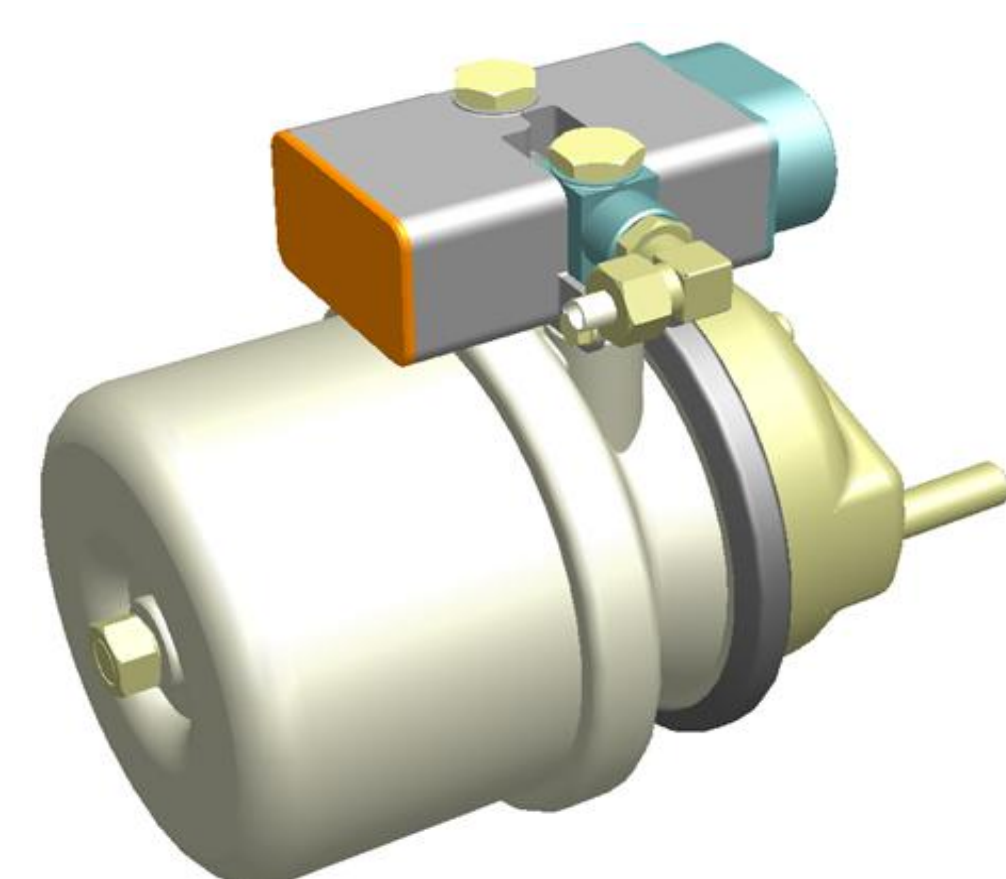
