

US Academic Research Fleet Vessel Specifications

	Vessel:	<i>Atlantis</i>	<i>Langseth</i>	<i>Revelle</i>	<i>Sikuliaq</i>	<i>Thompson</i>
<b>Globals</b>						
<b>Dimensions</b>						
Length (overall)	ft	274'	237'3"	273'2"	261'	273'
Length (waterline)	ft	252'6"	208'	251'	237'	252'6"
Beam	ft	52'6"	56'	52'6"	52'	52'6"
Draft @ amidships	ft	19'	19'4"	17'	18'9"	17'
Hull Depth @ amidships	ft	28'	25'	26'6"	28'3"	26'6"
Regulatory Tonnage	GT ITC <sup>1</sup>	3,304	3834	3,180	TBD	3,058
Displacement (Full Load) <sup>3</sup>	LT	3,512	3906	3,512	3,665	3,528
<b>Lab and Science Spaces</b>						
Main Lab	ft <sup>2</sup>	1,676	2345	1,745	1000	1,700
Wet Lab	ft <sup>2</sup>	234	613	330	510	225
Additional Labs	ft <sup>2</sup>	2,085	1724	1,774	570	1,720
Library/Conf Rm/Lounge	ft <sup>2</sup>	418	w/ in main lab	756	310	560
Temperature controlled lab space	ft <sup>2</sup>	63 (fridge) 63 (freezer)	-	63 (fridge) 63 (freezer)	2 x 70	40 (fridge) 40 (freezer)
Science Storage	ft <sup>2</sup>	500	in the labs	965	750	1,400
Sci Hazmat/chemical storage	ft <sup>2</sup>	80 (800 ft3)	upon request	50	70	50
<b>Deck</b>						
Aft Deck Areas	ft <sup>2</sup>	3,732	1150	3,710	3920	3,990
CTD Staging Hanger	ft <sup>2</sup>	-	-	360	440	360
Side Rail	ft	104	80	104	100	112
Freeboard	ft	9	5' 7"	9	9' 6"	10
Maximum Scientific Load	LT	80	180	139.3	100	44.6
20ft Van Locations	number	6	2 - 4	7	3	6
Stern Ramp	yes/no	no	yes	no	no	no
Removeable Bulwarks		100%	starboard side, mid-ships	100%	100%	100%

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		<b>Globals</b>				
<b>Berths</b>						
Science + Mar Techs	#	38	35	37	26	38
Mobility impaired accessible	yes/no/#bunks	no	no	no	yes/2	no
Crew	#	22	20	22	20	21
Berthing Van Option	#	no	no	no	yes/1	no
Total	#	60	55	59	46	59
<b>Performance</b>						
Cruise Speed	kts	11	11	11.7	11	12
Max Speed	kts	15	13	15	14	15
Range <sup>2</sup>	nm	17,280	13,500	15,000@12kts	9,700@11kts	12,000@15kts
Endurance	days	60	60 (fuel limited)	52	45	60
Fuel Capacity	gallons	267,540	270,000	227,500	185,000	280,000
Fuel Consumption (avg est)	gal/day	3,000	3500	4,400	4600	2,324
Bow Thruster- type	type	360° azimuthing jet	tunnel	360° azimuthing jet	jet	360° azimuthing jet
Bow Thruster	hp	1,180	800	1,180	920	1,100
Main Propulsion - type	type	diesel-electric, azimuthing stern thrusters	direct-drive, conventional twin-screw	diesel-electric, azimuthing stern thrusters	diesel-electric, azimuthing stern thrusters	diesel-electric, azimuthing stern thrusters
Main Propulsion	hp	2 x 3,000	2 x 3,550	2 x 3,000	5,750	2 x 3,000
URN: Below ICES 209 limits?	yes/no	no	no	no	TBD	no
Ice Class	class	-	ABS Ice-Strengthening Class 1C	ABS Ice Strengthening Class C	IACS Polar Class PC5	-
Dynamic Positioning Certification	rating	DP-0	DP-1	DP-0	DP1	DP-0

