

Motorcycle multibody model validation for Human-in-the-Loop simulation

Grottoli M.^{1,2,*}, Celiberti F.^{1,*}, van der Heide A.¹, Lemmens Y.¹ and Happee R.²

(1) Simulation and Test Solutions, Siemens PLM Software, Interleuvenlaan 68, Leuven, Belgium, e-mail : {marco.grottoli, francesco.celiberti, oane.van_der_heide, yves.lemmens}@siemens.com

(2) Department of Biomechanical engineering, Delft University of Technology, Mekelweg 2, Delft, The Netherlands, e-mail : {m.grottoli, r.happee}@tudelft.nl

(*)Joint first authors

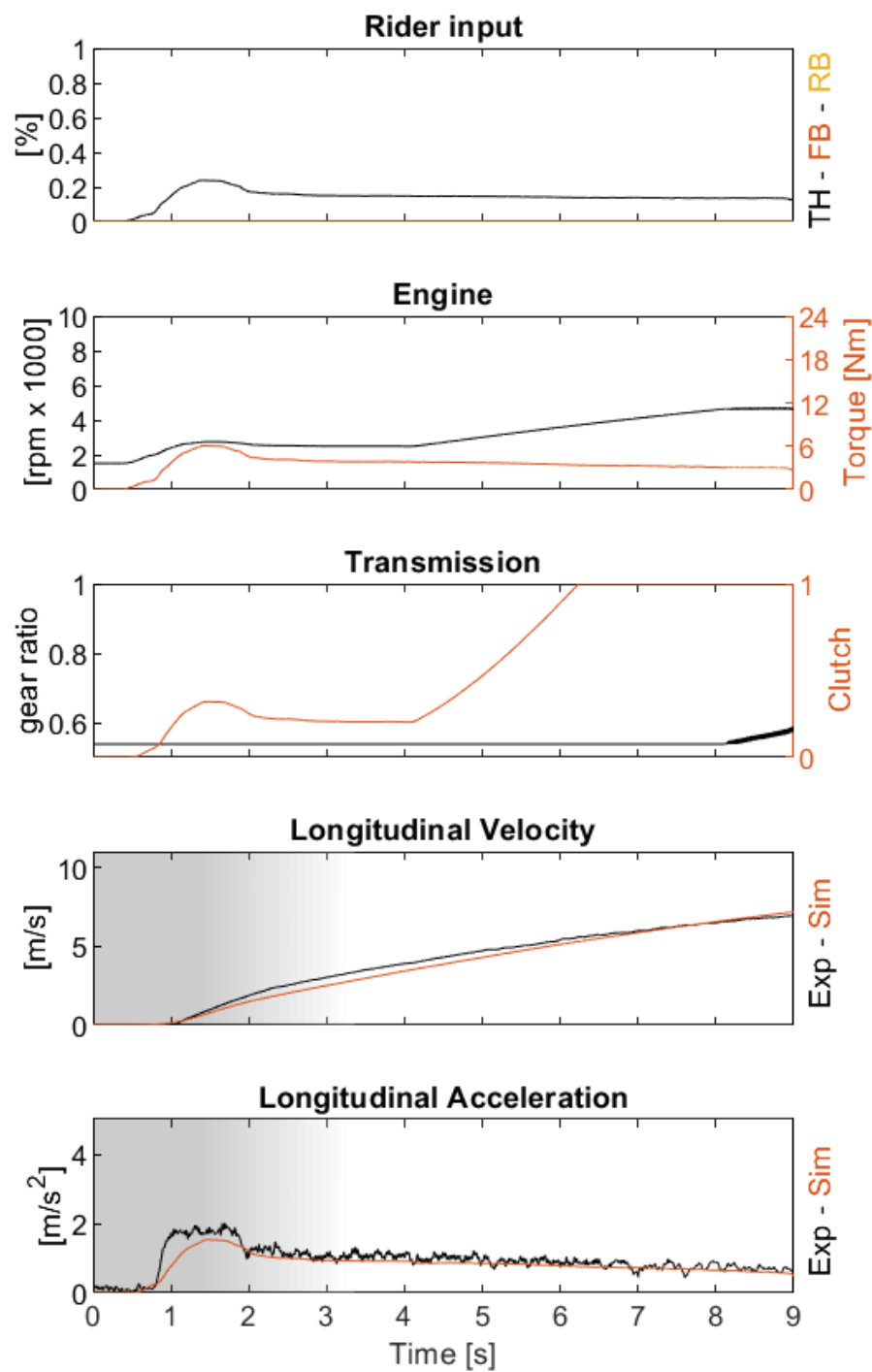


Figure 1: Maneuver A30. Comparison between model simulation and measurements on a real motorcycle. TH : throttle, FB : front brake, RB : rear brake.

