
SeaWiFS Postlaunch Technical Report Series

Stanford B. Hooker and Elaine R. Firestone, Editors

Volume 12, SeaWiFS Postlaunch Technical Report Series
Cumulative Index: Volumes 1–11

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Space Administration

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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 11 volumes and consists of 5 sections including an errata, an addendum, 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 11 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, 2000-206892, and 2001-206892, 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:


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. In addition, an addendum section has been added to include the revised SeaWiFS Project In Situ Data Policy, which is too short in length to warrant a separate volume within the series.

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. #).

2. ERRATA

In Volume 10, page 51, the table should be labeled “Table 13” instead of “Table 3.”

Figure 29 in Volume 10 did not appear in the published document because of a printing error. The appropriate figure and caption appears above.

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, has changed. Listed below are the references in question as they were cited in one or more of the first 11 volumes in the series, along with how they now appear in the references section of this volume.

Original Citation


Revised Citation

Original Citation

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Original Citation

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Original Citation

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3. ADDENDUM

SeaWiFS Project In Situ Data Policy

This policy provides the guidelines for data collected under the NASA Research Announcement (NRA) Biological Oceanography Program and SeaWiFS Project field collaborations for inclusion in the calibration and validation database. The in situ data is to be submitted to the SeaWiFS Bio-optical Archive and Storage System (SeaBASS) [Hooker et al. 1994c, Fargion and Mueller 2000, and Fargion and McClain 2001]. The SeaBASS database is co-managed by the Sensor Intercomparison and Merger for Biological and Interdisciplinary Oceanic Studies (SIMBIOS) and SeaWiFS Projects at Goddard Space Flight Center (GSFC).

The purpose of SeaBASS is to ensure that a user-friendly, searchable database of in situ and airborne bio-optical measurements is readily available to the NASA Ocean Color Science Team members and to other approved individuals (members of other ocean color instrument teams, voluntary data contributors, etc.) for advanced algorithm development and data product validation purposes. In addition, SeaBASS contains a variety of data collected using different methods (e.g., subsurface and above-surface reflectance, high performance liquid chromatography, and fluorometric chlorophyll $a$) which are useful for measurement protocol evaluation purposes (Mueller and Austin 1995, Hooker et al. 1999b, and Fargion and Mueller 2000). This policy supercedes the SeaWiFS Project 1991 policy (Appendix A in Hooker et al. 1993b).

Submission: Ocean color algorithm development is essentially observation limited, and rapid turnaround and access to such data are crucial for progress. Principal Investigators (PIs) supported under the SIMBIOS and SeaWiFS Programs must meet a 6-month data submission deadline. Bio-optical data collected under funding from the NASA Ocean Biology Program, however, must be submitted within 1 year. International Science Team members and members of other ocean color instrument teams who are making suitable observations for algorithm development and validation are encouraged to provide their data as well, to foster collaboration.

Formats and Metadata: Data should be provided in the currently agreed-upon format, along with relevant information describing collection conditions, instrument specifications, instrument performance and calibration, and statements of data accuracy. The currently used data format specifications and examples are posted on the SeaBASS Web site (http://seabass.gsfc.nasa.gov/~seabass/seabass/html/seabass.html). The provider should use FCITeCK, which is an automated format checker program, to test the format validity of SeaBASS data files via return e-mail. Appropriate instrument information, cruise reports, and calibration histories are expected from each data provider. For data providers supported by the SeaWiFS Project Office, submission of the above information is mandatory. Data values shall be in appropriate units (e.g., providing volts together with conversion coefficients and drift data is unacceptable). High level data sets, such as normalized water-leaving radiance spectra, are encouraged together with descriptions or citations of the procedures used to derive the values. Descriptions of data should be segmented into logical groupings, e.g., by station, date, parameter, etc. Data quality, calibration traceability and history, instrument drift, and sampling protocols may be in text format. Future recommended format modifications may be proposed during NASA Ocean Color Science Team meetings and then discussed for approval and implementation.

