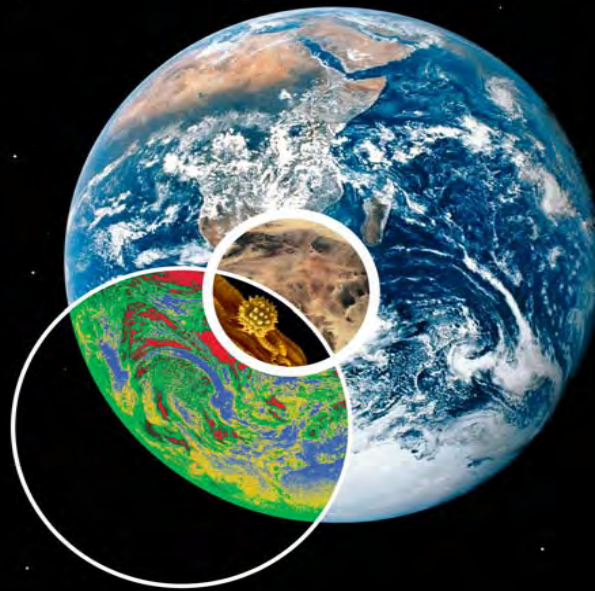


LAMONT-DOHERTY EARTH OBSERVATORY OF COLUMBIA UNIVERSITY



MLSOC – May 08 San Diego



Marcus Langseth

Current Status and Challenges

- LDEO Perspective

- M.G. Langseth Conversion Status and Major Remaining Items
- M.G. Langseth Operations and Maintenance Issues
- Technical Support and Personnel Issues
- Schedule Overview and Planned Maintenance Periods
- Status of Facility Budget and NSF Audit
- Issues to be Addressed by MLSOC

- NSF Perspective

- MLSOC Perspective

Marcus Langseth

The background of the slide is a photograph of the ship Marcus G. Langseth. The ship is a large, white-hulled vessel with a dark blue stripe along the waterline. The name "MARCUS G. LANGSETH" is visible on the side of the hull. The ship is shown from a low angle, looking towards the bow, with various masts and antennas visible against a clear sky.

✦ M.G. Langseth Conversion Status and Major Remaining Items

Conversion Status Overview

Major Areas Accomplished

Vessel

Maritime Systems

MCS

General Purpose in Support of MCS

Remaining Weaknesses

Ship Appearance

Habitability

Auxiliary Systems

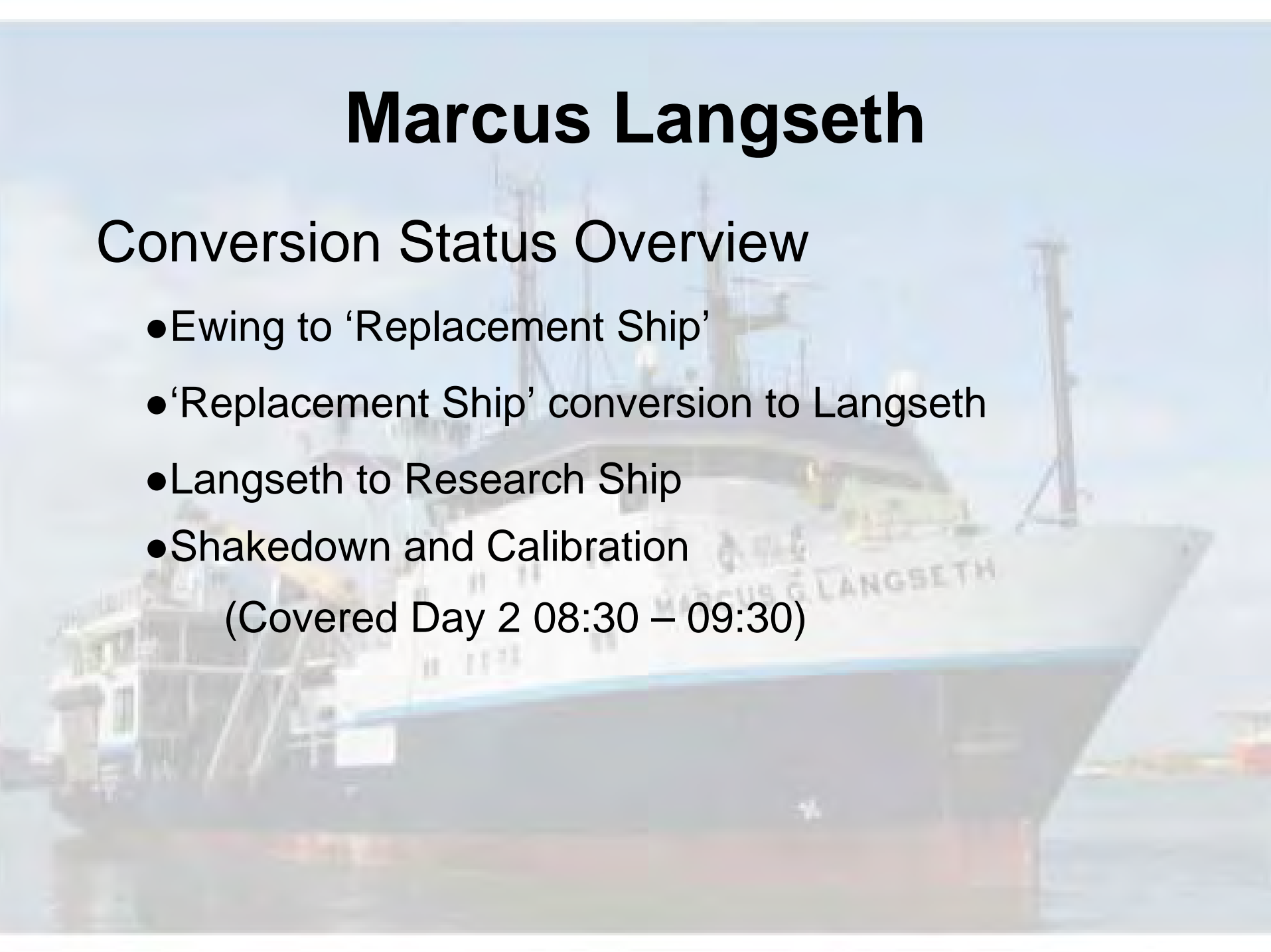
Operational Steady State (Engine and Science)

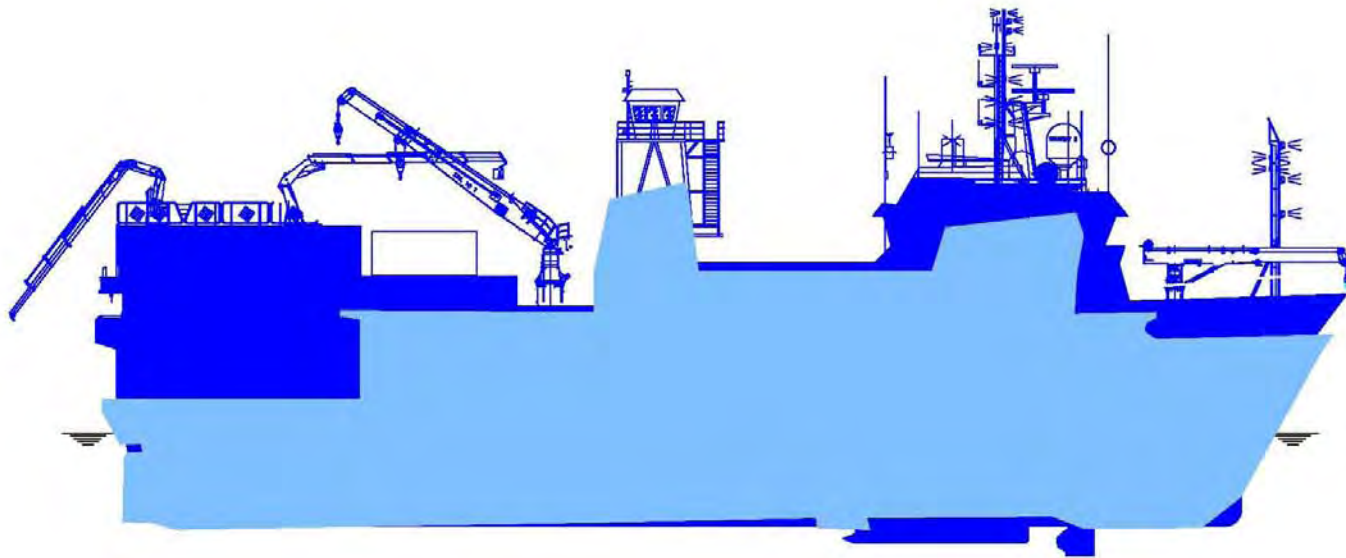
Marcus Langseth

Conversion Status Overview

- Ewing to 'Replacement Ship'
- 'Replacement Ship' conversion to Langseth
- Langseth to Research Ship
- Shakedown and Calibration

(Covered Day 2 08:30 – 09:30)





Replacement Vessel

Maurice Ewing

Main Deck

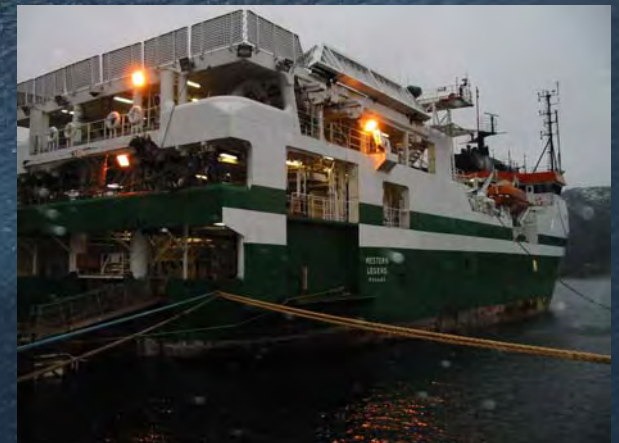
Ewing to 'Replacement Ship'



'Replacement Ship' Conversion to Langseth

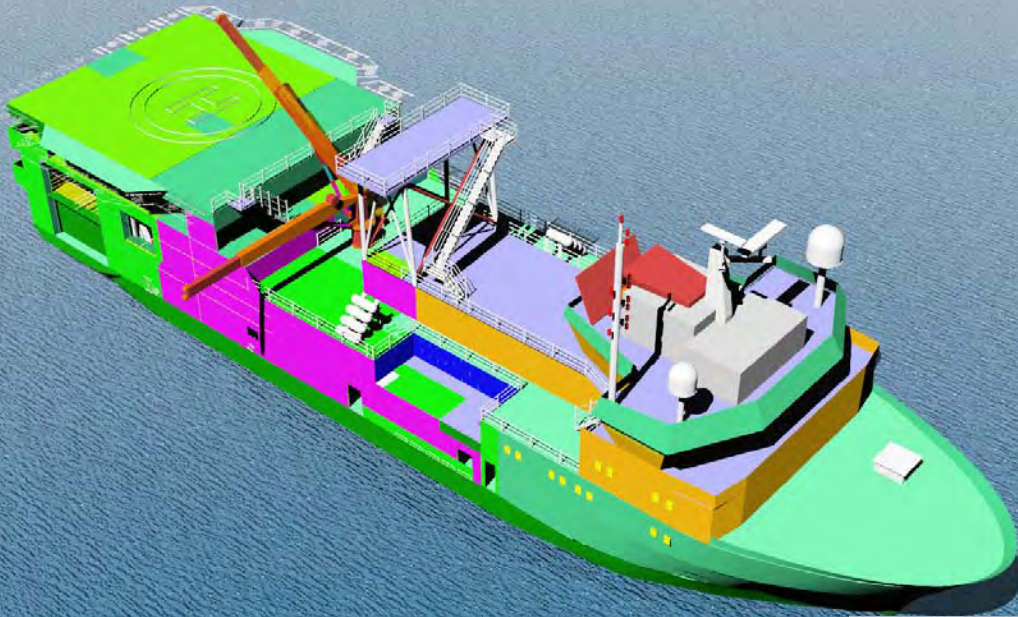


'Replacement Ship' Conversion to Langseth

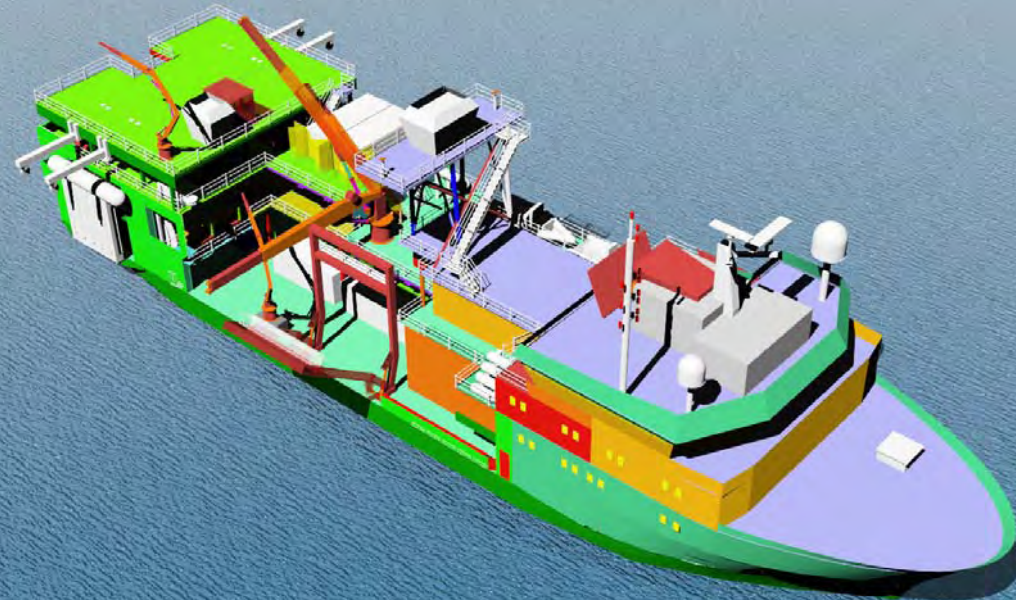


M/V LEGEND

‘Replacement Ship’
Conversion to
Langseth



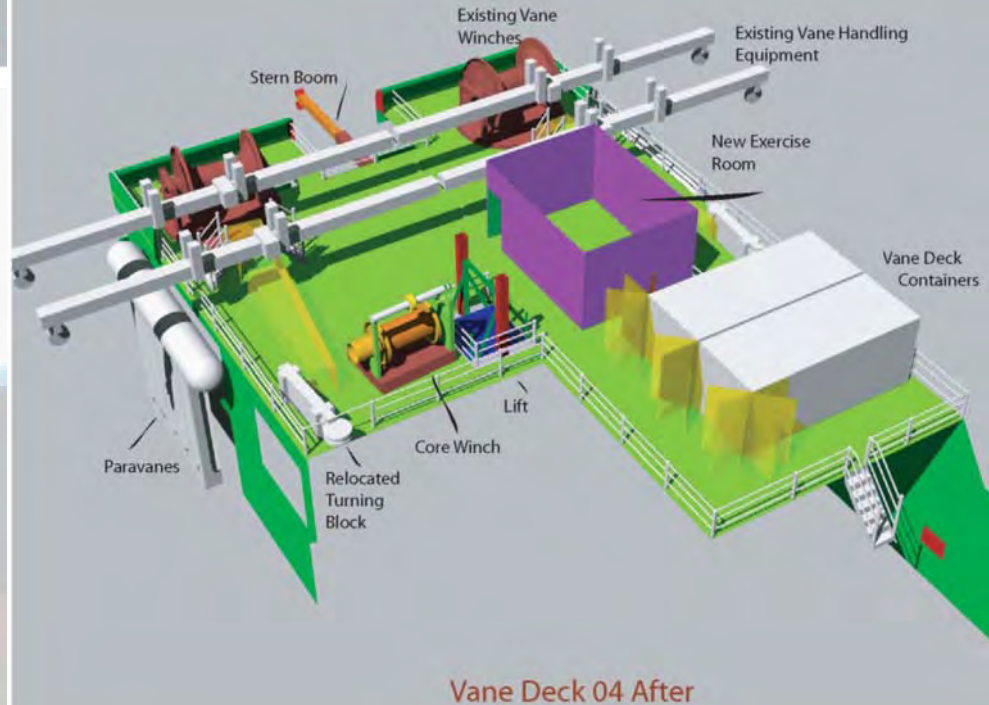
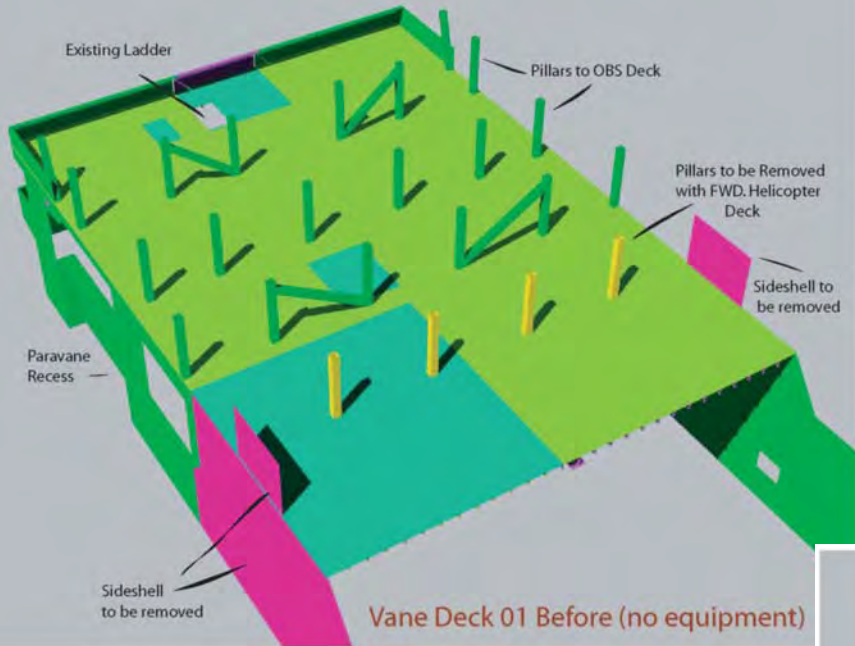
‘Replacement Ship’
Conversion to
Langseth



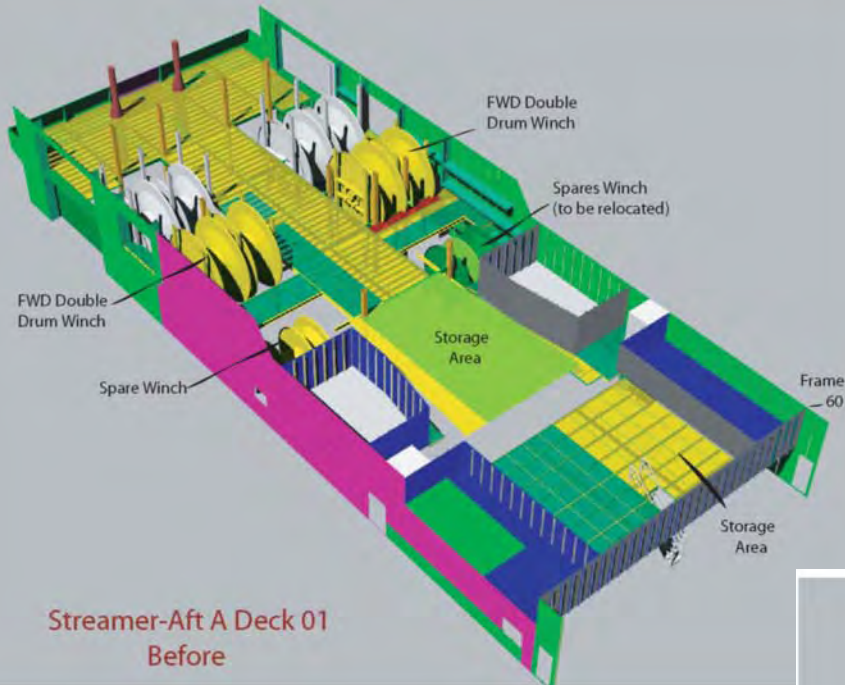
R/V LANGSETH

VANE DECK

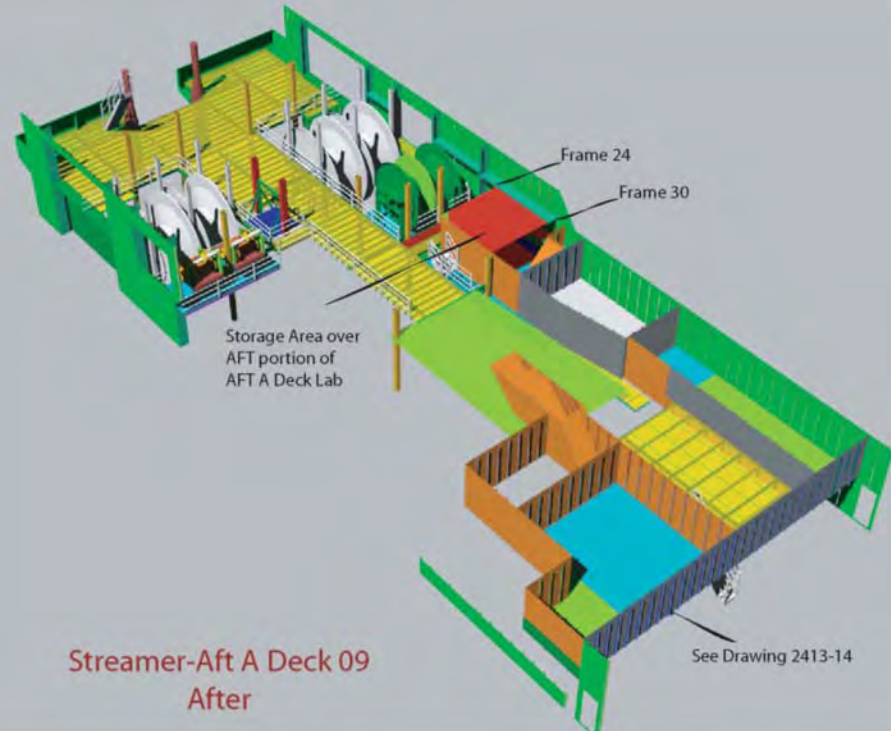
‘Replacement Ship’ Conversion to Langseth

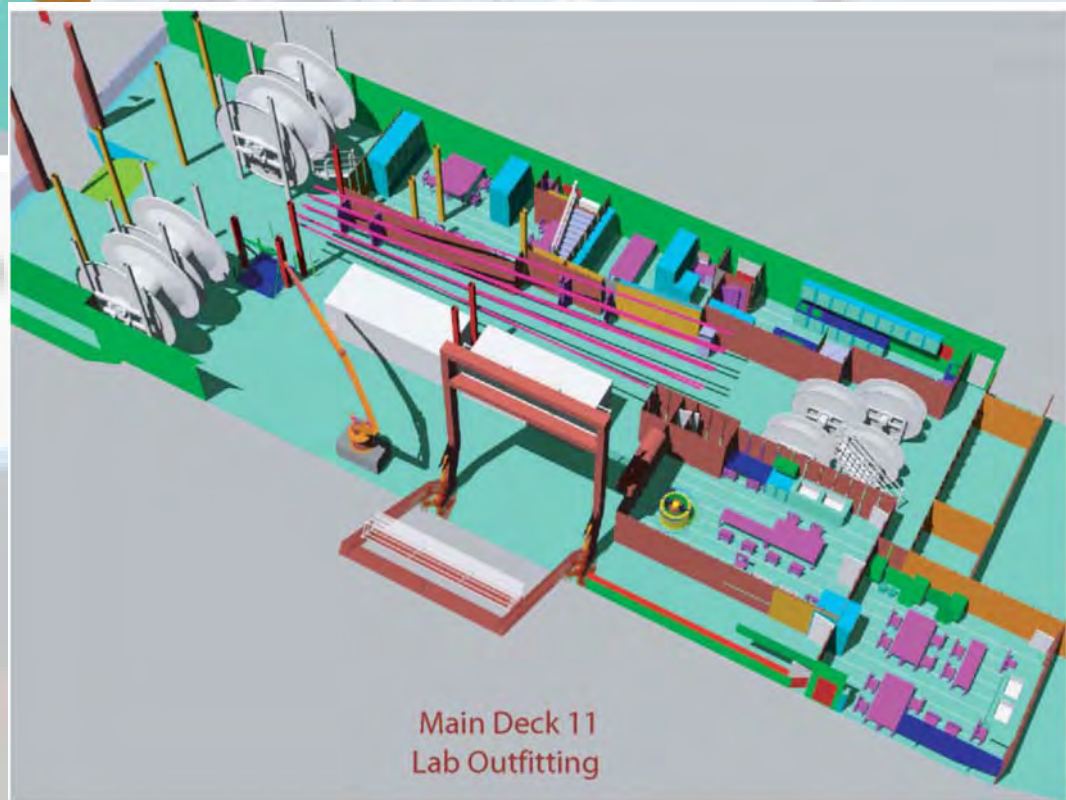
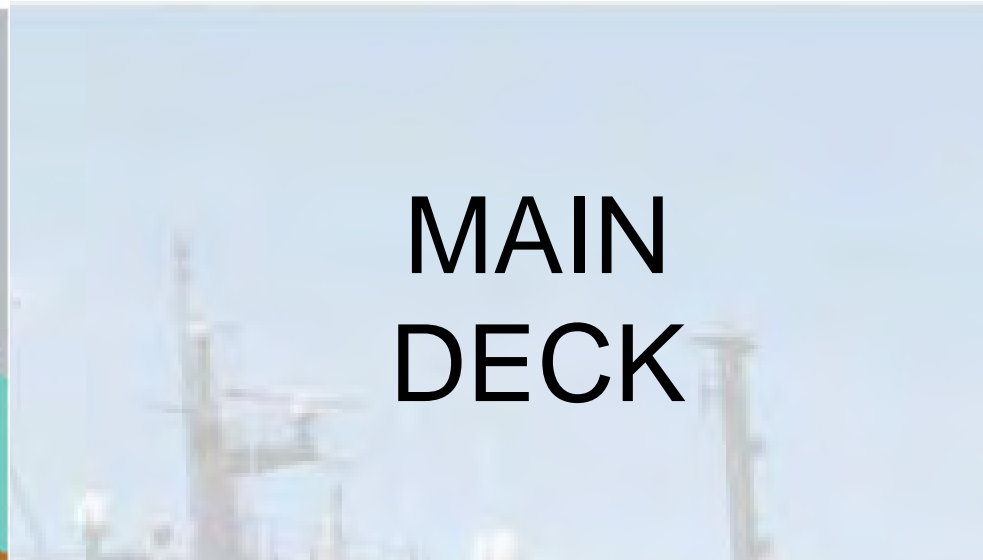
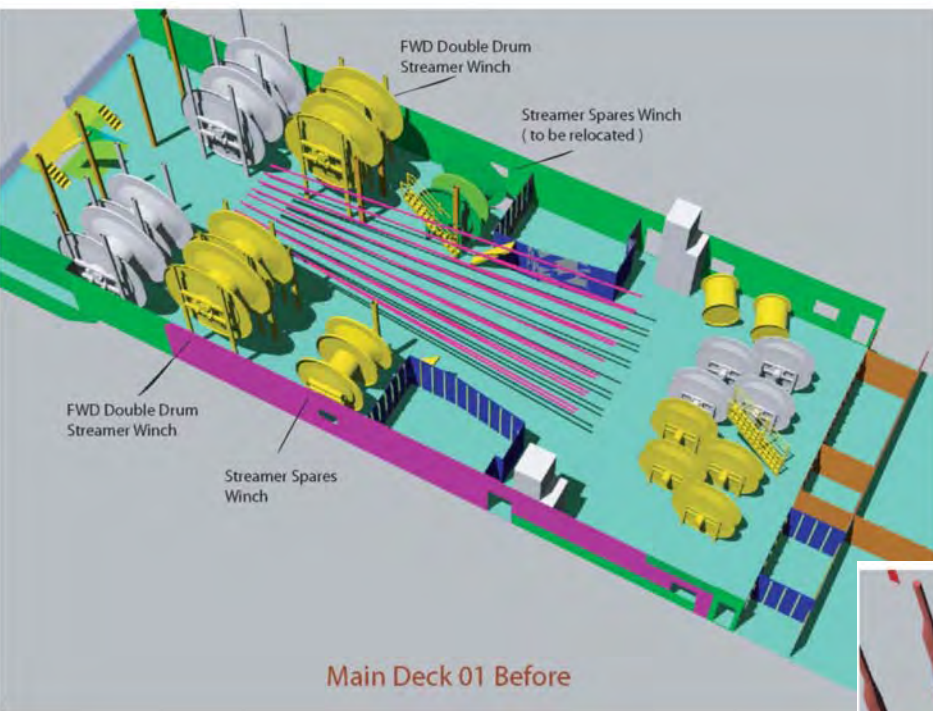


STREAMER DECK

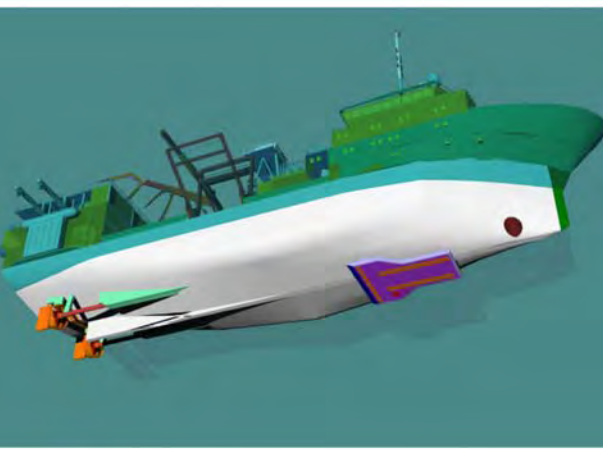


‘Replacement Ship’
Conversion to
Langseth





EM120 1° x 1°



Transducer Array

48 Modules

each with 18 Elements

Receive Array

16 Modules

each with 8 Transducer Staves

'Replacement Ship' Conversion to Langseth

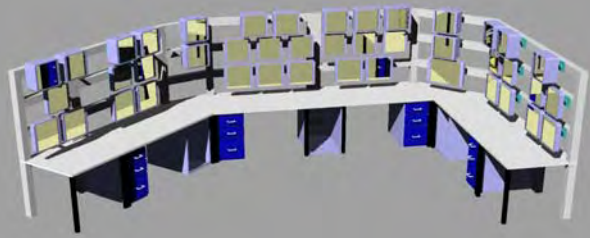
MAIN LAB



'Replacement Ship'

