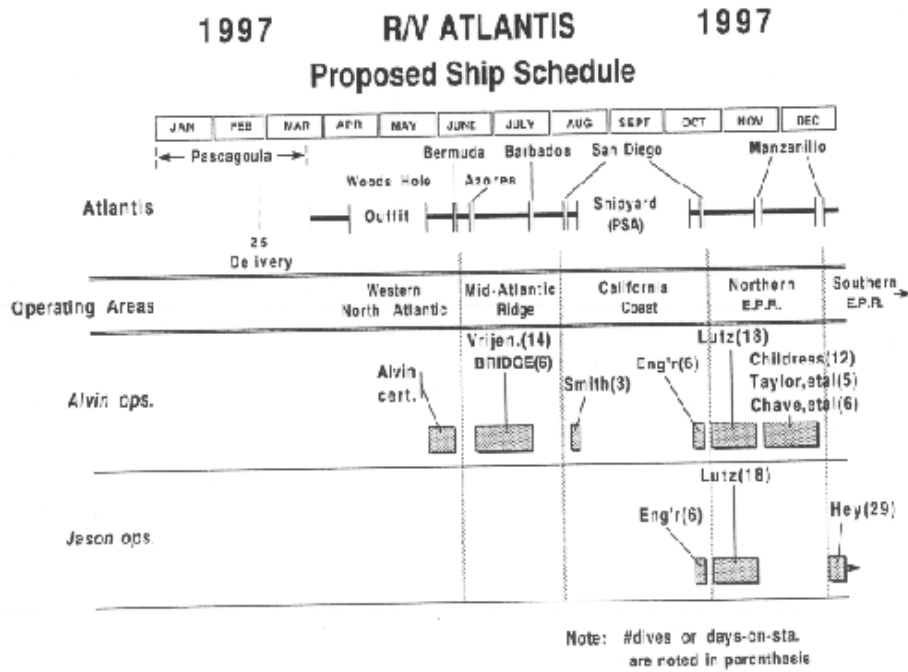
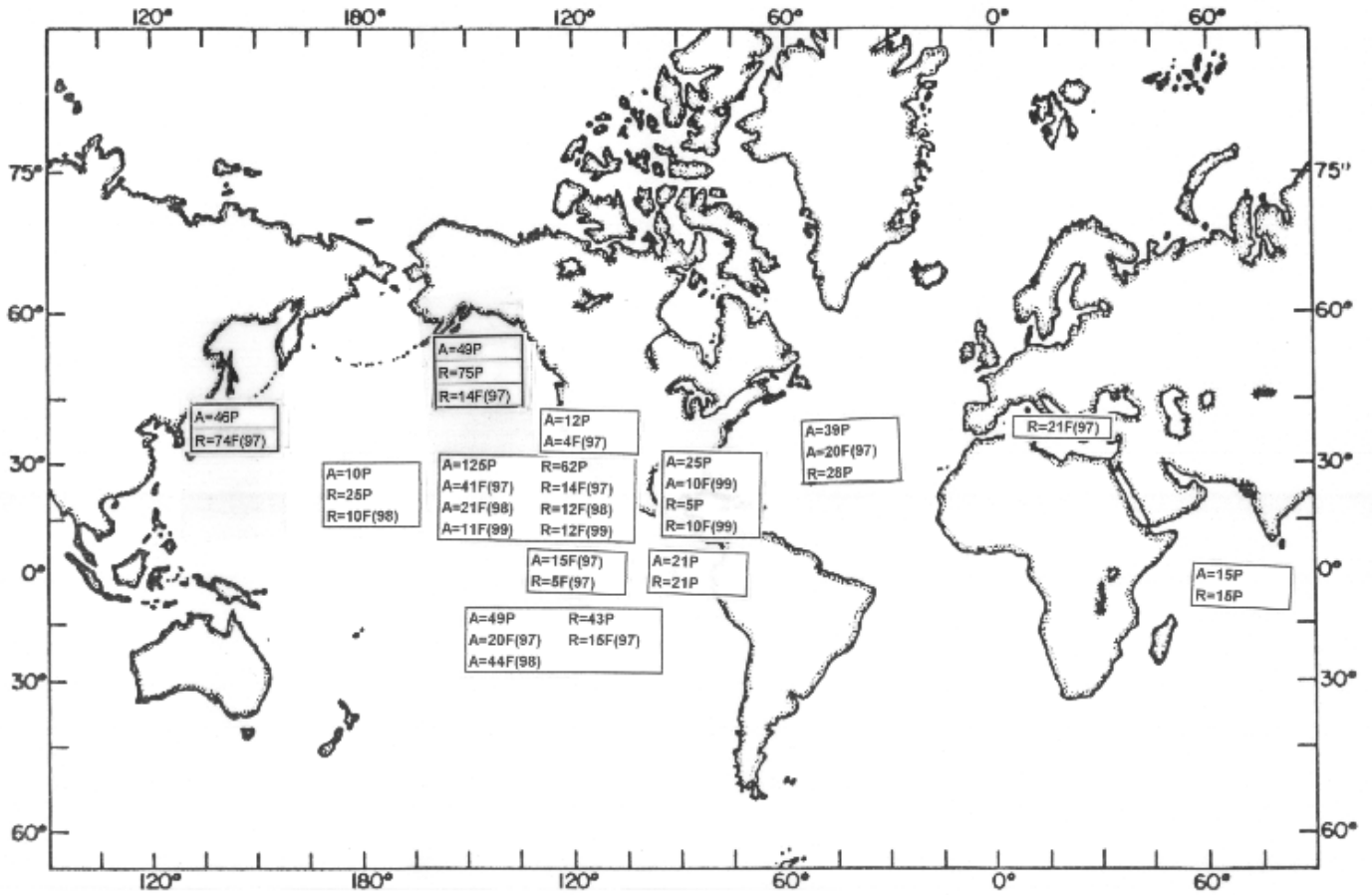