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<b>Globals</b>						
<b>Over the side handling equipment</b>						
A-frame Dimensions	H(ft) x W(ft)	18' x 16' Alvin LARS	-	26' x 20'	30' x 20'	26' x 20'6"
A-frame Rating	SWT (lbf)	50,000 w/2:1 FS	-	18,000	30,000 luffing 120,000 in stops	20,000
Starboard A-frame/J-frame	H(ft) x W(ft)	-	27'8" x 14'6"	-	LHS	-
Starboard A-frame/J-frame Rating	SWT (lbf)	-	33,040	-	11,100	-
Aft Crane Reach	ft	65'	40'	65'	50'	65'
Aft Crane(s) Lift	SWT (lbf)	3,400-42,000 1,700-21,000	4494 @ 40'	3,400-42,000 1,700-21,000	35,000 at 25' 15,000 at 50'	3,400-34,000
Foredeck Crane	SWT (lbf)	-	6,612@32', midship:11,000@ 49'	yes	1	none
Permanent Winches	#	4	15+	3	3	3
Winch Wire type and length	type, L (m)	0.322EM, 10K	0.322EM, 8K	0.322EM, 10K	0.680 EM, 10K	0.322EM, 10K
Winch Wire type and length 2	type, L (m)	1/4", 10K	Dedicated, seismic source	0.322EM, 10K	9/16", 10K	0.322EM, 10K
Winch Wire type and length 3	type, L (m)	9/16", 10K	Dedicated, seismic streamer	9/16", 10K	0.322EM, 10K	9/16", 10K

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	Vessel:	<i>Atlantis</i>	<i>Langseth</i>	<i>Revelle</i>	<i>Sikuliaq</i>	<i>Thompson</i>
		<b>Globals</b>				
Winch Wire type and length 4	type, L (m)	0.681EO, 10K	Dedicated, wide tow vanes	0.680Coax, 10K	0.322EM, 10K	0.680Coax, 10K
Load Handling System (LHS)	yes/no	yes	no	yes	yes	yes
<b>Science Equipment</b>						
Met Instrumentation		wind speed/direction, barometer, temp, relative humidity, long and short wave radiation, PAR	windspeed/direction, air temp/humidity, and barometric pressure	wind speed/direction, barometer, temp, relative humidity, long and short wave radiation, PAR	wind speed/direction, barometer, temp, relative humidity, long and short wave radiation, PAR	wind speed/direction, barometer, temp, relative humidity, long and short wave radiation, PAR
Met Tower	yes/no	yes	no	yes	yes	yes
Retractable Centerboard	yes/no	no	no	no	yes	no
ADCP(s)	kHz	75	75	75, 150	38 <sup>SIK1</sup> , 75, 150	75
Multibeam sonar	KHz	12 (1°x1° Array)	12 (1°x1° Array)	12 (1°x1° Array)	30 & 70 (0.5°x1° Array)	30 (1°x1° Array)
Echosounder(s) <sup>3</sup>	kHz	3.5, 12	3.5, 12	3.5, 12	3.5, 12, 18, 38, 70, 120, 200	3.5, 12
Open Transducer well locations	yes/no/#	no/	no/	yes/1	yes/5	no
Work/Rescue boats	#/#	2	1/1	1	1 / 1	1 / 1
Fume Hoods	#	4	0	4	4	4

