

INSTRUCTIONS
FOR ASSIGNING DUMAND INTERNAL REPORT NOS.

NOTE AUTHOR(S), TITLE, AND DATE OF
REPORT BY NEXT AVAILABLE NUMBER ON LIST
ATTACHED. INSERT ORIGINAL AND COPIES
OF REPORT IN FILE FOLDER MARKED WITH
SAME DUMAND NUMBER. HEPG OFFICE WILL
TYPE ADDITIONS ONTO MASTER LIST (AT
LEFT) AND FILE FOLDER LABELS.

Note:

If you need a DIR number,
please ask Vic Stenger.

The master list is on

[DUMAND] INTERNAL REP

DIR-10-91

Clem, John and Webster, Med: "Monte Carlo Prediction of SPS
Trigger Rates."

DIR-11-91

Learned, J.G. "Using the DUMAND Optical Module Hardhat as
a Lens to Increase Light Collection"

DIR-9-90	Stenger, V.J.: "Preliminary Results on the Effect of Digitizer Least Count on Pointing Error" July 1990
DIR-10-90	Stenger, V.J.: "MC Results on Low Energy Neutrinos in DUMAND" August 1990
DIR-11-90	Cavadias, George: "Time and Frequency Control in the DUMAND Array"
DIR-12-90	Learned, J.G.: "Triggering in DUMAND"
DIR-13-90	Ekstrom, Phil: "Brief Regarding String Clocks"
DIR-14-90	Okada, A. and Uehara, S.: "Pulse Height Distribution of a Hamamatsu PMT and an Estimate of Background Rate for TE Trigger"
DIR-15-90	Wilkins, George: "Specification for: 36-km-long, Deepsea, Electro-optical, Communication Cable"
DIR-16-90	Wilkins, George: "Specification for Four 9.2-km-long Opto-mechanical tubes for Deepsea Electro-optical Seafloor Cable"
DIR-17-90	Van Ryzin, Joe: "Progress, DUMAND Site/cable study"
DIR-18-90	Stenger, V.J.: "Optical Module Simulation"
DIR-19-90	Learned, Okada and Uehara, "Estimating the Total Energy Trigger Rate in DUMAND II" (Pub in Sendai, 10/90 Proceedings)
DIR-20-90	Aoki, T. and Japan DUMAND Collaboration, "Digital Circuit for Optical Module"
DIR-21-90	Kawamota, H., "Circuit with New Output Pulse Structure for JOM"
DIR-1-91	Dye, S., Hazen, E.S.: "Computer Simulation of the Strawman Digitizer for the DUMAND II Experiment"
DIR-2-91	Hazen, E.: "DUMAND SBC Fast Digitizer Design Report"
DIR-4-91	Hayashino, T.: "Light Emission Ckeck from Back Direction of Hamamatsu 15" PMT"
DIR-5-91	Stevenson, M.L.: "
DIR-6-91	Wilkes, R.J., Egaas, B. and McCourry, L.: "Hydrophone Cable Crosstalk Tests" DUMAND-UWA-91-1
DIR-7-91	Wilkes, R.J.: "Environmental Module for DUMAND: Design and Deployment" DUMAND-UWA-91-2
DIR-8-91	Goodman, et al on FNAL beam
DIR-9-91	Stevenson, M.L.: "Seattle Transparencies of "Parameterization of (Anti)Neutrino Cross Sections"

DIR-5-86 Stenger, V.: "Determination of Water Attenuation from SPS Calibration Runs"
November 1986

DIR-6-86 Stenger, V.: "Demon, Trical and Decal: the SPS Onboard Analysis Programs"

DIR-1-87 Learned, J.: "Post Mortem of SBC Fast Electronics"
January 1987

DIR-2-87 Stenger, V.: "The Bottom-Moored String"
May 1987

DIR-3-87 Matsuno, S.: "The Angular Time Delay of OM Response"
August 1987

DIR-4-87 Learned, J.: "Away Specifications for Next Stage of DUMAND"
December 1987

DIR-5-87 Becker-Szendy, R.: "Report on Preliminary Analysis of Environmental Data"

