

UuvDepthCircleTestMission Report

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Mission Metadata	
AVCL Mission File	UuvDepthCircleTest.xml
Mission Statement	Perform a series of closed-loop and open-loop maneuvers to observe vehicle response.
Identity information	
Location	Monterey Bay
Live/virtual	Virtual
Environment	
Estimated sea state	0
Estimated current set, drift	0
Estimated wind direction, speed	0
Estimated navigational fix accuracy	0
Test objectives	
Mission	Observe vehicle maneuverability to estimate likely response in more complex missions.
Communications	None
Conclusions and recommendations	

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AVCL Mission Header	
title	UuvDepthCircleTest.xml
mission	UuvDepthCircleTest.xml
description	AVCL mission generated by the AUV Workbench
created	010106ZFEB2012
creator	Don Brutzman
MissionMetadata	UuvDepthCircleTest.MissionMetadata.xml
generator	AUV Workbench https://savage.nps.edu/AuvWorkbench
identifier	http://TODO insert persistent url path here/UuvDepthCircleTest.xml
missionOffsetDeltaNorth	0

AVCL Mission Header	
missionOffsetDeltaEast	0

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AVCL Mission Details	
Vehicle Type	UUV
Vehicle Name	Aries
Vehicle ID	1
Units of Measure	
Angle	degrees
Distance	meters
Mass	kilograms
Time	seconds
Geographic Origin	
Latitude	36.606998443603516
Longitude	-121.88500213623047
Time Units	
Start Time	26 September 2012 16:50:24
Time Zone	-1
Sample Time Interval	8 seconds

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AVCL Mission Commands

AVCL Mission Command List: UuvDepthCircleTest.xml					
#	Command	X Position	Y Position	Z Position	Description
0	SetPositionUUV	0.0	0.0		Launch point
1	Thrusters	enabled="true"			
2	MetaCommand	content="fix problem with Thrusters enabled command" name="TODO"			

AVCL Mission Command List: [UuvDepthCircleTest.xml](#)

#	Command	X Position	Y Position	Z Position	Description
3	SetStandoff	value="5.0"			Distance for declaring success reaching waypoint
4	WaypointUUV	25.0	-50.0		reach and maintain ordered depth
5	WaypointUUV	100.0	-250.0		circle turn
6	SetRudder	right -100.0 %			Right full rudder
7	Wait	60.0 seconds			circle for 1 minute
8	SetRudder	right -50.0 %			Right full rudder
9	Wait	60.0 seconds			circle for 1 minute
10	WaypointUUV	250.0	-100.0		circle again
11	SetRudder	left 100.0 %			Left full rudder
12	Wait	60.0 seconds			circle for 1 minute
13	SetRudder	left 50.0 %			Left full rudder
14	Wait	60.0 seconds			circle for 1 minute
15	WaypointUUV	50.0	-20.0		return to surface
16	WaypointUUV	0.0	0.0		mission complete at origin, surfaced
17	SetPower	AllPropellers	0.0%		all stop
18	SetRudder	left 100.0 %			slow in place
19	Wait	10.0 seconds			finish slowing maneuver
20	Quit				

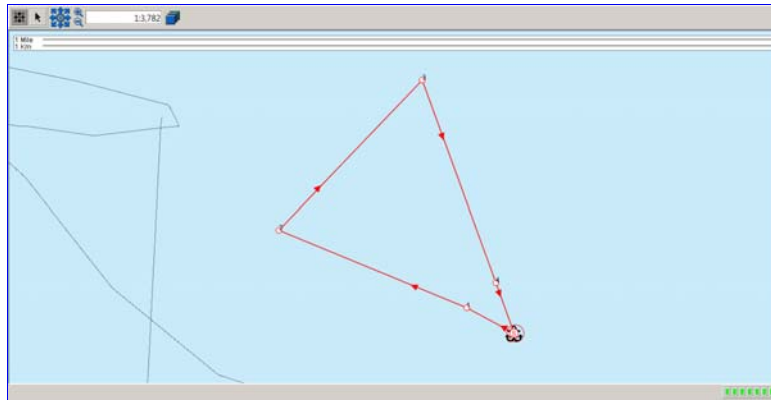


Figure 3: Resulting mission image from OpenMapView

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Mission Telemetry Plot Charts

