

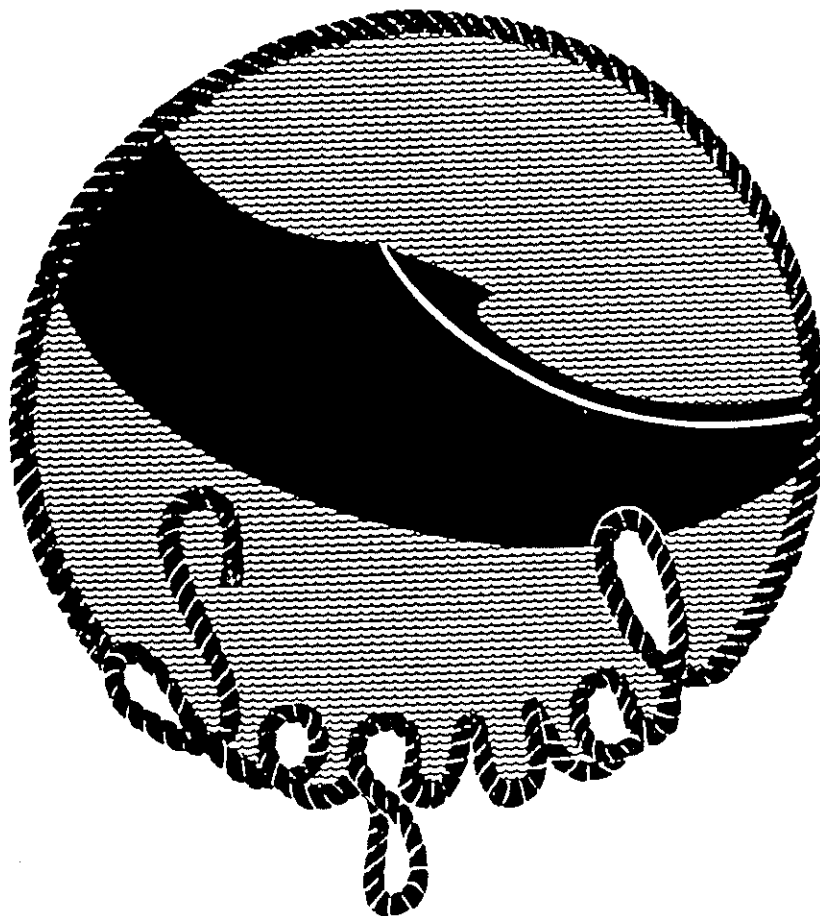
SEQUAL ONE

CRUISE REPORT

R/V CONRAD 24

LEGS 1 & 2

29 JAN - 11 MAR 1983



CRUISE REPORT: SEQUAL ONE

1. Summary

SEQUAL ONE was accomplished on the R/V CONRAD, Cruise No. 24, Legs 1 and 2.

Departed Bridgetown, Barbados	29 January 1983
Arrived Recife, Brazil	17 February
Departed Recife, Brazil	20 February
Arrived Abidjan, Ivory Coast	11 March

A combined distance of 7700 nm was logged and a total of 163 hours were spent on station (see Figure 1 for track chart).

Six surface buoyed current meter moorings were set (SA1 - SA6). Three buoys carry instruments to record wind speed and direction, air and sea surface temperature, barometric pressure and solar radiation. Two also record relative humidity (§3).

Repairs were made to a wind sensor deployed last November on St. Peter and St. Paul rocks (§4). While at the rocks, a FOCAL Aanderaa tide gauge was replaced.

Seven satellite tracked, subsurface drogued, drifters were deployed (§5).

Nine Inverted Echo Sounders were deployed and a tenth delivered to O.R.S.T.O.M. in Abidjan for later deployment (§6).

114 XBT traces to greater than 750 meters were obtained (§7 and Figure 2).

Bi-hourly wind observations were made by the ship's officers.