Conversion
to Langseth

MAIN CONSOLE



'Replacement Ship'
Conversion
to Langseth



MARCUS G. LANGSETH

MARCUS G.
LANGSETH
ME 8108
NY

IMO 9201137

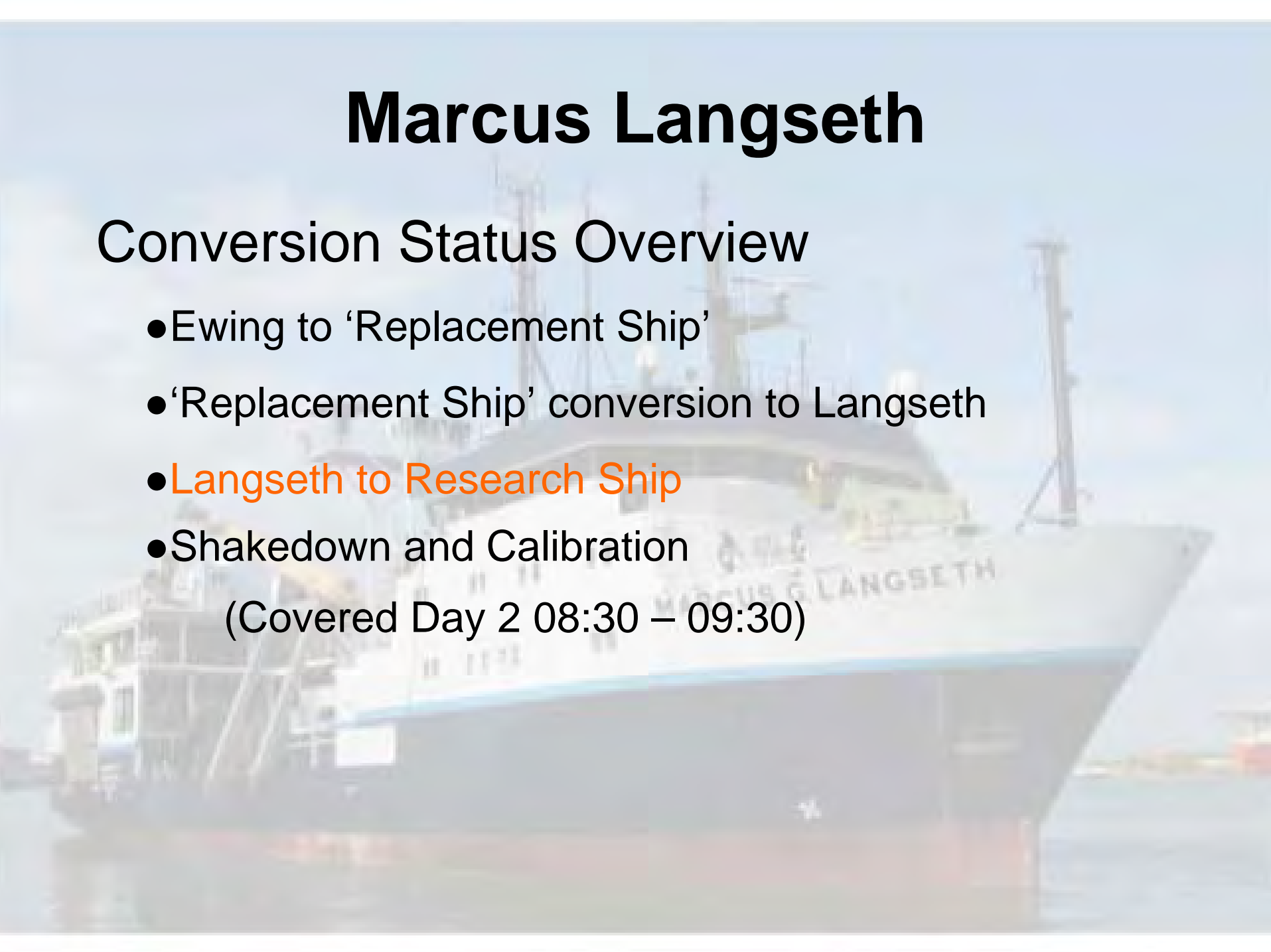


Marcus Langseth

Conversion Status Overview

- Ewing to 'Replacement Ship'
- 'Replacement Ship' conversion to Langseth
- **Langseth to Research Ship**
- Shakedown and Calibration

(Covered Day 2 08:30 – 09:30)





**LANGSETH TO
RESEARCH SHIP**

**Streamer
Loading**

MARCUS G. LANGSETH

LANGSETH TO RESEARCH SHIP

Finish Conversion

Ship Classification to ABS

COI & Reflagging to USCG

Vessel Operational

DP Testing

Multibeam Testing

NSF Ship Inspection

Vessel Title



Shakedown Cruises

Sound Source

Handling

Firing and Towing

Vane

Handling

Streamer

Handling

Build

Birds, Collars and Ballasting

3D Arrangement

Streamers

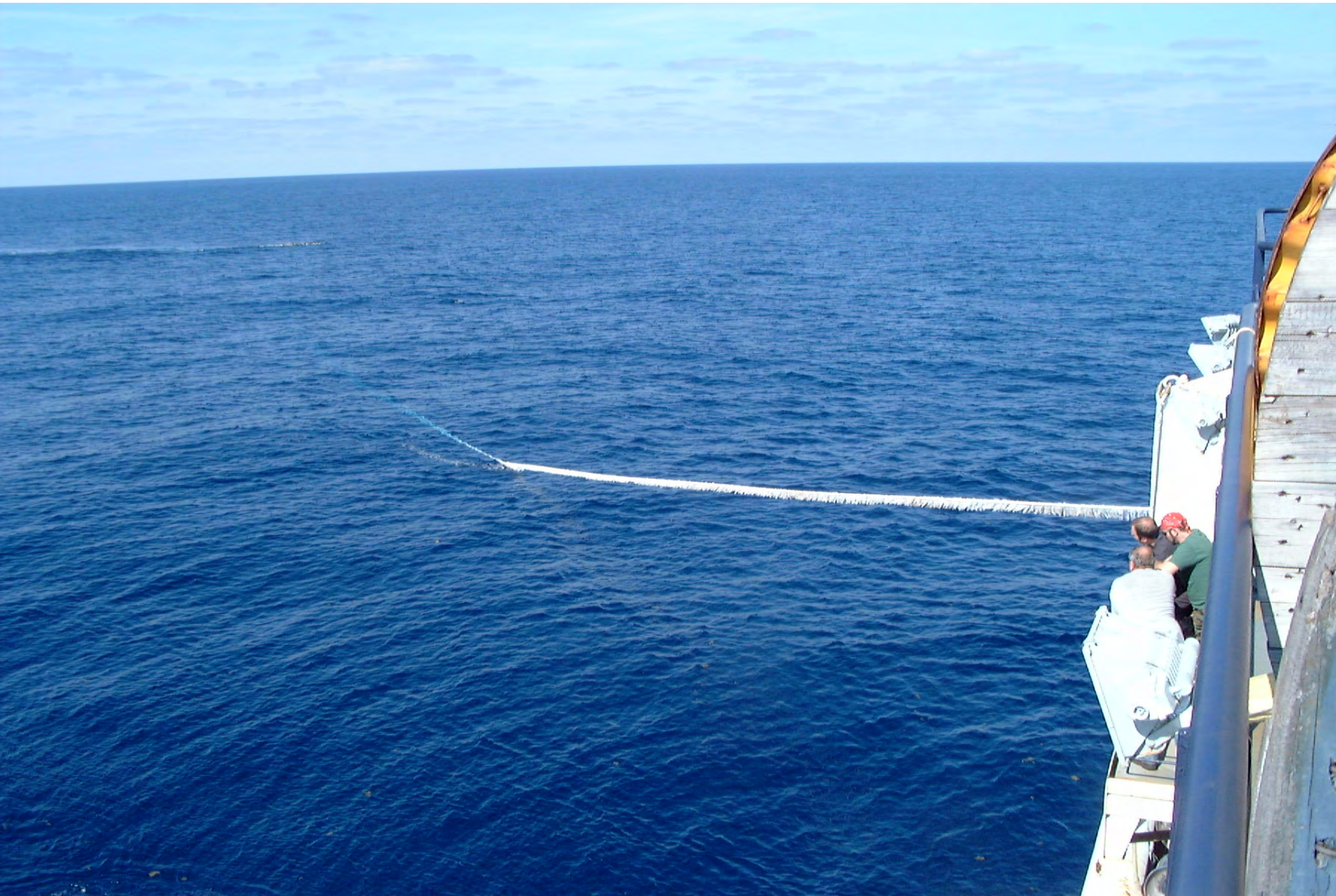
Sound Source Arrays

Support Systems and Data



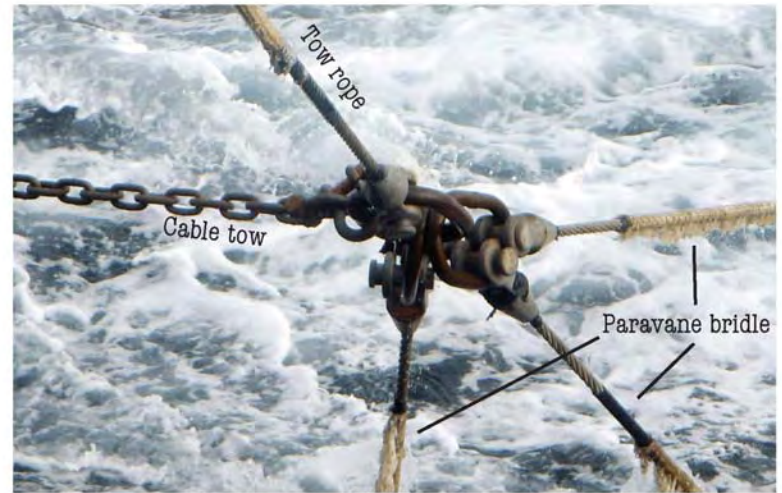






MGL 0801 cruise photos - cable/paravane rigging

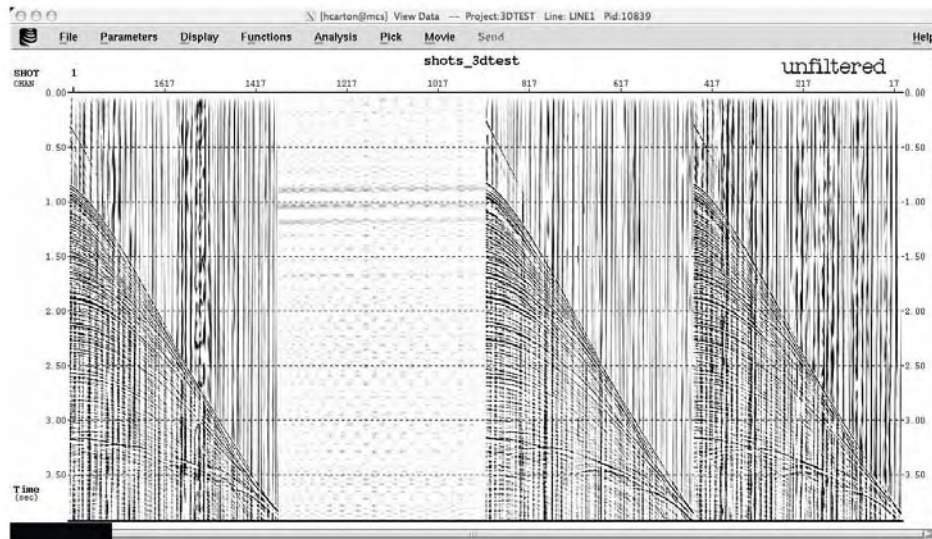
Cable separation rope rigging



Source spreader rope and slider



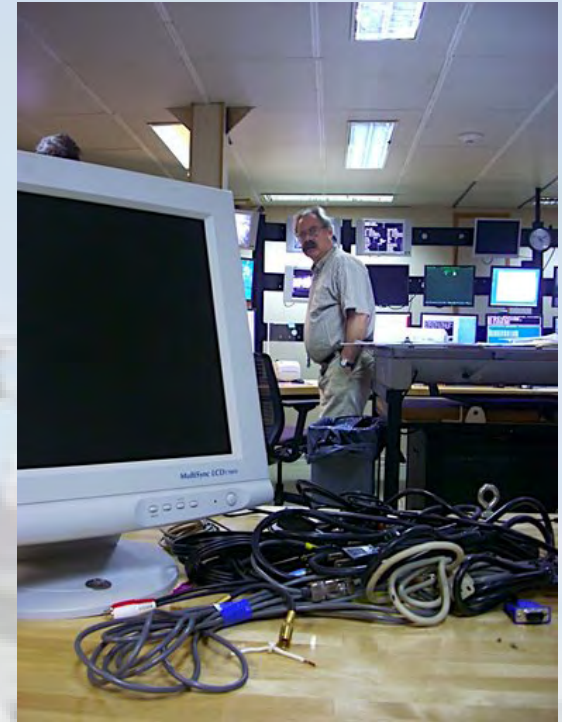
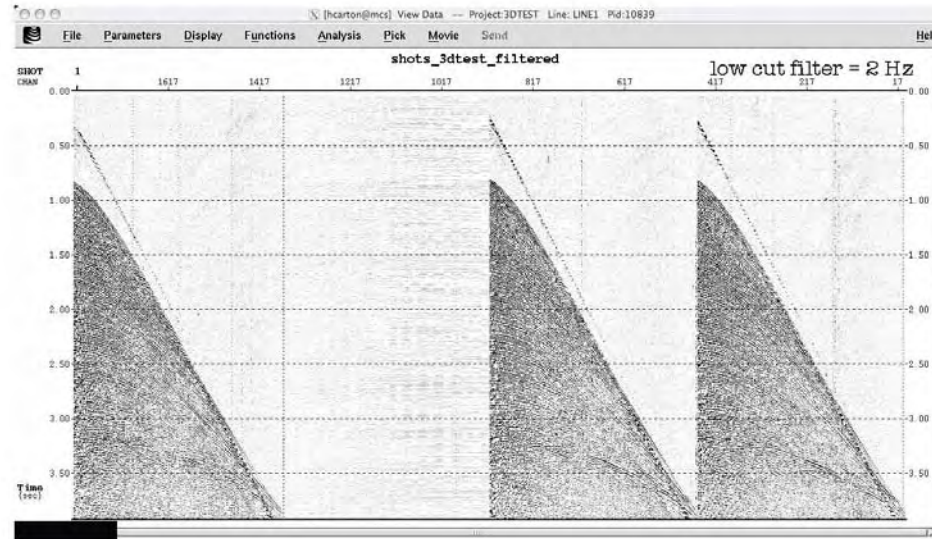
MGL0801 3D test line shot gathers

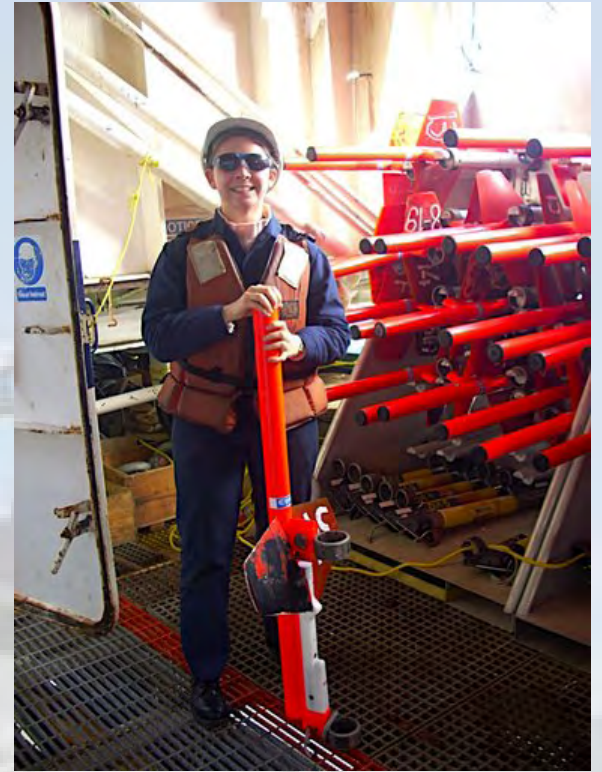
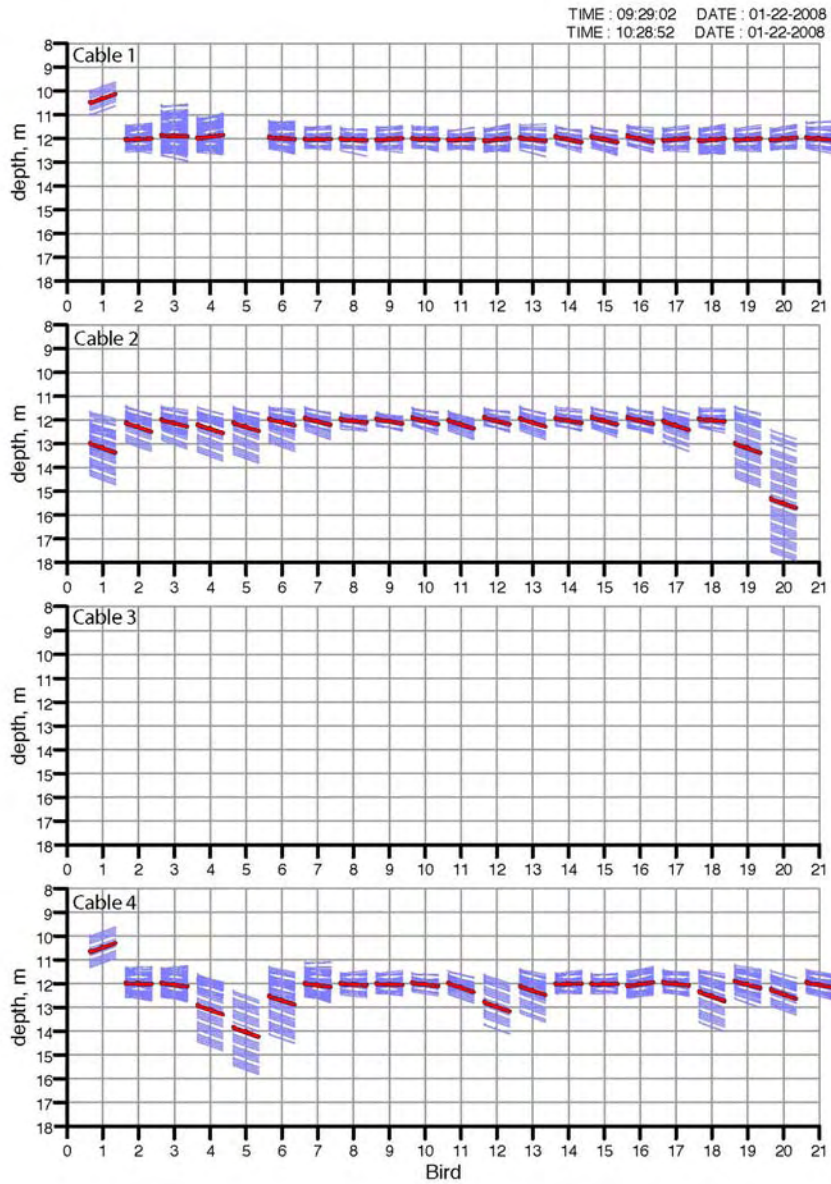


cable 1

cable 3

cable 4





Marcus Langseth

The background of the slide is a photograph of the ship Marcus G. Langseth. The ship is a large, dark-hulled vessel with a white superstructure. The name "MARCUS G. LANGSETH" is visible on the side of the hull. The ship is at sea, and the sky is clear.

✦ M.G. Langseth Conversion Status and Major Remaining Items

Conversion Status Overview

Major Areas Accomplished

Vessel

Maritime Systems

MCS

General Purpose in Support of MCS

Remaining Weaknesses

Ship Appearance

Habitability

Auxiliary Systems

Operational Steady State (Engine and Science)

Marcus Langseth

The background of the slide is a photograph of the ship Marcus G. Langseth. The ship is a large, white-hulled vessel with a dark blue stripe along the waterline. The name "MARCUS G. LANGSETH" is visible on the side of the hull. The ship is shown from a low angle, looking towards the bow, and is set against a clear blue sky and a body of water.

✦ M.G. Langseth Conversion Status and Major Remaining Items

Conversion Status Overview

Major Areas Accomplished

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MCS

General Purpose in Support of MCS

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Habitability

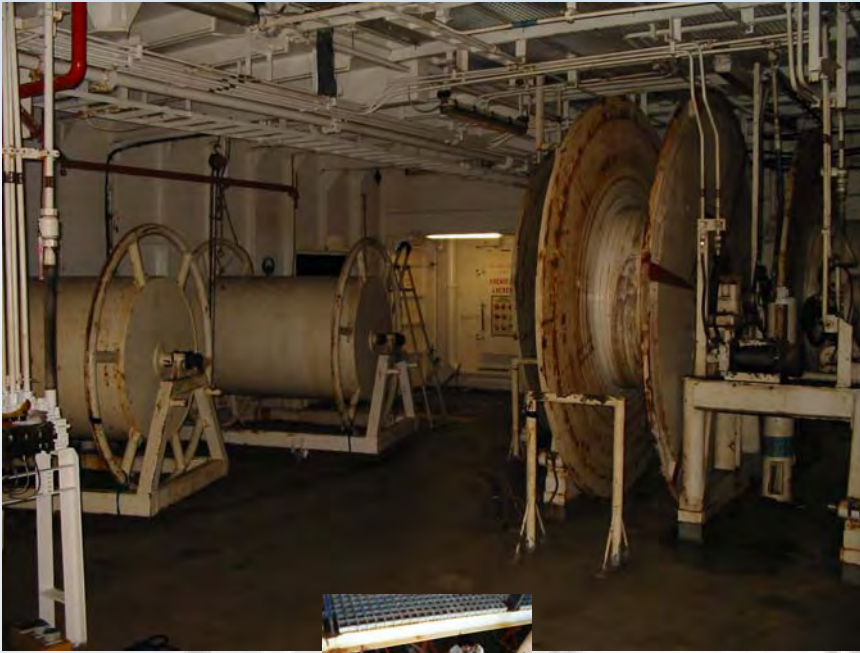
Auxiliary Systems

Operational Steady State (Engine and Science)

Remaining Weaknesses - Ship Appearance



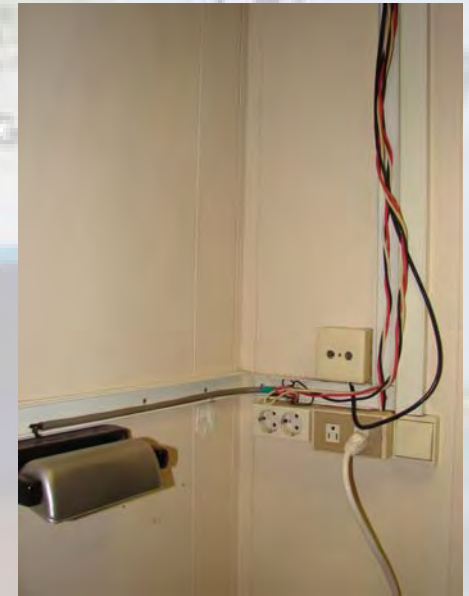
Remaining Weaknesses - Ship Appearance - Progress



Remaining Weaknesses - Habitability



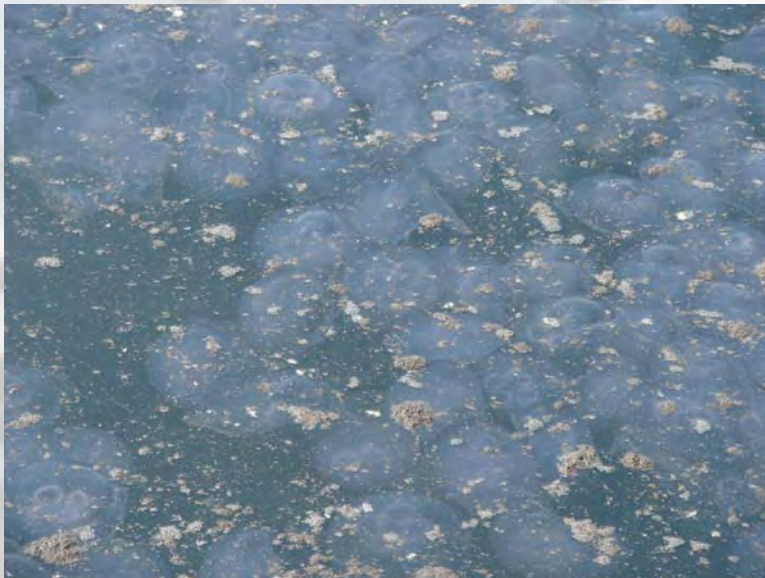
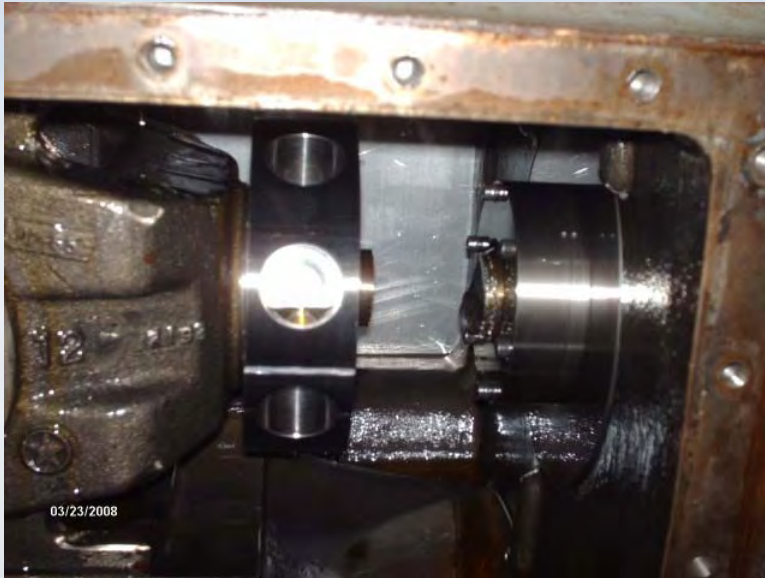
Remaining Weaknesses - Habitability



Remaining Weaknesses – Auxiliary Systems



Remaining Weaknesses – Operational Steady State



Marcus Langseth

Current Status and Challenges

- LDEO Perspective

- M.G. Langseth Conversion Status and Major Remaining Items
- **M.G. Langseth Operations and Maintenance Issues (14:30 Today)**
- Technical Support and Personnel Issues
- Schedule Overview and Planned Maintenance Periods
- Status of Facility Budget and NSF Audit
- Issues to be Addressed by MLSOC

- NSF Perspective

- MLSOC Perspective

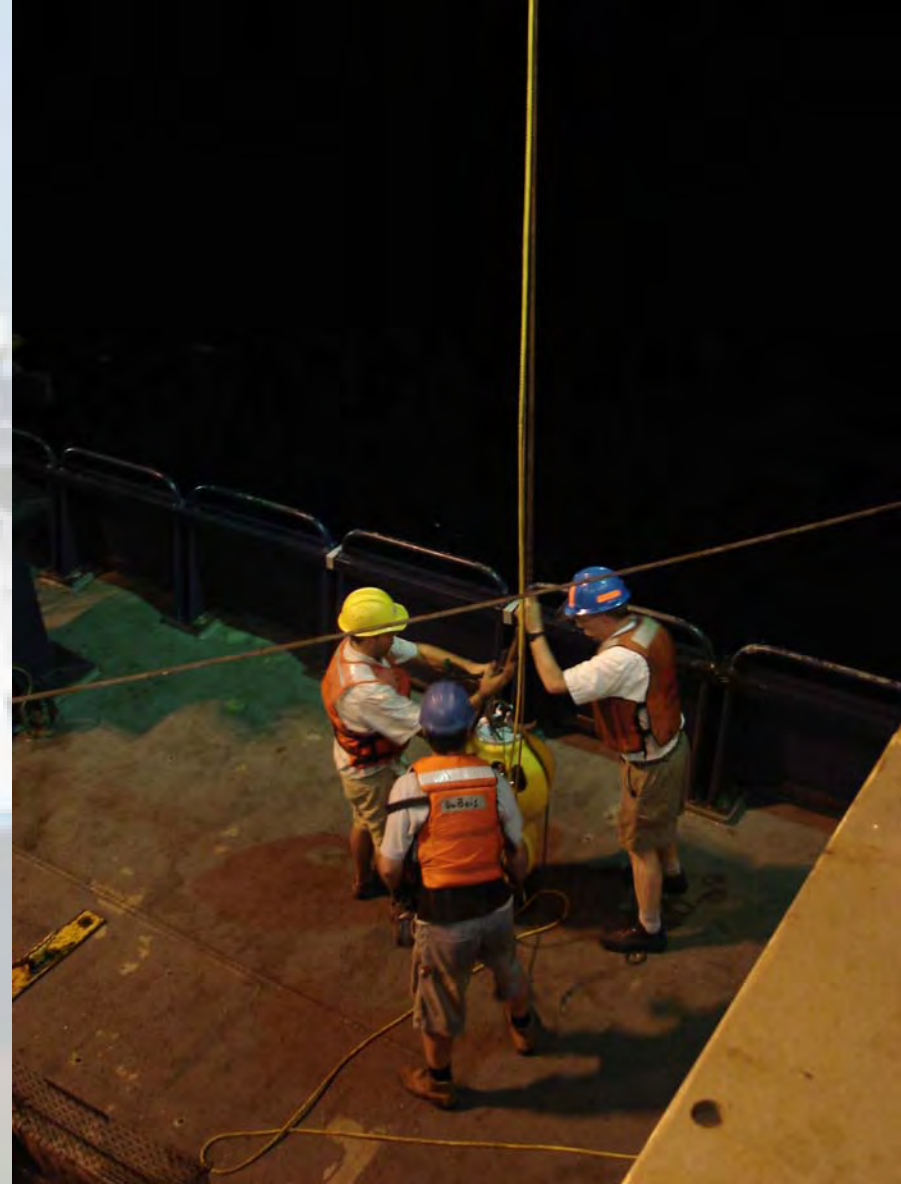




M.G. Langseth Operations



M.G. Langseth Operations



M.G. Langseth Operations



M.G. Langseth Operations



M.G. Langseth Operations

Home
Web File Manager

[settings...][more help...]

Documents / OMO / Cruise_Documents / 2008 / MGL0807-Holbrook-2 / 3-Personnel

Name	Modified	Size
Marcus Langseth crewlist April 24 final.doc	05/05/08 14:36	92 KB
Phonelist_MGL0808.xls	05/05/08 14:36	14 KB
Room Designation ML08-08-Final.xls	05/05/08 14:36	19 KB
tech-org-chart_MGL0808-Draft1.xls	05/05/08 14:36	68 KB

RV Marcus Langseth Technical Support Organizational Chart
Technical Support Organizational Chart
Cruise MGL0808

Tech-in-charge			
Bern McKiernan			
Chief Acquisition			
Bern McKiernan			
Chief IT/Nav			
Michael Zhang			
Operational Watches Acquisition and IT/Navigation			
Midnight to Noon		Noon to Midnight	
Watch Leader		Watch Leader	
Mke Martello		Bern McKiernan	
Acquisition Leader	IT/Nav Leader	Acquisition Leader	IT/Nav Leader
Mke Martello	Michael Zhang	Bern McKiernan	Elliot Aguilar
Acq Watch Stander A	IT/Nav Watch Stander A	Acq Watch Stander A	IT/Nav Watch Stander A
Visiting Science #1	Visiting Science #2	Visiting Science #3	Visiting Science #4
Acq Watch Stander B	IT/Nav Watch Stander B	Acq Watch Stander B	IT/Nav Watch Stander B
Chief Sound Source Handling			
Robbie Gunn			
Operational Watches Sound Source/Handling			

Documents / OMO / Langseth / Documents / Noon Reports / 2008

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MGL 05152008 Noon Report.txt	15/05/08 15:32	1 KB
MGL 05162008 Noon Report.txt	16/05/08 15:30	1 KB

File Upload

Home
Web File Manager

[settings...][more help...]

Documents / OMO / Purchasing / 2008-Purchasing / RQN-Engine

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E00-003	29/04/08 14:32	
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E00-006	29/04/08 11:14	
E00-007	29/04/08 11:18	
E00-008	29/04/08 11:20	
E00-009	29/04/08 13:16	
E00-010	29/04/08 13:17	
E00-011	29/04/08 13:23	
E00-014	29/04/08 14:32	
E00-015	13/05/08 14:13	
E00-016	29/04/08 14:32	
E00-017	29/04/08 13:26	
E00-018	29/04/08 13:29	
E00-019	29/04/08 14:32	
E00-020	29/04/08 15:42	
E00-021	29/04/08 15:49	
E00-022	29/04/08 15:46	
E00-024	29/04/08 13:30	
E00-025	29/04/08 13:31	

M.G. Langseth Operations

Web File Manager | C...