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	Vessel:	<i>Atlantis</i>	<i>Langseth</i>	<i>Revelle</i>	<i>Sikuliaq</i>	<i>Thompson</i>
		<b>Globals</b>				
Science seawater system	pipe type	teflon-lined stainless steel	teflon-lined stainless steel	stainless steel	stainless steel	teflon lined resistoflex, seamless stainless
Seismic Air Compressors	#/scfm	-	2/2750	2/300	-	1/300
<b>Communications Equipment and Network</b>						
Satellite Band		C(HiSeasNet), L(FBB)	C(HiSeasNet), L(FBB)	C(HiSeasNet), L(FBB)	C/Ku(HiSeasNet), L(FBB), Iridium Openport	C/Ku(HiSeasNet), L(FBB-1ea)
Telecommunications center		-	-	-	-	-

1. ITC is "International Tonnage Convention"
  2. Dependent on vessel speed
  3. Includes Fisheries Acoustics and Sub-bottom profilers
- SIK1. installation of a 38kHz ADCP is planned.
- AE1. includes 01 aft deck
- AE2. Dynamic loads in sea state 3
- OCR1. Portable crane w/3 locations including forward

US Academic Research Fleet Vessel Specifications

	Vessel:	<i>Atlantic Explorer</i>	<i>Endeavor</i>	<i>Kilo Moana</i>	<i>Oceanus</i>	OCRV
		<b>Ocean/Intermediate</b>				
<b>Dimensions</b>						
Length (overall)	ft	170'	185'	186'	177'	238'
Length (waterline)	ft	162'	165'	172'	165'	230'
Beam	ft	38'	33'	88'	33'	50'
Draft @ amidships	ft	11'3"	18' 6"	25'	17' 6"	15'
Hull Depth @ amidships	ft	14' 3"	21'6"	38'	20'6"	22'
Regulatory Tonnage	GT ITC <sup>1</sup>	861	298	3,060	261	TBD
Displacement (Full Load) <sup>3</sup>	LT	1,297	1,166	2,542	960	2,916
<b>Lab and Science Spaces</b>						
Main Lab	ft <sup>2</sup>	380	696	500	595	1,023
Wet Lab	ft <sup>2</sup>	-	390	320	240	398
Additional Labs	ft <sup>2</sup>	670	578	1,264	520	311
Library/Conf Rm/Lounge	ft <sup>2</sup>	500	168	353	170	529
Temperature controlled lab space	ft <sup>2</sup>	-	95	-	-	102
Science Storage	ft <sup>2</sup>	in labs	150	144	150	589
Sci Hazmat/chemical storage	ft <sup>2</sup>	10	18	20	20	57
<b>Deck</b>						
Aft Deck Areas	ft <sup>2</sup>	2030 <sup>AE1</sup>	2,100	2,200	2,150	1,567
CTD Staging Hanger	ft <sup>2</sup>	190	-	1,888	-	303
Side Rail	ft	-	73	18	73	80
Freeboard	ft	3' 3"	3	12	3	7
Maximum Scientific Load	LT	80	80	100	80	250
20ft Van Locations	number	3	2	3	2	3
Stern Ramp	yes/no	no	no	no	no	no
Removeable Bulwarks		partial	100% aft	100% aft	100% aft	yes/TBD

US Academic Research Fleet Vessel Specifications

	Vessel:	<i>Atlantic Explorer</i>	<i>Endeavor</i>	<i>Kilo Moana</i>	<i>Oceanus</i>	OCRV
		<b>Ocean/Intermediate</b>				
<b>Berths</b>						
Science + Mar Techs	#	22	18	28	15	24
Mobility impaired accessible	yes/no/#bunks	no	no	no	no	yes/1
Crew	#	12	12	20	12	20
Berthing Van Option	#	no	no	no	no	no
Total	#	34	30	48	27	45
<b>Performance</b>						
Cruise Speed	kts	10	10	11	11	11
Max Speed	kts	11	14	14	14	12
Range <sup>2</sup>	nm	5,500	8,000	10,000@12kts	7,000	11,500
Endurance	days	30	30	50	30	40
Fuel Capacity	gallons	56,000	56,100	130,000	51,000	147,066
Fuel Consumption (avg est)	gal/day	900-1,200	1,100	3,300	900	2,779
Bow Thruster- type	type	azimuthing	32" U-Tube, 360° azimuthing	azimuthing (stbd hull.)	32" U-Tube, 360° azimuthing	360° azimuthing
Bow Thruster	hp	350	320	919	350	920
Main Propulsion - type	type	direct-drive, conventional twin screw	direct-drive, conventional single screw w/controllable pitch propeller	diesel-electric, conventional twin screw w/ fixed pitch propellers	direct-drive, conventional single screw w/ controllable pitch propeller	diesel-electric, conventional twin screw w/ controllable pitch propellers
Main Propulsion	hp	2 x 940	3,050		3,000	1,162 x 2
URN: Below ICES 209 limits?	yes/no	no	no	no	no	TBD
Ice Class	class	-	-	-	-	ABS D0
Dynamic Positioning Certification	rating	-	-	yes	-	DP-0