2. Scientific Party

Leg 1

*Dr. Eli Katz, Chief Scientist, P.I., IES	LDGO
Dr. Robert Weisberg, P.I., SA1-SA3, SA5 & SA6	NCSU
Dr. Silvia Garzoli, P.I., Wind Recorder on the Rocks; Co-P.I., IES	LDGO
Mr. Gerald Chaplin, IES Engineer	URI
Mr. Paul Blankinship, Mooring Engineer	NCSU
*Mr. Richard Nowak, Wind Recorder Engineer	WHOI
*Mr. John Blue, Current Meter Technician	URI
*Mr. Joe Woods, Mooring Technician	NCSU
*Mr. Jack Hickman, Mooring Technician	NCSU
*Mr. Tom Weingartner, Graduate Student	NCSU

Leg 2

All those asteriked above plus the following:

Dr. Philip Richardson, P.I., SA4 and Drifter Program	WHOI
Dr. Richard Payne, P.I., Mooring Wind Recorders	WHOI
Mr. Sam Simkins, Acoustic Release Technician	WHOI
Mr. Michael Mulroney, IES Technician	URI
Lt. Eduardo Carpes, Observer	Brazilian Navy

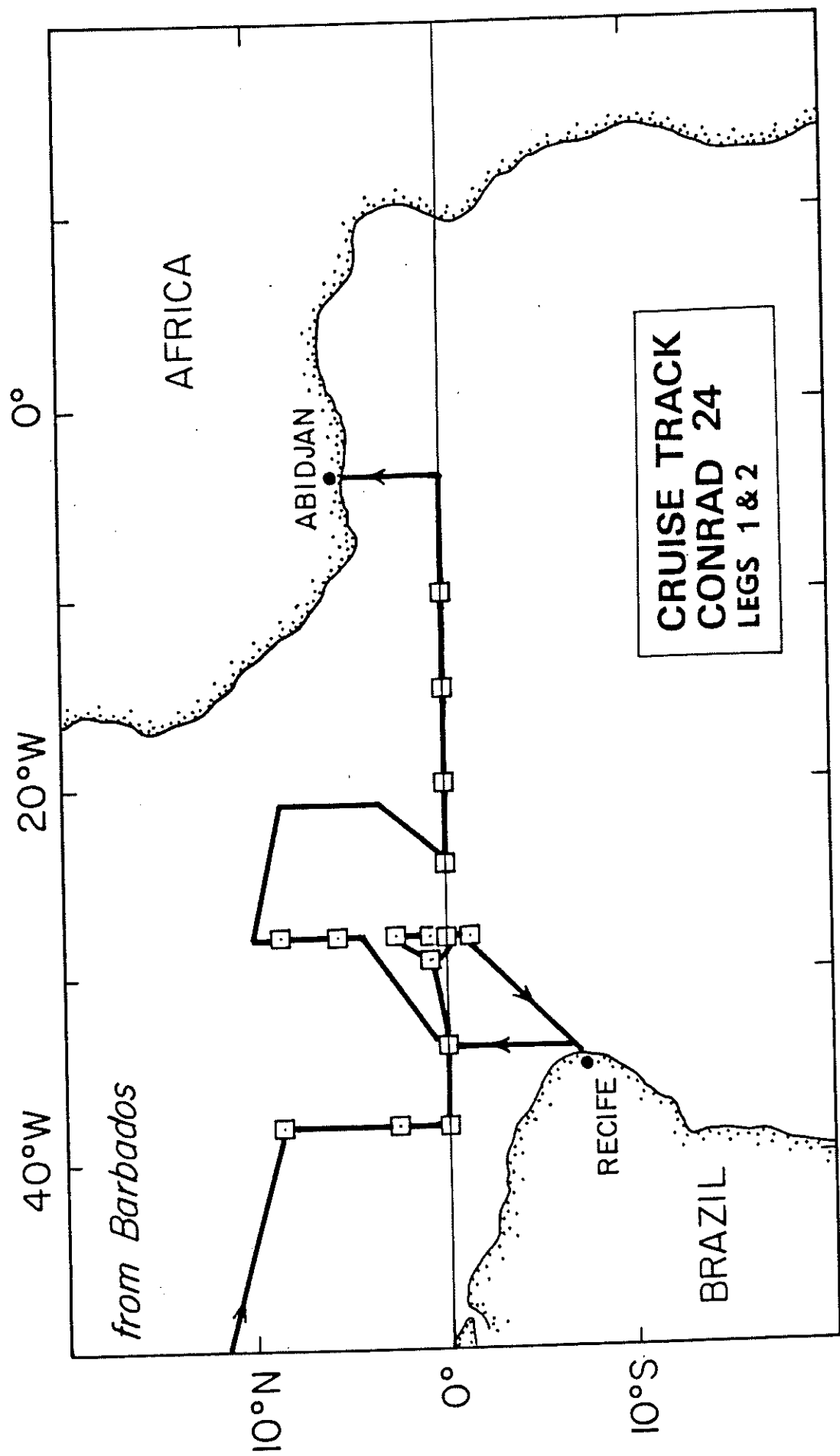


Figure 1

3. Surface Moored Current Meter Moorings

Mooring	Deployed	Depth (m)	Location		Depth of Current Meters
	Time (GMT)/Yr. Day		Lat.	Long.	
SA1	21:08/041	4066	0°44'N	28°11'W	10, 75, 100, 150
SA2	16:23/044	4123	0°00'S	28°09'W	10, 50, 75, 100, 150, 200
SA3	19:41/045	4100	0°45.5'S	28°09'W	10, 75, 100, 150
SA4	15:18/056	4371	6°06'N	27°52.5'W	20, 50, 75, 150
SA5	14:04/062	3954	0°03.5'N	23°59.5'W	10, 50, 75, 150
SA6	20:20/065	3769	0°01'S	14°56.5'W	10, 25, 50, 75, 150

Vector Averaging Wind Recorder (VAWR) on SA4 Buoy.
 Meteorological Recording Package on SA5 and SA6 Buoys.
 All buoys are being tracked by the ARGOS system.

4. Wind Recorder at St. Peter and St. Paul Rocks (SSP)

The wind station at SSP (0°55'N, 29° 20'W) first deployed in November 1982 during FOCAL I, consists of two anemometers transmitting hourly data via satellite through the GOES system.

During the cruise the system was brought on-line and the first satellite transmission was received at 18:42 GMT on Year-Day 043.

Data are being received and reduced daily at LDGO.