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Figure 4	chartXy	description
Figure 5	chartXyz	description
Figure 6	chartZ	description
Figure 7	chartOrientations	description
Figure 8	chartLinearVelocities	description
Figure 9	chartRotationalVelocities	description
Figure 10	chartPropellers	description
Figure 11	chartRudder	description
Figure 12	chartPlaneSurfaces	description
Figure 13	chartBodyThrusters	description
Figure 14	chartLateralThrustersCourse	description
Figure 15	chartVerticalThrustersDepth	description
Figure 16	chartRemainingBatteryPower	description

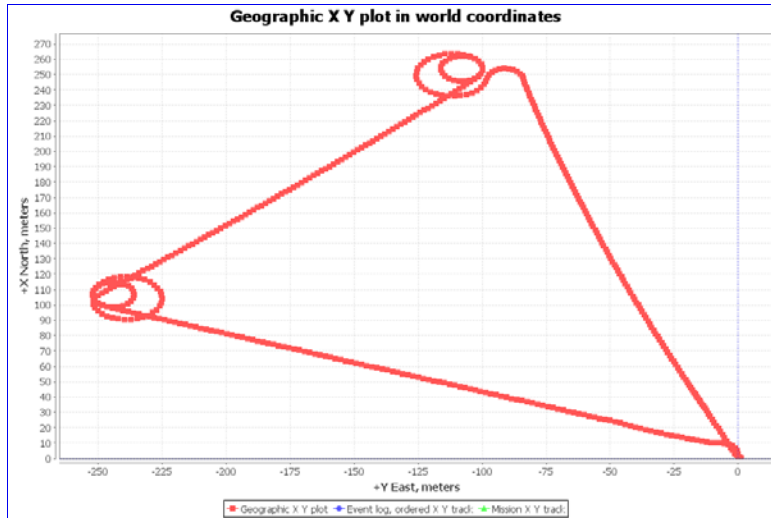


Figure 4: Telemetry plot chartXy ([description](#))

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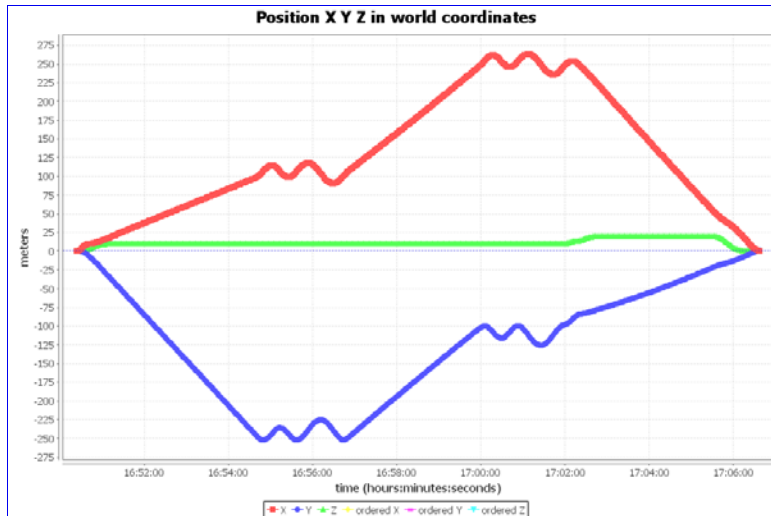


Figure 5: Telemetry plot chartXyz ([description](#))

