Held Contrast Reduction Meter
HIRIS High Resolution Imaging Spectrometer
HN (Polaroid) Not an acronym; a linear sheet polarizer used to check the polarization sensitivity of SeaWiFS bands 7 and 8.
HOTS Hawaiian Optical Time Series
HP Hewlett Packard
HPGL Hewlett Packard Graphics Language
HPLC High Performance Liquid Chromatography
HQ Headquarters
HR (Polaroid) Not an acronym; a linear sheet polarizer used to check the polarization sensitivity of SeaWiFS bands 1–6.
HRPT High Resolution Picture Transmission
HST Hawaii Standard Time
HYDRA Hydrographic Data Reduction and Analysis

– I –

I/O Input/Output
IAPSO International Association for the Physical Sciences of the Ocean
IAU International Astrophysical Union
IBM International Business Machines
ICD Interface Control Document
ICES International Council on Exploration of the Seas
ICESS Institute for Computational Earth System Science (University of California at Santa Barbara)
IDL Interactive Data Language
IFOV Instantaneous Field of View
IMS Information Management System
IOP Inherent Optical Property
IP Internet Protocol
IPD Image Processing Division
IR Infrared
IRIX Not an acronym, a computer operating system.
ISCCP International Satellite Cloud Climatology Project
ISIC Integrating Sphere Irradiance Collector
ISTP International Solar Terrestrial Program
IUCRM Inter-Union Commission on Radio Meteorology
IUE International Ultraviolet Explorer

– J –

JAM JYACC Application Manager
JARE Japanese Antarctic Research Expedition
JGOFS Joint Global Ocean Flux Study
JHU Johns Hopkins University
JOI Joint Oceanographic Institute
JPL Jet Propulsion Laboratory
JRC Joint Research Center

– K –

KQ K_d Quality (flag)

– L –

L&N Leeds & Northrup
LAC Local Area Coverage, fine resolution satellite data with a nominal ground resolution at nadir of approximately 1 km.
LANDSAT Land Resources Satellite
LCD Least Common Denominator (file)
LDEO Lamont-Doherty Earth Observatory (Columbia University)
LDGO Lamon-Doherty Geological Observatory (Columbia University)
LDTNLR Local Dynamic Threshold Nonlinear Raleigh
Level-0 Raw data.
Level-1 Calibrated radiances.
Level-2 Derived products.
Level-3 Gridded and averaged derived products.
LMCE *Laboratoire de Modelisation du climat et de l'Environment* (France)
LOC Local Time
LODYC *Laboratoire d'Océanographie et de Dynamique du climat* (France)
LOICZ Land Ocean Interaction in the Coastal Zone
LPCM *Laboratoire de Physique et Chimie Marines* (France)
LRER Long-Range Ecological Research
LSB Least Significant Bits
LSF Line Spread Function
LUT Look-Up Table

– M –

MAREX Marine Resources Experiment Program
MARS Multispectral Airborne Radiometer System
MASSS Multi-Agency Ship-Scheduling for SeaWiFS
MBARI Monterey Bay Aquarium Research Institute
MEM Maximum Entropy Method
MER Marine Environmental Radiometer
MERIS Medium Resolution Imaging Spectrometer
METEOSAT Meteorological Satellite
MF Major Frame
mF Minor Frame
MIPS Millions of Instructions Per Second
MIT Massachusetts Institute of Technology
MIZ Marginal Ice Zone
MLE Maximum Likelihood Estimator
MLML Moss Landing Marine Laboratory (San Jose State University)
MO Magneto-Optical
MOBY Marine Optical Buoy
MOCE Marine Optical Characterization Experiment
MODARCH MODIS Document Archive
MODIS Moderate Resolution Imaging Spectroradiometer
MODIS-N Nadir-viewing MODIS instrument
MODIS-T Tilted MODIS instrument to minimize sun glint
MOS Marine Optical Spectroradiometer
MOU Memorandum of Understanding
MSB Most Significant Bits
MS/DOS Microsoft/Disk Operating System
MTF Modulation Transfer Function

– N –

NABE North Atlantic Bloom Experiment
NAS National Academy of Science
NASA National Aeronautics and Space Administration
NASCOM NASA Communications
NASDA National Space Development Agency (Japan)
NASIC NASA Aircraft/Satellite Instrument Calibration
NAVSPASUR Naval Space Surface Surveillance
NCAR National Center for Atmospheric Research
NCCOSC Navy Command, Control, and Ocean Surveillance Center
NCDC (NOAA) National Climatic Data Center
NCDS NASA Climate Data System
NCSA National Center for Supercomputing Applications
NCSU North Carolina State University
NDBC National Data Buoy Center
NDVI Normalized Difference Vegetation Index
NEAT Northeast Atlantic
NEdL Noise Equivalent Differential Spectral Radiance
NEδL Noise Equivalent delta Radiance
NEΔT Noise Equivalent Delta Temperature
NER Noise Equivalent Radiance
NERC Natural Environment Research Council

NESDIS National Environmental Satellite Data Information Service
NESS National Environmental Satellite Service
NET NIMBUS Experiment Team
netCDF (NASA) Network Common Data Format
NFS Network File System
NGDC National Geophysical Data Center
NIMBUS Not an acronym, but a series of NASA experimental weather satellites containing a wide variety of atmosphere, ice, and ocean sensors.
NIST National Institute of Standards and Technology
NMC National Meteorological Center
NMFS National Marine Fisheries Service
NOAA National Oceanic and Atmospheric Administration
NOARL Naval Oceanographic and Atmospheric Research Laboratory
NODC National Oceanographic Data Center
NOPS NIMBUS Observation Processing System
NORAD North American Air Defense (Command)
NOS National Ocean Service
NRA NASA Research Announcement
NRaD Naval Research and Development
NRIFSF National Research Institute of Far Seas Fisheries (Japan)
NRL Naval Research Laboratory
NRT Near-Real Time
NSCAT NASA Scatterometer
NSF National Science Foundation
NSSDC National Space Science Data Center

– O –

OAM Optically Active Materials
OCDM Ocean Color Data Mission
OCEAN Ocean Colour European Archive Network
OCS Ocean Color Scanner
OCTS Ocean Color Temperature Sensor (Japan)
ODAS Ocean Data Acquisition System
ODEX Optical Dynamics Experiment
ODU Old Dominion University
OFFI Optical Free-Fall Instrument
OI Original Irradiance
OLIPAC Oligotrophy in the Pacific (Ocean)
OMEX Ocean Marine Exchange
OMP-8 Not an acronym, but a type of marine antibiofouling compound.
ONR Office of Naval Research
OPT Ozone Processing Team
OS Operating System
OSC Orbital Sciences Corporation
OSFI Optical Surface Floating Instrument
OSSA Office of Space Science and Applications
OSU Oregon State University

