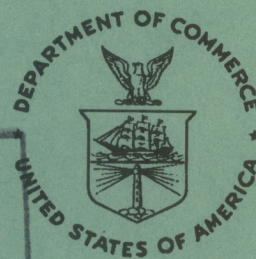
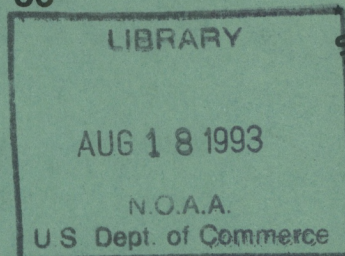


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## NOAA Technical Memorandum NESDIS 36



## NESDIS PUBLICATION LISTING, 1992

Washington, D.C.  
April 1993



## National Environmental Satellite, Data, and Information Service

The National Environmental Satellite, Data, and Information Service (NESDIS) manages the Nation's civil Earth-observing satellite systems, as well as global national data bases for meteorology, oceanography, geophysics, and solar-terrestrial sciences. From these sources, it develops and disseminates environmental data and information products critical to the protection of life and property, national defense, the national economy, energy development and distribution, global food supplies, and the development of natural resources.

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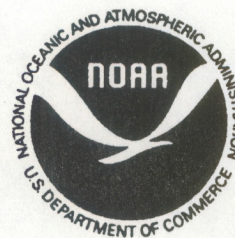
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- NESDIS 1 Publications and Final Reports on Contracts and Grants, 1982. Nancy Everson, March 1983. (PB83-252528)
- NESDIS 2 The Geostationary Operational Environmental Satellite Data Collection System. D.H. MacCallum and M.J. Nestlebusch, June 1983. (PB83 257634)
- NESDIS 3 Nimbus-7 ERB Sub-Target Radiance Tape (STRT) Data Base. L.L. Stowe and M.D. Fromm, November 1983. (PB84 149921)
- NESDIS 4 Publications and Final Reports on Contracts and Grants, 1983. Nancy Everson, April 1984. (PB84 192301)
- NESDIS 5 A Tropical Cyclone Precipitation Estimation Technique Using Geostationary Satellite Data. Leroy E. Spayd Jr. and Roderick A. Scofield, July 1984. (PB84 226703)
- NESDIS 6 The Advantages of Sounding with the Smaller Detectors of the VISSR Atmospheric Sounder. W. Paul Menzel, Thomas H. Achtor, Christopher M. Hayden and William L. Smith, July 1984. (PB851518/AS)
- NESDIS 7 Surface Soil Moisture Measurements of the White Sands, New Mexico. G.R. Smith, September 1984. (PB85 135754)
- NESDIS 8 A Technique that Uses Satellite, Radar, and Conventional Data for Analyzing and Short-Range Forecasting of Precipitation from Extratropical Cyclones. Roderick A. Scofield and Leroy E. Spayd, Jr., November 1984. (PB85 164994/AS)
- NESDIS 9 Surface Cyclogenesis as Indicated by Satellite Imagery. Frank Smigielski and Gary Ellrod, March 1985. (PB85 191815/AS)
- NESDIS 10 Detection of High Level Turbulence Using Satellite Imagery and Upper Air Data. Gary Ellrod, April 1985. (PB85 208452/AS)
- NESDIS 11 Publications and Final Reports on Contracts and Grants, 1984. Nancy Everson, April 1985. (PB85 208460/AS)
- NESDIS 12 Monthly Infrared Imagery Enhancement Curves: A Tool for Nighttime Sea Fog Identification off the New England Coast. E.M. Maturi and Susan J. Holmes, May 1985. (PB85 237725/AS)
- NESDIS 13 Characteristics of Western Region Flash Flood Events in GOES Imagery and Conventional Data. Eric Fleming and Leroy Spayd Jr., May 1986. (PB86 209459/AS)
- NESDIS 14 Publications and Final Reports on Contracts and Grants, 1985. Nancy Everson, June 1986. (PB86 232477/AS)



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**NOAA Technical Memorandum NESDIS 36**



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Nancy A. Everson  
Office of Research and Applications  
Satellite Applications Laboratory  
Training and Information Services Branch

Washington, D.C.  
April 1993

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National Environmental Satellite,  
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## PREFACE

This technical memorandum is one of a series (see inside covers) containing lists of articles and reports published by or for the National Environmental Satellite, Data and Information Service (NESDIS). To date, the series consists of NESCTM 1 (for 1958-1966), 2 (1967), 11 (1968), and 22 (1969) NOAA TM NESS 31 (1979), 38 (1971), 46 (1972), 55 (1973), 69 (1975), 79 (1976), 97 (1977), 104 (1978), 108 (1979), 115 (1980), 117 (1981); NOAA TM NESDIS 1 (1982), 4 (1984), 11 (1985), 14 (1986), 22 (1987) 24 (1988), 32 (1989), 33 (1990) and 35 (1991).

This issue lists items published or received during 1991 and includes items omitted from the previous issue.

The technical reports and technical memorandums listed in this report are available from the National Technical Information Service (NTIS), Department of Commerce, Sills Bldg., 5285 Port Royal Road, Springfield, VA 22161 (prices on request for paper copies or microfiche), or by contacting Nancy Everson, NOAA/NESDIS, 5200 Auth Road, Washington, DC 20233 (when extra copies are available).

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## SECTION I

### OFFICE OF SATELLITE DATA PROCESSING AND DISTRIBUTION



**OFFICE OF SATELLITE DATA PROCESSING AND DISTRIBUTION (OSDPD)**

**PROCEEDINGS OF TECHNICAL CONFERENCES OR MEETINGS**

Jackson, N.L. and J. Green-Newby, 1992: Generating estimates using the GOES-I interactive flash flood analyzer (IFFA) software on the wide word workstation (WWW). Proceedings of the 8th International Conference on Interactive Information and Processing Systems for Meteorology, Oceanography, and Hydrology and the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, J87-J91.



