APPENDIX III

Deep Submergence Science Committee

28, 29 May 1996
Woods Hole, MA
R. Pittenger

Woods Hole Oceanographic Institution

Features of the
New Deep Submergence Facility
(After Spring 1997)

ATLANTIS

- Lab Space, General Purpose Capacity
- Berthing
- Endurance
- Speed
- Sea-keeping/Sea-kindliness
- Power
- Dynamic Positioning

Combined Deep Submergence Operations Group

- ALVIN
- ARGO II, DSL 120, JASON

ROV's also available in "fly-away" mode

- For now?

ATLANTIS

Schedule of Key Events

- *ATLANTIS II* out of service - Sept. '96
- *ALVIN* Overhaul - Sept. '96- Apr. '97
- *ATLANTIS* (AGOR-25)
    - Launch Date - 1 Feb. '96
    - Conversion Complete - April '97
    - Arrive WHOI - May 6 '97
    - DSOG Demo/Trials - May 20 '97- June 3 '96
    - Available for Science - June - Dec. '97
      (contiguous to USA)
    - Available for Science - >Feb. '98
      (unlimited)

	LULU	ATLANTIS II	KNORR	ATLANTIS
LOA	105 ft	210 ft	279 ft	274 ft
Beam	48 ft	44 ft	46 ft	52.5 ft
Displacement	480 Ltons	2.300 Ltons	2,685 Ltons	3,250 Ltons
Crew	9	22	22	22
Science				
DSV/Tech	9	9	13	13
Party	8	19	21	24
Generators	150 kw	600 kw	1,780 kw	2,145 kw
Cruising Speed	6.5 kts	10.5 kts	12 kts	12 kts
Endurance	20 days	30 days	60 days	60 days
Range	2,000 mi	9,000 mi	12,000 mi	11,300 mi
Labs	1 van	4 labs	6 labs	6 labs
		1.031 sq. ft	1,981 sq. ft.	3,890 sq. ft.

Individual documents can be viewed by selecting the appropriate item below.

1996 ALVIN/ROV Operations
1997 ATLANTIS/ALVIN/ROV Schedule
AGOR 25/ATLANTIS II/ALVIN Schedule (3 Years)
ATLANTIS SHIPBOARD INFORMATION SYSTEM
Outboard Profile of R/V ATLANTIS with Deep Submergence Modifications Highlighted
Plan View of ATLANTIS Main Deck

New Features:

- ALVIN A-Frame and Tracks
  A-Frame will be taken from ATLANTIS II, completely refurbished and new, more powerful hydraulic system.
  Positive control traversing and track system to move ALVIN into and out of hangar.
- ALVIN Hangar
  To provide secure,covered storage and easy access for maintenance.
- Shops (Mechanical, Electric, and Electronics)
  Near Hangar for efficiency.
- ROV Bay
  For storage and maintenance of WHOI ROV's.

ALVIN Dive Weight, Battery Charging and Spare Part Storage

- Co-located conveniently immediately below ALVIN hangar.
- Battery service facility includes charger, storage for replacement battery and hyraulic lift for removing/installing heavy battery units.
- ALVIN uses 1,000 lbs. of steel as descent weights on each dive.
- Typically the ship will carry 75,000 lbs. of expendable. weights.
- Having an adjacent dedicated large spare parts storage for submersibles will greatly enhance the at-sea groups' efficiency.

Upper Level of ALVIN Hangar

- Cat-walk provides easy access to submarine.
- Adjacent shop.
- Air compressors for servicing ALVIN.

- Work boat is used in ALVIN launch/recovery.

Remotely Operated Vehicle (ROV) Shipboard Equipment

- Storage, maintenance and launch facilities will be provided.
- An innovative scheme to launch these vehicles from the port side (from a new dedicated hydroboom).
- The control station will house the control for the A-frame, both hydrobooms, both hydrowinches, and the large traction winch (located below decks). Remote controlled video cameras will assist the operators.

ALVIN Surface Control Station

- The central nerve center (surface control station) for ALVIN dive operations will contain navigation and plotting systems, underwater communications equipment for talking to the submarine during dives, video monitoring equipment for dive and recovery sequences, and radio equipment.
- The surface control station is located adjacent to the bridge to facilitate coordination between the ship control and submersible control stations.

Schedule of Installation