– P –

PAR Photosynthetically Available Radiation
PC (IBM) Personal Computer
PDR Preliminary Design Review
PDT Pacific Daylight Time
PFF Programmable Frame Formatter
PI Principal Investigator
PIKE Phased Illuminated Knife Edge
PM-1 Not an acronym, used to designate the afternoon platform of EOS.
PMEL Pacific Marine Environmental Laboratory
PML Plymouth Marine Laboratory
POC Particulate Organic Carbon
POLDER Polarization Detecting Environmental Radiometer (France) or Polarization and Directionality of the Earth's Reflectance (depending on usage).
PON Particulate Organic Nitrogen
PPC Photoprotectant Carotenoids
PR Photo Research
PRIME Plankton Reactivity in the Marine Environment
PSC Photosynthetic Carotenoids
PST Pacific Standard Time
PSU Practical Salinity Units
PTFE Polytetrafluoroethylene
PUR Photosynthetically Usable Radiation

– Q –

QC Quality Control
QED Quantum Efficient Device

– R –

R&A Research and Applications
R&D Research and Development
R/V Research Vessel
RACER Research on Antarctic Coastal Ecosystem Rates
RDBMS Relational Database Management System
RDF Radio Direction Finder
RF Radio Frequency
RFP Request for Proposals
RISC Reduced Instruction Set Computer
rms root mean squared
ROSIS Remote Sensing Imaging Spectrometer, also known as the Reflective Optics System Imaging Spectrometer (Germany)
ROV Remotely Operated Vehicle
ROW Reverse Osmosis Water
RR Round-Robin
RSMAS Rosenstiel School for Marine and Atmospheric Sciences (University of Miami)
RSS Remote Sensing Systems (Inc.)
RTOP Research and Technology Operation Plan

– S –

S/C Spacecraft
S/N Serial Number
SAC Satellite Applications Centre
SARSAT Search and Rescue Satellite
SBRC (Hughes) Santa Barbara Research Center
SBUV Solar Backscatter Ultraviolet Radiometer
SBUV-2 Solar Backscatter Ultraviolet Radiometer–2
SCADP SeaWiFS Calibration and Acceptance Data Package
SCOR Scientific Committee on Oceanographic Research
SDPS SeaWiFS Data Processing System
SDS Scientific Data Set
SDSU San Diego State University
SeaBASS SeaWiFS Bio-Optical Archive and Storage System

SEAPAK Not an acronym, but an image display and analysis package developed at GSFC.
SeaSCOPE SeaWiFS Study of Climate, Ocean Productivity, and Environmental Change
SeaStar Not an acronym, but the name of the satellite on which SeaWiFS will fly.
SeaWiFS Sea-viewing Wide Field-of-view Sensor
SES Shelf Edge Study
SGI Silicon Graphics, Incorporated
SI *Système International d' Unitès* or International System of Units
SIG Special Interest Group
SIO Scripps Institution of Oceanography
SIO/MPL Scripps Institution of Oceanography/Marine Physical Laboratory
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)
SIS Spherical Integrating Source
SISSR Submerged *In Situ* Spectral Radiometer
SJSU San Jose State University
SMM Solar Maximum Mission
SNR Signal-to-Noise Ratio
SO Southern Ocean (algorithm)
SOC Simulation Operations Center
SOGS SeaStar Operations Ground Subsystem
SOH State of Health
SOW Statement of Work
SPIE Society of Photo-Optical Instrumentation Engineers
SPM Suspended Particulate Material or Special Perturbations Model (depending on usage).
SPO SeaWiFS Project Office
SPOT *Satellite Pour l'Observation de la Terre* (France)
SPSWG SeaWiFS Prelaunch Science Working Group
SQL Structured Query Language
SRC Satellite Receiving Station (NERC)
SRT Sigma Research Technology, Incorporated
SSM/I Special Sensor for Microwave/Imaging
SST Sea Surface Temperature or SeaWiFS Science Team (depending on usage).
ST Science Team
Sterna Not an acronym, but a BOFS Antarctic research project.
STM Science Team Member
SUN Sun Microsystems
SWAP *Sylter Wattenmeer Austausch-prozesse*
SWG Science Working Group
SXR SeaWiFS Transfer Radiometer

– T –

T-S Temperature-Salinity
TAE Transportable Applications Executive
TAO Thermal Array for the Ocean or more recently, Tropical Atmosphere-Ocean
TBD To Be Determined
TBUS Not an acronym, but a NOAA orbit prediction
TDI Time-Delay and Integration
TDRSS Tracking and Data Relay Satellite System
TIROS Television Infrared Observation Satellite
TLM Telemetry
TM Technical Memorandum
TOA Top of the Atmosphere
TOGA Tropical Ocean Global Atmosphere program
TOMS Total Ozone Mapping Spectrometer
TOPEX Topography Experiment
TOVS TIROS Operational Vertical Sounder
TRMM Tropical Rainfall Measuring Mission
TSM Total Suspended Material
TV Thermal Vacuum

– U –

UA University of Arizona
UARS Upper Atmosphere Research Satellite
UAXR University of Arizona's Transfer Radiometer
UCAR University Consortium for Atmospheric Research
UCMBO University of California Marine Bio-Optics
UCSB University of California at Santa Barbara
UCSD University of California at San Diego
UH University of Hawaii
UIM/X User Interface Management/X-Windows
UM University of Miami
UNESCO United Nations Educational, Scientific, and Cultural Organizations
UNIX Not an acronym, a computer operating system.
UPS Uninterruptable Power System or Uninterruptable Power Supply, depending on usage.
URI University of Rhode Island
USC University of Southern California
USF University of South Florida
UTC Coordinated Universal Time (definition reflects actual usage instead of following the letters of the acronym)
UTM Universal Transverse Mercator (projection)
UV Ultraviolet
UVB Ultraviolet-B
UWG User Working Group

– V –

V0 Version 0
V1 Version 1
VAX Virtual Address Extension
VCS Version Control Software
VDC Volts Direct Current
VHF Very High Frequency
VI Virtual Instrument
VISLAB Visibility Laboratory (Scripps Institution of Oceanography)
VISNIR Visible and Near Infrared
VMS Virtual Memory System
VSF Volume Scattering Function

– W –

WFF Wallops Flight Facility
WHOI Woods Hole Oceanographic Institute
WMO World Meteorological Organization
WOCE World Ocean Circulation Experiment
WORM Write-Once Read-Many (times)
WVS World Vector Shoreline

– X –

XDR External Data Representation

– Y, Z –

YBOM Yamato Bank Optical Mooring

SYMBOLS

– A –

a The semi-major axis of the Earth's orbit, a formulation constant, a constant equal to 0.983, a constant equal to $-20/\tanh(2)$; an exponential value in the expression relating the radiance of scattered light to wavelength; or a a regression coefficient (depending on usage).

a' The absorption at the Raman excitation wavelength.