DIR-1-88 Matsuno, S.: "A Manual of SPS Event Display Program EVPLT"
June 1988

DIR-2-88 Stenger, V.: "Muon Astronomy in the Sea"

DIR-1-89 Roberts, A.: "DUMAND Checklist"
April 1989

DIR-2-89 Stenger, V.: "The Hawaii DUMAND Monte Carlo"
August 1989

DIR-1-90 Harris, D., Roberts a.: "The DUMAND Power Supply Problem"
March 1990

DIR-2-90 Roberts, A.: "Shall We Duplex C2 and C3?"
March 1990

DIR-3-90 Roberts, A.: "Array Expansion"
March 1990

DIR-4-90 Roberts, A.: "Regulator Design"
March 1990

DIR-5-90 Roberts, A., Learned, J.: "Design of Junction Box EM Package"
April 1990

DIR-6-90 Roberts, A.: "Summary of Changes in 11/89 DUMAND Specs as of 4/10/90"
April 1990

DIR-7-90 Roberts, A., Learned, J.: "Emergency Battery Power: Testing Strings in the Ocean"
April 1990

DIR-8-90 Stenger, V.J.: "Response of Octagon to Fermilab Neutrinos"
July 1990

DIR-14-83 Lewitus, Alan: "Physical Oceanographic Data from the DUMAND Site"

DIR-15-83 O'Connor, D., et al.: "Background and Bioluminescent Light Levels at the DUMAND Site"

DIR-1-84 Stenger, V.: "Monte Carlo Analysis of Mt. Hopkins 37 PMT System"
January 1984

DIR-2-84 Learned, J.: "Sound Velocity and Variations at DUMAND Site"
March 1984

DIR-3-84 O'Connor, D. et al.: "Calculations of the Angular Acceptance of a Photomultiplier in a Cylindrical Baffle Mounted in a Sphere Immersed in Water"
March 1984

DIR-4-84 Wilkins, G.: "Power/Strength Tradeoffs for 6.35mm Deepsea E-O Tether"
June 1984

DIR-5-84 Wilkins, G.: "Another Round of Power/Strength/Diameter Tradeoffs"
July 1984

DIR-6-84 Dye, S.: "Deep Ocean Releases of Interest to DUMAND"
June 1984

DIR-7-84 Roberts, A.: "Heat Loss Through the Benthos Sphere"
October 1984

DIR-8-84 Rangan, K.: "Results from Purdue K-40 Experiment"

DIR-9-84 Dye, S.: "A Preliminary Assessment of the Effects of an Aluminum SBC Pressure Housing on the Dynamics of the SPS"
November 1984

DIR-10-84 Stenger, V.: "Yet Another Imaging Algorithm"
December 1984

DIR-1-85 Stenger, V.: "A Comparison of Underground Neutrino Event Rate Calculations"
May 1985

DIR-2-85 Stenger, V.: "Ersatz Expectations"
November 1985

DIR-1-86 Matsuno, S.: "Results on Optical Module Calibration"
July 1986

DIR-2-86 Stenger, V.: "SPS Expectations"

DIR-3-86 Learned, J.: "Convective Cooling by Gases"
October 1986

DIR-4-86 Learned, J.: "Calibrating the SPS in the Ocean with the Laser"