## SECTION II

### OFFICE OF RESEARCH AND APPLICATIONS



## OFFICE OF RESEARCH AND APPLICATION (ORA)

### ARTICLES IN PERIODICALS

- Boone, M.J. and A.E. Strong, 1992: An MCSST climatology: 1984-1990. EOS Transactions, 73 (43), 264.
- Chen, T.S., A. Gruber, A. Thomasell, W. Zonghao, and M. Jianping, 1992: Assessment of the impact of NOAA satellite soundings on the forecast system of the Peoples Republic of China. Advances in Space Research, 12, (7)313-(7)316.
- Daughtry, C.S.T., K.P. Gallo, S.N. Goward, S.D. Prince, and W.P. Kustas, 1992: Spectral estimates of absorbed radiation and phytomass production in corn and soybean canopies. Remote Sensing of Environment, 39, 141-152.
- deWaard, J., W.P. Menzel, and J. Schmetz, 1992: Atlantic data coverage by METEOSAT-3. Bulletin American Meteorological Society, 73 (7), 977-983.
- Ellrod, G.P. and D.I. Knapp, 1992: Forecasting techniques - An objective clear-air turbulence forecasting technique: Verification and operational use. Weather and Forecasting, 7 (1), 150-165.
- Fiore, J.V., Jr. and N.C. Grody, 1992: Classification of snow cover and precipitation using SSM/I measurements: Case studies. International Journal Remote Sensing, 13, 3349-3361.
- Gutman, G., 1992: Satellite image classification for global studies of Earth's surface parameters from polar orbiters. International Journal Remote Sensing, 13, 209-304.
- Huang, H.L., W.L. Smith, and H.M. Woolf, 1992: Vertical resolution and accuracy of atmospheric infrared sounding spectrometers. Journal of Applied Meteorology, 31, 265-274.
- Kaufman, Y.J., A. Setzer, D. Ward, D. Tanre, B.N. Holben, V.W.J.H. Kirchhoff, W.P. Menzel, M.C. Pereira, and R. Rasmussen, 1992: Biomass burning airborne and spaceborne experiment in the Amazons (BASE-A). Journal of Geophysical Research, 97 (D13), 14581-14599.
- King, M.D., Y.J. Kaufman, W.P. Menzel, and D. Tanre, 1992: Remote sensing of cloud, aerosol and water vapor properties from the moderate resolution imaging spectrometer (MODIS). IEEE Transactions and Geoscience and Remote Sensing, 30 (1), 2-27.



- Maturi, E.M. and P. Celone, 1992: A bird's eye view of Florida's loop current. Mariners Weather Log, Summer 1992, and Florida Oceanographic, 13 (4), 2 pp.
- May, D.A., L.L. Stowe, J.D. Hawkins, and E.P. McClain, 1992: A correction for Saharan dust effects on satellite sea surface temperature measurements. Journal of Geophysical Research, 97 (C3), 3611-3619.
- McMillin, L., M. Uddstrom, and A. Coletti, 1992: A procedure for correcting radiosonde reports for radiation errors. Journal of Atmospheric and Oceanic Technology, 9 (6), 801-811.
- Menzel, W.P., D.P. Wylie, and K.I. Strabala, 1992: Seasonal and diurnal changes in cirrus clouds as seen in four years of observations with the VAS. Journal of Applied Meteorology, 31 (4), 370-385.
- Parmenter-Holt, F.C., 1992: The role of satellite remote sensing in precipitation forecasting, rainfall estimation, and water management. International Archives of Photogrammetry and Remote Sensing, V29 (Part B7), 538-541.
- Prins, E.M. and W.P. Menzel, 1992: Geostationary satellite detection of biomass burning in South America. International Journal of Remote Sensing, 13 (15), 2783-2799.
- Rabin, R.M., L.A. McMurdie, C.M. Hayden, and G.S. Wade, 1992: Layered precipitable water from the infrared VAS sounder during a return-flow event over the Gulf of Mexico. Journal of Applied Meteorology, 31 (8), 819-830.
- Rao, C.R.N., 1992: Aerosol radiative corrections to the retrieval of sea surface temperatures from infrared radiances measured by the Advanced Very High Resolution Radiometer (AVHRR). International Journal of Remote Sensing, 13, 1757-1769.
- Schreiner, A.T., C.M. Hayden, and C.A. Paris, 1992: A study of satellite derived moisture with emphasis on the Gulf of Mexico. Journal of Applied Meteorology, 31 (7), 742-757.
- Stowe, L., R. Carey, and P. Pellegrino, 1992: Monitoring the Mt. Pinatubo aerosol layer with NOAA/11 AVHRR data. Geophysical Research Letters, 19 (2), 159-162.
- Strong, A.E., 1992: Monthly time-series of coincident in situ SST and SMSST. EOS Transactions, 72, 74.
- Strong, A.E., 1992: Derived sea surface temperature data sets. Sea Surface Temperature, R. Clancy and R. Weller (Eds.), Joint Oceanographic Institute, Washington, DC, 24-25.



Velden, C.S., C.M. Hayden, W.P. Menzel, J.L. Franklin, and J.S. Lynch, 1992: The impact of satellite-derived winds on numerical hurricane track forecasting. Weather and Forecasting, 7 (1), 107-118.

#### **NOAA TECHNICAL REPORTS IN THE NESDIS SERIES AND NOAA TECHNICAL MEMORANDA IN THE NESDIS SERIES**

Everson, N.A., 1992: Publications and final reports on contracts and grants, 1991. NOAA Technical Memorandum NESDIS 35, U.S. Department of Commerce, Washington, D.C., 21 pp.

Ferraro, R., 1992: NOAA workshop on climate scale operational precipitation and water vapor products. NOAA Technical Report NESDIS 62, U.S. Department of Commerce, Washington, D.C., 61 pp.

Hudson, R.D. and W.G. Planet, 1992: International Dobson data workshop summary report. NOAA Technical Report NESDIS 60, U.S. Department of Commerce, Washington, D.C., 29 pp.

Smigielski, F.J. and H.M. Mogil, 1992: A systematic satellite approach for estimating central pressures of mid-latitude oceanic storms. NOAA Technical Report NESDIS 63, U.S. Department of Commerce, Washington, D.C., 64 pp.

Zehr, R.M., 1992: Tropical cyclogenesis in the Western North Pacific. NOAA Technical Report NESDIS 61, U.S. Department of Commerce, Washington, D.C., 181 pp.

#### **PROCEEDINGS OF TECHNICAL CONFERENCES OR MEETINGS**

Ackerman, S.A., S. Limaye, G.S. Wade, and P. Fry, 1992: Spectral signatures of dust, smoke, forest fires and volcanic aerosols from satellite observations. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 75-76.

Alishouse, J. and R. Ferraro, 1992: Areal relationships in satellite precipitation retrievals. Proceedings on the Special Meeting on Microwave Radiometry and Remote Sensing. E. Westwater (Ed.), NOAA/ERL, January 14-16, 1992, Boulder, CO, 32-35.



