

UNOLS RVTEC MEETING

Next Up Regional Class Research Vessel – Daryl Swensen



RCRV Update RVTEC 2022

Regional Class Research Vessel Program- Oregon State University

October 3rd, 2022





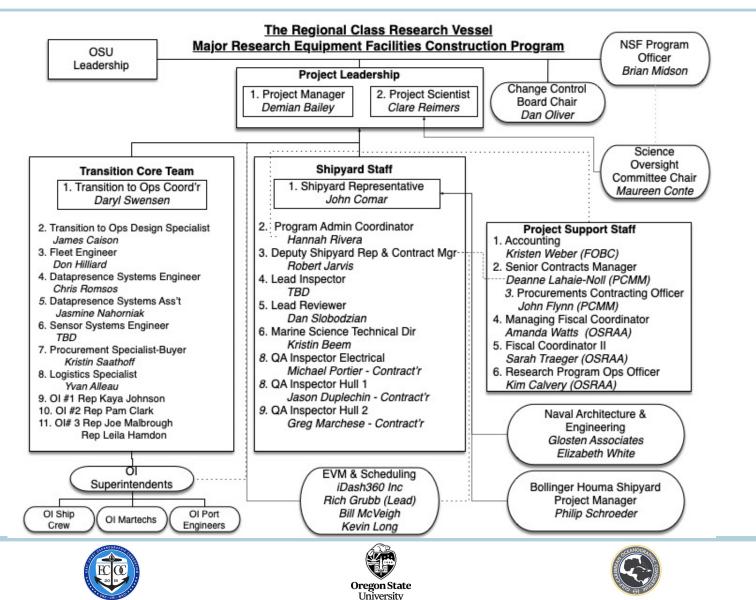












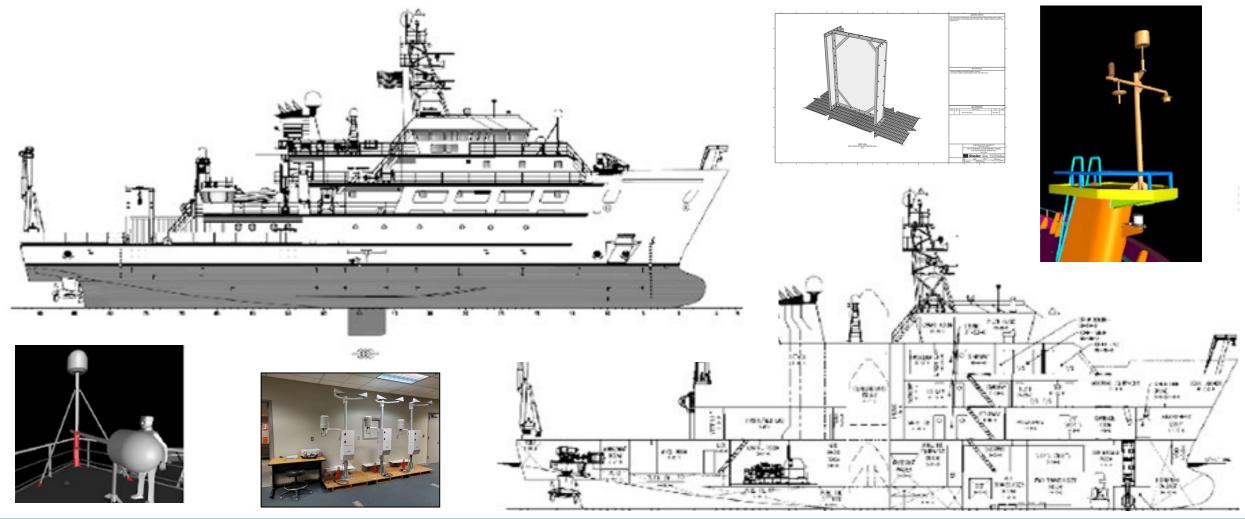








General Arrangement and Science Services



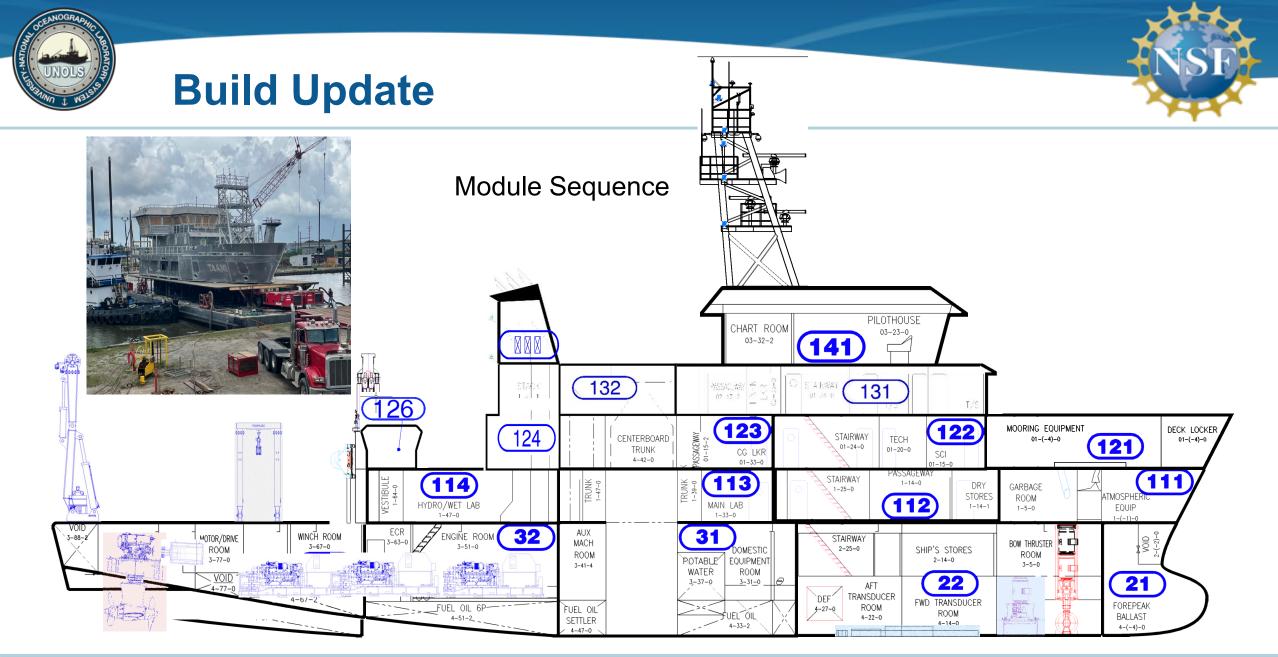












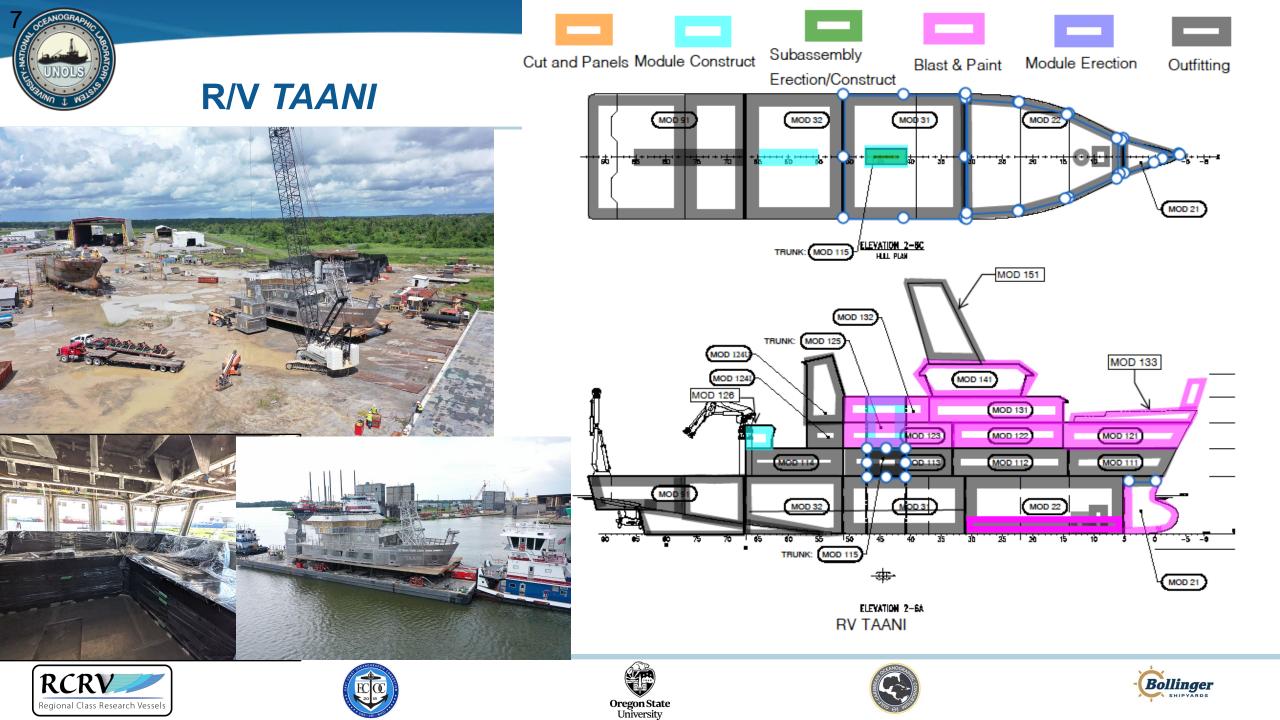


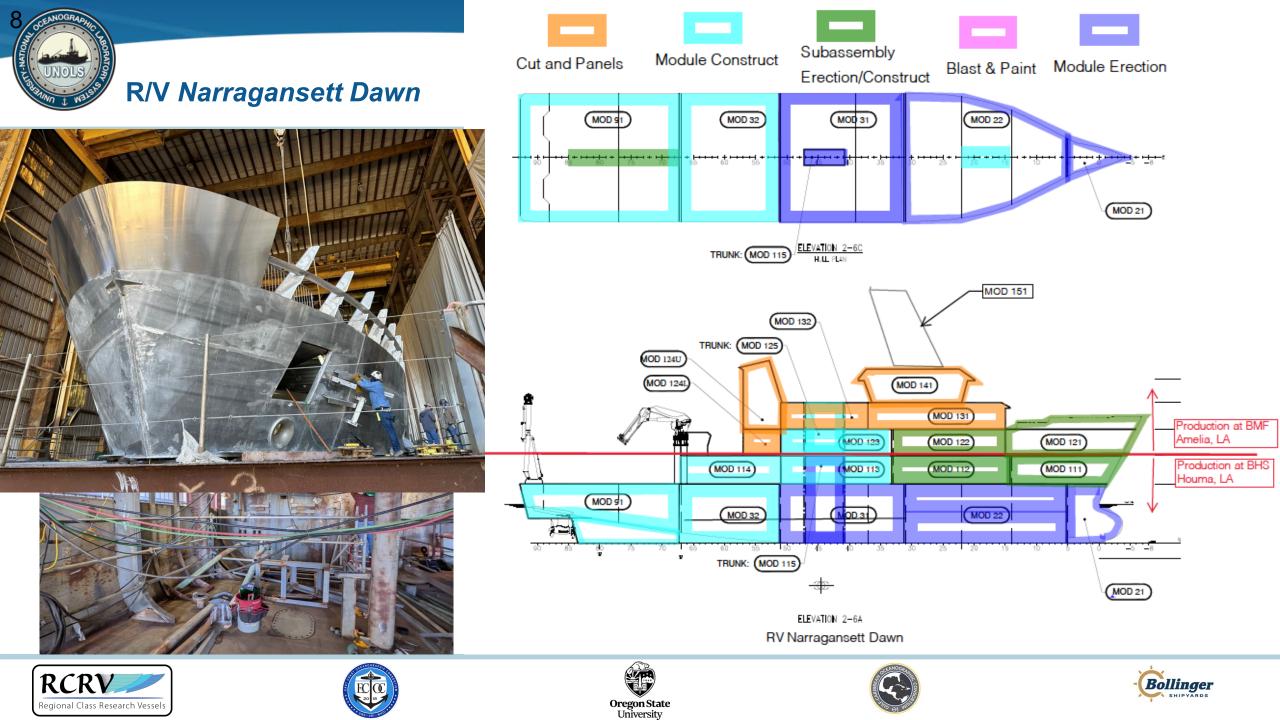


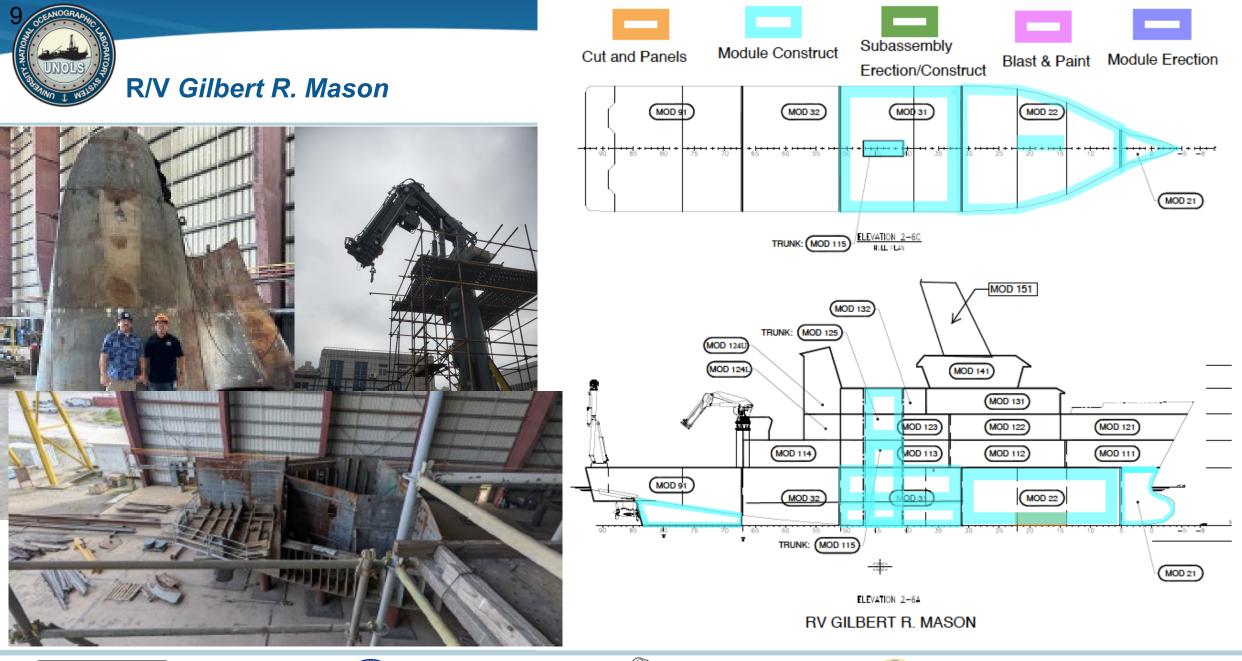






















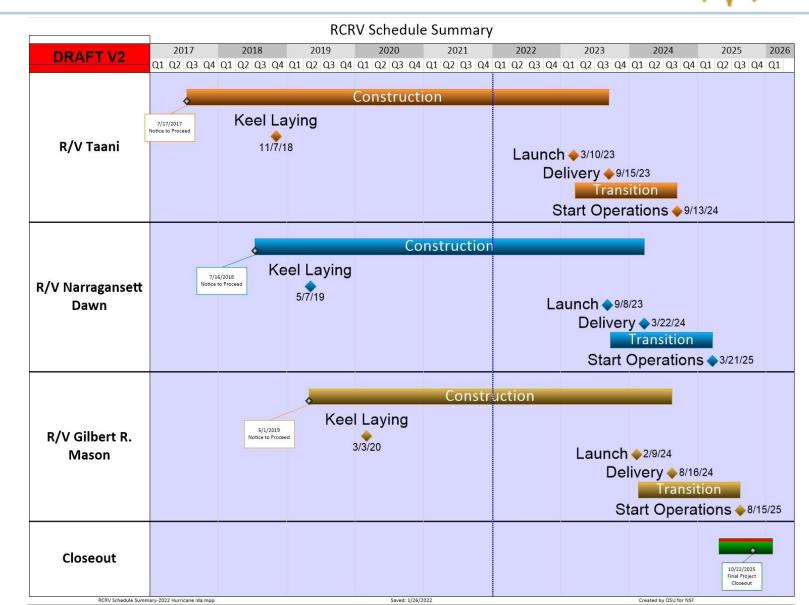