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	Vessel:	<i>Atlantic Explorer</i>	<i>Endeavor</i>	<i>Kilo Moana</i>	<i>Oceanus</i>	OCRV
		<b>Ocean/Intermediate</b>				
<b>Over the side handling equipment</b>						
A-frame Dimensions	H(ft) x W(ft)	22' x 40'	11' x 20'	18'6" x 12'6"	9' x 14'	27' x 20'7"
A-frame Rating	SWT (lbf)	20,000	18,200 12,000	20,000	26,000	30,000
Starboard A-frame/J-frame	H(ft) x W(ft)	yes	10' x 8'	-	6' (boom)	-
Starboard A-frame/J-frame Rating	SWT (lbf)	10,000	12,960	no	5,000lb	-
Aft Crane Reach	ft	48'	70'	55'	65'	70'
Aft Crane(s) Lift	SWT (lbm)	4,000@46.5' 7,200@30' 10,000@20' <sup>AE2</sup>	4,000@35'	16,000@35' 8,000@55'	40,000@10' 6,890@65'	TBD: Tech Pub
Foredeck Crane	SWT (lbm)	-	-	-	-	2,000@ 30' <sup>OCRV1</sup>
Permanent Winches	#	3	3	2	3	3
Winch Wire type and length	type, L (m)	0.322EM, 10K	0.322EM, 10K	0.681EM, 10K	9/16", 10K	0.322EM, 10K
Winch Wire type and length 2	type, L (m)	1/4", 5K	0.322EM, 10K	9/16", 10K	0.680Coax, 10K	3/8", 10K
Winch Wire type and length 3	type, L (m)	1/4"Synthetic, 2K	9/16", 10K	0.322EM, 10K	0.322EM, 10K	9/16", 10K



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	Vessel:	<i>Atlantic Explorer</i>	<i>Endeavor</i>	<i>Kilo Moana</i>	<i>Oceanus</i>	OCRV
		<b>Ocean/Intermediate</b>				
Winch Wire type and length 4	type, L (m)	-	-	0.680Coax, 10K	1/4", 10K	0.681EO, 10K
Load Handling System (LHS)	yes/no	no	no	yes	no	yes
<b>Science Equipment</b>						
Met Instrumentation		wind speed/direction, barometer, temp, relative humidity, precipitation,	wind speed/direction, barometer, temp, relative humidity, precipitation, long and short wave radiation, PAR	wind speed/direction, barometer, temp, relative humidity, precipitation, long and short wave radiation, PAR	wind speed/direction, barometer, temp, relative humidity, precipitation, short wave radiation	wind speed/direction, TBD
Met Tower	yes/no	no	yes	portable, available on request	yes	TBD - fwd mast avail.
Retractable Centerboard	yes/no	no	no	no	no	no
ADCP(s)	kHz	75	75, 300	38, 300	75, 300	38, 150, 300
Multibeam sonar	KHz	-	-	70, 12	-	12 (1° x 2°), 700 (.5° x 1°)
Echosounder(s) <sup>3</sup>	kHz	3.5, 12	3.5, 12	3.5, 38, 200	3.5, 12	3.5, 12, 18, 38, 70, 120, 200
Open Transducer well locations	yes/no/#	yes/	yes/1	yes/1	yes/1	yes/3
Work/Rescue boats	#/#	1	1	1	1	1
Fume Hoods	#	1	2	2	1	2