$a(\lambda)$ Total absorption coefficient.

$a(z,\lambda)$ Spectral absorption coefficient.

a_a The specific absorption of chlorophyll *a*.

a_{abc} The specific absorption of chlorophylls *a*, *b*, and *c*.

a_b The specific absorption of chlorophyll *b*.

a_c The specific absorption of chlorophyll *c*.

$a_e(\lambda)$ Absorption coefficient due to substances other than water.

$a_f(z,\lambda)$ $a_p(\lambda) - a_t(z,\lambda)$.

a_g The DOM/detritus specific absorbance.

$a_g(\lambda)$ Gelbstoff spectral absorption coefficient.

$a_i(\lambda_a,T)$ Initial estimate of the apparent absorption coefficient; used for determining the apparent absorption coefficient for substances other than water.

a_o Oxygen absorption coefficient.

a_{ox} Coefficient for oxygen absorption.

a_{oz} Coefficient for ozone absorption.

$a_p(\lambda)$ Particulate spectral absorption coefficient.

a_{PP} The specific absorption of PPC.

$a_{ps}(\lambda)$ Photosynthetically active pigment spectral absorption coefficient.

a_{PS} The specific absorption of PSC.

$a_t(\lambda)$ Tripton spectral absorption coefficient.

$a_w(\lambda)$ Absorption coefficient for pure water.

a_{wv} Coefficient for water vapor absorption.

a_ϕ The DOM/chlorophyll combined absorbance.

$a_\phi(\lambda)$ Phytoplankton pigment spectral absorption coefficient.

$a_\phi^M(\lambda)$ Phytoplankton pigment spectral absorption coefficient determined in methanol extract.

A Fitting coefficient for $P_4 - X$, or clearance area of a filter, depending on usage.

A_0 Coefficient for the linear term in the scan modulation correction equation.

A_d The detector aperture.

$A_d(\bar{z},\lambda)$ Linear regression intercepts at the center of a fitted depth interval for ln of $A_d(z,\lambda)$ (defined in Vol. 26).

A_f The foam reflectance.

A_i The intersection area or an arbitrary constant (depending on usage).

A_i' An arbitrary constant.

A_j An arbitrary constant.

A_j' An arbitrary constant.

$A_l(\bar{z},\lambda)$ Linear regression intercepts at the center of a fitted depth interval for ln of $A_l(z,\lambda)$ (defined in Vol. 26).

$A_u(\bar{z},\lambda)$ Linear regression intercepts at the center of a fitted depth interval for ln of $A_u(z,\lambda)$ (defined in Vol. 26).

$A(k)$ Absorptivity.

$A(\lambda)$ Coefficient for calculating $b_b(\lambda)$.

$A(\lambda_a)$ AC-9 instrument calibration factor for absorption.

$A(\lambda_c)$ AC-9 instrument calibration factor for beam attenuation.

– B –

b A formulation coefficient, a constant equal to 1/3, or a regression coefficient (depending on usage).

$b(z,\lambda)$ Total scattering coefficient.

$b(\theta,z,\lambda_0)$ Volume scattering coefficient.

b_b Backscattering coefficient.

$b_b(z,\lambda)$ Spectral backscattering coefficient.

$b_{bc}(\lambda)$ Spectral backscattering coefficient for phytoplankton.

b_{bp} The particle specific backscatter coefficient (usually normalized to chlorophyll *a* concentration).

b_{bw} The backscatter coefficient of water.

$b_i(\lambda)$ Initial estimate of the particle scattering coefficient; used for determining the apparent particle scattering coefficient for substances other than water.

b_{min} Scattering associated with phytoplankton (Prieur and Sathyendranath 1981).

$b_p(\lambda)$ Total particle scattering.

$b_r(\lambda)$ Total Raman scattering coefficient.

b_R The Raman scattering coefficient.

$b_w(\lambda)$ Total scattering coefficient for pure seawater.

$b1(k)$ Input data for polarization calculations for SeaWiFS band 1.

$b7(k)$ Input data for polarization calculations for SeaWiFS band 7.

B Excess target radiance, the fitting coefficient for e^{B/P_5}, the width of band 7, a variable in the expression for limiting reflectance ($R_{\rm lim}$), defined as $0.33b/K_d$, or an empirical constant (depending on usage).

B_0 Coefficient for the power term in the scan modulation correction equation.

B_1 BBOP casts 1 m from the ship's stern.

B_6 BBOP casts 6 m from the ship's stern.

$B(\lambda)$ Coefficient for calculating $b_b(\lambda)$.

B_b An empirical constant dependent on the backscatter ratio.

– C –

$c(z,\lambda)$ Spectral beam attenuation coefficient.

$c(z,660)$ Red beam attenuation (at 660 nm).

$c_e(\lambda)$ Corrected non-water beam attenuation coefficient.

$c_i(\lambda)$ Initial estimate of the beam attenuation coefficient (used for determining the apparent beam attenuation coefficient for substances other than water).

$c_p(\lambda)$ Beam attenuation coefficient due to particles.

$c_w(\lambda)$ Beam attenuation coefficient for pure water equal to $a_w(\lambda) + b_w(\lambda)$.

[*chl. a*]/K Concentration of chlorophyll *a* over K, the diffuse attenuation coefficient.

C Chlorophyll *a* pigment, or just pigment concentration.

$C'(\lambda)$ AC-9 factory calibration coefficient.

$C_r'(\lambda)$ Additional AC-9 factory calibration coefficient.

C_1 Measured value for the flight diffuser on a given scan line in counts or a polynomial regression factor (depending on usage).

C_{13} Pigment concentration derived using CZCS bands 1 and 3.

C_2 Measured value of the flight diffuser for the scan line immediately sequential to the first scan line used to measure the flight diffuser (i.e., S_1 in counts).

C_{23} Pigment concentration derived using CZCS bands 2 and 3.

C_a The concentration of chlorophyll a.

C_{abc} The concentration of chlorophylls a, b, and c.

C_b The concentration of chlorophyll b.

C_c The concentration of chlorophyll c.

C_{dark} Instrument dark restore value, in counts.

C_{ext} Average total extinction cross-section of a particle.

C_F The calibration factor.

C_{out} Instrument output, in counts.

C_P Phaeopigment concentration.

C_{PP} PPC concentration.

C_{PS} PSC concentration.

$C_r(\lambda)$ Digital response of reference detector.

C_{ref} Reference chlorophyll value (0.5).

