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⑥ TRACOR REPORTS ON TOPICS
IN THE FIELD OF SONAR.

AUSTIN HYDROSPACE LABORATORY

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Preface

This publication has been prepared as a convenient guide to work done in the field of sonar at the Austin Hydro-space Laboratory. The compilation covers reports issued from December 9, 1960 to June 6, 1967. Earlier editions of this listing, the last of which was dated December 23, 1966, are superseded by this edition.

The listing is in two parts: (1)

- A. Closed Projects *and (2)*
- B. Current Projects.

In part ¹A, projects are listed by government contract number, in numerical order. In part ²B, they are listed by TRACOR project number, in numerical order. All listings include both of these numbers, as well as a short title for the project.

We expect that this will be the last edition of the list to appear in this form. In the future, listings will be prepared by TRACOR's automated document retrieval system.

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6500 TRACOR LANE, AUSTIN, TEXAS 78721

CLOSED PROJECTS

A

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Prior to December 1, 1961)

1. Tucker, E. A., et al. TRA EXPERIMENTAL PROGRAM FOR DEFLECTION CONTROL OF A STORAGE TUBE ELECTRON BEAM. (Letter Report Enclosure 2). December 9, 1960.

Tucker, E. A., et al. NOTES ON AN/SOS-4 DISPLAY AND DATA PROCESSING PARAMETERS (U). (Letter Report Enclosure 3) December 9, 1960. (CONFIDENTIAL).
2. Tucker, E. A., et al. COMPUTATION OF SONAR DATA DISPLAY SYSTEM TARGET TRACKS USING A DIGITAL COMPUTER (U). (Letter Report). March 14, 1961.
3. Tucker, E. A., et al. DATA DISPLAY SYSTEM (U). April 27, 1961. (Final Engineering Report). (CONFIDENTIAL).
4. Tucker, E. A., et al. AN/SQS-4 SERIES ACTIVE SONAR DATA DISPLAY STUDY (U). July 18, 1961. (Special Report) (CONFIDENTIAL).
5. Tucker, E. A., et al. PROPOSED SEA TEST SCHEDULE FOR PASSIVE SONAR DISPLAY SYSTEM (U). August 31, 1961. (CONFIDENTIAL).
6. Boessenroth, I. L. SUPPLEMENTARY REPORT ON PROCESSING GAIN FOR ACTIVE SONAR SEQUENTIAL DETECTION. October 30, 1961. (Expansion of a report by P. G. Bergman entitled FIGURES OF MERIT FOR THE LONG RANGE SEARCH SONAR PROBLEM, U. S. Navy Department, Bureau of Ships, Sonar Analysis Group, December 5, 1946.)
7. Deatherage, B. H., et al. A NEW ACTIVE SONAR VISUAL DISPLAY CONSOLE DESIGN (U). October 30, 1961. (Special Report) (CONFIDENTIAL).
8. Tucker, E. A., et al. A SYSTEM FOR SEQUENTIAL DETECTION DATA PROCESSING FOR THE AN/SQS-4 SERIES ACTIVE SONAR (U). October 30, 1961. (CONFIDENTIAL).
9. Horton, C. W. SOME NOTES ON COMMUNICATION THEORY. April 17, 1961.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-85185)

Application of Digital Techniques to Sonar Studies

CLOSED

1. Stuart, J. D. CONVERSION OF THE TEMPERATURE-DEPTH GRID OF A BATHYTHERMOGRAPH TO A SOUND-SPEED DEPTH GRID. Special Report No. 1, Problem 3, December 4, 1961.
2. Deatherage, B. H., Tucker, E. A., Wittenborn, A. F., and Young, J. M. THE APPLICATION OF DIGITAL TECHNIQUES TO SONAR SYSTEMS. March 29, 1962.
3. Batey, E. H., et al. SOME GUIDELINES FOR SONAR BAFFLE DESIGN. March 30, 1962.
4. Kemp, G. T. INTERIM REPORT ON SOME EFFECTS OF VERTICAL SHADING OF THE AN/SQS-23 TRANSDUCER (U). May 2, 1962. (CONFIDENTIAL).
5. Kemp, G. T. SOME EFFECTS OF INOPERATIVE TRANSDUCER ELEMENTS ON AN/SQS-23 OPERATION (U). July 3, 1962. (CONFIDENTIAL).
6. Kemp, G. T. SOME EFFECTS OF BROKEN OR PITTED CERAMIC FACES ON AN/SQS-23 TRANSDUCER ELEMENTS (U). July 19, 1962. (CONFIDENTIAL).
7. Hedgcoxe, P. G. and Moyer, W. C., Jr. THE EVALUATION OF BESSEL AND NEUMANN FUNCTIONS THROUGH THE USE OF TAYLOR SERIES SOLUTIONS TO BESSEL'S DIFFERENTIAL EQUATION - TRACOR Technical Memorandum. December 3, 1962.
8. Courts, H. R. COMPUTATION OF BESSEL AND NEUMANN FUNCTIONS - TRACOR Technical Memorandum. December 13, 1962.
9. Tucker, E. A. AN/SQS-26 (XN-1) and (XN-2) SONAR SYSTEMS EXPERIMENTAL DATA EVALUATIONS - Final Report Problems 5 and 9. TRACOR Document Number 63-120-U. May 17, 1963.
10. Tucker, E. A., Smith, R. T., and Stuart, J. D. SUMMARY REPORT OF UNDERWATER SOUND RANGE PREDICTION TECHNIQUES (U). TRACOR Document Number 63-246-C. September 27, 1963.
11. Deatherage, B. H. THE DESIGN OF A PSYCHOPHYSICAL EXPERIMENT AND THE DEVELOPMENT OF THE EXPERIMENTAL MATERIALS TO ASSESS THE SCENICS DISPLAY. January 8, 1963.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract No. NObsr-89250)

Sonar Classification Studies

CLOSED

1. SEA TEST PLAN, Project D/S 307 FY 64. TRACOR Document Number 64-104-C. January 7, 1964.
2. Final Report for Active Sonar Classification Studies TRACOR Document Number 64-183-C. April 10, 1964.

