#105132 ASTR 83-03 83003nav

ASTERIAS 83003

Penobscot Bay

June 9-19, 1983

J.Knebel, K.Scanlon

NAVIGATION LOG

(June 11-17, 1983)

U.S.G.S.
INTEGRATED NAVIGATION SYSTEM
AND
NORTHSTAR LORAN-C NAVIGATION LOG

SHIP ASTERIAS

CRUISE NO. AST-83-03

DATE 6-11-83

CHIEF SCIENTIST KNEBEL / SCANLON

1 Asterias 83-03 Penobscot Bay

YR	MO	DAY	TIME	LINE #	SHIPS (magnetic) COURSE	SPD	FIX TIME	LATITUDE ± DEGREES ± MINUTES	LONGITUDE ± DEGREES ± MINUTES	LORAN TYPE	QUAL	
83	06	11	0705									1
			0756	1	085			44 11.36	69 03.22			2
			0811									3
			0839	2				44 11.87	68 59.94			4
			0857									5
			0905					Station 1	Station 3			6
								TIME DELAYS				7
			0922	3				12616.1	25919.8			8
			0027	4	007			12567.5	25919.7			9
			1051		062			12556.9	25928.8			10
			1117		000			12537.1	25930.1			11
			1152	5	085			12526.1	25943.9			12
			1209 3 SE					12514.4	25941.3			13
			1212		80			12512.4	25940.9			14
			1223					12504.8	25940.1			15
			1225									16
			1232	6	010			12498.4	25939.3			17
			1320	7	242			12479.1	25954.8			18
			1428	7A	015			12524.0	25953.3			19
			1453	8	107			12514.0	25961.6			20
			1505									21
			1552	8	107			12482.1	25942.3			22
			1632	9	325			12465.3	25934.3			23
			1659	10	210			12468.0	25945.7			24
			1711					~~12480.4~~	~~25942.0~~			25
			1721					12480.4	25942.0			26
			1741	11	125			12491.7	25936.9			27
			1812	12	188			12480.6	25924.1			28
			1831		250			12488.0	25918.3			29
			1932	13	127			12526.4	25919.9			30

TAPE #	START	END	COMMENTS AND OBSERVATIONS (PAGE 1)
		✓	Depart Willey's Wharf, Camden, ME
1	✓		Begin Line 1
			Tape Servo changed to Channel 4 on tape
			End Line 1 / begin Line 2 LORAN Locations (TD's) about 2 miles off from radar & buoys
			subtracted 10 μsec from LORAN 25 TD - running N'Star on manual
			subtracted 10 μsec from 12 TD lines / TD's (25 & 12 lines) now plot very close to Dick's radar & ranging
			SNR's for 12 & 25 both in 8 & 900's
			End Line 2 / Begin Line 3
			End Line 3 / Begin Line 4 at Bell R2 off Grindel Pt.
			A/C to 062 still Line 4 at L9
			A/C to 000 still Line 4
			End Line 4 / Begin Line 5 A/C to 085°
			Passing close by II buoy
			A/C to 080°
			maneuvering to avoid lobster pots
			back on course 080°
			End Line 5 / Begin Line 6 A/C to 010° TD agree v. well w/ 2 "dist. off" fixes
			End Line 6 / Begin Line 7 A/C to 242° Searsport Bell 5
			End Line 7 / Begin Line 7A A/C to 015°
			End Line 7A / Begin Line 8 A/C to 107°
			maneuvering to avoid lobster pots (back on course in 1 or 2 min)
			Abeam of buoy Group #1 [South of Sears Island] on Line #8
			End Line 8 / Begin Line 9 A/C to 325°
			End Line 9 / Begin Line 10 A/C to 210° turn at Num 4 off Spring Hd.
			EPC recorder malfunctioning - cleaned belt, seems to be O.K.
			A/C to 202°
			End Line 10 / Begin Line 11 A/C to 125°
			End Line 11 / Begin Line 12 A/C to 188° at Dice Head Light
			A/C to 250° Continue Line 12 → changed to 4100 EPC recorder the 3200 was malfunctioning again
			End Line 12 Begin Line 13 A/C to 127°

