Report Generated by Test Manager

Title: Helicopter outer loop test

Author: bpotter

Date: 31-May-2019 12:54:34

Test Environment

Platform: PCWIN64 MATLAB: (R2019a)

Summary

Name	Outcome	Duration (Seconds)
HeliLoopTest	6⊘	159
Helicopter Pitch Control Test	2	58
■ SmallPositiveStep	•	31
■ SmallNegativeStep	Ø	27
Helicopter Roll Control Test	2	50
■ SmallPositiveStep	Ø	25
■ SmallNegativeStep	Ø	25
Helicopter Yaw Control Test	2	51
■ SmallPositiveStep	Ø	26
■ SmallNegativeStep	Ø	25

HeliLoopTest

Test Result Information

Result Type: Test File Result

Parent: None

Start Time: 31-May-2019 12:51:55 End Time: 31-May-2019 12:54:34 Outcome: Total: 6, Passed: 6

Test Suite Information

Name: HeliLoopTest

Back to Report Summary

Helicopter Pitch Control Test

Test Result Information

Result Type: Test Suite Result Parent: HeliLoopTest

Start Time: 31-May-2019 12:51:55 End Time: 31-May-2019 12:52:53 Outcome: Total: 2, Passed: 2

Test Suite Information

Name: Helicopter Pitch Control Test

Back to Report Summary

SmallPositiveStep

Test Result Information

Result Type: Test Case Result

Parent: <u>Helicopter Pitch Control Test</u>

Start Time: 31-May-2019 12:51:55 End Time: 31-May-2019 12:52:26

Outcome: Passed

Description:

Pitch step of +1 degree to determine tracking, overshoot and rise time.

Test Case Information

Name: SmallPositiveStep Type: Simulation Test

Test Case Requirements

Description: SR_6: Attitude Rate Tracking Performance (HelicopterSystemR

equirements#10)

Document: <u>HelicopterSystemRequirements.slreqx</u>

Simulation

System Under Test Information

Model: HelicopterSystem

Simulation Mode: normal

Configuration Set: Configuration

Start Time: 0 Stop Time: 10

Checksum: 1452374767 2694912940 1796571153 1815399691

Simulink Version: 9.3 Model Version: 1.21 Model Author: bpotter

Date: Wed May 08 07:15:05 2019

User ID: bpotter

Model Path: C:\Users\bpotter\MATLAB\Projects\ARP_Example_

Project\ARP_03_SystemArchitecture\specification\

HelicopterSystem.slx

Machine Name: AH-BPOTTER

Solver Name: ode23t

Solver Type: Variable-Step

Max Step Size: 0.001

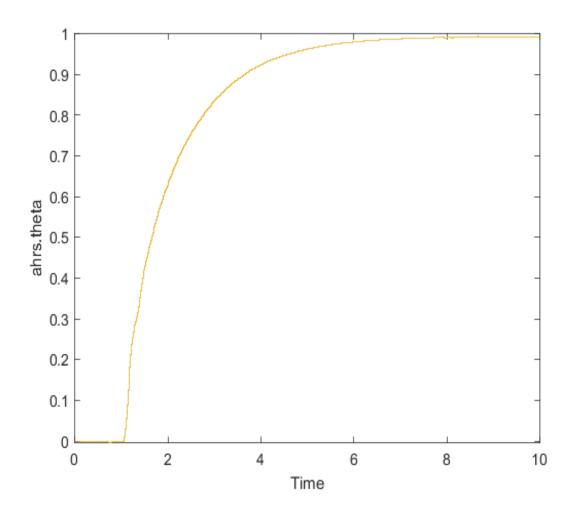
Simulation Start Time: 2019-05-31 12:51:56 Simulation Stop Time: 2019-05-31 12:52:24

Platform: PCWIN64

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
ahrs.theta	double	deg	0.01	zoh	union	Link
ahrs.phi	double	deg	0.01	zoh	union	Link
ahrs.psi	double	deg	0.01	zoh	union	Link
ahrs.q	double	deg/sec	0.01	zoh	union	Link

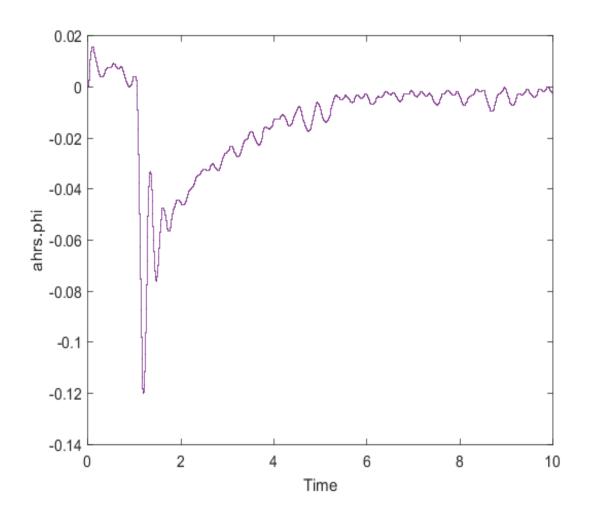
ahrs.p	double	deg/sec	0.01	zoh	union	Link
ahrs.r	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.valid	boolean		0.01	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.theta	double	deg	0.01	zoh	union



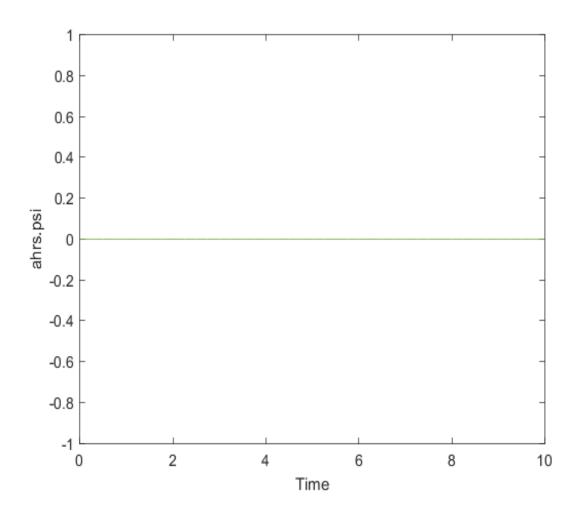
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync	
ahrs.phi	double	deg	0.01	zoh	union	



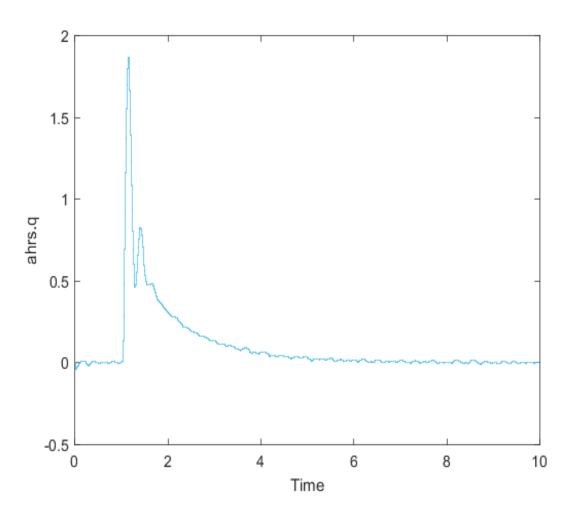
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.psi	double	deg	0.01	zoh	union



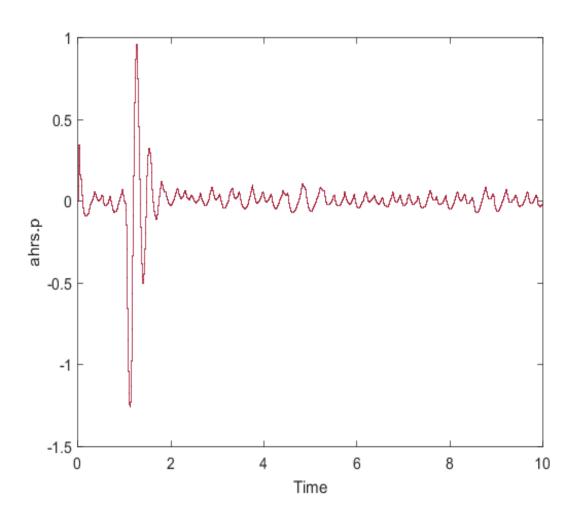
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.q	double	deg/sec	0.01	zoh	union