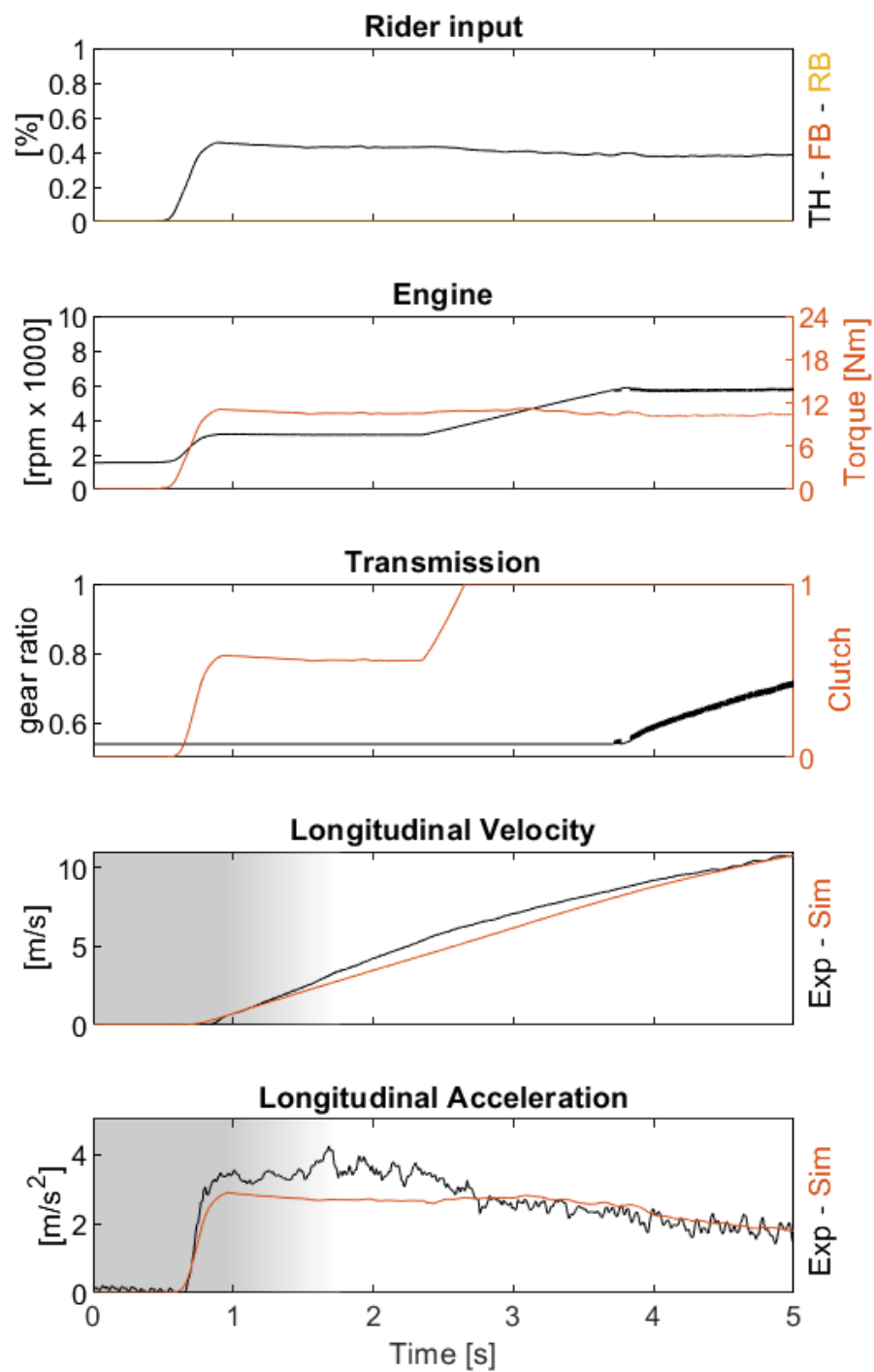


Figure 2: Maneuver A50. Comparison between model simulation and measurements on a real motorcycle. TH : throttle, FB : front brake, RB : rear brake.

