NASA/TM–2000–206892, Vol. 6

SeaWiFS Postlaunch Technical Report Series

Stanford B. Hooker and Elaine R. Firestone, Editors

Volume 6, SeaWiFS Postlaunch Technical Report Series Cumulative Index: Volumes 1–5

Elaine R. Firestone and Stanford B. Hooker

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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, on 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 serves as a reference, or guidebook, to the previous five volumes and consists of four 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 first in a series of indexes, published as a separate volume in the *SeaWiFS Postlaunch Technical Report Series,* and includes information found in the first five volumes of the series. The *SeaWiFS Postlaunch Technical Report Series* has been written under the National Aeronautics and Space Administration's (NASA) Technical Memorandum (TM) numbers 1998–206892, 1999–206892, and 2000–206892, 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:

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 Prelaunch 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.*

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. In addition, 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 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 instrument or project. 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.* #).

2. ERRATA

In Table 11 of Vol. 1, the value for p_1 for Channel 6 should read 1.12093×10^{-3}, not 1.12093×10^{-4}.

The authorship in the citation of Volume 4, listed on the last page of that volume should be "Johnson, B.C., E.A. Early, R.E. Eplee, Jr., R.A. Barnes, and R.T. Caffrey".

Note: Since the issuance of previous volumes, a number of the references cited have changed their publication status, e.g., they have gone from "submitted," "accepted," 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 five volumes in the series, along with how they now appear in the references section of *this* volume.

Original Citation

Barnes, R.A., R.E. Eplee, Jr., F.S. Patt, and C.R. McClain, 1999: Changes in the radiometric sensitivity of SeaWiFS. *Appl. Opt.*, (in press).

Revised Citation

Barnes, R.A., R.E. Eplee, Jr., F.S. Patt, and C.R. McClain, 1999: Changes in the radiometric sensitivity of SeaWiFS determined from lunar and solar-based measurements. *Appl. Opt.*, **38,** 4,649–4,664.

Original Citation

Biggar, S.F., P.N. Slater, J.M. Palmer, and K.J. Thome, 1999: Unified approach to absolute radiometric calibration in the solar-reflective range. *Remote Sens. Environ.*, (accepted).

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Original Citations

Hooker, S.B., and C.R. McClain, 1998: A comprehensive plan for the calibration and validation of SeaWiFS data. *Prog. Oceanogr.*, (submitted).

and

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Revised Citation

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Original Citation

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Revised Citation

Zibordi, G., J.P. Doyle, and S.B. Hooker, 1999: Offshore tower shading effects on in-water optical measurements. *J. Atmos. Oceanic Tech.*, **16,** 1,767–1,779.

Cumulative Index

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

–T, U, V, W, X, Y, Z–

GLOSSARY

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

– A –

A/D Analog-to-Digital
AAOT *Acqua Alta* Oceanographic Tower
AC Alternating Current
ADCP Acoustic Doppler Current Profiler
AERONET Aerosol Robotic Network
AMT Atlantic Meridional Transect
AMT-5 The Fifth AMT (cruise)
AOT Aerosol Optical Thickness
ASCII American Standard Code for Information Interchange
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
BCD Binary Coded Decimal
BNC Bayonet Nut Connector
BPA Back Plate Assembly
BRDF Bidirectional Reflectance Distribution Function
BSST Bulk Sea Surface Temperature

– C –

C-FALLS Software package for logging SeaFALLS data.
C-mount Not an acronym, but a mounting system for camera lenses.
C-OPS Combined Operations
CANIGO Canary Islands, Azores, Gibraltar Observations
CC Cloud Cover
CCAR Colorado Center for Astrodynamics Research
CCD Charge-Coupled Device
CCMS Centre for Coastal and Marine Studies
CCN Cloud Condensation Nucleii
CCPO Center for Coastal Physical Oceanography
CDOM Colored Dissolved Organic Matter
CEC Commission of the European Communities
CERT Calibration Evaluation and Radiometric Testing
CHN Carbon-Hydrogen-Nitrogen
CNR *Consiglio Nazionale delle Ricerche* (National Research Council)
CoASTS Coastal Atmosphere and Sea Time Series
COTS Commercial Off-The-Shelf
CT Cylindrical Tube or Conductivity and Temperature, depending on usage.
CTD Conductivity, Temperature, and Depth

