NAVIGATION LOG

85022NAV

ASTR 85-10

KNEBEL / CIRCÉ

10420

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

SHIP Asterias

CRUISE NO. 85-10

DATE July, 1985

CHIEF SCIENTIST Knebel/Circé

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YR	MO	DAY	TIME	LINE #	SHIPS COURSE	SHIPS SPD	FIX TIME	NAVIGATION X LATITUDE ± DEGREES ± MINUTES	NAVIGATION Y LONGITUDE ± DEGREES ± MINUTES	TYPE	QUAL.
85	07	09	0710					.	.		
			0720					.	.		
			0936	1				27157.8	42653.2		
			1123	1A				27139.7	42714.0		
			1139.55	1B				27134.8	42713.7		
			1236	2				27143.8	42770.1		
			1505	2				27167.6	42690.3		
			1508	2				27167.7	42688.9		
			1616	2				27178.2	42648.1		
			1705	3				27214.6	42705.2		
			1820	3				27170.1	42662.8		
								.	.		
85	07	10	0658	4				.	.		
			0747	4				27191.2	42677.5		
			0830	4				27183.1	42703.8		
			0917	4				27177.8	42728.0		
			0929	4				27175.4	42729.2		
			1220	4				27143.5	42839.9		
			1221	5				27142.8	42839.6		
			1332	5				27145.7	42796.1		
			1350	5				27144.0	42784.5		
			1635					.	.		
								.	.		
85	07	11	0715	6				.	.		
			0802	6				27205.6	42692.1		
			1010	6				27188.7	42752.9		
			1025	6			Not given →	27172.	42761.1		
			1139	6				27157.0	42814.7		
			1202	6				27160.3	42823.5		
			1234	6				27159.7	42855.0		

TAPE #	START	END	COMMENTS AND OBSERVATIONS	PAGE 1
			Underway from Lewes, DE, Univ. Del. Marine Science Facility	
			Testing gear	
			BOL #1	
			EOL #1 / BOL #1A	
			EOL #1A / BOL #1B	
			EOL #1B / BOL #2	
			Maneuver to avoid anchored tanker	
			Complete maneuver	
			EOL LINE #2	
			BOL LINE #3	
			EOL LINE #3	
			Underway from Univ. Delaware Marine Sci Facility Lewes, DE	
			BOL #4	
			Abeam of buoy R-28 ≈ 200 yds away	
			Abeam of buoy WR-11 = 200-300 yds away	
			Abeam of buoy R-10 = 1/2 - 1/4 mile away	
			EOL #4 / BOL #5	
			O/C for Line #5	
			C/C CONTINUE LINE #5	
			End Line #5 due to weather	
			Return to port Lewes DE	
			Underway from Univ Del Marine Sci Facility, Lewes, DE	
			BOL #6	
			Increase speed to 4.5 kts	
			Abeam of Brandywine Shoal Light	
			C/C to avoid shoal continue Line #6	
			C/C to avoid shoal continue Line #6	
			EOL #6	

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DELAY TIMES

YR	MO	DAY	TIME	LINE #	SHIPS COURSE	SHIPS SPD	FIX TIME	X NAVIGATION LATITUDE ± DEGREES ± MINUTES	Y NAVIGATION LONGITUDE ± DEGREES ± MINUTES	TYPE	QUAL.
85	07	11	1317	7				27176.3	42869.9		
			1347	7				27181.2	42852.2		
			1348	7				27181.0	42850.7		
			1440	7				27180.[illegible]	42850.9		
			1542	7				27202.4	42777.1		
			1637	7				27213.6	42736.6		
			1645	7				27215.0	42730.5		
~~85~~	~~07~~	~~12~~						.	.		
85	07	12	0702					27236.6	.		
			0848	8				~~27[illegible]~~ .	42726.4		
			0948	8				27224.7	42771.7		
			1035 2/3	8				27222.4	42779.8		
			1247	8				27195.5	42882.3		
			1~~3[illegible]~~	~~7~~				.	.		
			1319	9				27242.1	42873.3		
			1329	9				27212.8	42869.8		
								.	.		
			1508	10				27237.4	42802.1		
			1510	10				27237.6	42801.1		
			1607	10				27245.2	42765.7		
								.	.		
85	07	13	0650					.	.		
			0937	14				27246.2	42877.0		
			0951					27249.3	42864.8		
			1031					27259.7	42828.5		
			1042					27261.6	42818.6		
								.	.		
			1105					27248.2	42791.3		
			1133					.	.		
								.	.		