# APPENDIX III

## DESSC - ALVIN/ROV UPDATE



# ALVIN AND ROV REQUEST SUMMARY: 1997 AND BEYOND



#	PI	97		97		98		98		98+		98+	
		ALVIN	ALVIN	ROV	ROV	ALVIN	ALVIN	ROV	ROV	ALVIN	ALVIN	ROV	ROV
		PROP	FUND	PROP	FUND	PROP	FUND	PROP	FUND	PROP	FUND	PROP	FUND
<b>ATLANTIC</b>													
1	BLACKMAN	14		15									
2	RONA	10											
3	VRIJENHOEK/BRIDGE		20										
4	TUCHOLKE					15		13					
		24	20	15	0	15	0	13	0	0	0	0	0
<b>MEDITERRANEAN</b>													
5	BALLARD				21								
		0	0	0	21	0	0	0	0	0	0	0	0
<b>GULF OF MEXICO</b>													
6	ROBERTS					15							
7	AHARON					10		5					
8	MACDONALD									10		10	
		0	0	0	0	25	0	5	0	0	10	0	10
<b>JUAN DE FUCA</b>													
9	EMBLEY			10									
10	BECKER				6								
11	KARSTEN	17											
12	COLLIER					20							
13	JOHNSON					12					5		
14	DELANEY			33				27					
-	CHADWICK				5								
-	JOHNSON				3								
		17	0	43	14	32	0	27	0	0	0	5	0
<b>OFF CALIFORNIA</b>													
15	ECKMAN					12							
16	C.R. SMITH		4										
		0	4	0	0	12	0	0	0	0	0	0	0
<b>NORTH EAST PACIFIC RISE</b>													
17	FISHER				14								
18	FISHER					10							
19	CARBOTTE			36									
20	LUTZ		18										
21	LUTZ					11		12		11		12	
22	FORNARI	2											
23	TAYLOR/WIRSEN		5										
24	BALLARD					21		21					
25	FORNARI			5									
26	MEG TIVEY					20							
27	TOLSTOY					8							
28	VON DAMM	10				10				10			
29	CHAVE		6										
30	MULLINEAUX					10				10			
31	MANAHAN					8				16			
32	CHILDRESS		12										
		12	41	41	14	77	21	21	12	36	11	0	12