– D –

DalBOSS Dalhousie Buoyant Optical Surface Sensor
DalSAS Dalhousie SeaWiFS Aircraft Simulator
DARR-94 Data Analysis Round-Robin
DAS Data Acquisition Sequence
DATA Not an acronym, but a designator for the Satlantic, Inc., series of power and telemetry units.
DC Direct Current
DCM Deep Chlorophyll Maximum
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
DOC Dissolved Organic Carbon
DPA Detector Plate Assembly
DUT Device Under Test
DVM Digital Voltmeter

– E –

E East
EDTA Ethylenediaminetetraacetic Acid
EEZ Exclusive Economic Zone
e-mail Electronic Mail
EOS Earth Observing System
EP Entrance Pupil
ERS-2 The Second Earth Resources Satellite
EU European Union
EUC Equatorial Under Current

– F –

FASCAL Facility for Automated Spectroradiometric Calibrations (NIST)
FEL Not an acronym, but a lamp designator.
FET Field-Effect Transistor
FIGD-IC Flow Injection Gas-Diffusion Coupled to Ion Chromatography
F-mount Not an acronym, but a mounting system for camera lenses.
FRRF Fast Repetition Rate Fluorometer
FS Field Stop

– G –

GF/F Not an acronym, but a specific type of glass fiber filter manufactured by Whatman.
GMT Greenwich Mean Time
GOES-8 The Eighth Geostationary Operational Environmental Satellite
GPIB General Purpose Interface Bus
GSE Ground Support Equipment
GSFC Goddard Space Flight Center

– H –

HACR High-Accuracy Cryogenic Radiometer
HP Hewlett-Packard
HPLC High Performance Liquid Chromatography
HTCO High Temperature Catalytic Oxidation

–I–

IAD Ion-Assisted Beam Deposition
IC Integrated Circuit
ID Inside Diameter
IDL Interactive Data Language
IEEE Institute of Electrical and Electronic Engineers
IF Interference Filter
ILX Not an acronym.
IOP Inherent Optical Property
IOS (SOC) Institute of Oceanographic Sciences
ISDGM *Istituto per lo Studio della Dinamica delle Grandi Masse* (Italy)
ISIC Integrating Sphere Irradiance Collector

–J–

JCR (RRS) *James Clark Ross*
JRC Joint Research Centre

–K, L–

LANDSAT Land Satellite
LLR Low Level Radiance
LoCNESS Low-Cost NASA Environmental Sampling System
LS Light Stability
LSB Least Significant Bit
LXR LANDSAT Transfer Radiometer

–M–

MA Methylamine
METEOSAT Meteorological Satellite
MFR-6 Multi-Filter Rotating Shadow-Band Radiometer
miniNESS miniature NASA Environmental Sampling System
MISR Multiangle Imaging Spectroradiometer
MMA Mirror Mount Assembly or Monomethylamine, depending on usage.
MOBY Marine Optical Buoy
MODIS Moderate Resolution Imaging Spectroradiometer
MODTRAN Not an acronym, but an atmospheric photochemical and radiative transfer model.
MSB Most Significant Bit
MVDS Multichannel Visible Detector System

–N–

N North
NASA National Aeronautics and Space Administration
NEC Not an acronym, but the present name for the Nippon Electric Company (Japan)
NECC North Equatorial Counter Current
NEUC North Equatorial Undercurrent
NIR Near-Infrared
NIST National Institute of Standards and Technology
NOAA National Oceanic and Atmospheric Administration
NRSR Normalized Remote Sensing Reflectance