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LORANC Time Delays

YR	MO	DAY	TIME	LINE #	SHIPS COURSE	SHIPS SPD	FIX TIME	NAVIGATION Station 1 ~~LATITUDE~~ ± DEGREES ± MINUTES	NAVIGATION Station 3 ~~LONGITUDE~~ ± DEGREES ± MINUTES	TYPE	QUAL.
83	06	11	1933	13	127			.	.		
			2010					12513.5	25907.1		
								.	.		
								.	.		
83	06	12	0647					.	.		
			0734	14067				12524.0	25915.7	Bad	
			0810	15287				12534.1	25895.0	Good	
			0847	16175				12552.4	25907.6		
			0903					.	.		
			0942	17273				12567.4	25886.4		
			1028	18158				12594.7	25896.0		
			1118	19272				12597.0	25876.6		
			1218	19				12633.8	25888.9		
			1318	20140				12667.9	25901.4		
			1432	21035				12653.3	25868.5		
			1442	21				.	.		
			1446	21				.	.		
			1449	21				.	.		
			1452	21				.	.		
			1501	22320				12635.1	25873.6		
			1634					12643.4	25908.4		
								.	.		
								.	.		
83	06	13	0630					.	.		
			0724					.	.		
			0727	23225				12643.7	25868.9		
			0731		255			12689.1	25872.3		
			0818	24125				.	.		
			0952	25265				12663.5	25844.0		
								.	.		

TAPE #	START	END	COMMENTS AND OBSERVATIONS	
2	✓		End Tape 1 / Begin Tape 2	
			End of Line 13 Hauling in gear for the day	
			Underway from Buck Harbor	
			Begin Line 14 on course 067°	subtracted 10 m sec from 12 & 25 running N'star on manual
			End Line 14 / Begin Line 15 A/C to 287°	25 locked in now, 12 on "cycle"
			End Line 15 / Begin Line 16 A/C to 175°	LORAN TD's & "dist. off" match perfectly!
			Shut of recorder for 30 sec to reload bugs on belt	
			End Line 16 / Begin Line 17 A/C to 273°	
			End Line 17 / Begin Line 18 A/C to 158°	Changing belt on EPC recorder
			End Line 18 / Begin Line 19 A/C to 272°	
			Abeam of buoy #8, Line 19	
			End Line 19 / Begin Line 20 A/C 140° M	seas getting rougher — 2 foot swells. rolling a bit. Heading toward more inland waters.
			End Line 20 / Begin Line 21 A/C to 035°	
			Maneuvering to avoid lobster pots	
			Back on course after maneuver.	
			Maneuvering to avoid lobster pots	
			Back on course after maneuver	
			End Line 21 / Begin Line 22 A/C to 320°	in the trough, rolling
2	✓		End Line 22 End of Day	
3	✓		Underway from Camden Harbor — Enroute to first turning point	
			Gear in the water	
			Begin Line 23 running Northstar on manual °/c 255°	
			A/C to 255° fair weather - slight swells causing slight roll (<10°)	
			A/C to 125° End Line 23 / Begin Line 24	
			BEGIN LINE 25	

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YR	MO	DAY	TIME	LINE #	SHIPS COURSE	SHIPS SPD	FIX TIME	NAVIGATION ~~LATITUDE~~ Station 1 ± DEGREES ± MINUTES	NAVIGATION ~~LONGITUDE~~ Station 3 ± DEGREES ± MINUTES	LORAN TYPE	LORAN QUAL.	
83	06	13	0957	25				.	.			1
			1004					.	.			2
			1009					.	.			3
			1020					12682.6	25849.5			4
			1050					12703.6	25857.5			5
			1108					.	.			6
			1200	26	000			12675.4	25872.1			7
			1214		345			12668.7	25876.1			8
			1238	26	022			12667.5	25886.9			9
			1340					.	.			10
		~	1415					.	.			11
			1500	26	055			12603.4	25919.8			12
			1517					.	.			13
			1600	26	055			12569.5	25924.6			14
			1624		030			12557.5	25925.8			15
			1751		072			12515.8	25941.7			16
			1831	27	165			12487.5	25940.2			17
			1913	27				12490.4	25923.1			18
								.	.			19
								.	.			20
83	06	14	0630	—				.	.			21
			0707	27				.	.			22
			0710					12491.1	25922.3			23
			0715					.	.			24
			0721					12497.1	25918.7			25
								.	.			26
								.	.			27
								.	.			28
								.	.			29
								.	.			30

TAPE #	START	END	COMMENTS AND OBSERVATIONS
3			Maneuvering to avoid lobster pots
			Back on course by now
			Maneuvering to avoid lobster pots – lots of 'em
			Done maneuvering
↓3			End Line 25 – shutdown Uniboom – going to try side scan (Tape turned off and left off until 1517)
No Tape			Side scan fish is in the water – playing w/ Edo recorder & winch
			On line 26 – running Uniboom, testing Sidescan
			A/C to 345, still on Line 26
			A/C to 022°M – Still on Line 26
			Uniboom down for a minute to test sidescan
			" " " couple minutes " " Saving side scan records now
			A/C to 055°M – Still on Line 26
↓3			Tape on to record Uniboom (off by accident since 1050)
			All's well. Still on Line 26. Recording Uniboom & Sidescan
			A/C to 030°m – Still on Line 26
			A/C to 072°m – still on Line 26
			End Line 26 / Begin Line 27 A/C to 165° running Uniboom & SS
3		✓	End of Day – continue Line 27 tomorrow
			Underway to resume Line 27
4	✓		All gear in operation, begin Tape 4 Start new Nav cassette (#2)
			On Line 27 (continued)
			Silent 700 not recording on cassette – Greg replacing cassette
			Begin Cassette #2 in Silent 700 – no data on orig. cassette #2
			↳ but we have printout for
			those 15 minutes