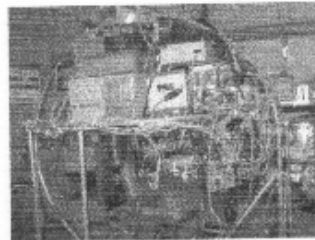
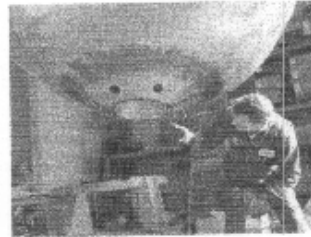
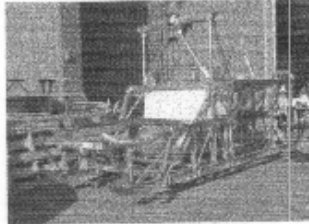
<b>GUAYMAS BASIN</b>													
33	BALLARD					21		21					
		0	0	0	0	21	0	21	0	0	0	0	0
<b>EQUATORIAL PACIFIC</b>													
34	KARSON		15		5								
		0	15	0	5	0	0	0	0	0	0	0	0
<b>SOUTHERN EAST PACIFIC RISE</b>													
35	KLEINROCK					6		21					
36	HEY				12								
37	LILLEY						25						
38	FORNARI					2		3					
39	LUPTON					20							
40	LUTZ						14						
41	NAAR					18		12					
42	URABE						5						
43	SINTON		20		3								
44	VAN DOVER					3		7					
		0	20	0	15	49	44	43	0	0	0	0	0
<b>HAWAII</b>													
45	D.K. SMITH							25					
46	GARCIA					10							
47	CHAVE							10					
		0	0	0	0	10	0	25	10	0	0	0	0
<b>WESTERN PACIFIC</b>													
48	PERFIT					15		5					
49	TBA					6							
50	CLEFT						25						
51	FRYER				27								
-	DERBYSHIRE				47								
		0	0	0	74	46	0	5	0	0	0	0	0
<b>INDIAN OCEAN</b>													
52	FORNARI									15		15	
		0	0	0	0	0	0	0	0	15	0	15	0
		97	97	97	97	98	98	98	98	99+	99+	99+	99+
#		ALVIN	ALVIN	ROV	ROV	ALVIN	ALVIN	ROV	ROV	ALVIN	ALVIN	ROV	ROV
		PROP	FUND	PROP	FUND	PROP	FUND	PROP	FUND	PROP	FUND	PROP	FUND
	<b>TOTALS</b>	<b>53</b>	<b>100</b>	<b>99</b>	<b>143</b>	<b>287</b>	<b>65</b>	<b>160</b>	<b>22</b>	<b>51</b>	<b>21</b>	<b>20</b>	<b>22</b>