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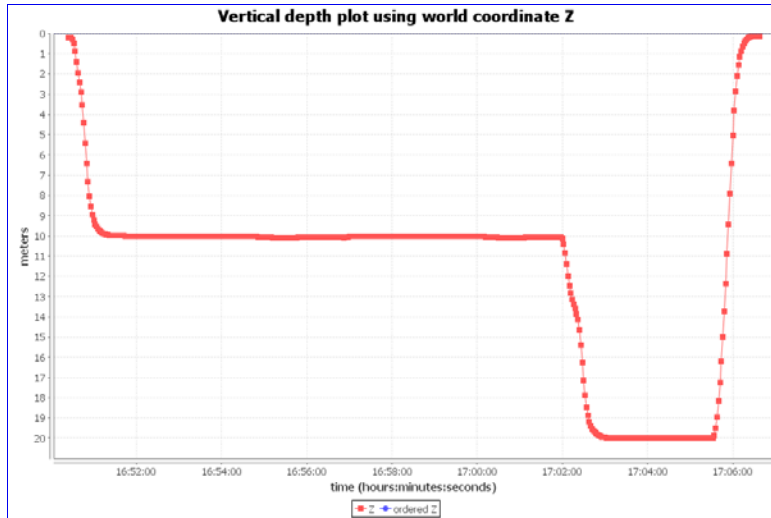


Figure 6: Telemetry plot chartZ ([description](#))

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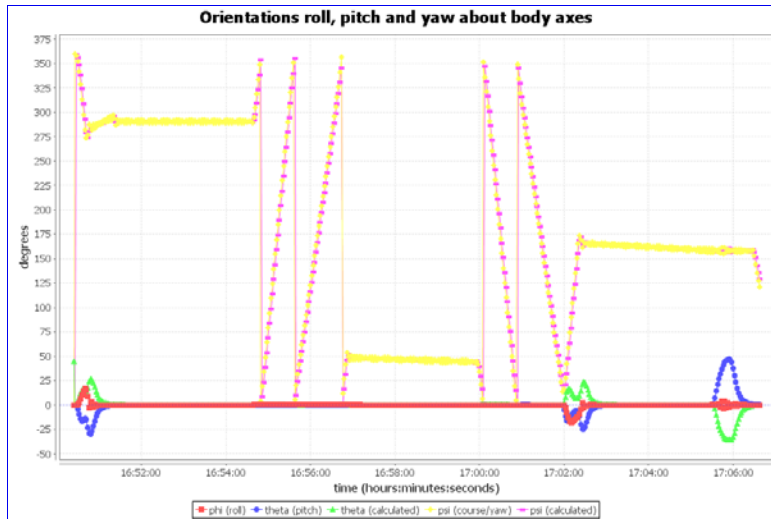


Figure 7: Telemetry plot chartOrientations ([description](#))

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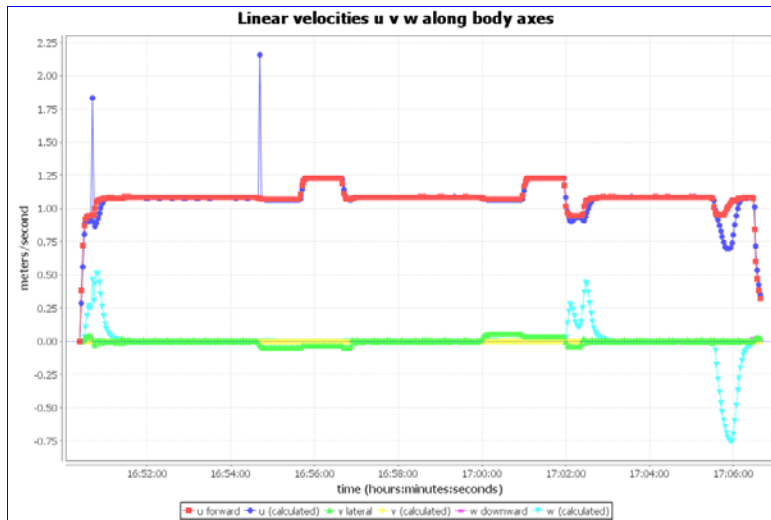