C_S Simulated C.

$C_t(\lambda)$ Digital response of water transmission detector.

C_{temp} Temperature sensor output, in counts, represented by an 8-bit digital word in the SeaStar telemetry.

C_{TP} Total pigment concentration.

$[C+P]$ Pigment concentration defined as mg chlorophyll a plus phaeopigments m^{-3}.

– D –

d The distance between source and detector apertures.

d_i Distance from the ith observation point to the point of interest.

d_j Distance from the jth observation point to the point of interest.

$d(I(\lambda))$ An increment in detector current.

$d\lambda$ An increment in wavelength.

ds Detector configuration datum.

D Sequential day of the year.

$\vec{D}$ Orbit position difference vector.

D_{at} Along-track position difference.

D_{ct} Cross-track position difference.

D_{rad} Radial position difference.

DC Digital count (value) or direct current (depending on usage).

DC_{10} Digital counts at 10-bit digitization.

DC_{meas} The digital counts measured unshadowed.

DC_{scat} The digital counts due to scattered sunlight.

DC_{TOA} The digital counts measured at the top of the atmosphere.

– E –

e Orbit eccentricity of the Earth.

E'_0 The downwelling irradiance at the Raman excitation wavelength.

$E(\lambda)$ Spectral irradiance.

$\hat{E}(z,m)$ A smoothed estimate of irradiance obtained by a least-squares regression fit in the center of a depth interval.

$E_a(\lambda)$ Irradiance in air.

E_{beg} Beginning irradiance value.

E_{cal} Calibration source irradiance.

E_d Incident downwelling irradiance.

$E_d(0^-,\lambda)$ Incident spectral irradiance.

$E_d(z,\lambda)$ Downwelling spectral irradiance profile.

$E'_d(z,\lambda)$ Normalized downwelled spectral irradiance.

E_{end} Ending irradiance value.

$E_{\text{meas}}(\lambda)$ Measured radiance.

$E_{\text{ref}}(\lambda)$ Reference radiance.

$E_s(\lambda)$ Surface irradiance.

$E_s(z,\lambda)$ Vertical profile of surface irradiance.

$\overline{E}_{s,i}(\lambda)$ The value of $E_s(z,\lambda)$ at node depth z_i.

$\vec{E}_s(z_m,\lambda)$ Defined as $\mathbb{H}\vec{\overline{E}}_s(\lambda)$.

$\vec{\overline{E}}_s(\lambda)$ The measured irradiance vector of length M.

E_{rem} Percentage of energy removed from a wavelength band.

$E_{\text{sky}}(\lambda)$ Spectral sky irradiance distribution.

$E_{\text{sun}}(z,\lambda)$ Spectral sun irradiance distribution.

$E_u(z,\lambda)$ Upwelling spectral irradiance profile.

$E_u(0^-,\lambda)$ Upwelling spectral irradiance just beneath the sea surface.

$E_w(z,\lambda)$ Irradiance in water.

– F –

f The fraction of the surface covered by foam or the ratio of sensor-to-instrument diameters (depending on usage).

f_i Filter number, i=0–11.

$f(T)$ Offset voltage correction from the linear function characterizing temperature response.

$f(\lambda)$ Instrument spectral response function.

f-ratio The ratio of new to total production.

$\bar{F}$ Arithmetic average.

$\overline{F}(\lambda)$ A mean conversion factor.

$F(\lambda)$ Calibration factor.

$F(\lambda)$ A conversion factor to convert PR714 readings to the GSFC sphere radiance scale.

$\bar{F}(\lambda)$ Average of calibration factors.

F_0 Extraterrestrial irradiance corrected for Earth-sun distance.

$\mathbb{F}_0$ The scalar value of the solar spectral irradiance at the top of the atmosphere, multiplied by a columnar matrix of the four Stokes parameters (1/2, 1/2, 0, 0).

$\overline{F}_0$ Mean solar irradiance.

F'_0 Extraterrestrial irradiance corrected for the atmosphere.

$F_0(\lambda)$ Mean extraterrestrial spectral irradiance.

$\overline{F}_0(\lambda)$ Mean extraterrestrial irradiance.

F_1 Pigment biomass loading factor.

F_2 Detritus concentration loading factor.

F_3 Carotenoid concentration (or relative pigment abundance) loading factor.

F_a Forward scattering probability of the aerosol.

F_d The total flux incident on the surface if it did not reflect light.

F'_d The total flux incident on the surface, corrected for surface reflection.

$\mathbb{F}'_d$ The scalar value of the total flux incident on the surface, corrected for surface reflection, multiplied by a columnar matrix of the four Stokes parameters.

F_i A correction factor or an immersion coefficient (depending on usage).

$F_v(\lambda)$ Field-of-view coefficient.

– G –

g A constant that consists of the ratios of the air-sea interface effects, the effects of the light field, and the relative spectral variation of Q.

$g(T)$ Coefficient of a linear function characterizing temperature response.

g_1 A constant equal to 0.82.
g_2 A constant equal to -0.55.
g_{ij} Integrals of γ_{ij} (defined in Vol. 24).
gs Gain selection datum.
G Gain factor or the concentration of DOM and DOM-like absorbers (depending on usage).
$G(z,\lambda)$ Solid angle dependence with water depth.
$G(\mu_0,\lambda)$ The effect of the downwelling light field.
G_1 Gain setting 1.
G_2 Gain setting 2.
G_3 Gain setting 3.
G_4 Gain setting 4.
$G(\lambda)$ $\grave{R}_a(\lambda_i)/\grave{R}_a(670) = (670/\lambda)^{\gamma}\ T_{2r}(670)/T_{2r}(\lambda_i)$.
G_e Gravitational constant of the Earth (398,600.5 km^3 s^{-2}).
G_n Gain factor at gain setting n.

– H –

$h(k)$ Residual values without the calculated sinusoidal response.
$h(\lambda)$ Normalized response function.
h_{ij} Analytic integral coefficients over the Hermitian polynomials γ_{ij}.
h_{mj} Matrix elements (defined in Vol. 26).
$H(\lambda_i{:}\lambda_j)$ Pigment calculated from the hyperbolic transform of $L_{i:j}$.
$\mathbb{H}$ Matrix of coefficients h_{ij} or $[h_{mj}]$ (depending on usage).
H_{GMT} GMT in hours.
H_M The measured moon irradiance.
H_s Altitude of the spacecraft (for SeaStar 705 km).

– I –

i Inclination angle or interval index (depending on usage).
i' Inclination angle minus 90°
I Rayleigh intensity.
I_0 Surface downwelling irradiance.
I_1 Radiant intensity after traversing through an absorbing medium.
I_2 Reflected radiant energy received by the satellite sensor.
$I_{\max}$ Recorded maximum instrument output in response to linearly polarized light.
$I_{\min}$ Recorded minimum instrument output in response to linearly polarized light.
$I(\lambda)$ Detector current.
ICS Current from the current source diode.