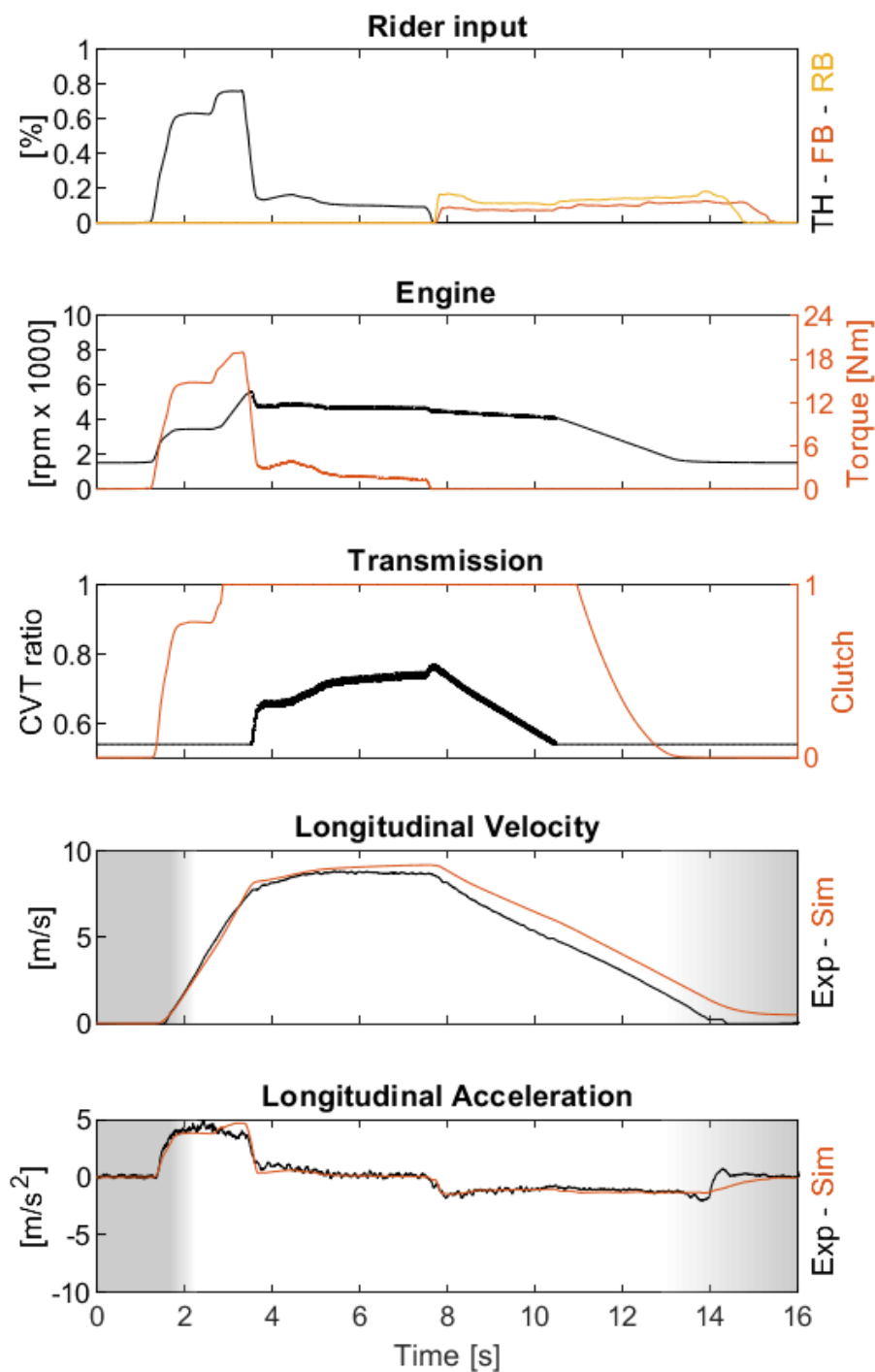


Figure 3: Maneuver B25. Comparison between model simulation and measurements on a real motorcycle. TH : throttle, FB : front brake, RB : rear brake.