(Contract NObsr-89265)

Sonar System Studies and Analyses

CLOSED

1. Deatherage, B. H. THE DESIGN OF A PSYCHOPHYSICAL EXPERIMENT AND THE DEVELOPMENT OF THE EXPERIMENTAL MATERIALS TO ASSESS THE SCENICS DISPLAY. January 8, 1963.
2. Morell, J. D., W. C. Moyer, and A. F. Wittenborn. AN ANALYTIC SOLUTION TO THE SOUND PRESSURE FIELD RESULTING FROM A PLANE WAVE INCIDENT ON A CYLINDER AND CONCENTRIC CYLINDRICAL SECTION - Technical Memorandum. TRACOR Document No. 63-112-U. March 14, 1963.
3. Wittenborn, A. F. PRELIMINARY RESULTS FROM A STUDY OF PHASE COHERENCE OF ECHOES AN/SQS-26 (XN-2). TRACOR Document No. 63-131-C. No Date.
4. Wittenborn, A. F. THE EFFECT OF DIFFERENTIAL DOPPLER ON PROCESSING GAIN FOR AN FM SLIDE (U)-Technical Memorandum. TRACOR Document No. 63-143-C. May 2, 1963.
5. Mills, G. S., W. C. Moyer, and Alice M. Spitzer. AN ANALYTIC SOLUTION TO THE SOUND PRESSURE FIELD RESULTING FROM A PLANE WAVE INCIDENT ON A CYLINDER AND CONCENTRIC CYLINDRICAL SECTION - COMPUTATIONAL TECHNIQUES - Technical Memorandum. TRACOR Document No. 63-145-U. May 8, 1963.
6. Deatherage, B. H. DESIGN OF A PSYCHOPHYSICAL EXPERIMENT USING THE USNEL CHARACTRON DISPLAY. TRACOR Document No. 63-197-U. July 19, 1963.
7. Deatherage, B. H. SUMMARY REPORT OF RESULTS, CONCLUSIONS AND RECOMMENDATIONS FROM A PSYCHOPHYSICAL STUDY OF THE RELATIVE DETECTABILITY OF TARGET TRACKS IN SIMULATED PASSIVE SONAR DISPLAYS. TRACOR Document No. 63-231-U. September 6, 1963.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-89265)

Sonar System Studies and Analyses

8. Deatherage, B. H. DESIGN OF AN EXPERIMENT TO ASSESS THE USNEL CHARACTERON DISPLAY. TRACOR Document No. 63-300-U. December 20, 1963.
9. Moyer, W. C. AN ANALYTICAL INVESTIGATION OF SONAR DOME SPOKING. TRACOR Document No. 64-116-C. February 14, 1964.
10. DESIGN CRITERIA FOR BAFFLE-DOME-TRANSDUCER COMPLEXES (U) - Summary Report. Calendar year 1963, Problem 17, TRACOR Document Number 64-140-C. January 3, 1964.
11. Oehler, K. L. EXPERIMENTAL STUDY OF THE ATTITUDE BEHAVIOR OF THE AN/SQA-10 VDS FISH. TRACOR Document Number 64-108-U. January 14, 1964.

(Contract NObsr-91039)

Signal Processing and Related Topics

Pertaining to the AN/SQS-26 Sonar

CLOSED

1. Tucker, E. A., G. T. Kemp, J. M. Young, and W. A. Youngblood. SOME REDUNDANCY EFFECTS ON AN/SQS-26 PERFORMANCE (U) - Technical Memorandum. TRACOR Document Number 63-233-C. September 9, 1963.

Also, Addendum 1, January 12, 1965 (CONFIDENTIAL).

Addendum 2, June 23, 1965 (CONFIDENTIAL).

2. Courts, H. R., K. L. Oehler, and A. F. Wittenborn. THE EFFECTS OF OR GATING IN THE AN/SQS-26 (XN-2)- Technical Memorandum. TRACOR Document Number 63-235-U. September 11, 1963.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR
(Contract NObsr-91039)

3. Kemp, G. T., Tucker, E. A., Young, J. M., and Youngblood, W. A. SOME COMPUTED EFFECTS OF PHASE AND AMPLITUDE TOLERANCES OF TRANSDUCER ELEMENTS AND PREAMPLIFIERS ON BEAM FORMATION AND SSI PERFORMANCE IN THE AN/SQS-26 SONAR EQUIPMENT (U) - Technical Memorandum. TRACOR Document No. 63-242-C September 25, 1963.
4. Kemp, G. T., Morell, J. D., Moyer, W. C., and Young, J. M. SOME COMPUTED EFFECTS OF DOME SKIN AND TEMPERATURE DIFFERENTIAL ON OPERATION OF THE AN/SQS-26 SONAR EQUIPMENT (U) - Technical Note. TRACOR Document No.63-238-C. October 4, 1963.
5. Kemp, G. T., Young, J. M., and Youngblood, W. A. EFFECTS OF ECHO-LENGTH ON SSI BEARING ERROR IN THE PRESENCE OF NOISE (U). TRACOR Document Number 63-263-C. October 25, 1963.
6. Kemp, G. T., Tucker, E. A., and Young, J. M. SOME COMPUTED EFFECTS OF ASSUMED INOPERATIVE TRANSDUCER STAVES ON BEAM FORMATION AND SSI PERFORMANCE IN THE AN/SQS-26 (XN-2) SONAR EQUIPMENT (U). TRACOR Document Number 63-285-C. January 29, 1964.
7. Young, J. M. and Kemp, G. T. AN/SQS-26 RELIABILITY AND SSI BEARING ACCURACY AS FUNCTIONS OF REDUNDANCY AND TOLERANCES (U) - TRACOR Summary Report, Tasks 5a and 5b. TRACOR Document Number 64-122-C. February 13, 1964.
8. Oehler K. L., Tucker, C., and Wittenborn, A. F. ALGORITHMS FOR CODED PULSE PROCESSING. TRACOR Document Number 64-126-U. February 14, 1964.
9. Mitchell, F. R., Youngblood, W. A., Kemp, G. T., et al. ANALYSIS OF SIGNAL PROCESSING AND RELATED TOPICS PERTAINING TO THE AN/SQS-26 SONAR EQUIPMENT (U). Summary Report TRACOR Document No. 64-146-C. March 27, 1964.
10. Tucker, E. A. SOME COMPUTED EFFECTS OF PHASE & AMPLITUDE TOLERANCES ON HORIZONTAL BEAM PATTERNS OF THE AN/SQS-26 SONAR EQUIPMENT. TRACOR Document Number 64-256-C. March 1, 1964.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract No. NObsr-91223)