Figure 8: Telemetry plot chartLinearVelocities ([description](#))

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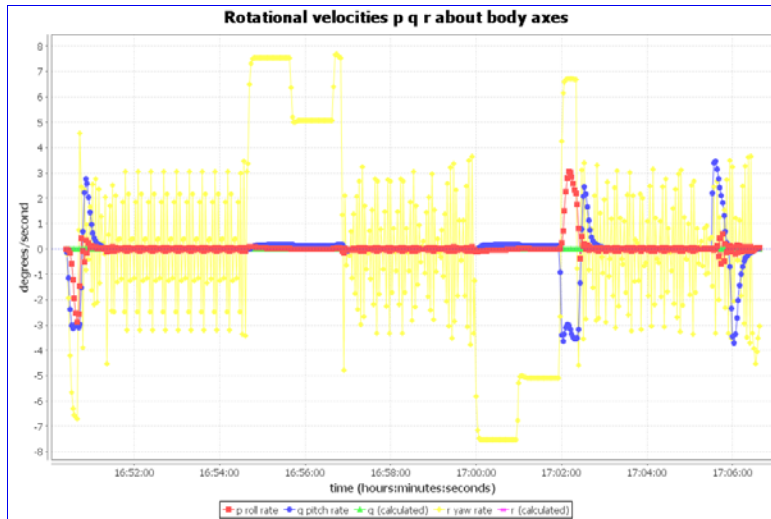


Figure 9: Telemetry plot chartRotationalVelocities ([description](#))

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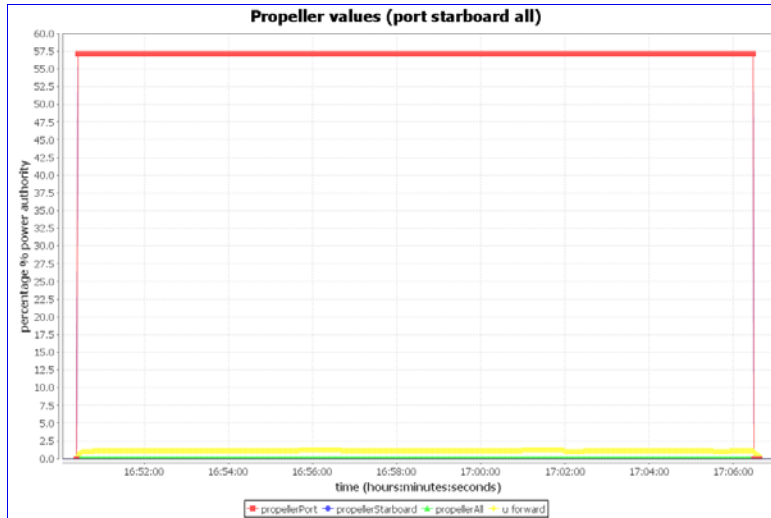


Figure 10: Telemetry plot chartPropellers ([description](#))

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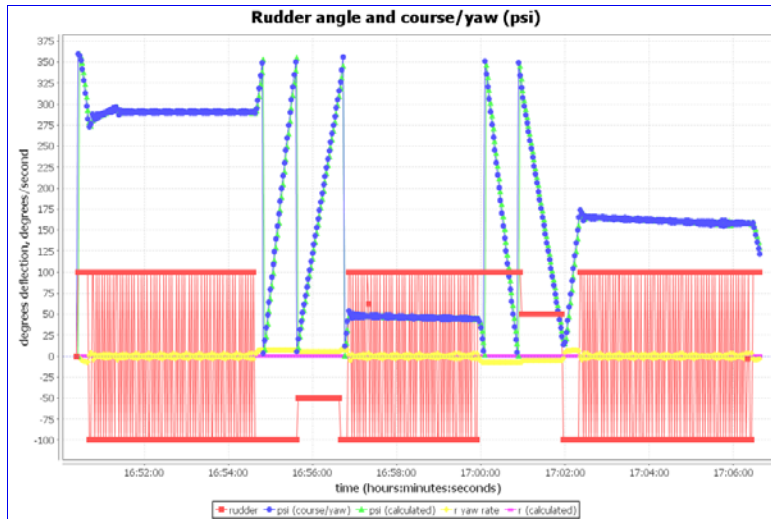


