

Accession No.: 2009-33

PROCESSING RECORD  
SCRIPPS INSTITUTION OF OCEANOGRAPHY ARCHIVES

---

Scripps Institution of Oceanography. Marine Physical Laboratory

SIO Marine Physical Laboratory Reports, 1959-1997

PHYSICAL DESCRIPTION: 7 mss

DESCRIPTION: Technical memorandum and technical reports from SIO's Marine Physical Laboratory. MPL assigned report numbers to its scientists reprints of publications; those are excluded from this collection, since they are available in the published literature.

**SIO Marine Physical Laboratory  
Reports, 1959-1997  
Accession Number 2009-33**

**BOX**

**REPORT**

**1**

Table of the Integral Over the Range - Jeanne Baker & Marcia Head – MPL  
Technical Memorandum 111 – MPL-U-24/59

Degree of Dissociation of MgSO<sub>4</sub> Solutions From Acoustic Absorption and  
Density Data – F.H. Fisher – MPL Technical Memorandum 113 – MPL-U-25/59

Cost Valuation of Tolerances for Acoustic Arrays – Victor C. Anderson - MPL  
Technical Memorandum 112 – MPL-U-7/60

Null Balance Tests on Four-Element Albacore-Dimus Arrays – W. Robert  
Cherry - MPL Technical Memorandum 116 – MPL-U-4/61

First Order Correction of Location Errors in a Multiple Beamformer – Victor C.  
Anderson - MPL Technical Memorandum 125 – MPL-U-23/62

Annual Report Paleomagnetism of Deep Sea Sediments – Victor Vacquier -  
MPL Technical Memorandum 129 – MPL-U-50/62

Dimus Shift Register – Daniel K. Gibson - MPL Technical Memorandum 132 –  
MPL-U-8/63

Flip Dimus – Daniel K. Gibson and Gerald L. Denny - MPL Technical  
Memorandum 133 – MPL-U-12/63

AC Demagnetization Apparatus – C. G. A. Harrison - MPL Technical  
Memorandum 163 – MPL-U-62/63

Seismic Equipment Manual – Alan C. Jones - MPL Technical Memorandum 143  
– MPL-U-5/64

Deep-Towed Proton Magnetometer – John D. Mudie - MPL Technical  
Memorandum 150 – MPL-U-54-64

A Photographic Compass Inclinator – C.G.A. Harrison et. all - MPL  
Technical Memorandum 149 – MPL-U-56/64

MPL MK III Sampling Phase-Meter – Philbrook Cushing - MPL Technical  
Memorandum 152 – MPL-U-69/64

**BOX****REPORT**

- 1 Trieste Proton Magnetometer – Martin D. Benson – MPL-U-18/65
- Deeply-Towed Echo Sounding West of the Island of Kauai – Michael S. Loughridge - MPL Technical Memorandum 159 – MPL-U-19/65
- Sealab II Staging Vessel Positioning Control – M.D. Benson and John D. Mudie - MPL Technical Memorandum 170 – MPL-U-48/65
- Measurement of Anisotropy of Susceptibility With the Torque Magnetometer – Anthony I. Rees - MPL Technical Memorandum 161 – MPL-U-23/65
- A Steerable Null Processing Technique for Wideband Passive Sonar – Victor C. Anderson - MPL Technical Memorandum 162 – MPL-U-24/65
- The Paleomagnetism of Deep Sea Cores – C. G. A. Harrison - MPL Technical Memorandum 178 – MPL-U-49/66
- Heat Flow Instruction Manual – Charles E. Corry - MPL Technical Memorandum 180-1 – MPL-U-52/66
- MPL Two Man Submarine Propulsion Controller – D. K. Gibson - MPL Technical Memorandum 181 – MPL-U-53/66
- Defeat on Popocatepetl – Charles E. Corry – MPL-U-60/66
- Sea Floor Spreading in the Pacific – C. G. A. Harrison and J. D. Mudie – MPL-U-2/67
- Sediment Thickness and Sea-Floor Spreading in Pacific – C. G. A. Harrison and John D. Mudie – MPL-U-3/67
- Position Determination Near the Sea Floor – Carl D. Lowenstein – MPL-U-22/67
- A Doppler Shift Flowmeter – E.D. Squier – MPL-U-48/67
- Deep-Towed Proton Magnetometer – Martin D. Benson - MPL Technical Memorandum 186 – MPL-U-57/67
- MPL Digital Counter Output Converter – Martin Benson - MPL Technical Memorandum – MPL-U-106/67
- Improvements in Side-Looking Sonar for Deep Vehicles – Victor C. Anderson and Carl D. Lowenstein – MPL-U-5/68