HAWAII DUMAND CENTER
Internal Reports

Report No.	Author(s)/Title/Date
DIR-1-83	Matsuno, S.: "Simulation on the DUMAND String and the Muon String by Use of "SNAPLD" Program" April 1983
DIR-2-83	Stenger, V.: "Not so Grim Results of Imaging Gamma Ray Monte Carlo Events" June 1983
DIR-3-83	Stenger, V.: "Monte Carlo Studies on the Efficiency, Energy Threshold and Angular Resolution of the Mt.#Hopkins Gamma Ray Telescope" July 1983
DIR-4-83	Roberts, A.: "Preliminary Ideas on In Situ Testing of Optical Properties of the SPS" July 1983
DIR-5-83	Roberts, A.: "Effect on Sensitivity of Blue Cutoff Filter to Eliminate Bioluminescence" July 1983
DIR-6-83	Gorham, P.: "PMT Anode Current Measuring Considerations For the DUMAND Prototype Module" August 1983
DIR-7-83	Stenger, V.: "How Much Can We Improve Sensitivity of Mt.#Hopkins Gamma Ray Telescope?" September 1983
DIR-8-83	Stenger, V.: "Comparing Gamma Ray Monte Carlos With Shower Data is Like Comparing Apples and Oranges if You Don't Watch Out" September 1983
DIR-9-83	Stenger, V.: "Experimental Note on 16" PMT Tests" September 1983
DIR-10-83	Stenger, V.: "Teravolt Astronomy: COSPAR/IAU Symposium on Advances in High Enrgy Astrophysics and Cosmology" September 1983
DIR-11-83	Matsuno, S.: "16" Hamamatsu PMT Test" October 1983
DIR-12-83	Roberts, A.: "Proposed Method for Obtaining Amplitude Data in Multiple Muon Events" October 1983
DIR-13-83	O'Connor, D., Matsuno, S. et al.: "Calibration of the Photomultipliers Used for Measurement of Bioluminescence Background DUMAND"

HIGH ENERGY PHYSICS GROUP
INTERNAL REPORTS
1982

<u>Report No.</u>	<u>Author(s)/Title/Date</u>
DIR-1-82	Learned, J.: "Photoelectron Statistics From a Fixed Mean Photon Intensity - They are Poisson" February 1982
DIR-2-82	Roberts, A.: "Note on False Track Synthesis by Smart and Dumb PMT's" March 1982
DIR-3-82	Roberts, A.: "DUMAND Status and Current Problems" May 1982
DIR-4-82	Roberts, A.: "Note on Philips Proposal for a Smart Tube" April 1982
DIR-5-82	Stenger, V.J.: "The Proposed DUMAND Array Cannot Be Greatly Improved Upon as a Detector of Extraterrestrial High Energy Neutrinos" May 1982
DIR-6-82	Hoffman, D.: "Acceleration Mechanism: The "Dynamo" Model (Lovelace) C Term Paper, Physics 712" May 1982
DIR-7-82	
DIR-8-82	Roberts, A.: "Phillips Proposal for a Smart PMT" April 1982
DIR-9-82	O'Connor, D.: "Revised Muon Flux and Muon Spectra in the Ocean" July 1982
DIR-10-82	Roberts, A.: "Answer to Phillips Questions of 6/21/82 Concerning DUMAND PMT" July 1982
DIR-11-82	Bosetti, P.: "Grand Unified Monopoles and DUMAND" July 1982
DIR-12-82	<i>PR-83</i> Harris, F.A.: "Muon String Software Documentation" July 1982
DIR-13-82	<i>PR-83</i> Gorham, P.: "DeSteigeur Cruise Data Analysis" August 1982
DIR-14-82	<i>PR-83</i> Mitsui, K.: "How Much Light Lost Due to the Benthos Sphere?" September 1982
DIR-15-82	<i>PR-83</i> Stenger, V.J.: "Imaging Analysis for Mt. Hopkins" December 1982

HIGH ENERGY PHYSICS GROUP
INTERNAL REPORTS
1981

<u>Report No.</u>	<u>Author(s)/Title/Date</u>
DIR 81-2	Stenger, V.J.: "How to Talk with CAMAC on IS-11 Without a System" February 1981
DIR 81-8	Learned, J.: "Rock to Water Range Conversion for Cosmic Ray Muons" April 1981
DIR 81-11	Learned, J.: "Directly Produced μ 's in the Monte Carlo Program" April 1981
DIR 81-12	Roberts, A.: "Notes on a Visit by T. Hiruma and R. Fisher of Hamamatsu Corp." May 1981
DIR 81-13	Harris, F.A.: "Downloading Programs from the Terak to the IS-11" June 1981
DIR 81-14	Roberts, A.: "Reconsideration of Required Depth for a DUMAND Array" September 1981
DIR 81-15	Learned, J.: "Precision of Depth Measurement for Muon String" September 1981
DIR 81-16	Roberts, A.: "Note on the Use of a Barge for DUMAND Deployment" October 1981
DIR 81-17	Learned, J.: " K^4_0 Induced Photon Flux" October 1981
DIR 81-18	Stenger, V.J.: "How to Discover the W Boson with DUMAND Phase I" September 1981
DIR 81-19	Harris, F.A.: "Muon String System Software Status" October 1981
DIR 81-20	Roberts, A.: "True Coincidence Background from K^4_0 Decay" November 1981
DIR 81-21	Roberts, A.: "Experimental Measurements of K^4_0 True Coincidence Rate"
DIR 81-22	Jones, M.: "E546 Neutral-Current Events and Search for Tau Neutrino Interactions"

