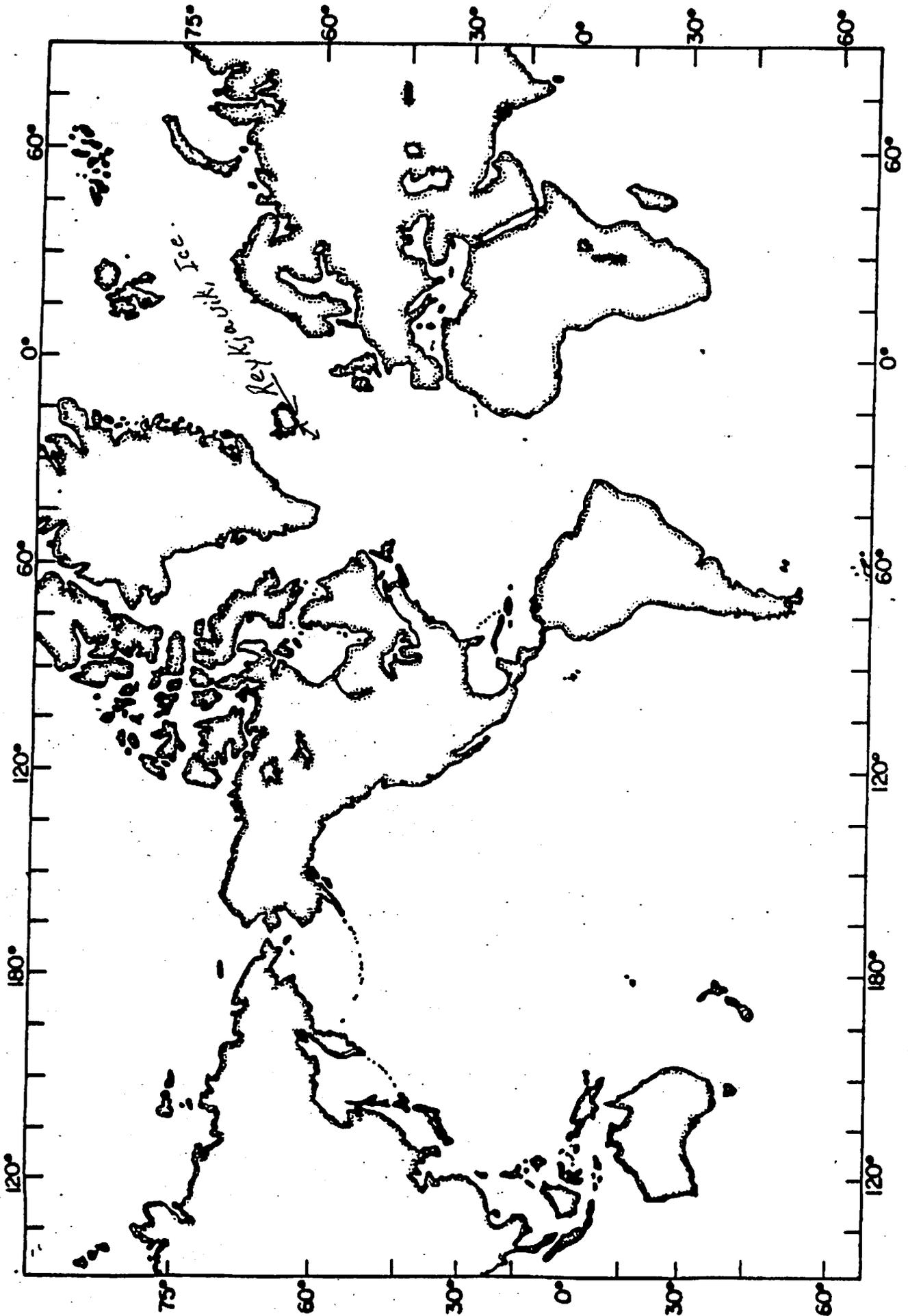


CRUISE REPORT

UNOLS 12/89

Ship Utilization Data

1. Ship Name VV MAURICE EWING		2. Operating Institution Lamont-Doherty Geological Observatory		3. Cruise (leg) Number EW 90-05	
4. Dates of Project: Begin: 7/19/90 End: 7/22/90		7. Participating Personnel:		Function on Cruise (Ch.Sci.,Obs.,Tech.,Grad. Student, Undergrad, For.Obsv.)	
Port Calls Place Date		Code Title.Name.Institution		Dates (If less than entire cruise)	
Reykjavik, Ice. 7/19/90 7/19/90		1 Mr. L. Sullivan L-DGO		Ch. Sci.	
Reykjavik, Ice. 7/22/90 7/25/90		2 Mr. J. Stennett L-DGO		Technician	
		3 Mr. P.R. Bouchard WHOI		Scientist	
		4 Mr. M. Maccio L-DGO		Scientist	
		5 Mr. D.V. Mannv USC		Scientist	
		6 Mr. Wm. Ostrom WHOI		Scientist	
		7. Mr. E. Swift URI		Scientist	
5. Number, Sea Days 6. Number, Port Days		8 Mr. R. Trask WHOI		Scientist	
4 0		9 Mr. B.S. Way WHOI		Scientist	
8a. Area of Operations, Area Index and Geographic Description		10 Ms. C.A. Womeldor WHOI		Scientist	
NA5 North Atlantic 60oN		11 Mr. I. Bitte L-DGO		Technician	
8b. Research in Foreign Waters?_NO__		12 Mr. R. Blaes L-DGO		Technician	
Country:		13 Mr. R. DePietro L-DGO		Technician	
		14 Mr. J. DiBernardo L-DGO		Technician	
		15 Mr. S. Ferguson URI		Technician	
		16 Mr. J. Greer L-DGO		Technician	
		17 Mr. M. Iltzsche L-DGO		Technician	
		18 Mr. P. Lemmond URI		Technician	
		19 Mr. R. Maiwiriwiri L-DGO		Technician	
