

VALIDATION TEST

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|----------------------------|---|--------------------|----------|
| Title | Steady state sideslip during approach - Right | | |
| Id | 2 d viii b | Aircraft | DA42-VI |
| Device | A42M2-12 | Version | 1.03 |
| Qualification Level | FNPT2 | Operator | AFTA |
| Result Date | 04/04/24 | Master Date | 19/04/22 |
| Result Load | 2012.01 | Master Load | 2012.01 |

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|---|---|
| Objective | Expected Results |
| Demonstrate that the the simulator exhibits the correct inter-relationship of steady state lateral/directional flight characteristics in conformance with the class of aeroplanes | Rudder / Bank / Sideslip / Wheel position 20% / 1.5 deg / -3.1 deg / -8.5% 100% / 10.2 deg / -25 deg / -68% |
| Reference | Evaluation Criteria |
| Chapter 12 - Validation data - Handling Qualities - Test 2.d.viii.b | +/- 2 deg bank +/- 1 deg sideslip +/- 5 deg or +/- 10% wheel position |

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| Demonstration procedure | From steady approach initial conditions, the control rudder is used to established a steady state sideslip on the right, for two different rudder displacements. |
| Manual test procedure | In ISA conditions and approach configuration, the pilot performs standard approach profile. When approach is stabilised, the pilot moves the rudder by 20% then 60% of its travel in one side whilst the roll control is moved to stabilize a new heading. |
| Automatic test procedure | 2 d viii b |