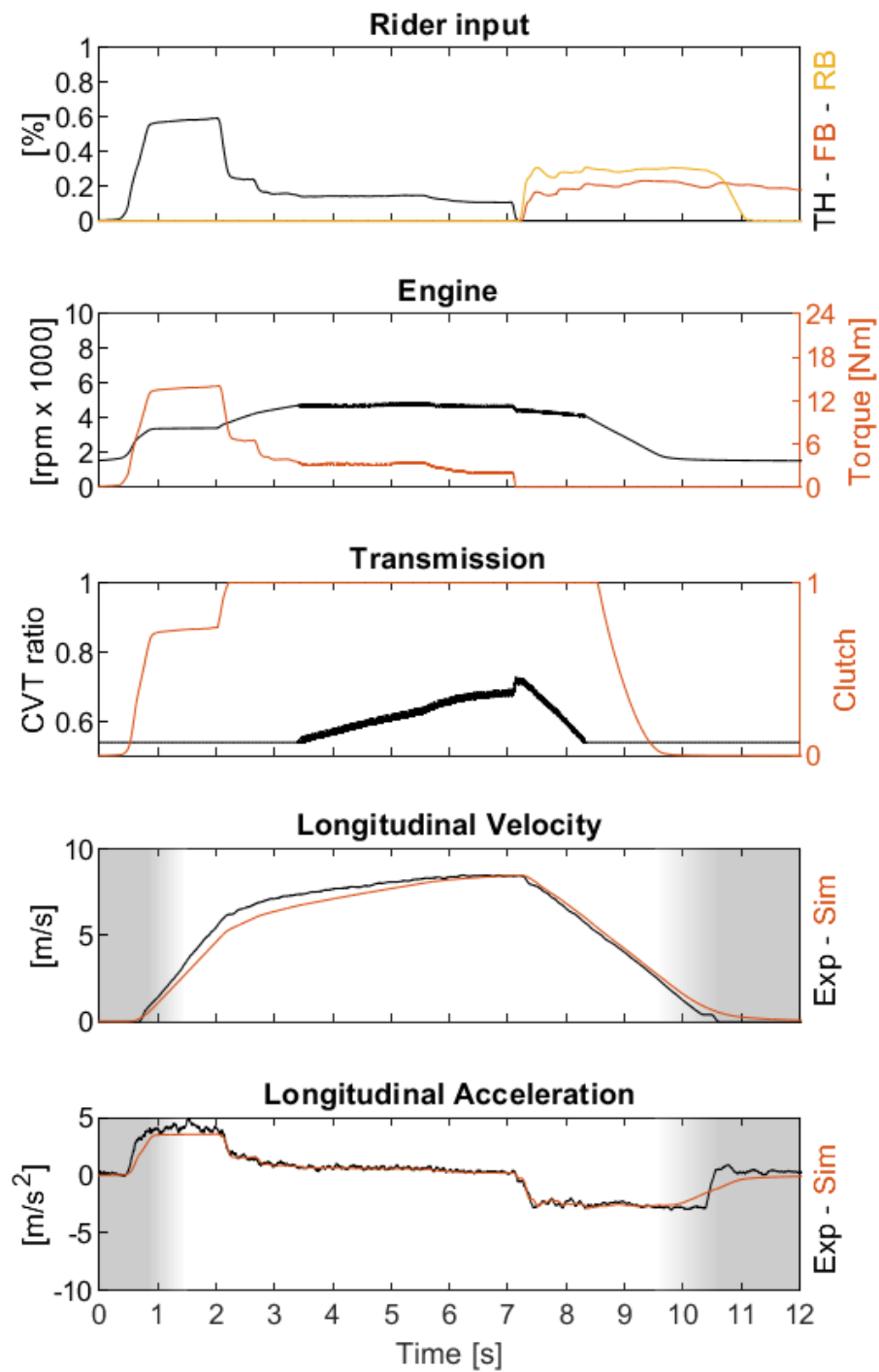


Figure 4: Maneuver B12. Comparison between model simulation and measurements on a real motorcycle. TH : throttle, FB : front brake, RB : rear brake.