Delivery Schedule DRAFT (Ida Delay)

- R/V Taani
 - Start of Transition to Operations
 - 03/07/2023
 - Delivery
 - 09/15/2023
 - Start of Operations
 - 09/13/2024
- R/V Narragansett Dawn
 - Start of Transition to Operations
 - 09/11/2023
 - Delivery
 - 03/22/2024
 - Start of Operations
 - 03/21/2025
- R/V Gilbert R. Mason
 - Start of Transition to Operations
 - 02/05/2024
 - Delivery
 - 08/16/2024
 - Start of Operations
 - 08/15/2025









Transition to Operations

Phase IV

RCRV Transition to Operations 642 days 3/7/2023 8/19/2025 R/V Taani Transition to Operations 3/7/2023 9/13/2024 400 days Pre-Delivery Support 140 days 3/7/2023 9/15/2023 Transition to Operations Start 0 days 3/7/2023 3/7/2023 3/7/2023 9/15/2023 Crew Readiness 140 days 3/7 Engineer and/or Mate and technician at Shipyard Office 0 days 3/7/2023 3/7/2023 Engineer and/or Mate and technician for Inspection and Familiarization 138 days 3/7/2023 9/13/2023 5/30/2023 Full Crew Complement Hired 0 days 5/30/2023 5/30 New Crew Orientation and Training 41 days 5/31/2023 7/26/2023 Crew to Shipyard Office 0 days 7/26/2023 7/26/2023 ੋ 7/26 7/27/2023 9/13/2023 OSU Crew @ Shipyard Office for Familiarization and Training 35 days 9/15/2023 9/15/2023 