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|--|---|
| Authority's approval (date, signature and comments) | Operator's approval (date, signature and comments) |
| | |

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| Autopilot mode | AUTO_HEADING |
|---|--------------|
| Automatic AUTO_HEADING mode : Heading is maintained constant through roll and yaw trim and Vertical Speed through pitch trim. | |

| Initial parameters | HOLD_FLAPS_APP_GEAR |
|-----------------------------|--------------------------|
| Gross weight (kg) : 1900 | Flaps lever position : 1 |
| Balance (%) : 50 | Gear lever position : 1 |
| Altitude (ft) : 3000 | Left Load (%) : 70 |
| Vertical speed (ft/min) : 0 | Right Load (%) : 70 |
| IAS (kt) : 106 (free) | Left RPM : 2060 |
| Heading (°) : 0 | Right RPM : 2060 |
| Bank (°) : 0 (free) | |
| Attitude (°) : -1 | |
| Pedal Position (%) : 0 | |
| Column Position (%) : 32 | |
| Wheel Position (%) : 0 | |

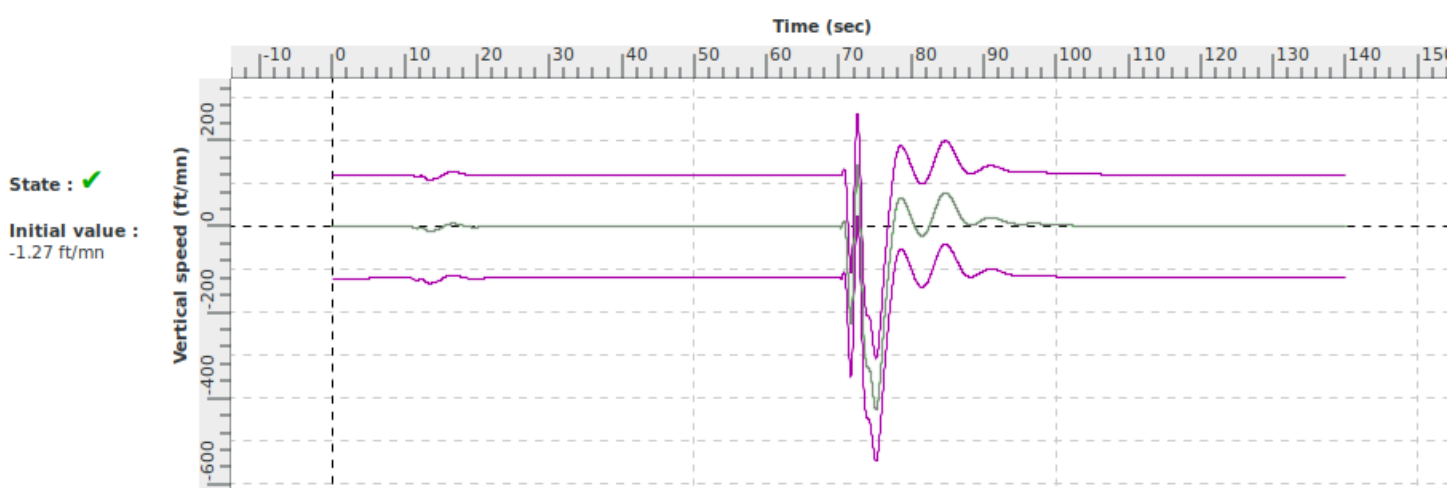
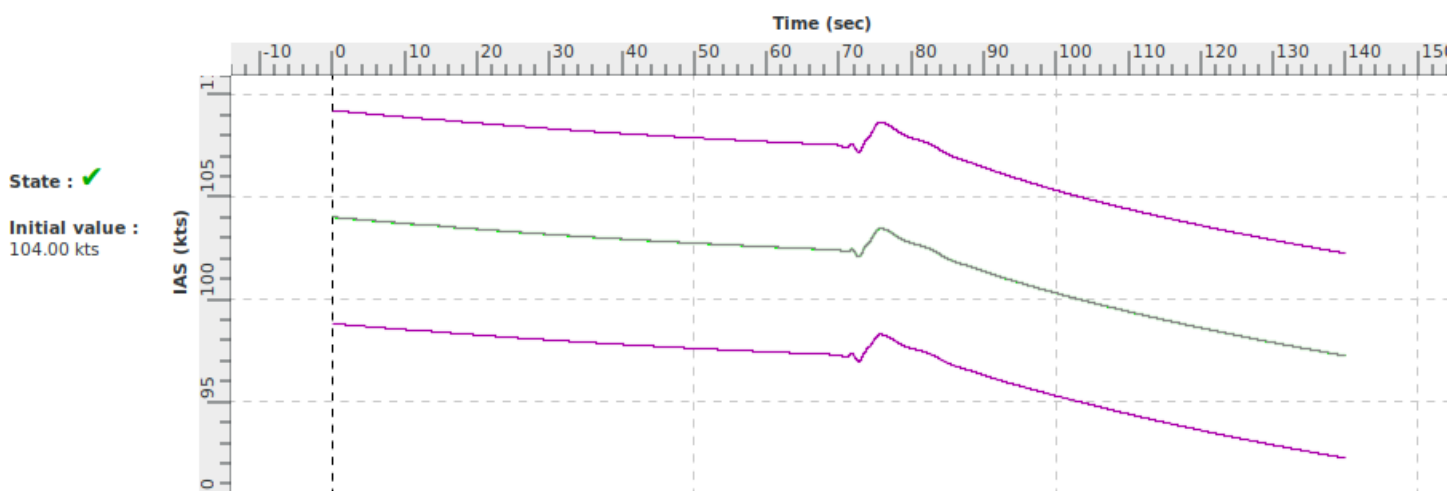
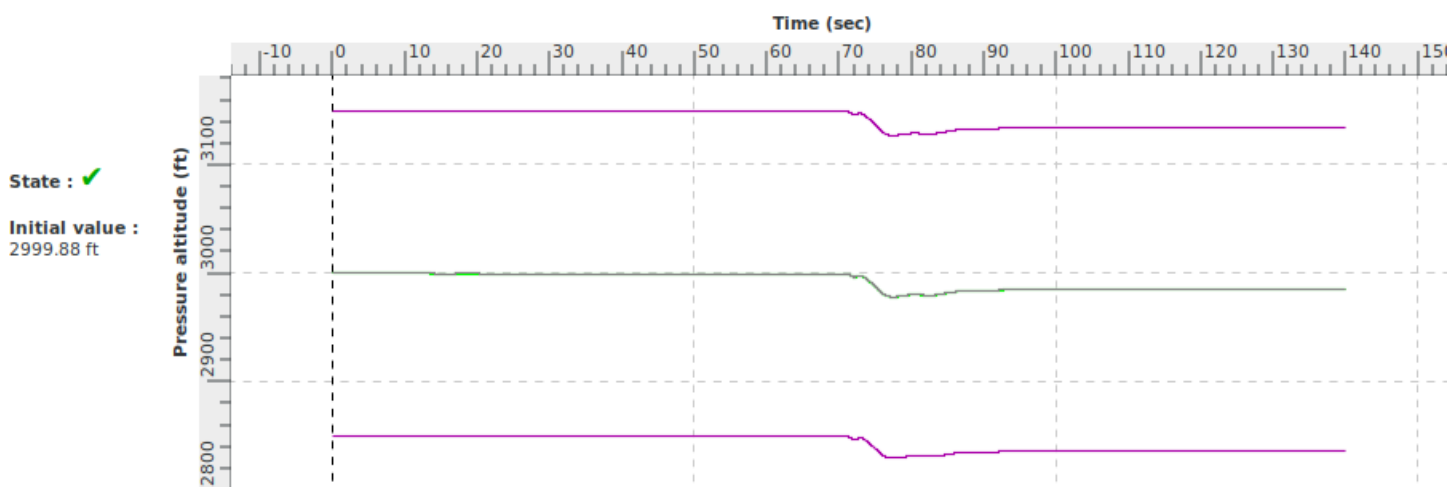
| Commands | | | |