**BOX****REPORT****1**

Dicanne II Project Synopsis – Victor C. Anderson - MPL Technical Memorandum 207 – MPL-U-54/69

Variable Paper Advance Control for Gift Recorders – Edward J. Cray, Jr. - MPL Technical Memorandum 208 – MPL-U-57/69

A Descriptive Summary of the Rum – Orb Sea Floor Work System – Daniel K. Gibson - MPL Technical Memorandum 217 – MPL-U-66/7

”Rum” – Remote Underwater Manipulator – Daniel K. Gibson - MPL Technical Memorandum 216 – MPL-U-67/70

Navigation by Acoustic Transponders – Carl D. Lowenstein – MPL-U-89/70

Travel-Time Plots for Refraction Stations near Kodiak, Alaska – George G. Shor, Jr. - MPL Technical Memorandum 233 – MPL-U-13/72

Calibration of the MPL Oscillating Quartz Crystal Temperature Sensor – Robert Detrick - MPL Technical Memorandum 235 – MPL-U-61/72

Lrapp Beamformer – W. R. Cherry - MPL Technical Memorandum 236 – MPL-U-70/72

Summary of Orb Cruise – H.F. Bezdek – MPL-U-78/72

Sound Velocity Correction Table and Revised Matthews’ Tables-South Tow 6 - Robert Detrick and K. D. Klitgord - MPL Technical Memorandum 240 – MPL-U-92/72

Technical Manual for MPL-60 Model 10,000 Six Channel High Pass/Low Pass Filter – S. P. Burke - MPL Technical Memorandum 243 – MPL-U-25/73

Marine Physical Laboratory Status Report of the ARPA ADA Program (U) – MPL-C-74/73

**2**

Exercise Plan for Combined Acoustic Propagation in Eastpac Region (Exercise Caper) – G. B. Morris and C. B. Bishop – MPL-U-63/74

MPL Calibration Transponder – F. Pavlicek et. al - MPL Technical Memorandum 266 – MPL-U-97/74

1975 Calibration of the MPL Oscillating Quartz Crystal Temperature Sensor – Kathleen Crane - MPL Technical Memorandum 267 – MPL-U-20/75

**BOX****REPORT****2**

Cepstrum – Theodore G. Birdsall – MPL Technical Memorandum 271 – MPL-U-70/75

A Study of the Monitoring of Sewage and Power Plant Discharges in the Southern California Bight – Chris Robbins - MPL Technical Memorandum 272 – MPL-U-76/75

PDP-11 Runoff – L. Wade - MPL Technical Memorandum 277 – MPL-U-28/76

ADA Experimental Program – Victor C. Anderson - MPL Technical Memorandum 283-A – MPL-U-82/76

ADA Software Documentation – John C. Nickles et. al - MPL Technical Memorandum 294 – MPL-U-59/77

FLIP As a Seagoing Measurement Platform – C. B. Bishop - MPL Technical Memorandum 297 – MPL-U-91/77

Strain: Observations of the Vertical gradient of Isopycnal Vertical Displacement – Robert Pinkel et. al - MPL-U-7/78

Data Collection and Analysis Plan for the June 1978 ADA Operation – Victor C. Anderson - MPL Technical Memorandum 299 – MPL-U-35/78