US Academic Research Fleet Vessel Specifications

	Vessel:	<i>Atlantic Explorer</i>	<i>Endeavor</i>	<i>Kilo Moana</i>	<i>Oceanus</i>	OCRV
		<b>Ocean/Intermediate</b>				
Science seawater system	pipe type	schedule 80 PVC	schedule 80 PVC	polypropylene lined stainless steel	stainless steel, schedule 80 PVC	TBD
Seismic Air Compressors	#/scfm	-	-	-	-	-
<b>Communications Equipment and Network</b>						
Satellite Band		Ku(HiSeasNet), L(FBB)	Ku(HiSeasNet), L(FBB)	C(HiSeasNet), L(FBB)	Ku(HiSeasNet), L(FBB)	C/Ku (HiSeasNet), L (FBB)
Telecommunications center		-	-	-	-	-

1. ITC is "International Tonnage Convention"
  2. Dependent on vessel speed
  3. Includes Fisheries Acoustics and Sub-bottom SIK1. installation of a 38kHz ADCP is planned.
- AE1. includes 01 aft deck  
 AE2. Dynamic loads in sea state 3  
 OCRV1. Portable crane w/3 locations including f

US Academic Research Fleet Vessel Specifications

	Vessel:	RCRV	Sharp
		Regional	
<b>Dimensions</b>			
Length (overall)	ft	191'	146'
Length (waterline)	ft	176'	135'
Beam	ft	41'	32'
Draft @ amidships	ft	12'6"	9'6"
Hull Depth @ amidships	ft	19'	14'6"
Regulatory Tonnage	GT ITC <sup>1</sup>	~1450	496
Displacement (Full Load) <sup>3</sup>	LT	~1,488	598
<b>Lab and Science Spaces</b>			
Main Lab	ft <sup>2</sup>	525	340
Wet Lab	ft <sup>2</sup>	285	260
Additional Labs	ft <sup>2</sup>	420	400(vans)
Library/Conf Rm/Lounge	ft <sup>2</sup>	180	120
Temperature controlled lab space	ft <sup>2</sup>	vans	vans
Science Storage	ft <sup>2</sup>	220	in labs
Sci Hazmat/chemical storage	ft <sup>2</sup>	portable lockers	portable lockers
<b>Deck</b>			
Aft Deck Areas	ft <sup>2</sup>	2,350	1,500
CTD Staging Hanger	ft <sup>2</sup>	w/in wet lab	-
Side Rail	ft	77	53
Freeboard	ft	6	5
Maximum Scientific Load	LT	50	45
20ft Van Locations	number	3	2
Stern Ramp	yes/no	no	yes
Removeable Bulwarks		yes/TBD	partial

US Academic Research Fleet Vessel Specifications

	Vessel:	RCRV	Sharp
		Regional	
<b>Berths</b>			
Science + Mar Techs	#	18	16
Mobility impaired accessible	yes/no/#bunks	yes/1	yes/1
Crew	#	12	6
Berthing Van Option	#	yes/4	yes/4
Total	#	30(34)	22(26)
<b>Performance</b>			
Cruise Speed	kts	11	10-11
Max Speed	kts	~12.5	11
Range <sup>2</sup>	nm	5400	3,500
Endurance	days	21	14
Fuel Capacity	gallons	≥60,000	15,000
Fuel Consumption (avg est)	gal/day	1500	700
Bow Thruster- type	type	360° azimuthing (drop down) and azimuthing Jet	tunnel
Bow Thruster	hp	1085	325
Main Propulsion - type	type	diesel-electric, azimuthing stern thrusters	diesel-electric, azimuthing stern thrusters
Main Propulsion	hp	1,600	750
URN: Below ICES 209 limits?	yes/no	Same as Sikuliaq requirements	@8.0kts
Ice Class	class	ABS C0	no
Dynamic Positioning Certification	rating	DPS-1	Unrated