Signal Processing and Related Topics
Pertaining to the AN/SQS-26 Sonar

CLOSED

1. PRELIMINARY RESULTS OF AN EXAMINATION OF THE POWER SPECTRA OF DATA RECORDED ON THE AN/SQS-26 (XN-1) and (XN-2) (U). TRACOR Document Number 64-165-C. 1 May 1964.
2. COMPARISON OF SIGNAL PROCESSOR OUTPUTS FROM THE SIMULATOR AND FROM THE AN/SQS-26 (XN-2) (U). TRACOR Document Number 64-172-C. 8 May 1964.
3. COMPUTED FIXED BEAM HORIZONTAL COVERAGE AS RELATED TO REDUNDANCY IN THE AN/SQS-26CX SONAR EQUIPMENT (U). TRACOR Document Number 64-255-C. 17 August 1964. Preliminary Draft.
4. Wittenborn, A. F. A COMPARISON OF SIGNAL-TO-NOISE RATIOS AS A FUNCTION OF DEFINITION. TRACOR Document Number 64-272-U. 14 September 1964.
5. NOTES ON RELIABILITY TESTING METHODS. TRACOR Document Number 64-285-U. October 2, 1964.
6. Young, J. M., Robinson, D. E. PROCESSING GAIN ACHIEVABLE BY PING-TO-PING INTEGRATION. TRACOR Document Number 64-221-C. 22 October 1964.
7. ANALYSIS OF SIGNAL PROCESSING AND RELATED TOPICS PERTAINING TO THE AN/SQS-26 SONAR EQUIPMENT (U) A SUMMARY REPORT, II. TRACOR Document Number 64-290-C. 16 October 1964.
8. Wittenborn, A. F. PROCESSING GAIN AS A FUNCTION OF TRANSMITTED PULSE BANDWIDTH. TRACOR Document Number 64-287-C.
9. Wittenborn, A. F. PROCESSING GAIN AS A FUNCTION OF ASPECT ANGLE. TRACOR Document Number 64-317-C. November 25, 1964.
10. Young, J. M. TECHNICAL NOTE - DISPLAY ANALYSIS. TRACOR Document Number 65-107-C. January 15, 1965.
11. Kemp, G. T. and Young, J. M. RELIABILITY, MAINTAINABILITY AND AVAILABILITY REQUIREMENTS FOR AN/SQS-26CX SONAR EQUIPMENT (U). TRACOR Document Number 63-267-C. November 4, 1964. Addendum 1, April 13, 1964.
12. Collins, J. L. TECHNICAL MEMORANDUM - INTERPRETATION OF EXPLOSIVE SOURCE DATA FOR LONG PULSE SONAR (U). TRACOR Document Number 65-105-C. January 11, 1965.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR
(Contract No. NObsr-91223)

13. Courts, Bob. PRELIMINARY RESULTS OF THE SPECTRAL CHARACTERISTICS OF REVERBERATION AS A FUNCTION OF TIME. TRACOR Document Number 65-138-C. February 10, 1965.

(Contract NObsr-91254)

PROJECT 22002

Variable Depth Sonar

CLOSED

1. A STUDY OF THE DYNAMIC TOWING RESPONSE OF THE AN/SQA-10 VDS FISH. TRACOR Document Number 65-259-C. August 6, 1965.

(Contract No. NObsr-91271)

PROJECT 22008

Active Sonar Classification

CLOSED

1. Brown, B. M. SEA TEST PLAN, Project D/S 335, Part I - Test Description. TRACOR Document Number 65-111-C.

SEA TEST PLAN, Project D/S 335, Part II - Detailed Test Procedure. TRACOR Document Number 65-111-C.
2. Brown, B. M. TECHNICAL NOTE - CHOICE OF SIGNAL PARAMETERS FOR ACCENTUATION OF CLASSIFICATION CLUES BASED UPON SUBMARINE HULL-WAKE CHARACTERISTICS. TRACOR Document Number 65-324-C. September 24, 1965.
3. Gottwald, J. T., Brown, B. M., and Wittenborn, A. F. REPORT ON SECOND YEAR ACTIVE SONAR CLASSIFICATION STUDIES (U). TRACOR Document Number 65-421-C. December 18, 1965.
4. Gottwald, J. T., Brown, B. M. and Wittenborn, A. F. Summary Report on THE MULTI-CHANNEL, REAL-TIME, THREE-BIT LINEAR CORRELATOR (U) TRACOR Document Number 65-422-C. December 18, 1965.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-91349)

PROJECT 002 027 01 (22009)

AN/BQS-6 - SONAR SIGNAL PROCESSING ANALYSIS

CLOSED

1. Brown, B. M. Outline Letter on the contribution to the AGENDA ON SIGNAL PROCESSING AND RECOGNITION DIFFERENTIAL. TRACOR Document Number 65-112-C. January 20, 1965.
2. Brown, B. M. FUTURE TESTS USING THE AN/BQS-6 EQUIPMENT. TRACOR Document Number 65-179-C. April 23, 1965.
3. Brown, B. M. SUMMARY REPORT FOR AN/BQS-6 - SONAR SIGNAL PROCESSING ANALYSIS. TRACOR Document Number 65-184-C. May 14, 1965.
4. SEA TEST PLAN D/S 374. TRACOR Document Number 65-391-C. (No Date).
5. FINAL REPORT FOR AN/BQS-6 SONAR SIGNAL PROCESSING ANALYSIS. April 16 & March 29, 1965.

(Contract No. NObsr-93056)

PROJECT 20008

Technical Assistance Sonar Projects

CLOSED

1. Technical Note, AN/SQS-23C TRAM Receiver TVG/RCG Design Review. August 10, 1965. TRACOR Document No. 65-270-C.
2. Technical Note, Method and Detailed Results of the AN/SQS-23 Shallow Water Short Pulse Analysis. July 29, 1965. TRACOR Document No. 65-250-C.