HIGH ENERGY PHYSICS GROUP
INTERNAL REPORTS
1980

<u>Report No.</u>	<u>Author(s)/Title/Date</u>
DIR 80-1	Learned, J.: "How to Use the Time Information in Monte Carlo Track Reconstruction" January 10, 1980
DIR 80-2	Learned, J.: "Getting Ready for the Signal Processing Workshop" January 10, 1980
DIR 80-3	Learned, J.: "Fitting Tracks in 4 Dimensions" January 13, 1980
DIR 80-4	Roberts, A.: "Preliminary Reflections Concerning a Small-Scale DUMAND Experiment - DUMAND M" January 31, 1980
DIR 80-5	Learned, J.: "A New Type of Module" February 22, 1980
DIR 80-6	Learned, J.: "Optimum Detector Size and Spacing in Large DUMAND Arrays" May 28, 1980
DIR 80-7	Learned, J.: "Ocean PMT Tests and Optical Attenuation Measurement" August 12, 1980
DIR 80-8	Camerini, U.: "Opacity of the Sea Urchin (neglecting reflections)" June 4, 1980
DIR 80-9	Learned, J.: "December Deployment Workshop in San Diego" August 20, 1980
DIR 80-10	Roberts, A.: "On Z Strategies for DUMAND" June 1980
DIR 80-11	Roberts, A., Wilkins, G.: "Proposed 1980 DUMAND Standard Array" June 1980
DIR 80-12	Roberts, A.: "Proposed Testing Program for Sea Urchin Modules." June 1980
DIR 80-13	McGibney, D., Roberts, A., Camerini, U.: "The Sea Urchin Module. I. Survey of Design Problems" 14pp

July 1980

DIR 80-14 McGibney, D., Roberts, A.: "Design of the Sea Urchin Module.
II. Spine Design" 26pp
July 1980

DIR 80-15 Roberts, A.: "PMT Requirements for DUMAND: A Preliminary
Summary"
July 1980

DIR 80-16 Roberts, A.: "Multiplication of Effective Detector Volume
for Fast Muons"
August 1980

DIR 80-17 Roberts, A.: "Lessons of the 1980 DUMAND Workshop Symposium,
and Remarks on DUMAND Meetings for the Future"
August 1980

DIR 80-18 Roberts, A.: "Recent Evolution of the DUMAND Array, and
Consequences for Sensor Design"
August 1980

DIR 80-19 McGibney, D.J.: "Results of Sea Urchin Spine Efficiency Tests"
August 20, 1980

DIR 80-20 No Report assigned to this number

DIR 80-21A Learned, J.: "Golden Tag for UHE taus in DUMAND"
September 15, 1980

DIR 80-22 Roberts, A.: "Note on Effective Area and Volume of the
Five-String"

DIR 80-23 Roberts, A., McGibney, D.: "Design of the Sea Urchin"

DIR 80-24 Roberts, A.: "Memo to Deployment Workshop"

DIR 80-25 Roberts, A., Stenger, V.J.: "Monte Carlo Array Studies.
II. Further Work on Detection of Muon Neutrinos via Recoil
Muons"

DIR 80-26 Roberts, A.: "Coincidence vs. High-Gain First Dynodes; Once
More, With Feeling"

DIR 80-27 Roberts, A.: "Preliminary Summary of Deployment Workshop"
December 1-5, 1980

DIR 80-28 Learned, J.: "Muon Rates"

DIR 80-29 Learned, J.: "Neutrino Interactions in Vicinity of Muon String
(est. total - 4/day)"

DIR 80-30

Stenger, V.J.: "The Muon String as a V Detector"