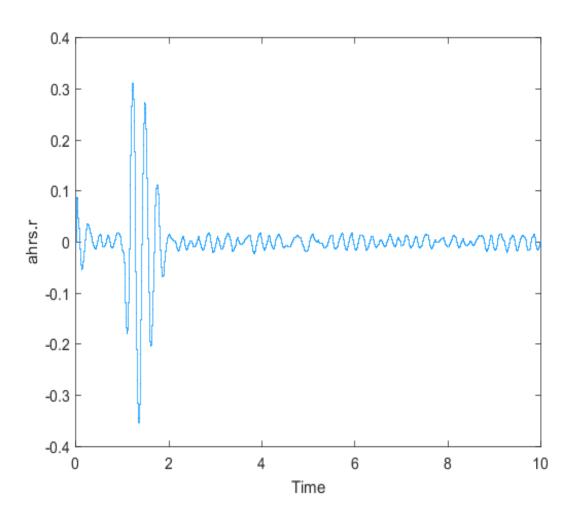
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.p	double	deg/sec	0.01	zoh	union



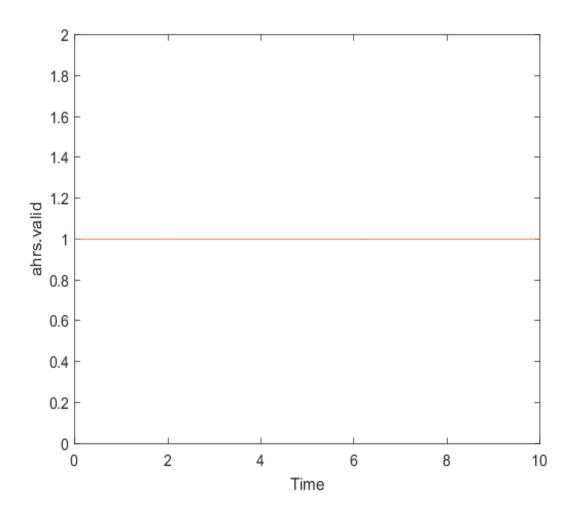
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.r	double	deg/sec	0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.valid	boolean		0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Custom Criteria Result Information

Diagnostic Record:

Outcome: Passed

Event: VerificationPassed

VerificationPassed in custom criteria of sltest.testmanager.TestCase.

Framework Diagnostic:	
verifyGreaterThanOrEqu	al passed.
Actual Value:	
0.888241353397106	
Minimum Value (Inclusiv	re):
0.630000000000000	
Diagnostic Record:	
Outcome:	Passed
Event:	VerificationPassed
VerificationPassed in custor	 m criteria of sltest.testmanager.TestCa
Framework Diagnostic:	
verifyLessThanOrEqual p	passed.
Actual Value:	
0.993492741575472	
Maximum Value (Inclusiv	/e):
1.1000000000000000	
Diagnostic Record:	
Outcome:	Passed
Event:	VerificationPassed
VerificationPassed in custor	 m criteria of sltest.testmanager.TestCa
Framework Diagnostic:	
verifyGreaterThanOrEqu	al passed.

Actual Value:

0.987639307404695

Minimum Value (Inclusive):
0.95000000000000

Diagnostic Record:
Outcome: Passed
Event: VerificationPassed

VerificationPassed in custom criteria of sltest.testmanager.TestCase.

Framework Diagnostic:

verifyLessThanOrEqual passed.

Actual Value:

SmallNegativeStep

Test Result Information

0.993492741575472

Result Type: Test Case Result

Parent: Helicopter Pitch Control Test

Start Time: 31-May-2019 12:52:26 End Time: 31-May-2019 12:52:53

Outcome: Passed

Description:

Pitch step of -1 degree to determine tracking, overshoot and rise time.

Test Case Information

Name: SmallNegativeStep

Type: Simulation Test

Test Case Requirements

Description: SR_6: Attitude Rate Tracking Performance (HelicopterSystemR

equirements#10)

Document: HelicopterSystemRequirements.slreqx

Simulation

System Under Test Information

Model: HelicopterSystem

Simulation Mode: normal

Configuration Set: Configuration

Start Time: 0 Stop Time: 10

Checksum: 1452374767 2694912940 1796571153 1815399691

Simulink Version: 9.3 Model Version: 1.21 Model Author: bpotter

Date: Wed May 08 07:15:05 2019

User ID: bpotter

Model Path: C:\Users\bpotter\MATLAB\Projects\ARP Example

Project\ARP_03_SystemArchitecture\specification\

HelicopterSystem.slx

Machine Name: AH-BPOTTER

Solver Name: ode23t

Solver Type: Variable-Step

Max Step Size: 0.001

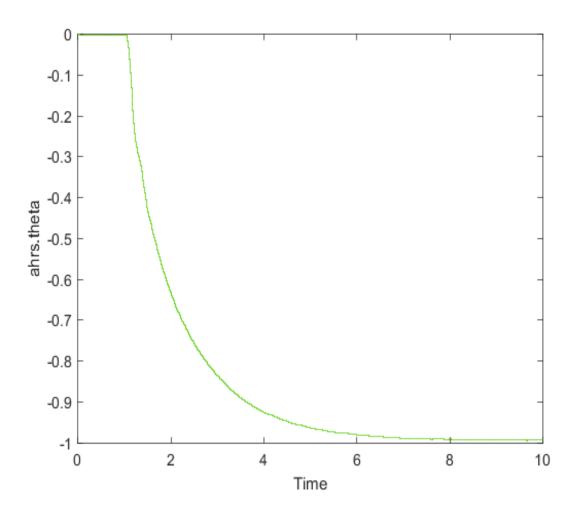
Simulation Start Time: 2019-05-31 12:52:26 Simulation Stop Time: 2019-05-31 12:52:52

Platform: PCWIN64

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
ahrs.theta	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.phi	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.psi	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.q	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.p	double	deg/sec	0.01	zoh	union	<u>Link</u>

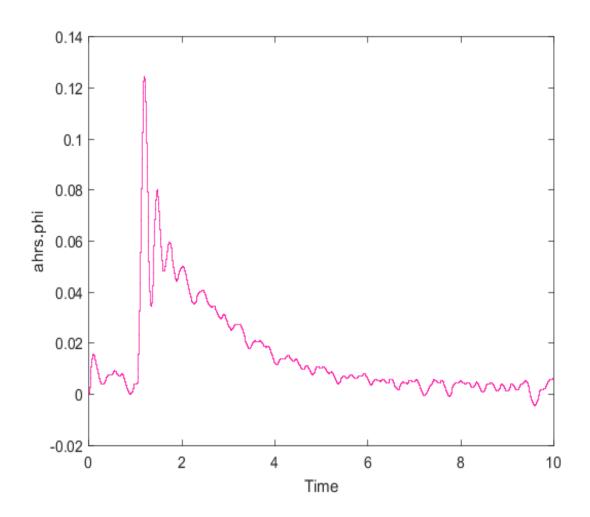
ahrs.r	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.valid	boolean		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.theta	double	deg	0.01	zoh	union



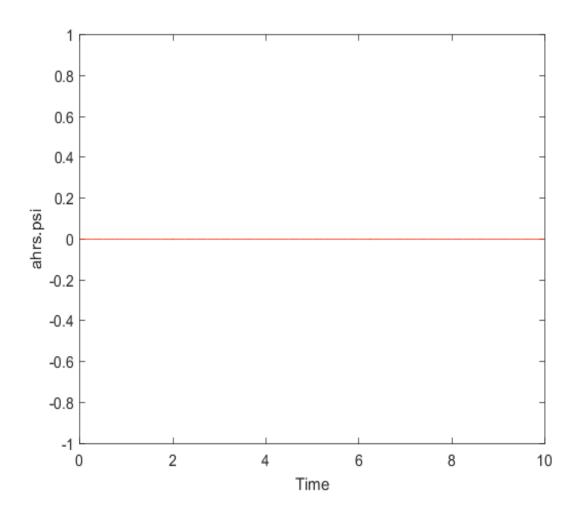
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync	
ahrs.phi	double	deg	0.01	zoh	union	