Gulf of California IPOD Site Survey – G. F. Moore et. al – MPL-U-36/78

ADA Array Rubber Dome Failure – Dr. Victor C. Anderson and Dan K. Gibson - MPL Technical Memorandum 301 – MPL-U-47/78

ADA Calibration at Sea – Victor C. Anderson and John C. Nickles - MPL Technical Memorandum 307 – MPL-U-58/78

ADA Handling and Mooring – Dr. Victor C. Anderson and Dan K. Gibson - MPL Technical Memorandum 304-A – MPL-U-85/78

Nonstationary and Nonuniform Oceanic Background in a High gain Acoustic Array - V. C. Anderson – MPL-U-89/78

A Laboratory Test of the MPL Dynamic Beamformer – V. C. Anderson - MPL Technical Memorandum 309 – MPL-U-16/79

Cruise Report:; Mariana Leg 10 – George G. Shor Jr. – SIO Reference 79-8 – MPL-U-26/79

**BOX****REPORT****2**

The George H. Scripps Memorial Marine Biological Laboratory of the Scripps Institution of Oceanography University of California, San Diego – George G. Shor Jr. et. al – SIO Reference 79-26 – MPL-U-84/79

Anomalous Absorption Preliminary System Description – Daniel Gibson - MPL Technical Memorandum 365 – MPL-U-6/80

Reverberation Model: II. Software Description – W. S. Hodgkiss - MPL Technical Memorandum 320 – MPL-U-46/80

Free Fall Cone Penetrometer – D. K. Gibson - MPL Technical Memorandum 325 – MPL-U-4/81

Briefing for Dr. John O. Dimmock – Deputy Director Technology Programs – MPL-U-62/81

Preliminary Processing of selected Segments of the ARL/PSU FY 80 Test Data – D. Alexandrou and W. S. Hodgkiss - MPL Technical Memorandum 333 – MPL-U-85/81

Effect of Ionic Strength and Ion Pairing on Sound Absorption in Aqueous solutions of MgSO<sub>4</sub> and NaCl – C. Neuberger et. al – SIO Reference 82-9 – MPL-U-56/78

Marine Physical Laboratory Program in Acoustics and the Ocean Environment – F. N. Spiess and V. C. Anderson – MPL-U-43/82

**3**

Coherent Recombination – April 1981 – W. Fincke et. al - MPL Technical Memorandum 349 – MPL-U-81/82

Investigations of the 1 KHZ Sound Absorption in Sea Water – Vernon Pitkin Simmons – SIO Reference 83-1 – MPL-U-11/83

Doppler Sonar and Profiling CTD Observations of the Interrelationship Between Large and Small Scale Internal Waves – Robert Pinkel - MPL Technical Memorandum 359 – MPL-U-29/83

Doppler Sonar Data Analysis: RESEARCHER Cruise September 1982 – D. S. Hansen and W. S. Hodgkiss - MPL Technical Memorandum 358 – MPL-U-88/83

**BOX****REPORT**

**3** Spectral Analysis of Oceanic Incoherent Doppler Sonar Data by Fourier and Modeling Techniques – D. Scott Hansen - MPL Technical Memorandum 366 – MPL-U-17/84

AR Spectral Modeling of Simulated Incoherent Doppler Sonar – D. Scott Hansen - MPL Technical Memorandum 367 – MPL-U-18/84

ACSAS/KAMLOOPS VAX Experiment Control Software Specification – William B. Fincke et. al - MPL Technical Memorandum 374 – MPL-U-2/85

Seacliff Scientific Users Manual – R. A. Harriss and C. B. Bishop - MPL Technical Memorandum 370 – MPL-U-62/84

VLF Workshop: 24-25 January 1985 – W. S. Hodgkiss - MPL Technical Memorandum 376 – MPL-U-11/85

FLIP Floating Instrument Platform – Earl D. Bronson and Larry R. Glosten – SIO Reference 85-21 – MPL-U-27-85

