ENDEAVOR 311:

[NOTE: Cruise report not available]
PRIMER V ITINERARY: EN311
DECEMBER 1--6, 1997
CHIEF SCIENTIST: Scott Worrilow

XBT Plan:

After leaving Newport the ship will steam to the "Onshore Shelfbreak Endpoint". Upon reaching this point, commence dropping XBTs every 2mi until the "Offshore Shelfbreak Endpoint". We'll be using a Sippican system (with hand-held launcher) that is borrowed from the OCEANUS. The backup system is the ENDEAVOR's Bathysystems unit. There are three cases of new T-7s (36 probes) which should be plenty. The ship should be able to steam at full speed, but if there are problems with wire breakage, shorts, etc. try reducing speed. If a probe does fail, launch another one as quickly as possible.

The XBT survey will begin 6-8 hours after leaving port. Greg, Shelley, and Avon should do the survey since they all have experience from past cruises. After the survey data will be transfered from the XBT computer to Dan's workstation (zircon) and the processing programs run, which produces a hard copy plot of the profile (no hurry on this).

Upon completion of the XBT line, the mooring work will begin.

	Latitude	Longitude
Onshore Shelfbreak Endpoint:	40 32.8 N	70 23.7 W
Offshore Shelfbreak Endpoint:	39 50.9 N	69 53.4 W

Mooring Plan:

There are three tall moorings that need to be recovered. They are located seaward of the Offshore Shelfbreak Endpoint. At the same time, 6--8 deep CTD stations are to be occupied in the same vicinity. It is up to Scott to determine the sequence of work. Obviously the moorings have top priority. Note that the outer two moorings are also Deep CTD sites. All things being equal it would be advantageous to occupy the CTD prior to recovering the mooring, but this is Scott's call.

	Latitude	Longitude	Approx. Depth
Mooring #989	39 49.13 N	69 52.11 W	1000m
Mooring #988	39 36.97 N	69 43.55 W	2230m
Mooring #987	39 5.19 N	69 21.38 W	3000m

Deep CTD Plan:

A minimum of 6 Deep CTD stations should be done. If time permits it would be helpful to do two more (the two offshore-most ones), but this is lowest priority and is up to Scott.

Deep CTD Stations:

Latitude	Longitude	~Depth	Comment
39 52.0 N	69 54.1 W	970m	
39 47.0 N	69 50.7 W	1590m	
39 36.9 N	69 43.5 W	2230m	Tall mooring site (stay 1/4 mi downwind)
39 21.2 N	69 32.2 W	2510m	
39 5.2 N	69 21.4 W	3000m	Tall mooring site (stay 1/4 mi downwind)
38 49.5 N	69 10.3 W	3260m	Also near Toole's M&M mooring
38 33.2 N	68 59.1 W	3490m	Time permitting
38 18.2 N	68 49.1 W	3848m	Time permitting

We'll be using the WHOI 24-position 3.3L small frame with CTD #1088 and a lowered ADCP. Our backup is a Seabird system with a 12-position frame. Below is a table of water sample pressures versus station depth that should used as a guide. (Note: the actual deepest pressure will differ slightly from what is listed, depending on how close the station is to the target depth. Just make sure to take the first sample at the bottom of the cast.) All deep stations are to be taken to ~15m off the bottom. Jan will be running salts.

There are three CTD watches:

0400--1200: Terry McKee, Frank Bahr, Brian Arbic

1200--2000: Shelley Ugstad, Avon Russell

2000--0400: Jan Szelag, Greg Packard

Frank will be in charge of the lowered ADCP for all casts (note there are three people on his watch to ease his watchstanding responsibilities). CFCs will be collected at all stations by Eugene Gorman (who will not stand a CTD watch).

The CTD work will be fit in around the mooring work, so the stations won't come one right after another (which also makes the CFC work a little easier). During the mooring operations the CTD watchstanders need to be available to help Scott on deck as he sees fit.

Shelfbreak CTD Plan:

As the last component of the cruise, the XBT line will be re-occupied with CTDs, using the shallow CTD package. This package consists of CTD #1295 in a small cage with a pinger. Each of the shallow stations are to be taken to ~5m off the bottom (Jan needs to set up the PDR and oversee this). The survey should take roughly 12-14 hours. The first station should be at the "Offshore Shelfbreak Endpoint", and stations should be spaced every 2mi until the "Onshore Shelfbreak Endpoint". This will be approximately 25 stations.

EN310 Water Sample Pressures:

3848m	3490m	3260m	3000m	2510m	2230m	1590m	970m
bottom	bottom	bottom	bottom	bottom	bottom	bottom	bottom
3650	3300	3200	2850	2400	2100	1500	900
3450	3200	3000	2750	2300	2000	1400	800
3350	3100	2850	2650	2200	1900	1300	700
3200	3050	2650	2500	2100	1750	1200	600
3000	2850	2450	2350	2000	1600	1100	500
2800	2550	2250	2200	1900	1500	1000	400

2650	2350	2050	2050	1800	1200	900
300						
2500	2150	1900	1900	1700	1000	800
200						
2300	2000	1750	1750	1600	800	700
100						
2100	1850	1550	1600	1500	700	600
5						
1900	1700	1450	1450	1400	600	500
1700	1550	1350	1300	1300	500	400
1550	1350	1250	1200	1200	400	300
1400	1250	1150	1100	1100	300	200
1220	1150	1050	1000	1000	200	100
1100	1000	900	900	900	100	5
950	850	750	700	800	5	
800	700	600	550	700		
600	500	500	300	600		
400	400	400	250	450		
200	300	200	100	300		
100	150	100	50	150		
5	5	5	5	5		