- Alishouse, J. and R. Ferraro, 1992: SSM/I total precipitable water vapor algorithms: A reprise and update. Proceedings of the 1st Conference on DMSP Retrieval Products, April 14-15, 1992, Camp Springs, MD, R. Isaacs, E. Kalnay, G. Ohring, and R. McClatchey, (Eds.), 77-81.
- Bloom, H.J., L.M. Wilson, A. Reale, and L.M. McMillin, 1992: Operational TOVS soundings using a radiance classification retrieval approach. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 48-51.
- Boime R.D., S.G. Warren, and A. Gruber, 1992: The use of visible-channel data from NOAA satellites to measure total ozone amount over Antarctica. Proceedings of the Quadrennial Ozone Symposium, June 4-13, 1992, Charlottesville, VA.
- Brown, J.M., A.A. Rockwood, J.F. Weaver, B.D. Jamison, and R. Holmes, 1992: An expert system for the prediction of downslope windstorms. Proceedings of the 4th Workshop on Operational Meteorology, September 15-18, Whistler, BC, Canada, 6 pp.
- Chang, Tse-Tsang and D.W. Hillger, 1992: Optimal smoothing of GOES VAS upper-atmosphere thermal waves. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 102-105.
- Dalu, G.A., J.F.W. Purdom, M. Baldi, and P.N. Dills, 1992: Winter ocean vortex off the Pacific Coast of Mexico, satellite observed behavior and the theoretical interpretation. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 381-384.
- Ellrod, G.A., 1992: Anvil characteristics of the Plainfeild, Illinois tronadic storm determined from frequent interval GOES imagery. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 106-109.
- Ellrod, G.A., 1992: Potential applications of GOES-I 3.9um infrared imagery. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 184-187.



- Ellrod, G.A., 1992: The occurrence of clear air turbulence in the tropics. Proceedings of the WMO Technical Conference on Tropical Aeronautical Meteorology (TECTAM-92), October 5-9, 1992, Geneva, Switzerland, 12 pp.
- Faska, C.G. and A. Reale, 1992: Satellite soundings quality control measures and the implementation of the TOVS stability departure parameter. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 139-141.
- Ferraro, R.R. and N.C. Grody, 1992: The use of the DMSP SSM/I for the generation of precipitation products at NOAA/NESDIS: Part I - A status report. Proceedings of the 1st NMC/NESDIS/DoD Conference of DMSP Retrieval Products, April 14-15, 1992, Camp Springs, MD, 83-88.
- Ferraro, R.R., N.C. Grody, and J.C. Alishouse, 1992: The calibration of an SSM/I Scattering index for rain rate retrievals using RADAP-II AMEDAS radar data. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 290-294
- Fiore, J.V., Jr. and W. Pichel, 1992: Evaluation of the experimental SSM/I orbit-by-orbit products at NOAA/NESDIS. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 250-253.
- Fleming, H.E., M.D. Goldberg, W.E. Baker, J.C. Derber, and B.B. Katz, 1992: The development and implementation of an interactive retrieval/analysis/forecast algorithm. Proceedings of the Asian Pacific International Science Year Conference on the Earth and Space, November 16-20, 1992, Tokyo, Japan, 4 pp.
- Gabriel, P.M. and J.F.W. Purdom, 1992: Simple deconvolution and enhancement of visible and infrared satellite imagery. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 129-130.
- Green-Newby, J.L. and N.L. Jackson, 1992: Updating the interactive flash flood analyzer for the GOES-I era. Proceedings of the 8th International Conference on Interactive Information and Proceedings Systems for Meteorology, Oceanography, and Hydrology, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 253-260.



- Grody, N.C. and R.R. Ferraro, 1992: A comparison of passive microwave rainfall retrieval methods. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 60-65.
- Grody, N.C. and R.R. Ferraro, 1992: The use of the DMSP SSM/I for the generation of precipitation products at NOAA/NESDIS: Part II - Scientific results. Proceedings of the 1st NMC/NESDIS/DoD Conference of DMSP Retrieval Products, April 14-15, 1992, Camp Springs, MD, 82.
- Gruber, A. and P.A. Arkin, 1992: Reviews of modern climate diagnostic techniques. World Climate Programme Research, World Meteorological Organization, WMO/TD-No. 519, November 1992, 54 pp.
- Gutman, G., 1992: Anisotropy of visible and near-IR land reflectances as observed from NOAA AVHRR. Proceedings of the International Radiation Symposium, Tallinn, Estonia, August, 1992.
- Gutman, G., 1992: Normalization of multi-annual global AVHRR reflectance data over land surfaces to common sun-target-sensor geometry. COSPAR '92 Meeting, August 1992, Washington, D.C.
- Gutman, G., 1992: Multi-annual time series of AVHRR-derived land surface temperature. COSPAR '92 Meeting, August 1992, Washington, D.C.
- Gutman, G., 1992: NOAA activities in monitoring land climate using the Advanced Very High Resolution Radiometer. Proceedings of the 6th Australian Remote Sensing Conference, November 2-6, 1992, Wellington, New Zealand, 60-69.
- Hayden, C.M. and T.J. Schmit, 1992: Quantitative applications of the 6 micrometer water vapor band measurements from satellites. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta GA, American Meteorological Society, Boston, MA, 188-192.
- Herman, L.D., 1992: Obtaining cloud motion vectors from polar orbiting satellites. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta GA, American Meteorological Society, Boston, MA, 110-113.
- Hillger, D.W., 1992: Image and graphical analysis of principal components of satellite sounding channels. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 28-31.



- Hillger, D.W. and J.F.W. Purdom, 1992: A satellite sounding analysis of the 28 August 1990 Illinois tornadoes. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 114-117.
- Jacobowitz, H. and V.R. Taylor, 1992: Changes in the regional radiation budget resulting from the Kuwaiti oil fires. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 360-362.
- Jacobowitz, H. and L. Stowe, 1992: Earth radiation budget, cloud, and aerosol parameters derived from AVHRR and TOVS measurements. Proceedings of the Asian Pacific International Science Year Conference on the Earth and Space, November 16-20, 1992, Tokyo, Japan.
- Lubich, D.A. and J.F.W. Purdom, 1992: The use of cloud relative animation in the analysis of satellite data. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 118-119.
- Lure, Y.M., Y.S. Chiou, N.C. Grody, and M. Yeh, 1992: Classification of Earth surface from special sensor microwave image (SSM/I) using artificial neural network data fusion. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 44-47.
- McMillin, L.M. and M.J. Uddstrom, 1992: An evaluation of results from classification retrieval methods. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 44-47.
- Menzel, W.P. and D.P. Wylie, 1992: Global semi-transparent cloud statistics from two years of HIRS data. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA.
- Miller, D.B. and W.P. Menzel, 1992: Using GOES and Meteosat in the United States: Assigning cloud heights and inferring winds. Proceedings of the 9th Meteosat Scientific User's Meeting, September 15-19, 1992, Locarno, Switzerland.
- Mitchell, K.E., T.L. Black, F. Mesinger, and N.C. Grody, 1992: Impact of SSM/I based snow/ice analysis in the NMC ETA model. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 153-154.