–O–

OCI Ocean Color Irradiance
OCR Ocean Color Radiance
OCTS Ocean Color Temperature Scanner
OD Outside Diameter
OPC Optical Plankton Counter
OrbView-2 Not an acronym, but the current name for the SeaStar satellite.
OSC Orbital Sciences Corporation

–P–

P-I Photosynthesis-Irradiance
PAR Photosynthetically Available Radiation
PC Personal Computer
PCR Polymerase Chain Reaction
PID Proportional, Integral, Differential
PM Particulate Matter
PML Plymouth Marine Laboratory
POC Particulate Organic Carbon
PRIME Plankton Reactivity in the Marine Environment
PRT Platinum Resistance Temperature (sensor)
PST Pacific Standard Time
PSU Practical Salinity Units
PTFE Polyfluorotetraethylene
PVC Polyvinylchloride

–Q, R–

RAM Random Access Memory
RE Ramsden Eyepiece
RL Relay Lens
RMSD Root Mean Square Difference
ROSSA Radiometric Observations of the Sea Surface and Atmosphere
RRS Royal Research Ship
RSG (PML) Remote Sensing Group
RSMAS Rosenstiel School for Marine and Atmospheric Science
RSR Relative Spectral Response
RTV Room Temperature Vulcanizing
RVS (BAS) Research Vessel Services

–S–

S South
S/N Serial Number
SACZ Sub-Antarctic Convergence Zone
SAI Space Applications Institute
SBE Sea-Bird Electronics
SBRC Santa Barbara Research Center (Raytheon)
SBRS Santa Barbara Remote Sensing
SBUV Solar Backscatter Ultraviolet Radiometer
SDY Sequential Day of the Year
SeaACE SeaWiFS Atlantic Characterization Experiment
SeaBASS SeaWiFS Bio-Optical Archive and Storage System
SeaBOARR SeaWiFS Bio-Optical Algorithm Round-Robin
SeaBOARR-98 The First SeaBOARR (held in 1998)
SeaBOSS SeaWiFS Buoyant Optical Surface Sensor
SeaFALLS SeaWiFS Free-Falling Advanced Light Level Sensors
SeaOPS SeaWiFS Optical Profiling System
SeaSAS SeaWiFS Surface Acquisition System

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
SIMBIOS Sensor Intercomparison and Merger for Biological and Interdisciplinary Oceanic Studies
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)
SIS Spherical Integrating Source
SMSR SeaWiFS Multichannel Surface Reference
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
SQM SeaWiFS Quality Monitor
SQM-II The Second Generation SQM
SS Sea State
SSE Size-of-Source Effect
SSH Sea Surface Height
SSM/I Special Sensor for Microwave/Imaging
SSST Sea Surface Skin Temperature
SXR SeaWiFS Transfer Radiometer

–T–

TEC Thermoelectric Cooler
THOR Three-Headed Optical Recorder
TMA Trimethylamine
TOC Total Organic Carbon
TOPEX Topography Experiment
TSG Thermosalinograph
TSM Total Suspended Matter
TTL Transistor–Transistor Logic

–U–

UIC Underway Instrumentation and Control
UK United Kingdom
UNC Unified Course
UOR Undulating Oceanographic Recorder
UPS Uninterruptable Power Supply

–V–

VAFB Vandenberg Air Force Base
VisSCF Visible Spectral Comparator Facility (NIST)
VXR Visible Transfer Radiometer

–W–

W West
WETLabs Western Environmental Technology Laboratories (Inc.)
WiSPER Wire-Stabilized Profiling Environmental Radiometer
WM Spherical Mirror Wedge Section
WMO World Meteorological Organization
WOCE World Ocean Circulation Experiment
WS Wind Speed

–X–

XBT Expendable Bathythermograph
XOTD Expendable Optical, Temperature, and Depth

–Y, Z–

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

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13. ABSTRACT *(Maximum 200 words)*

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, on 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 serves as a reference, or guidebook, to the previous five volumes and consists of four 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.

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