(Extension: Contract NObsr-95198)

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract No. NObsr-9314C)

PROJECT 22011 (closed)

Signal Processing and Related Topics
Pertaining to the AN/SQS-26 Sonar

1. Duderstadt, D. W. TECHNICAL NOTE, CW ECHO BANDWIDTHS IN THE AN/SQS-26. TRACOR Document Number 65-164-C. April 5, 1965.
2. AIRBORNE ANTISUBMARINE WARFARE MAGNETIC DETECTION SYSTEMS. TRACOR Document Number 65-168-U. April 2, 1965.
3. Young, J. M. TECHNICAL NOTE - DISPLAY ANALYSIS. TRACOR Document Number 65-182-C. June 10, 1965.
4. Gray, H. L. TECHNICAL MEMORANDUM - PRODUCTION MODEL ACCEPTANCE CRITERIA. TRACOR Document Number 65-191-U. May 24, 1965.
5. Benning, C. J., and Gray, H. L. TECHNICAL MEMORANDUM - RELIABILITY/MAINTAINABILITY GUIDELINES FOR SONAR SPECIFICATION WRITERS. TRACOR Document Number 65-192-U. June 18, 1965.
6. Tucker, C. T. TECHNICAL NOTE - AN ANALYSIS OF THE STATISTICAL WAVE PERIOD PROCESSOR. TRACOR Document Number 65-194-U. May 14, 1965.
7. Collins, J. L. TECHNICAL NOTE - ON THE STABILITY OF AN/SQS-26 ECHO RANGING CYCLES. TRACOR Document Number 65-206-C. June 9, 1965.
8. Brown, P. B. SEA TEST PERFORMANCE OF A REAL-TIME LINEAR CORRELATOR. TRACOR Document Number 65-217-C. June 28, 1965.
9. Gray, H. L. and Lewis, T. O. ABSTRACTS - PRODUCTION MODEL ACCEPTANCE CRITERIA. April 29, 1965.
10. Gray, H. L. and Benning, C. J. ABSTRACTS - CONFIDENCE INTERVAL FOR AVAILABILITY. April 29, 1965.
11. Quade, Thomas E. ABSTRACT - MAINTAINABILITY GOES TO COLLEGE. April 27, 1965.
12. PROPOSED CHANGES IN SPECIFICATION SHIPS-D-4511A. Rough Draft. April 30, 1965.
13. Kemp, G. T. WIDE TRANSMIT BEAM PHASING. TRACOR Document Number 65-144-U. February 26, 1965.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract No. NObsr-93140)

CLOSED

14. Mitchell, F. R. AN/SQS-26 ANALYSIS PROGRESS REPORT FOR JUNE 1965. TRACOR Document Number 65-252-C. July 30, 1965.
15. Blosser, Anne Blocker. THE EFFECTS OF SIGNAL PROBABILITY AND OBSERVATION PERIOD DURATION UPON SIGNAL DETECTION PERFORMANCE. TRACOR Document Number 65-277-U. August, 1965.
16. Kemp, G. T. ANALYSIS AND DEVELOPMENT OF RELIABILITY DEMONSTRATION TESTS FOR PRODUCTION AN/SQS-26 SONARS. TRACOR Document Number 65-310-U. September 10, 1965.
17. Collins, J. L. PRELIMINARY REPORT ON THE AN/SQS-26 THREE-SHIP MUTUAL INTERFERENCE TEST. TRACOR Document Number 65-320-C. September 17, 1965.
18. FINAL REPORT: SPATIAL AND TEMPORAL PROCESSING FOR THE TOWED ARRAY. TRACOR Document Number 65-241-C.
19. Fowler, S. MUTUAL INTERFERENCE MODEL. TRACOR Document Number 65-216-U.
20. TECHNICAL NOTE - DISPLAY ANALYSIS (U). TRACOR Document Number 65-107-C. January 15, 1965.
21. NOTES ON RELIABILITY TESTING METHODS. TRACOR Document Number 64-285-U. October 2, 1964.
22. LaGrone, F. S. CALCULATION OF RADIATION IMPEDANCE FOR THE AN/SQS-26 TRANSDUCER. TRACOR Document Number 65-318-C. July 21, 1965.
23. ANALYSIS OF SIGNAL PROCESSING AND RELATED TOPICS PERTAINING TO THE AN/SQS-26 SONAR EQUIPMENT (U) - A Summary Report III. TRACOR Document Number 65-336-C. October 15, 1965.
24. Collins, J. L. SECOND PRELIMINARY REPORT ON THREE-SHIP MUTUAL INTERFERENCE TESTS (U). TRACOR Document Number 65-371-C. November 16, 1965.
25. Fowler, S. F. BOTTOM BOUNCE REVERBERATION MODELING AND BOTTOM LOSS ANALYSIS - Technical Memorandum. TRACOR Document Number 66-355-C. November 16, 1966.
26. Technical Memorandum - THE APPLICATION OF DIGITAL BEAM FORMING TECHNIQUES TO ACTIVE NARROW-BAND SONAR RECEIVERS (U), January 10, 1967. TRACOR Document Number 67-118-U.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-93218)

PROJECT 20012

Submarine Target Strength

CLOSED

1. Kite, C. L. COMPUTATION OF TARGET STRENGTHS - Technical Memorandum. TRACOR Document Number 66-463-C. November 10, 1966.
2. Kite, C. L. COMPUTATION OF TARGET STRENGTH (U) - Summary Report. TRACOR Document Number 66-487-C. July 31, 1966.
3. Kite, C. L. Typical Examples of Computed Target Strength for Direct Path and Bottom Bounce Modes (U) - Technical Note. TRACOR Document Number 66-610-C, October 31, 1966.

(Contract NObsr-93218)

PROJECT 20017, 002 013 03 (20083)

Target Classification

CLOSED

1. Gottwald, J. T. THIRD YEAR ACTIVE SONAR CLASSIFICATION STUDIES (U) - Summary Report. TRACOR Document Number 66-486-C. September 15, 1966.