- Mogil, H.M., G. Ellrod, M.L. Pearce, and R.H. Brady, 1992: Analysis of two recent Washington, D.C. area severe thunderstorms: Similarities and differences. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 163-172.
- Nagle, F.W., 1992: The use of a simplified Kalman filter in continuously updating hemispheric analysis on a desk-top computer of modest capacity, incorporating NOAA-X and DMSP retrievals. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA.
- Ohring, G., W. Planet, and M. Weinreb, 1992: Monitoring global change from operational satellites: Problems and prospects. ASPRS/ACSM/RT 92 Technical Papers, Vol. 1, Global Change and Education, August 3-7, 1992, Washington, D.C., 140-155.
- Planet, W.G., J.H. Lienesch, H.D. Bowman, A.J. Miller, and R.M. Nagatani, 1992: Ozone determinations with the NOAA SBUV/2 system. Proceedings of the Quadrennial Ozone Symposium, June 4-13, 1992, Charlottesville, VA, National Oceanic and Atmospheric Administration, Washington, D.C., 4 pp.
- Purdom, J.F.W. and J.F. Weaver, 1992: Analysis of rapid scan satellite imagery to diagnose tornadic storms and the environment in which they form. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, Atlanta, GA, American Meteorological Society, Boston, MA, J25-J30.
- Rasmussen, E.A. and J.F.W. Purdom, 1992: Investigations of a polar low using geostationary satellite data. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 120-122.
- Ritter, C.M., D.R. Smith, and A.E. Strong, 1992: A reexamination of sea surface temperatures as a predictor for tropical storm intensity. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 4 pp.
- Rockwood, A.A., J.F. Weaver, J.M. Brown, B.D. Jamison, and R. Holmes, 1992: An expert system for the prediction of downslope windstorms in northern Colorado. Proceedings of the Symposium on Weather Forecasting, January 5-10, Atlanta, GA, American Meteorological Society, Boston, MA, 210-211.



- Rosenfeld, D. and G. Gutman, 1992: Retrieving microphysical properties of cloud tops by multispectral analysis of AVHRR data. Proceedings of the Cloud and Precipitation Conference, Montreal, Canada, August 1992.
- Schmit, T.J. and W.P. Menzel, 1992: GOES/VAS infrared calibration. Infrared Radiometric Sensor Calibration Symposium, September 16, 1992, Logan, UT.
- Schmit, T.J. and W.P. Menzel, 1992: VAS observed sudden stratospheric warming. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 180-183.
- Scofield, R.A. and J. Robinson, 1992: The "water vapor plume/potential energy axis connection" with heavy convective rainfall. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, J36-J43.
- Sherman, J.W., III, 1992: Historical perspective: Marine oil spill detection by remote sensing. Proceedings of the 1st Thematic Conference on Remote Sensing for Marine and Coastal Environments, June 15-17, 1992, New Orleans, LA, Environmental Research Institute of Michigan, Ann Arbor, MI, 25-36.
- Snook, J.S. and D.W. Hillger, 1992: A comparison of cluster versus rectangular averaging of radiance measurements for use in VAS soundings. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 32-35.
- Stowe, L.L., 1992: Aerosol optical thickness. Third Annual Climate Assessment 1991, M.S. Halpert and C.F. Ropelewski (Eds.), Department of Commerce, Climate Analysis Center, Camp Springs, MD, 74 pages.
- Strong, A.E., et al., 1992: Observed climate variability and change. Climate Change 1992: The Supplementary Report to the IPCC Scientific Assessment, J.T. Houghton, B.A. CVallander, and S.K. Varney (Eds.) WMO, Cambridge University Press, 200 pp.
- Strong, A.E., 1992: Sea surface temperature signals from satellites. Encyclopedia of Earth System Science, W.A. Nierenberg (Ed.), Academic Press, San Diego, CA, 69-80.



- Thiao, W. and R.A. Scofield, 1992: Water vapor plume characteristics associated with the extreme heavy rainfall. Proceedings of Mesoscale Meteorology and Oceanography, June 8-12, 1992, Universite Laval, Quebec, Canada, 132.
- Thiao, W., R.A. Scofield, and J. Robinson, 1992: Characteristics of extreme rainfall events (125 mm or more) during the Summer season over the U.S.A. Proceedings of the 1st International Conference of the African Meteorological Society, December 7-11, 1992, Nairolbi, Kenya.
- Uddstrom, M.J. and L.M. McMillin, 1992: On the use of TOVS radiances. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 56-59.
- Wade, G.S., 1992: Precipitable water fields derived from VAS data over the Southwest. Proceedings of the 4th Arizona Weather Symposium, June 10-12, 1992, Scottsdale, AZ, 19-30.
- Weaver, J.F. and J.F.W. Purdom, 1992: Satellite analysis of the 6 June 1990 Limon, Colorado tornado. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 123-125.
- Zhang, M. and R.A. Scofield, 1992: Satellite-derived estimation of rainfall in forward-backward thunderstorm propagation model using neural network expert system techniques. Proceedings of the International Joint Conference on Neural Networks, Vol. II, June 7-11, 1992, Baltimore, MD, 425-430.
- Zhang, M. and R.A. Scofield, 1992: ANSER - Artificial neural network expert system for satellite-derived estimation of rainfall. Proceedings of the XVII International Society for Photogrammetry and Remote Sensing Conference Congress, Vol. 29, August 2-14, 1992, Washington, DC.
- Zhang, M. and R.A. Scofield, 1992: Satellite-derived estimation of rainfall using neural network expert system techniques. Proceedings of the 6th Artificial Intelligence Research in Environmental Science (AIRIES'92) Workshop, October 27-29, 1992, Monterey, CA.