TAPE #	START	END	COMMENTS AND OBSERVATIONS	PAGE 2
			BOL #7	
			Maneuvering to avoid stake nets	
			Maneuver over	
			C/S Increase speed ≈ 4.5 kts	
			Abeam of buoy R-14	
			Abeam of buoy "WF"	
			EOL #7	
			Depart Univ. Del. Marine Facility, Lewes DE	
			BOL #8	
			Discontinue Line 8 temporarily to avoid shoal	
			Resume Line #8	
			EOL #8 / BOL #9	
			Abeam of buoy over submarine piles	
			EOL #9 / BOL #10	
			Maneuvering to avoid shoal	
			Abeam of buoy N-2 (≈ 15 yds)	
			EOL #10	
			Depart dock @ Univ. Del. - Lewes	
			BOL # 11	
			MIAH Maull Shoal Horn ~ .75 miles	
			SLOW DOWN TO PULL SS. HIT BTM	
			EOL # 11 - steaming to line #12	
			BOL # 12	
			SS Fish up - broke tail - hit bottom	

Time Delays

YR	MO	DAY	TIME	LINE #	SHIPS COURSE	SHIPS SPD	FIX TIME	NAVIGATION X ~~LATITUDE~~ ± DEGREES ± MINUTES	NAVIGATION Y ~~LONGITUDE~~ ± DEGREES ± MINUTES	TYPE
85	07	13								
			1152	012				27240.6	42821.6	
			1204					27238.1	42829.9	
			1301					27227.2	42871.9	
			1326	013				27211.0	42856.3	
			1455							
			1535	13				27230.3	42785.0	
			1607	13				27237.4	42763.7	
85	07	14	0730							
			0852	14				27221.9	42740.4	
			0945							
			1023	14A						
			1133	14A				27207.8	42793.0	
			1316	14A				27186.0	42870.6	
			1341	15				27169.6	42856.8	
			1534	15						
			1658	15				27208.1	42719.1	
85	07	15	0754	16				27200.4	42680.6	
			1115	16				27153.1	42847.0	

TAPE #	START	END	COMMENTS AND OBSERVATIONS	PAGE
			manuvere around shoals	
			fish back in	
			EOL 12	
			BOL 13	
			SUSPEND LINE 13 ALL CLEAR	
			IN. MOVING AROUND SHOAL	
			resume line 13	
			EOL #13 - heading for the barn	
			depart dock @ U. del Marine Sci. Facility	
			heavy fog	
			BOL 14	
			LINE ABORTED EOL #14 WRONG TD	
			BOL 14A	
			Bouy - abeam. port side R "16"	
			EOL 14A	
			SOL 15	
			C/C to skirt Brandywine Shoal	
			EOL 15 - choppy seas for last 2-2½ hrs	
			SOL 16 - J. William (USGS) & S. Kahn (Bangladesh)	
			on board	
			EOL 16 340 RPM	

Time Delay

YR	MO	DAY	TIME	LINE #	SHIPS COURSE	SHIPS SPD	FIX TIME	NAVIGATION ~~LATITUDE~~ X ± DEGREES ± MINUTES	NAVIGATION ~~LONGITUDE~~ Y ± DEGREES ± MINUTES	TYPE	QUAL.
85	07	15	1145	17				27145.7	42796.1		
			1300					.	.		
								.	.		
			1416	17				27185.1	42662.0		
								.	.		
85	07	16	0820	18				27140.2	42750.1		
								.	.		
			1113	18				27247.6	42853.1		
								.	.		
			1123	18				27253.9	42858.8		
								.	.		
								.	.		
			1149	19				27257.9	42834.2		
			1209	19				27245.7	42813.1		
			1435	19				27140.6	42712.2		
								.	.		
			1445	20				.	.		
								.	.		
85	07	18	0755	20				27150.7	42683.8		
			0855	20				27193.6	42723.5		
								.	.		
85	07	18	0714	21				27171.8	42639.9		
			0745	21				27165.1	42662.3		
			0851	21				27150.1	42713.9		
			0916	21				27144.7	42731.9		
			~~0923~~	21				.	.		
			0989	21				27140.3	42750.0		
								.	.		
								.	.		
								.	.		

TAPE #	START	END	COMMENTS AND OBSERVATIONS	PAGE ____
			SOL 17	
			SS records deteriating due to sea condition 2-5	
			EOL 17 -	
			BOL 18 - 340 RPM - Dave Hall on board from N.J. Geological Survey	
			Bouy mark "25"	
			EOL #18	
			BOL # 19	
			C/C on Line #19	
			EOL #19	
			LOST LORAN	
			BOL #20 - ROUGH SEAS	
			EOL #20 - aborted line due to sea condition	
			Bo/#21	
			Passed between ice breakers & end of jetty	
			ABEAM - stbd side of bouy R "2"	
			ABEAM - " " " " R "4"	
			~~ABEAM. Port side of bouy "5"~~	
			EOL #21	

YR	MO	DAY	TIME	LINE #	SHIPS COURSE	SHIPS RPM ~~SPD~~	FIX TIME	NAVIGATION X ~~LATITUDE~~ ± DEGREES ± MINUTES	NAVIGATION Y ~~LONGITUDE~~ ± DEGREES ± MINUTES	TYPE	QUAL.
85	07	18	1002	22	240	340		27143.5	42770.0		
			1107					27222.4	42770.0		
			1150	22							
			1227	22							

TIME DELAYS

TAPE #	START	END	COMMENTS AND OBSERVATIONS	PAGE ____
			BOL #22	
			LORAN OUT	
			LORAN UNDEPENDABLE, USE DR POSITIONS	
			ON TRACK CHART FOR LINE 22 NAVIGATION	
			EOL22	