		20 Ms. S. O'Hara L-DGO		Technician	
		21 Mr. Wm. Robinson L-DGO		Technician	
		22 Mr. D. Schmidt L-DGO		Technician	
		23 Mr. Ruben Smith L-DGO		Technician	
Use reverse of necessary					
9. Primary Project(s)					
a. Project Title,Principal Investigator,Institution		b.Sponsoring Agency/		c.Grant or Contract d.Participating Personnel ee. Discipline	
Mooring Recovery Dr. John Marra L-DGO		CNR		N00014-89-J-1679SHP CO,CO,BO	
10. Ancillary Project(s)					
a. Project Title,Principal Investigator,Institution		b.Sponsoring Agency/		c.Grant or Contract d.Participating Personnel ee. Discipline	
11. Science Party:		12. Cost Allocation Data			
Scientists_9___ Grad. Students___		a. Days Charged		b. Agency or Activity Charged c. Grant or Contract No.	
Undergrads___ Technicians_14___		4		CNR N00014-89-J-1679 SHP	
Observers___					
Foreign Observers___					
13  Michael Rawson, Marine Science Coordinator Lamont-Doherty Geological Observatory Palisades, NY 10964				Dec. 7, 1990	
Title, Signature, Operating Institution Official				Date	



Leg ME 90-05

TO: Barbee, W.D. UNOLS
Gerard, S. LDGO
✓Hayes, D. LDGO
Cox, L. LDGO
Lotti, R. LDGO
Kent, D. LDGO
Simpson, D. LDGO
Smith, J. LDGO
Takahashi, T. LDGO
Weissel, J. LDGO
Science Officer EWING
Captain EWING

Oct. 2, 1990

RESEARCH CRUISE REPORT

R/V MAURICE EWING Legs 90-05

Attached is a copy of the cruise report for the above

R/V MAURICE EWING. cruise.