– J –

j Interval index.
$J2$ The $J2$ gravity field term (0.0010863).
$J3$ The $J3$ gravity field term (-0.0000254).
$J4$ The $J4$ gravity field term (-0.0000161).
$J5$ The $J5$ gravity field term.

– K –

k Wavenumber of light ($1/\lambda$), the fractional factor of total particle scattering, the molecular absorption cross-section area, or an index to two vectors of band ratios k_1 and k_2 (depending on usage).
k' $y/\tan\theta_{0w}$.
k_1 Beginning wavenumber or a band ratio vector (depending on usage).
k_2 Ending wavenumber or a band ratio vector (depending on usage).
k_c Wavelength independent fraction.
$k_c(\lambda)$ Spectral fit coefficient weighted over the SeaWiFS bands; $k_c'(\lambda)$ also used.
$\vec{\overline{K}}$ Vector of $\overline{K}_n$.
$K(\lambda)$ Generic irradiance attenuation coefficient.
$K(z,\lambda)$ Diffuse attenuation coefficient.
$K(440)$ Diffuse attenuation coefficient at 440 nm.
$K(490)$ Diffuse attenuation coefficient of seawater measured at 490 nm.
$K_0(\lambda)$ Diffuse attenuation coefficient at $z = 0$.
K_1 Primary instrument sensitivity factor.
K_2 Gain factor.
K_3 Temperature dependence of detector output.
K_4 Scan modulation correction factor.
K_5 Spacecraft analog to digital conversion factor.
K_6 Analog-to-digital offset in spacecraft conversion.
K_7 Current from the diode at 20°C.
$K_c(\lambda)$ Attenuation coefficients for phytoplankton.
K_d Diffuse attenuation coefficient for downwelling irradiance.
$K_d(z,\lambda)$ Vertical profile of the diffuse attenuation coefficient for the downwelling irradiance spectrum.
$K_d'(z,\lambda)$ $K_d(z,\lambda)$ determined by least squares regression over a depth interval.
$K_E(\lambda)$ Attenuation coefficient for downwelled irradiance.
$K_g(\lambda)$ Attenuation coefficient for Gelbstoff.
$K_L(z,\lambda)$ Vertical profile of the diffuse attenuation coefficient for the upwelling radiance spectrum.
$K_L'(z,\lambda)$ $K_L(z,\lambda)$ determined by least squares regression over a depth interval.
$\overline{K}_n$ K at node depth z_n determined, with its vertical derivative by least-squares fit to radiometric profiles.
$K_s(z,\lambda')$ Apparent attenuation coefficient measured in a homogenous water column.
$K_u(z,\lambda)$ Vertical attenuation coefficient for upwelled irradiance.
$K_u(z,\lambda)$ Vertical profile of the diffuse attenuation coefficient for the upwelling irradiance spectrum.
$K_u'(z,\lambda)$ $K_u(z,\lambda)$ determined by least squares regression over a depth interval.
$K_w(\lambda)$ Attenuation coefficient for pure seawater.

– L –

l Cuvette pathlength.
l_s Nominal absorption pathlength.
L Radiance of light transmitted through absorbing oxygen.
$L_{i:j}$ The ratio of normalized water-leaving radiances at wavelengths i (λ_i) to j (λ_j): $L_{WN}(\lambda_i)/L_{WN}(\lambda_j)$.
$L(\lambda)$ Spectral radiance.
$L(\lambda_m)$ The radiance of a calibration sphere at the nominal peak wavelength of a filter.
$L(z,\theta,\phi)$ Submerged upwelled radiance distribution.
$L^*(\lambda,\theta,\phi)$ Atmospheric path radiance at flight altitude.
L_0 The radiance of the atmosphere.
$L_1(\lambda)$ Apparent radiance response to a linearly polarized source.

$L_2(\lambda)$ Orthogonal apparent radiance response to a linearly polarized source.
L_a Aerosol radiance.
$L_{\rm atm}$ Radiance of light reflected from the atmosphere.
$L_c(\lambda)$ Cloud radiance threshold.
$L_{\rm cal}$ Calibration source radiance.
$L_{\rm cloud}$ Maximum radiance from reflected light off of clouds.
$\mathbb{L}_d$ A matrix of the four Stokes parameters for radiance incident on the surface.
$L_g(\lambda)$ Sun glint radiance.
L_i Incident light or the length of the ith element (depending on usage).
$L_i(\lambda)$ Spectral radiance for run number i, or radiance, where i may represent any of the following: m for measured; LU for look-up table; 0 for light scattered by the atmosphere; *sfc* for reflection from the sea surface; and w for water-leaving radiance.
L_{LU} The radiance calculated for the look-up tables.
L_m The radiance of the ocean-atmosphere system measured at a satellite.
L_M The radiance of the moon.
$L_{\rm max}$ Maximum saturation radiance.
$L_{\rm nadir}$ Measured radiance at nadir.
$L_{\rm NER}\lambda)$ Noise equivalent radiance.
$L_r(\lambda)$ Rayleigh radiance.
$L_{r0}(\lambda)$ Rayleigh radiance at standard atmospheric pressure, P_0.
$L_s(\lambda)$ Subsurface water radiance.
L_{sa} $L_0 + L_{\rm sfc}$.
$L_{\rm sat}(\lambda)$ Saturation radiance for the sensor.
$L_{\rm scan}$ Measured radiance at any pixel in a scan.
$L_{\rm sfc}$ The radiance of the light reflected from the sea surface.
$\mathbb{L}_{\rm sfc}$ The columnar matrix of the four Stokes parameters $(L_{u,1}, L_{u,2}, L_{u,3}, L_{u,4})$.
$L_{\rm sky}(\lambda)$ Spectral sky radiance distribution.
$L_t(\lambda)$ Total radiance at the top of the atmosphere (where a satellite sensor is located).
$L_{\rm typical}$ Expected radiance from the ocean measured on orbit.
$L_u(z,\lambda)$ Upwelling spectral radiance profile.
$L_u(0^-,\lambda)$ Upwelling spectral radiance just beneath the sea surface.
$\hat{L}_u(\lambda)$ True upwelled spectral radiance.
$\tilde{L}_u(\lambda)$ Measured upwelled spectral radiance.
$\mathbb{L}_{\rm up}$ The columnar matrix of light leaving the surface containing the values $L_{{\rm up},1}$, $L_{{\rm up},2}$, $L_{{\rm up},3}$, and $L_{{\rm up},4}$.
$L_{{\rm up},i}$ The RADTRAN radiance parameters (for $i = 1, 4$).
L_W The water-leaving radiance of light scattered from beneath the surface and penetrating it.
$L_W(443)$ Water-leaving radiance at 443 nm.
$L_W(520)$ Water-leaving radiance at 520 nm.
$L_W(550)$ Water-leaving radiance at 550 nm.
$L_W(670)$ Water-leaving radiance at 670 nm.
$\mathbb{L}_w$ The scalar value of the water-leaving radiance multiplied by a columnar matrix of the four Stokes parameters.
$L_{WN}(\lambda)$ Normalized water-leaving radiance.
L'_{WN} Normalized water-leaving radiance at the Raman excitation wavelength.
LS_1 Measured radiance for mirror side 1.
LS_2 Measured radiance for mirror side 2.