US Academic Research Fleet Vessel Specifications

	Vessel:	RCRV	Sharp
		Regional	
<b>Over the side handling equipment</b>			
A-frame Dimensions	H(ft) x W(ft)	25' x 20'	11'9"x 20'5"
A-frame Rating	SWT (lbf)	15,000 luffing	20,000
Starboard A-frame/J-frame	H(ft) x W(ft)	portable A-frame	5' x 11'4"
Starboard A-frame/J-frame Rating	SWT (lbf)	TBD- 6000(tow) 16,000(station keeping)	11,000
Aft Crane Reach	ft	TBD-65'	67'
Aft Crane(s) Lift	SWT (lbm)	TBD- Dockside: 35,000@20', 15,000@50'	3,090@67' 15,400@18'
Foredeck Crane	SWT (lbm)	TBD - SS3: 2,200@25', 3,900@15'	-
Permanent Winches	#	2	3
Winch Wire type and length	type, L (m)	0.393EO, 10K	0.322EM, 6K
Winch Wire type and length 2	type, L (m)	9/16", 10K	1/2", 3K
Winch Wire type and length 3	type, L (m)	0.681FO, 7K	0.681EO, 2.5K

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	Vessel:	RCRV	Sharp
		<b>Regional</b>	
Winch Wire type and length 4	type, L (m)	TBD synthetic	0.498 Deck winch
Load Handling System (LHS)	yes/no	yes	no
<b>Science Equipment</b>			
Met Instrumentation		wind speed/direction, barometer, temp, relative humidity, precipitation, long and short wave radiation, PAR	wind speed/direction, barometer, temp, relative humidity, short wave radiation
Met Tower	yes/no	Yes, foremast	no
Retractable Centerboard	yes/no	yes	yes
ADCP(s)	kHz	75, 300	600
Multibeam sonar	KHz	70/30 (.5° x 1°).200 (1°x1°)	200,400
Echosounder(s) <sup>3</sup>	kHz	12, 18, 38, 70, 120, 200	3.5, 12
Open Transducer well locations	yes/no/#	TBD/>=3	yes/1
Work/Rescue boats	#/#	1(skid mounted)/1	1 (17')
Fume Hoods	#	2	2+

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	Vessel:	RCRV	Sharp
		Regional	
Science seawater system	pipe type	TBD	copper-nickel and reinforced tygon
Seismic Air Compressors	#/scfm	-	-
<b>Communications Equipment and Network</b>			
Satellite Band		2xKu (HiSeasNet), L (FBB)	L(FBB), Fleet 55
Telecommunications center		yes	Bridge Station

1. ITC is "International Tonnage Convention"
  2. Dependent on vessel speed
  3. Includes Fisheries Acoustics and Sub-bottom
- SIK1. installation of a 38kHz ADCP is planned.
- AE1. includes 01 aft deck
- AE2. Dynamic loads in sea state 3
- OCR1. Portable crane w/3 locations including f