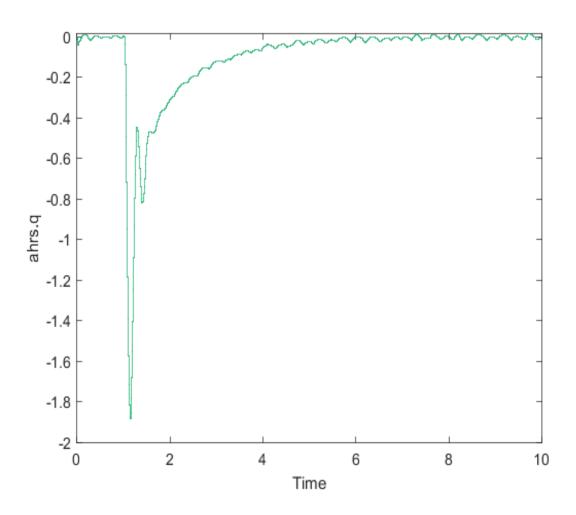
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.psi	double	deg	0.01	zoh	union



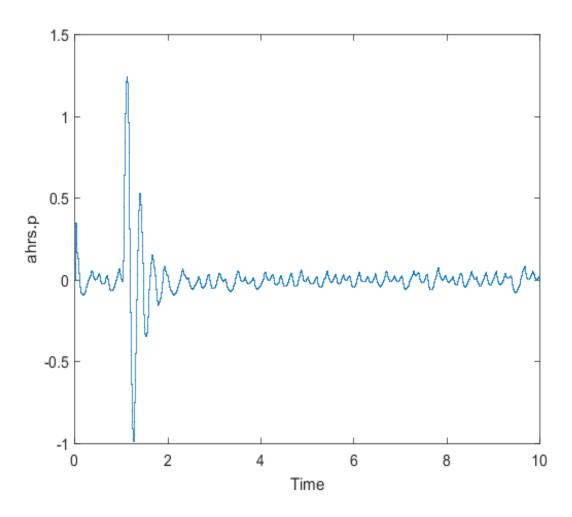
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.q	double	deg/sec	0.01	zoh	union



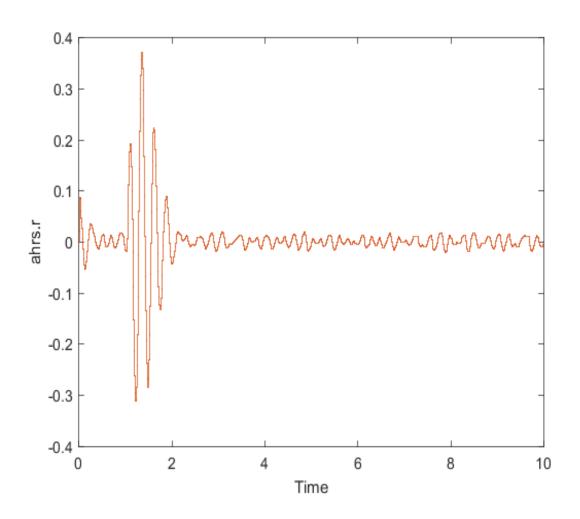
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.p	double	deg/sec	0.01	zoh	union



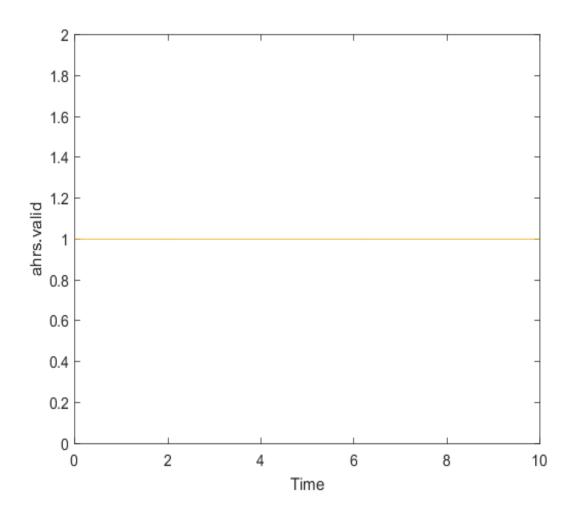
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.r	double	deg/sec	0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.valid	boolean		0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Custom Criteria Result Information

Diagnostic Record:

Outcome: Passed

Event: VerificationPassed

VerificationPassed in custom criteria of sltest.testmanager.TestCase.

Framework Diagnostic:	
verifyLessThanOrEqual p	passed.
Actual Value:	
-0.890182567235976	
Maximum Value (Inclusiv	ve):
-0.630000000000000	
Diagnostic Record:	
Outcome:	Passed
Event:	VerificationPassed
VerificationPassed in custon	m criteria of sltest.testmanager.Test
Framework Diagnostic:	
verifyGreaterThanOrEqu	al passed.
Actual Value:	
-0.994359041515568	
Minimum Value (Inclusiv	<i>r</i> e):
-1.1000000000000000	
Diagnostic Record:	
Outcome:	Passed
Event:	VerificationPassed
VerificationPassed in custon	m criteria of sltest.testmanager.Test
Framework Diagnostic:	
verifyGreaterThanOrEqu	al passed.
	al passed.

Actual Value: -0.994359041515568 Minimum Value (Inclusiv -1.0500000000000000	re):
Diagnostic Record: Outcome: Event:	Passed VerificationPassed
VerificationPassed in custon	 m criteria of sltest.testmanager.TestCase.
Framework Diagnostic:	
verifyLessThanOrEqual p	passed.
Actual Value: -0.989465853237920 Maximum Value (Inclusiv -0.9500000000000000	/e):

Helicopter Roll Control Test

Test Result Information

Result Type: Test Suite Result Parent: HeliLoopTest

 Start Time:
 31-May-2019 12:52:53

 End Time:
 31-May-2019 12:53:43

 Outcome:
 Total: 2, Passed: 2

Test Suite Information

Name: Helicopter Roll Control Test

Back to Report Summary

SmallPositiveStep

Test Result Information

Result Type: Test Case Result

Parent: <u>Helicopter Roll Control Test</u>

Start Time: 31-May-2019 12:52:53 End Time: 31-May-2019 12:53:18

Outcome: Passed

Description:

Roll step of +1 degree to determine tracking, overshoot and rise time.