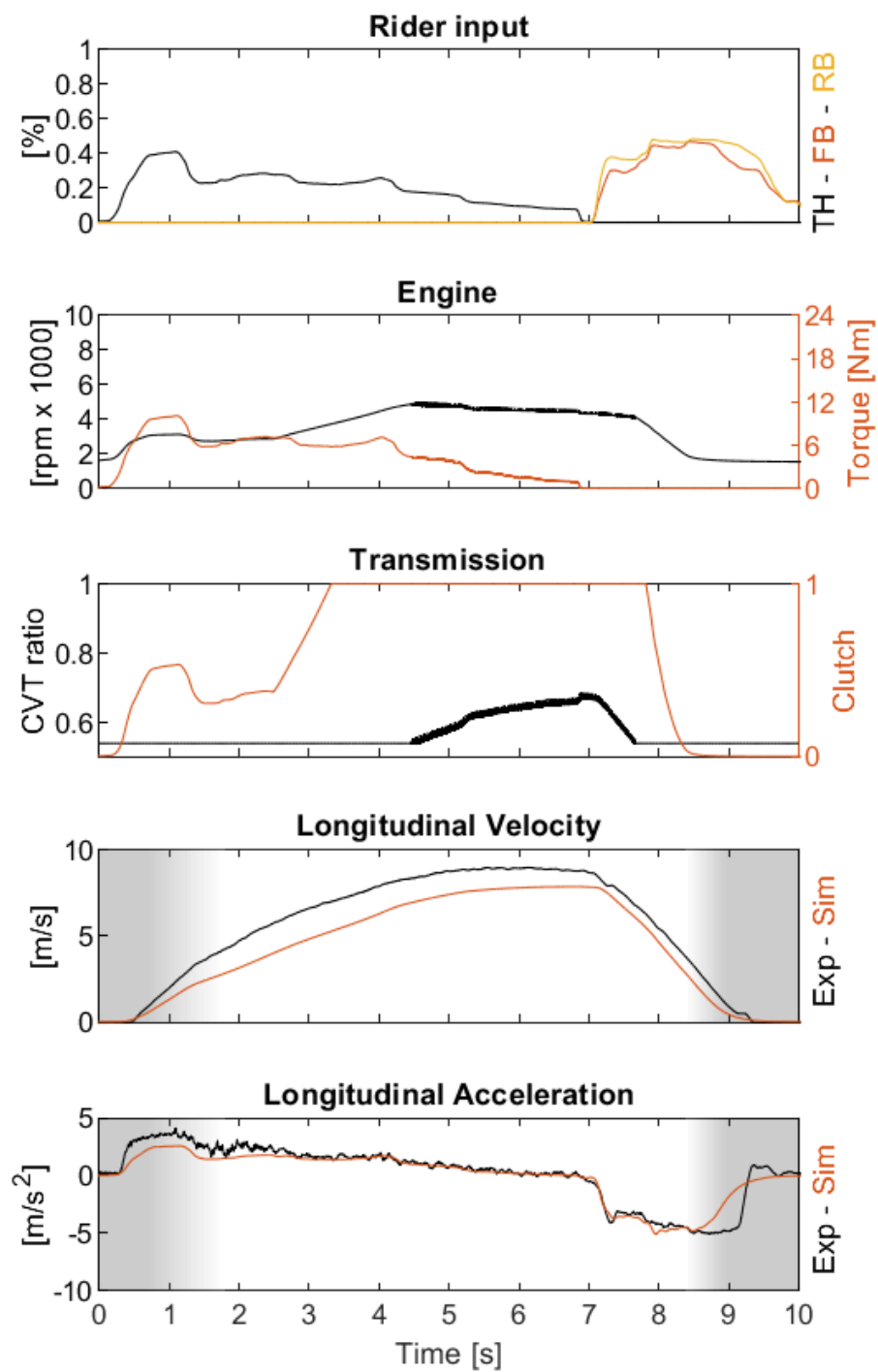


Figure 5: Maneuver B7.5. Comparison between model simulation and measurements on a real motorcycle. TH : throttle, FB : front brake, RB : rear brake.