– M –

m Index of refraction or an air mass (depending on usage).
M Path length through the atmosphere or the total number of discrete data points in a vertical radiometeric profile (depending on usage).
M'_m The corrected mean orbit anomaly of the Earth, which is a function of date, and refers to an imaginary moon in a circular orbit.
$M_{\rm oz}$ Path length for ozone transmittance.

– N –

n The index of refraction, the mean orbital motion in revolutions per day, the gain setting, or the starting index in a measurement for angular measurements, or node index for the integral K analysis (depending on usage).
$n(\lambda)$ An exponent conceptually similar to the Ångström exponent.
$n_g(\lambda)$ Index of refraction of Plexiglas™.
$n_w(\lambda)$ Index of refraction of water.
N The total number of something, or the ending index in a measurement sequence for angular measurements, or the total number density (usage dependent).
N_D The compensation factor for a 4 log neutral density filter.
N_i Total number density of either the first or second aerosol model when $i = 1$ or 2, respectively.

– O –

$\vec{O}$ $\vec{P} \times \vec{V}$.
O_{20} OFFI casts 20 m from the ship's stern.
${\rm OD}_b(\lambda)$ Baseline optical density spectrum.
${\rm OD}_g(\lambda)$ Optical density of soluble material (Gelbstoff).
${\rm OD}_p(\lambda)$ Optical density spectra of filtered particles.
${\rm OD}_r(\lambda)$ Optical density reference for filter or distilled water.
${\rm OD}_t(\lambda)$ Optical density of non-pigmented particulates (tripton).

– P –

p Surface pressure.
p_a A factor to account for the probability of scattering to the spacecraft for three different paths from the sun.
$p_a/(4\pi)$ Aerosol albedo of the scattering phase function.
$p_{\rm dev}$ Pressure deviation between the minimum and maximum surface pressures compared to 1,013 mb.
$p_{\rm ref}$ Reference pressure.
p_w The probability of seeing sun glitter in the direction θ, Φ given the sun in position θ_0, Φ_0 as a function of wind speed (W).
P Nodal period, phaeopigment concentration, local surface pressure, or the particulate concentration including detrital material (depending on usage).
$\vec{P}$ Orbit position vector.
$P(\theta^+)$ Phase function for forward scattering.
$P(\theta^-)$ Phase function for backward scattering.
$P(\lambda)$ Polarization sensitivity.
P_0 Standard atmospheric pressure (1,013.25 mb).
P_a Probability of scattering to the spacecraft.

P_i PR714 raw radiance or the fitting coefficient for $i =$ 1–5.
P_S Simulated $C_a + C_P$ (q.v.).
P_W Probability of seeing sun glint in the spacecraft direction.
P_σ Phaeopigment concentration.
PF Polarization factor.
Pxl Pixel number, i.e., the numerical designation of a pixel in a scan line.

– Q –

q Water transmittance factor.
Q The ratio of upwelling irradiance to radiance, which varies with the angular distribution of the upwelling light field, and is π for an isotropic distribution.
$Q(\lambda)$ $L_u(0^-,\lambda)$ to $E_u(0^-,\lambda)$ relation factor (equal to π for a Lambertian surface).

– R –

r Water-air reflectance for totally diffuse irradiance, the radius coordinate, or the Earth-sun distance (depending on usage).
r_1 The radius of circle one or source aperture (depending on usage).
r_2 The radius of circle two or detector aperture (depending on usage).
r_i The geometric mean radii of either the first or second aerosol model when $i = 1$ or 2, respectively.
R Reflectance.
$R(\lambda)$ The irradiance reflectance at a particular wavelength.
$\mathbb{R}$ The reflection matrix.
$\overline{R}$ Mean Earth-sun distance.
R^2 The square of the linear correlation coefficient.
$R(0^-,\lambda)$ Irradiance reflectance just below the sea surface.
R_1 A multiplier for mirror side 1.
R_2 A multiplier for mirror side 2.
R_a Aerosol reflectance.
$\grave{R}_a$ $R_a/(qT_{2r})$.
R_e Mean Earth radius (6,378.137 km).
R_E Effective resistance for the thermistor-resistor pair.
$R_L(z,\lambda)$ Spectral reflectance.
R_{lim} Limiting reflectance for defining Case-1 water.
R'_L Reflectance from an uncalibrated radiometer.
R_r Rayleigh reflectance.
R_{rs} Remote sensing reflectance.
$R_{rs}(z,\lambda)$ Spectral remote sensing reflectance profile.
$R_{rs}(z,\lambda)$ Vertical profile of the remote sensing reflectance spectrum.
R_s Subsurface reflectance.
R_t Total reflectance at the sensor.
$\grave{R}_t$ $(R_t - R_r)/(qT_{2r})$.
R_T Resistance of the thermistor.
R_z Sunspot number.

– S –

s The reflectance of the atmosphere for isotropic radiance incident at its base.
$s(\lambda)$ The slope for the range 0–1,023.
S The solar constant or the slope of a line (depending on usage).
$S(\lambda)$ Solar spectral irradiance or $L_a(\lambda)/L_a(670)$ (depending on usage).
$S(\lambda_r)$ A coefficient of water temperature variation in $a_w(\lambda,T)$.
$S_G(\lambda)$ Radiometer signal (uncalibrated) measured viewing a reflectance plaque.
S_i Initial detector signal.
S_n Detector signal with gain.
S_{sky} Radiometer signal (uncalibrated) measured viewing the sky.
$S_W(\lambda)$ Radiometer signal (uncalibrated) measured viewing the water.
s_{xy} Residual standard deviation.