Web File Manager | CMS

MGL Science Purchasing Spreadsheet ... Langseth_RQN-Engine-08 - Google... OMO_Released_Requisition_Log - Goo...

Google Docs BETA megan@ldeo.columbia.edu | [New features](#) | [Docs Home](#) | [Help](#)

Langseth_RQN-Engine-08 Autosaved on May 15, 2008 3:50:43 PM EDT Automatically Saved Save

File Edit Sort Formulas Revisions Create a Map, Chart or Table...^{New} Print Discuss Share

Format **B** *I* U **A** **B** **C** **D** **E** **F** **G** **H** **I** **J** **K** **L** **M** **N** **O** **P** **Q** **R** **S** **T** **U** **V** **W** **X** **Y** **Z** **1** **2** **3** **4** **5** **6** **7** **8** **9** **0** **+** **-** **Alt** **Ctrl** **Shift** **Cmd** **Fn** **Esc** **Tab** **Enter** **Backspace** **Del** **Home** **End** **Page Up** **Page Down** **Print** **Insert** **Copy** **Paste** **Undo** **Redo** **Find** **Replace** **Align** **Insert** **Delete** Wrap Text **Merge across**

	A	B	C	D	E	F	G	H	I	J	K	L	
1	E	Date Submitted	Description	RQN FORM YES/NO	Manufacturer	Priority 1-4	Who	Approved	Account	PO Process Status	PO Submitted Date	CU RGN Number	PO or C Number
96	E08-095	2/21/2008	Unitor Bioguard chemical	YES		2			467042-4710		3/16/2008		XABYW
97	E08-096	2/21/2008	Jet Spray juice machine parts	YES		2			467042-4730		2/29/2008		XABXGV
98	E08-097	2/21/2008	RO chemicals	YES		2	Meg						
99	E08-098	2/22/2008	PG pumps- FO transfer pp	YES		2	Meg		467042-4720		3/26/2008		RA5W71
100	E08-099	2/24/2008	Mercer valve 5th stage relief for Ariel	YES		1			467042-4720		3/14/2008		RA5TT1
101	E08-100	3/3/2008	bearings for various pp motors	YES		1				al cc			
102	E08-101	3/5/2008	Bunkers for Panama	YES		1							
103	E08-102	3/6/2008	Slops to pumped off in Panama	YES		1							
104	E08-103	3/6/2008	McMaster Carr- MG breaker for welding machine							al CC Grainger			

Google Docs BETA megan@ldeo.columbia.edu

OMO_Released_Requisition_Log Autosaved on May 19, 2008 1:07:44 PM EDT Create a Map, Chart or Table...

File Edit Sort Formulas Revisions Print Discuss Share

Format **B** *I* U **A** **B** **C** **D** **E** **F** **G** **H** **I** **J** **K** **L** **M** **N** **O** **P** **Q** **R** **S** **T** **U** **V** **W** **X** **Y** **Z** **1** **2** **3** **4** **5** **6** **7** **8** **9** **0** **+** **-** **Alt** **Ctrl** **Shift** **Cmd** **Fn** **Esc** **Tab** **Enter** **Backspace** **Del** **Home** **End** **Page Up** **Page Down** **Print** **Insert** **Copy** **Paste** **Undo** **Redo** **Find** **Replace** **Align** **Insert** **Delete** Wrap Text **Merge across**

	A	B	C	D	E	F	G	H
1	Submitted	LDEO Req #	Account #	Vendor	Price	OMO Requisition #	Description	Karen's Comments
31								4/22/08 - (AW) (Megan emailed) faxed PO to vendor
32	4/21/2008	RA60XX	598070	Sonardyne	\$402	MGL-SCI-ACQ-082	TB Coils	
33	4/21/2008	RA60YL	598069	ING PG Pumps	\$858	E08-022	Evap JW Pump Spares (not all avail)	faxed PO to vendor
34	4/22/2008		590069	intox.com	\$132	C08-027	security tapes and Dry gas	ordered on line
35	4/22/2008		590069	Datrex.com	\$161	C08-036	Liferings	faxed CC order to Becky w/tax exempt
36	4/22/2008		590069	landfallnav.com	\$104	C08-038	DC Plugs	ordered on line
37								
38	4/29/2008	RA62PM	467042	GeoSpace	\$285,400	MGL-SCI-ACQ-047A	SRDs	MR and VN have signed_pending
39	4/30/2008		598069	Mackay	\$698	CAPT-08-019	Jotran Sart Batteries	Stock at manufacturer in Texas
40	4/30/2008		598069	Wales Darby	\$536	E08-054	Fan Coil Unit	8 - 10 week lead time
41	4/30/2008		598069	Swilkerson@cobu	\$833	E08-019	AC Filter Frames	lead time: 21 days to build
42	4/30/2008		598069	Progressive Hyd	\$412	E08-043	Metric Comp Fittings	2 week lead time
43	4/30/2008		598070	A/G Geophysical	\$2,334	SCI-08-ACQ-109	AG Sips 1 Coil Assemblies	Availability date: 7/24/2008
44	4/30/2008		598069	Valley Business Forms	\$95	E08-166	HYD Label Fiberglass Sample	2 week lead time
45	5/1/2008	RA63A2	598070	Genstat	\$3,475	MGL-SCI-118	CMS Computer	Bob Bookbinder Going to Order

Marcus Langseth

Current Status and Challenges

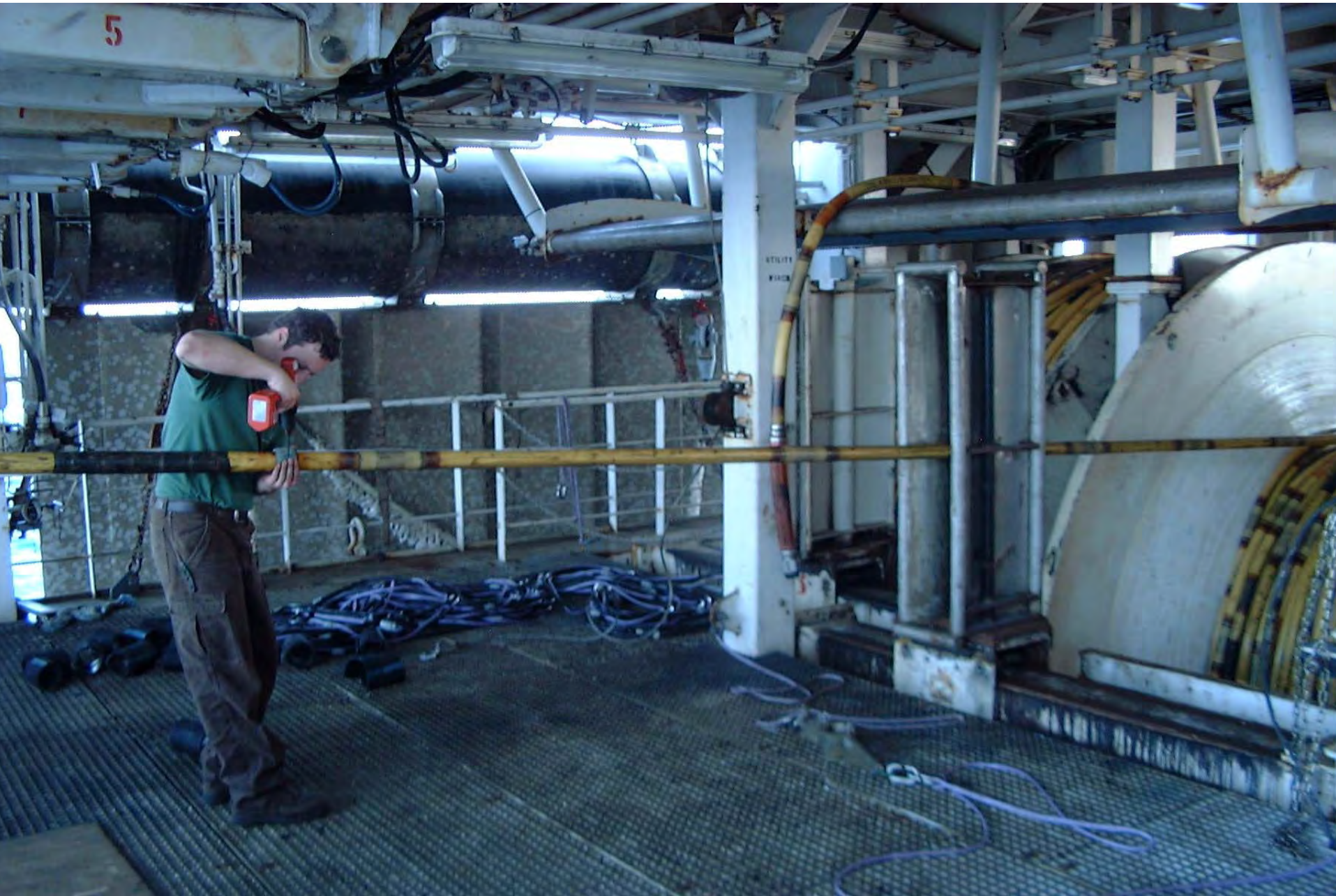
- LDEO Perspective

- M.G. Langseth Conversion Status and Major Remaining Items
- M.G. Langseth Operations and Maintenance Issues
- **Technical Support and Personnel Issues (16:00 Today)**
- Schedule Overview and Planned Maintenance Periods
- Status of Facility Budget and NSF Audit
- Issues to be Addressed by MLSOC

- NSF Perspective

- MLSOC Perspective





Loss of key personnel

Project and Department Group Leaders Technical Side

Richard Oliver-Goodwin – Ewing: IT

Joe Stennett – Ewing: General Purpose Science

Gartz Gould – Equipment and Operation

Megan Meyer – Operations

Johnny Diebernardo – Ewing: Sound Source Handling

Robert Steinhaus – Industry: Back Deck and Recording

Jay Johnstone – Industry: Streamer and Recording

Anthony Johnson – Ewing: IT

Tom Spoto – Industry: Back Deck and Sound Source



Loss of key personnel

Project and Department Group Leaders Technical Side

Megan Meyer – Operations

Anthony Johnson – Ewing: IT

Tom Spoto – Industry: Back Deck and Sound Source



Loss of key personnel

Project and Department Group Leaders Technical Side

Robert Steinhaus – Industry: 3D, Back Deck and Recording

Anthony Johnson – Ewing: IT/Nav, Back Deck and Recording

Tom Spoto – Industry: Back Deck and Sound Source

Robbie Gunn – Industry: Back Deck and Sound Source

Megan Meyer - Operations

NCS SubSea

Others Gaining Experience (3)

Two New IT

Four Trial Runs



Marcus Langseth

Current Status and Challenges

- LDEO Perspective

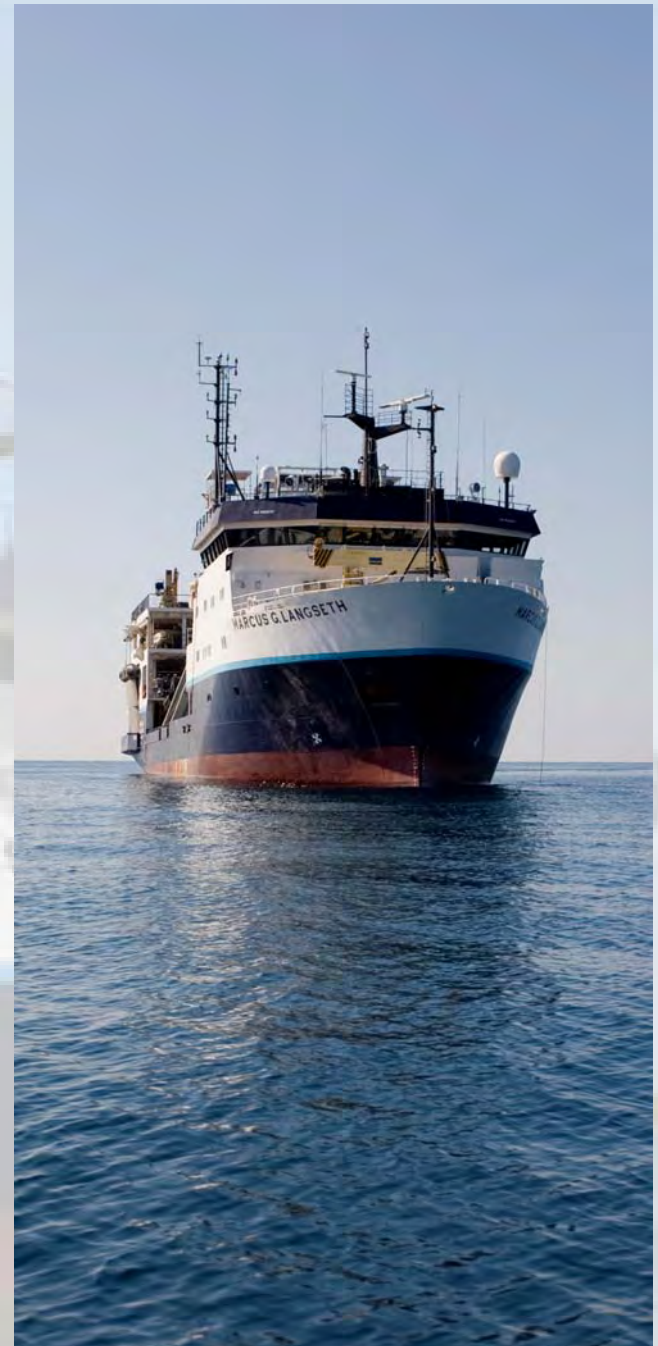
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2008 cruises

- Holbrook -1 & -2
(MCS & OBS)
- McGuire (OBS)
- Mutter (3D)
 - 6 Day Transit / 3 Maint / 6 Transit
- Gulick (MCS & OBS)
 - 5 Maint
- Toomey (OBS)



APPLICATIONS FOR 2008

– Gulick

- NMFS General Counsel has the IHA-A
- Alaskan Fish & Game Department contacted Meagan Cummings, asking about the “carbon footprint” of the Langseth.
 - Have asked for clarification of what this term means (fuel usage?, etc.)
 - New spin for us!

– Bangs (*Thompson* cruise)

- NMFS General Counsel has the IHA-A

– Toomey

- In progress with Canadian DFO

Marcus Langseth

Current Plan

- α **May 26th Depart for Shakedown**
- α **June 6th Return to San Diego**
- α **June 22nd Depart San Diego**
- α **June 27th Arrive Manzanillo – Depart June 29**



Marcus Langseth

Current Status and Challenges

- LDEO Perspective

- M.G. Langseth Conversion Status and Major Remaining Items
- M.G. Langseth Operations and Maintenance Issues
- Technical Support and Personnel Issues
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- **Status of Facility Budget and NSF Audit**
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- NSF Perspective

- MLSOC Perspective

2008 MLSOC San Diego
2008 Technicians Proposal
Overview

	Basic	2D	3D	Sound Source Only
Days				
Testing - Not Included		22		
Transits - Included In Basic	42			
Science Days	215	82	46	45
Total Basic Services	215			
Total Specialized Services	173			
Day Rates				
	\$2,908	\$16,625	\$34,318	\$12,013
Request				
Current Request	\$550,591	\$1,329,972	\$1,578,634	\$540,600
Total	\$3,999,797			
Carry Forward	-\$526,412			
Actual Request	\$4,526,209			
Original Request				
Original Request	\$659,750	\$1,534,500	\$1,914,000	\$520,000
Total	\$4,628,250			
Carry Forward	-\$526,412			
Actual Request	\$5,154,662			
Budget Change				
	-\$628,453			

2008 MLSOC San Diego
2008 Technicians Proposal
Budget by NSF Groups

	Basic	2D	3D	Sound Source Only
Salary	\$227,984	\$444,065	\$506,919	\$196,533
Fringe	\$56,792	\$76,566	\$96,399	\$38,782
Total Salary and Fringe	\$284,776	\$520,631	\$603,318	\$235,315
A. Travel	\$31,861	\$48,044	\$20,373	\$21,932
B. Communication and Coordination	\$78,750	\$0	\$0	\$0
C. Maintenance, Repair, Calibration	\$20,000	\$143,227	\$171,733	\$28,050
D. Parts	\$2,000	\$67,787	\$52,593	\$28,050
E. Expendables	\$18,300	\$63,413	\$69,767	\$14,025
F. Storage, Rentals, Licenses	\$25,000	\$26,787	\$49,373	\$16,275
G. Training, Consultants, Sub Contractors	\$5,000	\$225,940	\$277,500	\$79,845
H. Shipping, Mobilization, Demobilization	\$5,000	\$25,000	\$40,000	\$15,000
Total Direct Costs	\$185,911	\$600,197	\$681,340	\$203,177
Indirect Costs	\$155,685	\$242,143	\$293,976	\$102,108
Direct Costs Where ICR Waived		(\$210,940)	(\$177,400)	(\$74,845)
TOTAL	\$626,372	\$1,362,971	\$1,578,634	\$540,600
Less Funds Other Sources	\$7,000	\$33,000		
Less HighSEAS Net	\$68,781			
REQUEST	\$550,591	\$1,329,971	\$1,578,634	\$540,600

2008 MLSOC San Diego
2008 Technicians Proposal
Budget by Equipment

	Basic	2D	3D	Sound Source Only
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Streamer Systems	\$49,200	\$96,600	
Acoustic Positioning	\$21,867	\$42,933	
Depth Control	\$30,613	\$60,107	
Tail Buoy, GPS	\$10,933	\$21,467	
Seismic Recording	\$19,680	\$19,320	
Seismic Computers, Tapes, Software	\$32,253	\$27,907	\$15,000
Seismic Deck Equipment	\$14,213	\$15,027	
Air Guns	\$76,533	\$37,567	\$44,625
Arrays	\$28,427	\$13,953	\$16,575
Air Gun Controller	\$9,840	\$4,830	\$5,738
Air Gun Deck Equipment	\$7,653	\$3,757	\$4,463

TOTAL	\$301,213	\$343,467	\$86,400
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Number of months shooting	2.73	1.53	1.50
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Number of Streamers	1.00	4.00	
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End of Year Factor	80%	70%	85%
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Streamer Repair Factor	50%	50%	
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2008 MM0 BUDGET

- Cut LGL subcontract from 767K to 500K
- Cut a further 16K from sections B – H to 505.242K
 - Comms, coordination, maintenance/repair, parts, expendables, storage, training/consultant charges, shipping, mob/demob

R/V Marcus G. Langseth - 2008		
2008 Dayrate=	\$30,092.13	Proposed Annual Budget
I. SALARIES & WAGES		
A. Ship's Company		
1. Salary		\$1,250,575
2. Overtime		\$551,436
3. Vacations		\$496,652
4. Fringe-		\$520,005
Subtotal		\$2,818,668
B. Marine Operations Staff		
1. Salaries		\$582,682
2. Overtime		\$0
3. Fringe		\$157,907
Subtotal		\$740,589
II. Maintenance & Major O'Haul		
A. Maint. & Repair		\$180,000
B. MOSA		\$399,169
Subtotal		\$579,160
III. OTHER EXPENSES		
A. Fuel & Lube Oil		\$2,208,836
B. Food		\$321,962
C. Insurance		\$170,000
D. Stores		\$170,000
E. Travel		
Foreign		\$31,626
Domestic		\$107,263
F. Shore Facilities		\$130,000
G. Misc		\$335,205
Subtotal		\$3,474,892
Total Direct Costs		\$7,613,309
Total Operating Days		253
Day Rate		\$30,092

R/V Langseth

5 Year Projected MOSA

Main Propulsion(overhaul, rebuild, split cooling)	\$339,000	
Main Gear (overhaul, shaft bearings)	\$260,000	
Dry Docking (paint, zincs, pull shafts)	\$370,800	
ABS & USCG Inspection Costs	\$43,000	
Controls (Rolls Royce Calibration, Alarms)	\$205,000	
Seismic Compressors (overhaul, bearings)	\$125,000	
CAT Engines (overhaul, radiator replacement)	\$172,000	
Hydraulic Systems (winch overhaul, hoses)	\$140,000	
Deck (FRC& Workboat overhaul), Aframe	\$8,000.00	
Engine Auxiliaries(HVAC, Blowers, Piping)	\$180,000	
General-Painting, Bridge Floor, Tank Coating	\$136,000	
	total	\$3,991,600.00

*see handout for detail

Marcus Langseth

Current Status and Challenges

- LDEO Perspective

- M.G. Langseth Conversion Status and Major Remaining Items
- M.G. Langseth Operations and Maintenance Issues
- Technical Support and Personnel Issues
- Schedule Overview and Planned Maintenance Periods
- Status of Facility Budget and NSF Audit
- Issues to be Addressed by MLSOC

- NSF Perspective

- MLSOC Perspective

Marcus Langseth

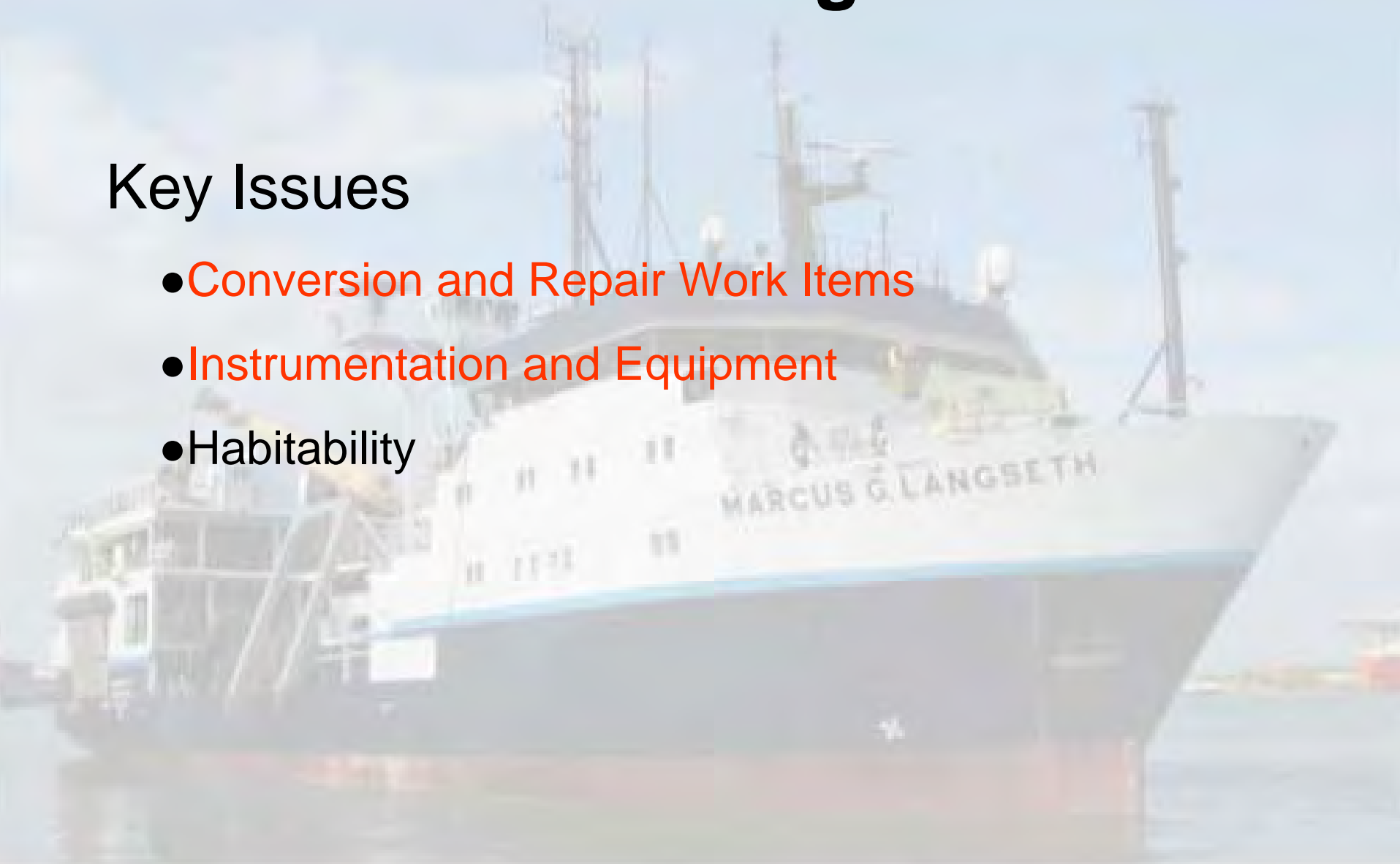
Issues to be Addressed by MLSOC

- Equipment Prioritization / Streamer (Day 2)
- Shakedown Plan (Day 2)
- Technical Manning Model (Afternoon)
- Short Term Work List Priorities (Afternoon)
- Operating with Decreasing Budgets
- AGU Workshop Planning

Marcus Langseth

Key Issues

- Conversion and Repair Work Items
- Instrumentation and Equipment
- Habitability



Weekly or Port Work Active Work List

Date: May 12 2008

Port (if applicable): Sea

General Comments

- Discuss Big Grinder Move
- Clean and Organize Tool Cabinets
- New Work Flow Training
- Test ME's @ 750 for Overheating
- Pay Attention to Humidity Log and Enter in Properly onto SpreadSheet**

General Maintenance

- 1.) Start LO Purifier and see if will work, In Progress
- 2.) Check HP Cutouts for AC and Reefer
- 6.) Check/Lube FCUs, Check Filters
- 12.) Change Racor Filters on Port Ariel

Electrical Maintenance

- 1.) Lamping

Weekly Work List

ITEM NUMBER	Who	Date	Date	Group	WORK DESCRIPTION	NOTES	Comments
E08H-AC-ACC-009				AC ACC	Trouble Fwd / Aft accom A/C	Capacity Control & TXV's problems	
E08H-AC-ACC-010				AC ACC	Repair siezed butterfly valve to Fwd A/C		
E08H-AC-ACC-011				AC ACC	Continue T.S. Fwd/AR Accom A/C		
E08L-AC-ACC-015				AC ACC	Replace Aft Accom AC Oil Drain Valve	the flats on the existing one is stripped	
E08H-AC-LAB-002				AC Lab	Find and Fix Leaks in #2 and #3 system, also clean #3 condenser		
E08H-AIR-001				AIR	Start Air Comp Running 9 Hours a Day	Why, dampers?	
E08H-AIR-002				AIR	Investigate Control Air Dryer		In Progress
E08H-AIR-003				AIR	Investigate Control Air Dryer	Possible leak	
E08L-Ariel-002				Ariel	Stbd #3 Cylinder (Throw #2) Leaking Oil	Need To Know How to Repair	
E08H-AUX-004				AUX	LO Purifier Operational	Test, If not will get Rep	New Feed Pump
E08H-AUX-007				AUX	Replace Disc P Gauge LO Purifier Feed Pump		
E08L-AUX-013				AUX	Test all Barrel Pps, install correct air fitting		
E08L-AUX-014				AUX	Weld coupling on Strainer to Aux Gen		
E08L-AUX-015				AUX	Test all Ener Pac Jacks		
E08H-Doc-006				Doc	Laminate and Post Procedures by Machinery	Evap, R/O, OWS, Etc	
E08H-Doc-011				Doc	Post Photo's of Quick Close Vlvs in Open, Closed and Tripped Position	Reduce Chornic Confusion	
E08H-Elect-023				Elect	Lamp up Hydraulic Indicator Lamps		In Progress
E08H-Elect-033				Elect	Bridge Signal Light Outlets P/S Bridge Deck	Need To Reference Past Work Done	
E08H-Elect-044				Elect	Properly Wire Supply for Fisher Valve Controller from UPS source		Bern is on it.
E08H-HVAC-004				HVAC	Install Screens Return Ducting to Derivent by Machine Shop	Hazard of Objects Getting Pulled In	
E08L-HVAC-010				HVAC	Weld brackets on Derivent Air System		
E08L-HYD-007				HYD	Core Winch Brake		
E08H-INV-001				INV	Ariel Compressors Inventory		In Progress
E08L-INV-003				INV	Lab AC Inventory		
E08L-INV-020				INV	Tubing	Consolidate as well	In Progress
E08L-INV-021				INV	Start and Working Air Comp Parts	Order what's Needed for complete overhaul	
E08L-M_Engine-006				M_Engine	Properly Label Panel Gauges on P/S M/E		
E08L-Piping-007				Piping	Investigate Galley Plumbing Problems		
E08L-Pumps-002				Pumps	Rebuild Removed Evap JW Pump	Need to Put in a PO for new pupmp	
E08H-TANKS-005				TANKS	Repair Tank Sounding System		In Progress
E08H-TANKS-008				TANKS	Replace Level Indicator Gauge New Tk Sounding System	Not in Range	New Gauge reads 300mm low. Need to Order
E08H-Vessel-003				Vessel	WT Door Pump Handle Holders		
E08H-Vessel-004				Vessel	Wet/Dry Lab Door Latch		
E08L-Vessel-027				Vessel	Mount (weld) spare Lab HVAC motor in Lab Fan Rm		

Weekly or Port Work Active Work List

Date: May 05 2008

Port (if applicable): Sea

General Comments

- Discuss Big Grinder Move
- Clean and Organize Tool Cabinets
- New Work Flow Training
- Test ME's @ 750 for Overheating
- Pay Attention to Humidity Log and Enter in Properly onto Spreadsheet

General Maintenance

- 1.) Start LO Purifier and see if will work
- 2.) Check HP Cutouts for AC and Reefer
- 3.) Test ME Injection Nozzles, Label, Wrap, and Stow Done
- 4.) Special Attention to ME Fuel Pump Parts Done
- 5.) Replace Deck Plate Outbd Port Ariel
- 6.) Check/Lube FCUs, Check Filters
- 7.) Clean Evap Ejector Pump Strainer
- 8.) Secure Deck in Lab Fan Room
- 9.) Weeklies
- 10.) Monthlies
- 11.) Change Belts on R/O
- 12.) Change Racor Filters on Port Ariel
- 13.) Clean Bunker Station Save-all
- 14.) Take Hour Meter Readings

Electrical Maintenance

- 1.) Lamping

Weekly Work List

ITEM NUMBER	Who	Date Start	Date Finish	Group	WORK DESCRIPTION	NOTES	Comments
E08H-AC-ACC-014				AC ACC	Exercise Room Cover Secures	It keeps falling off, and will be soon broken	
E08H-AIR-001				AIR	Start Air Comp Running 9 Hours a Day	Why, dampers?	
E08H-AIR-002				AIR	Investigate Control Air Dryer		
E08L-Ariel-002				Ariel	Stbd #3 Cylinder (Throw #2) Leaking Oil	Need To Know How to Repair	
E08H-Ariel-006				Ariel	Weigh Crosshead Nuts and Stamp Weights		
E08H-AUX-004				AUX	LO Purifier Operational	Test, If not will get Rep	New Feed Pump
E08H-AUX-007				AUX	Replace Disc P Gauge LO Purifier Feed Pump		
E08H-AUX-010				AUX	Open OWS and Clean		
E08H-Elect-023				Elect	Lamp up Hydraulic Indicator Lamps		In Progress
E08H-Elect-031				Elect	Lighting Room 307		
E08H-Elect-033				Elect	Bridge Signal Light Outlets P/S Bridge Deck	Need To Reference Past Work Done	
E08H-Elect-044				Elect	Properly Wire Supply for Fisher Valve Controller from UPS source		
E08H-HVAC-004				HVAC	Install Screens Return Ducting to Derivent by Machine Shop	Hazard of Objects Getting Pulled In	
E08L-HYD-007				HYD	Core Winch Brake		
E08H-HYD-016				HYD	Mount Control Box for HIAB		
E08H-INV-001				INV	Ariel Compressors Inventory		In Progress
E08L-INV-003				INV	Lab AC Inventory		
E08L-INV-020				INV	Tubing	Consolidate as well	
E08H-M Engine-013				M_Engine	Repair PME Turbo Water Wash Cyl. Button		
E08H-Piping-036				Piping	Change Steel Fittings Fwd AC SW Lines		
E08L-Piping-007				Piping	Investigate Galley Plumbing Problems		
E08L-Pumps-002				Pumps	Rebuild Removed Evap JW Pump	Need to Put in a PO for new pupmp	
E08H-TANKS-005				TANKS	Repair Tank Sounding System		
E08H-TANKS-008				TANKS	Replace Level Indicator Gauge New TK Sounding System	Not in Range	
E08H-Vessel-003				Vessel	WT Door Pump Handle Holders		
E08H-Vessel-004				Vessel	Wet/Dry Lab Door Latch		
E08H-M Engine-014				M_Engine	Repaired SME Fuel Leak From Load Tests		