Figure 11: Telemetry plot chartRudder ([description](#))

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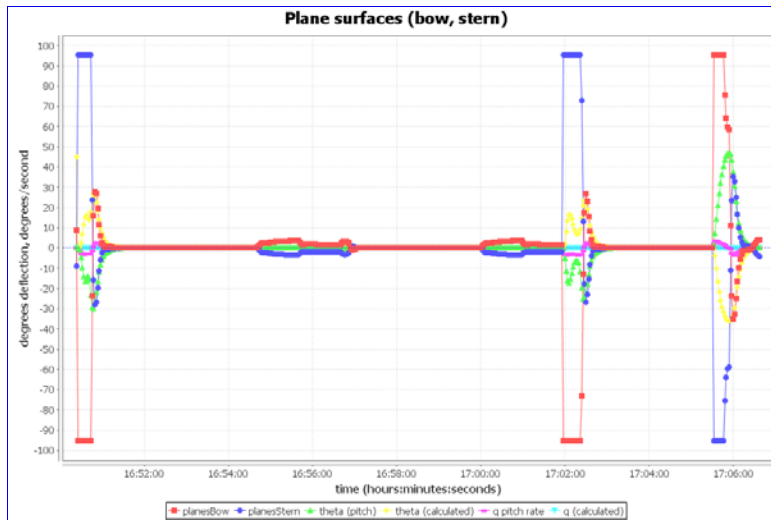


Figure 12: Telemetry plot chartPlaneSurfaces ([description](#))

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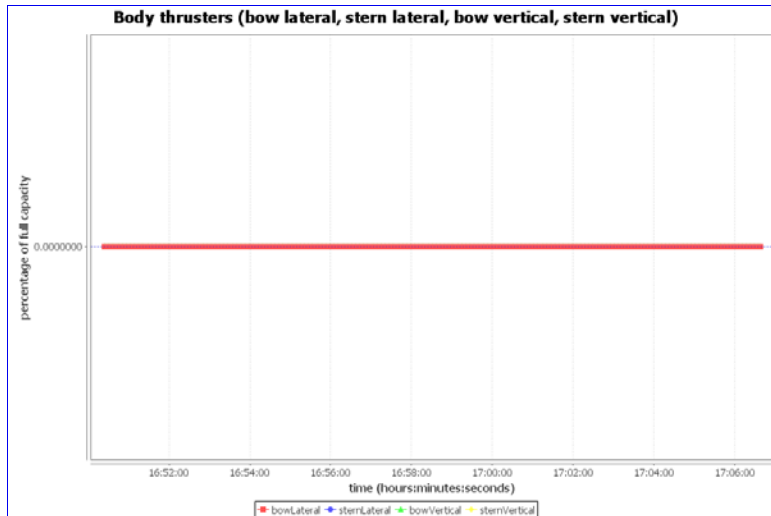


Figure 13: Telemetry plot chartBodyThrusters ([description](#))