|----------|-------------------------|-------|---|
| Time | Name | Param | Explanations |
| 0.0 | Start_Test | 0.0 | Start the results recording |
| 1.0 | set_rudder_auto_heading | 0.0 | Ask it to maintain the desired rudder angle |
| 10.0 | set_rudder_auto_heading | 20.0 | Ask it to maintain the desired rudder angle |
| 70.0 | set_rudder_auto_heading | 100.0 | Ask it to maintain the desired rudder angle |
| 140.0 | Stop_Test | 0.0 | Stop the test procedure |

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| Log of Revision | | |
|-----------------|----------|--|
| Rev. Nbr | Date | Reason for revision |
| 1.01 | 29/03/21 | 1909 Master. New expected results and new command. |
| 1.02 | 27/07/21 | 2012-R1 Master. New expected results. |
| 1.03 | 19/04/22 | 2012-R1 master correction on Force |
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| Notes |
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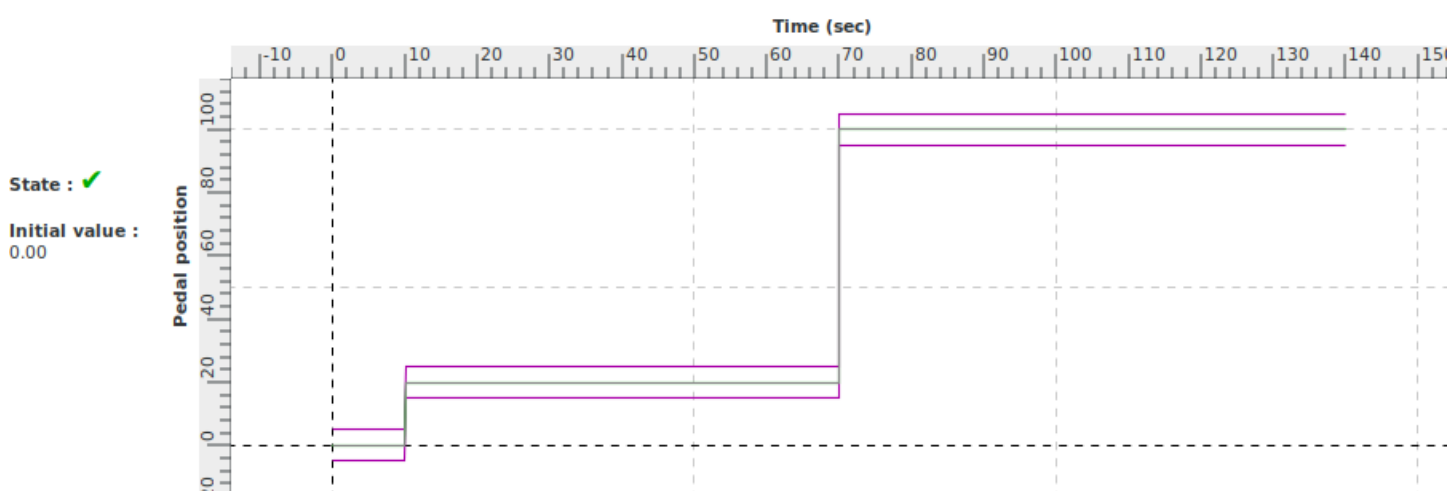
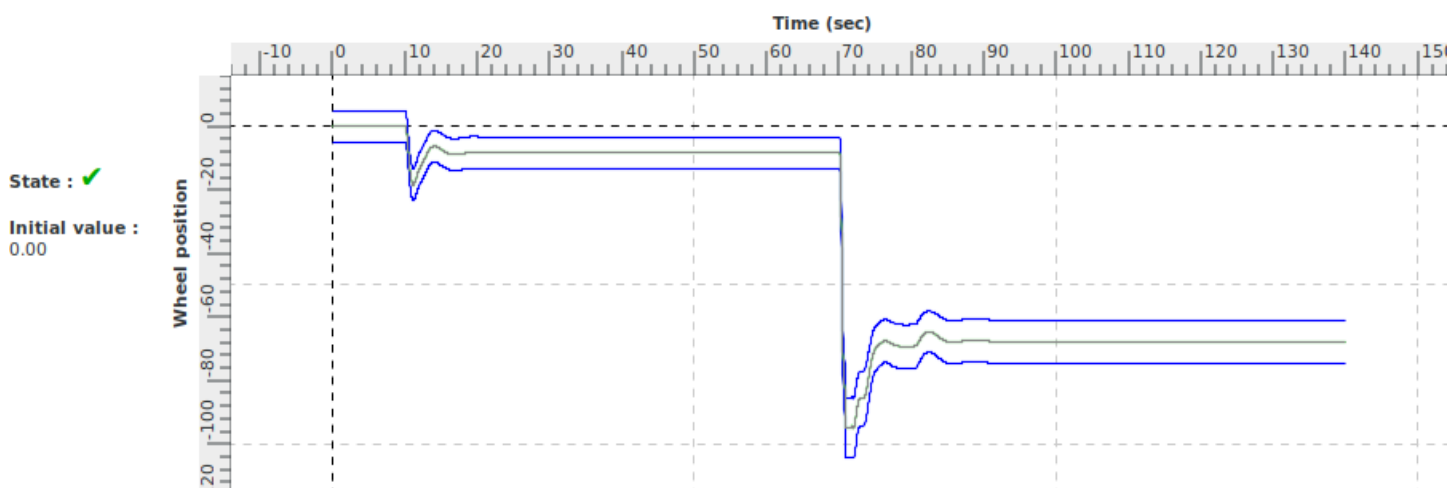
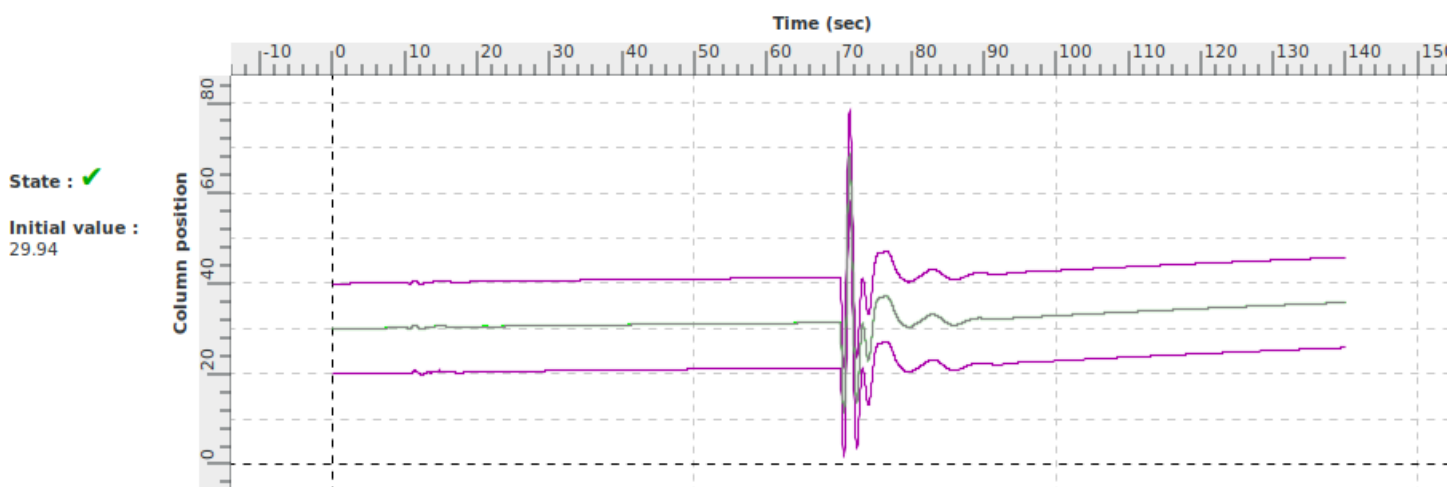
Legend :