– T –

t Time variable or the transmission of L_{sfc} through the atmosphere (depending on usage).
t' The transmission of L_W through the atmosphere.
$t(k)$ Spectral transmission as a function of wavenumber.
$t(\lambda)$ Diffuse transmittance of the atmosphere.
$t(750,\theta)$ Diffuse transmittance between the ocean surface and the sensor at 750 nm.
t_0 The sum of the direct and diffuse transmission of sunlight through the atmosphere, or initial time (usage dependent).
t_1 First observation time.
t_2 Second observation time.
t_a Aerosol transmittance after absorption.
t_{as} Aerosol transmittance after scattering.
t_d Direct component of transmittance after absorption by the gaseous components of the atmosphere, scattering and absorption by aerosols, and scattering by Rayleigh.
$t_d(z,\lambda)$ Downward spectral irradiance transmittance from flight altitude z to the surface.
t_e Time difference in hours between present position and most recent equator crossing.
t_{EC} Equator crossing time.
t_{oz} Transmittance after absorption by ozone.
t_r Transmittance after Rayleigh scattering.
t_s Diffuse component of transmittance after absorption by the gaseous components of the atmosphere, scattering and absorption by aerosols, and scattering by Rayleigh.
t_{wv} Transmittance after absorption by water vapor.
T Tilt position.
T' Instrument temperature during calibration.
$T(\lambda)$ The transmittance along the slant path to the sun.
$T(\lambda,\theta)$ Total transmittance (direct plus diffuse) from the ocean through the atmosphere to the spacecraft along the path determined by the spacecraft zenith angle θ.
$T(\lambda,\theta,\theta_0)$ Two-way transmission through oxygen in the model layer in terms of zenith angle (θ), and solar angle (θ_0).
T_{2r} Two-way diffuse transmittance for Rayleigh attenuation.
$T_0(\lambda,\theta_0)$ Total downward transmittance of irradiance.
T_e Equation of time.
$T_g(\lambda)$ Transmittance through a glass window.
T_{ox} Transmittance of oxygen (O_2).
T_{oz} Transmittance of ozone (O_3).
$T_s(\lambda)$ Transmittance through the surface.
$T_w(\lambda)$ Transmittance through a water path.
T_{wv} Transmittance of water vapor (H_2O).

– U, V –

V Volume of water filtered.
$V(z)$ Transmissometer voltage.
$V(\theta)$ Normalized measured value for a cosine collector.
$\vec{V}$ Orbit velocity vector.
$\hat{V}$ True voltage.
$\tilde{V}$ Measured voltage.
$\overline{V}(\theta_i)$ Mean normalized measured value of instrument response.
$V_{\rm air}$ Factory transmissometer air calibration voltage.
$V'_{\rm air}$ Current transmissometer air calibration voltage.
$V_{\rm dark}$ Transmissometer dark response.
$V_i(t_j)$ The ith spatial location at observation time t_j.
V_M The radiance detector voltage while viewing the moon.
V_S The irradiance detector voltage while viewing the sun.
V_T Focal plane temperature sensor voltage output.

– W –

w_m The weighting coefficient at each depth z_m.
W Wind speed or quivalent bandwidth (depending on usage).
W_d Direct irradiance divided by the total irradiance at the surface.
W_s Diffuse irradiance divided by the total irradiance.
W_θ Weighting function.

– X –

x Abscissa or longitudinal coordinate, or the pixel number within a scan line (depending on usage).
X ECEF x component of orbit position or depth in meters (depending on usage).
$\dot{X}$ ECEF X component of orbit velocity.

– Y –

y Ordinate, meridional coordinate, or an empirical factor (depending on usage).
Y ECEF y component of orbit position or the base 10 logarithm of the radiometric measurement E_d, E_u, or L_u (depending on usage).
$\dot{Y}$ ECEF Y component of orbit velocity.

– Z –

z Vertical coordinate.
z' Corrected depth for pressure transducer depth offset relative to a sensor.
z_i The depth of a particular node.
z_m Centered depth or the depth of the mth data point in a vertical radiometric profile (depending on usage).
z_n The node depth number ($n = 0, \ldots, N-1$).
z_r Shallow depth.
z_s Exclusion depth due to data contamination.
Z ECEF z component of orbit position.
$\dot{Z}$ ECEF Z component of orbit velocity.

– Greek –

α Percent albedo, tilt angle, formulation coefficient (intercept), the power constant in the Ångström formulation, or the exponential value in the expression relating the extinction coefficient to wavelength (depending on usage).
α' A power law constant.
α_0 A curve fitting constant.
α_1 A curve fitting constant.
α_2 A curve fitting constant.
α_{750} Albedo at 750 nm.

β A formulation coefficent (slope) or a constant in the Ångström formulation (depending on usage).
β_i The extinction coefficient of either the first or second aerosol model when $i = 1$ or 2, respectively; or the filter absorption correction factor for scattering within the filter.
$\beta(z,\lambda,\underline{\theta})$ Spectral volume scattering function.
$\overline{\beta}_b$ The measured integral of the volume scattering function in the backward direction.

γ The Ångström exponent.
$\gamma(\lambda)$ The ratio of the aerosol optical thickness at wavelength λ to the aerosol optical thickness at 670 nm.
$\gamma_{ij}(\xi)$ Hermitian cubic polynomial.

δ The great circle distance from $\Psi_s(t_0)$ to $\Psi_s(t-t_0)$, the departure of each individual conversion factor from the mean, a relative difference, the absorption coefficient, or the cosine response asymmetry (depending on usage).
Δk Equivalent bandwidth.
ΔL The difference between L and L_0.
$\Delta L_W(670)$ The error in the water-leaving radiance for the red channel.
Δp The difference in atmospheric pressure.
$\Delta p\mathrm{CO_2}$ Partial pressure difference of CO_2 between air and sea water.
ΔP The difference in successive pixels or the pressure deviation from standard pressure, P_0 (depending on usage).
Δt Time difference.
$\Delta T(\lambda)$ The error in transmittance.
Δz Half-interval depth increment.
$\Delta\theta$ Angular increment.
$\Delta\theta_s$ The error (in radians) in the knowledge of θ_s.
$\Delta\lambda$ An interval in wavelength.
$\Delta\rho_w(\lambda)$ The error in the water-leaving reflectance for the red channel.
$\Delta\sigma(\lambda)$ The absolute error in spectral optical depth.
$\Delta\tau_a$ The error in the aerosol optical thickness.
$\Delta\omega$ The longitude difference from the sub-satellite point to the pixel.
$\Delta\omega_s$ Longitude difference.

ϵ Cosine collector response error or an atmospheric correction parameter (depending on usage).
$\epsilon_{\rm sun}$ Self-shading error for $E_{\rm sun}$.
$\epsilon_{\rm sky}$ Self-shading error for $E_{\rm sky}$.
$\varepsilon(\lambda)$ $1 - e^{-k'a(\lambda)r}$.

η The bearing from the sub-satellite point to the pixel along the direction of motion of the satellite.