Test Case Information

Name: SmallPositiveStep Type: Simulation Test

Test Case Requirements

Description: SR_6: Attitude Rate Tracking Performance (HelicopterSystemR

equirements#10)

Document: HelicopterSystemRequirements.slregx

Simulation

System Under Test Information

Model: HelicopterSystem

Simulation Mode: normal

Configuration Set: Configuration

Start Time: 0 Stop Time: 10

Checksum: 1452374767 2694912940 1796571153 1815399691

Simulink Version: 9.3 Model Version: 1.21 Model Author: bpotter

Date: Wed May 08 07:15:05 2019

User ID: bpotter

Model Path: C:\Users\bpotter\MATLAB\Projects\ARP_Example_

Project\ARP_03_SystemArchitecture\specification\

HelicopterSystem.slx

Machine Name: AH-BPOTTER

Solver Name: ode23t

Solver Type: Variable-Step

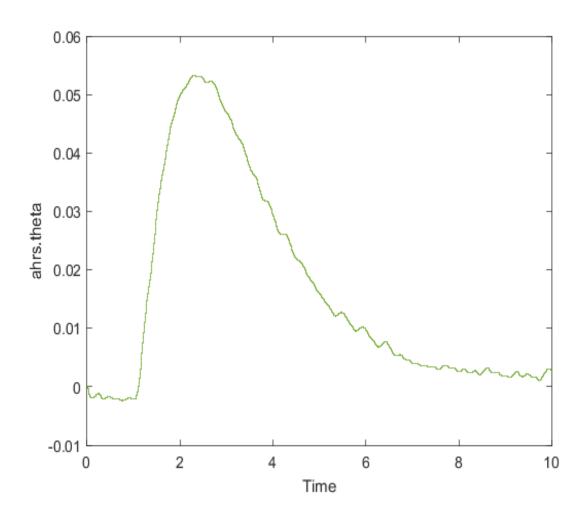
0.001

Max Step Size: Simulation Start Time: 2019-05-31 12:52:53 Simulation Stop Time: Platform: 2019-05-31 12:53:17

PCWIN64

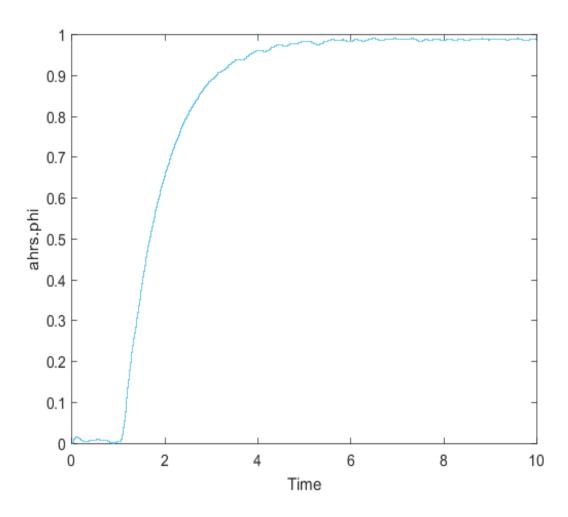
Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
ahrs.theta	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.phi	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.psi	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.q	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.p	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.r	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.valid	boolean		0.01	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.theta	double	deg	0.01	zoh	union



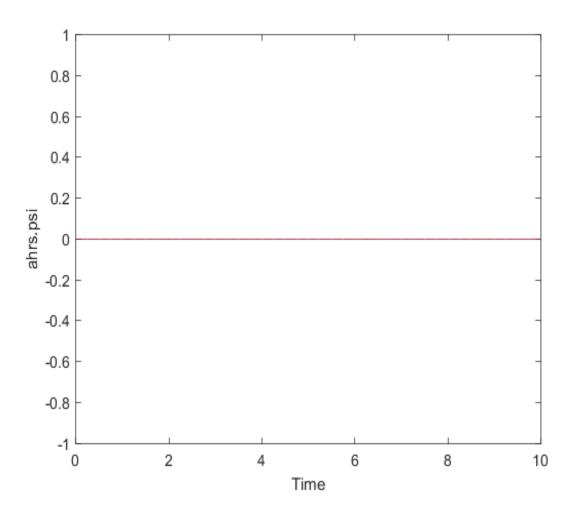
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.phi	double	deg	0.01	zoh	union



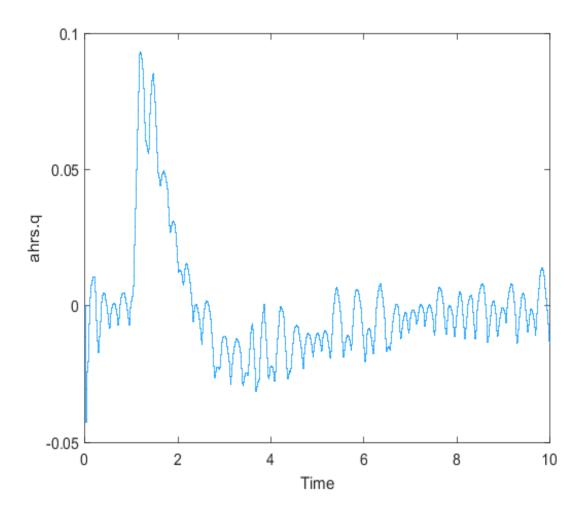
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.psi	double	deg	0.01	zoh	union



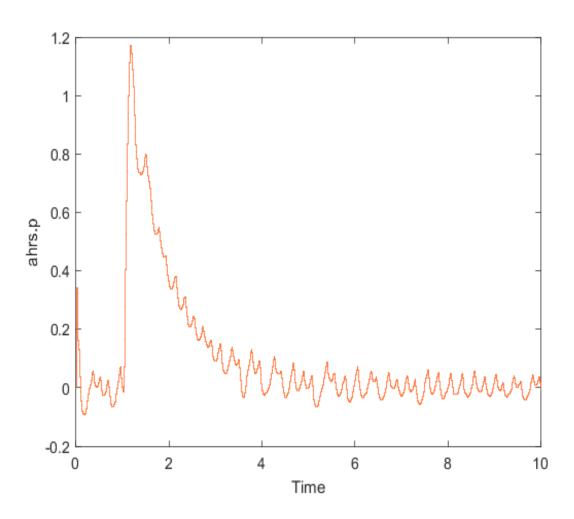
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.q	double	deg/sec	0.01	zoh	union



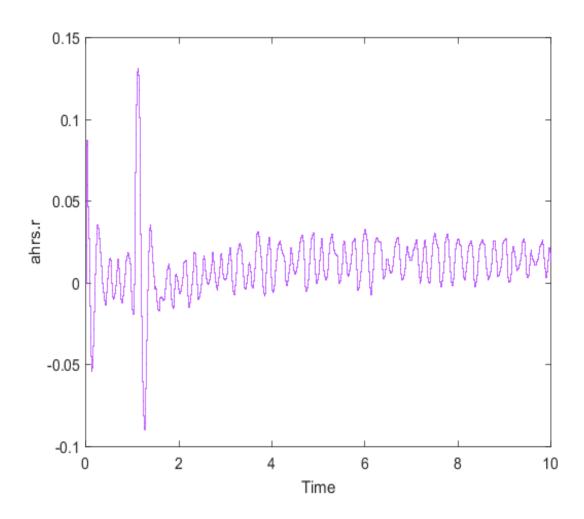
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.p	double	deg/sec	0.01	zoh	union



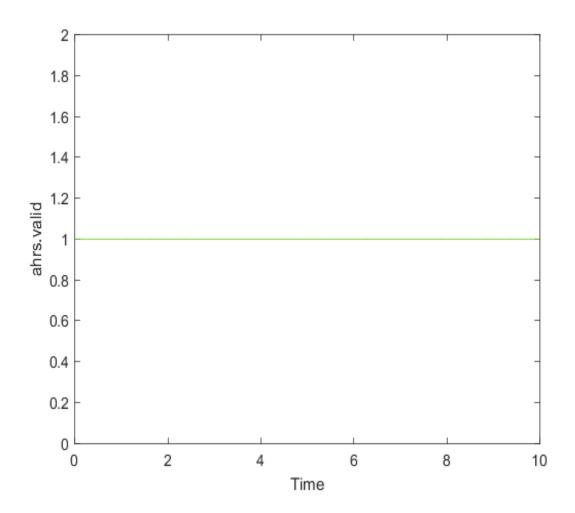
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.r	double	deg/sec	0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.valid	boolean		0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Custom Criteria Result Information

Diagnostic Record:

Outcome: Passed

Event: VerificationPassed

VerificationPassed in custom criteria of sltest.testmanager.TestCase.

Framework Diagnostic:	
verifyGreaterThanOrEqua	al passed.
Actual Value:	
0.936450362760788	
Minimum Value (Inclusive	e):
0.630000000000000	
Diagnostic Record:	
Outcome:	Passed
Event:	VerificationPassed
verification assea in custon	n criteria of sltest.testmanager.TestCa
Framework Diagnostic:	
verifyLessThanOrEqual pa	assed.
Actual Value:	
0.991080483713319	
Maximum Value (Inclusiv	e):
1.1000000000000000	
Diagnostic Record:	
Outcome:	Passed
Event:	VerificationPassed
VerificationPassed in custom	 n criteria of sltest.testmanager.TestCa
Framework Diagnostic:	
verifyGreaterThanOrEqua	al passed.