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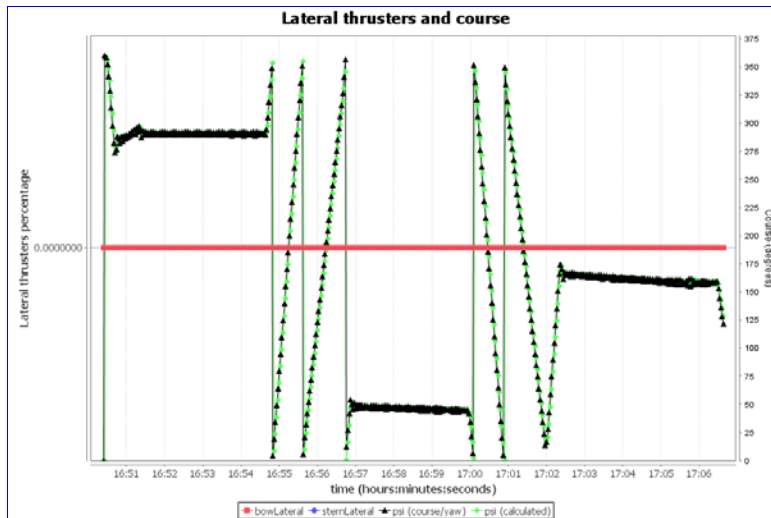


Figure 14: Telemetry plot chartLateralThrustersCourse ([description](#))

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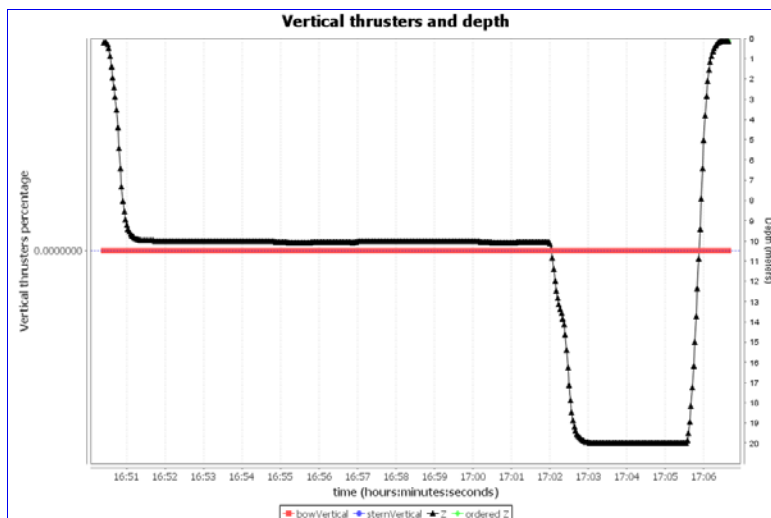


Figure 15: Telemetry plot chartVerticalThrustersDepth ([description](#))

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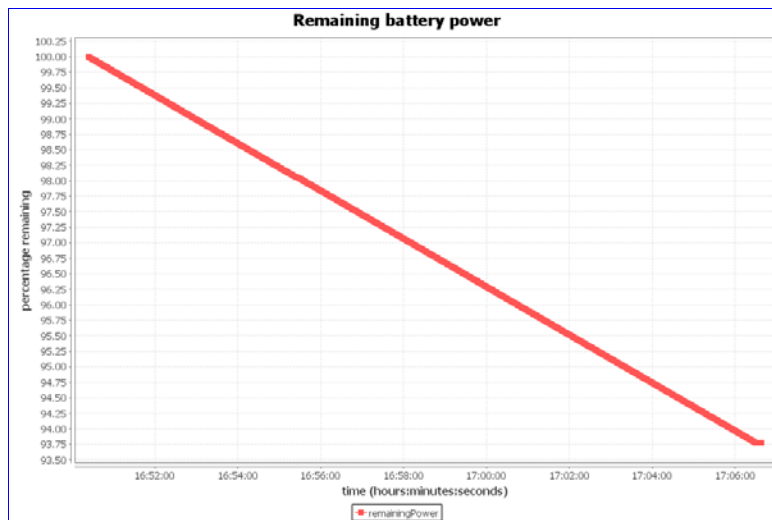


Figure 16: Telemetry plot chartRemainingBatteryPower ([description](#))

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Credits

This report was generated by the [Autonomous Unmanned Vehicle \(AUV\) Workbench](#), an open-source tool for robot-mission planning, rehearsal, execution, and playback visualization. Available online at <https://savage.nps.edu/AuvWorkbench>.

This report was generated on 261653ZSEP2012.