US Academic Research Fleet Vessel Specifications

	Vessel:	<i>Barnes</i>	<i>Blue Heron</i>	<i>Pelican</i>	<i>Savannah</i>	<i>Sproul</i>	<i>Walton Smith</i>
		<b>Coastal/Local</b>					
<b>Dimensions</b>							
Length (overall)	ft	65' 5 1/2"	86'3"	116'	92'	125'	96'
Length (waterline)	ft	61' 5 1/2"	78'4"	109'	84'2"	116'	90'
Beam	ft	19' 7 1/2"	23'4"	26'6"	27'	32'	40'
Draft @ amidships	ft	6' 3"	11'9"	9'6"	8' 6"	10'4"	7'
Hull Depth @ amidships	ft	9' 10"	14'9"	13'6"	13'6"	11'6"	40'
Regulatory Tonnage	GT ITC <sup>1</sup>	N/A	<200	261	265	355	325
Displacement (Full Load) <sup>3</sup>	LT	86	275	514	351	696	156
<b>Lab and Science Spaces</b>							
Main Lab	ft <sup>2</sup>	110	575	124	308	220	480
Wet Lab	ft <sup>2</sup>	combined labs	240	273	158	130	200
Additional Labs	ft <sup>2</sup>	-	-	156	-	400	-
Library/Conf Rm/Lounge	ft <sup>2</sup>	-	-	125	178	135	-
Temperature controlled lab space	ft <sup>2</sup>	-	-	-	-	-	-
Science Storage	ft <sup>2</sup>	in labs	in labs	in labs	~60	-	in labs
Sci Hazmat/chemical storage	ft <sup>2</sup>	portable locker	portable lockers	portable lockers	portable lockers	2-10	18
<b>Deck</b>							
Aft Deck Areas	ft <sup>2</sup>	280	800	1200	606	1854	960
CTD Staging Hanger	ft <sup>2</sup>	-	-	-	-	-	-
Side Rail	ft	2' 7"	3' 4"	4	~50	90	4'
Freeboard	ft	4'	3'	4' 6"	5'	2	5'8"
Maximum Scientific Load	LT	1.7	22-30	21	10	124.6	23
20ft Van Locations	number	0	10' van	2	0	3	0
Stern Ramp	yes/no	no	yes	no	no	no	no
Removeable Bulwarks		-	-	-	-	partial	partial



US Academic Research Fleet Vessel Specifications

	Vessel:	<i>Barnes</i>	<i>Blue Heron</i>	<i>Pelican</i>	<i>Savannah</i>	<i>Sproul</i>	<i>Walton Smith</i>
		<b>Coastal/Local</b>					
<b>Berths</b>							
Science + Mar Techs	#	6	7	15	17	12	13
Mobility impaired accessible	yes/no/#bunks	no	no	no	no	no	no
Crew	#	2	4	6	5	5	7
Berthing Van Option	#	no	no	no	no	no	no
Total	#	8	11	21	22	17	20
<b>Performance</b>							
Cruise Speed	kts	8.5	9	9.2	8	8.5	9-10
Max Speed	kts	10	10	9.2	9	9.5	10
Range <sup>2</sup>	nm	1000	2000	3490	2400	4,300	1800
Endurance	days	7	21	18	10	14	12
Fuel Capacity	gallons	1920	5200	15,000	10,500	25,000	10,000
Fuel Consumption (avg est)	gal/day	90	600	460	720	850	400
Bow Thruster- type	type	-	-	azimuthing	tunnel	White-Gill, trainable hydraulically	hydraulic
Bow Thruster	hp	-	-	125	65	155	25
Main Propulsion - type	type	direct-drive, conventional single screw	direct-drive, conventional single screw	direct-drive, conventional single screw	direct-drive, conventional single screw	direct-drive, conventional single screw	direct-drive, conventional single screw
Main Propulsion	hp	400	775	2 x 450	2 x 450	2 x 675	2x760
URN: Below ICES 209 limits?	yes/no	no	no	no	no	yes	no
Ice Class	class	-	-	-	n/a	-	-
Dynamic Positioning Certification	rating	-	-	-	n/a	-	yes