(Contract NObsr-93219)

PROJECT 002 014 01 (20013)

FM Detection

CLOSED

1. STUDY OF THE ABILITY OF LISTENERS TO DETECT FM SLIDES BY AUDITORY CUES - Summary Report. TRACOR Document Number 67-149-U. January 1967.

(Contract NObsr-93220)

PROJECT 002 013 01 (20011)

Bottom Effects on Target Classification

CLOSED

1. King, Bill. A STUDY OF BOTTOM INFORMATION CONTAINED IN BOTTOM BOUNCE ACOUSTIC ECHOES (U) - Summary Report. TRACOR Document Number 66-445-C. August 15, 1966.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-93221)

PROJECT 002 017 01 (20016)

Revision of Sonar Equations

CLOSED

1. Wilkinson, J. F. REFORMULATION OF THE SONAR EQUATIONS - Summary Report. TRACOR Document Number 66-392-C. (Part I & II).

(Contract NObsr-93353)

PROJECT 002 015 01 (20014)

Oceanographic Factors

CLOSED

1. Jones, J. D. INFLUENCE OF OCEANOGRAPHIC FACTORS ON ECHO COHERENCE - Summary Report. TRACOR Document Number 66-489-C. September 1966.

(Contract NObsr-93358)

PROJECT 22021 (closed)

Sonar Performance & Maintainability (PAIR)

CLOSED

1. Technical Note. PERFORMANCE COMPARISON OF THE AN/SQS-23 AND PAIR. November 15, 1965. TRACOR Document No. 65-357-C (Revision). Revision II - March 31, 1966.
2. PRELIMINARY ANALYSIS OF PAIR ACTIVE SIGNAL PROCESSING AND DISPLAY. August 24, 1965. TRACOR Document Number 65-290-C.
3. PERFORMANCE COMPARISON OF THE WAVE PERIOD PROCESSOR AND THE CORRELATOR WITH THE PAIR. Revised September 21, 1966.) March 14, 1966. TRACOR Document Number 66-222-C.
4. COMPARISON OF THE PASSIVE PERFORMANCE OF THE AN/SQS-23 AND THE PERFORMANCE OF THE PAIR PASSIVE SYSTEM. May 17, 1966. Rev. June 1, 1966.) Incorporated into 66-421-C. August 2, 1966, (in San Diego Office). TRACOR Document Number 66-315-C.
5. THE DETERMINATION OF THE PERFORMANCE CURVES OF THE PAIR PROCESSORS. (Rev. May 17, 1966.) March 14, 1966. TRACOR Document Number 66-220-C.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR
(Contract NObsr-95149)

PROJECT 002 019 01 (20021)

Studies in Support of the AN/SQS-26 Sonar
CLOSED

1. Collins, J. L. OPERATIONAL EVALUATION OF THE SQS-26 SONAR. TRACOR Document Number 66-356-C.

PROJECT 002 019 02 (20022)

Long Range Upgrading
CLOSED

1. Duderstadt, Worth and Courts, H. R. RESULTS OBTAINED FROM A TEST OF THE AN/SQS-26(BX)CLIPPED CORRELATOR SIGNAL PROCESSOR AND DISPLAY USING ANALOG INPUT DATA RECORDED ON MAGNETIC TAPE (U) - Technical Note. TRACOR Document Number 66-183-C. February 18, 1966.
2. Brown, P. INVESTIGATIONS OF NORMALIZATION TECHNIQUES - Technical Note. April 1, 1966. TRACOR Document Number 66-239-C.
3. Duderstadt, D. W. TEST PROCEDURES FOR AN AN/SQS-26(CX) SIGNAL PROCESSOR PERFORMANCE ACCEPTANCE TESTS - Technical Note. April 4, 1966. TRACOR Document Number 66-240-U.
4. Butler, B. and Duderstadt, W. ANALYSIS OF AN/SQS-26 (BX) SONAR DATA FROM USS WAINWRIGHT (DLG-28) SEA TEST OF 28 MAY TO 23 JUNE, 1966 - Technical Note. October 4, 1966. TRACOR Document Number 66-477-U.

PROJECT 002 019 03 (20023)

Mutual Interference
CLOSED

1. Collins, J. L. MUTUAL INTERFERENCE AND THE AN/SQS SONAR SYSTEMS, A DETAILED STUDY (U). February 3, 1966. TRACOR Document Number 66-150-C.
2. REVERBERATION EFFECTS OF FREQUENCY SEPARATED TRIPLE PING TRANSMISSIONS ON THE AN/SQS-26 SONAR SYSTEM - Technical Note. February 16, 1967. TRACOR Document Number 67-183-U.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-95149)

Project No. 002 019 04

Dome Effects

CLOSED

1. Moyer, W. C. and Douglass, R. E. AN ANALYSIS OF THE EFFECTS OF THE RUBBER DOME ON TRANSMITTED BEAMS OF THE AN/SQS-26 SONAR EQUIPMENT - Technical Memorandum. July 6, 1966. TRACOR Document Number 66-379-U.
2. Morell, J. D. AN ANALYSIS OF THE INTERACTION OF SONAR DOME INOPERATIVE STAVES FOR THE AN/SQS-26 SONAR SYSTEM - Technical Memorandum. November 7, 1966. TRACOR Document Number 66-626-U.
3. Morell, J. D. and G. T. Kemp. SOME COMPUTED EFFECTS OF FRESH WATER IN THE SONAR DOME OF THE AN/SQS-26 - Technical Note. June 11, 1966. TRACOR Document Number 66-351-U.
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PROJECT 002 019 05 (20025)

Display Analysis

CLOSED

1. Young, J. M. MARKING DENSITY STUDIES FOR THE AN/SQS-26 SONAR EQUIPMENT A-SCAN DISPLAY - Technical Memorandum. May 20, 1966. TRACOR Document Number 66-316-U.
2. Montgomery, M. B. AN ADDENDUM TO THE REPORT ON MARKING DENSITY STUDIES FOR THE AN/SQS-26 SONAR EQUIPMENT DISPLAY - Technical Note. June 8, 1966. TRACOR Document Number 66-345-U.
3. A STUDY OF THE DECREASE IN FALSE ALARM PROBABILITY RESULTING FROM AN INCREASE IN THE NUMBER OF DISPLAYED ECHO RANGING CYCLES (U) - Technical Note. August 19, 1966. TRACOR Document Number 66-578-C.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR
(Contract NObsr-95149)