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YR	MO	DAY	EDT TIME	LINE #	SHIPS magnetic COURSE	SPD	FIX TIME	LORAN C Time Delays NAVIGATION Station1 ~~LATITUDE~~ ± DEGREES ± MINUTES	Station3 ~~LONGITUDE~~ ± DEGREES ± MINUTES	TYPE	QUAL.	
83	06	14	0730	27	197			12502.4	25915.8			1
			0745		235			12511.1	25911.4			2
			0809		214			12528.5	25910.4			3
			0917		230			12567.9	25895.7			4
			0920					.	.			5
			0949		213			12589.4	25892.7			6
			1053		233			12623.6	25879.5			7
			1205					12666.1	25873.6			8
			1245	28	155			12708.6	25849.8			9
			1454	28A	110			12707.2	25802.0			10
			1525	29	335			12692.2	25794.4			11
			1723					12692.2	25847.0			12
								.	.			13
								.	.			14
								.	.			15
								.	.			16
								.	.			17
								.	.			18
								.	.			19
								.	.			20
								.	.			21
								.	.			22
								.	.			23
								.	.			24
								.	.			25
								.	.			26
								.	.			27
								.	.			28
								.	.			29
								.	.			30

TAPE #	START	END	EDT	COMMENTS AND OBSERVATIONS
4			0730	All systems operating smoothly. Fair weather
			0745	A/C to 235°M Still on Line 27
			0809	A/C to 214°M still on Line 27
			0917	A/C to 230°M still on Line 27 Paper change on Uniboom recorder
			0920	Begin Roll 3 on Uniboom EPC
			0949	A/C to 213°M Still on Line 27
			1053	A/C to 233°M Still on Line 27
			1205	End Line 27 pulling in gear, will steam to next line
			1245	Begin Line 28 - Uniboom only, will try SS on other side of ridge.
			1454	End Line 28 / Begin Line 28A no SS - too foggy to see pots.
			1525	End Line 28A / Begin Line 29
			1723	End Line 29 End of Day

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YR	MO	DAY	EDT TIME	LINE #	SHIPS COURSE	SPD	FIX TIME	Time delays NAVIGATION Station 1 ~~LATITUDE~~ ± DEGREES ± MINUTES	Station 2 ~~LONGITUDE~~ ± DEGREES ± MINUTES	TYPE	QUAL.	
83	06	15	0615					12635.7	25921.8			1
			~~0630~~					.	.			2
			0630					.	.			3
			0800					.	.			4
			0810					.	.			5
			0820	30	085			12528.4	25889.4			6
			0915					.	.			7
			0924					.	.			8
			0933	31	258			12534.9	25855.2			9
			0944					.	.			10
			1021	032	148			12564.7	25859.4			11
			1119	33	249			12558.1	25836.3			12
			1207	34	120			12591.8	25837.1			13
			1328	35	220			12570.2	25817.3			14
			1330	7				.	.			15
1418 on N'star ←			1427	36				12600.0	25808.6			16
			1429					.	.			17
			1448					.	.			18
			1455					12591.7	25817.2			19
			1600					12572.4	25835.8			20
			1614	36	220			12567.5	25840.3			21
			1719					.	.			22
			1720					.	.			23
			1757					12527.5	25864.7			24
								.	.			25
								.	.			26
								.	.			27
								.	.			28
								.	.			29
								.	.			30

TAPE #	START	END	COMMENTS AND OBSERVATIONS
			0615 At the dock - using different Northstar unit today - master signal coming in strong on this set. Running on automatic.
			0630 Under way - leaving Camden harbor
			0800 On station - deploying gear
			0810 Standing by for tape drive repair (lat & long. now being calculated on two best stations)
			0820 Begin Line 30 - No tape. (25000 TD lines are now station 2 (were station 3))
			0915 Looking like the tape drive may not be revived
			0924 Greg discovered yet another fuse in tape drive - a dead one!
			0933 EOL 30 / BOL 31 A/C to 258°
5	✓		0944 Begin Tape 5 - Greg fixed tape drive
			1021 End Line 31 / Begin Line 32 A/C to 148° New belt
			1119 End Line 32 / Begin Line 33 A/C to 249°
			1207 End Line 33 / Begin Line 34 A/C to 120° (into the wind - slowing us down)
			1329 End Line 34 / Begin Line 35
			1330 Reset time on Northstar - off by ~30 sec (had to subtract 30 sec. from N'star time)
			1427 EOL 35 / BOL 36 Northstar clock acting screwy (Greg reset time again)
			1429 slow down to deploy side scan
			1448 Silent 700 is refusing to print
			1455 Silent 700 back up
			1600 All systems well
			1614 A/C to 220° Still on Line 36
			1719 Twig notices missing lug on EPC (uniboom) recorder - change belt (paper feed may not be constant during the past hour)
			1720 EPC up again
			1757 End Line 36 End of Day