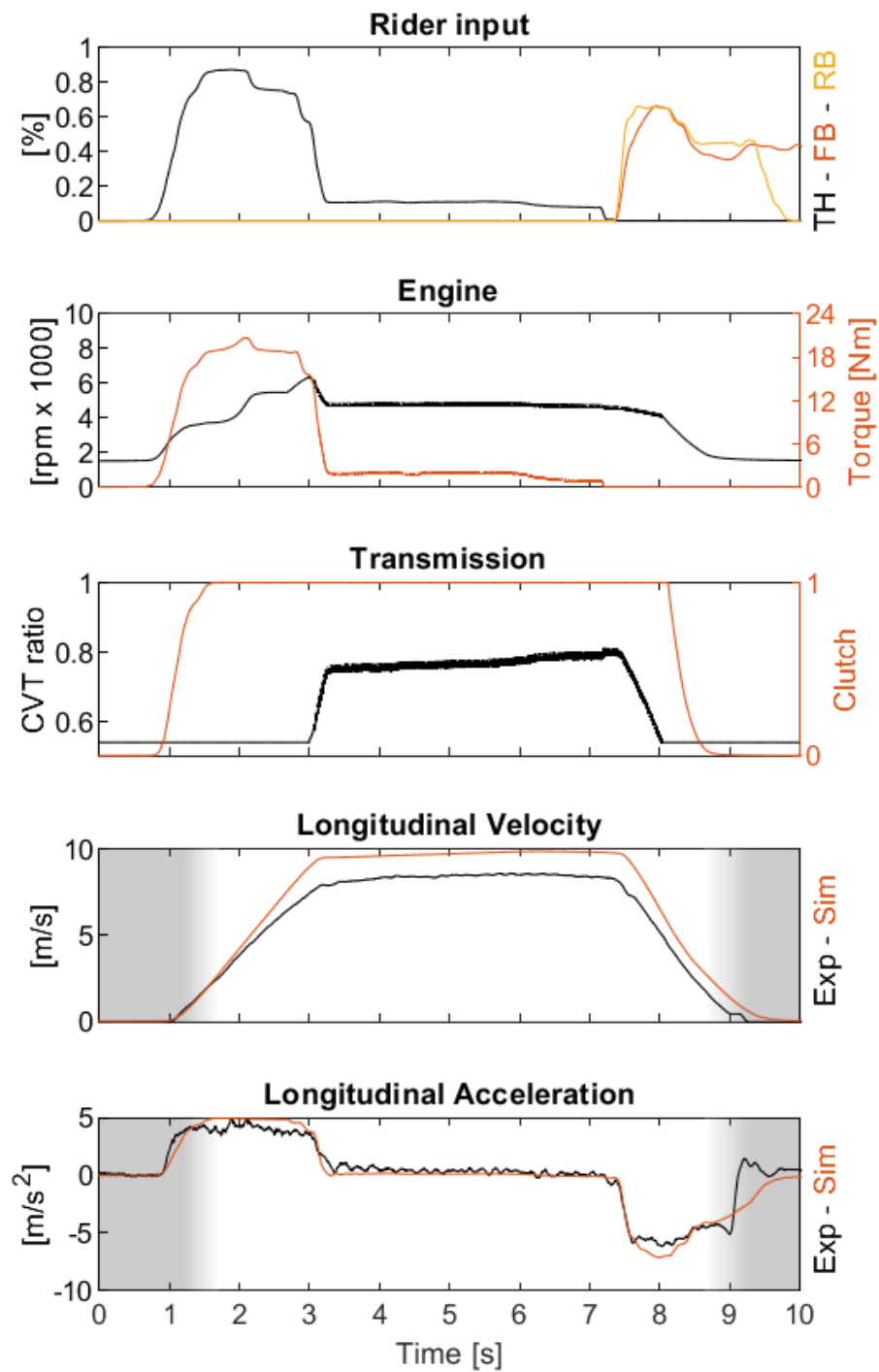


Figure 6: Maneuver B5.5. Comparison between model simulation and measurements on a real motorcycle. TH : throttle, FB : front brake, RB : rear brake.

