AD-A277 286

TATION PAGE

Form Approved
OBM No. 0704-0188

1. Agency Use Only *(Leave blank).*	2. Report Date. January 1994	3. Report Type and Dates Covered. Contractor Report

4. Title and Subtitle.
Quarterly Report Satellite Oceanography

5. Funding Numbers.
Contract N00014-93-1-G905
Program Element No.
Project No.
Task No.
Accession No.
Work Unit No.

6. Author(s).

7. Performing Organization Name(s) and Address(es).
The Regents of the University of Colorado
Office of Contracts and Grants
Campus Box 19
Boulder, CO 80309-0019

8. Performing Organization Report Number.

9. Sponsoring/Monitoring Agency Name(s) and Address(es).
Naval Research Laboratory
Ocean Dynamics and Prediction Branch
Stennis Space Center, MS 39529-5004

10. Sponsoring/Monitoring Agency Report Number.
NRL/CR/7320--94-0006

11. Supplementary Notes.

12a. Distribution/Availability Statement.
Approved for public release, distribution is unlimited.

12b. Distribution Code.

13. Abstract *(Maximum 200 words).*

Renewed interest in the inverted barometer effect has been spurred by altimetry, specifically, the accuracy of measurements of TOPEX/Poseidon. The change in SSH associated with this effect produces anomalous oceanographic features. It is, therefore, desirable to remove this signal.

Currently, only one component of the inverted barometer is understood, the static response. The total effect was studied through implementation of a barotropic model. A region in the North Pacific with a February/March '93 time period was selected as an appropriate test area. The issue was addressed with model runs driven by 6-hourly FNOC wind and pressure fields to examine both the static and dynamic elements of the inverted barometric response.

14. Subject Terms. methodology, barometer, altimeter	15. Number of Pages. 1
	16. Price Code.

17. Security Classification of Report. Unclassified	18. Security Classification of This Page. Unclassified	19. Security Classification of Abstract. Unclassified	20. Limitation of Abstract. SAR

QUARTERLY REPORT, QTR. ENDED 12-31-93
GRANT NO.: N00014-93-1-G905

Renewed interest in the inverted barometer effect has been spurred by altimetry, specifically, the accuracy of measurements of TOPEX/Poseidon. The change in SSH associated with this effect produces anomalous oceanographic features. It is therefore desirable to remove this signal.

Currently, only one component of the inverted barometer is understood, the static response. The total effect was studied through implementation of a barotropic model. A region in the North Pacific with a February/March '93 time period was selected as an appropriate test area. The issue was addressed with model runs driven by 6-hourly FNOC wind and pressure fields to examine both the static and dynamic elements of the inverted barometric response.

The model, which runs with a resolution of 0.5°, incorporates real bathymetry, and includes the marginal seas and shelf regions. Identical twin methodology was used to separate out the influence of atmospheric forcing. Three runs were made: one incorporating atmospheric pressure, one using winds, and the last employing both. The SSH difference between the last two runs and the static inverse barometer are used to estimate the dynamic component of the inverse barometer. Currently, a simulated TOPEX/Poseidon altimeter is being flown over the model domain to compare with the altimeter data directly.