

AD-A241 122 DTIC



7b. DECLASSIFICATION/DOWNGRADING SCHEDULE

ELECTE

OCT 03 1991

3 DISTRIBUTION/AVAILABILITY OF REPORT
This document has been approved
for public release and sale; its
distribution is unlimited.

4 PERFORMING ORGANIZATION REPORT NUMBER(S)

N00014-87-G0116

5. MONITORING ORGANIZATION REPORT NUMBER(S)

6a. NAME OF PERFORMING ORGANIZATION

University of Miami RSMAS

6b. OFFICE SYMBOL
(If applicable)

7a. NAME OF MONITORING ORGANIZATION

6c. ADDRESS (City, State, and ZIP Code)

4600 Rickenbacker Causeway
Miami, FL 33149

7b. ADDRESS (City, State, and ZIP Code)

8a. NAME OF FUNDING/SPONSORING
ORGANIZATION

ONR

8b. OFFICE SYMBOL
(If applicable)

9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER

8c. ADDRESS (City, State, and ZIP Code)

800 North Quincy Street
Arlington, VA 22217-5000

10. SOURCE OF FUNDING NUMBERS

PROGRAM
ELEMENT NO.PROJECT
NO.TASK
NO.WORK UNIT
ACCESSION NO.

11. TITLE (Include Security Classification)

Satellite Remote Sensing of Large Scale Ocean Transients

12. PERSONAL AUTHOR(S)

Dr. Otis Brown/Dr. Robert Evans

13a. TYPE OF REPORT

FINAL

13b. TIME COVERED

FROM 10/1/86 TO 1/31/91

14. DATE OF REPORT (Year, Month, Day)

August 12, 1991

15. PAGE COUNT

16. SUPPLEMENTARY NOTATION

17. COSATI CODES

FIELD	GROUP	SUB-GROUP

18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

The objectives of this project included study of transient behavior of western boundary currents and associated eddy structures, frontal processes, and their response to atmospheric forcing as observed by satellite remote sensing techniques. Attainment of these objectives required development of quantitative assimilation methods for satellite data on both large and small scales supported by suitable tools which yield timely access to calibrated, navigated satellite observations. Efforts were focused on obtaining a multi-year time series of high resolution NOAA AVHRR retrievals for the Brazil Current/Malvinas (Falklands) Confluence, analysis of these data, implementation of a GEOSAT altimetric measurement processing and analysis system and preliminary analysis of a year time series for the South Atlantic and Western Indian oceans, and implementation of remote AVHRR LAC collection for the Western Indian Ocean region and operation of the global retrieval capability using the DOD/ONR furnished satellite receiving system.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT

☐ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☐ DTIC USERS

21. ABSTRACT SECURITY CLASSIFICATION

22a. NAME OF RESPONSIBLE INDIVIDUAL

Dr. Otis B. Brown/ Dr. Robert Evans

22b. TELEPHONE (Include Area Code)

305/361-4018

22c. OFFICE SYMBOL

DD FORM 1473, 84 MAR

83 APR edition may be used until exhausted
All other editions are obsolete.

SECURITY CLASSIFICATION OF THIS PAGE

01 10 2 069

NTIS CRA&I	✓
DTIC TAB	
Unannounced	
Justification	
By <i>per lti</i>	
Date <i>10/1/81</i>	
Date <i>10/1/81</i>	
<i>A-1</i>	

0-1
 A-1

A-1

behaviors,
s, fr

- observe
objec
r sate

91-12255



- Johns, W., T. Lee, F. Schott, R. Zantopp and R. Evans, 1990: The North Brazil Current Retroflexion: Seasonal Structure and Eddy Variability. J. Geophys. Res. 95(C12): 22,103-22,120.
- Podesta, G. P., O. B. Brown and R. H. Evans, 1991: The annual cycle of satellite-derived sea surface temperature in the Southwest Atlantic Ocean. J. Climatology, 4(4): 457-467.
- Joyce, T. M., J. K. B. Bishop and O. B. Brown. Observations of Offshore Shelf Water Transport Induced by a Warm-core Ring. Deep Sea Res., accepted
- Weatherly, G. L., R. H. Evans and O. B. Brown. A comparison of GEOSAT altimeter inferred currents and measured flow at 5400m depth in the Argentina Basin. Deep-Sea Res. accepted.
- Mariano, A.J. and O.B. Brown. Efficient Objective Analysis of Dynamically Heterogeneous and Nonstationary Fields via the Parameter Matrix. Deep-Sea Res. (submitted).