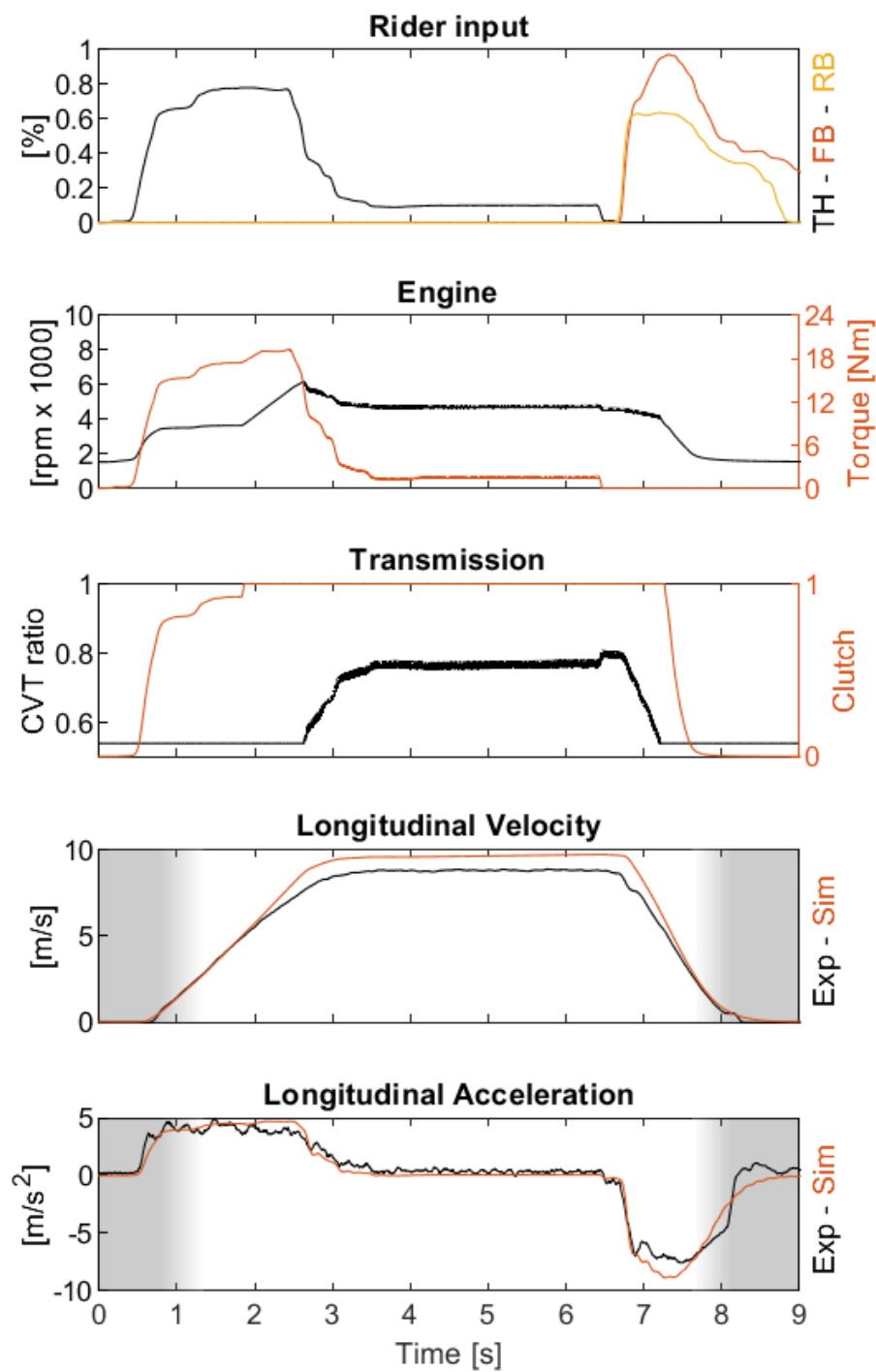


Figure 7: Maneuver B4.5. Comparison between model simulation and measurements on a real motorcycle. TH : throttle, FB : front