## FINAL REPORTS OF NESDIS SPONSORED CONTRACTS AND GRANTS

- Campbell, G.G., S.B. Smith, and P.N. Dills, 1992: Principle component analysis of satellite imagery: Can it reveal physical forecasting? A case study. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, Atlanta, GA, American Meteorological Society, Boston, MA, 98-99 (CIRA, Colorado State University).
- Cheng, M., E.C. Barrett, and M.J. Beaumont, 1992: The Upper Nile Region: Investigations of convective clouds using Meteosat infrared and DMSP-SSM/I imagery. Report No. NOA17EC0194, University of Bristol, Bristol, UK, 79 pp.
- Dills, P.N. and S.B. Smith, 1992: Comparison of profiler and satellite cloud-tracked winds. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 155-158 (CIRA, Colorado State University).
- Hucek, R., 1992: Development of diurnal reference fields for daily simulations. Final Report, Contract #50-DDNE-9-00072, Research and Data Systems Corporation, Greenbelt, MD, 41 pp.
- Hucek, R., 1992: Optimization of the MLE data processing system for minimum angular sampling errors with CERES. Final Report, Contract #50-DDNE-9-00072, Research and Data Systems Corporation, Greenbelt, MD.
- Pinker, R. and I. Laszlo, 1992: Interannual variability of solar irradiance in the Amazon Basin including the 1982/83 El Niño year. Journal Climate, 5 (11), 1305-1315 (University of Maryland).
- Smith, S.B. and P.N. Dills: Nowcasting with satellite-based mesoscale convective climatologies. Proceedings of the Symposium on Weather Forecasting and 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, J44-J47 (CIRA, Colorado State University).
- Smith, S.B. and M.K. Yau, 1992: The roles of the mountain-plain and synoptic circulations in the initiation of severe convective outbreaks in Alberta. Proceedings of the 5th Conference on Mesoscale Processes, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 54-59 (CIRA, Colorado State University).



Smith, W.L., A.T. Schreiner, and C.M. Hayden, 1992: A report of the severe weather program for the period 1 September 1990 to 29 February 1992. Final Report, University of Wisconsin, Madison, WI, Grant # NA90-AA-H-RA497, 100 pp.

Smith, W.L., C.M. Hayden, and W.P. Menzel, 1992: An anthology of CIMSS journal publications, 1991-1992. Report from the Cooperative Institute for Meteorological Satellite Studies (CIMSS), University of Wisconsin-Madison, WI, 2024 pp.



SECTION III

OFFICE OF SYSTEMS DEVELOPMENT



OFFICE OF SYSTEMS DEVELOPMENT (OSD)

PROCEEDINGS OF TECHNICAL CONFERENCES OR MEETINGS

Mignogno, M., 1992: Prospects for Landsat commercialization and the new Landsat policy. Proceedings of the 4th International Conference for Space Technology, Development and Business, March 23-26, 1992, Montreux, Switzerland, and members of the Advisory Board, 195-200.



SECTION IV

NATIONAL CLIMATIC DATA CENTER



## NATIONAL CLIMATIC DATA CENTER (NCDC)

### ARTICLES IN PERIODICALS

- Doty, S.R., D.J. Foster, and R.J. Snodgrass, 1992: Summary of the retrospective upper-air data user requirements workshop. Bulletin of the American Meteorological Society, 73 (9), 1449-1451.
- Golubev, V.S., P.Ya. Groisman, and R. Quayle, 1992: An evaluation of the United States standard 8-inch nonrecording rain gauge at the Valdai Polygan, Russia. Journal of Atmospheric and Oceanic Technology, 9, 624-629.
- Groisman, P.Ya., 1992: Possible regional climatic consequences of Pinatubo eruption: An empirical approach. Geophysical Research Letters, 19 (15), 1603-1606.
- Guttman, N.B. and R.L. Lehman, 1992: Estimation of daily degree-hours. Journal of Applied Meteorology, 31 (7), 797-810.
- Peterson, T.C., T.P. Barnett, E. Roeckner, and T.H. Vonder Haar, 1992: An analysis of the relationship between cloud anomalies and sea surface temperature anomalies in a global circulation model. Journal of Geophysical Research, 97 (D18), 20,497-20,506.
- Portman, D.A., W.C. Wang, and T.R. Karl, 1992: Comparison of general circulation model and observed regional climates: Daily and seasonal variability. Journal of Climate, 5, 343-353.
- Reek, T., S.R. Doty, and T.W. Owen, 1992: A deterministic approach to the validation of historical daily temperature and precipitation data from the cooperative network. Bulletin of the American Meteorological Society, 73 (6), 753-762.

### PROCEEDINGS OF TECHNICAL CONFERENCES AND MEETINGS

- Easterling, D.R. and T.C. Peterson, 1992: Techniques for detecting and adjusting for artificial discontinuities in climatological time series: A review. Proceedings of the 5th International Meeting on Statistical Climatology, June 22-26, 1992, Toronto, Canada, Environment Canada, Ottawa, Canada, J28-J32.



- Elms, J.D., 1992: The Comprehensive Ocean-Atmosphere Data Set (COADS): Its evolution, applications and future enhancements. Global Ocean Partnership; MTS 92 Proceedings, October 19-21, 1992, Washington, DC, Marine Technology Society, Washington, DC, 507-514.
- Elms, J.D., 1992: Status of NCDC keying of historical marine data. Proceedings of the International COADS Workshop, January 13-15, 1992, Boulder, CO, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Climate Research Division, Boulder, CO, 37-45.
- Elms, J.D. and R.G. Quayle, 1992: Multi-decade sea surface temperature trends in American waters afflicted by coral bleaching. Proceedings of the 3rd Symposium on Global Change Studies, January, 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 98-101.
- Folland, C.K., T.R. Karl, N. Nicholls, B.S. Nyenzi, D.E. Parker, and K.Va. Vinnikov, 1992: Observed climate variability and change. Climate Change 1992, The Supplementary Report to the IPCC Scientific Assessment, Intergovernmental Panel on Climate Change, Cambridge University Press, 135-170.
- Guttman, N.B., 1992: The use of L-moments in the determination of regional precipitation climates. Proceedings of the 12th Conference on Probability and Statistics in the Atmospheric Sciences, June 22-26, 1992, Toronto, Ontario, Canada, American Meteorological Society, Boston, MA, 231-236.
- Guttman, N.B., J.R. Wallis, and J.R.M. Hosking, 1992: Regional precipitation climates. Proceedings of the 1992 International Winter Meeting, December 15-18, 1992, American Society of Agricultural Engineers, Nashville, TN.
- Hadeen, K.D., 1992: Global and regional baseline data sets for climate change studies. World Climate Programme Data and Monitoring, Final Report of the CCI Working Group on Climate Data and Its Rapporteurs, World Meteorological Organization, WMO/TD-No. 523, November 1992, 39-49.
- Peterson, T.C. and T.H. Vonder Haar, 1992: The relationship between clear sky water vapor and SST anomalies. Proceedings of the 6th Conference on Satellite Meteorology and Oceanography, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 341-344.
- Peterson, T.C. and T.H. Vonder Haar, 1992: An observational analysis useful in evaluating coupled ocean-atmosphere climate and GCMs. Proceedings of the 3rd Symposium on Global Change Studies, January, 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 122-124.