Data Delivery and Access: Researchers, who are supported by the SeaWiFS Project Office, will be required to deliver data to the SeaWiFS Project Office within six months of data collection. For a period of three years following data collection, access to the digital data will be limited to the NASA Ocean Color Science Team and other approved users as agreed upon by the SeaWiFS Project Office and data providers unless earlier access is granted by individual data providers. Data providers can declare their data sets available for open access anytime prior to the three-year anniversary. The SeaWiFS and SIMBIOS Project Offices will grant access to international science team members on a case-by-case basis according to ongoing collaboration efforts. Other investigators from the ocean color community will be able to query SeaBASS for information about the data (i.e., parameters, locations, dates, and investigators), but will not have access to the data itself. If the investigators are interested in obtaining the data, they will be referred to the appropriate provider. After the third-year anniversary of data collection, all restricted data will change to an open status, and a copy of the data will be given to the National Oceanographic Data Center (NODC) for distribution. Exceptions to this plan may be made with the approval of the Ocean Color Science Team. For example, some special data sets for algorithm development may be made available to the research community without restrictions.

Use Conditions: Prior to the three-year data collection anniversary, users of data will be required to provide proper credit and acknowledgment of the provider. A citation should also be made of the data archive. Users of data are encouraged to discuss relevant findings with the provider early in the research. The user is required to give all providers of the data being used a copy of any manuscript resulting from use of the data prior to the initial submission for publication, thus giving the data provider an opportunity to comment on the paper.

† Note that all citations given in this addendum are listed in their entirety in the References section of this Technical Memorandum.
provider(s) shall have the right to be named as a co-author. All users and providers are requested to report possible data errors or mislabeling found in the database, to the SeaBASS administration.

Updates and Corrections: A major purpose of the SeaBASS database is to facilitate comparisons between in situ observations (regionally, temporally, by technique, by investigator, etc.), as well as between in situ and remotely sensed observations. Updates and corrections to submitted data sets are encouraged. Records will be maintained of updates and corrections; summaries of updates will be posted on a database board, and users shall be notified of the updates. It will be the provider's responsibility to ensure that the current data in the archive is identical to the data used in the provider's most recent publications or current research. When an investigator has determined that the data sets are final, a written certification of data quality is mandatory.

Distribution: After receiving the final data, the SeaWiFS Project Office will forward the data at the appropriate time to NODC for open distribution. A courtesy citation, naming the provider and the funding agency, will accompany the data. The SeaWiFS Project will not be held responsible for any data errors or misuse.
Cumulative Index

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

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E.R. Firestone and S.B. Hooker

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### Glossary

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

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**A**

- AAOT *Acqua Alta* Oceanographic Tower  
- AC Alternating Current  
- ACS Average Calibration Slope  
- A/D Analog-to-Digital  
- ADCP Acoustic Doppler Current Profiler  
- AERONET Aerosol Robotic Network  
- AI Absorbing Aerosol Index  
- A19901 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-5 The Fifth AMT Cruise  
- AMT-8 The Eighth AMT Cruise  
- AOP Apparent Optical Property  
- AOT Aerosol Optical Thickness  
- 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  
- AT A Ambient Temperature Plate Assembly  
- ATSR Along-Track Scanning Radiometer  
- AU Astronomical Unit  
- AVHRR Advanced Very High Resolution Radiometer  

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**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 Bayonnet 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  

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**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 *Consiglio Nazionale delle Ricerche* (National Research Council)  
- COARE Coupled Ocean Atmosphere Response Experiment  
- CoASTS Coastal Atmosphere and Sea Time Series  
- CoBOP Coastal Benthic Optical Properties (Bahamas)  
- C-OPS Combined (software package for logging) SeaOPS data.  
- 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  

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**D**

- DAAC Distributed Active Archive Center  
- DalBOSS Dalhousie Buoyant Optical Surface Sensor  
- DalSAS Dalhousie SeaWiFS Aircraft Simulator  
- DARR Data Analysis Round-Robin  
- DARR-94 The first DARR (1994)  
- DAS Data Acquisition Sequence  
- DATA Not an acronym, but a designator for the Satellite, Inc., series of power and telemtry 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 Satellite, Inc., series of directional units.  
- DMA Dimethylamine  
- DMM Digital Multimeter  
- DMS Dimethylsulfide  
- DMSP Dimethylsulphoniodipropionate  
- DMSPd Dissolved DMSP  
- DMSPp DMSPWithin phytoplankton cells  
- DNA Deoxyribonucleic Acid  
- DOC Dissolved Organic Carbon  
- DPA Detector Plate Assembly  
- DU Dobson Unit (of total ozone)  
- DUT Device Under Test  
- DVM Digital Voltmeter  