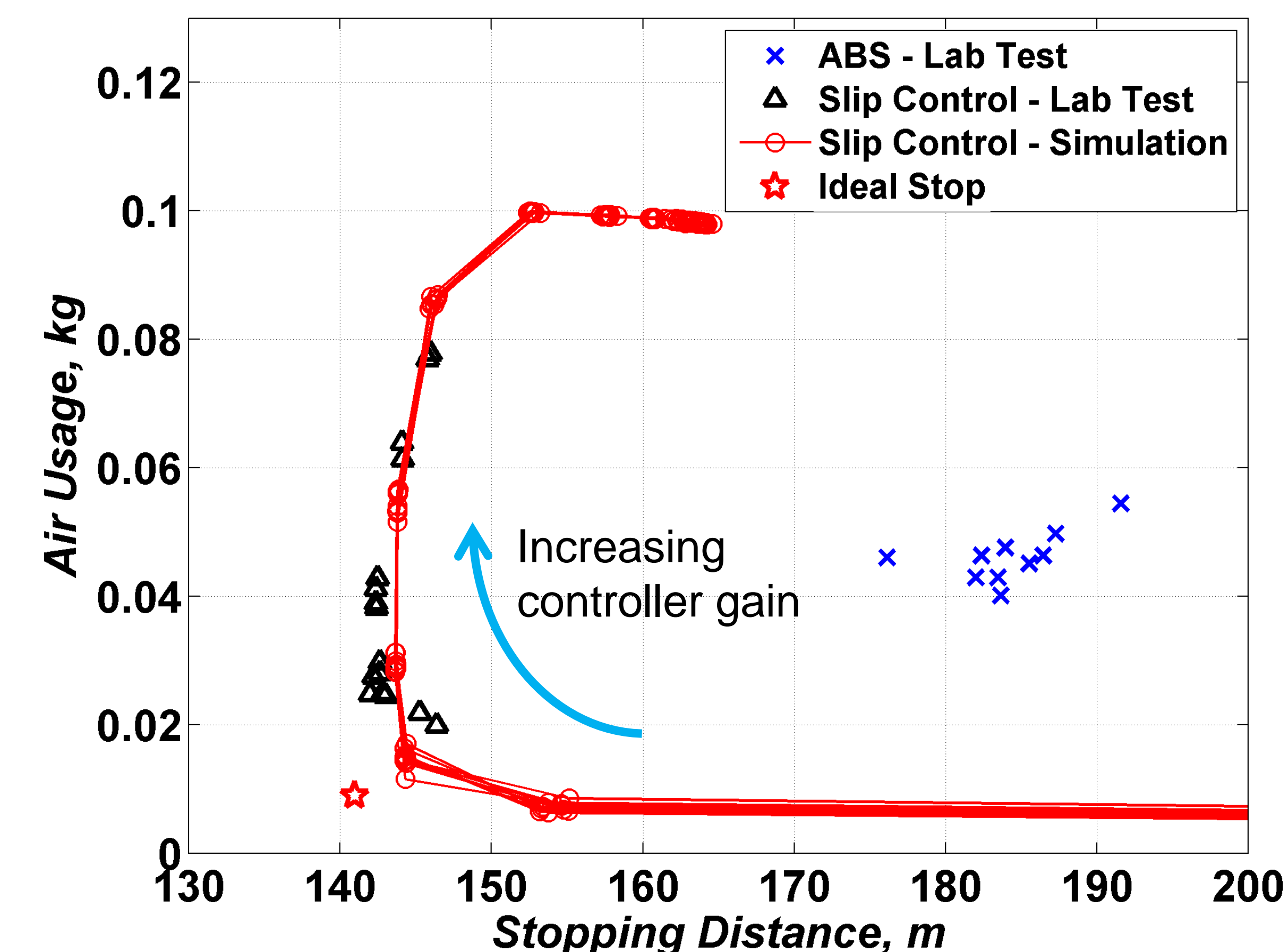