ALVIN/ROV LETTERS OF INTEREST: SUMMARY 1997 - 1999													
	97	97	97	97	98	98	98	98	99+	99+	99+	99+	
	ALVIN	ALVIN	ROV	ROV	ALVIN	ALVIN	ROV	ROV	ALVIN	ALVIN	ROV	ROV	
# OF LETTERS	PROP	FUND	PROP	FUND	PROP	FUND	PROP	FUND	PROP	FUND	PROP	FUND	
<b>ATLANTIC</b>													
4 LETTERS	24	20	15	0	15	0	13	0	0	0	0	0	
<b>MEDITERRANEAN</b>													
1 LETTER	0	0	0	21	0	0	0	0	0	0	0	0	
<b>GULF OF MEXICO</b>													
3 LETTERS	0	0	0	0	25	0	5	0	0	10	0	10	
<b>JUAN DE FUCA</b>													
8 LETTERS	17	0	43	14	32	0	27	0	0	0	5	0	
<b>OFF CALIFORNIA</b>													
2 LETTERS	0	4	0	0	12	0	0	0	0	0	0	0	
<b>NORTH EAST PACIFIC RISE</b>													
16 LETTERS	12	41	41	14	77	21	21	12	36	11	0	12	
<b>GUAYMAS BASIN</b>													
1 LETTER	0	0	0	0	21	0	21	0	0	0	0	0	
<b>EQUATORIAL PACIFIC</b>													
1 LETTER	0	0	0	0	0	15	0	5	0	0	0	0	
<b>SOUTHERN EAST PACIFIC RISE</b>													
10 LETTERS	0	0	0	12	49	64	43	3	0	0	0	0	
<b>HAWAII</b>													
3 LETTERS	0	0	0	0	10	0	25	10	0	0	0	0	
<b>WESTERN PACIFIC</b>													
5 LETTERS	0	0	0	74	46	0	5	0	0	0	0	0	
<b>INDIAN OCEAN</b>													
1 LETTER	0	0	0	0	0	0	0	0	15	0	15	0	
<b>TOTALS</b>	<b>53</b>	<b>65</b>	<b>99</b>	<b>135</b>	<b>287</b>	<b>100</b>	<b>160</b>	<b>30</b>	<b>51</b>	<b>21</b>	<b>20</b>	<b>22</b>	

# *ALVIN Overhaul*

## *Status*

- Some personnel on ROV ops
- Frame repaired..100%
- Variable ballast rebuilt..70%
- Manipulators rebuilt..90%
- Electronic Equip maint..75%
- Personnel/VB/HP spheres insp..100%
- Pressure test implodables..50%
- Hydraulic system rebuild..80%
- Electrical J-boxes rebuild..75%
- Explosive bolts..20%
- Battery Boxes..10%
- Foam repairs..50%
- Blow/vent system.. 100%
- Internal panels/wiring.. 75%
- Skin repairs/painting..5%
- Component re-installations started..5%





## *ALVIN Upgrades*

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- Wiring for 3rd battery
- Pan/Tilt installation
- New single chip video camera
- New motor controllers
- Pelagic pump motors
- New in-hull Nikon cameras

*1997-1999 Upgrade Plans*  
*Deep Submergence*

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***DESSC Upgrade Priority List***

- Datalogger/video upgrades
- Additional foam
- ALVIN power management
- Wiring for 3rd battery
- Slurp pumps
- Dual head scanning sonar
- Laser ring gyro
- Imaging infrastructure
- 35mm in-hull cameras and auto strobes
- Pencil cameras
- Homer probes



# *1997-1999 Upgrade Plans Deep Submergence*

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## ***Additional Upgrade Priorities***

- VB System- planned '97-'98 engineering proposal
- Navigation
- Digital imaging for ALVIN/Jason/ARGO
- Remote data and temperature logging via inductive coupling
- ALVIN thermistor probes

# *ROV Status*

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## **M/V Derbyshire Preparations**

- 47 day survey requiring deployment of DSL-120, Argo-II and Jason vehicles from R/V Thompson
- Installation of HDTV camera and associated telemetry, display and recording subsystems
- Installation of digital high resolution color video camera including enhanced telemetry and recording
- Installation of stereo video system
- Upgrade to existing mosaicking capability
- Refinement of DSG data reduction and processing capabilities

# *ROV Upgrade Plans*

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- DSL-120 real-time display and processing
- Jason ascent/descent weight dropper
- "Smart" elevator
- Video telemetry upgrade for Jason and Argo-II
- Jason payload increase
- Enhancement to Jason's auxiliary hydraulic system
- Replacement of Jason neutral tether cable