Outcome: Passed

Event: VerificationPassed

VerificationPassed in custom criteria of sltest.testmanager.TestCase.

Framework Diagnostic:

verifyLessThanOrEqual passed.

Actual Value:

0.990927581653827

Maximum Value (Inclusive):

1.0500000000000000

SmallNegativeStep

Test Result Information

Result Type: Test Case Result

Parent: <u>Helicopter Roll Control Test</u>

Start Time: 31-May-2019 12:53:18 End Time: 31-May-2019 12:53:43

Outcome: Passed

Description:

Roll step of -1 degree to determine tracking, overshoot and rise time.

Test Case Information

Name: SmallNegativeStep

Type: Simulation Test

Test Case Requirements

Description: SR_6: Attitude Rate Tracking Performance (HelicopterSystemR

equirements#10)

Document: HelicopterSystemRequirements.slreqx

Simulation

System Under Test Information

Model: HelicopterSystem

Simulation Mode: normal

Configuration Set: Configuration

Start Time: 0 Stop Time: 10

Checksum: 1452374767 2694912940 1796571153 1815399691

Simulink Version: 9.3 Model Version: 1.21 Model Author: bpotter

Date: Wed May 08 07:15:05 2019

User ID: bpotter

Model Path: C:\Users\bpotter\MATLAB\Projects\ARP Example

Project\ARP_03_SystemArchitecture\specification\

HelicopterSystem.slx

Machine Name: AH-BPOTTER

Solver Name: ode23t

Solver Type: Variable-Step

Max Step Size: 0.001

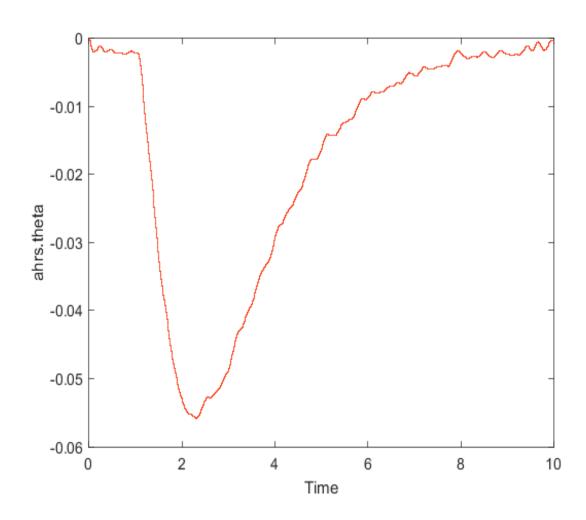
Simulation Start Time: 2019-05-31 12:53:19 Simulation Stop Time: 2019-05-31 12:53:42

Platform: PCWIN64

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
ahrs.theta	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.phi	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.psi	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.q	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.p	double	deg/sec	0.01	zoh	union	<u>Link</u>

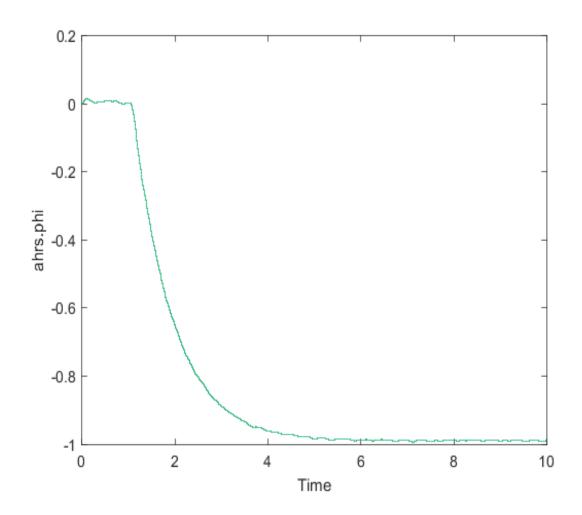
ahrs.r	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.valid	boolean		0.01	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.theta	double	deg	0.01	zoh	union



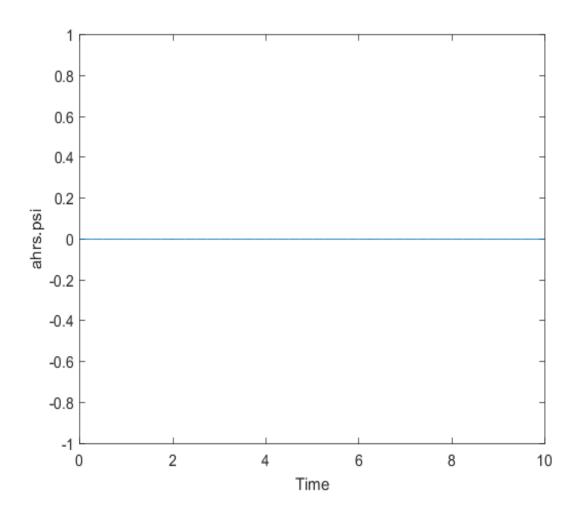
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.phi	double	deg	0.01	zoh	union



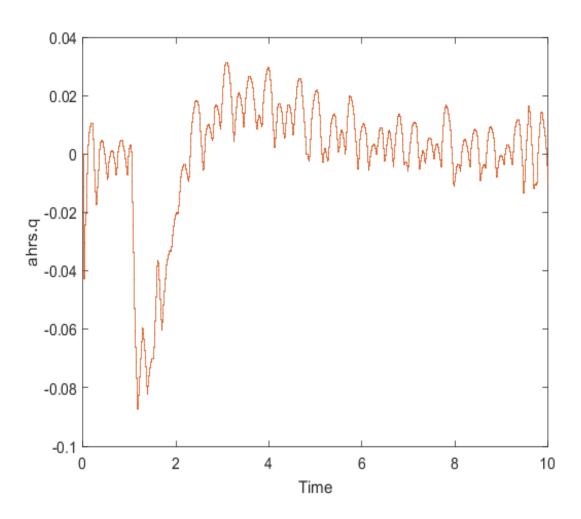
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.psi	double	deg	0.01	zoh	union



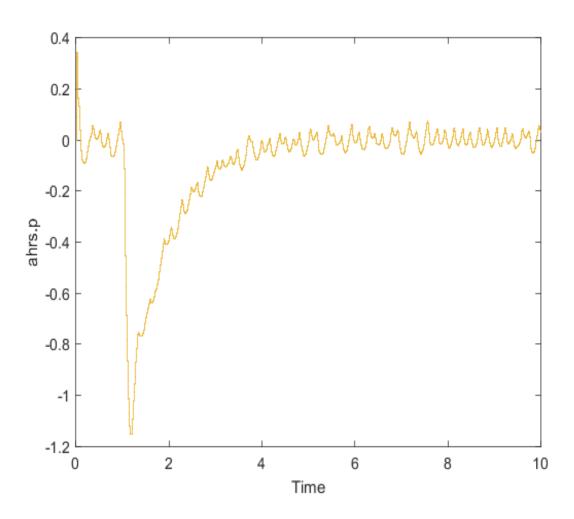
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.q	double	deg/sec	0.01	zoh	union



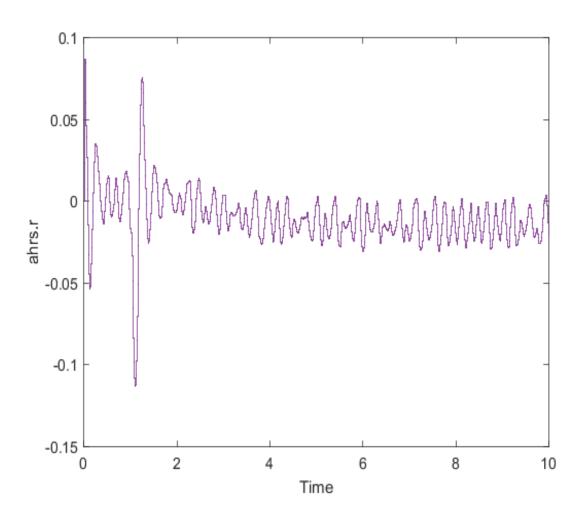
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.p	double	deg/sec	0.01	zoh	union