s 9/15 Delivery 0 days Outfitting, Operator and Science Trials 261 days 9/15/2023 9/13/2024 Post Delivery Outfitting and Crew Familiarization at Shipyard 38 days 9/15/2023 11/7/2023 Č. Outfitting at BHS 28 days 9/15/2023 10/24/2023 Crew Familiarization from Deep Water Access Dock 10 days 10/25/2023 11/7/2023 37 days 11/7/2023 12/28/2023 Transit to Newport, Oregon **x**11/7 Depart Houma for Newport, OR 0 days 11/7/2023 11/7/2023 Ľ٩, Deep Water Shipyard Trials #1 14 days 11/8/2023 11/27/2023 11/28/2023 12/28/2023 Transit Days 23 days Home Port Arrival 0 days 12/28/2023 12/28/2023 \$12/28

Duration

- 18-months transition plan tied to shipyard contract Delivery date.
- Starting 6-months prior to Delivery, crew hiring, shipyard support, crew training and familiarization.
- At Delivery, full crew and technicians on site at the shipyard for outfitting and start of vessel trials (40 days).
- Transit to home port for local outfitting, and operator and science trials (86 days)
- Warranty haul out at a local shipyard.
- NSF Inspection and Acceptance as UNOLS vessel
- Teams of experts for operations and science trials. Funded participation for the full vessel verification.