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**E**

- East  
- EcoHAB Ecology of Harmful Algal Blooms  
- EDTA Ethylenediaminetetraacetic Acid  
- EEZ Exclusive Economic Zone
e-mail Electronic Mail
EOS Earth Observing System
EP Entrance Pupil
EqPac Equatorial Pacific
ERS-2 The Second Earth Resources Satellite
EU European Union
EUC Equatorial Under Current

FARCAL Facility for Advanced Radiometric Calibrations
FASCAL Facility for Automated Spectroradiometric Calibrations
FEL Not an acronym, but a lamp designator.
FET Field-Effect Transistor
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)
FRRF Fast Repetition Rate Fluorometer
FS Field Stop
FWHM Full-Width at Half-Maximum

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
GSE Ground Support Equipment
GSFC Goddard Space Flight Center

HACR High-Accuracy Cryogenic Radiometer
HDF Hierarchical Data Format
HMS Her Majesty's Ship
HOT Hawaii Optical Time-series
HP Hewlett-Packard
HPLC High Performance Liquid Chromatography
HRPT High Resolution Picture Transmission
HTCO High Temperature Catalytic Oxidation

IAD Ion-Assisted Beam Deposition
IC Integrated Circuit
ICESS Institute for Computational Earth System Science
ID Inside Diameter
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
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

JCR (RRS) James Clark Ross
JES9906 Japan East Sea Cruise, 1999-06
JGOFs Joint Global Ocean Flux Study
JRC Joint Research Centre

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
LoCNESS Low-Cost NASA Environmental Sampling System
LS Light Stability
LSB Least Significant Bit
LTER Long Term Ecological Research
LXR LANDSAT Transfer Radiometer

MA Methylamine
MBARI Monterey Bay Aquarium Research Institute
MBR Maximum Band Ratio
MCP Modified Cubic Polynomial
MER Marine Environmental Radiometer
MERIS Medium Resolution Imaging Spectrometer
METEOSAT Meteorological Satellite
MF0796 R/V Miller Freeman Cruise, 1996-07
MFR-6 Multi-Filter Rotating Shadow-Band Radiometer
miniNESS miniature NASA Environmental Sampling System
MISR Multiangle Imaging Spectroradiometer
MLML Moss Landing Marine Laboratory
MMA Mirror Mount Assembly or Monomethylamine, depending on usage.
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
MVDS Multichannel Visible Detector System
E.R. Firestone and S.B. Hooker

SEC South Equatorial Current
SEM Scanning Electronic Microscopy
SEUC South Equatorial Undercurrent
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)
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
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
TEC Thermoelectric Cooler
THOR Three-Headed Optical Recorder
TIROS Television Infrared Observation Satellite
TMA Trimethylamine
TOA Top of the Atmosphere
TOC Total Organic Carbon
TOGA Tropical Ocean Global Atmosphere
TOMS Total Ozone Mapping Spectrometer
TOPEX Topography Experiment
TOTO Tongue of the Ocean (Bahamas)
TOVS TIROS Operational Vertical Sounder
TSG Thermosalinograph
TSM Total Suspended Matter
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
UNC Unified Course
UOR Undulating Oceanographic Recorder
UPS Uninterruptable Power Supply
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 -
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
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


E.R. Firestone and S.B. Hooker


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, 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.


E.R. Firestone and S.B. Hooker


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Neckel, H., and D. Labs, 1984: The solar radiation between 3,300 and 12,500Å. Solar Physics, 90, 205-258.


-W, X-


THE SEAWiFS POSTLAUNCH TECHNICAL REPORT SERIES

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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 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 11 volumes and consists of 5 sections including an errata, an addendum, 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.