ITEM NUMBER	To Weekly	Group	WORK DESCRIPTION	NOTES	WHO	ROM (K)	Priority	RQN	ON HAND SOURCE	REF1	REF2	REF3
E08H-AC-ACC-001		AC ACC	Repair Fan Coil Room 309	If New Motor Does Not Work, New Unit Try Generic- See If Works, Yes Order	DONE		08Maint-2	E08-093				
E08H-AC-ACC-002		AC ACC	FCU - Blower Equivalent	More	DONE		08Maint-2	E08-093				
E08H-AC-ACC-003		AC ACC	Sheetmetal Cover for FCU Movie		DONE		08Maint-2	NO				
E08H-AC-ACC-004		AC ACC	Fix Fill Connection to Charge Acc A/C	Leaking	DONE		08Maint-2	NO				
E08H-AC-ACC-005		AC ACC	Spare FCU	Possibly Room 309	Purchase		08Maint-2	E08-054				
E08H-AC-ACC-006		AC ACC	Replace Hydraulic C.C.Relay Aft AC	Short Cycles - Replace End Bel	Ship Crew		08Maint-2	E08-040				
E08H-AC-ACC-007		AC ACC	System Operation Refinement		Ship Crew		08Maint-2	NO				
E08H-AC-ACC-007		AC ACC	Aft AC Unit Oil into System Problem		DONE		08Maint-2					
E08H-AC-ACC-008		AC ACC	Leaks in Fwd AC	Find	Ship Crew		08Maint-2					
E08H-AC-ACC-009	5/12/2008	AC ACC	Trouble Fwd / Aft accom A/C	Capacity Control & TXV's problems	Ship Crew		08Maint-2					
			Repair siezed butterfly valve to Fwd									
E08H-AC-ACC-010	5/12/2008	AC ACC	A/C		Ship Crew		08Maint-2					
E08H-AC-ACC-011	5/12/2008	AC ACC	Continue T.S. Fwd/Aft Accom A/C		Ship Crew		08Maint-2					
E08L-AC-ACC-001		AC ACC	Fwd AC Capacity Control	75% Stuck - Replace End Bel	Ship Crew		08Maint-4	E08-040				
E08L-AC-ACC-002		AC ACC	Antifreeze to Lower Chill Temp		Ship Crew		08Maint-4	YES				
E08L-AC-ACC-003		AC ACC	Thermostatic Control Old FCU		Planning		08Maint-4	YES				
E08L-AC-ACC-004		AC ACC	FCU Heaters		Planning		08Maint-4	YES				
E08L-AC-ACC-005		AC ACC	Plastic Pipe Coupling Problem		Planning		08Maint-4	YES				
E08L-AC-ACC-006		AC ACC	Flush and Clean System				08Maint-4	NO				
E08L-AC-ACC-007		AC ACC	FCU Filter and Frame List	Replace in All Units Orderd			08Maint-4	E08-019				
E08L-AC-ACC-008		AC ACC	Install Amp Meters Acc AC				08Maint-4	E08-031				
E08L-AC-ACC-009		AC ACC	Change Chiller Gaskets Accom AC	Fwd Accom Intermittent Leak Possibly			08Maint-4	E08-079				
E08L-AC-ACC-010		AC ACC	Rebuild Next Accom AC Comp				08Maint-4	E08-125				
E08L-AC-ACC-011		AC ACC	Replace Original FCUs	On Going Work			09+	YES				
E08L-AC-ACC-012		AC ACC	Trouble Shooting Guide for Old FCL				08Maint-4		C/E			
E08H-AC-ACC-013		AC ACC	Repair FCUs rooms 201, 203, 308, 309, 313	Test fan motor runs very fast and noisy, but works, and plan to order more It keeps falling off, and will be soon	Ship Crew		08Maint-1	08-093	C/E			
E08H-AC-ACC-014		AC ACC	Exercise Room Cover Secures	broken	Ship Crew		08Maint-2	NO	C/E			
E08L-AC-ACC-015	5/12/2008	AC ACC	Replace Aft Accom AC Oil Drain Valve	the flats on the existing one is stripped	Ship Crew		08Maint-4	NO				
E08H-AC-LAB-001		AC Lab	Lab AC Tune UP	Bailey	Tech Rep		08Maint-1	E08-153				
E08H-AC-LAB-002	5/12/2008	AC Lab	Find and Fix Leaks in #2 and #3 system, also clean #3 condenser		Ship Crew		08Maint-1					
E08L-AC-LAB-001		AC Lab	Main Lab Temp Control	Replace Thermo?			08Maint-4	?				
E08L-AC-LAB-002		AC Lab	Flush System				08Maint-4	NO				
E08L-AC-LAB-003		AC Lab	Replace Damaged Bottoms to FCU	Check Container			08Maint-4	E08-041				
E08H-AIR-001	4/28/2008	AIR	Start Air Comp Running 9 Hours a Day	Why, dampers?			08Maint-2	?				
E08H-AIR-002	5/5/2008	AIR	Investigate Control Air Dryer				08Maint-2	YES				
E08H-AIR-003		AIR	Overhaul Start and Working Air Comps	Need Inv & Order Parts First			08Maint-2	YES				
E08L-AIR-001		AIR	Pipe ER Air to HP Manifold	Mammal Gun			08Maint-4	YES				
E08L-AIR-002		AIR	Trouble Shoot Fwd Working Air Comp				08Maint-4	YES				
E08L-AIR-003		AIR	Install Deck Air Compressor	Consider 500psi for Mammal			08Maint-4	YES				
E08L-AIR-004		AIR	Pipe in More Working Deck Air Connections				08Maint-4	YES				
E08L-AIR-005		AIR	Pipe Air to Steering Gear Room				08Maint-4	YES				
E08L-AIR-006		AIR	Install Air to Hydraulic Room				08Maint-4	YES				
E08L-AIR-007		AIR	Pipe New Deck Air to HP Manifold	Mammal Gun			08Maint-4	YES				
E08L-AIR-008		AIR	Get Operational HP Air to Service Air	Regulation			08Maint-4	NO				
E08L-AIR-009		AIR	Pipe Start Air Quick Close Vavles	As Originally Designed			08Maint-4	NO				
E08L-AIR-010		AIR	Most Isolation Valve On Start Air Bottle Leak, Replance Them	Valves are Metric and Will be a Difficult Job			08Maint-4	YES				

ITEM NUMBER	To Weekly	Group	WORK DESCRIPTION	NOTES	WHO	ROM (K)	Priority	RQN	ON HAND	SOURCE	REF1	REF2	REF3
E08L-Elect-046		Elect	Upgrade Lighting Machine Shop				08Maint-4	Yes		JMS290			
E08L-Elect-047		Elect	Lab				08Maint-4	Yes		JMS296			
E08L-Elect-048		Elect	Upgrade Lighting Port Lab				08Maint-4	Yes		JMS304			
E08L-Elect-049		Elect	Upgrade Lighting Wet Lab				08Maint-4	Yes		JMS308			
E08L-Elect-050		Elect	Upgrade Lighting Gun Shop				08Maint-4	Yes		JMS316			
E08L-Elect-051		Elect	Provide Source of Emerg Gen 110 volts to Engine Room Machine Shop				08Maint-4	Yes		JMS316			
E08H-H2O-001		H2O	RO and Evap Operational		DONE		08Maint-1	NO		Conversion	JMS	John D	Dolan
E08H-H2O-002		H2O	Change/Inspect Anodes on HW heater	purchase locally	Ship Crew		08Maint-2	Yes -loacl					
E08H-H2O-003		H2O	Multimedia Filter on R/C		Ship Crew		08Maint-2	YES	Shipping	Chief Eng			
E08H-H2O-004		H2O	Repair Leak on RO unit		Ship Crew		08Maint-2	NO					
E08H-H2O-005		H2O	Order Complete RO Spares		Ship Crew		08Maint-2	E08-135					
E08H-H2O-006		H2O	UV Purifier make operational		Ship Crew		08Maint-2	E08-014		JMS062			
E08H-H2O-007		H2O	Obtain New 150' of Potable Water Hose 1 1/2" Fire Hose		Ship Crew		08Maint-2	E08-151					
E08H-H2O-008		H2O	Install Potable Water Fill Valve		Ship Crew		08Maint-2	E08-152					
E08H-H2O-009		H2O	Water Testing		Ship Crew		08Maint-2	NO					
E08H-H2O-010		H2O	RO Pump Oil Sight Glass		Ship Crew		08Maint-2	E08-003					
E08H-H2O-011		H2O	Anodes in HW Heater		Ship Crew		08Maint-2	E08-150					
E08H-H2O-012		H2O	Evap New Chemical Meter Installation		DONE		08Maint-1	NO					
E08L-L20-001		H2O	New RO				08Maint-4	E08-149		JMS061			
E08L-L20-002		H2O	Replace pulleys on R/C				08Maint-4	E08-005					Dolan
E08L-L20-003		H2O	Fresh Water System Upper Decks	Need pumps and piping			2009+	YES		Conversion	OBS Group		
								E08-015					
								E08-033					
E08H-HVAC-001		HVAC	Damper Controls		Ship Crew		08Maint-2	E08-043					
E08H-HVAC-002		HVAC	Reinstall #1 supply motor		Ship Crew		08Maint-2	E08-051					
E08H-HVAC-003		HVAC	#4 Exhaust Fan	Was Working Inspect	DONE		08Maint-2	NO					
E08H-HVAC-003	4/21/2008	HVAC	Port Divivent Fan Guard Loose				08Maint-2	NO					
			Install Screens Return Ducting to Derivent by Machine Shop	Hazard of Objects Getting Pulled In	Ship Crew		08Maint-2	NO					
E08L-HVAC-001		HVAC	Ventilation Accom				08Maint-4	?					
E08L-HVAC-002		HVAC	Ventilation Galley				08Maint-4	?					
E08L-HVAC-003		HVAC	Pull Port Hyd Exhuast Blower/Rebuilt				08Maint-4	YES					
E08L-HVAC-004		HVAC	Pull Stbd Hyd Exhuast Blower/Rebuilt				08Maint-4	YES					
E08L-HVAC-005		HVAC	Pull Steering Gear Blower/Rebuilt				08Maint-4	YES		JMS047			
E08L-HVAC-006		HVAC	Get Direvent System Going Stbd	Parts Fwd of Bkhd 58			08Maint-4	NO					
E08L-HVAC-007		HVAC	Fix Water Fountains				08Maint-4	?					
			Repair Lagging on Chill Water Piping over Stbd M/E	USCG approved material			08Maint-4	YES					
E08L-HVAC-008		HVAC	Clean All Ventilation Ducts				08Maint-4	YES		JMS023			
E08L-HVAC-009		HVAC	Weld brackets on Derivent Air System				08Maint-4	YES					
E08H-HYD-001		HYD	Organize/Inventory Hydraulic Room		Ship Crew		08Maint-2	NO					
E08H-HYD-002		HYD	Hydraulic Control Lables		Ship Crew		08Maint-2	NO		Conversion	JMS	Dolan	
E08H-HYD-003		HYD	Hydraulic Hose Program		Contractor		08Maint-2						
E08H-HYD-004		HYD	Hydraulic Remote Controls		TECH		08Maint-2	YES		Conversion	NCS	Dolan	
E08H-HYD-005		HYD	Hydraulic Leak -	Actuator WTD Hydraulics Room	Ship-Hose Doctor		08Maint-2	E08-163					
				Bock to Tugger Winch Aft of Stbd Streamer Reel, Streamer Deck									
E08H-HYD-006		HYD	Hydraulic Leak -		Ship-Hose Doctor		08Maint-2	E08-163					
E08H-HYD-007		HYD	Hydraulic Leak -	HIAB Fitting	Ship-Hose Doctor		08Maint-2	E08-163		Eng/Gunner			
E08H-HYD-008		HYD	Hydraulic Leak -	HIAB Winch	Ship-Hose Doctor		08Maint-2	E08-163		Eng/Gunner			
E08H-HYD-009		HYD	Hydraulic Leak -	Bow Crane	Ship-Hose Doctor		08Maint-2	E08-163		Eng/Gunner			

Category	ITEM NUMBER	e Person	Group	Group	WORK DESCRIPTION	IMPETUS	ROM (K)	PERIOD	C	PO REQUIRED	ON HAND	OF ITEM	REFERENCE 1	REFERENCE 2	REFERENCE 3
SHAKEDOWN	SHK-OMO-A001		OMO	Boats	Workboat Repair		A	08-Maint1	Yes	Yes					
	SHK-OMO-A002		OMO	Boats	Workboat Davit Repair		A	08-Maint1	Yes	Yes					
	SHK-OMO-A003		OMO	Struct	Rack Support	support	A	08-Maint1	Yes	Yes		Conversion	Holbrook1-205	Dolan	
	SHK-OMO-A004		OMO		Subcontractors	repeat for Mutter	A	08-Maint1	Yes				Holbrook1-108		
	SHK-OMO-A005		OMO	Boats	Rescue Boat VHF		A			SCI-ACQ-095					
	SHK-ACQ-A001		ACQ	Boats	Workboat PosNet GPS	Install/ Integrate	A	08-Maint1		NO					
	SHK-ACQ-A002		ACQ	Boats	Workboat VHF	Installl	A	08-Maint1		Yes					
	SHK-ACQ-A003		ACQ	Stream	Streamer Repair Material		A			SCI-ACQ-096					
	SHK-ACQ-A004		ACQ	Stream	Streamer Tension Units	System working	A	08-Maint1				NCS			
	SHK-ACQ-A005		ACQ	Bird	Bird Battery Replacement		A	08-Maint1		SCI-ACQ-072					
	SHK-ACQ-A006		ACQ	Bird	Bird Repair		A	08-Maint1		SCI-ACQ-038					
	SHK-ACQ-A007		ACQ	Bird	Spare Digicourse Birds	Ewning	A	08-Maint1		SCI-ACQ-088		Dave-NCS			
	SHK-ACQ-A008		ACQ	Acous	Sonardyne	Ranging Working	A	08-Maint1		NO		Shakedown	NCS	Dolan	
	SHK-ACQ-A009		ACQ	Acous	Acoustic Inventory		A			NO					
	SHK-ACQ-A010		ACQ	Posnet	POSNET repairs		A	08-Maint1		RA5YVE					
SHK-ACQ-A011		ACQ	Posnet	Gun GPS Cables		A	08-Maint-2								
SHK-ACQ-A012		ACQ	Posnet	POSNET working		A	08-Maint1								
SHK-ACQ-A013		ACQ	Stream	Repair Pneumatic Spoolers		A	08-Maint1		SCI-GUN-014						
SHK-IT/N-A001		IT/NAV	Display	Spectra Bridge Display		A	08-Maint-2		YES		ON HAND	NCS			
SHK-IT/N-A002		IT/NAV	Display	Bird Display Bridge		A	08-Maint-2		YES		ON HAND				
SHK-IT/N-A003		IT/NAV	IT	Printer Paper		A			SCI-IT-098						
SHK-GUN-A001		GUN	Towing	Resupply		A	08-Maint1		SCI-GUN-061						
SHK-GUN-A002		GUN	Towing	Inventory		A	08-Maint1		NO						
SHK-GUN-A003		GUN	Towing	Repair Gear Vane Booms		A	08-Maint1		YES						
SHK-OMO-B001		OMO	Boats	List		B	08-Maint1	Yes	Yes						
SHK-ENG-B001		ENG	RR	RR 10-12V DP Amps		B	08-Maint1	Yes	E08-140			Eng			
SHK-ACQ-B001		ACQ	Nav	DP driven from Spectra		B	08-Maint1		NO			Conversion	John D		
SHK-ACQ-B002		ACQ	Nav	DP calibrated for towing		B	08-Maint1		E08-143						
SHK-ACQ-B003		ACQ	Control	DigiCourse Spare LIU		B	08-Maint1		MGL-GUN-101			NCS			
SHK-ACQ-B004		ACQ	Control	Board for DMU		B	08-Maint1		MGL-GUN-101			NCS			
SHK-ACQ-B005		ACQ	Control	Spare DigiCourse Modem		B	08-Maint1		MGL-GUN-101						
SHK-ACQ-B006	planning	ACQ	Stream	Load Spare Tow Leader		B	08-Maint1		shipping/support						
SHK-ACQ-B007	planning	ACQ	Stream	Sections		B	08-Maint1		shipping/support						
SHK-ACQ-B008	planning	ACQ	Stream	Repair STUs		B	08-Maint1		SCI-ACQ-087						
SHK-ACQ-B009		ACQ	Stream	SRD and Collars		B	08-Maint1		Yes			Inst-08			
SHK-ACQ-B010		ACQ	Stream	Fisher Valve Display		B	08-Maint1		NO						
SHK-ACQ-B011		ACQ	Stream	Manifold Pressure Display		B	08-Maint1		SCI-ACQ-097						
SHK-ACQ-B012		ACQ	Stream	Streamer Boot Repair Kits		B	08-Maint1		Yes			Inst-08			
SHK-ACQ-B013		ACQ	Stream	Vane Tension		B	08-Maint1		YES						
SHK-IT/N-B001	Jeff-rqn	IT/NAV	Acous	Sonardyne Coil on Tail Buoy position		B	08-Maint1		SCI-ACQ-082						
				Test Spare Sonardyne		B									
SHK-IT/N-B002		IT/NAV	Acous	Processor		B	08-Maint1		NO			NCS			
SHK-IT/N-B003		IT/NAV	Bird	Digishot Logger Integration		B	08-Maint1		NO						
SHK-IT/N-B004		IT/NAV	Record	RTNU		B	08-Maint1		No			Dave-NCS			
SHK-IT/N-B005		IT/NAV	Nav	GPS/acoustic Gun Splitters		B			SCI-GUN-099						
SHK-IT/N-B006	Jeff	IT/NAV	Acous	Sonardyne Spare I/O Board	7784 processor	B	08-Maint1		SCI-NAV-100			NCS			
SHK-IT/N-B007	Jeff	IT/NAV	Acous	Board	7784 processor	B	08-Maint1		SCI-NAV-100			NCS			
SHK-IT/N-B008	Jeff	IT/NAV	Acous	Card		B	08-Maint1		SCI-NAV-100			NCS			
SHK-GUN-B001		GUN	Gun	Sound Source Depth and Pressure		B	08-Maint1		07SCI-ACQ-05C			Inst-08			

Category MUTTER	ITEM NUMBER	e Person	Group	Group	WORK DESCRIPTION	IMPETUS	ROM (K)	PERIOD	C	PO REQUIRED	ON HAND	OF ITEM	REFERENCE 1	REFERENCE 2	REFERENCE 3	
	3D-OMO-A001	AI	OMO		Subcontractors	Shakedown	A	08-Maint1					Holbrook1-108			
	3D-OMO-A002		OMO		Watchstanders		A	08-Maint1		E08-107/108			Holbrook1-107			
	3D-OMO-A003		OMO	HVAC	Instrument Room Partiton	Fails	A	08Maint-2		E08-107/108	107 YES 108 NO		Holbrook1-504	Dolan		
	3D-OMO-A004		OMO	HVAC	Air Drier Instrument Room	If required	A	08Maint-2		Yes						
	3D-OMO-A005		OMO	Mam	NMFS Hotline		A	08Maint-2		NO		Cummings	Holbrook1-304			
	3D-OMO-A006		OMO	Mam	Animal Carcass Wording		A	08Maint-2		NO		Cummings	Holbrook1-305			
	3D-ENG-A001		ENG	Elect	Rm	Power Distribution	A	08Maint-2		NO		Eng	Holbrook1-206			
	3D-ENG-A002		NG	Elect	Rm	Outlet Labels	A	08Maint-2		NO		Eng	JMS			
	3D-ACK-A001		ACQ	Stream	Syntrak Spares Testing		A	08Maint-2		NO		Integration	Dolan			
	3D-ACK-A001	Jeff	ACQ	Stream	Tail Buoy Lights		A	1k	08Maint-2	MGL-ACQ-074		Gunner				
	3D-ACK-A002		ACQ	Stream	Replacement		A	08Maint-2		NO						
	3D-ACQ-A003		ACQ	Stream	Tail Stretch Sections		A	08Maint-2					NCS			
	3D-ACK-A004		ACQ	Stream	Head Stretch Sections		A	08Maint-2					NCS			
	3D-ACK-A005		ACQ	Stream	Database		A	08Maint-2		NO						
	3D-ACK-A006		ACQ	Stream	Find Home STIC Cables		A	08Maint-2		NO						
	3D-ACQ-A007		ACQ	Stream	Sections		A	28k	08Maint-2	In Process			Tech			
	3D-ACQ-A008		ACQ	Bird	Bird Batteries		A	40k	08Maint-2	YES			Gunner			
	3D-ACQ-A009		ACQ	Accous	Accoustic Batteries		A	3k	08Maint-2	YES			Gunner			
	3D-ACQ-A010		ACQ	Accous	Acoustic Floats		A	08Maint-2		YES			Acq			
	3D-ACQ-A011		ACQ	MCS	Deployment Checklist		A	08Maint-2		NO						
	3D-ACQ-A012		ACQ	MCS	Recovery Checklist		A	08Maint-2		NO						
	3D-ACQ-A013		ACQ	MCS	Deploy and Recover Procedure Manual		A	08Maint-2		NO						
	3D-ACQ-A014	Robert/Jeff	ACQ	Coms	Ops	base	A	08Maint-2		YES			Captain	NCS	Dolan	OBS Group
	3D-ACQ-A015		ACQ	Towing	Remote Control Boxes	Potential Big Job	A	08Maint-2		YES			NCS			
	3D-ACQ-A016		ACQ	Ocean	EM120 Board Replacement		A	08Maint-2		NO						
	3D-ACQ-A017		ACQ	Ocean	String 3 Reel Solenoid		A	08Maint-2		NO						
	3D-ACQ-A018		ACQ	Ocean	Serial cable for TSG		A	08Maint-2		NO						
	3D-ACQ-A019		ACQ	Ocean	Order XBTs		A	08Maint-2		NO						
	3D-ACQ-A020		ACQ	Ocean	Maggie Operational		A	08Maint-2		NO			Conversion	John D	Dolan	
	3D-ACQ-A021		ACQ	Ocean	Fix Gravimeter		A	08Maint-2		YES			Tech	John D	Dolan	
	3D-ACQ-A022	Jeff/John	ACQ	Record	Frequency Notch Data	False report	A	08Maint-2		NO				Holbrook2		
	3D-ACQ-A023		ACQ	Ocean	Serial cable for PCO2		A	08Maint-2		NO						
	3D-IT/NAV-A001		IT/NAV	Bird	Digishot Coms with Spectra		A	08Maint-2		NO			Dave-NCS	John D		

3D-IT/N-A002	RJS / AJ	IT/NAV	MCS	Verification		A	08Maint-2	YES		O	NCS	Al Hise
3D-IT/N-A003		IT/NAV	Display	Back Deck Monitor Spectra		A	08Maint-2	YES	ON HAND	NCS		
3D-IT/N-A004		IT/NAV	Display	Back Deck Monitor Birds		A	08Maint-2	YES	ON HAND	NCS		
3D-IT/N-A005		IT/NAV	Record	Spectra second machine		A	08Maint-2	YES		NCS		
3D-IT/N-A006		IT/NAV	Record	Seisnet Redundancy		A	08Maint-2	YES		IT	Holbrook1-204	Dolan
3D-IT/N-A007		IT/NAV	Record	Order Tapes	3590/SDLT/DDS	A	08Maint-2	SCI-ACQ-092				
3D-IT/N-A008		IT/NAV	Record	SDLT Repair	2 of 3 down	A	08Maint-2	SCI-ACQ-093				
3D-IT/N-A009		IT/NAV	Record	Spare XRaid Drives		A	08Maint-2	SCI-ACQ-094				
3D-IT/N-A010		IT/NAV	Record	Sonardyne to Spectra		A	08Maint-2	NO				
3D-IT/N-A011		IT/NAV	IT	SIO Sies Install		A	08Maint-2	NO				
3D-IT/N-A012		IT/NAV	IT	Copy and Report on Compute		A	08Maint-2	NO				
3D-IT/N-A013		IT/NAV	IT	Tape Drives on MCS		A	08Maint-2	NO				
3D-IT/N-A014		IT/NAV	IT	Order Paper		A	08Maint-2	SCI-IT-09E				
3D-IT/N-A015		IT/NAV	IT	Thermal Printers on MCXS		A	08Maint-2	NO				
3D-IT/N-A016		IT/NAV	IT	RTNu GPS splitter install		A	08Maint-2	NO				
3D-IT/N-A017		IT/NAV	IT	SAN raw and processed seismic NFS export		A	08Maint-2	NO				
3D-IT/N-A018		IT/NAV	IT	MCS/Compute heads port side Mlab		A	08Maint-2	NO				
3D-IT/N-A019	John D	IT/NAV	Record	SIOSeis/brute stack	Carbotte - EPR leg	A	08Maint-2	NO		Acq	Holbrook1-202	
3D-IT/N-A020		IT/NAV	IT	Inmarsat F as Back UP		A	08Maint-2	NO		conversion		
3D-GUN-A001		GUN	Towing	Tow Ropes		A	4k	08Maint-2	YES	Gunner		
3D-GUN-A002		GUN	Towing	Towed Array Spares		A	10k	08Maint-2	08SCI-Gun-102	Gunner		
3D-GUN-A003		GUN	Gun	Gun Jumper Spares		A	15k	08Maint-2	YES	Acq		
3D-GUN-A004		GUN	Gun	2 1500 Guns		A	28k	08Maint-2	YES	Gunner		
3D-GUN-A005		GUN	Gun	1900 Spares - 2nd batch		A	3.5k	08Maint-2	YES	Gunner		
3D-GUN-A006		GUN	Gun	1500 Spares		A	7k	08Maint-2	YES	Gunner		
3D-GUN-A007	Jeff	GUN	Gun	Solenoid Repair Upgrade		A	8k	08Maint-2	YES	Gunner		
3D-GUN-A008		GUN	SS	Rails		A	08-Maint2	NO		Gunner		
3D-GUN-A009		GUN	SS	Grease PM Schedule		A	08-Maint2	NO		Gunner		
3D-GUN-A010		GUN	SS	GCM SS Guards		A	08-Maint2	YES		Gunner		
3D-GUN-A011		GUN	SS	Vane Upright Guards Port		A	08-Maint2	YES	ONBOARD	Gunner		
3D-GUN-A012		GUN	SS	Order Gun Modules		A	08-Maint2	08SCI-Gun-105				
3D-GUN-A013		GUN	SS	Wirelock Resin Kits Replace		A	08-Maint2	08SCI-Gun-102				
3D-GUN-A014		GUN	Air	Overhaul 4 Whitey Valves		A	08-Maint2	08SCI-Gun-117				
3D-GUN-A015		GUN	Air	Nuts for Whitey Valves		A	08-Maint2	YES				

Category	ITEM NUMBER	Person	Group	Group	WORK DESCRIPTION	IMPETUS	ROM (K)	PERIOD	C	PO REQUIRED	ON HAND	OF ITEM	REFERENCE 1	REFERENCE 2	REFERENCE 3
	SCI-ACQ-A-001		ACQ	c	Additional Acoustic Pods			2009+		YES		NCS			
	SCI-ACQ-A-002		ACQ	c	Acoustic Transponder		>	2009+		YES		NCS			
	SCI-ACQ-A-003		ACQ	Bird	Bird Upgrade Path					INSTRUM 0€		Inst-08			
	SCI-ACQ-G-007		ACQ	I	Readout							Conversion	John D		
	SCI-ACQ-G-001		ACQ	I	Electronic Test Equipment		10k	08Maint-2		Yes		Inst-08			
	SCI-ACQ-G-008		ACQ	I	Oceanographic Winch Logs							Ops	JMS		
	SCI-ACQ-G-009		ACQ	I	PCO2							Taro	Dolan		
	SCI-ACQ-G-010		ACQ	I	MET	On Bridge						Conversion	Dolan		
	SCI-ACQ-G-012		ACQ	I	Get ADCP operational										
	SCI-ACQ-G-013		ACQ	I	New RDF Antenna	Remove Old									
	SCI-ACQ-G-014		ACQ	I	Back up Gyro								JMS-071		
	SCI-ACQ-G-015		ACQ	I	CTD Slip Ring								JMS-074		
	SCI-ACQ-G-016		ACQ	I	Maggie Winch								JMS-134		
	SCI-ACQ-G-006		ACQ	I	Controls	and A Frame							JMS-222		
	SCI-ACQ-G-004		ACQ	I	PTZ Operational Dry Lab			08Maint-1				Conversion	John D		
	SCI-ACQ-G-003		ACQ	I	CCTV Finished			08Maint3				conversion	OBS Group		
	SCI-ACQ-G-002		ACQ	I	Camera System Finished			08Maint3				conversion	Holbrook1-408		
	SCI-ACQ-M-001	Meagan	ACQ	al	New PAM			08Maint-2		MGL-Mam-084		Instrum	Holbrook1-302		
	SCI-ACQ-M-002		ACQ	al	PAM testing procedure	units test on deck							Holbrook1-303	JMS076	
	SCI-ACQ-O-001		ACQ	Ocean	Replacement SBP							Inst-08			
	SCI-ACQ-O-002	New	ACQ	Ocean	Maggie winch	New Winch			08Maint-2			Shipyard	Holbrook1-703		
	SCI-ACQ-O-003		ACQ	Ocean	Wiring				08Maint-2						
	SCI-ACQ-O-004		ACQ	Ocean	Real Time Sound Velocity	need better temp			08Maint-2			Conversion	John D		
	SCI-ACQ-O-005		ACQ	Ocean	SBP 120				2009+						
	SCI-ACQ-O-006		ACQ	Ocean	New ADCP							Inst-08	JMS260		
	SCI-ACQ-O-007		ACQ	Ocean	EM122 Upgrade		5k	2009+							
	SCI-ACQ-O-008		ACQ	Ocean	Speedlog	crosstrack error no relationship to Tension									
	SCI-ACQ-S-002		ACQ	Stream	installation							Nav			
	SHK-ACQ-005	planning	ACQ	Stream	Streamer Sections 1 Repair				08-Maint1						
	SCI-ACQ-S-001		ACQ	Stream	Retermiante Lead-Ins				end08/09						
	SCI-ACQ-S-003		ACQ	Stream	Replacement	Vegetable Oil									
	SCI-ACQ-S-004		ACQ	Stream	Streamer Repairs Batch 2										
	SCI-ACQ-S-005		ACQ	Stream	2D Nav System										
	SCI-IT-D-001		IT/NAV	Display	Visualization Screens					YES	Inst-08	John D	Dolan		
	SCI-IT-D-002		IT/NAV	Display	Dry Lab Navigation Displays							Inst-08			
	SCI-IT-I-002		IT/NAV	IT	Large Format Plotter							Conversion	OBS Group		
												Inst-08			

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Science Items

- Test Cruise (Positioning / Towing / Practice / Refine Procedures)
- SRDs
- Back Deck Communications
- Bridge Displays
- Spectra Back-Up
- Test all Syntrak Spares and 3590s
- Spare Streamers and Lead-In
- Gun Positioning
- Consumables
- Bird Repairs