5. Satellite Tracked Drifters. Drogued at a depth of 20m and sending position and sea surface temperature via ARGOS system. Data are being received and reduced at WHOI.

S/N	Launched		Position	
	Time(GMT)	Yr. Day	Lat.	Long.
1552	16:20	055	4°30'N	28°00'W
53	17:03	056	6°05'N	27°52'W
56	00:44	057	7°13'N	28°00'W
55	09:31	057	8°30'N	27°58'W
51	22:55	057	10°00'N	28°01'W
50	02:42	060	7°00'N	21°00'W
54	14:45	060	5°01'N	20°59'W

6. Inverted Echo Sounders

Site	S/N	Deployed		Depth (m)	Location	
		Time(GMT)	Yr. Day		Lat.	Long.
SAL	036	12:47	035	4070	9°01'N	38°18.5'W
SOL	035	01:45	037	4539	3°03'N	38°34'W
SUE	041	00:06	038	4370	0°01'S	38°33'W
EVA	039	14:19	053	4552	0°02'N	34°02'W
QUIQUE	042	13:55	057	5253	9°03'N	28°00.5'W
QUITO	033	16:02	042	3971	2°59.5'N	28°00'W
QUIZA	040	18:08	044	4129	0°01'S	28°12'W
URI	038	22:24	063	4358	0°05'S	20°06.5'W
ANA	037	05:35	067	5190	0°02.5'N	10°05.5'W

7. Expendible Bathythermographs. Temperature profiles to depths greater than 750m.

<u>No.</u>	<u>Lat.*</u>	<u>Long.*</u>	<u>Time(GMT)</u>	<u>Yr. Day</u>
1†	9°30'	40°59'	13:40	034
2	9°13'	40°02'	19:40	
3	9°01'	38°19'	13:21	035
4	8°31'	38°20'	17:30	
5	8°01'	38°18'	20:29	
6	7°30'	38°20'	23:33	
7	6°58'	38°20'	02:41	036
8	6°30'	38°20'	05:34	
9	6°00'	38°20'	08:21	
10	5°31'	38°20'	11:05	
11	5°01'	38°21'	14:03	
12	4°32'	38°20'	17:00	
13	4°00'	38°21'	19:52	
14	3°29'	38°20'	22:40	
15	3°03'	38°34'	02:41	037
16	2°31'	38°30'	06:42	
17	2°00'	38°29'	09:33	
18	1°24'	38°26'	12:50	
19	1°00'	38°28'	15:04	
20	0°31'	38°29'	17:46	
21	0°01'S	38°33'	00:52	038
22	0°01'S	37°30'	08:07	
23	0°01'S	36°30'	14:22	
24	0°00'	35°30'	20:18	
25	0°00'	34°45'	00:57	039
26	0°01'	34°00'	06:09	
27	0°13'	33°00'	12:17	
28	0°25'	32°00'	18:33	
29	0°33'	31°01'	01:04	040
30	0°43'	30°00'	07:31	
31	0°53'	29°01'	22:03	
32	0°44'	28°02'	05:15	041
33	0°44'	28°02'	05:20	
34	0°44'	28°02'	22:50	
35	2°08'	28°06'	09:53	042