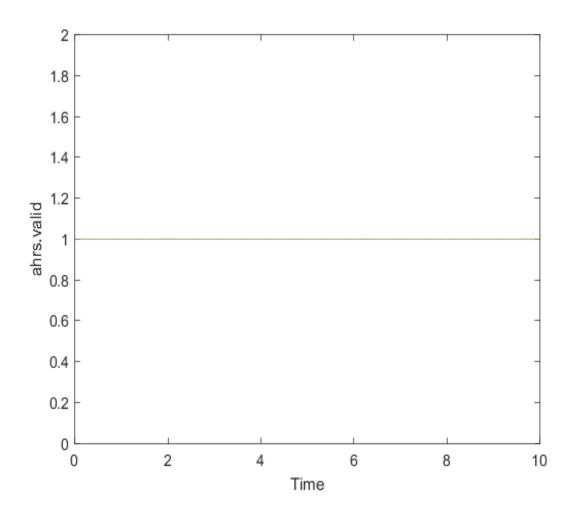
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.r	double	deg/sec	0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.valid	boolean		0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Custom Criteria Result Information

Diagnostic Record:

Outcome: Passed

Event: VerificationPassed

VerificationPassed in custom criteria of sltest.testmanager.TestCase.

Framework Diagnostic:	
verifyLessThanOrEqual	passed.
Actual Value:	
-0.933227461386989	
Maximum Value (Inclus	ive):
-0.630000000000000	
Diagnostic Record:	
Outcome:	Passed
Event:	VerificationPassed
VerificationPassed in custo	om criteria of sltest.testmanager.TestCas
 Framework Diagnostic:	
verifyGreaterThanOrEq	ual passed.
Actual Value:	
-0.993415130118128	
Minimum Value (Inclusi	ve):
-1.1000000000000000	
Diagnostic Record:	
Outcome:	Passed
Event:	VerificationPassed
VerificationPassed in custo	om criteria of sltest.testmanager.TestCa
 Framework Diagnostic:	
verifyGreaterThanOrEg	nacead

Actual Value: -0.993415130118128 Minimum Value (Inclusiv -1.0500000000000000	re):
Diagnostic Record: Outcome: Event:	Passed VerificationPassed
VerificationPassed in custon	m criteria of sltest.testmanager.TestCase.
Framework Diagnostic:	
verifyLessThanOrEqual p	passed.
Actual Value: -0.987373140799446 Maximum Value (Inclusiv -0.9500000000000000	7e):

Helicopter Yaw Control Test

Test Result Information

Result Type: Test Suite Result Parent: HeliLoopTest

 Start Time:
 31-May-2019 12:53:43

 End Time:
 31-May-2019 12:54:34

 Outcome:
 Total: 2, Passed: 2

Test Suite Information

Name: Helicopter Yaw Control Test

Back to Report Summary

SmallPositiveStep

Test Result Information

Result Type: Test Case Result

Parent: <u>Helicopter Yaw Control Test</u>

Start Time: 31-May-2019 12:53:43 End Time: 31-May-2019 12:54:09

Outcome: Passed

Description:

Yaw step of +1 degree/sec to determine tracking, overshoot and rise time.

Test Case Information

Name: SmallPositiveStep Type: Simulation Test

Test Case Requirements

Description: SR_6: Attitude Rate Tracking Performance (HelicopterSystemR

equirements#10)

Document: HelicopterSystemRequirements.slregx

Simulation

System Under Test Information

Model: HelicopterSystem

Simulation Mode: normal

Configuration Set: Configuration

Start Time: 0 Stop Time: 10

Checksum: 1452374767 2694912940 1796571153 1815399691

Simulink Version: 9.3 Model Version: 1.21 Model Author: bpotter

Date: Wed May 08 07:15:05 2019

User ID: bpotter

Model Path: C:\Users\bpotter\MATLAB\Projects\ARP_Example_

Project\ARP_03_SystemArchitecture\specification\

HelicopterSystem.slx

Machine Name: AH-BPOTTER

Solver Name: ode23t

Solver Type: Variable-Step

0.001

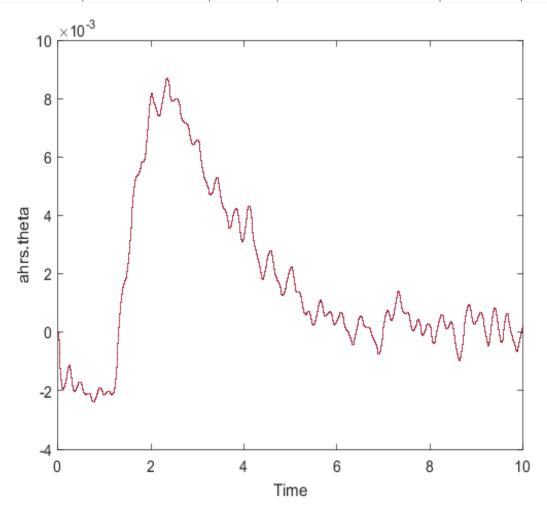
Max Step Size: Simulation Start Time: 2019-05-31 12:53:44 Simulation Stop Time: Platform: 2019-05-31 12:54:08

PCWIN64

Simulation Output

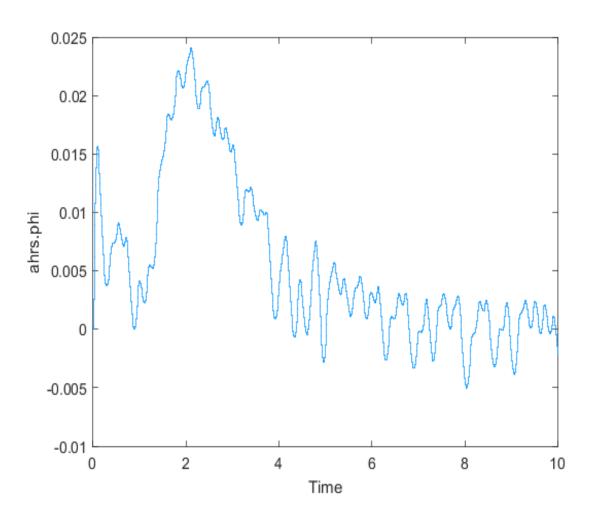
Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
ahrs.theta	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.phi	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.psi	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.q	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.p	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.r	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.valid	boolean		0.01	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.theta	double	deg	0.01	zoh	union



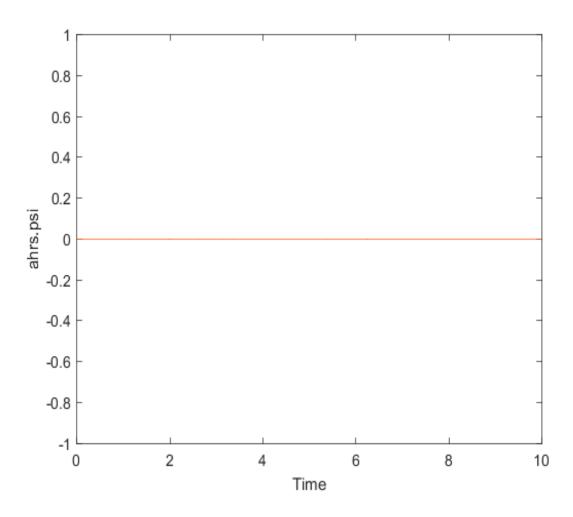
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.phi	double	deg	0.01	zoh	union