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Engine List

- Engine Load Capacity
- AC Service - Final Humidity Determination
- Work Boat and Davit
- Rack Support
- OWS / RO / LO Purifier / Fisher Valve
- Hose – Deck Machinery – Engine Room
- Spare Parts / Requisitions



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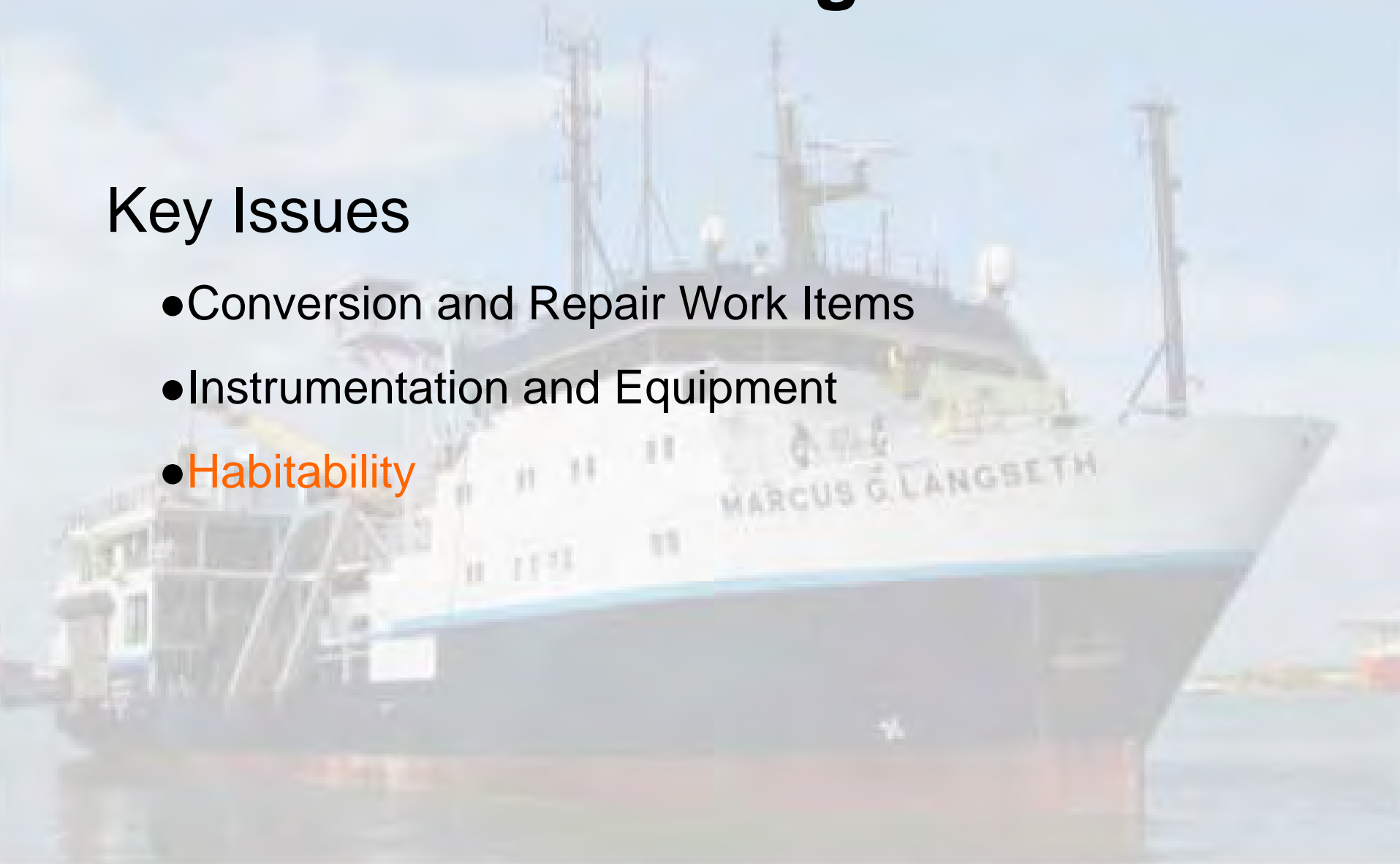
Deck (Habitability) List

- Ship Appearance and Cleanliness
- Room 309 Main Deck Port Side
- Movie Room Seating
- Satellite TV Reception- Antenna and Service
- Galley Sink
- Repair/replace European Faucets, Mix valves, Toilets
- Replace Stateroom Carpeting
- B Deck Furnishing as Required e.g. Couches, Chairs
- Touch Up All Disturbed Interior Surfaces, Joiner Work
- Revised Stateroom Planning – Clusters

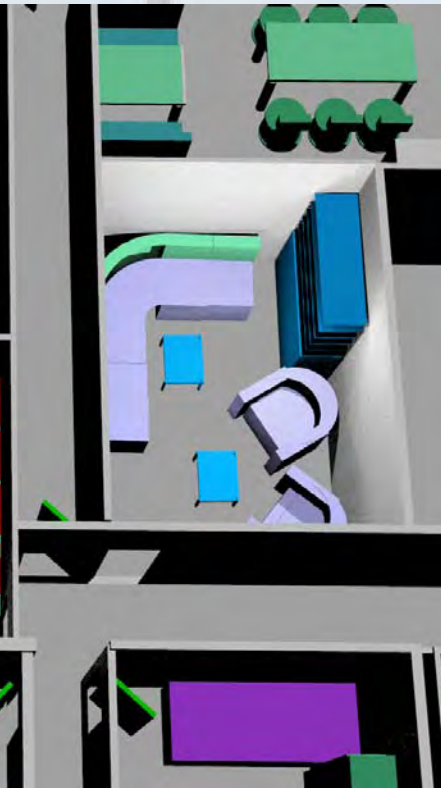
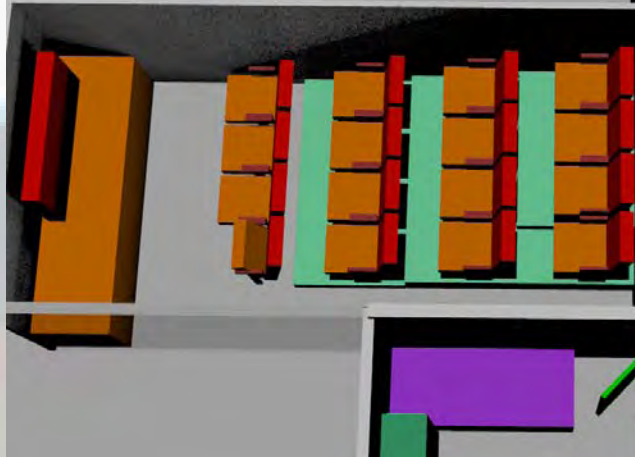
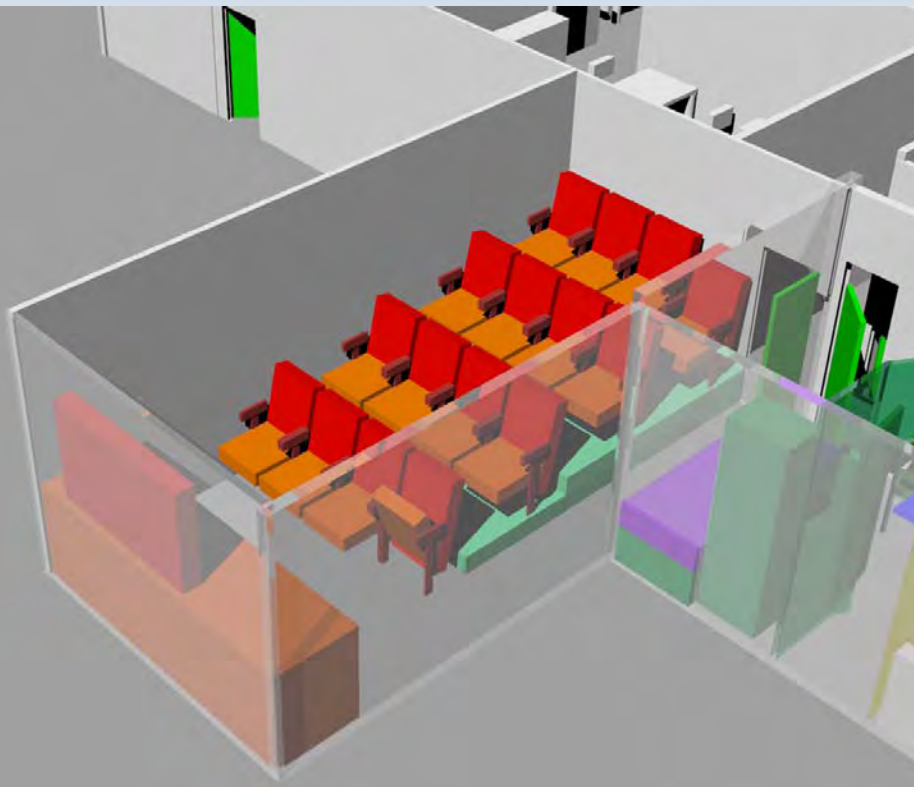
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Key Issues

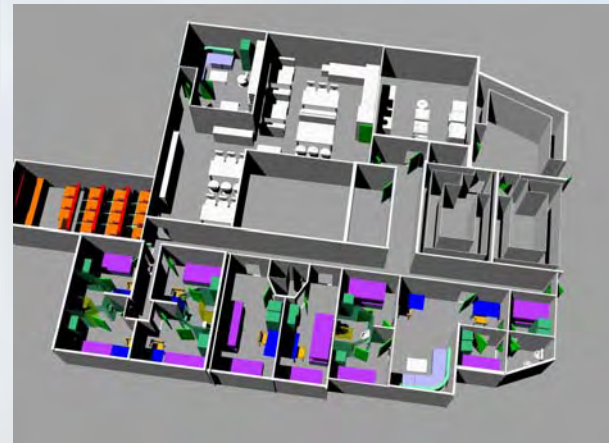
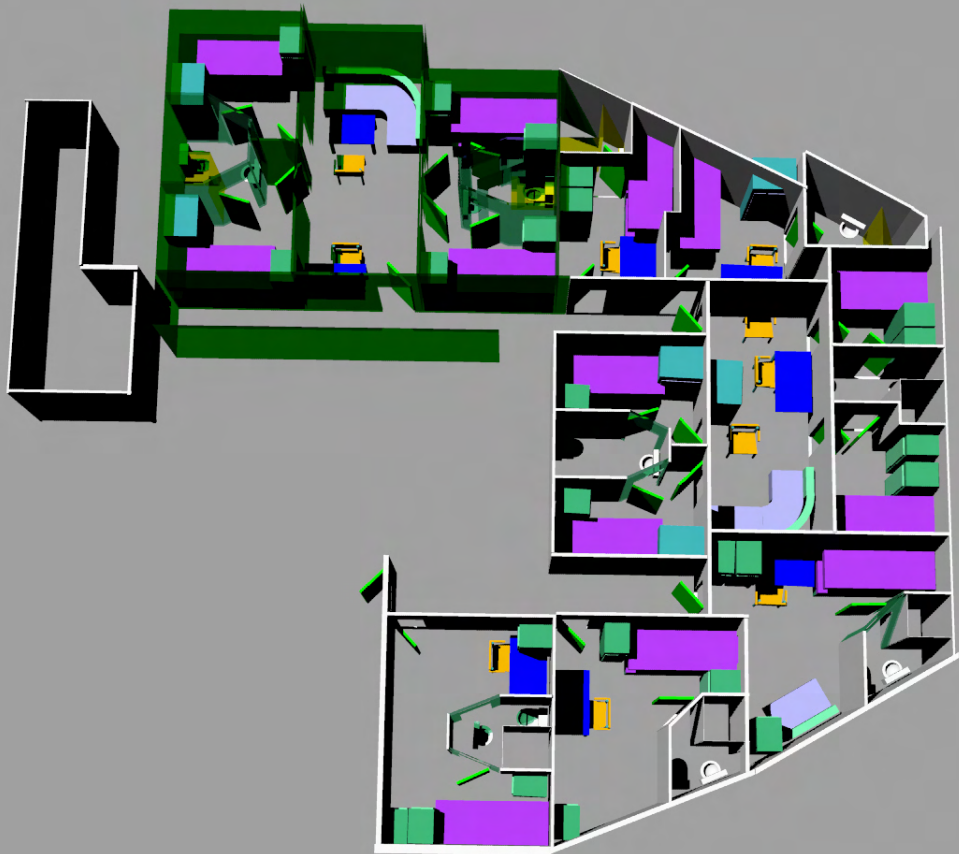
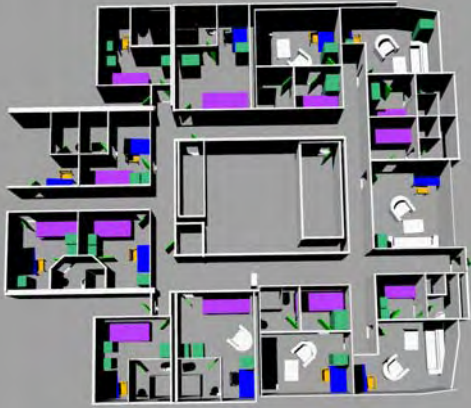
- Conversion and Repair Work Items
- Instrumentation and Equipment
- **Habitability**



Habitability Big Issues



Habitability Big Issues

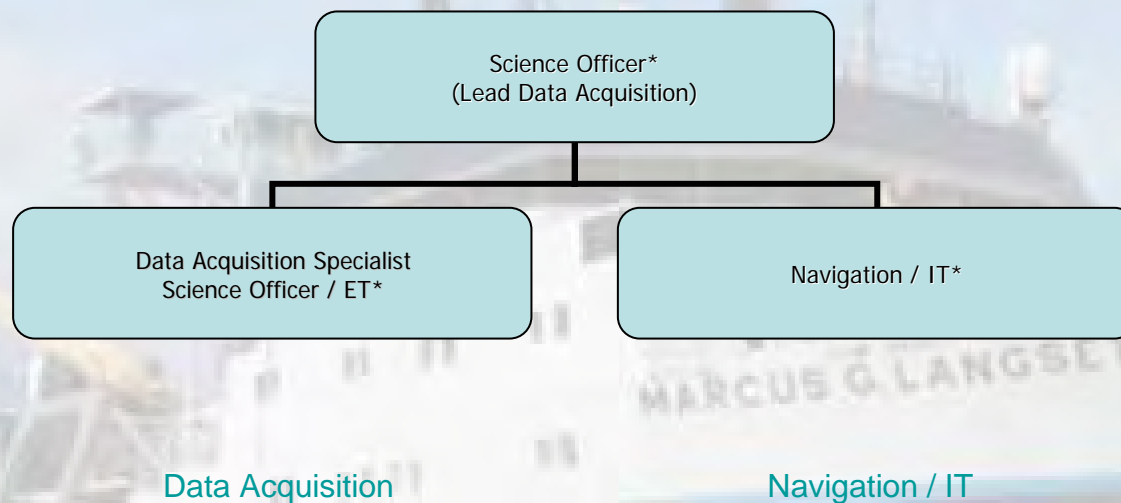


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Personnel and Technical Support

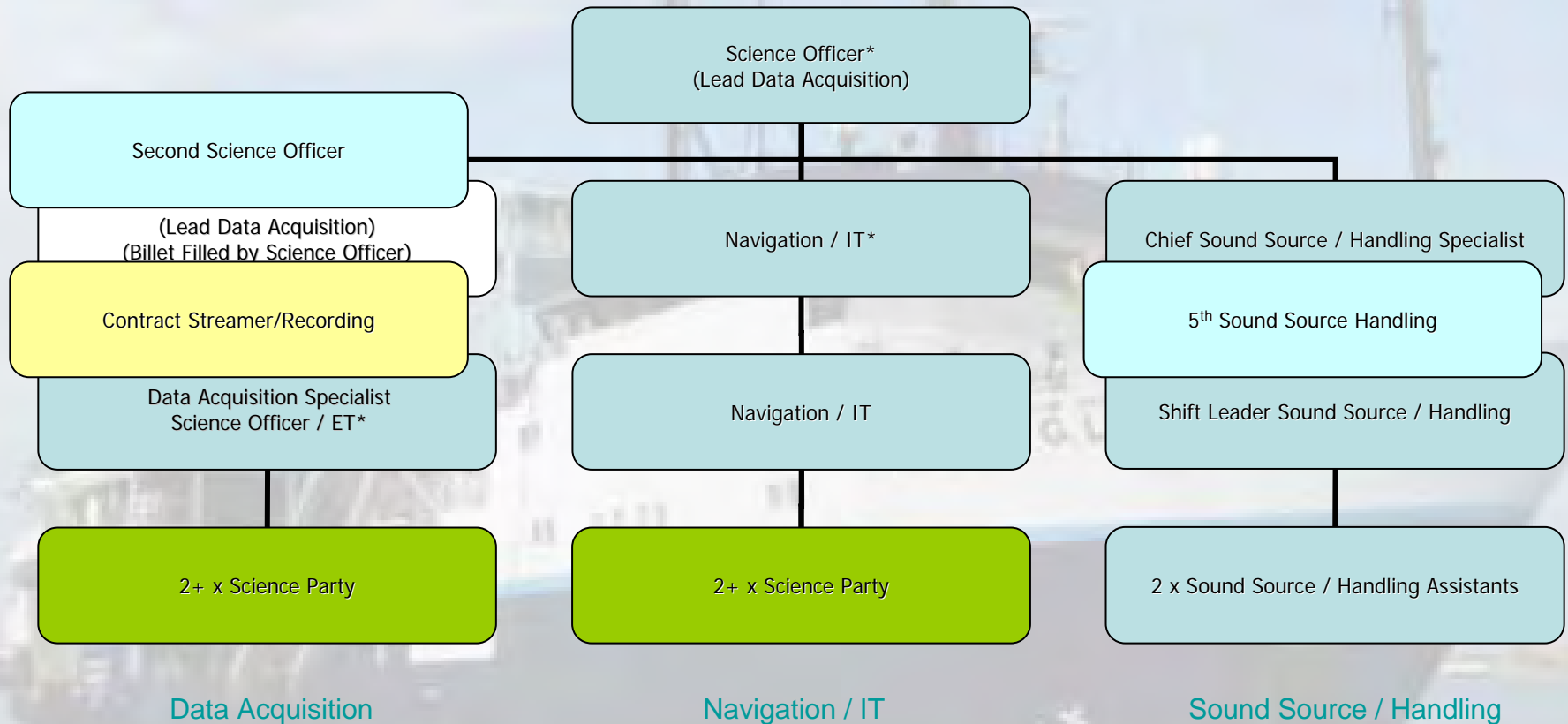
- Recommendations for Standard Tech Staffing
- Key Personnel and Plans for Recruitment/Retention
- Plans for Review/Promotion Pathways of Technical Staff
- Plans for Training for Technical Staff
- Strategy for Supporting Next Year's Cruises
- Provide Input on Support to be Provided Ashore/Online and Onboard for Data Acquisition Planning, Collection and Processing
- OMO

R/V Langseth Basic at Sea Technical Staff



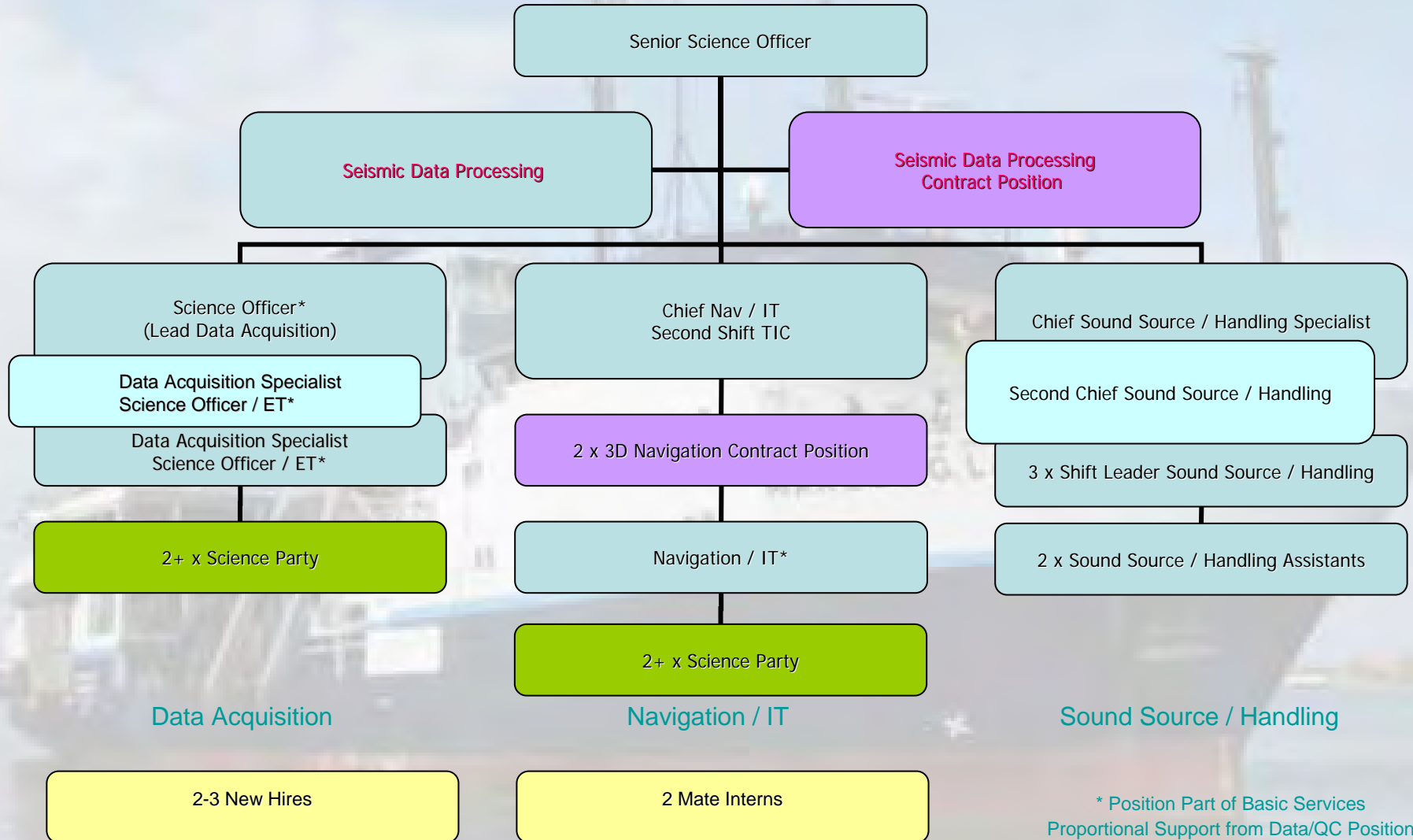
* Position Part of Basic Services
Proportional Support from Data/QC Position

R/V Langseth 2D MCS (3.1) 2008



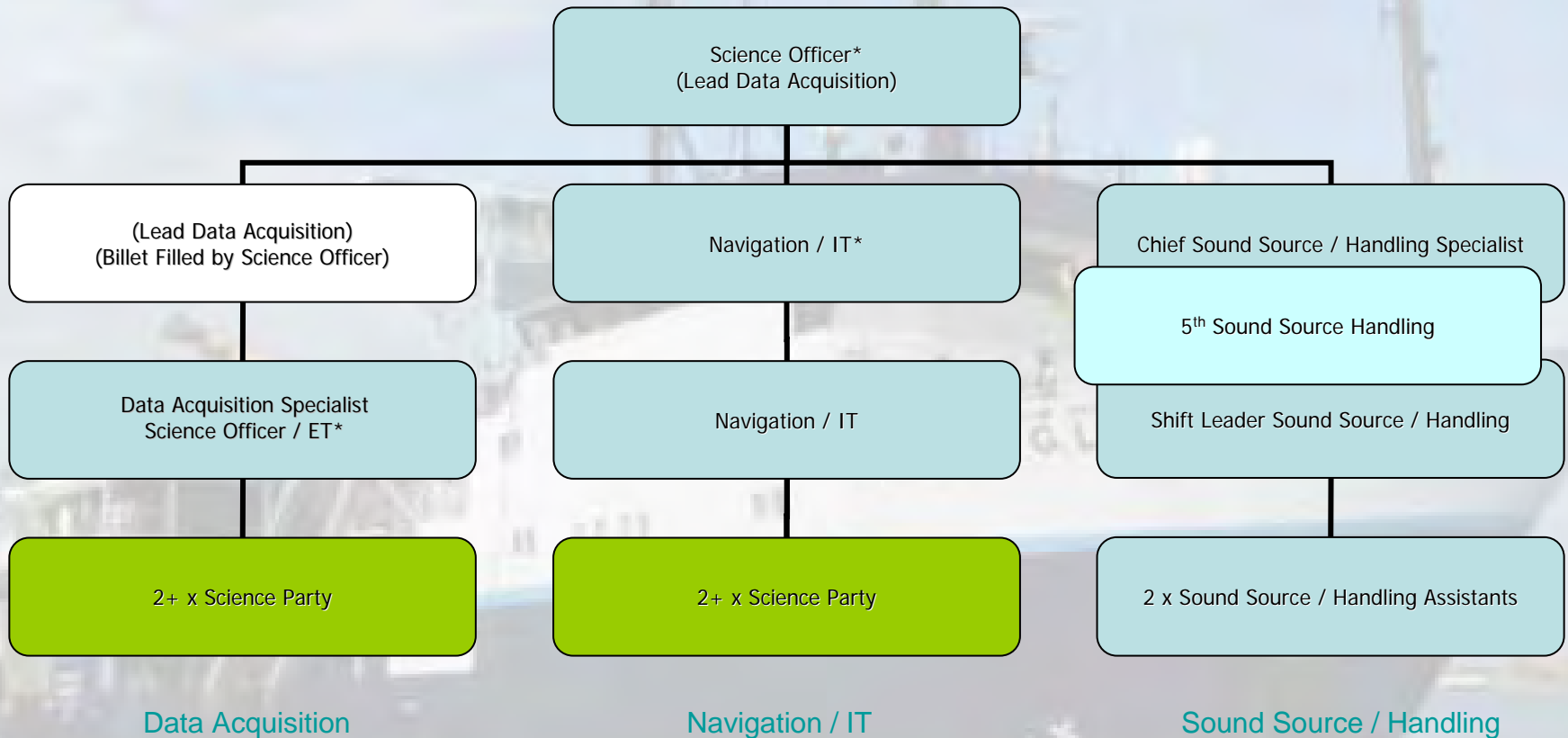
* Position Part of Basic Services
Proportional Support from Data/QC Position
Mammal Observation Under Separate Proposal

R/V Langseth 3D MCS (3.2) at Sea Technical Staff



* Position Part of Basic Services
Proportional Support from Data/QC Position
Mammal Observation Under Separate Proposal

R/V Langseth Sound Source Only (3.3) at Sea Technical Staff



* Position Part of Basic Services
Proportional Support from Data/QC Position
Mammal Observation Under Separate Proposal

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		3	13	14	24	15	24	10	19	18	23	11	21	17	29	25	1	26							
		Galveston Texas	Limon Panama		Limon Caldera Panama Panama		Caldera Panama		Manzanillo Mexico		Maint	3D MCS Mutter 46		2D MCS Gulick 28		Sound Source Only Toomey 26		Maint							
		Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec												
Management/Shore Support (M)		<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">Current Employee</div> <div style="border: 1px solid black; padding: 2px;">Looking to Hire</div> <div style="border: 1px solid black; padding: 2px;">Contract</div> <div style="border: 1px solid black; padding: 2px;">Other</div> </div>																				Total of Quarter Months at Sea			Ashore Months
Langseth (L)	Special Oversight Shift 1																								
Robert AJ	TIC/AOQ TIC/NAV	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">TIC/NAV</div> <div style="border: 1px solid black; padding: 2px;">TIC/NAV</div> <div style="border: 1px solid black; padding: 2px;">SSO</div> <div style="border: 1px solid black; padding: 2px;">SSO</div> <div style="border: 1px solid black; padding: 2px;">TIC/NAV</div> <div style="border: 1px solid black; padding: 2px;">TIC/NAV</div> <div style="border: 1px solid black; padding: 2px;">SSO</div> <div style="border: 1px solid black; padding: 2px;">SSO</div> <div style="border: 1px solid black; padding: 2px;">TIC/NAV</div> <div style="border: 1px solid black; padding: 2px;">SSO</div> </div>																				16	16	16	16
Ted Kocinski Ben McKiernan	Acquisition Shift 1 Science Officer 1 Acquisition Specialist	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">Science Officer 1</div> <div style="border: 1px solid black; padding: 2px;">Science Officer 1</div> <div style="border: 1px solid black; padding: 2px;">SO1</div> <div style="border: 1px solid black; padding: 2px;">SO1</div> <div style="border: 1px solid black; padding: 2px;">SO1</div> <div style="border: 1px solid black; padding: 2px;">Aeq Sp 1</div> <div style="border: 1px solid black; padding: 2px;">Aeq Sp 1</div> <div style="border: 1px solid black; padding: 2px;">Aeq Sp 1</div> <div style="border: 1px solid black; padding: 2px;">Aeq Sp 1</div> </div>																				26	24	20	20
TEN TBN	Science Officer Acquisition Specialist	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">NEW</div> <div style="border: 1px solid black; padding: 2px;">SO2</div> <div style="border: 1px solid black; padding: 2px;">ACQ SP 2</div> <div style="border: 1px solid black; padding: 2px;">SO 2 (NEW)</div> <div style="border: 1px solid black; padding: 2px;">ACQ SP 2</div> </div>																				14	13	13	14
Lance Dolan Andrew	Lance Dolan Andrew	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">Lance</div> <div style="border: 1px solid black; padding: 2px;">Lance</div> <div style="border: 1px solid black; padding: 2px;">NEW</div> <div style="border: 1px solid black; padding: 2px;">Lance</div> </div>																				8	4	0	0
Dave M Al Hise Mike M Matt O Rick	Dave M Al Hise Mike M Matt O Rick	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">Dave M</div> <div style="border: 1px solid black; padding: 2px;">Al Hise</div> <div style="border: 1px solid black; padding: 2px;">Mike M</div> <div style="border: 1px solid black; padding: 2px;">Mike M</div> <div style="border: 1px solid black; padding: 2px;">Mike M</div> <div style="border: 1px solid black; padding: 2px;">MATE</div> <div style="border: 1px solid black; padding: 2px;">Dave M</div> <div style="border: 1px solid black; padding: 2px;">Al Hise</div> <div style="border: 1px solid black; padding: 2px;">MATE</div> <div style="border: 1px solid black; padding: 2px;">Dave M</div> <div style="border: 1px solid black; padding: 2px;">Dave M</div> <div style="border: 1px solid black; padding: 2px;">NCS</div> </div>																				24	21		
Eli Troychansky Michael Elliot	IT/Navigation 1	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">Eli</div> <div style="border: 1px solid black; padding: 2px;">Eli</div> <div style="border: 1px solid black; padding: 2px;">Michael</div> <div style="border: 1px solid black; padding: 2px;">Michael</div> <div style="border: 1px solid black; padding: 2px;">Elliot</div> <div style="border: 1px solid black; padding: 2px;">Michael</div> <div style="border: 1px solid black; padding: 2px;">Michael</div> <div style="border: 1px solid black; padding: 2px;">Elliot</div> <div style="border: 1px solid black; padding: 2px;">IT (NEW)</div> <div style="border: 1px solid black; padding: 2px;">IT (NEW)</div> <div style="border: 1px solid black; padding: 2px;">PH</div> <div style="border: 1px solid black; padding: 2px;">SO</div> <div style="border: 1px solid black; padding: 2px;">MATE</div> <div style="border: 1px solid black; padding: 2px;">NEW</div> </div>																				5	1	16	16
Tom Robbie	SS Hand Chief 2	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">SS Hand Chief 2</div> <div style="border: 1px solid black; padding: 2px;">SS Hand Chief 2</div> <div style="border: 1px solid black; padding: 2px;">Gunn</div> <div style="border: 1px solid black; padding: 2px;">Gunn</div> <div style="border: 1px solid black; padding: 2px;">SS 2</div> <div style="border: 1px solid black; padding: 2px;">SS Hand Chief 2</div> <div style="border: 1px solid black; padding: 2px;">SS Hand Chief 2</div> <div style="border: 1px solid black; padding: 2px;">Gunn</div> <div style="border: 1px solid black; padding: 2px;">SS2</div> </div>																				24	20	24	24
Carlos Outtersz Justin Walsh Brian Goodick	Sound Source 1 Sound Source 2 Sound Source 3	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">Sound Source 1</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 2</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 3</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 1</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 2</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 3</div> <div style="border: 1px solid black; padding: 2px;">SS 1</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 2</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 3</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 1</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 2</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 3</div> <div style="border: 1px solid black; padding: 2px;">SS 1</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 2</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 3</div> </div>																				29	25	19	19
Paul F Jay Ardsi New1 New2 New3 CR#1 CR#2	Sound Source Paul F	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">Sound Source Paul F</div> <div style="border: 1px solid black; padding: 2px;">Ardai</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 4</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 4</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 5</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 5</div> <div style="border: 1px solid black; padding: 2px;">Sound Source 6</div> <div style="border: 1px solid black; padding: 2px;">CR Gunner 1</div> <div style="border: 1px solid black; padding: 2px;">CR Gunner 2</div> <div style="border: 1px solid black; padding: 2px;">CR Gunner 1</div> <div style="border: 1px solid black; padding: 2px;">CR Gunner 2</div> </div>																				10	6	0	0
																						3	3	0	0
																						10	10	7	7
																						10	10	7	7
																						5	5	5	5
																						19	19	0	0
																						15	15	0	0

Marcus Langseth

A large, dark-hulled ship with a white superstructure is shown from a low angle, sailing on the water. The ship's name 'WARRIOR' is partially visible on the side. The background is a clear blue sky and sea.