ABSTRACTS:

- Olson, D.B., R.E. Evans, O.B. Brown, G. Podesta, and E.P. Chassignet, 1987. Long-period Variations in the Western Boundary Current Systems in the South Atlantic. EOS Transactions, AGU 68(16): 338.
- Brown, O.B., R.H. Evans and H.M. Carle, 1987. Present capabilities for global mapping of sea surface temperature. IUGG XIX General Assembly, Vancouver, Canada, Abstracts V. 3: 1002.
- Brown, O., D. Olson and R. Evans, 1988. Height and Thermal Field Mesoscale Variability in the South Atlantic. ONR South Atlantic Accelerated Research Initiative (ARI), South Atlantic Section, SAARI Meeting Report, Lamont-Doherty Geological Observatory (May 24-26, 1988): 6. (Invited)
- Olson, D., G. Podesta, R. Evans and O. Brown, 1988. Temporal variations in the separation of Brazil and Malvinas Currents. ONR South Atlantic Accelerated Research Initiative (ARI), South Atlantic Section, SAARI Meeting Report, Lamont-Doherty Geological Observatory (May 24-26, 1988): 37-38. (Invited)
- Brown, O., 1989. Space/time structure of western boundary current fronts: A global comparison. EOS Transactions, AGU 70(15): 360. (Invited)
- Podesta, G., O. Brown, P. Evans, H. Figueroa, C. Forbes and D. Olson, 1989. Use of remote sensing techniques for the study of oceanic processes in the Southwestern Atlantic. Abstract submitted for Jornadas Nacionales de Ciencias del Mar, Puerto Madryn, Argentina, 17-23 September, 1989.
- Podesta, G.P., O.B. Brown and J.J. Hoey, 1989. The association between the distribution and abundance of swordfish (*Xiphias gladius*) and satellite-derived sea surface temperature fields off the northeastern United States. Inaugural Meeting of the Oceanography Society, Monterey, CA, August 27-30, 1989.

- Brown, O.B., R.H. Evans and S.R. Emmerson, 1990: Spatial and Temporal Variability in the North Atlantic as Determined by NIMBUS-7 CZCS Pigment Observations. EOS, 71(2), 120.
- Deuser, W.G., F.E. Muller-Karger, R.H. Evans, O.B. Brown, W.E. Esaias, G.C. Feldman, 1990: Surface Color and Deep Carbon Flux in the Sargasso Sea: Seven Years of Concurrent Data. EOS, 71(2), 120.
- Cornillon, P., O. Brown and R. Evans, 1990: Satellite-derived Global Sea Surface Temperature Fields: 1982-1989. In: SPIE Proceedings, Orlando, FL, May 1990.
- Gordon, H. R., and R. H. Evans, 1990: The CZCS: Algorithms and Characterization. Venice 1990 Oceans From Space meeting, Scuola Grande San Giovanni Evangelista, Venice, Italy, May 22-26.
- Podesta, G. P., O. B. Brown, R. H. Evans and A. Mariano, 1990: The Annual and Super-Annual Patterns of Satellite-Derived Sea Surface Temperatures in the Southwestern Atlantic Ocean. EOS 71(17), 542.
- Forbes, C., K. Leaman and O. Brown, 1990: Development of an Objective Analysis Technique for the Assimilation of GEOSAT altimeter data over the South Atlantic Ocean. Extended Abstract submitted to International Symposium on Assimilation of Observations in Meteorology & Oceanography, France, July 9-13.
- Mariano, A. J. and O. B. Brown, 1990: Efficient Objective Analysis of Dynamically Heterogenous and Nonstationary Fields via the Parameter Matrix. International TOGA Scientific Conference, Honolulu, Hawaii, July 16-20.
- Halpern, D., J. Newman, V. Zlotnicki, O. Brown, and F. Wentz, 1990: Monthly Mean Global Distributions of Sea Surface Temperature, Surface Wind Speed, and Sea Surface Height During 1988. EOS, 71(43), 1387.
- Brown, O. B., 1990: Role of Satellite Observations in Global Change. Venice 1990 Oceans From Space meeting, Scuola Grande San Giovanni Evangelista, Venice, Italy, May 22-26.
- Brown, O. B., 1990: Satellite Observations and Global Programs. Lectures at Ocean University of Qingdao and Academia Sinica Institute of Oceanography, Qingdao, P.R. China, as project specialist in World Bank supported Chinese University Development Project, June 19-July 20.
- Brown, O. B., 1990: Ocean Research and Space Systems. Marine Technology Society "MTS 90" meeting, Washington DC, September 27.
- Brown, O. B. and R. H. Evans, 1990: Satellite-Derived Global Sea Surface Temperature Fields: 1982-1989, 1990. NOAA Operational Satellites conference, Washington DC, October 18.

Graduate Students Supported: 6

Post Doctoral Fellowships Supported: 2