*Unless otherwise noted, latitude is north, longitude is west.
†Incomplete or no good.

<u>No.</u>	<u>Lat.</u>	<u>Long.</u>	<u>Time(GMT)</u>	<u>Yr. Day</u>
36	3°00'	28°00'	16:53	042
37	3°00'	28°00'	16:59	
38	0°05'S	28°12'	21:09	044
39	0°46'S	28°10'	19:50	045
40†				
41	1°37'S	28°50'	03:02	046
42	2°31'S	29°42'	09:42	
43	3°00'S	30°09'	13:23	
44	3°29'S	30°38'	17:00	
45	4°31'S	31°34'	00:30	047
46	5°31'S	32°27'	07:43	
47	6°31'S	33°22'	15:12	
48	7°25'S	34°14'	22:15	
49	5°00'S	34°29'	06:18	052
50	4°30'S	34°26'	09:12	
51	4°01'S	34°23'	12:07	
52	3°31'S	34°20'	15:11	
53	3°00'S	34°17'	18:10	
54	2°29'S	34°14'	21:14	
55	2°00'S	34°12'	00:11	053
56	1°31'S	34°09'	03:03	
57	1°00'S	34°06'	06:04	
58	0°30'S	34°02'	09:04	
59	0°03'	34°04'	16:44	
60	1°00'	32°52'	02:36	054
61	2°01'	31°25'	13:59	
62	2°59'	29°58'	01:16	055
63	4°01'	28°37'	11:30	
64	4°30'	28°00'	16:23	
65	5°00'	28°00'	19:29	
66	5°28'	28°01'	22:24	
67	6°06'	27°52'	17:12	056
68	6°30'	28°00'	20:07	
69	7°00'	28°06'	23:25	
70	7°30'	28°02'	02:43	057
71	8°00'	27°58'	06:22	
72†				
73	8°31'	27°59'	09:44	
74	9°02'	28°01'	16:35	
75	9°30'	28°01'	19:38	

<u>No.</u>	<u>Lat.</u>	<u>Long.</u>	<u>Time(GMT)</u>	<u>Yr. Day</u>
76	10°00'	28°00'	23:02	057
77	9°46'	25°59'	11:13	058
78	9°29'	23°59'	22:23	
79	9°08'	22°00'	09:36	
80	8°59'	21°00'	15:13	
81	8°30'	21°01'	17:45	059
82	8°00'	21°01'	20:29	
83	7°27'	21°01'	23:27	
84	7°02'	21°00'	02:26	060
85	6°30'	21°01'	05:46	
86	6°00'	21°00'	08:46	
87	5°39'	20°59'	10:51	
88	5°05'	20°59'	14:12	
89	4°30'	21°00'	17:58	
90†				
91	3°59'	21°00'	21:04	
92	3°30'	20°59'	23:53	
93	3°00'	21°05'	02:54	061
94	0°02'	24°00'	15:39	062
95	0°04'S	23°01'	23:14	
96	0°01'	22°00'	05:55	063
97	0°01'	21°00'	12:26	
98	0°05'S	20°09'	01:24	064
99	0°01'	18°58'	09:53	
100	0°01'	17°59'	16:35	
101	0°01'S	17°00'	23:10	
102	0°01'	16°00'	05:30	065
103	0°00'	14°57'	22:11	
104	0°02'	14°00'	04:03	066
105	0°01'	13°00'	09:52	
106	0°02'	12°00'	15:49	
107	0°00'	11°00'	21:43	
108	0°02'	10°05'	07:12	067
109	0°00'	9°00'	14:07	
110	0°01'	8°01'	20:20	
111	0°02'	7°00'	02:35	068
112	0°00'	5°59'	08:43	
113	0°00'	5°01'	14:33	
114	0°01'S	3°59'	21:20	
115	1°00'	4°00'	02:48	069
116	2°02'	3°59'	09:39	
117	3°00'	3°59'	16:50	
118	4°00'	3°58'	00:55	070