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YR	MO	DAY	TIME	LINE #	SHIPS COURSE	SHIPS SPD	NAVIGATION FIX TIME	LATITUDE ± DEGREES ± MINUTES	LONGITUDE ± DEGREES ± MINUTES	TYPE	QUAL.	
83	06	16	0700					.	.			1
			0752					.	.			2
			0800					12488.3	25920.4			3
			0814	37018				12486.0	25924.8			4
			0830	38230				12452.1	25943.7			5
			0942		225			12460.6	25943.2			6
			0950					.	.			7
			1012	39286				12480.1	25938.3			8
			1049	40200				12501.8	25950.4			9
			1152					.	.			10
			1200					12531.9	25933.4			11
								.	.			12
			1255	41200				.	.			13
			1340					.	.			14
								.	.			15
								.	.			16
								.	.			17
								.	.			18
								.	.			19
								.	.			20
			1343					.	.			21
			1520					12665.9	25873.6			22
								.	.			23
								.	.			24
								.	.			25
								.	.			26
								.	.			27
								.	.			28
								.	.			29
								.	.			30

TAPE #	START	END	COMMENTS AND OBSERVATIONS
			Underway to begin survey — LORAN having trouble locking on to stations - v. low signal
			0752 LORAN strong now. Greg found nothing wrong. Master must have been down
6	✓		0800 Uniboom & Side scan in the water
			0814 Begin Line 37 A/C to 018°
			0930 End Line 37 / Begin Line 38 A/C to 230°
			0942 A/C to 225° still Line 38
			0950 Having trouble staying on course
			1012 End Line 38 / Begin Line 39 A/C to 286
			1049 End Line 39 / Begin Line 40 A/C to 200°
			1152 EDO sidescan recorder screwing up - Greg working on it
			1200 End Line 40 - haul in gear
			steam to next line
			1255 Begin Line 41 - Uniboom & sidescan
			1340 Changed belt on EPC (Uniboom) twice in last 45 min.
			got it right now. LORAN Master is occasionally
			fading out. but OK most of the time. Silent 700 is not recording times
			properly - I am annotating the printout by hand at
			intervals. Edo sidescan recorder is losing the
			starboard channel. Greg has turned it off to work
			on it.
			1343 Sidescan recorder working again
			1520 End Line 41
			haul in gear, head for Camden
			1615 arrive in Camden

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YR	MO	DAY	TIME	LINE #	SHIPS COURSE	SHIPS SPD	NAVIGATION FIX TIME	LATITUDE ± DEGREES ± MINUTES	LONGITUDE ± DEGREES ± MINUTES	TYPE	QUAL.	
83	06	17	0630									1
			0800									2
												3
			0920					12656.3	25835.1			4
												5
			0941									6
			0943	42288								7
			0038	43203				12713.3	25855.3			8
			1059	44132				12723.9	25848.8			9
			1122	45108				12718.0	25839.7			10
			1400	8	~~0000~~							11
			1506	46000				12620.7	25782.0			12
			1607					12600.0	25807.8			13
			1612									14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27
												28
												29
												30

TAPE #	START	END	COMMENTS AND OBSERVATIONS	PAGE 7
			Underway out of Camden - LORAN not locking on	
			0800 - Hanging out near Numbury west of Thoroughfare Channel	
			Waiting for LORAN to straighten out &/or fog to lift	
			0920 - Still standing by - LORAN is locked on now, but it	
			loses a station now & then. Visibility ~.1 mi.	
			0941 - Bear in the water, begin ~~sidescan~~ Airboom, Visibility still bad.	
7	✓		0943 - Begin Line 42 - lots of lobster pots to dodge.	
			1038 - End Line 42/Begin Line 43 A/C to 203°M	GPS
			1059 - End Line 43/Begin Line 44 A/C to 132°M	
			1122 - End Line 44/Begin Line 45 A/C to 108°M	
			1400 - All's well still on Line 45 - only a few rests of pots now	
			1506 - End Line 45/Begin Line 46 - A/C to 000° foggy again	
			1607 - End Line 46 End of Survey	
			1612 - Underway for Camden	