- Reek, T., S.R. Doty, and T.W. Owen, 1992: A deterministic approach to the creation of a baseline data set utilizing the historical temperature and precipitation data from the U.S. Cooperative Network. Proceedings of the 5th International Meeting on Statistical Climatology, 2-26 June 1992, Toronto, Canada, Environment Canada, Ottawa, Canada, 35-38.
- Snodgrass, R.J. and S.M. Evans, 1992: Improved data access and products in the automated era: Automated Surface Observing System (ASOS). Proceedings of the 8th International Conference on Interactive Information and Processing Systems for Meteorology, Oceanography, and Hydrology, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 34-37.
- Snodgrass, R.J. and W.M. Faas, 1992: On-line data access at the National Climatic Data Center. Proceedings of the 8th International Conference on Interactive Information and Processing Systems for Meteorology, Oceanography, and Hydrology, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 229-232.

#### **FINAL REPORTS OF NESDIS SPONSORED CONTRACTS AND GRANTS**

- Decker, W.L., 1992: A preliminary analysis of the changes of geopotential heights and temperatures of the 700 and 500 mb levels due to changes in instrumentation and practice. Contract P040EANE101503, University of Missouri-Columbia, 113 pp.
- Huang, H-J, 1992: Report on quality control system for CARDS (Comprehensive Aerological Reference Data Set. Contract P040EANE101504, University of NC-Asheville, 23 pp.



**SECTION V**

**NATIONAL OCEANOGRAPHIC DATA CENTER**



## NATIONAL OCEANOGRAPHIC DATA CENTER (NODC)

### ARTICLES IN PERIODICALS

Douglas, B.C., 1992: Global sea level acceleration. Journal of Geophysical Research, 97 (C8), August 15, 1992.

Levitus, S. and G. Isayev, 1992: A polynomial approximation to the international equation of state for seawater. Journal of Ocean and Atmosphere Technology, 9, 705-707.

Stathoplos, L. and N. Tuross, 1992: Proteins and DNA from modern planktonic foraminifera. Journal of Foraminiferal Research.

### PROCEEDINGS OF TECHNICAL CONFERENCES AND MEETINGS

Conkright, M.E. and W.M. Sackett, 1992: Stable carbon isotope changes during the maturation of organic matter. Productivity, Accumulation and Preservation of Organic Matter Recent and Ancient sediments, J. Whelan and J. Farrington (Eds.), Columbia University Press, New York, NY.

Douglas, B.C., 1992: Long-term sea level variation. National Academy of Sciences/NRC Volume on Decade to Century Time Scales of Climate Variability.

### FINALS REPORTS ON CONTRACTS AND GRANTS

Sanchez-Ibarra, A. and M. Brarraza-Paredes, 1992: Catalogue of Coronal Holes 1970-1991. Report UAG-102, World Data Center A for Solar-Terrestrial Physics, October 1992, National Geophysical Data Center, Boulder, CO, 64 pp.



SECTION VI

NATIONAL GEOPHYSICAL DATA CENTER



## NATIONAL GEOPHYSICAL DATA CENTER (NGDC)

### ARTICLES IN PERIODICALS

- Ahn, B.H., Y. Kamide, H.W. Kroehl, and D.J. Gorney, 1992: Cross-polar cap potential difference, auroral electrojet indices, and solar wind parameters. Journal of Geophysical Research, 97 (A2), 1345-1352.
- Allen, J.H., 1991: Trends in the acquisition and accessibility of long-term solar-terrestrial data. Journal of Geomagnetism and Geoelectricity, 43, Suppl., 911-920.
- Anderson, D.M. and W.L. Prell, 1992: The structure of the SW monsoon winds over the Arabian Sea during the late Quaternary: Observations, simulations, and marine geologic evidence. Journal Geophysical Research, 97 (C10), 15,481-15,487.
- Barry, R.G., 1992: Mountain climatology and past and potential future climatic changes in mountain regions: A review. Mountain Research Development, 12, 71-86.
- Hanson, H.P., C.S. Hanson, and B.H. Yoo, 1992: Recent Great Lakes ice trends. Bulletin of the American Meteorological Society, 73 (5), 577-584.
- Hastings, D.A., 1992: Global change databases on compact disks and diskettes. Global Change Newsletter, 12, December 1992, 10-11.
- Hastings, D.A. and W.J. Emery, 1992: The Advanced Very High Resolution Radiometer (AVHRR): A brief reference guide. Photogrammetric Engineering and Remote Sensing, 58 (8), 1183-1188.
- Hittelman, A.M., 1992: Network and CD-ROM access to Earth system data. Recent Advances in Marine Science and Technology.
- Kamide, Y. and H.W. Kroehl, 1992: What is the recovery phase of substorms in terms of the auroral electrojets? American Geophysical Union EOS Supplement, October 27, 1992, 450.
- Kenny, M.R. and K.E. Brown, 1992: The National Geophysical Data Center Bathymetric Program. International Journal of Marine Geodesy, 15, 165-175.
- Overpeck, J.T., R.S. Webb, and T. Webb, III, 1992: Mapping eastern North American vegetation change over the past 18,000 years: No-analogs and the future. Geolog, 20, 1071-1074.