Ann Burns
Marine Office

Lamont - Doherty Geological Observatory | Palisades, N.Y. 10964
of Columbia University

Cable: LAMONTGEO

Telephone: Code 914, Elmwood 9-2900

Palisades New York State

01 October 1990

TWX-710-876-2653

To: Ann Burns, Marine Office

Subj: Narrative Cruise Report Request 9/28/90

Narrative Cruise Report
R.V. Maurice Ewing Cruise No. EW-90-05

The personnel making the cruise representing ML/ML were:

1. Lawrence Sullivan	LDGO	6. Richard Trask	WHOI
2. Ivars Bitte	LDGO	7. William Ostrom	WHOI
3. Miquel Maccio	LDGO	8. Bryan Way	WHOI
4. Derek Manov	USC	9. Paul Bouchard	WHOI
5. Elijah Swift	URI	10. Carol Womeldorf	WHOI

The cruise was scheduled for a period of four to five days, with a primary goal of recovering the ML/ML pilot mooring at 59.5°N, 21°W, which was deployed in April 1989. The mooring surface buoy had parted in June, and been recovered at that time. The remainder of the 2850 meter mooring sank to the bottom. It was our mission to recover the mooring using either back-up floatation or by "dragging". A secondary project was to collect some water sample profiles and net tows at the site for one of the ML/ML P.I.'s.

The ship was loaded in Port Newark with all mooring equipment including the TSE traction winch, biological sampling and lab gear, and all mooring instrumentation and data reduction systems. All ML/ML personnel joined the ship in Reykjavik, upon its arrival at 0900 on the 19th of July. We sailed the same day at 1830 after setting up our entire operation in less than eight hours. This was a joint effort of all groups and was a good indicator of our chances for success.

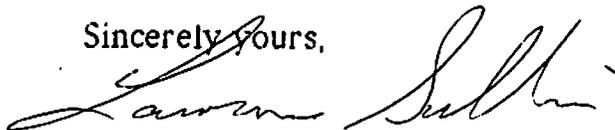
We arrived at the mooring site as defined by our September 1989 survey of the anchor position. The operation began at 0230 on 21 July with a short but very precise GPS survey, which clearly showed that the mooring was still in place, in a vertical position, with a working acoustic release. The decision to release was made based on the predicted weather for the next 36 hours and the number of hours of daylight we had to find the low mooring profile on the surface. The anchor position was determined to be 59° 31.30 N, 20° 47.13 W. The mooring was released at 0539Z on the 21 July, and we successfully tracked the ascent by ranging on the release. Some problems were encountered during this operation and the ship was repositioned to the release point one tenth of a mile from the anchor position. A cluster of ten glass balls was then seen on the surface.

The entire mooring was recovered over the next nine hours by the ML/ML mooring team led by the WHOI Buoy group and assisted by the LDGO group, and the Ewing deck officers and Captain. Numerous problems involving wire, instruments, and floatation were dealt with in a controlled professional manner. The ever present Captain Peterlin controlled his ship and minimized the problems of high tension on the mooring string during the critical periods of the recovery. The mooring was successfully on deck by 1530 with the only losses being one 17 inch glass ball. At the completion of the mooring three hydro casts were taken, including two profiles of 3-five liter niskin bottles, and one net tow. The ship returned to Reykjavik, Iceland, on 22 July 1990 at 1930Z. The MVMS systems were downloaded during the transit to port. The tapes were recovered from the destroyed optical instrument packages BOMS/BLMS, engineering instruments were checked, time marked and shut down. The temperature pods were checked and found to have survived the 2850 meter depth, they were packed and left for processing at WHOI.