. 2023 Otr 2. 2023 Otr 3. 2023 Otr 4. 2023 Otr 1. 2024 Otr 2. 2024 Otr 3. 2024 Otr 4. 2024 Otr 1.

bMariAprivia, Jun JuliAug Sep OctNovDec Jan Feb MariAprivia, Jun JuliAug Sep OctNovDec Jan Feb MariAprivia, Jun

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Operations and Science Trials



RCRV Trials Matrix

- Item Test
 - Anemometer
- System Test
 - Atmospheric Sensors
- Test Procedure
- Prerequisite
- Test Phase
- Duration
 - Single
 - System
- Location
- Conditions
- Expert Support
- Vendor/Tech
- Acceptance Criteria
- Support
 - Equipment
 - Supplies
- Documentation



1.			Verification														
First Erb	try in Blue : D	oficition Example															
Work Bre Structure 01.02.01		elevant System- owthrough maars	Associated Sensor or Subsystem- WETStar Fluorometer	What factors are being leated- Performance and Cata Quality	Are there any systems required to be in place prior to test verification- CORIOLIX	What Phase will testing/ verification cocur- II. II	Howriang is required for a loss single test-1 hour 72	w long is pured for full Coastel and organize (los)- neuro in transit organize waters	What testing conditions are needed-productive and blue waters	Day, Nigre, Bot NA-Both	Suggested Experts for test/vertication- Contact Name, sz: Raimers	is a vendor or manufacturer tech rep needed - Valsala	ochste sny and all additional informatio ended to test and verify-Testing of aticus environments, coastal versus égoirophic waters.	What equipment is required on board for testing/verification-Filtration manifold to collect discrete samples, optional portable fluorometer to run discrete samples at sea.	Are there any supplies or samples needed. Discrete Chlorophyll annuba and supplies (0.2µm GFT*, discrete standards for its-situ-verification.	Link to Applicable Excurrentation-Link to Discrete Pigment Sample Collection Protocol	Ary ndu-Didpatarra.
152	572				1000	Test Press	Readined Single Text Duration In	Received Integration Text			togenet						
C1 02	20104	Atmospheric Sensors	liospherical PAR Sensor QSR	Ferformance and Data Quality	CORIOLOX	6.11	(7n.) (Duration (hm) Location Needed	Contraction (1995-99	Day	Kathy Lentz (NCAA)	Tech Rep	Acceptance Criteria	Equipment Needed	Supplies or Semples Needed"	Link to Applicable Cocumentation	Notes Night tests could be useful for mounting location, influence of LED deck lights stidues, for Accompanying profiling sensor on the GTD PAR DSP. Kathy identified during DSPS work
c1.02		Amospheric		Performance and	CORVELIE	E.H.				Cay	Kathy Lantz (NCAA)						porticité esparti o work with. Night tests could be useful for mounting location, influence of LED deox lights andway, for Accompanying profiling sensor on the CTD RAR QSP, Kuity identified during OBPS work
39,623	10.00	Sensors		Data Quality Performence and	200000000						120/04			PT333015 Fortable Calibration NEWIT			porential expert to work with. Performance is high humidity low temperature environments has been reported to be as
C1 02		Sanapra		Cola Quality References and	CORIOLIX	6,11					SAMO3			PTB33015 Fortible Calibration Kit with MITO Neasuroment Indicator Standards PTB33015 Fortuble Calibration Kit with			(Skullag), unaxe if we will see those environments but relative humdity should tested if (absolution).
5.2543	2.01.04	Sensors	Carsara WK1536 MET Station	Data Quality	CORIOLIX	6.11				-	SAMOS			PTRACTS Fortubie Calibration Kit with MITO Measurement indicator Standards	Additional Standards		