PROJECT 002 019 05 (20025) (Cont'd)
Display Analysis

4. A COMPARISON OF SIGNAL DETECTABILITIES ON A SIMULATED SONAR DISPLAY USING DEFLECTION, INTENSITY, AND INTENSITY-PLUS-DEFLECTION TYPE OF MODULATION (U) - Technical Note. September 12, 1966. TRACOR Document Number 66-571-C.
5. Montgomery, M. THE PROGRESS OF NAIVE OBSERVERS DURING A TRAINING PROGRAM - Technical Note. September 20, 1966. TRACOR Document Number 66-425-U.
6. FINAL TECHNICAL REPORT ON TASK 5, NObsr-95149 AN/SQS-26 DISPLAY ANALYSIS. September 30, 1966. TRACOR Document Number 66-704-U.

PROJECT 002 019 06 (20026)
Side Lobe Study
CLOSED

PROJECT 002 019 07 (20027)
Bottom-Scattering Model
CLOSED

1. Jones, J. D. REPORT ON THE STATUS OF THE BOTTOM-SCATTERING COMPUTER SIMULATION MODEL - Technical Note. February 1, 1966. TRACOR Document Number 66-204-U.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR
(Contract NObsr-95149)

PROJECT 002 019 08 (20028)

Optimized Transmit Beams

CLOSED

Progress Reports

- | | |
|---------------|--------------------------|
| 1. March 1966 | Document Number 66-259-U |
| 2. April 1966 | Document Number 66-283-U |
| 3. May 1966 | Document Number 66-327-U |
| 4. June 1966 | Document Number 66-381-U |

(Contract NObsr-95198)

PROJECT 19019

BQR-2/BQR-7 DIMUS Flicker Study

CLOSED

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BQR-7 DIMUS VISUAL DISPLAY - Summary Report. TRACOR
Document Number 66-674-U. November 30, 1966.

(Contract NObsr-95198)

Project 002 036 10

SISS Performance Predictions

CLOSED

1. PASSIVE PERFORMANCE PREDICTION. TRACOR Document
Number 66-657-C. November 21, 1966
2. Strange, T. I. BQQ-2 PASSIVE RANGING (U) - Summary
Report. TRACOR Document Number 67-288-C. March 30, 1967.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-95403)

PROJECT 20082

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CLOSED

1. THE DEFINITION AND ANALYSIS OF BOTTOM ROUGHNESS AND THE EFFECTS ON SONAR PERFORMANCE (U) - Summary Report. TRACOR Document Number 66-703-C. April 11, 1967.

(Contract N123(953)53354A)

PROJECT 22017

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CLOSED

1. Brown, Peter. A COMPARISON OF THE PERFORMANCE OF SEVERAL SIGNAL PROCESSORS - Technical Memorandum. TRACOR Document Number 66-203-U. March 10, 1966.

David Taylor Model Basin Contract N167-100(K)

Rockville Lab.

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2. SHIPBOARD INSTRUMENTATION FOR TOWED HYDROPHONE TEST PROGRAM - Final Report. TRACOR Document Number 65-260-C. July 30, 1965.
3. TRANSDUCER DESIGN AND ANALYSIS IN RELATION TO SHIP TOWED LINE ARRAYS - Final Report. TRACOR Document Number 65-261-C. July 30, 1965.

(N62306-67-C-0033)

PROJECT 002 006 01

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CLOSED

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(Contract NCnr-4193(00))

PROJECT 005 001 01

Binaural Interaction

CLOSED

1. SUMMARY REPORT ON STUDIES OF BINAURAL INTERACTION FOR THE PERIOD 1 APRIL 1965 THROUGH 31 MARCH 1966. TRACOR Document Number 66-311-U.



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CURRENT PROJECTS

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-95198)

PROJECT 002 001 11 (19011)

Special Studies

1. Thompson, J.R. DESIGN OF SLIDE RULE/NOMOGRAPH SONAR DATA CALCULATORS (U) - Technical Memorandum. TRACOR Document Number 66-622-C. November 7, 1966.
2. Technical Note - SOME COMPUTED HORIZONTAL BEAM PATTERNS FOR THE AN/BQR-7 SONAR (U). TRACOR Document Number 67-158-C. January 30, 1967
3. REPORT ON DIGITAL ALTERNATIVE RETROFIT EQUIPMENT (DARE) (U). TRACOR Document Number 66-645-C. November 15, 1966.
4. SUMMARY OF INSPECTION OF THE AN/SQQ-14 DATA PACKAGE AT GENERAL ELECTRIC, NOVEMBER 9 THROUGH 22 - Technical Note. TRACOR Document Number 66-685-U. December 7, 1966.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract N123(953)54996A)

PROJECT 002 009 04 (20043)

Analysis of Signal Processing Techniques

1. Hall, Larry. SIGNAL RECOMBINATION STUDIES (U). TRACOR Document Number 66-601-C. October 24, 1966.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract N123(953)54996A)

PROJECT 002 009 07 (20040)

Sonar Performance Modeling

1. FIRST CUT, ASW SHIP DEFINITION (U). TRACOR Document Number 66-494-C. August 31, 1966.
2. FIRST CUT, ESS BASELINE SYSTEM DESCRIPTION (U). TRACOR Document Number 66-517-C. September 1, 1966.

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(Contract No. N123(953)54996A)

PROJECT 002 009 09 (20048)

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1. HUMAN FACTORS STUDIES (U), CONFORMAL/PLANAR ARRAY - Technical Memorandum. TRACOR Document Number 66-562-C. San Diego. September 30, 1966.