green : results within tolerances
blue : tolerances

red : results out of tolerances
violet : tolerances Alsim

grey : master

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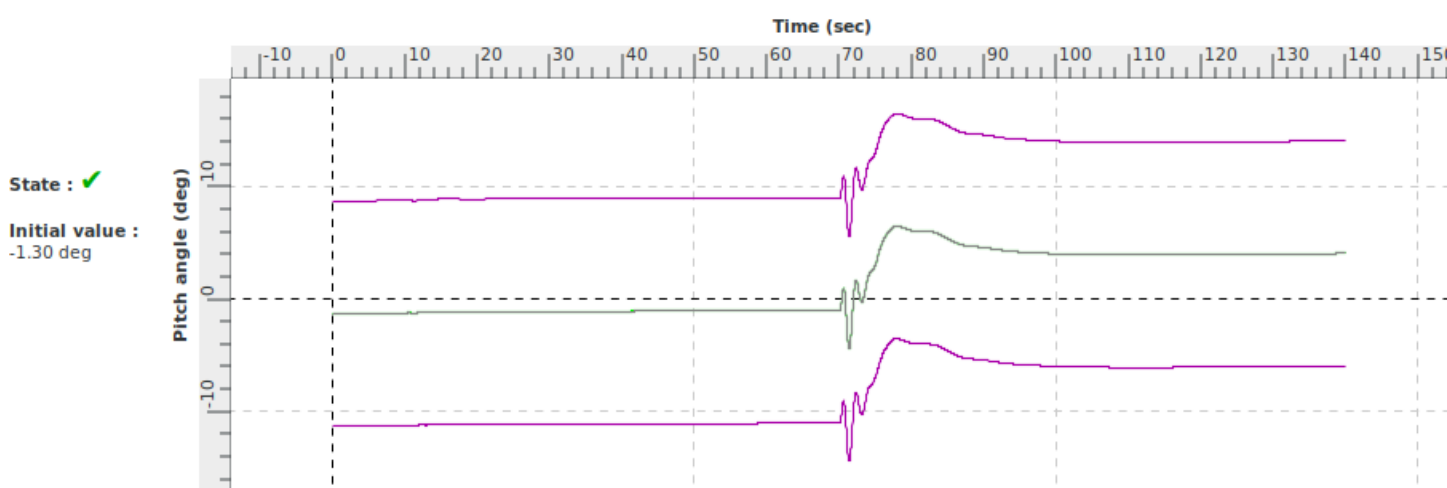
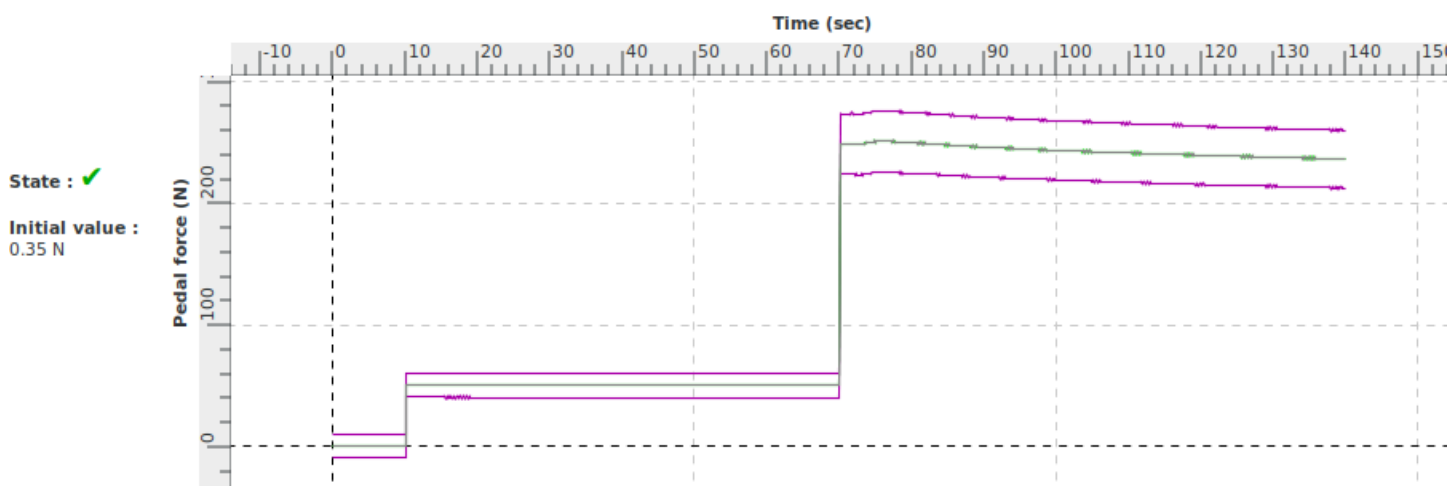
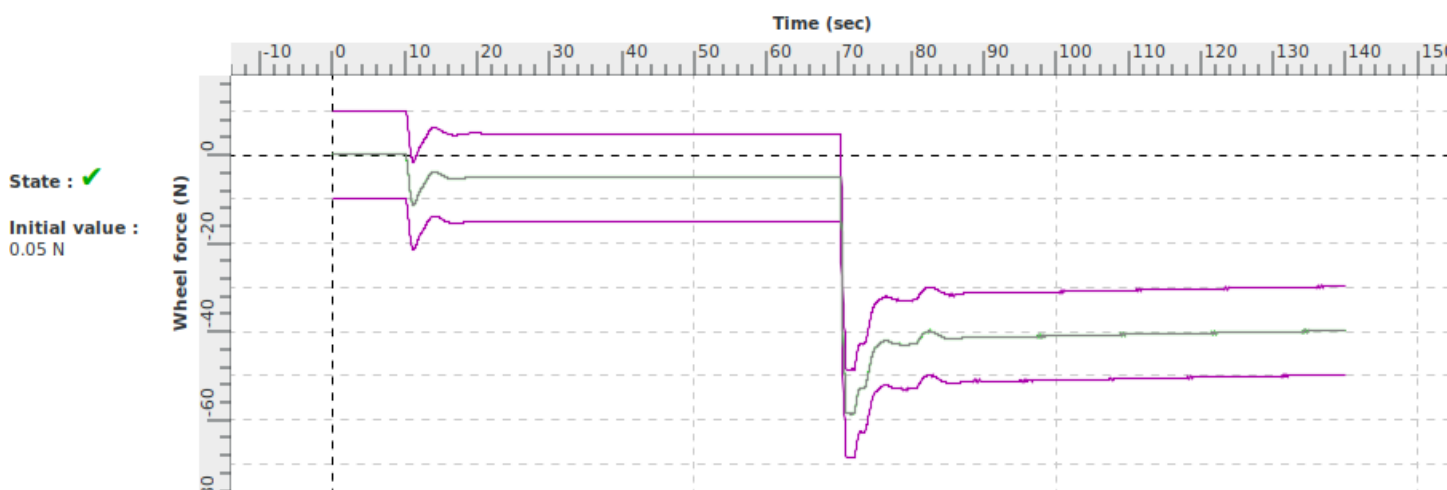
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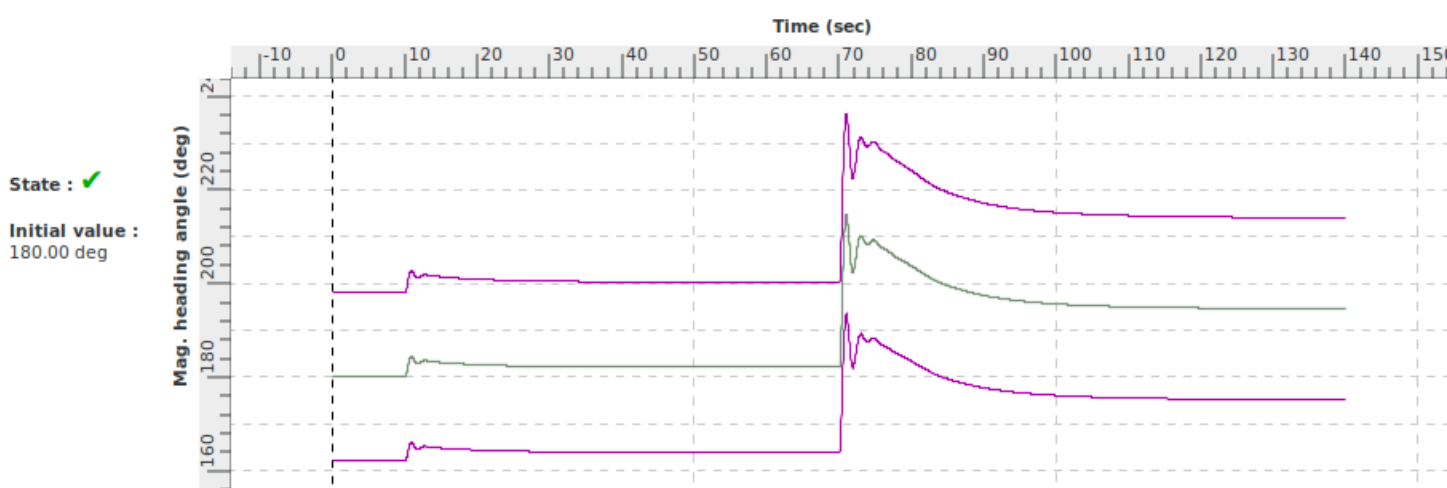
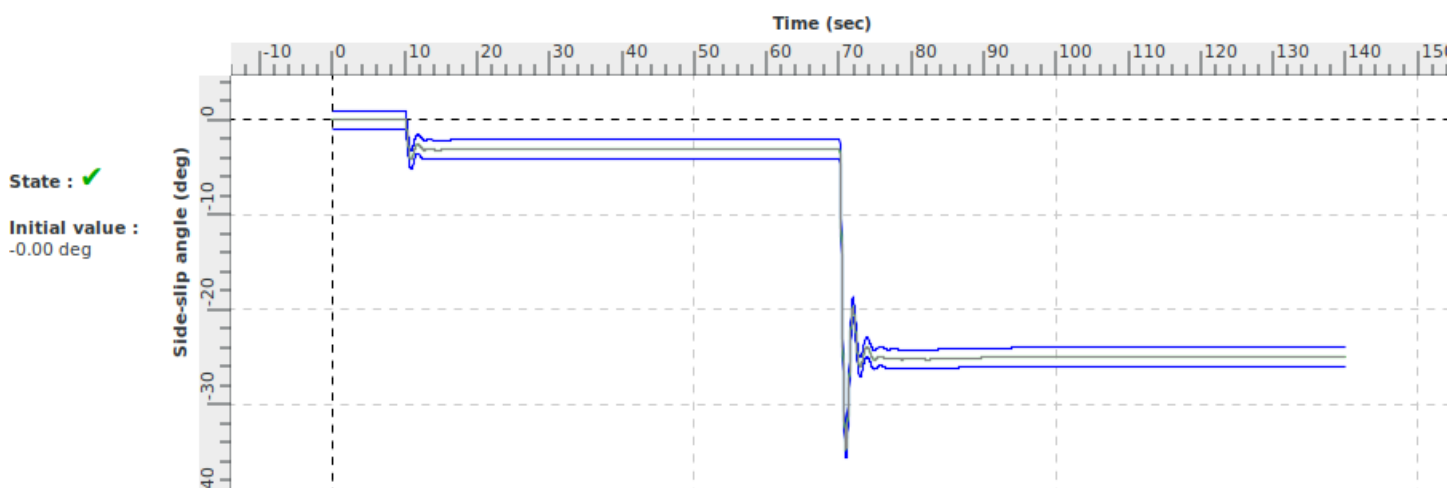
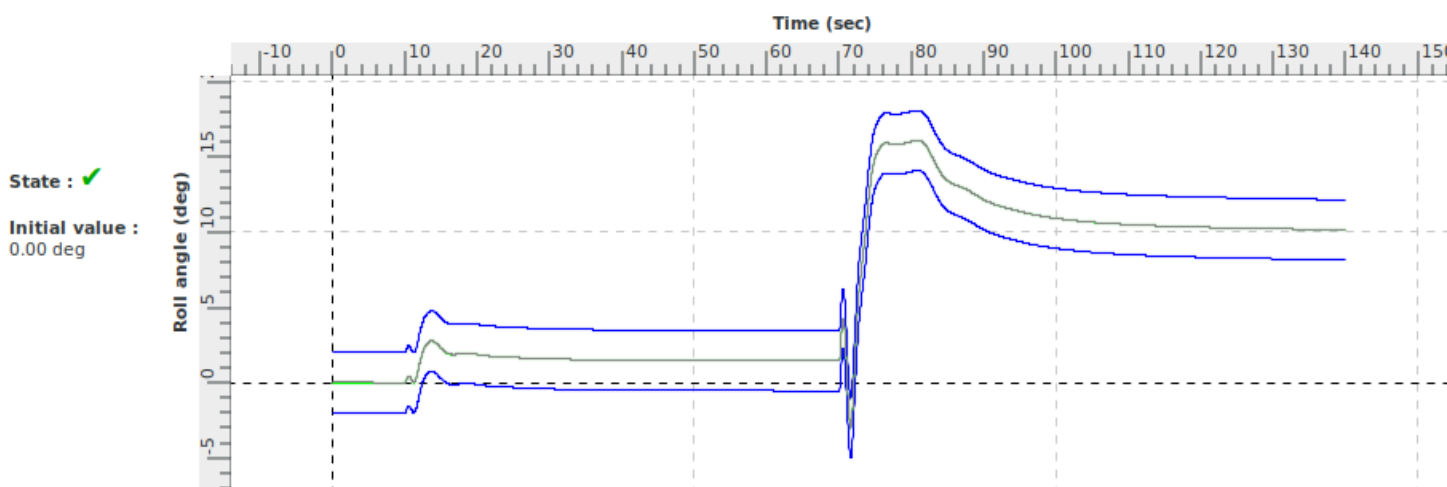
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