brake, RB : rear brake.

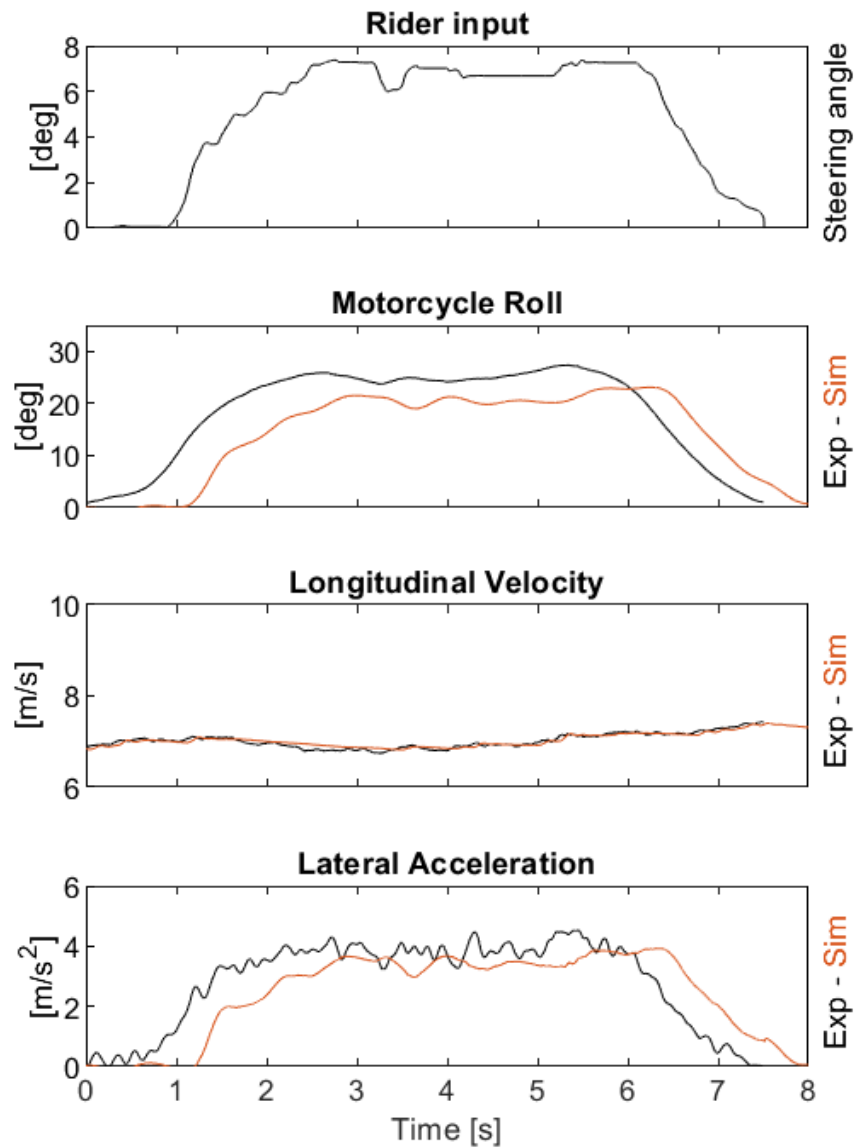


Figure 8: Maneuver U25. Comparison between model simulation and measurements on a real motorcycle.