- Recent Staff

- Robert Steinhaus – TIC – Senior Science Officer
- Anthony Johnson – TIC – Chief Nav/IT
- 2 New IT (One Trip and Two Trip Experience)
- 2 New ET/Acquisition/IT
- 2 MATE Interns

- Others

- Gunners – Two Chiefs / 3 Shift Leaders / 2 Others
- Acquisition – Ted K, Bern M, Lance C

- Seeking

- Strong Shift Leader Acquisition
- Strong IT
- Others

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Personnel and Technical Support

- Recommendations for Standard Tech Staffing
- Key Personnel and Plans for Recruitment/Retention
- Plans for Review/Promotion Pathways of Technical Staff
- Plans for Training for Technical Staff
- Strategy for Supporting Next Year's Cruises
- Provide Input on Support to be Provided Ashore/Online and Onboard for Data Acquisition Planning, Collection and Processing
- OMO

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Langseth Training Program Goals

- Quickly turn new hires into productive staff.
- Ensure required skill and knowledge are available to support every cruise.
- Ensure important skills are institutionalized.
- Outline skill progression and employee development

Langseth Training Program Methods

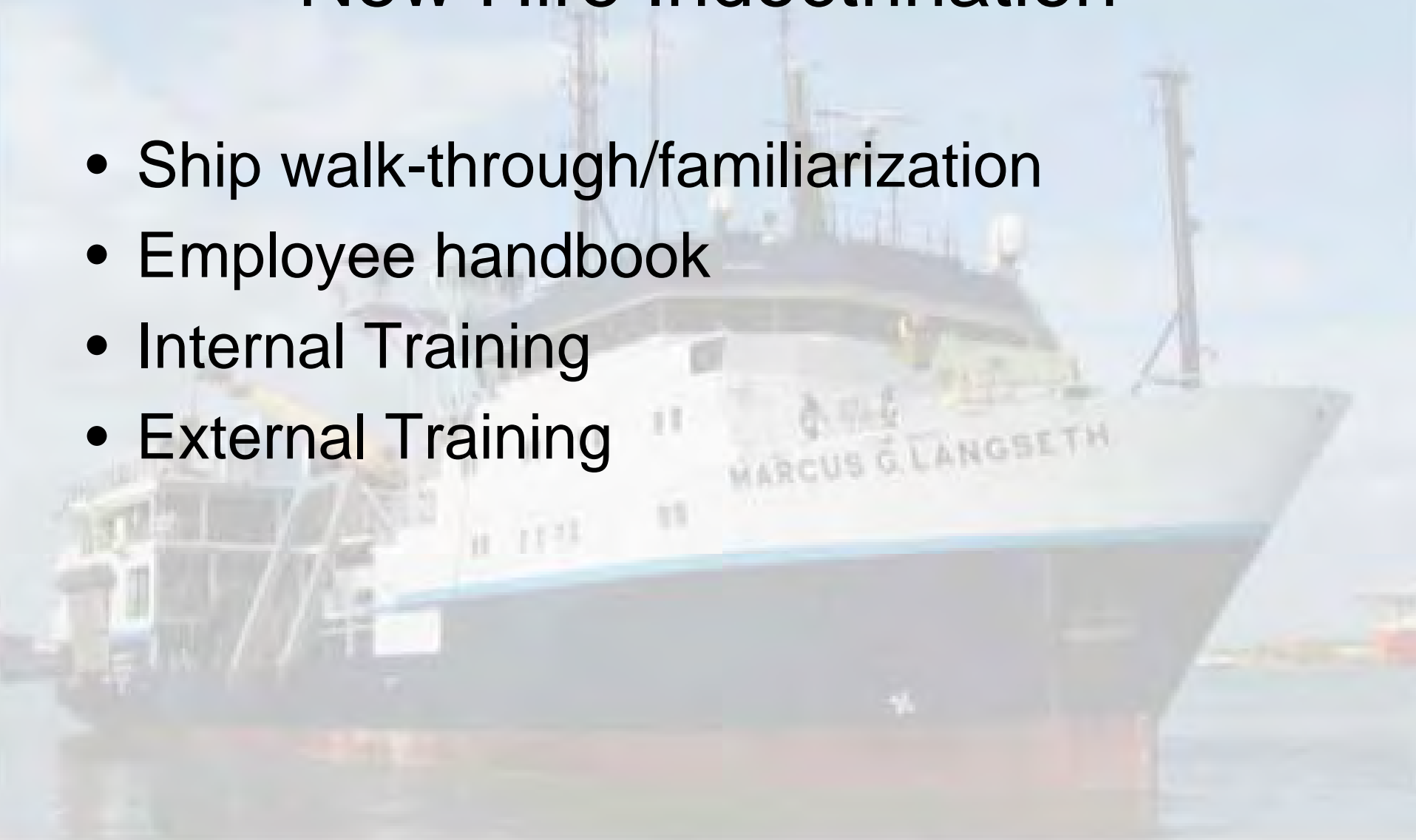
- New-hire indoctrination
- Formal Training
- Drills
- Skill evaluation/progression



Langseth Training Program

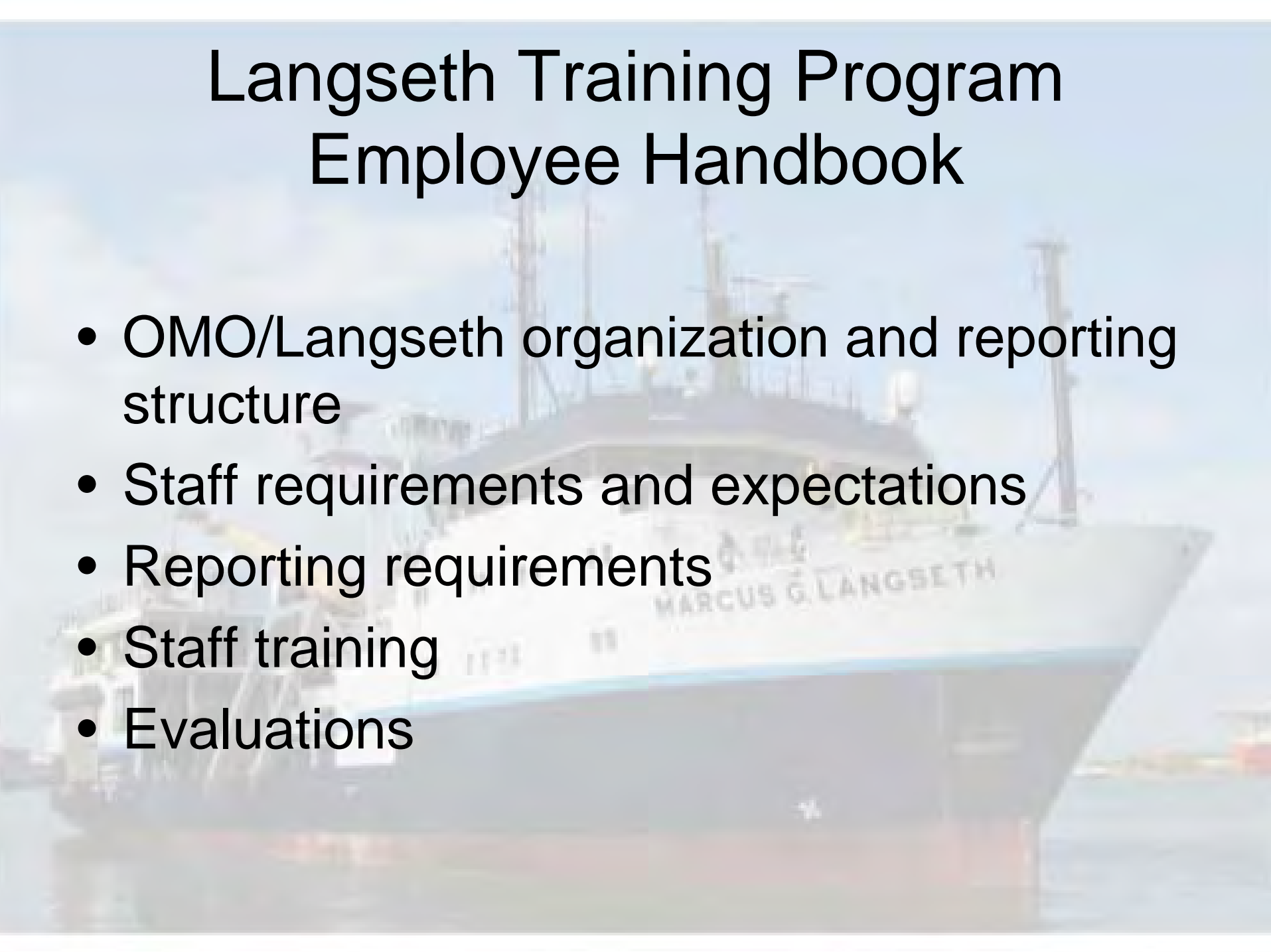
New Hire Indoctrination

- Ship walk-through/familiarization
- Employee handbook
- Internal Training
- External Training



Langseth Training Program Employee Handbook

- OMO/Langseth organization and reporting structure
- Staff requirements and expectations
- Reporting requirements
- Staff training
- Evaluations



Langseth Training Program

New Hire Internal Training

- Seismic Operators' training
- Seismic Handling
- General Science Handling & Operation
- Policy, Procedures, Documentation



Langseth Training Program

Seismic Operators' Training

Spectra, Syntrak, Digishot, Digicourse, Posnet, Dimona

- Basic recording room operations
- 30-60 minutes
- Hands-on
- Provided by senior staff
- Training completion tracked by senior technician, recorded in employee folio



Langseth Training Program

Seismic Handling Training

Streamer Ops/Maint, Bird/Acoustic Ops/Maint, Hydraulic Systems,
Workboat Ops, Essential Seamanship

- In-water equipment operations and maintenance
- Hands-on
- Provided by senior staff
- Training completion tracked by senior technician, recorded in employee folio

Langseth Training Program

General Science Training

CTD, XBT, EM120, Knudsen, TSG, PCO2, MET

- General science equipment
- Hands-on
- Provided by senior staff
- Training completion tracked by senior technician, recorded in employee folio

Langseth Training Program

External Training

Spectra, Syntrak, Digicourse, Digishot, Processing, Seisnet, IT, Welding, Hydraulics, Boat Handling

- Set policy to send employees to external training



Langseth Training Program

Training Levels

- Level I: Multiple departments, basic concepts and operations
- Level II: Specific department, equipment setup, maintenance and troubleshooting



Langseth Training Program

CTD Training 1

- What it does/how it works
- How to prep instrument
- Deploy/recovery procedure
- Recovering the data
- Processing the data
- Proper archival of data



Langseth Training Program

CTD Training 2

- Installation and set-up of processing system
 - Where software is stored
 - Where calibration and configuration files are stored
 - How to create a calibration file
- Equipment maintenance
 - Calibration schedule

Langseth Training Program Drills

- 30-60 minute sessions
- Intended to simulate hazardous operations in a controlled environment



Langseth Training Program Skill Evaluation

- Build a table listing areas of expertise for each department
- Develop a standard set of skills necessary for sail
- Coordinate cruise staffing appropriately
- Direct employee development accordingly

Langseth Training Program

Sample Skill Table: Nav/IT

- Programming
 - C, Perl, Java
- Networking
 - Serial, TCP/IP, Protocols, Security, Cabling
- Systems Administration
 - Linux, Windows, Solaris
- Seismic
 - Spectra, Seisnet, SIOSeis, Sprint/Reflex, Focus

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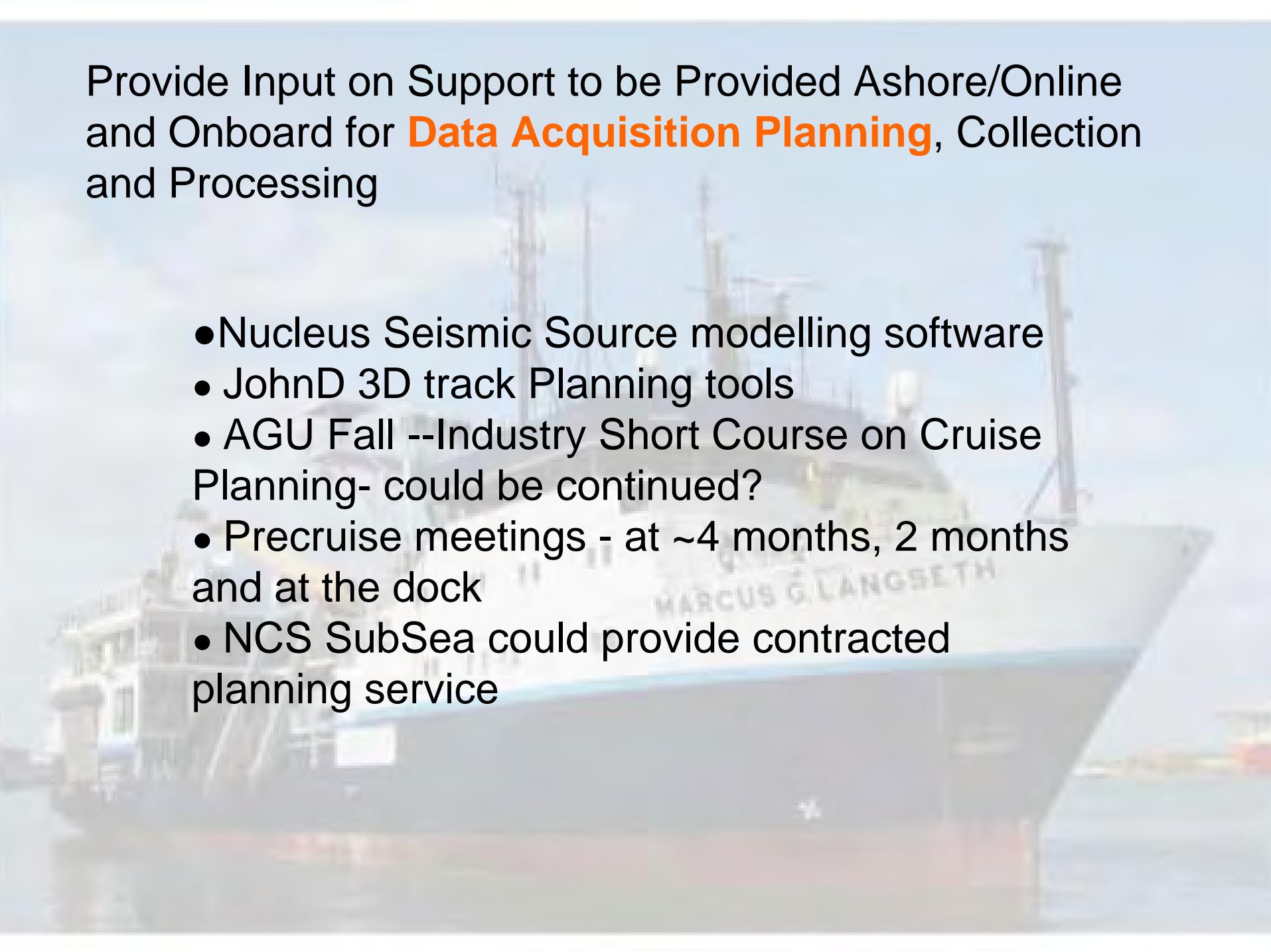
Marcus Langseth

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Provide Input on Support to be Provided Ashore/Online and Onboard for **Data Acquisition Planning**, Collection and Processing

- Nucleus Seismic Source modelling software
- JohnD 3D track Planning tools
- AGU Fall --Industry Short Course on Cruise Planning- could be continued?
- Precruise meetings - at ~4 months, 2 months and at the dock
- NCS SubSea could provide contracted planning service



Provide Input on Support to be Provided Ashore/Online and Onboard for Data Acquisition Planning, **Collection** and Processing

Full Collection Oversight Langseth's Core Mission

Gear Handling

QC

- Nucleus - for modelling effects of gun dropouts
- Seisnet - shot QC
- Real time stack – QC
- Equipment Monitoring (Streamer, Birds, Acoustics, GPS)
- Spectra QC

Provide Input on Support to be Provided Ashore/Online and Onboard for Data Acquisition Planning, Collection and **Processing**

Seismic Navigation:

- Full seismic navigation processing for 3D cruises - provided by contracted experts
- Could provide navigation post-processing onshore for 2D programs- either contracted or through shared personnel with onshore seismic database group.

Seismic data

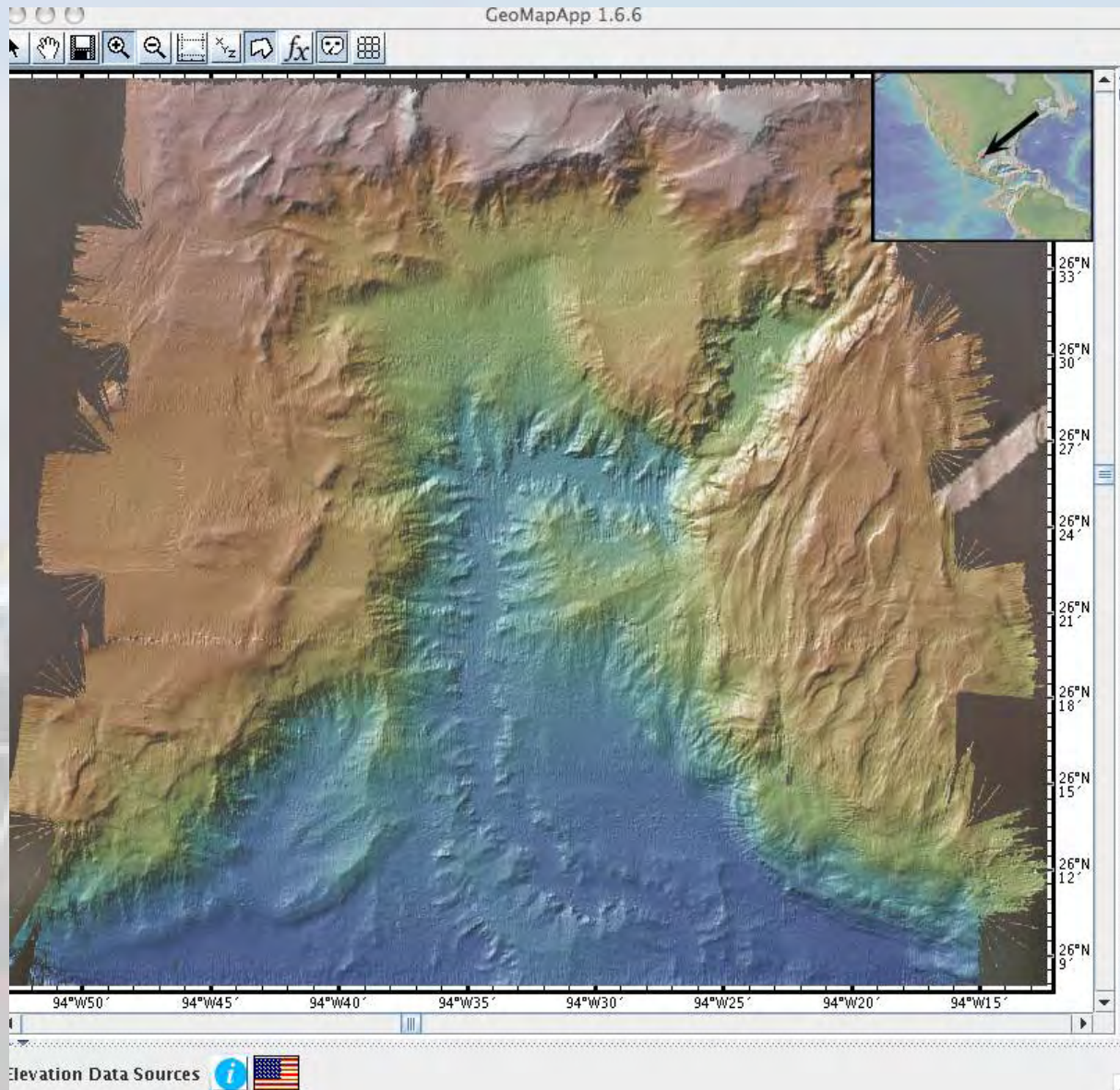
- Computing resources and software suite available for visiting scientists to use for their processing: Paradigm software(installed), Landmark (not installed), SIOSeis, SeismicUnix.

Provide Input on Support to be Provided Ashore/Online and Onboard for Data Acquisition Planning, Collection and **Processing**

Swath Bathymetry and Backscatter

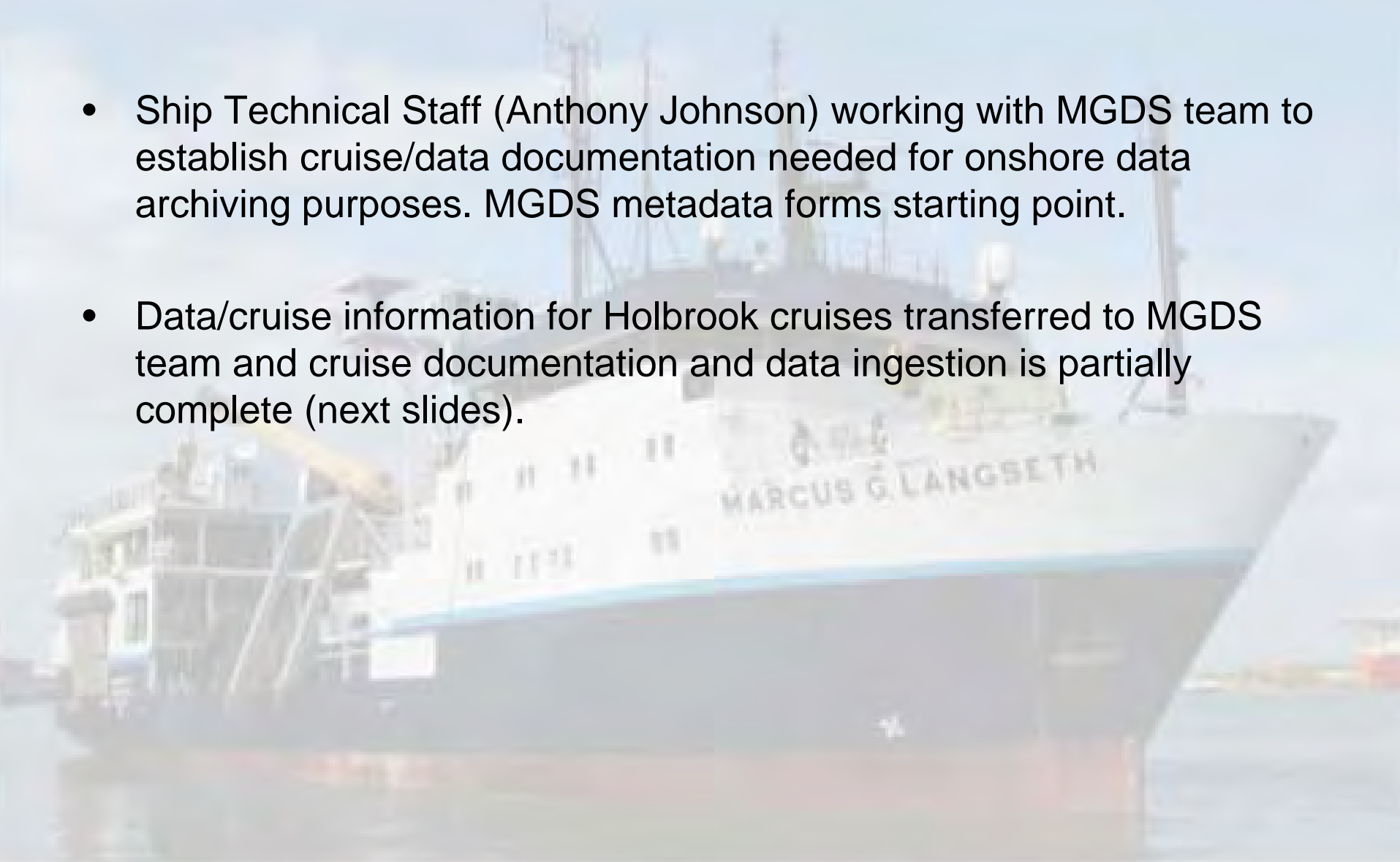
- Tools and routine procedures for MB processing onboard (will be install and tested by O'Hara this week). Will include sound velocity corrections, roll bias, outer beam assessment and trimming as needed, and construction of first pass grids.
- Current projects of the Marine Geoscience Data System (Carbotte et al) cover shore-side processing of Langseth multibeam (funding until 2010) although not as a specific service to scientists during their cruise (eg processed data produced after cruise).

Processed Langseth EM120 Data from MGL0704 Available through GeoMapApp



Data Stream to Shore Archives


- Ship Technical Staff (Anthony Johnson) working with MGDS team to establish cruise/data documentation needed for onshore data archiving purposes. MGDS metadata forms starting point.
- Data/cruise information for Holbrook cruises transferred to MGDS team and cruise documentation and data ingestion is partially complete (next slides).



Technician:MCS : Conrad, P.Lance : LDEO:Office_of_Marine_Operations
 Technician:Science: Dolan, James : LDEO:Office_of_Marine_Operations
 Technician:Science: Koczynski, Ted : LDEO:Office_of_Marine_Operations
 Technician:Science:Chief: Johnson, Anthony : LDEO:Office_of_Marine_Operations
 Captain : Landow, Mark : LDEO

Port: 2008-02-16 Limon, Costa Rica
 Ref: 2008-02-09 Limon, Costa Rica

http://www.marine-geo.org/link/entry.php?id=MGL0804



**GEOSCIENCE
DATA
SYSTEM**

- [Geomap.php](#)
- [Data Link](#)
- [Create Maps & Grids](#)
- [Web Services](#)
- [Data for Google Earth](#)
- [Education Modules](#)

Deployed Instruments and Samplers:


Deployed Stations	Device or Platform Type
List Stations	Seismic:OBS

Field Data Inventory:

Data	Platform ID/Type	Launch/Line/ Station Info	Quality	Device Type/Info
Navigation	Marcus G. Langseth		0	Navigation Primary C&C_Technologies:O
Depth Temperature	WaterColumn:Lowered Sippican	List Stations	0	Probe Expendable XBT Sippican:MK21
Conductivity Pressure Temperature	WaterColumn:Lowered Sippican	List Stations	0	Probe Expendable XCTD Sippican
Amplitude Bathymetry:Swath Sidescan	EM120:Langseth(Sonar:Multibeam)		0	Sonar Multibeam Simrad:EM120
Seismic:WideAngle:OBS		List Stations	0	Seismic OBS
Meteorological	Marcus G. Langseth		0	WeatherStation RM Young
Seismic:Reflection:MCS	Seismic:MCS:Langseth:Seismic:MCS		0	Seismic MCS

Related Entry: [MGL0807](#)

Attachments:

 Report:Technical:MCS Tow Offset Configuration (PDF)

Data Link Entry : MGL0804

Click on active links to access data or information.

Map View

Platform: Marcus G. Langseth
 Operator: [LDEO:Office_of_Marine_Operations](#)

Project: Collaborative Research: Seismic measurements of r

- Scientist:Chief : Holbrook, Steven : University_of_Wyoming :
- Scientist:Co-Chief: VanAvendonk, Harm : UTIG
- Scientist : Aaron, Ernie
- Scientist : Camacho, Johanna
- Scientist : DuBois, David
- Scientist : Eakin, Daniel
- Scientist : Fortin, William
- Scientist : Gibaud, Mark
- Scientist : Gribb, Nikolaus
- Scientist : Hollinshead, Crispin : SIO
- Scientist : Humbert, Lisa
- Scientist : Lemmond, Peter : WHOI
- Scientist : Swift, Steven

- Scientist:Investigator:Co-Principal: Cheadle, Michael : Univers
- Student:Graduate : Marson, Jacob : University_of_Wyoming
- Student:Graduate : McDonald, Matthew : University_of_Wyon
- Consultant:Survey : Martello, Michael : NCS_SubSea
- Consultant:Survey : Orme, Matthew : NCS_SubSea
- Observer:MarineMammal: Antochiw-Alonzo, Diana
- Observer:MarineMammal: Ennelmann, Nicolas



http://www.marine-geo.org/link/entry.php?id=MGL0804

**GEOSCIENCE
DATA
SYSTEM**

- [Data Link](#)
- [Create Maps & Grids](#)
- [Web Services](#)
- [Data for Google](#)
- [Education Modu](#)
- [Ridge 2000](#)
- [Ridge Bathymetry](#)
- [LDEO Core Repository](#)
- [UTIG Processed Seis](#)
- [Related Links](#)
- [Contribute Data](#)
- [Meetings & Reports](#)

Data Link Entry : MGL0804

Click on active links to access data or information.