C1 02		Sensors	Serometer	Forformonic and Cata Quality	WACS to CORD, IN	C L U H					SAMOS						Interest is participation of waldation during OBPS Workshop on melomene working grou
C1 02	2.01.04		RCVF-4 Ventilation Far Port	Ferformance and Data Quality	CORIOLIX	1,11				Day	(ORES, NOAA GML G RAD)	>					potential for buoy drive by's however it may be more of a validation of their data than our mommend having the NO6A settem onhosed with ours as a heter validation technic or
C1 02	2.01.04	Atmospheric Decaora	lipp and Zonen Pyrarometer SMP-21 #CVF-4 Ventilation Part Starboard	Federmance and Data Quality	COROLIX	1, 11				Day	(CRES, NOAA GML G (DRES, NOAA GML G (DRO)	2					Should plan testing with and without ventilation tan
C1 02	2.01.04	Amospheric Sensors	Opp and Zonen Pyrgeometer SGR 4 wCVF-4 Ventilation Far Port	Performance and Data Quality	CORIOLIX	F, 11				Cay	Laura Rihimaki (DREE, NOAA GML G RAD)	i.					Interest in part opation of validation during OBPS Workshop on rediementer variing gro
C1 02	2.01.04	Atmospheric Sensors	Opp and Zonen Pyrgeometer SGR-4 erCVF-4 Ventilation Part Startscard	Ferformance and Data Quality	CORIOLIX	1,0				Cay	Leura Sihinard (CRES, NOAA GML G						
C1 02	2.01.04	Atmospheric Sensors	laisala Present Weather FD71P	Performance and Data Quality	CORIOLIX	1,11					RAD) SAMOS			FD-71P Pertable Calibration Unit			Chould test for sources of refection interference based on mounting location. Verify has recar interference.
C1 02	2.61.04		W Young Rein George 50202	Performance and Data Quality	CORIOLIX	6.01					SAM08						
C1 02	2.01.04	Amospheric	Inin-supplied Gil 20 Ultrameir.	Performance and	WACS to CORD, P						SAMOS						Ship Suppled
	2.01.04	Amospharia	Chernometer Port Dhip supplied Gill 20 Ultrassenia	Eata Quality Ferformence and	MACS & CORD. B						SAMOS						Sho Sucoled
1000	1007			Eata Quality Ferformance and	WACS to CORD, P	122.0					6AMOS						
	40.104	Sanapre	Jitasonic Aterrottalar	Data Quality Performance and													Drip Duppled
C1 02		Sensors	fest	Data Quality	CORPORTE	1,11					SAMOS						
C102	2 61 04	Sensors	Aast	Performence and Data Quality	CORXXIX	8,11					SAMOS						
61.02	2.01.04	Atmospheric Sensors	Skywlew Camera Raciometer Maat	Performence and Data Quelity	CORIOLIX	6.0				Day	SAMOO, len Diesk						
6102	2.01.04	Atmospheric Demora	Sky-view Camera Main Wast	Ferformance and Dete Quality	CONDUCTOR	6,11				Day	SAMOS, len black						
C1 07	20104	Annospharic Sensors	belts SFN-1	Federmance and Data Quality	CORIOLIZ	1,11				Day	Laura Rithmand (CRES, NDAA GML G RACI)	2					
C1 02	2.01.04	Atmospheric Sensors	laisala CL51 Dellometer	Performance and Data Quality	CORIOLOC	6.0					SAMOS, Chris Fairail, Elizabeth "hompson			CL51 Termination Hoed for baseline validation.			
C1 02	2.01.04	Atmospheric Geneora	ricano G2401 Atmospheric Gases	Performance and Data Quality	CORIOLOL	1,11					Dave Munio (ROAA)				Calibration gases, 4 standards.		
C1 02	2.01.04	Atmospheric Sensors	RyperOCR ICSA Hyperspectral Radiometer	Performance and Data Quality	CORKILLE	L.II.				Day	Andrew Samard						Night tests could be useful for mounting location, influence of LED deck lights at dusk, 8 Comegoinding CTD Institut Sensor ICSW.
C1 02	2.01.04		Imesphoric Compling Menilele	Performance and Data Quality		8,81					EAMOS						
C102.01	2.01.04		Sea State Camera with ROSR	Ferformance and Date Quality	CORIOLIX	6.0				-	ler Eleck						
c1.02	2.01.04	iurface Sexwater	See State Carsers MET Mast	Ferformance and	CORIOLIX	K.H					lan Eleck						