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(Contract No. N123(953)54996A)

PROJECT 002 009 10

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1. Brown, B. M. SELF AND MUTUAL INTERFERENCE IN THE PROPOSED PAIR ACTIVE AND PASSIVE MODES (U) - Technical Memorandum. TRACOR Document Number 66-635-C. February 27, 1967.
2. Brown, B. M. and Morris Kostoff. EXTENSION OF THE PAIR AN/SQS-23 PERFORMANCE COMPARISON TO THE NON-ALERTED CONDITION (U). January 24, 1967. TRACOR Document Number 67-112-C.
3. Brown, B. M. and Morris Kostoff. PAIR AN/SQS-23 PERFORMANCE COMPARISON (U) - Technical Memorandum. TRACOR Document Number 67-112-C (REV). January 24, 1967.
4. LIKELIHOOD RATIO PROCESSOR FOR PAIR(U) - Technical Note. TRACOR Document Number 67-192-C. February 22, 1967.
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9. LIKELIHOOD RATIO PROCESSOR FOR PAIR (U) - Addendum. TRACOR Document Number 67-417-C. June 2, 1967.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract No. N123(953)54996A)

PROJECT 002 009 16

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1. David Doan. Technical Note - VERTICAL BEAMFORMER SIMULATION (U). TRACOR Document Number 67-351-C. April 25, 1967.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-93217)

PROJECT 002 012 02 (20010)

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1. STUDY OF MULTI-FREQUENCY AUDITORY AND VISUAL DISPLAYS FOR SONARS HAVING MULTIPLE FIXED BEAMS - Summary Report. January 1967. TRACOR Document Number 67-107-U.

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TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-93220)

PROJECT 002 013 02 (20034)

Computer Process Implementation

1. ANALYSIS OF TRANSIENT SIGNALS - Technical Note. TRACOR Document Number 66-519-U. September 9, 1966.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-93352)

PROJECT 002 016 01 (20036)

Develop Computer Processor for Detection,
Tracking & Mode Selection

Progress Reports

1. March 22 - June 1, 1966 Document Number 66-339-U
2. June 1 - July 1, 1966 Document Number 66-408-U
3. July 1 - August 1, 1966 Document Number 66-467-U
4. August 1 - Sept. 1, 1966 Document Number 66-530-U
5. August 1 - August 31, 1966 RL/66 026-U

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR
(Contract NObsr-93352)
PROJECT 002 016 02 (20015)
Optimum Pulses

A. Progress Reports

- | | |
|--------------------------------|--------------------------|
| 1. July 1965 | Document Number 65-298-U |
| 2. August 1965 | Document Number 65-299-U |
| 3. Sept. 1 - Oct. 1, 1965 | Document Number 65-329-U |
| 4. Oct. 1 - Nov. 1, 1965 | Document Number 65-358-U |
| 5. Nov. 1 - Dec. 1, 1965 | Document Number 65-359-U |
| 6. Dec. 1, 1965 - Jan. 1, 1966 | Document Number 66-103-U |
| 7. Jan. 1 - Feb. 1, 1966 | Document Number 66-182-C |
| 8. Feb. 1 - March 1, 1966 | Document Number 66-265-C |
| 9. March 1 - April 1, 1966 | Document Number 66-266-C |
| 10. April 1 - May 1, 1966 | Document Number 66-286-C |
| 11. May 1 - June 1, 1966 | Document Number 66-346-C |
| 12. June 1 - July 1, 1966 | Document Number 66-388-U |

B. Non-Periodic Reports

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TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-95149)

PROJECT 002 019 09 (20029)

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1. SIGNAL PROCESSOR PERFORMANCE COMPARISON. TRACOR Document Number 67-152-U. January 26, 1967.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-95149)

PROJECT 002 019 12

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1. M. N. Anastasi and S. F. Fowler. Technical Memorandum -
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PROJECT 002 019 13
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1. Technical Memorandum - NEARFIELD AND FARFIELD RESULTS
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(U). TRACOR Document Number 67-214-U. March 6, 1967.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR
(Contract NObsr-95130)
PROJECT 002 021 01 (20032)
Submarine Noise Field Measurements

1. Jones, H. L. and Duderstadt, D. W. PRELIMINARY SEA TEST PLAN, SUBMARINE NOISE FIELD MEASUREMENT SEA TEST OPERATION PLAN (U). TRACOR Document Number 66-289-C.
Version I - May 6, 1966.
Version II - May 20, 1966.
Version III - July 19, 1966
Version IV - September 19, 1966.
Version V - November 28, 1966.
2. SOME RECOMMENDED PARAMETERS FOR THE INTERIM HINDSIGHT SYSTEM (U) - Technical Note. TRACOR Document Number 66-637-C.
November 11, 1966.
3. Progress Report - January 16, 1967. D. W. Duderstadt.
TRACOR Document Number 67-134-C.
4. TOPHAT TECHNICAL NOTE NO. 1 (U). TRACOR Document Number 67-188-C. February 22, 1967.
5. Duderstadt, D. W. SUMMATION OF RESULTS OF SEA TESTS ABOARD THE FRANCIS SCOTT KEY (SSBN 657) 13-16 DECEMBER 1966. January 16, 1967. TRACOR Document Number 67-134-C.
6. TOPHAT PACKAGE FOR 25 APRIL 1967 PRESENTATION (U).
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TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract NObsr-95161)

PROJECT 002 023 01

Sonar Signal Processing

Progress Reports

1. July 1, 1966 - Sept. 30, 1966 Document No.66-572-C
2. Oct. 1, 1966 - Oct. 31, 1966 Document No.66-633-C
3. Nov. 1 - Dec. 9, 1966 Document No.66-722-U
4. Dec. 10, 1966 - Dec. 31, 1966 Document No.67-146-C
5. January 1 - January 31, 1967 Document No.67-176-C
6. February 1 - February 28, 1967 Document No.67-234-C
7. March 1 - March 31, 1967 Document No.67-375-C

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

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PROJECT 002 025 01-04

Dome Transducer Interactions

1. Douglass, R. E. and B. E. Jay. RADIATION CHARACTERISTICS OF A SPHERICAL TRANSDUCER SURROUNDED BY A CONCENTRIC SHELL - Technical Memorandum. TRACOR Document Number 67-178-U. February 10, 1967.
2. Moyer, W. C. RADIATION CHARACTERISTICS OF A CIRCULAR TRANSDUCER SURROUNDED BY A NONCONCENTRIC CIRCULAR SHELL. October 11, 1966. TRACOR Document Number 66-579-U.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