Map View

Platform: Marcus G. Langseth
Operator: [LDEO:Office of Marine Operations](#)

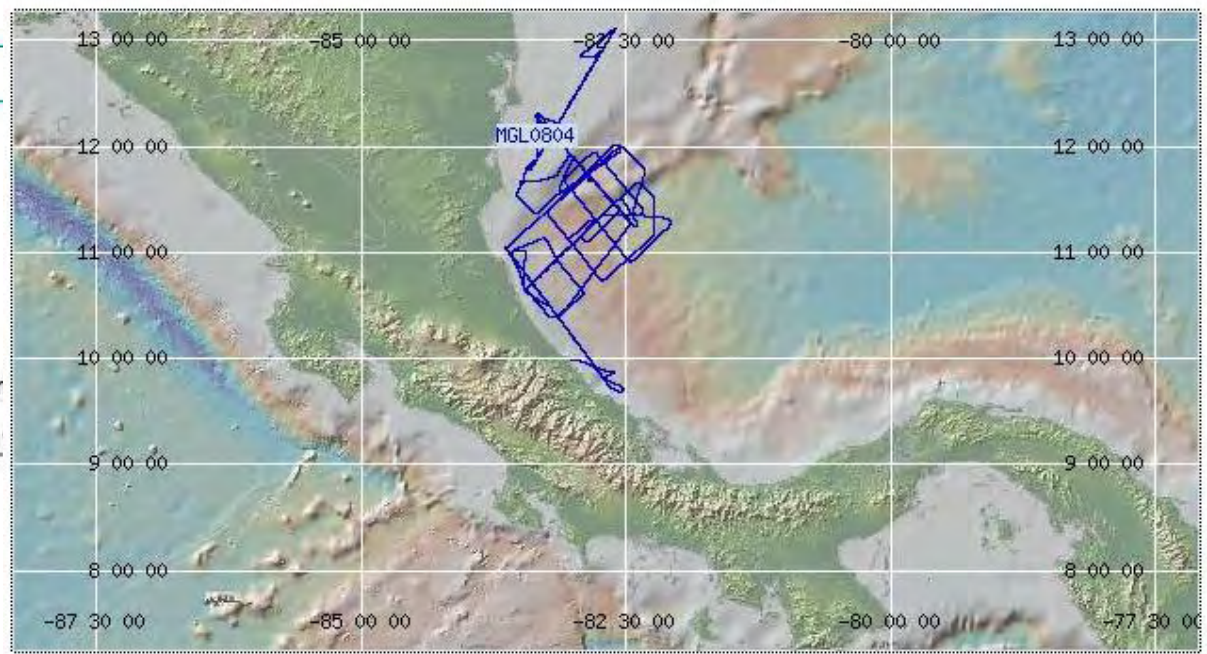
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Scientist : Lemmond, Peter : WHOI
Scientist : Swift, Steven

Scientist:Investigator:Co-Principal: Cheadle, Michae
Student:Graduate : Marson, Jacob : University_of_
Student:Graduate : McDonald, Matthew : University
Consultant:Survey : Martello, Michael : NCS_SubSe
Consultant:Survey : Orme, Matthew : NCS_SubSea
Observer:MarineMammal: Antochiw-Alonzo, Diana
Observer:MarineMammal: Ennelmann, Nicolas

Data Link: Map View



- Click Map:
- Re-Center
 - Zoom In
 - Zoom Out
- Factor: 2

Display Layers:

- Coastlines
 - Lat-Lon Gridlines
 - Ship Tracks
 - Station Locations*
 - Topography
 - Topography-Mask
- *loads only if zoomed to scale < 1:1000000

Scale: 0 110 km
1:5600000

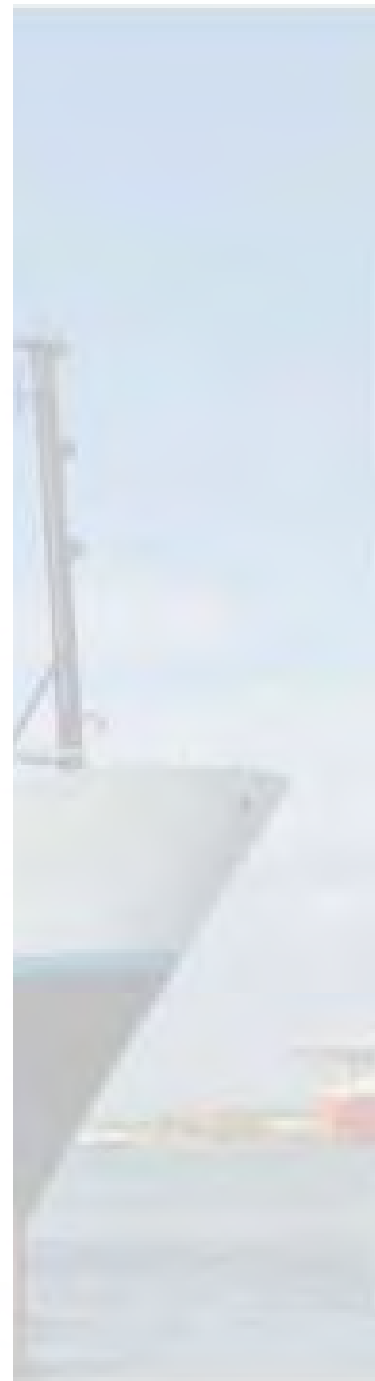
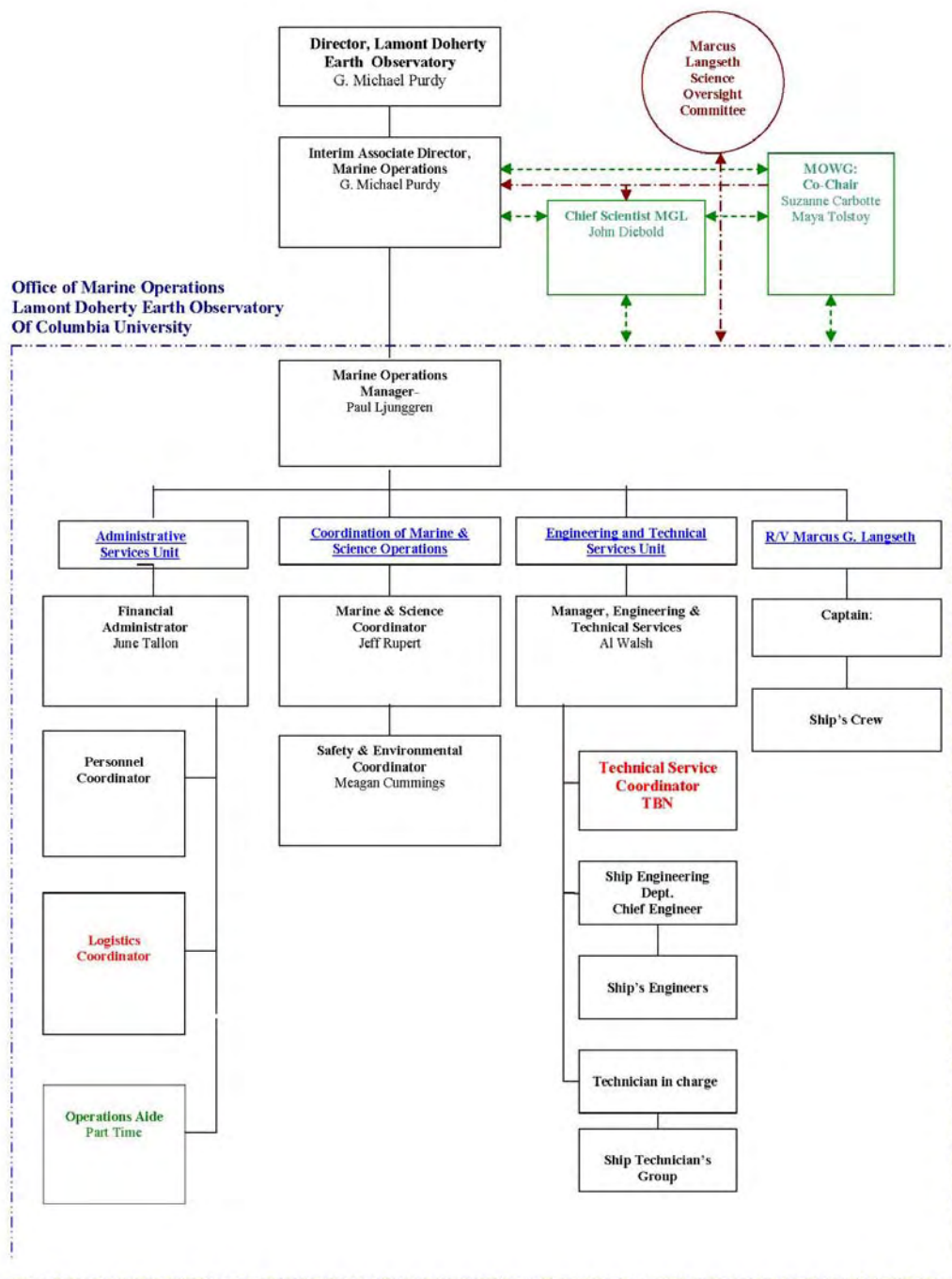
Mode:



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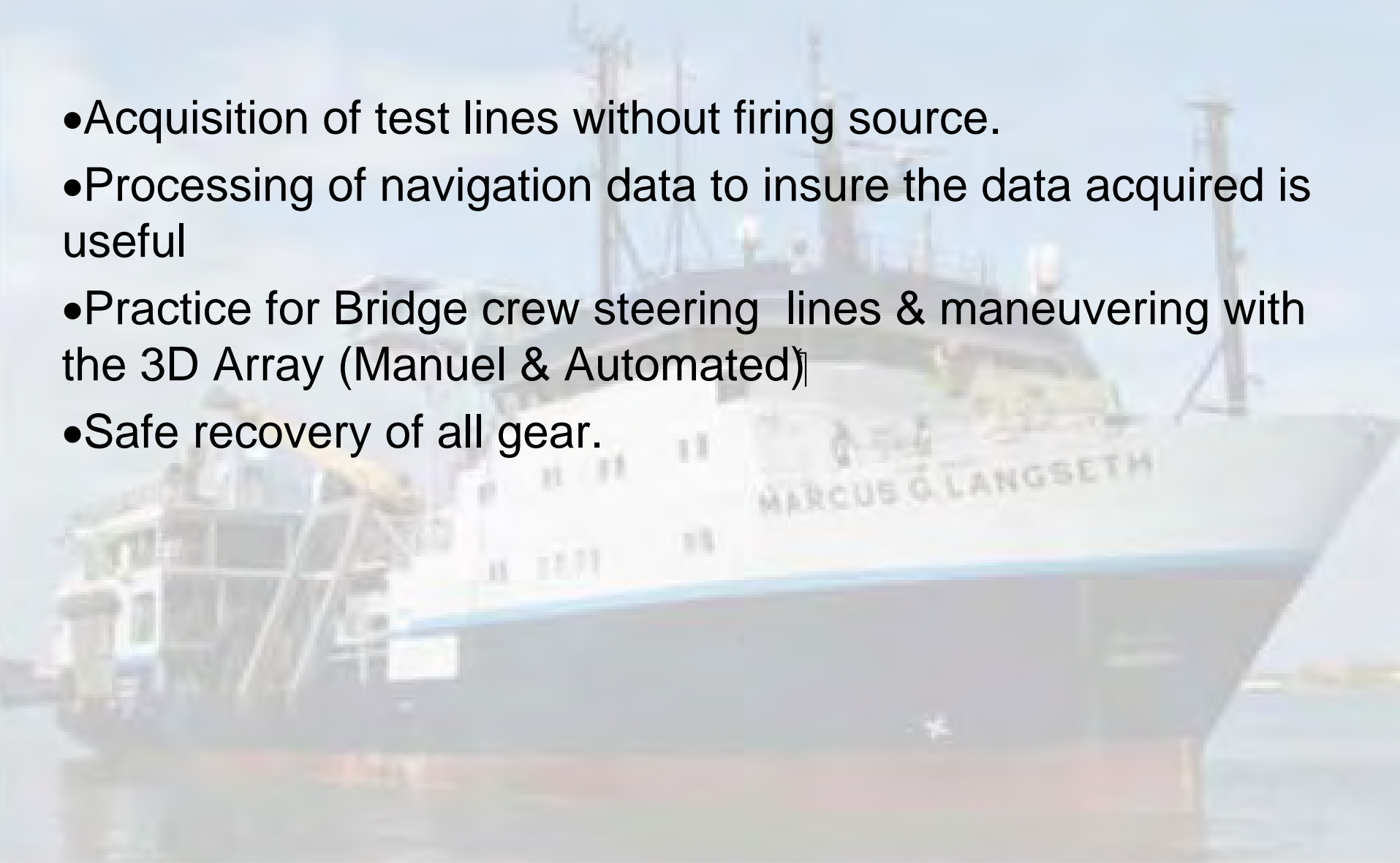


3D Shakedown Goals

- Safe operation- No injuries
- Safe deployment of 4 x 150 x 6k streamer array
- Safe deployment of dual source 75m array
- Refine procedures for launching, towing & recovering 3D gear
- Refine communication and responsibility boundaries for launching, towing, and recovering 3D gear
- Evaluate the towed array and see where improvements can be made before Mutter
- Accurate positioning of all in water equipment
- Complete setup and operation of all onboard systems related to 3D seismic.

3D Shakedown Goals Continued

- Acquisition of test lines without firing source.
- Processing of navigation data to insure the data acquired is useful
- Practice for Bridge crew steering lines & maneuvering with the 3D Array (Manuel & Automated)
- Safe recovery of all gear.



Marcus Langseth

A large, dark-hulled ship with a white superstructure is shown at sea. The ship's name, "MARCUS LANGSETH", is visible on the side of the superstructure. The ship is viewed from a low angle, emphasizing its size. The background is a clear blue sky and a calm sea.

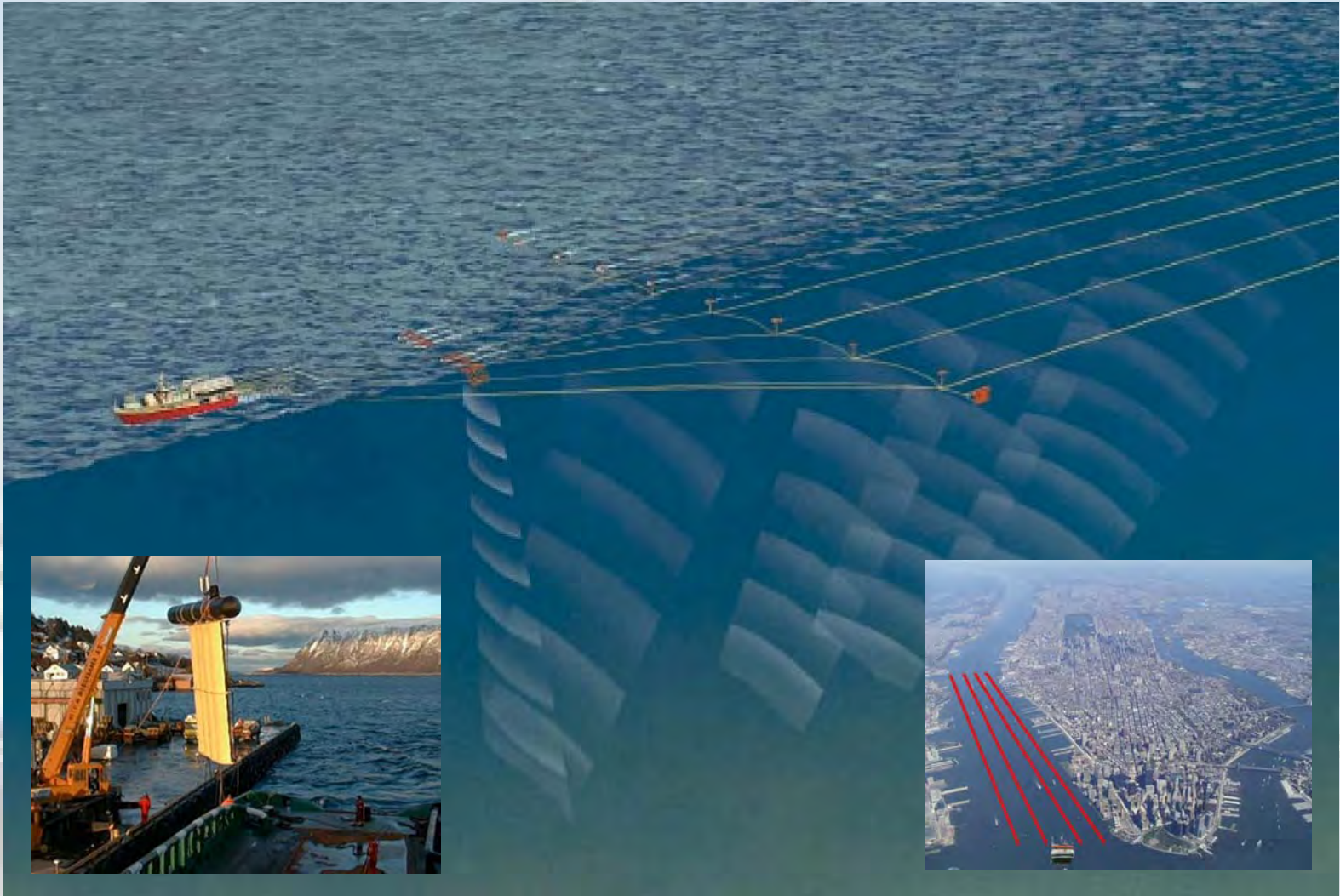
Advantages to Current Plan

- ⌘ **Have People NOW**
- ⌘ **Funding**
- ⌘ **Schedules**
- ⌘ **Preparation Time For Maintenance Periods**
- ⌘ **Fatigue of Crew and Techs for Another Maintenance Period**



R/V Marcus Langseth

MCS Paravane Towing – Example of What Needs to Go Right



R/V Marcus Langseth

MCS Paravane Towing – Example of Why





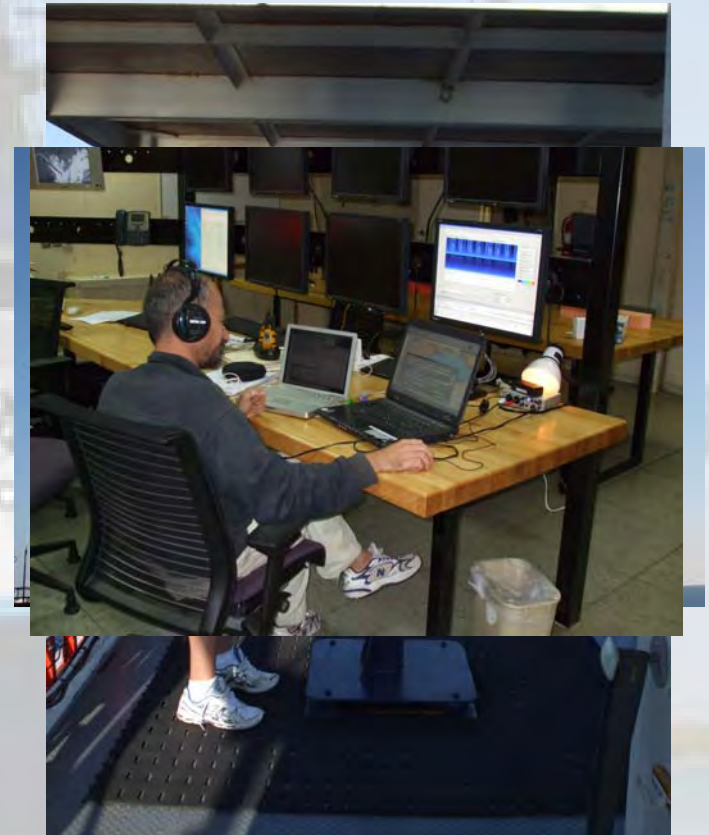


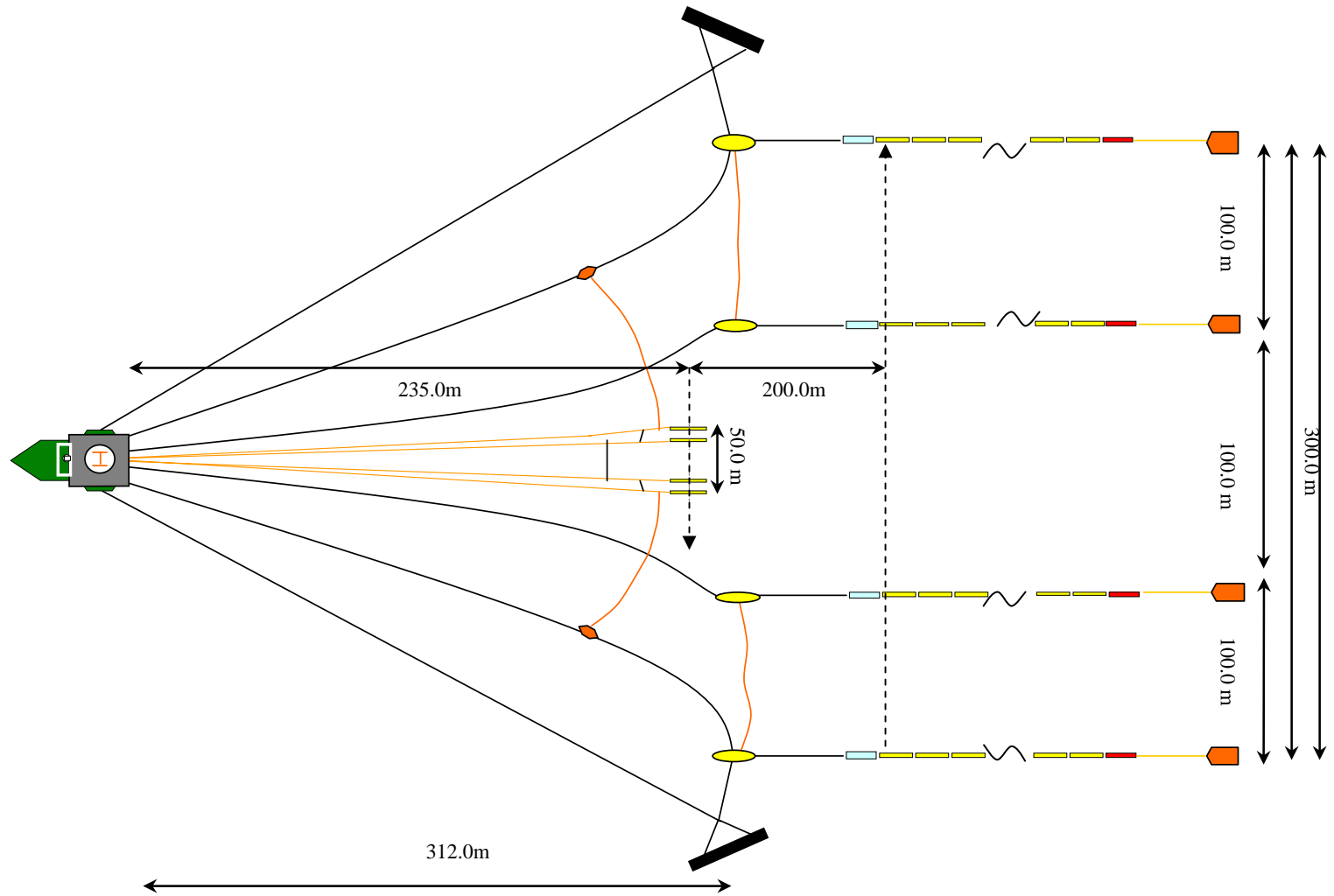
Marine Mammal Observers (MMO's)

- 5 MMO's for seismic operation cruises.
- Daytime rotation of visual MMO's and 24/7 PAM while conducting seismic operations.
- Other bunk spaces potentially required for guest MMO's from the local region's waters.

MGL's Superior Visual Observation Capabilities

- **Two “Big Eye” Binoculars installed on the tower, 16M above the main deck.**
- **Enclosed Observation Booth on the tower.**
- **Rightwaves & SEAMAP PAM systems. PAM stations both in the main lab and the tower.**
- **Closed Circuit TV cameras and monitors so that areas can be observed forward of the beam that may still be within the safety radius but obscured by the ship.**





R/V Marcus G Langseth Towed Seismic Array 4 Streamer x 100m Separation

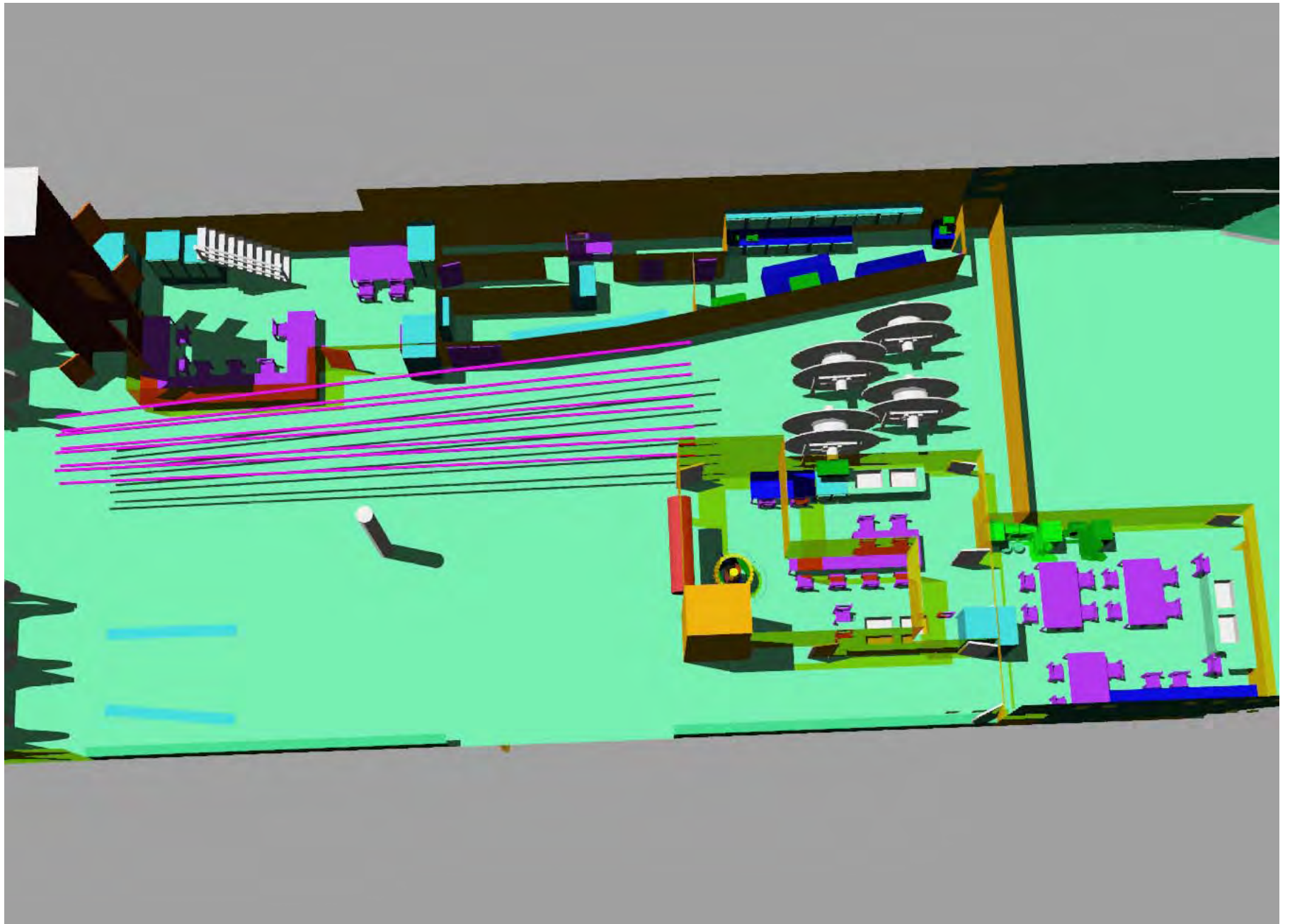


R/V Marcus Langseth

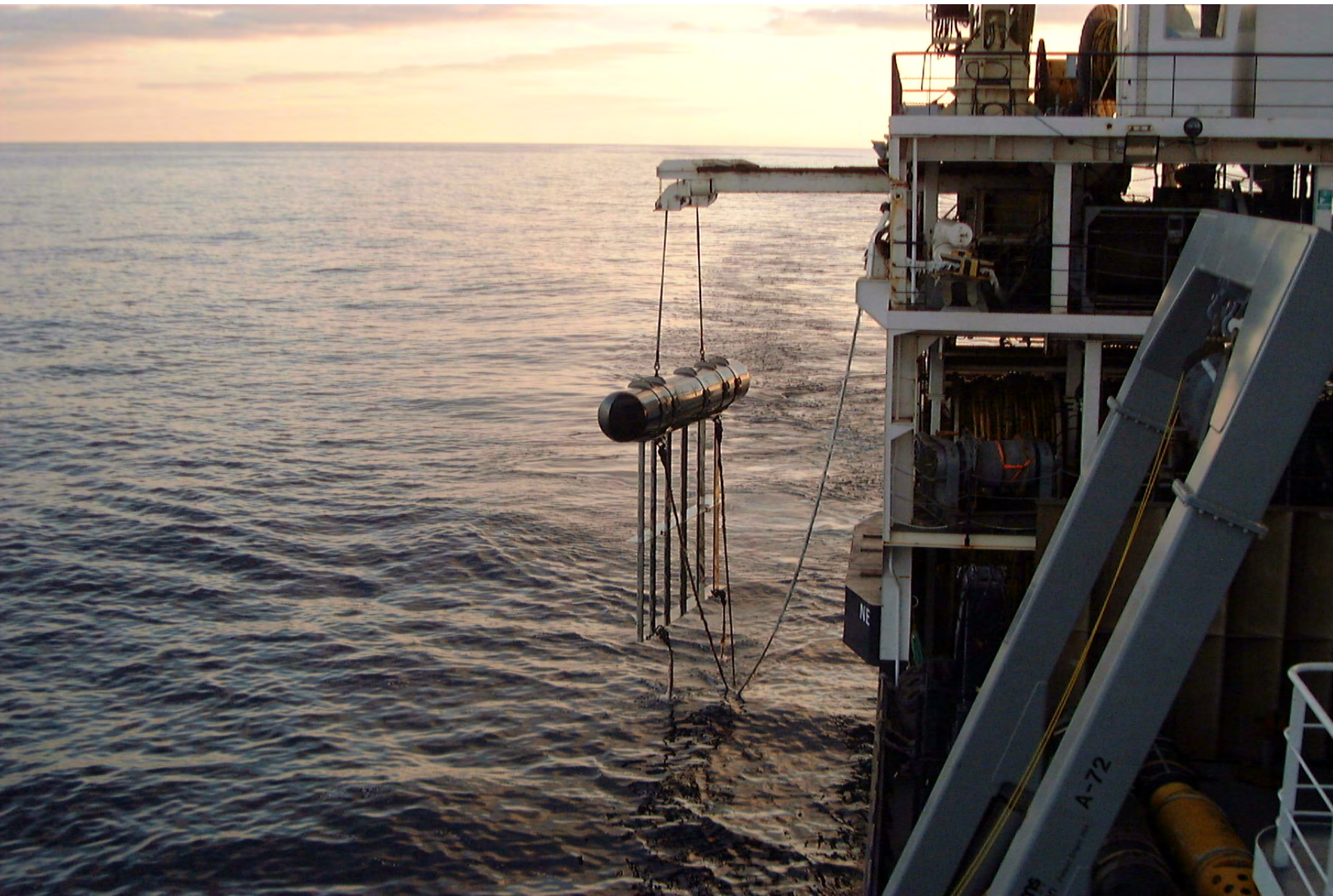
Going Forward

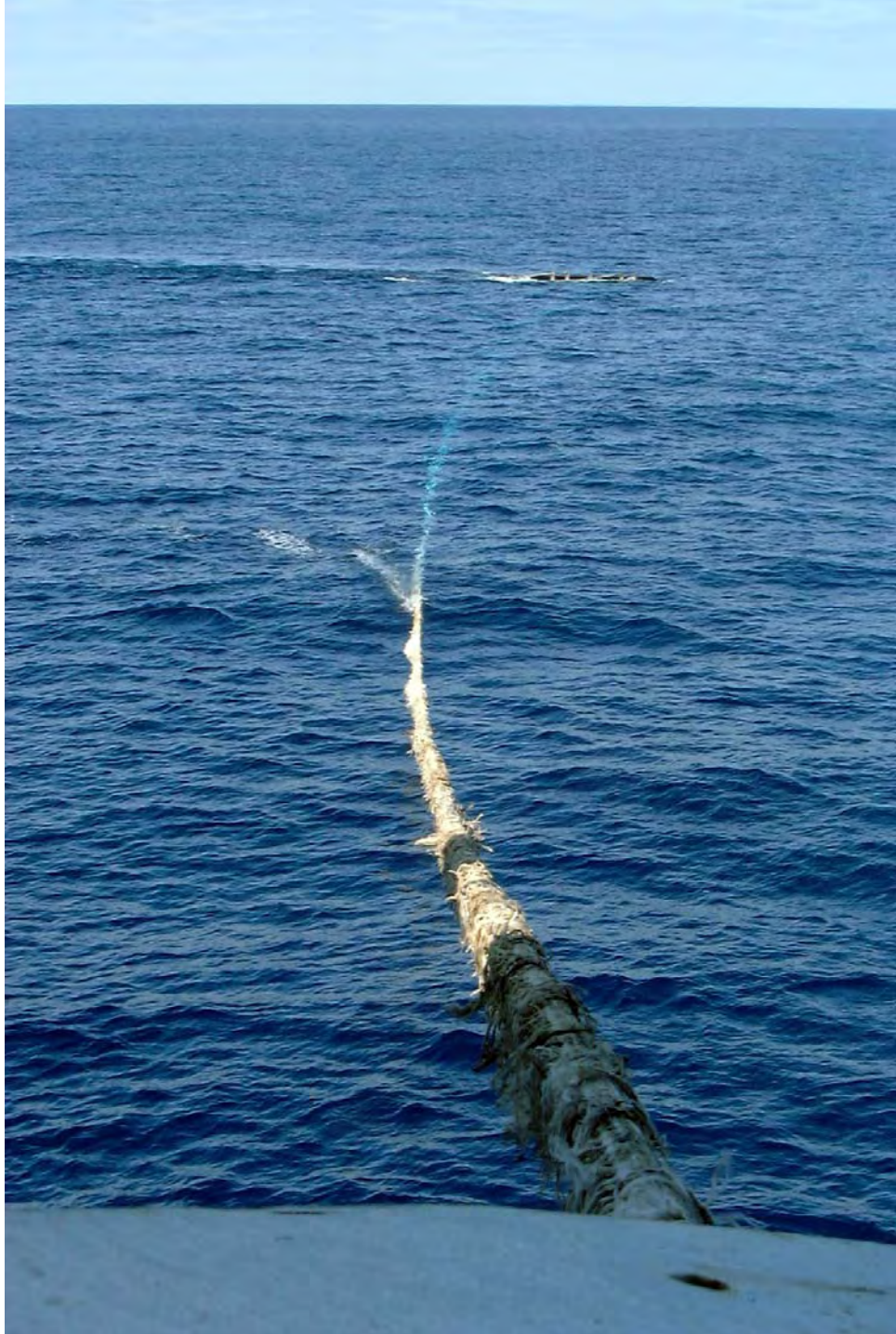
Money & Technicians & Technicians & Technicians