c102	-			Data Quality Performence and	CORIOLIT					-	Michael Reynolds						
0.000	2 0104	Secons urface Seawater	Radiometer NelVC3 Viave Rader	Data Cuality Ferformenos and							(RMRCO) Hans Graber						No indication in common for testing specifications
12,252	20202 L	Benabra		Colo Quality	-						nan orace						No indication in contract for leasing apportantions
12.55.1	10104	Sensors	Diaphrages Pump Ferward Intake	Volume and Latence	r	-											
C1 02	0.000	Sensors	Xapivagni Pump Atl Intake	Volume and Calency	T.												
C1 02	2.01.04		bensor Mars luid Plow Regulator	Pertomenos							Reimers (highes)						
C1 02	2.01.04	Sensors	Nentland	Ferfirements and Data Quality	CORIOLIX	6,11					Dave Munio, Jack Barth Reimers (hughes), Dave Micro, Jack				Discole salirity measurements (Autoral) includes sampl bettes, tubing", alternate probe to temperature velidade		Valication of temperature differential between intake, 525-35, and 525-45 locations.
C102	2.01.04	Fiontheough Sensors	IBE 45 The mosclinograph Apolio IGO2	Forformense and Data Quality	CORIOLIX	8,11					Dave Munro, Jack Bath Reimens (Hillighes),				Disarete salinity measurements (Auteoel) indudes sampli bettes, tubing* alternate probe for temperature validation	le Linx to Discrete Salinity Collection Protocol.	Valcation of temperature differential between intake, SDE-36, and SDE-45 locations.
C1 02	2.01.04	Flowthrough Sensore	SDE-33 millie Gea Eurlece Temperature	Fedomance and Data Quality	CORIOLIX	6,11					sense waver aufilt				Attenue probe for temperature validation.		Valication of temperature differential between intake, CDC-30, and SDE-45 locations.
C1 02	10.10.5	Fowthrough Democra	Uhip-suggried Theoryconoloc at Forward Inteks	Federmance and Data Quality	WACS to COROL P	CU.II					Jack Barth Roimers (Hughos), Meria Kavanauch Jack Darth				Alternate probe for temperature validation.		Valication of temperature differences between intake, SBE-35, and SBE-41 locations.
C5 02	2 61.04	Flewthrough Sensors	Dip-supplied Thermometer at Att Intuke	Ferformence and Data Quality	WACS & CORID. N	C LIL HI					Jesk Darth Reimens (Hughes), Maria Kavanaugh, Jack Barth				Alternale probe for temperature validation.		Valcation of temperature differential between intake, SDE.38, and SDE-45 locations.
C1 02	2.01.04			Performance and data quality	CORIOLIX	R. 11					Jack Barth Rotreers (Hughes), Jack Barth				Discrete Writter samples*.	Linc to Discrete Wintler Collection Protocol.	
C1 02	2.01.04	Fowthrough Densors	CONTRACTOR N	Ferformance and data quality	CORIOLIX	Ę.П. :-					Meria Kavanaugh (Nash), Kendra Daly				Discrete pigment samples (0.3 un GFF) for recosurement of fluorescence (Chicrophyli', Physoerythin'',	8 Link to Disorete Pigment Sample Collection Protocol.	
(10)	20104			Ferformence and	CORIOLOX	1.11					Maria Kavaraugh (3lack)				Procession . Calibration builds		
C1 02	2008	Fowthrough	CO Triplet BB2FL	data quality Performance and	CORIOLIX	E.H	-			-	Maria Kavanaugh				FDOM selection, potentially ADOM verification.		
		Fosteach		data quality Performance and		-					(Black) Maria Kavanaugh						
C1 02	2.01.04	Genatica		deter quality	CORDELLE	1, 11					(Sleck), Kendra Daly				Discrete Chicrophyl samples (0.3µm GPP)*.	Lincio Disorete Pigment Sample Collection Protocol.	

Webcam 01 Webcam 02 Webcam 03 Webcam 04 Webcam 05 Webcam 07

RCRV Update

Regional Class Research Vessel Program- Oregon State University

October 3^{*rd*}, 2022