

LAMONT DATA REDUCTION CRUISE SUMMARY

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CRUISE: EW9009

START: 01-Nov-90 [305] Port Newark

END: 22-Nov-90 [326] Port Newark

PURPOSE: MCS and SCS survey off New Jersey

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DATA REDUCTION: William J. Robinson

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SPEED AND HEADING:

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Instrument: Furuno CI-30 2-axis doppler speed log

Logging: 3 second intervals

Checking: visual check of plot of data

Smoothing: mean value of all good values within the same minute

TRANSIT SATELLITE FIXES:

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Instrument: Magnavox MX-1107RS dual frequency Transit satellite receiver

Logging: all fixes

Checking: reject receiver flagged fixes, fixes with high drifts in navigation.

GPS SATELLITE FIXES:

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Instrument: Magnavox T-Set Global Positioning System receiver

Logging: 20 second intervals

Checking:

    minimum number of sats: 3

    dilution of precision maximum: north = 4.0, east = 4.0

    carrier signal-noise ratio minimum: 35.0

    standard deviation maximum: north = 10.0, east = 10.0

    speed maximum: 18.0

    compared GPS speed and course with Furuno smooth speed and heading

    compared positions with Transit-Furuno navigation

    reject fixes with high drifts in navigation

Interpolation: interpolated positions at 00, 30 seconds of each minute

Smoothing: smoothed interpolated positions with 9 point running average

Northstar LORAN:

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Instrument: Northstar 6000 LORAN C receiver

Logging: 20 second intervals

Interpolation: interpolated positions at 00, 30 seconds of each minute

Smoothing: smoothed interpolated positions with 9 point running average

Notes:

    day 314 1449-1456 "garbage" positions deleted

day 319	0607-0612	"garbage" positions deleted
day 321	0457-0502	"garbage" positions deleted
day 324	1400-1507	some "garbage" data and a gap in output

NAVIGATION:

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The GPS-Transit-Furuno final navigation used acceptable GPS and Transit  
fixes merged at 1 per minute with priority given to GPS. The smooth speed and  
heading data is used to fill any gaps between fixes by computing 1 minute DR'ed  
positions corrected for set and drift between fixes. The DR'ed positions  
are produced at 00 seconds of each minute.

BATHYMETRY:

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Instrument: Raytheon LSR 3.5 kilohertz Precision Depth Recorder (PDR)  
Logging: readings from continuous PDR paper records  
Checking: visual check of plot of data

Instrument: Krupp-Atlas Hydrosweep DS  
Logging: each return; frequency dependent upon depth  
Checking: visual check of plot of data

Notes: Hydrosweep center beam forms the main source of the bathyetry  
file; gaps in hydrosweep coverage are filled in with PDR readings  
at 5 minute intervals.

day	interval	note
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306	0057-0407	gap in hydrosweep data
306	0733-2359	gap in hydrosweep data
307	0000-2359	gap in hydrosweep data
308	0000-2359	gap in hydrosweep data
309	0000-2359	gap in hydrosweep data
310	0000-1556	gap in hydrosweep data
311	1829-2056	gap in hydrosweep data
311	2107-2127	gap in hydrosweep data
314	0846-1000	gap in hydrosweep data
314	1952-2105	gap in hydrosweep data
316	0628-0712	gap in hydrosweep data
317	0256-0537	gap in hydrosweep data
318	1605-1805	gap in hydrosweep data
319	1543-2256	gap in hydrosweep data
320	0000-1408	gap in hydrosweep data
323	0020-0037	gap in hydrosweep data
323	0611-1430	gap in hydrosweep data

MAGNETICS:

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Not collected

GRAVITY:

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Instrument: Bell Aerospace BGM-3 marine gravity meter  
Logging: counts at 1 second intervals  
Notes: Not processed.

Instrument: KSS-30 gravity meter  
Logging: Mgals at 6 second intervals  
Notes: Not processed.

ADDITIONAL DATA SETS:

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- (1) Gun depths of the seismic system  
Daily files "dg.r308" thru "dg.r325"
  
- (2) Shot times of the seismic system  
Daily files "ts.r308" thru "ts.r325"