(Contract No. NObsr-91229)

PROJECT 002 026 01 (22004, 22005)

AN/BQS-2 - Transducer Interactions

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2. Hedgcoxe, P. G. TECHNICAL MEMORANDUM - AN ANALYTICAL SOLUTION TO THE SOUND PRESSURE FIELD RESULTING FROM A PLANE WAVE INCIDENT ON AN ELLIPTIC CYLINDER AND A RIGHT CIRCULAR CYLINDER. TRACOR Document Number 64-117-U. February 17, 1965.
3. Kemp, G. T., et al. TORQUE PROBLEM ON BQS-6 TRANSDUCER MOUNTING LOCKNUTS. Technical Note. TRACOR Document Number 66-155-U. February 4, 1966.
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7. Kemp, G. T. MIL-S-22974 SPECIFICATION REVIEW REPORT (U). TRACOR Document Number 66-201-C. March 11, 1966. (See also 200 & 202).
8. Kemp, G. T. DESIGN REVIEW REPORT FOR THE TR155(B)/BQ TRANSDUCER (U). TRACOR Document Number 66-202-C. March 11, 1966. (See also 200 & 201).
9. Technical Note - BUMPS ON THE TR155 B/BQ HEAD MASS. March 7, 1966. TRACOR Document Number 66-193-U.
10. SUPPLEMENT TO DESIGN REVIEW REPORT FOR THE TR155(B)/BQ TRANSDUCER. TRACOR Document Number 66-313-U. May 20, 1966.
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12. Technical Note - SUMMARY OF SHIPYARD DATA FOR THE AN/BQS-6 SONAR SPHERE. TRACOR Document Number 66-387-U. July 8, 1966.
13. A Summary Report - ANALYTICAL STUDIES OF DOME-TRANSDUCER INTERACTIONS. TRACOR Document Number 66-342-U. June 9, 1966.
14. FACE DISPLACEMENT SURVEY TR155B TRANSDUCER - Final Report. TRACOR Document Number RL/66-004-U. March 4, 1966. Rockville.

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(Contract N00-140-66-C-0202)

PROJECT 002 029 01 (22025)

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1. MATHEMATICAL MODELS FOR THE CONFORMAL/PLANAR ARRAY DEGRADATION STUDY - Final Report on Task I. January 20, 1967. TRACOR Document Number 67-143-U.
2. COMPUTED BEAM PATTERNS FOR A PLANAR ARRAY WITH INOPERATIVE COMPONENTS (U) - Technical Memorandum. TRACOR Document Number 67-187-C. February 22, 1967.
3. Cates, K. N. TRANSDUCER ARRAY PERFORMANCE PREDICTION MODEL COMPUTER IMPLEMENTATION - Final Report on Task II. May 17, 1967. TRACOR Document number 67-405-U.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR
(Contract N123(953)55324A)
PROJECT 002 030 02
Pair Design Review

A. Progress Reports

- | | |
|------------------------------|-----------------------|
| 1. June 1 - 30, 1966 | Document No. 66-401-U |
| 2. July 1 - 31, 1966 | Document No. 66-438-U |
| 3. September 1 - 30, 1966 | Document No. 66-589-U |
| 4. October 1 - 31, 1966 | Document No. 66-639-U |
| 5. December 1 - 31, 1966 | Document No. 67-155-U |
| 6. January 1 - Feb. 28, 1967 | Document No. 67-253-U |
| 7. March 1 - April 30, 1967 | Document No. 67-404-U |

B. Non-Periodic Reports

1. A REVIEW OF THE THRESHOLDING STUDY FOR PAIR (U) -
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March 30, 1967.
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PROJECT 002 036 13 (19033)
SISS System Analysis

1. AN/BQG-4 (PUFFS) RELIABILITY ANALYSIS (U) - Technical Note. TRACOR Document Number 67-219-C. March 7, 1967.
2. AN/BQG-2A (PUFFS) RELIABILITY ANALYSIS (U) - Technical Note. TRACOR Document Number 67-220-C. March 7, 1967
3. RELIABILITY PREDICTION FOR THE PASSIVE DETECTION MODE OF THE BQR-2 (U) - Technical Note. TRACOR Document Number 67-221-C. March 7, 1967.
4. RELIABILITY PREDICTION FOR THE BQH-2C CLASSIFICATION SONAR SET (U) - Technical Note. TRACOR Document Number 67-222-C. March 7, 1967.
5. RELIABILITY PREDICTION FOR AN/BQR-2 ()/ROVER DIMUS (U). TRACOR Document Number 67-223-C. March 7, 1967.

TRACOR REPORTS ON TOPICS IN THE FIELD OF SONAR

PROJECT 002 036 19 (19039)

SISS Spatial Processing

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PROJECT 002 036 25
SISS

A. Progress Reports

- | | |
|-------------------|--------------------------|
| 1. April 24, 1967 | Document Number 67-343-C |
| 2. May 8, 1967 | Document Number 67-381-C |

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1. Short, Douglas. ISSUES RELATED TO AN/BQR-7 AND AN/BQR-2 DIMUS SYSTEMS - PRELIMINARY DISCUSSION (U) - Technical Note. TRACOR Document Number 67-252-C. March 16, 1967.
2. Short, Douglas and R. G. Baldwin. ANALYSIS RELATED TO THE PROCUREMENT AND UTILIZATION OF AN/BQR-7 AND AN/BQR-2 DIMUS SYSTEMS - Rough Draft. May 12, 1967. TRACOR Document Number 67-316-C.
3. Short, Douglas. RELATIVE PERFORMANCE OF THE AN/BQR-2 DIMUS AND THE AN/BQR-7 DIMUS SONARS IN VARYING SEA STATES AND AT VARIOUS SHIPS SPEEDS - Rough Draft. May 23, 1967. TRACOR Document Number 67-399-C.

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Project 002 038 01, 02

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2. Technical Note - A COMPARISON OF THE PERFORMANCE PSEUDO RANDOM NOISE SIGNALS TO LINEAR FM SIGNALS. TRACOR Document Number 67-327-U. April 12, 1967.