θ The spacecraft zenith angle, spacecraft pitch, the polar angle of the line-of-sight at a spacecraft, or the centroid angle of the scattering measurement (depending on usage).
$\dot{\theta}$ Pitch rate.
θ_0 Polar angle of the direct sunlight or solar zenith angle (depending on usage).
θ_1 The intersection angle of circle one or the lower integration limit (depending on usage).
θ_2 The intersection angle of circle two or the upper integration limit (depending on usage).
θ_{0w} Refracted solar zenith angle.
θ_a In-air measurement angle.
θ_i Any nominal angle.
θ_n The zenith angle of the vector normal to the surface vector for which glint will be observed or an angular origin (depending on usage).
θ_N The angle with respect to nadir that the sea surface slopes to produce a reflection angle to the spacecraft or an angular terminus (depending on usage).
θ_s Scan angle of sensor or the solar zenith angle (depending on usage).
θ_s' Scan angle of sensor adjusted for tilt.
θ_t Tilt angle.
θ_w In-water measurement angle.

κ An integration constant: $\kappa = A_d \pi r_1^2 (r_1^2 + r_2^2 + d^2)^{-1}$.
κ' Self-shading coefficients.

λ Wavelength of light.
λ' A channel of nominal wavelength or the Raman excitation wavelength (depending on usage).
λ_0 Center wavelength.
λ_1 Starting wavelength.
λ_2 Ending wavelength.
λ_i A wavelength of light at a particular band.
λ_j A wavelength of light at a particular band.
λ_m Nominal center wavelength.
λ_n Any nominal wavelength.
λ_r Near-IR wavelength.

μ Mean value or cosine of the satellite zenith angle (depending on usage).
μ_0 Cosine of the solar zenith angle.
$\overline{\mu}_d(z,\lambda)$ Spectral mean cosine for downwelling radiance at depth z.
$\overline{\mu}_d(0^+,\lambda)$ Spectral mean cosine for downwelling radiance at the sea surface.
μ_s The reciprocal of the effective optical length to the top of the atmosphere, along the line of sight to the sun.

ν_j The jth temporal weighting factor.

ξ A local depth coordinate ranging from -1 at node z_{i-1} to $+1$ at node z_i.
ξ Actual deployment distance.
ξ_d The calculated deployment distance for downwelling irradiance measurements.
ξ_{EM} The distance between the Earth and the moon.
ξ_u The calculated deployment distance for upwelling irradiance measurements.
ξ_L The calculated deployment distance for upwelling radiance measurements.
$\xi(\lambda)$ Minimum ship-shadow avoidance distance.

ρ The Fresnel reflectivity, the weighted direct plus diffuse reflectance, or the average reflectance of the sea (depending on usage).
$\bar{\rho}$ The Fresnel reflectance for sun and sky irradiance.
$\rho(\lambda)$ The bidirectional reflectance.
$\rho(\theta)$ Fresnel reflectance for viewing geometry.
$\rho(\theta_0)$ Fresnel reflectance for solar geometry.
$\rho_{c,i}$ Reflectance of clouds and ice.
$\rho_g(\lambda)$ Gray card or plaque reflectance.
ρ_i The reflectance of the sea of either the first or second aerosol model when $i = 1$ or 2, respectively.
$\rho_i(\lambda)$ The reflectance where i may represent any of the following: m for measured; LU for look-up table; o for light scattered by the atmosphere; sfc for reflection from the sea surface; and w for water-leaving radiance.
ρ_n Sea surface reflectance for direct irradiance at normal incidence for a flat sea.
ρ_N Reflectance for diffuse irradiance.

σ One standard deviation of a set of data values.
σ^2 The mean square surface slope distribution.
$\sigma(\lambda)$ The spectral optical depth.
σ_i^2 $\sigma_i^2 = \langle(\log r - \log r_i)^2\rangle$.
σ_t The density of sea water determined from the *in situ* salinity and temperature, but at atmospheric pressure.
σ_θ The density of sea water determined from the *in situ* salinity and the potential temperature (θ), but at atmospheric pressure.

$\vec{\tau}$ Vector of measured optical depths.
$\tau(z,\lambda)$ Vertical profile of the spectral optical depth.
$\hat{\tau}(z,\lambda)$ The estimated vertical profile of the spectral optical depth.
τ_a Aerosol optical thickness.
τ_{ox} Oxygen optical thickness at 750 nm.
$\tau_{ox}(\lambda)$ Optical thickness due to oxygen absorption.
τ_{oz} The optical thickness of ozone.
τ_r Rayleigh optical thickness (due to scattering by the standard molecular atmosphere).
τ_r' Pressure corrected Rayleigh optical thickness.
τ_{ro} Rayleigh optical thickness weighted by the SeaWiFS spectral response.
τ_{r0} Rayleigh optical thickness at standard atmospheric pressure, P_0.
$\tau_s(\lambda)$ Spectral solar atmospheric transmission.
$\tau_s(\lambda)$ Spectral solar atmospheric transmission.
τ_{wv} The absorption optical thickness of water vapor.

ϕ Azimuth angle of the line-of-sight at a spacecraft.
ϕ_0 Azimuth angle of the direct sunlight.
Φ Spacecraft azimuth angle or roll (depending on usage).
$\dot{\Phi}$ Roll rate.
Φ_D The detector solid angle.
Φ_M The solid angle subtended by the moon at the measuring instrument.
Φ_0 Solar azimuth angle.

χ Proportionality constant.
Ψ Pixel latitude or yaw (depending on usage).
$\dot{\Psi}$ Yaw rate.
Ψ_d Solar declination latitude.
$\Psi_s(t)$ Subsatellite latitude as a function of time.

ω Longitude variable or the surface reflection angle (depending on usage).

ω_0 Old longitude value.

ω_a Single scattering albedo of the aerosol.

ω_e Equator crossing longitude.

ω_i Spatial weighting factor.

ω_s Longitude variable.

Ω Solar hour angle or the amount of ozone in Dobson units (depending on usage).

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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 is expected to be launched in 1996, on the SeaStar satellite, being built by Orbital Sciences Corporation (OSC). The SeaWiFS Project at the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC), has undertaken the responsibility of documenting all aspects of this mission, which is critical to the ocean color and marine science communities. This documentation, entitled the *SeaWiFS Technical Report Series*, is in the form of NASA Technical Memorandum Number 104566. All reports published are volumes within the series. This particular volume serves as a reference, or guidebook, to the previous 29 volumes and consists of 5 sections including: an errata, an index to key words and phrases, a list of all references cited, and lists of acronyms and symbols used. It is the editors' intention to publish a cumulative index of this type after every five volumes in the series. Each index covers the reference topics published in all previous editions, that is, each new index will include all of the information contained in the preceeding indices.

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