- Robinson, D.A., M.C. Serreze, R.G. Barry, G. Scharfen, and G. Kukla, 1992: Large-scale patterns and variability of snowmelt and parameterized surface albedo in the Arctic Basin. Journal of Climate, 5 (10), 1109-1119.
- Rostoker, G., J.C. Samson, L.L. Cogger, F. Creutzberg, T.J. Hughes, D.R. McDiarmid, A.G. McNamara, A. Vallance Jones, D.D. Wallis, R.E. Horita, D.J.W. Kendall, H.W. Kroehl, D.J. McEwen, D. Andre, P. Prikryl, D.R. Moorcroft, J. MacDougall, and J.P. St. Maurice, 1992: CANOPUS as a tool for substorm research. American Geophysical Union EOS Supplement, April 7, 1992, 268.
- Serreze, M.C., J.A. Maslanik, R.G. Barry, and T.L. Demaria, 1992: Winter atmospheric circulation patterns in the Arctic Basin and possible relationships in the great salinity anomaly in the northern North Atlantic. Geophysical Research Letters, 19 (3), 293-296.
- Wilkinson, D.C., 1992: GOES space environment data on CD-ROM (January 1986 - June 1992). American Geophysical Union EOS Supplement, October 27, 1992, 443.
- Yeh, K.C., K.H. Lin, and R.O. Conkright, 1992: The global behavior of the March 1989 ionospheric storm. Canadian Journal of Physics, 70, 532-543.

#### PROCEEDINGS OF TECHNICAL CONFERENCES OR MEETINGS

- Anderson, D.M., 1992: Changes in upwelling and ocean productivity over hundreds to thousands of years: The marine geologic record of climate change. Proceedings Marine Technology Society 1992, 515-521.
- Anderson, D.M., Brock, J.C., and W.L. Prell, 1992: Physical upwelling processes, upper ocean environment, and the sediment record of the southwest monsoon. C. Summerhayes, et al., (Eds.), Upwelling Systems: Evolution Since the Early Miocene, Geological Society Special Publication 64, 121-129.
- Armstrong, R.L. and M.A. Hardman, 1992: URAD '92. Proceedings of Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, E.R. Westwater, (Ed.), 99-103.
- Armstrong, R.L. and A. Rango, 1992: Monitoring snow and grain size for passive microwave studies. Proceedings of the 60th Annual Meeting of the Western Snow Conference, Jackson, WY, 46-55.



- Armstrong, R.L., A. Chang, A. Rango, and E. Josberger, 1992: Snow depths and grain size relationships with relevance for passive microwave studies. Proceedings of International Symposium on Remote Sensing of Snow and Ice, Boulder, CO.
- Chinnery, M.A., J.J. Kineman, D.A. Hastings, and H. Meyers, 1992: The global change database project: A pilot diskette project for Africa. Data for Discovery: Proceedings of the 12th International CODATA Conference, CRC Press, Inc., Boca Raton, FL.
- Coffey, H.E. (Ed), 1992: Solar-Geophysical Data: Parts I & II. National Geophysical Data Center, Boulder, CO, January-December 1992.
- Davis, W.M. and S.J. McLean, 1992: Magnetic observatory annual means - How good a measure of internal geomagnetic processes are they? Abstracts for the American Geophysical Union Spring Meeting, May 1993, Baltimore, MD.
- Habermann, R.E. and D.R. Mock, 1992: Common data formats: Common data problems? Proceedings of the 8th International Conference, Interactive Information and Processing Systems for Meteorology, Oceanography, and Hydrology, January 5-10, 1992, Atlanta, GA, American Meteorological Society, Boston, MA, 79.
- Hardman, M.A. and R.L. Armstrong, 1992: Validation of passive microwave snow cover algorithms using spatially interpolated surface point measurements. IGARSS '92, Houston, TX, Vol. I, 818.
- Hittelman, A.M., 1992: Modern access techniques for Earth systems data. Proceedings of PACON92: The Pacific Congress on Marine Science and Technology, June 1-5, 1992, Kona, HI.
- Hittelman, A.M., 1992: Windows to Earth sciences: Access to public domain data. Proceedings of GeoTech '92, August 31-September 1, 1992, Denver, CO.
- Kineman, J.J., 1992: What is a scientific database? Design considerations for global characterization in the NOAA-EPA Global Ecosystems Database Project. Proceedings of the 1st International Workshop on Integrating GIS with Environmental Modeling, Boulder, CO, September 1991.
- Loughridge, M.S., 1992: Activities of the U.S. National Geophysical Data Center related to sea-bottom surveys. Proceedings of the 20th Joint Meeting of the United States Japan Cooperative Program in Natural Resources Sea-Bottom Surveys Panel, November 1991, Tokyo, Japan, 30-41.



## FINAL REPORTS OF NESDIS SPONSORED CONTRACTS AND GRANTS

- Dunbar, P., R. Habermann, P. Lockridge, and L. Row, 1992: National Geophysical Data Center. Fiscal Year 1991-1992 National Earthquake Hazards Reduction Program Activities Report to Congress. Federal Emergency Management Agency, Washington, D.C.
- Dunbar, P., L. Whiteside, and P. Lockridge, 1992: Significant Earthquakes, 2000 B.C. - 1900 A.D., World Data Center A for Solid Earth Geophysics Publication SE-49, National Geophysical Data Center, Boulder, CO, 320 pp.
- Hittelman, A.M., R.W. Buhmann, S.D. Racey, and V.W. Chandler, 1992: Aeromagnetics Earth System Data, Minnesota Region, CD-ROM User's Manual. National Geophysical Data Center, Boulder, CO, 75 pp.
- Hittelman, A.M., R.E. Habermann, D.T. Dater, and L. Di, 1992: Gravity, Earth System Data, CD-ROM User's Manual. National Geophysical Data Center, Boulder, CO, 109 pp.
- Kineman, J.J., 1992: Global Ecosystems Database Version 1.0, User's Guide, Key to Geophysical Records Documentation 26, National Geophysical Data Center, Boulder, CO, 121 pp.
- Kineman, J.J. and M.A. Ohrenscha11, 1992: Global Ecosystems Database Version 1.0, Documentation Manual. Key to Geophysical Records Documentation 27, National Geophysical Data Center, Boulder, CO, 300 pp.
- Solid Earth Geophysics Division, 1992: Experimental Calibrated Global Vegetation Index from NOAA's Advanced Very High Resolution Radiometer (AVHRR), Key to Geophysical Records Documentation 28, National Geophysical Data Center, Boulder, CO, 35 pp.
- Solid Earth Geophysics Division, 1992: Global Change Data Base: Pilot (Diskette) Project for Africa. World Data Center A for Solid Earth Geophysics Publication SE-47, National Geophysical Data Center, Boulder, CO, 337 pp.
- Solid Earth Geophysics Division, 1992: Global Change Data Base: Training Exercise Manual; Exploring Earth's Environment, Africa as an Example. World Data Center A for Solid Earth Geophysics Publication SE-48, National Geophysical Data Center, Boulder, CO, 174 pp.