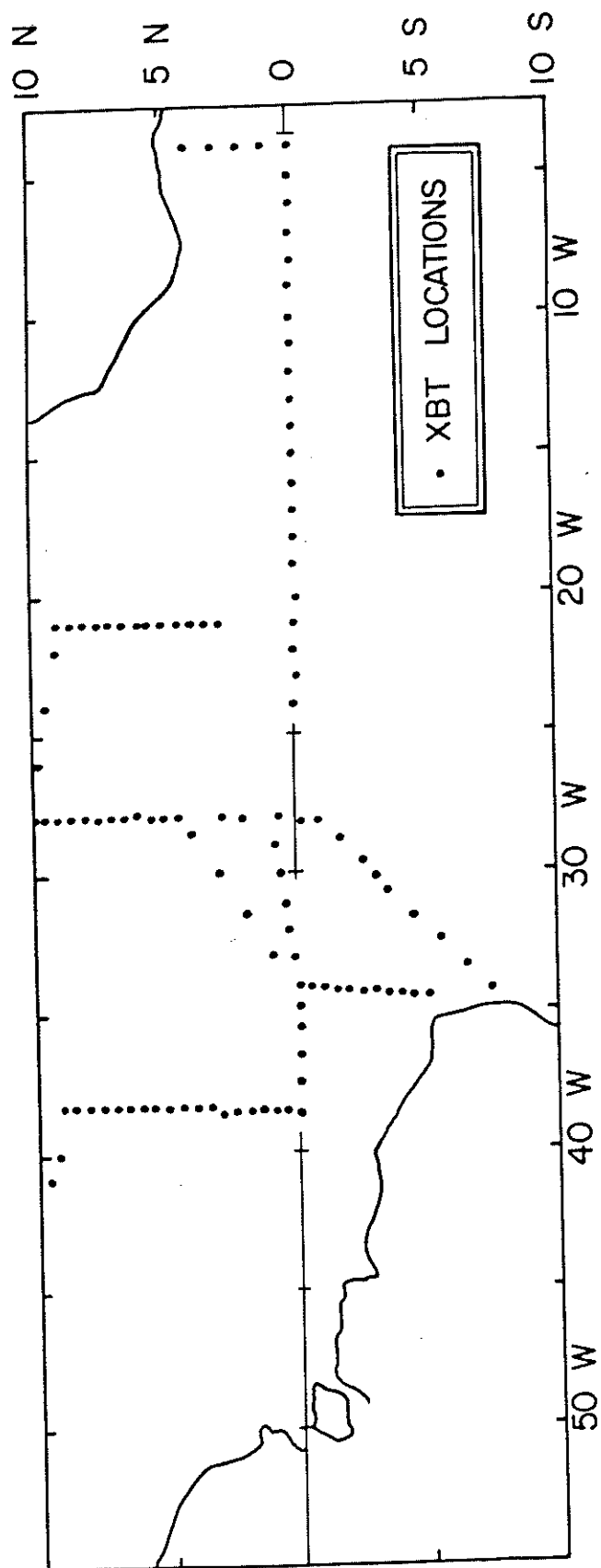
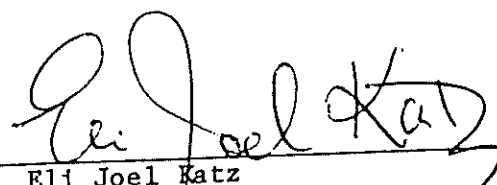


Figure 2

Miscellaneous

1. Communications: Extensive use was made of the newly installed Marisat communication link which proved invaluable for nearly instantaneous on-site evaluation of satellite communicating links before leaving the area. This value was enhanced by the fact that we operated part of the time outside the ATS range.
2. Cooperation by other UNOLS ships: Valuable assistance was received by coincidences in ship scheduling. The R/V OCEANUS brought gear from Woods Hole to Recife for the second leg. The R/V KNORR, in Recife at the same time as the R/V CONRAD, took much equipment back to Woods Hole after the first leg.



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