US Academic Research Fleet Vessel Specifications

		<i>Barnes</i>	<i>Blue Heron</i>	<i>Pelican</i>	<i>Savannah</i>	<i>Sproul</i>	<i>Walton Smith</i>
		<b>Coastal/Local</b>					
<b>Over the side handling equipment</b>							
A-frame Dimensions	H(ft) x W(ft)	-	13'6" x 7'6"	18' x 15'10"	17' x 17'	14' x 21'	20' x 20'
A-frame Rating	SWT (lbf)	-	10,000	21,250	9,000	21,000(tow) 16,100(station keeping)	5,000
Starboard A-frame/J-frame	H(ft) x W(ft)	-	-	16' x 10'6"	15'6"x8'6"	-	-
Starboard A-frame/J-frame Rating	SWT (lbf)	-	-	11,800	2000	-	-
Aft Crane Reach	ft	29'	30' 2"	40'	54'10"	26	20'5"
Aft Crane(s) Lift	SWT (lbf)	1,600	12,00@30'	22,500@5'9" 3,100@40'2"	1,600@54'	2,400	3,300@20'5" 9,500@5'
Foredeck Crane	SWT (lbf)	-	-	-	-	-	-
Permanent Winches	#	2	4	3	3	2	3
Winch Wire type and length	type, L (m)	1/4", 1K	1/2", .65K	1/2", 9.6K	1/2", .5K	3/8", 4.5K	1/4", 3K
Winch Wire type and length 2	type, L (m)	0.322EM, 2K	1/4", .45K	0.322EM, 10K	0.322EM, 1.5K	0.322EM, 4.5K	0.322EM, 4.8K
Winch Wire type and length 3	type, L (m)	-	0.322EM, .85K	.322EM, 2K	Vectran, 0.366K	-	0.322FO, 1K

US Academic Research Fleet Vessel Specifications

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		<b>Coastal/Local</b>					
Winch Wire type and length 4	type, L (m)	-	1/2", .45K	0.252EM, 5K	-	-	-
Load Handling System (LHS)	yes/no	no	no	no	no	no	no
<b>Science Equipment</b>							
Met Instrumentation		wind speed/direction, barometer, temp, relative humidity, PAR	wind speed/direction, barometer, temp, relative humidity	wind speed/direction, barometer, temp, relative humidity	wind speed/direction, barometer, temp, relative humidity	wind speed/direction, barometer, temp, relative humidity, precipitation, long and short wave radiation, PAR	wind speed/direction, barometer, temp, relative humidity, long and short wave radiation, PAR
Met Tower	yes/no	no	no	no	no	no	no
Retractable Centerboard	yes/no	no	no	no	no	no	no
ADCP(s)	kHz	150, 600	150	75, 300, 1200	75, 300	300	75, 600
Multibeam sonar	KHz	-	240	-	-	-	-
Echosounder(s) <sup>3</sup>	kHz	38, 200	28	3.5, 12	50, 200, 18, 38, 70, 120, 200, towed sidescan	3.5, 12	3.5, 12, 50 & 200
Open Transducer well locations	yes/no/#	no	no	yes/3	yes/1	no	no
Work/Rescue boats	#/#	1	1	2	1	2	1+
Fume Hoods	#	no	in rad van	1	1	-	-

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		<b>Coastal/Local</b>					
Science seawater system	pipe type	schedule 80 PVC	stainless steel	schedule 80 PVC	schedule 80 PVC	stainless steel	schedule 80 PVC
Seismic Air Compressors	#/scfm	-	1/22	-	-	-	-
<b>Communications Equipment and Network</b>							
Satellite Band		L(FBB), cellular	L(FBB), cellular	Ku(HiSeasNet), L(FBB)	L(FBB), cellular	L(FBB)	Ku(HiSeasNet), L(FBB), Iridium, cellular
Telecommunications center		-	-	-	-	-	-

1. ITC is "International Tonnage Convention"
  2. Dependent on vessel speed
  3. Includes Fisheries Acoustics and Sub-bottom SIK1. installation of a 38kHz ADCP is planned.
- AE1. includes 01 aft deck  
 AE2. Dynamic loads in sea state 3  
 OCRV1. Portable crane w/3 locations including f