Deep Seafloor Acoustic Backscattering Measurements Using Sea Beam – Christian de Moustier – SIO Reference 85-33 – MPL-U-54/85

Selective Reverberation Cancellation Via Adaptive Beamforming – Dimitrios Alexandrou – SIO Reference 85-23 – MPL-U-63/85

Freely Drifting Swallow Float Array: Initial Estimates of Interelement Range – R. L. Culver et. al - MPL Technical Memorandum 380 – MPL-U-69/85

Vertical Directionality of Ambient Noise: 150-300 Hz – W. S. Hodgkiss and F. H. Fisher - MPL Technical Memorandum 381 – MPL-U-7/86

Observations of the Upper Ocean Using a Multi-Beam Doppler Sonar – Albert James Plueddemann – SIO Reference 87-15 – MPL-U-26/86

**4** Freely Drifting Swallow Float Array: September 1985 Trip Report – R. K. Culver et. al – MPL-U-27-86

Vertical Directionality of Ambient Noise at 32 degrees N as a Function of Longitude: Tape 38247 – W. S. Hodgkiss and F. H. Fisher - MPL Technical Memorandum 387-D – MPL-U-32/86

Freely Drifting Swallow Float Array: September 1986 Trip Report – R. L. Culver et. al - MPL Technical Memorandum 391 – MPL-U-13/87

**BOX****REPORT**

- 4 Removing Resonant Oscillation Signals from Swallow Float Data – R. L. Culver et al - MPL Technical Memorandum 395 – MPL-U-21/87
- Freely Drifting Swallow Float Array: April 1987 Trip Report – G. L. D’Spain et al - MPL Technical Memorandum 397 – MPL-U-54//87
- Iterative Method for the Estimation of Shot and Sea Floor Depths using Hydrophone Streamer Data – Richard K. Brienzo - MPL Technical Memorandum 398 – MPL-U-57-87
- Velocity and Attenuation Profiles in the Monterey Deep-Sea Fan – Richard K. Brienzo – SIO Reference 87-28 – MPL-U-67/87
- Trip Report – August 1987 Swallow Float Deployment with Rum – G. L. D’Spain et. al - MPL Technical Memorandum 400 – MPL-U-68/87
- Vertical Signal Arrival Structure – W. S. Hodgkiss and F. H. Fisher - MPL Technical Memorandum 399 – MPL-U-2/88
- Program in Marine Physics Applied to Navy Undersea Missions – Kenneth M. Watson – MPL-U-37/88
- 5 Statistics of Chi-Square Random Variable Obtained from Independent Gaussian Samples with a Non-Zero Mean and Arbitrary Variance – Richard K. Brienzo - MPL Technical Memorandum 405 – MPL-U-40/88
- Navigation Software for the MPL Vertical Line Array – B. J. Sotirin and W. S. Hodgkiss - MPL Technical Memorandum 409 – MPL-U-12/89
- On Array Performance: A Methodology of System Calibration and Noise Identification – B. J. Sotirin and W. S. Hodgkiss - MPL Technical Memorandum 410 – MPL-U-25/89
- Large Aperture Array Measurements of the Vertical Ambient Noise Field – B. J. Sotirin and W. S. Hodgkiss - MPL Technical Memorandum 411 – MPL-U-2/89
- Vertical Directionality Measurements of Ambient Noise in the NE Pacific – B. J. Sotirin and W. S. Hodgkiss - MPL Technical Memorandum 412 – MPL-U-46/89
- Design and Testing of a Seafloor Geodetic System – Marie C. McIntyre – SIO Reference 89-9 – MPL-U-48/89
- Observations of Fine Scale Vertical Shear and Strain in the Upper Ocean – Jeffrey T. Sherman – SIO Reference 89-11 – MPL-U-49/89