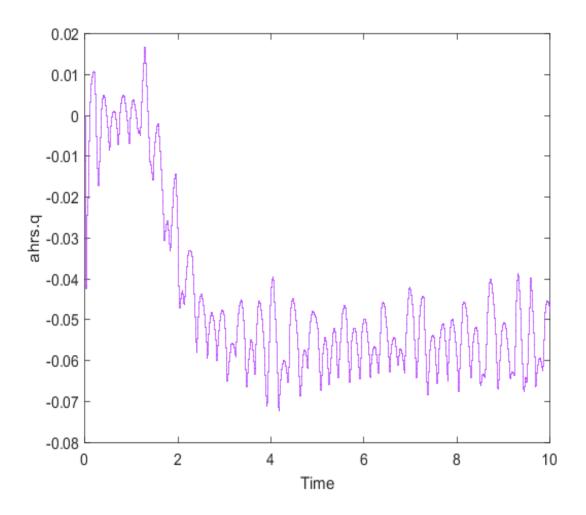
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.psi	double	deg	0.01	zoh	union



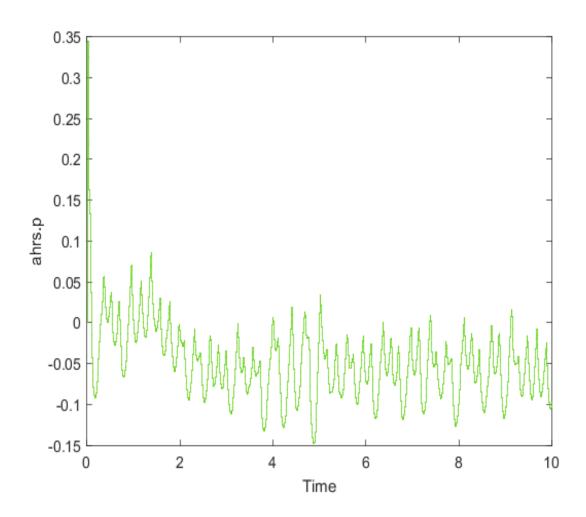
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync	
ahrs.q	double	deg/sec	0.01	zoh	union	



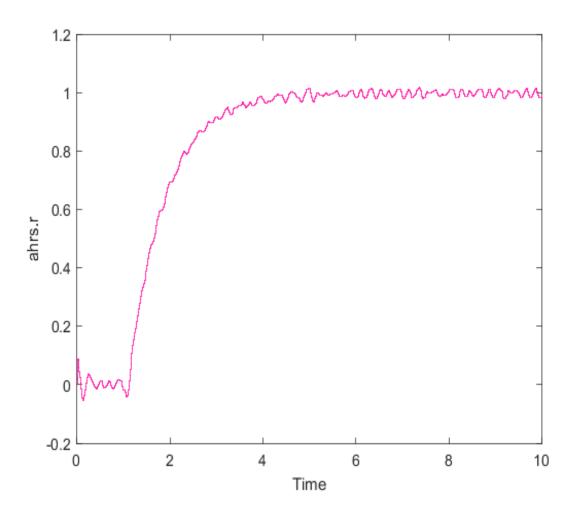
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.p	double	deg/sec	0.01	zoh	union



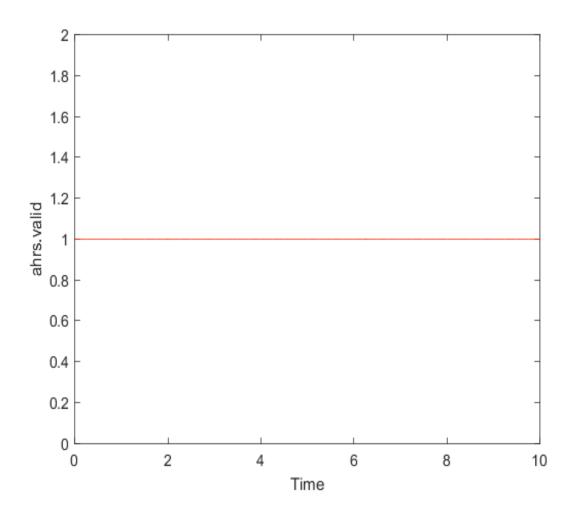
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.r	double	deg/sec	0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.valid	boolean		0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Custom Criteria Result Information

Diagnostic Record:

Outcome: Passed

Event: VerificationPassed

VerificationPassed in custom criteria of sltest.testmanager.TestCase.

ifyGreaterThanOrEqual ual Value:	
ual Value:	
951174390261090	
nimum Value (Inclusive)):
630000000000000	
nostic Record:	
ome:	Passed
nt:	VerificationPassed
.cationPassed in custom	criteria of sltest.testmanager.TestCa
 mework Diagnostic:	
ifyLessThanOrEqual pa	ssed.
ual Value:	
018645080486781	
ximum Value (Inclusive	e):
100000000000000	
nostic Record:	
ome:	Passed
nt:	VerificationPassed
.cationPassed in custom	 criteria of sltest.testmanager.TestCo
 mework Diagnostic:	
ifyGreaterThanOrEqual	
	criteria of sifest.testmanager.

Actual Value: 0.981488388547740 Minimum Value (Inclusive): 0.9500000000000000 Diagnostic Record: Outcome: Passed VerificationPassed Event: VerificationPassed in custom criteria of sltest.testmanager.TestCase.

Framework Diagnostic:

verifyLessThanOrEqual passed.

Actual Value:

1.018645080486781

Maximum Value (Inclusive):

1.0500000000000000

SmallNegativeStep

Test Result Information

Result Type: **Test Case Result**

Helicopter Yaw Control Test Parent:

31-May-2019 12:54:09 Start Time: End Time: 31-May-2019 12:54:34

Outcome: Passed

Description:

Yaw step of -1 degree/sec to determine tracking, overshoot and rise time.

Test Case Information

SmallNegativeStep Name:

Type: Simulation Test

Test Case Requirements

Description: SR_6: Attitude Rate Tracking Performance (HelicopterSystemR

equirements#10)

Document: HelicopterSystemRequirements.slreqx

Simulation

System Under Test Information

Model: HelicopterSystem

Simulation Mode: normal

Configuration Set: Configuration

Start Time: 0 Stop Time: 10

Checksum: 1452374767 2694912940 1796571153 1815399691

Simulink Version: 9.3 Model Version: 1.21 Model Author: bpotter

Date: Wed May 08 07:15:05 2019

User ID: bpotter

Model Path: C:\Users\bpotter\MATLAB\Projects\ARP Example

Project\ARP_03_SystemArchitecture\specification\

HelicopterSystem.slx

Machine Name: AH-BPOTTER

Solver Name: ode23t

Solver Type: Variable-Step

Max Step Size: 0.001

Simulation Start Time: 2019-05-31 12:54:10 Simulation Stop Time: 2019-05-31 12:54:33

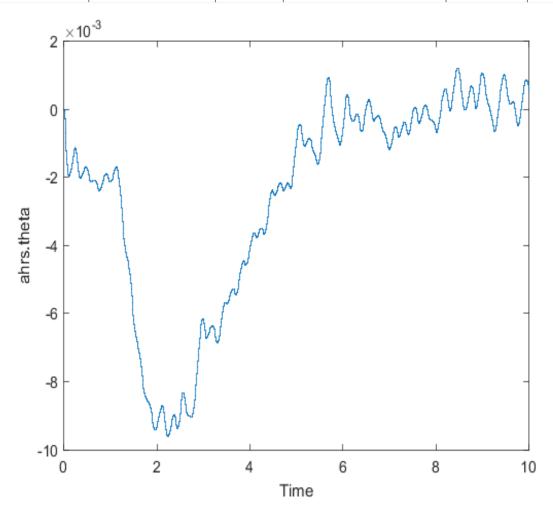
Platform: PCWIN64

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link
						to Plot
ahrs.theta	double	deg	0.01	zoh	union	Link
ahrs.phi	double	deg	0.01	zoh	union	<u>Link</u>
ahrs.psi	double	deg	0.01	zoh	union	Link
ahrs.q	double	deg/sec	0.01	zoh	union	Link
ahrs.p	double	deg/sec	0.01	zoh	union	<u>Link</u>