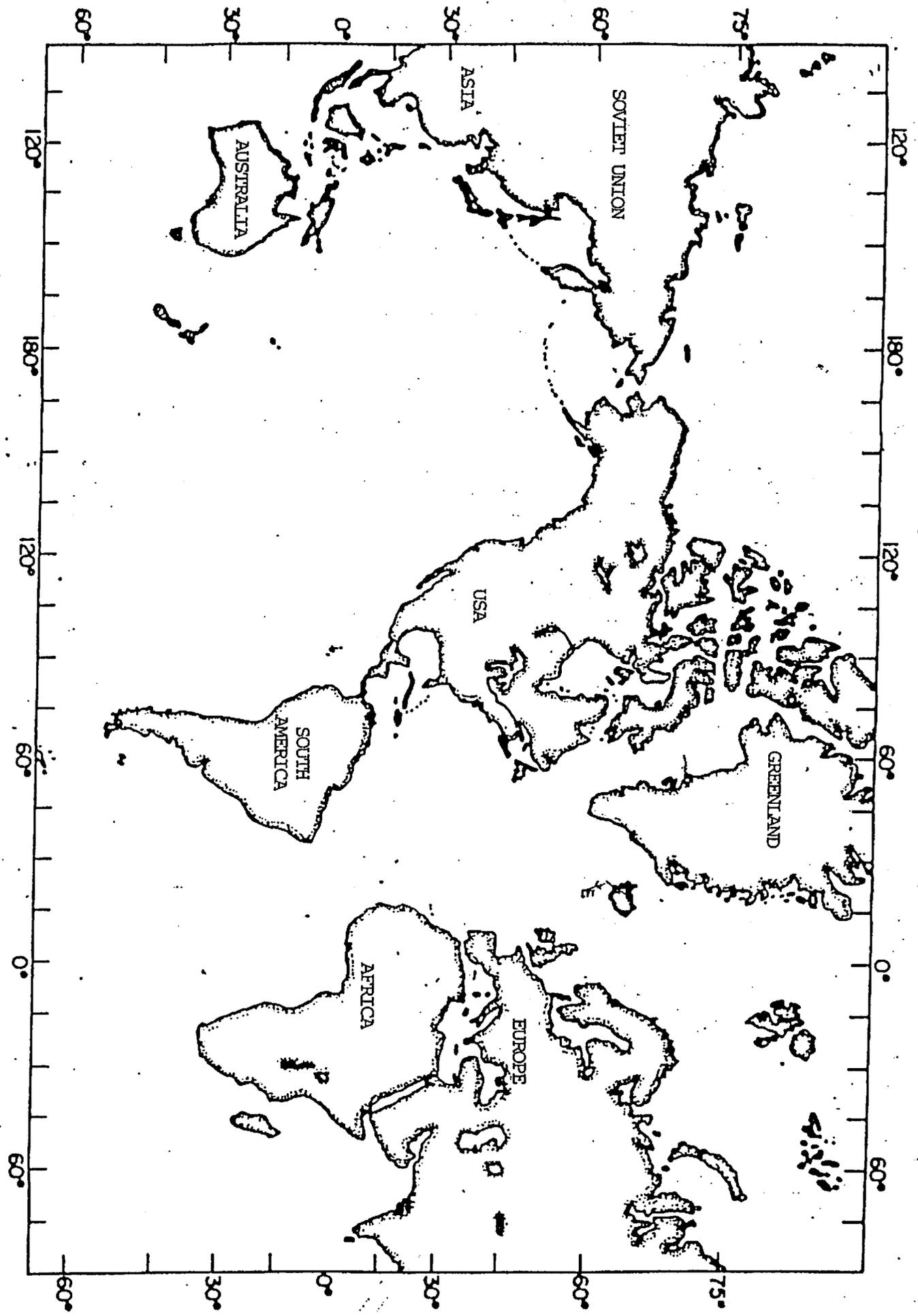
A preliminary assessment of the mooring instrumentation was made, photographs taken, and all equipment packed for transport from Reykjavik.

All mooring equipment and instrumentation was off loaded in Reykjavik, packed and loaded into three 20ft. containers and shipped back to LDGO and WHOI. Instrumentation will be transshipped to individual P.I.'s from LDGO in mid August.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Lawrence Sullivan".

Lawrence Sullivan, Chief Scientist



TRACK CHART

EW-70-05

D. Kayser
Oceanography