## NESDIS SATELLITE TRAINING MATERIALS

### TECHNICAL REFERENCE HANDBOOKS

- Weather Satellites: Systems, Data, and Environmental Applications

American Meteorological Society  
45 Beacon Street  
Boston, MA 02108  
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- Weather Service Forecasting Handbook #6 - "Satellite Imagery Interpretation for Forecasters"
- Workbook on Tropical Clouds and Cloud Systems Observed in Satellite Imagery

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### LEARNING PROGRAMS (SCRIPT-SLIDE SETS)

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- 89/1 - A water vapor image feature related to severe thunderstorms. Gary Ellrod
- 89/2 - Instability bursts and mesoscale convective system development and propagation. Rod Scofield and Jacob Robinson
- 89/3 - Analysis of stratiform precipitation with enhanced infrared and visible imagery. Gary Ellrod
  
- 90/1 - Using instability bursts and satellite imagery to analyze and NOWCAST heavy snow. Rod Scofield and Jacob Robinson
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- 90/5 - Applications of future GOES multispectral imagery. Gary Ellrod  
Weather satellite observations in the mesoscale forecasting era. Ralph Anderson
- 90/6 - Backward propagating mesoscale convective systems (MCSs) and flash floods. Jacob Robinson and Rod Scofield
- 90/7 - The "water vapor imagery/theta-E connection" with heavy convective rainfall. Rod Scofield and Jacob Robinson
- 90/8 - Use of water vapor imagery to identify clear air turbulence. Gary Ellrod
  
- 91/1 - Polar satellite information for the forecaster. Eileen Maturi
- 91/2 - Polar satellite data for the satellite weather information system (SWISS) and micro-swiss. Eileen Maturi
  
- 92/1 - NOAA polar satellite geographic coverage for the SWIS and MICROSWIS. Eileen Maturi
- 92/2 - METEOSAT imagery coverage of North America. Gary Ellrod
  
- 93/1 - Effect of METEOSAT coverage upon North American weather analysis. James LaDue
- 93/2 - Satellite-derived cloud height and amount to augment ASOS. Gary Ellrod and Anthony Schreiner

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- NESDIS 15 An Experimental Technique for Producing Moisture Corrected Imagery from 1 Km Advanced Very High Resolution Radiometer (AVHRR) Data. Eileen Maturi, John Pritchard and Pablo Clemente-Colon, June 1986. (PB86 24535/AS)
- NESDIS 16 A Description of Prediction Errors Associated with the T-Bus-4 Navigation Message and a Corrective Procedure. Frederick W. Nagle, July 1986. (PB87 195913)
- NESDIS 17 Publications and Final Reports on Contracts and Grants, 1986. Nancy Everson, April 1987. (PB87 220810/AS)
- NESDIS 18 Tropical Cyclone Center Locations from Enhanced Infrared Satellite Imagery. J. Jixi, and V.F. Dorvak, May 1987. (PB87 213450/AS)
- NESDIS 19 A Suggested Hurricane Operational Scenario for GOES I-M. W. Paul Menzel, Robert T. Merrill and William E. Shenk, December 1987. (PB88-184817/AS)
- NESDIS 20 Satellite Observed Mesoscale Convective System (MCS) Propagation Characteristics and a 3-12 Hour Heavy Precipitation Forecast Index. Jiang Shi and Roderick A. Scofield, December 1987. (PB88-180161)
- NESDIS 21 The GVAR Users Compendium (Volume 1). Keith McKenzie and Raymond J. Komajda (MITRE Corp.), May 1988. (PB88-241476)
- NESDIS 22 Publications and Final Reports on Contracts and Grants, 1987. Nancy Everson, April 1988. (PB88-240270)
- NESDIS 23 A Decision Tree Approach to Clear Air Turbulence Analysis Using Satellite and Upper Air Data. Gary Ellrod, January 1989. (PB89-20775/AS)
- NESDIS 24 Publications and Final Reports on Contracts and Grants, 1988. Nancy Everson, April 1989. (PB89-215545/AS)
- NESDIS 25 Satellite-Derived Rainfall Estimates and Propagation Characteristics Associated with Mesoscale Convective Systems (MCSs). Xie Jying and Roderick A. Scofield, May 1989.
- NESDIS 26 Removing Stripes in GOES Images by Matching Empirical Distribution Functions. M.P. Weinreb, R. Xie, J.H. Lienesch and D.S. Croby, May 1989. (PB89-21335A/S)
- NESDIS 27 Geographic Display of Circulation Model Data. Kurt Hess, September 1989.
- NESDIS 28 Operational Ozone Monitoring with the Global Ozone Monitoring Radiometer (GOMR). Walter G. Planet (Editor), August 1989. (PB90 114034/AS)
- NESDIS 29 Preliminary Report on the Demonstration of the VAS CO2 Cloud Parameters (Cover, Height, and Amount) in Support of ASOS. W.P. Menzel and K.I. Strabala, November, 1989.
- NESDIS 30 Instability Bursts Associated with Extratropical Cyclone Systems (ECSs) and a Forecast Index of 3-12 Hour Heavy Precipitation. Roderick A. Scofield, July 1990.
- NESDIS 31 Evaluation of the GOES I-M Normalization Technique with the Visible Images of GOES-7. J.H. Lienesch, R. Xie and W.Y. Ramsey, April 1990.
- NESDIS 32 Publications and Final Reports on Contracts and Grants, 1989. Nancy Everson, May 1990.
- NESDIS 33 Publications and Final Reports on Contracts and Grants, 1990. Nancy Everson, May 1991.
- NESDIS 34 Satellite Observation of Great Lakes Ice: Winter 1986-87. Sharolyn L. Young, July 1991.



## NOAA SCIENTIFIC AND TECHNICAL PUBLICATIONS

*The National Oceanic and Atmospheric Administration* was established as part of the Department of Commerce on October 3, 1970. The mission responsibilities of NOAA are to assess the socioeconomic impact of natural and technological changes in the environment and to monitor and predict the state of the solid Earth, the oceans and their living resources, the atmosphere, and the space environment of the Earth.

The major components of NOAA regularly produce various types of scientific and technical information in the following kinds of publications:

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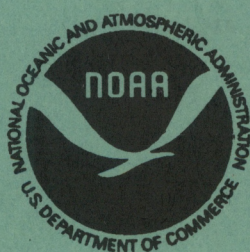
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