



ARV Preliminary Design Placemat



DIMENSIONS

Length, Overall	345 ft
Length, BP	325.3 ft
Beam, Overall	73.3 ft
Beam, WL	72 ft
Draft, FLD, Load Line	28 ft
Draft, Full Load	28 ft
Draft, Lightship	?? ft

PERFORMANCE

<u>Open Water</u>	
Cruise	11 kt T / 12kt O
Quiet	8 kt
<u>Ice</u>	
Continuous 3 kt	4.5 ft
Continuous 6 kt	1.6 ft
Turning out	4.5 ft
Range	17,000 nm

ACCOMMODATIONS

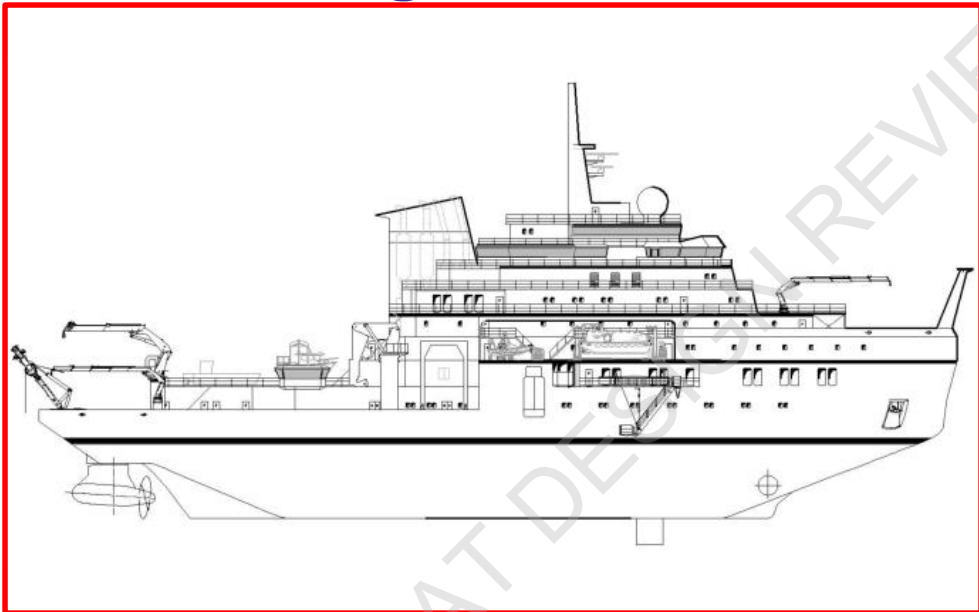
Ships Crew	29
Deck	15
Engineering	9
Stewards	5
NSF Science Party	
ADA Accessible	2
Scientists	53
Wastewater (days)	20 T / 60 O

PROVISIONS

Freeze	90 days
Chill	45 days
Dry	90 days

AVIATION

UAV Launch/Recovery	150 lbs
UAV Hangar	No JP-5
UAV Workshop	



MACHINERY SYSTEMS

Fixed Pitch Azipod	2 x 6.5 MW
Bow Thrusters	1 x 2.2 MW
Ship Power Plant	19 MW
Propeller	2 x 14.0ft FPP

NAVIGATION

AIS
ECDIS
S & K Band Radar
Ice Radar
DGPS

COMMUNICATIONS

HF Transmit and Receive
C-Band SATCOM
UHF SATCOM
GMDSS
INMARSAT F

MISSION EQUIPMENT

Deck Crane	2 - 3
Storage Crane	1
Meteorology Mast	1
Piston Core LARS	40m T / 50 m O
Towing	
4 kt	25,000 lbs
6 kt	10,000 lbs
Sonar Suite	
Drop Keel (below keel)	3 ft / 10 ft
Observation Bridge	
Ice Radar	
ISO Van Cap. (TEU)	20 T / 24 O

AUXILLIARY SYSTEMS

A/C Plants	
Fire Suppression	
Refueling	
Fuel Cargo Capacity	60,000 gal

WEIGHTS

Full Load	~ 11,185 t
SWBS 100	XXX t
SWBS 200	XXX t
SWBS 300	XXX t
SWBS 400	XXX t
SWBS 500	XXX t
SWBS 600	XXX t
SWBS 700	XXX t

CLASSIFICATION

ABS <input type="checkbox"/> A1	Oceanographic
AMS	ILM
ACCU	BWT+
Unrestricted service	CCO-Polar
HAB++(WB)	ENVIRO
ESS-LIBATTERY	HYBRID IEPS
ILM	UWILD
Ice Class	PC3
NIBS	(NIBS, CS-2,
DPS-1	and DPS-1
CS-2	Priority is
	meeting
	performance not
	obtaining
	notation)

STABILITY

Intact:	
~	
Damage:	
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MISSION SPACES

UNOLS Lab Vans	4T / 8O
Lab Area (total, s.f.)	5,700T / 6,500O
Aft Work Deck (s.f.)	4,500T / 5,500O
Science Stores (ft. cu.)	16,000T/20,000O
Side Deck Length	170 ft
Baltic Room Area	1,200 ft sq