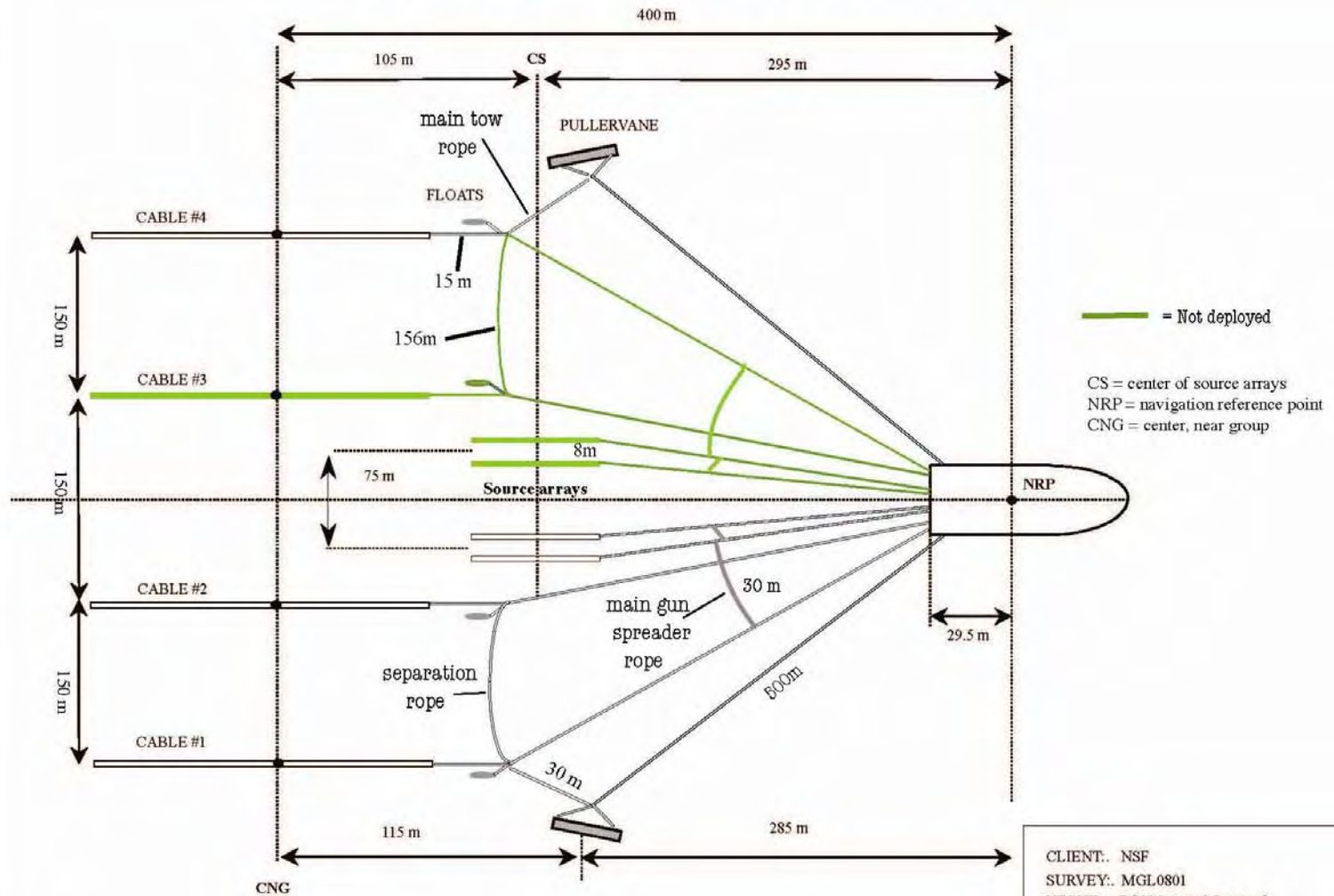








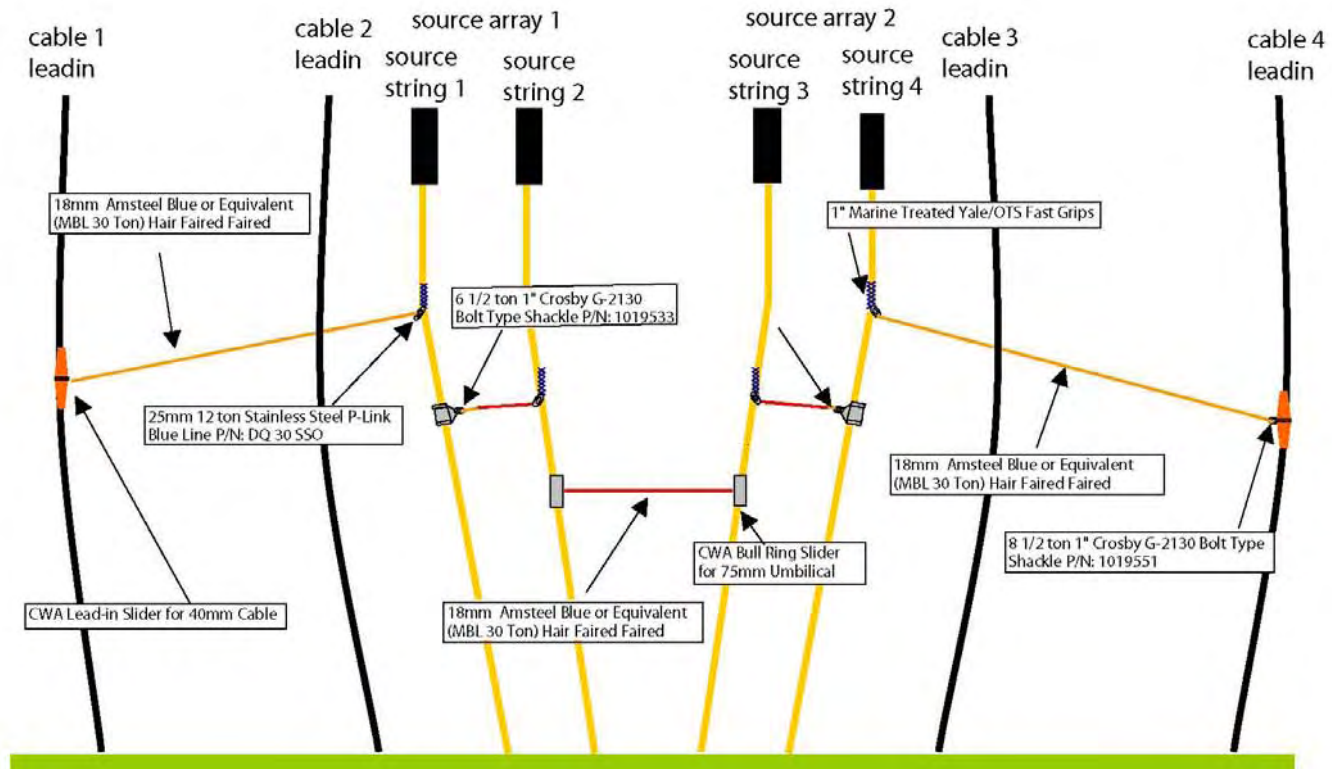
TOWING CONFIGURATION AND OFFSETS



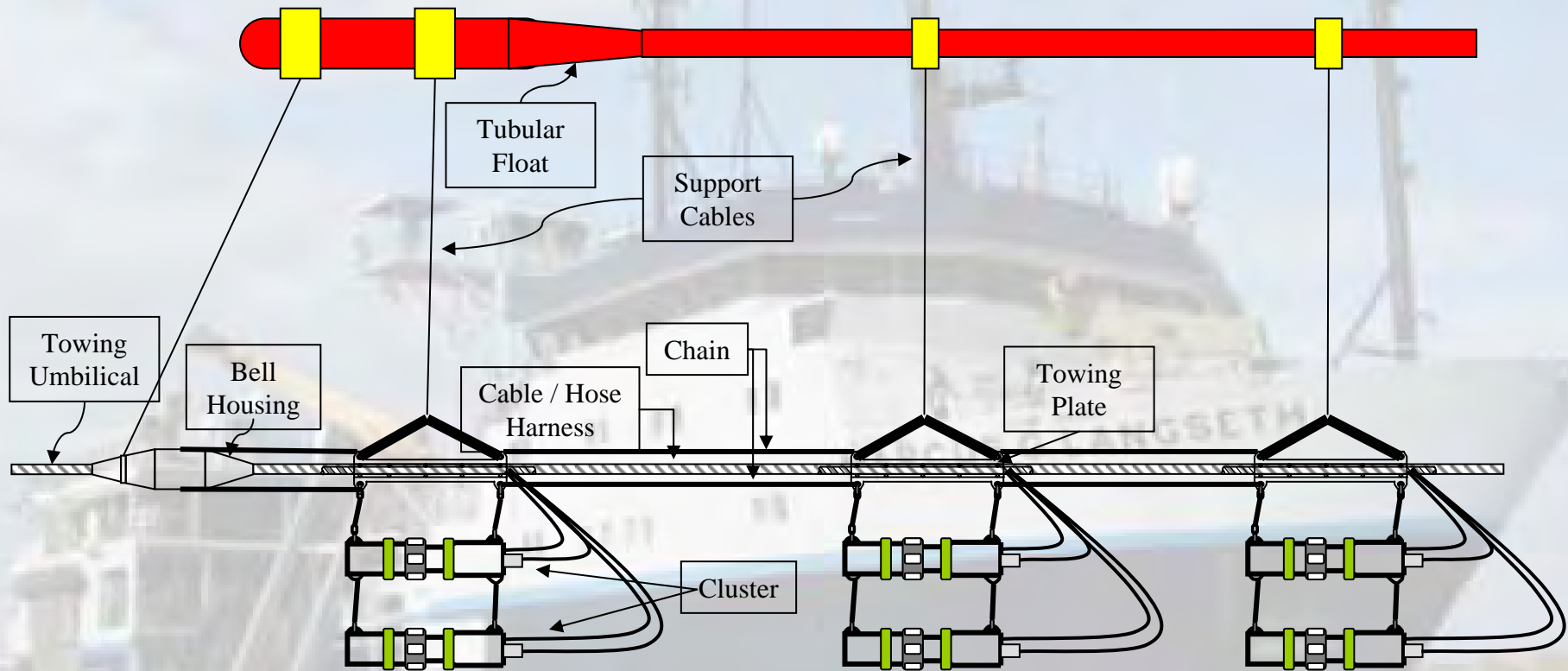
CLIENT: NSF
 SURVEY: MGL0801
 VESSEL: R/V Marcus G Langseth

Note: Drawing not to scale

Marcus Langseth 3D rigging: source array cross tags



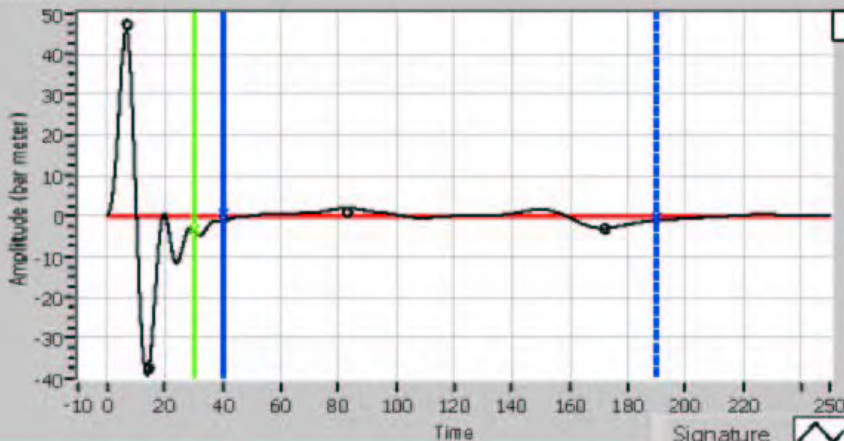
Towed Air Gun Array





Linear Sound Source Arrays

SIGNATURE



Signature File: _____

Reference File: _____

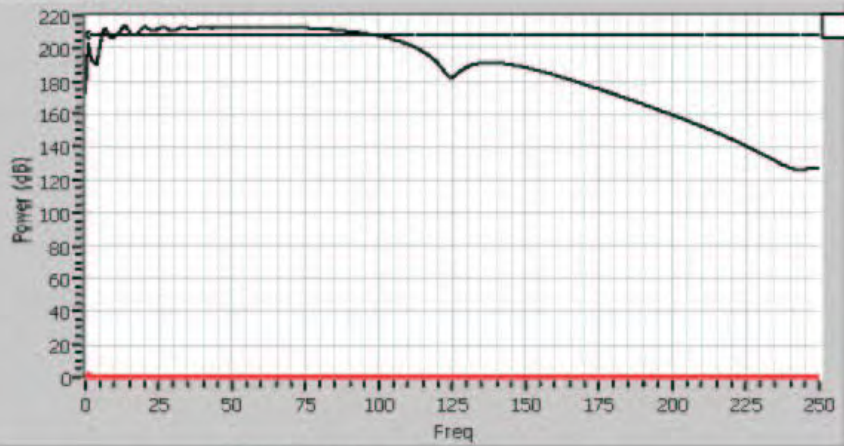
Import File: _____

Signature 

Reference 

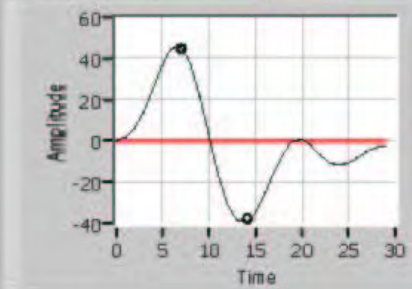
Import 

POWER SPECTRUM



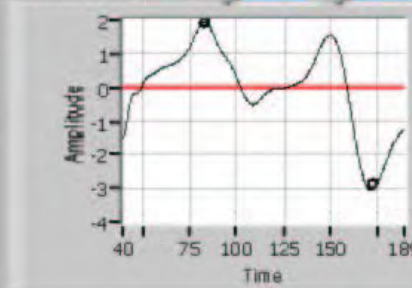
CTRL Z = undo

Initial Event (0ms to)



	Array	Ref	Import	
Zero to Peak	<input type="text" value="45.49"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	bar meter
Peak to Peak	<input type="text" value="85.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	bar meter
Bubble Period	<input type="text" value="67.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	ms
Bubble Pick	<input type="button" value="AUTO"/>			

Bubble Collapse Start B End B



	Array	Ref	Import	
Peak to Bubble Ratio	<input type="text" value="17.03"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	
% Difference	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	%

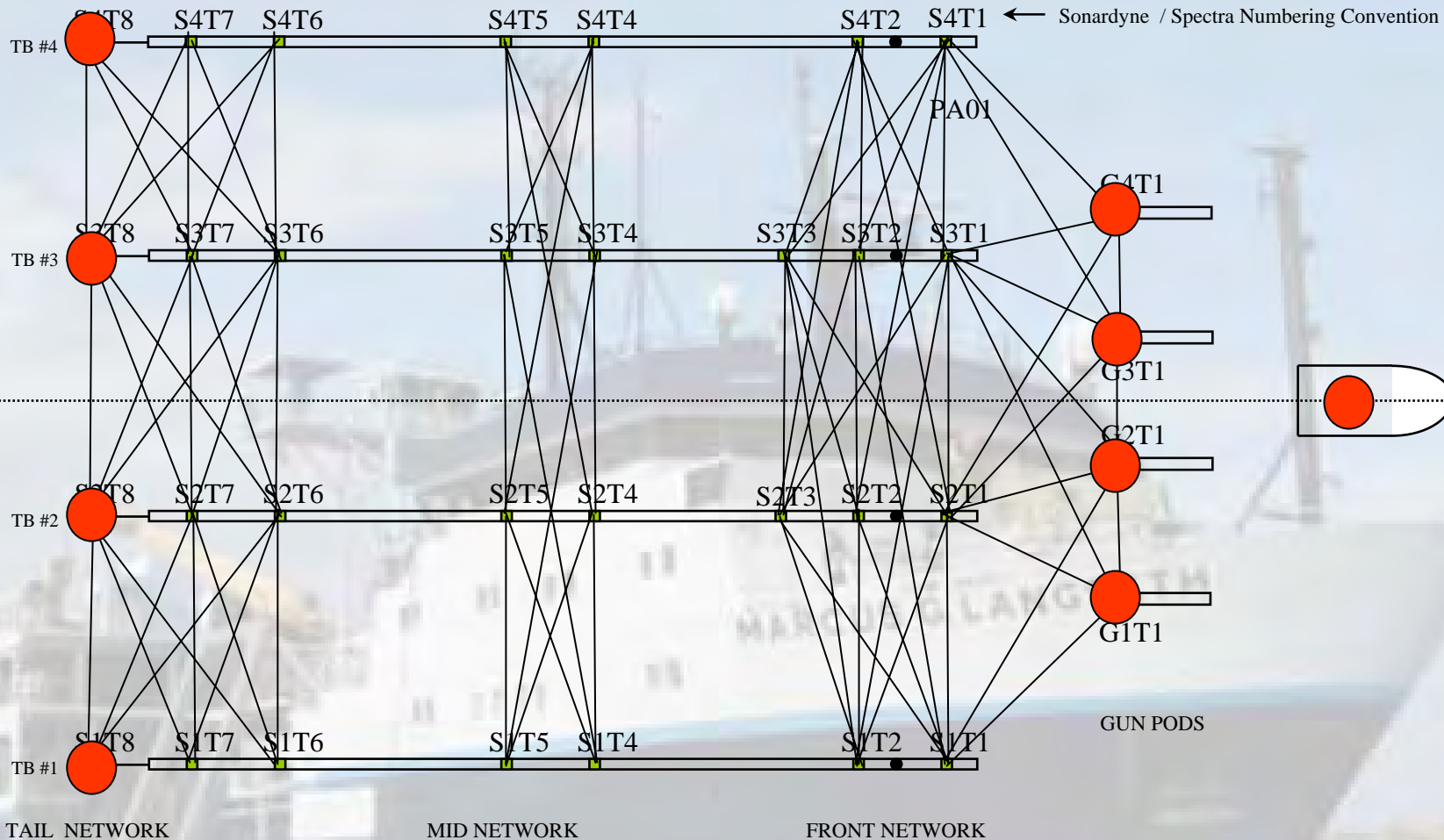
Pos - Array > Ref
Neg - Array < Ref

Array Ref Import

dB max	<input type="text" value="214.06"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	dB
dB min -6dB	<input type="text" value="208.06"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	dB
Bandwidth Low	<input type="text" value="5.86"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	Hz
Bandwidth High	<input type="text" value="15.63"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	Hz

Array Volume cubic inches

SONARDYNE ACOUSTIC NETWORK WITH GPS REFERENCE

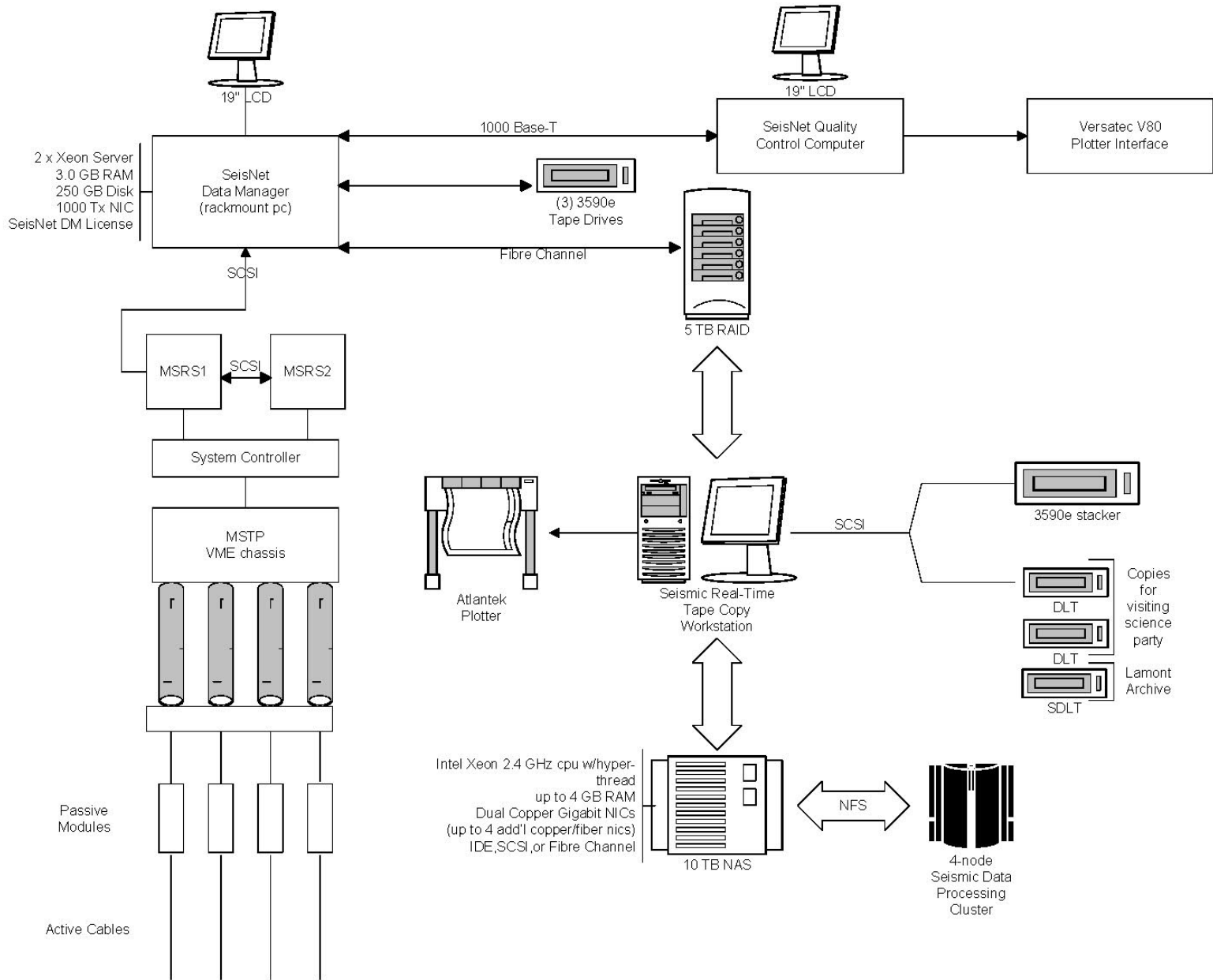


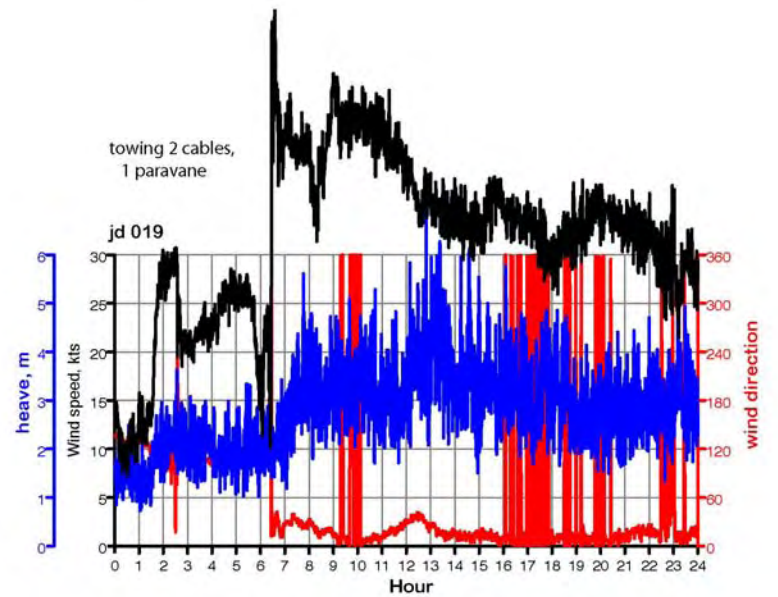
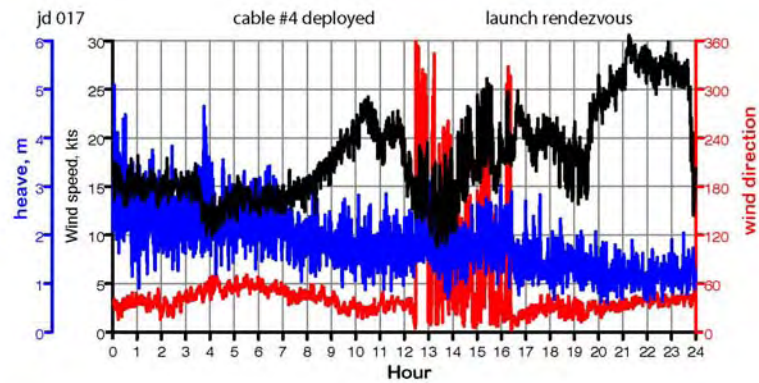
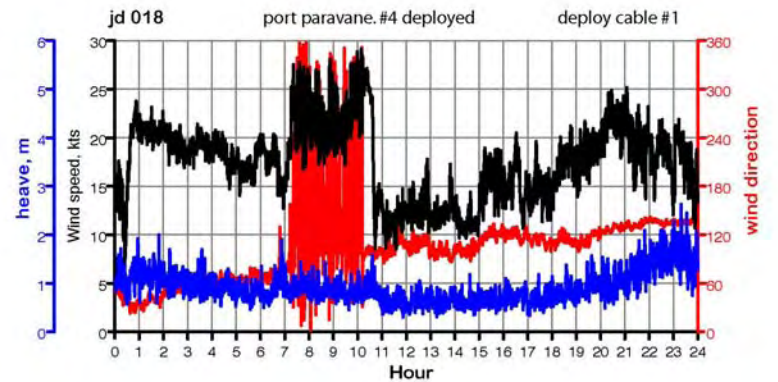
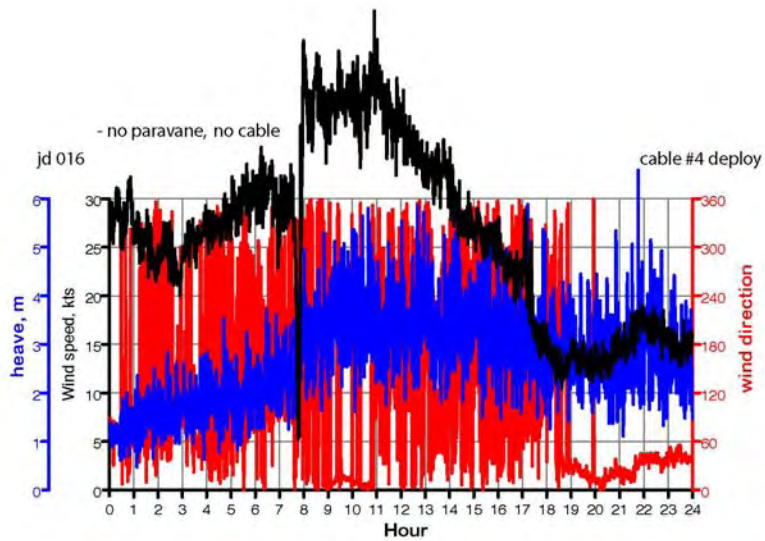
- ACOUSTIC PODS
- CENTRE NEAR GROUP
- RGPS TAILBUOY
- GPS Position

CLIENT:
 SURVEY:
 VESSEL: R/V Marcus G Langseth

SEQ: 001-

Note: Drawing not to scale





2008 SSSE

S-Band Radar

\$42,857

X-Band Radar

\$30,801

Deck Communication Talk Back System

\$62,190

Stability Program

\$15,562

RO Water Maker

\$28,350

Self Contained Breathing Apparatus (SCBAs)

\$7,854

MOB Systems

2008 Instrumentation

Mammal Mitigation PAM System	\$135,587	
Knudsen 3260 Sub Bottom Profiler	\$33,250	
MCS Streamer Boot Repair System	\$31,619	
Seismic Sound Source String Depth and Pressure Sensors	\$12,955	
MCS Streamer Recovery Devices	\$287,400	
MCS Streamer Level Device Upgrade	\$243,661	
Near Field Seismic Sound Source Hydrophones	\$11,200	
2D MCS Acquisition Control and Processing	\$68,785	
Dual Conversion UPSs		\$12,955
Visualization Screens		\$6,190
MCS Digital Air Management Manifolds	\$129,500	
75kHz ADCP		
Test Equipment	\$17,432	(\$10,000)
Large Format Plotter		\$11,200

Other Instrumentation

Multibeam Upgrade / Spares			100k
Kongsberg SBP120			750k
Portable High Resolution System		-	
Oceanographic Winches			1M
Active Mammal Sonar			300k
Streamer Systems			
Western – Hoard			1M
New Compatible Streamer 4.5km	2.3M		
Another Used System		-	
One New Streamer 12km / System	5M		
New System 4 x 6 km + 20%		12M	
SAN Storage			
Sun V890			