**BOX****REPORT**

- 5      Least Squares Adaptive and Bayes Optimal Array Processors for the Active Sonar Problem – David Almagor – SIO Reference 89-16 – MPL-U-75/89
- Observations of Seafloor Ambient Noise with an Ocean Bottom Seismometer Array – Anthony Edward Schreiner – SIO Reference 89-27 – MPL-U-84/89
- Downslope Conversion Experiment: Environmental Data Report – B. Martin Olivera - MPL Technical Memorandum 414 – MPL-U-1/90
- MPL's Research Program in Navy Related Technologies – Kenneth M. Watson and Victor C. Anderson – MPL-U-3/90
- A Performance Study of Full Aperture and Subaperture Processing of Vertical Line Arrays with the Minimum Variance Processor – Jean-Marie Q.D. Tran and William S. Hodgkiss - MPL Technical Memorandum 415 – MPL-U-4/90
- 6      Freely Drifting Swallow Float Array: July 1989 Trip Report – G. C. Chen et. al - MPL Technical Memorandum 420 – MPL-U-9/90
- Localized Swallow Floats During the July 1989 Experiment – G. C. Chen and W. S. Hodgkiss - MPL Technical Memorandum 421 – MPL-U- 28/90
- Acoustic Modem: December 20, 1989 Trip Report – A. Dotan et. al - MPL Technical Memorandum 422 – MPL-U-90/90
- Acoustic Modem: March 16, 1989 Trip Report – A. Dotan et. al - MPL Technical Memorandum 423 – MPL-U-91/90
- Trip Report – June 1989 Swallow Float Deployment with RUM – G. L. D'Spain et. al - MPL Technical Memorandum 424 – MPL-U-92/90
- A Sensitivity Study of Daytime Visibility Determination with the Horizon Scanning Imager – J. E. Shields et. al – Scientific Report No. 2 – MPL-U-25/91
- Automated Visibility Measurements with a Horizon Scanning Imager Volume I: Technical Discussion – R. W. Johnson et. al – Scientific Report No. 1 – MPL-U-99/91
- Seamount Structure from Seismic Tomography and Gravity Inversion – Philip T. C. Hammer – SIO Reference 92-4 – MPL-U-17/92
- Sedyn90 Modeling: Three Point Mooring of FLIP with Three Arrays – Gregory W. Beers - MPL Technical Memorandum 428 – MPL-U-18/92

An Automated Observing System for Passive Evaluation of Cloud Cover and Visibility – J. E. Shields et. al – SIO Reference 92-22 – MPL-U-65/92

Preliminary Analysis of the FLIP Array Data from the NOBS Experiment – M. T. Hagerty et. al - MPL Technical Memorandum 429 – MPL-U-42/92

Shear, Strain and Thermohaline Vertical Shear in the Upper Ocean – Steven Paul Anderson – SIO Reference 93-3 – MPL-U-4/93

UMPE: The University of Miami Parabolic Equation Model Version 1.0 – Kevin B. Smith et.al - MPL Technical Memorandum 432 – MPL-U-27/93

MDA AEL Error Analysis – E. D. Wolin et. al - MPL Technical Memorandum 438 – MPL-U-15/94

MPL Sound Velocimeter – D. E Boegeman et. al – MPL-U-23/97

Narrowband Calibration of the Doppler Sonar Systems Aboard the R. V. Researcher: March 1983 Cruise – D. Scott Hansen – MPL Tech Memo 361

A System for Airborne Measurements of the Total Heat Flow From the Sea Surface – E. D. McAlistar – AOG Report U-636

Effects of Pressure and Dielectric Constant on Sound Absorption in Magnesium Sulfate Solutions – Frederick H. Fisher – Technical Memorandum No. 46

Active Ballasting of a Freely-Drifting Sensor – Ron Horn et. al - MPL Technical Memorandum 427

The Scientific Research Support Potential of the Submersible MARITALIA 3GST9 – Andreas B. Rechnitzer - MPL Technical Memorandum 420

A near-bottom geophysical study of the Central Aleutian trench – Grow, J.A., Spiess, F.N., Mudie, J.D. – MPL-U-7/71