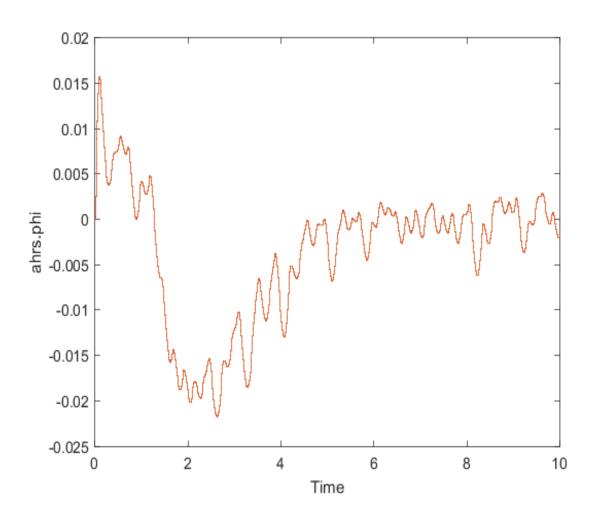
ahrs.r	double	deg/sec	0.01	zoh	union	<u>Link</u>
ahrs.valid	boolean		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.theta	double	deg	0.01	zoh	union



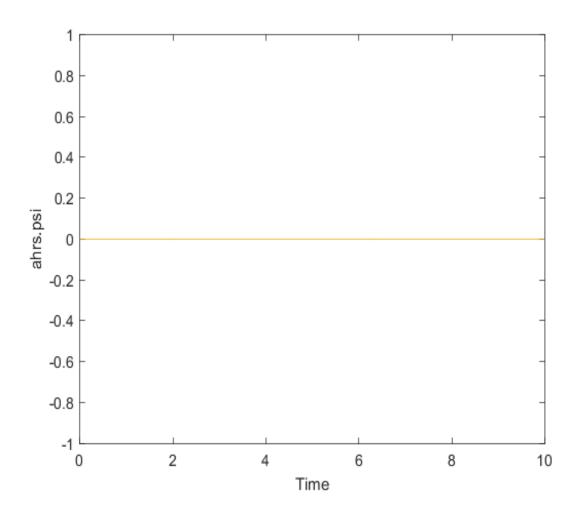
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.phi	double	deg	0.01	zoh	union



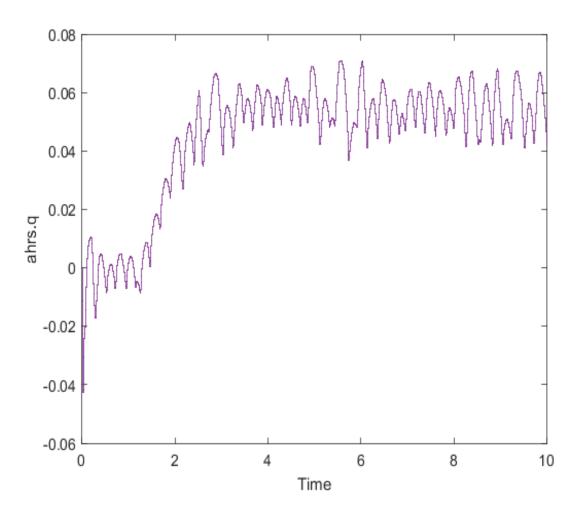
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.psi	double	deg	0.01	zoh	union



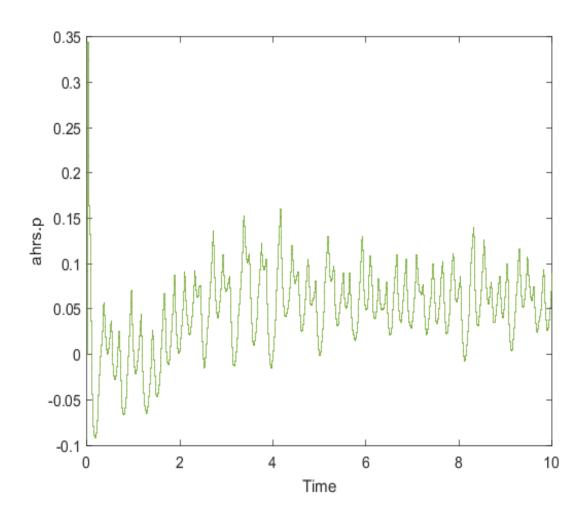
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.q	double	deg/sec	0.01	zoh	union



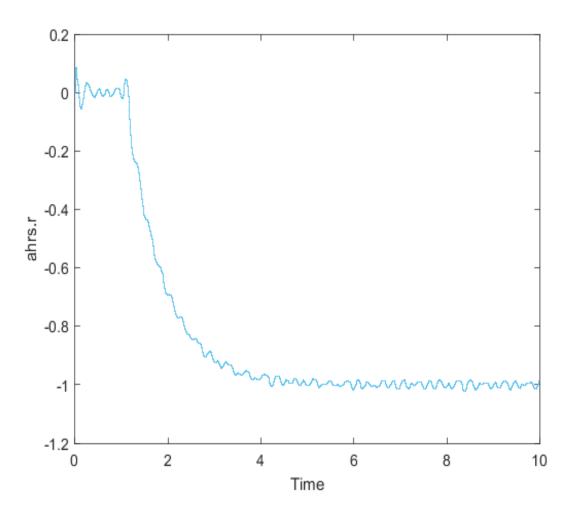
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.p	double	deg/sec	0.01	zoh	union



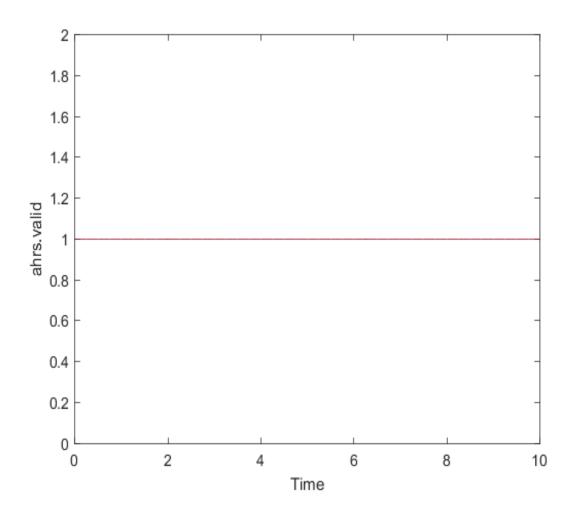
Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.r	double	deg/sec	0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
ahrs.valid	boolean		0.01	zoh	union



Back to Report SummaryBack to Signal Summary

Custom Criteria Result Information

Diagnostic Record:

Outcome: Passed

Event: VerificationPassed

VerificationPassed in custom criteria of sltest.testmanager.TestCase.

Framework Diagnostic:						
verifyLessThanOrEqual pa	verifyLessThanOrEqual passed.					
Actual Value: -0.952898053900316 Maximum Value (Inclusive						
-0.6300000000000						
Diagnostic Record:						
Outcome:	Passed					
Event:	VerificationPassed					
VerificationPassed in custom criteria of sltest.testmanager.TestCase.						
Framework Diagnostic:						
verifyGreaterThanOrEqual passed.						
Actual Value:						
-1.022867435958411						
Minimum Value (Inclusive)	Minimum Value (Inclusive):					
-1.10000000000000						
Diagnostic Record:	Diagnostic Record:					
Outcome:	Passed					
Event:	VerificationPassed					
VerificationPassed in custom criteria of sltest.testmanager.TestCase.						
Framework Diagnostic:						
verifyGreaterThanOrEqual passed.						

Actual Value: -1.022867435958411 Minimum Value (Inc -1.05000000000000000	lusive):			
Diagnostic Record: Outcome:	 Passed			
Event:	VerificationPas	sed		
 Framework Diagnost	ustom criteria of sltest.tes	tmanager.TestCase.		
verifyLessThanOrEq	ual passed.			
Actual Value: -0.981627611193364 Maximum Value (Inc -0.95000000000000000	clusive):			