New Slip Control Braking System

- Heavy Vehicles with existing Anti-Lock Braking Systems (ABS) take 40% longer to stop than cars
- A Slip Control Braking System has been developed using high speed pneumatic valves and novel nonlinear control strategies to maintain the optimum level of wheel slip
- Hardware-in-the-Loop tests, using prototype CVDC valves fitted to a standard truck disk brake, have exhibited 25% reductions in stopping distance and use 30% less air than ABS
- Next Step – Implement Slip Control Braking System on CVDC test vehicle (Feb 2012)



CAD Model of CVDC High Speed Pneumatic Valves Fitted to Existing Brake Chamber



Simulation and Hardware-in-the-Loop Test Results for New CVDC Valves (Icay Road)

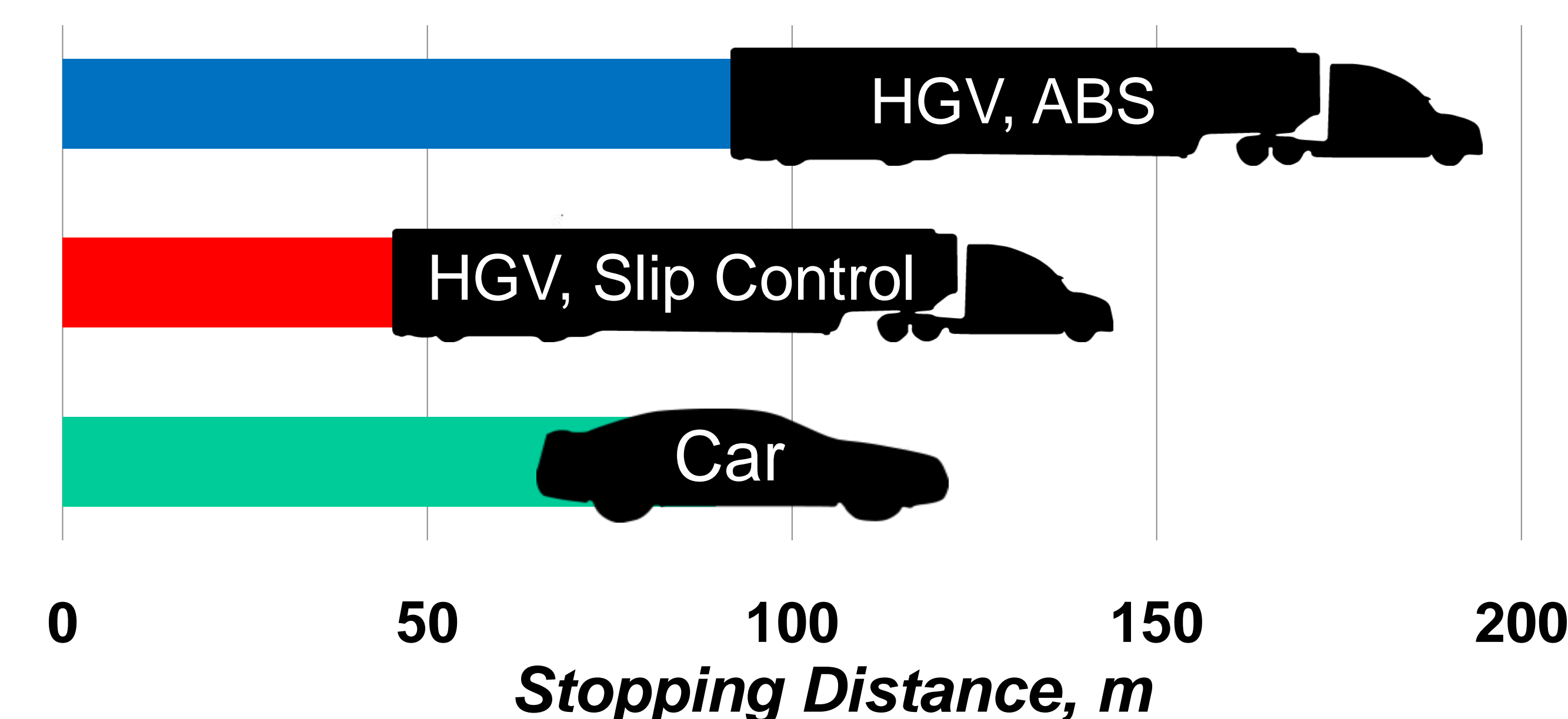


Longitudinal Accelerometer, Pitch Gyro

Articulation Angle Sensor

System Components for Trailer Retrofit

- Ultra-fast bi-stable pneumatic brake valves
- Longitudinal accelerometer, pitch gyro and articulation angle sensor
- Novel slip control braking strategies



Predicted Emergency Braking Performance for Full Scale Tests (Icay Road)

CAMBRIDGE VEHICLE DYNAMICS CONSORTIUM

ArvinMeritor	Haldex	Tinsley Bridge
Camcon	Mektronika Systems	University of Cambridge
Denby Transport	MIRA	Volvo Trucks
Firestone Air Springs	Poclain Hydraulics	
GOODYEAR DUNLOP	SIMPACK	