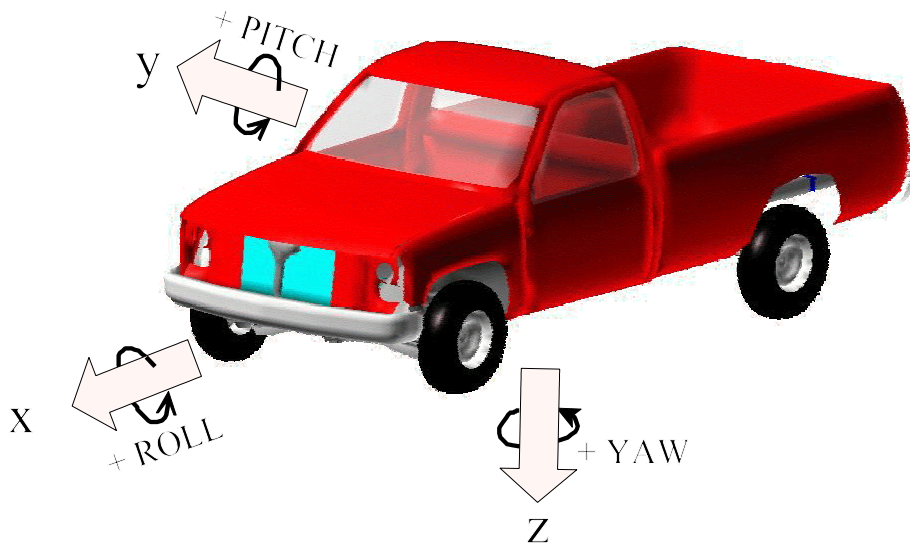


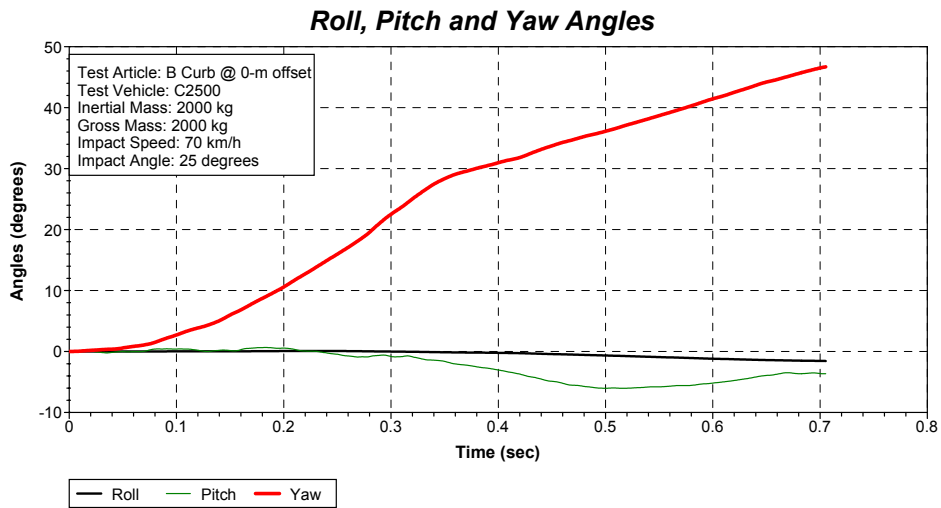
## APPENDIX J

### Angular Displacement-Time Histories From Curb-Barrier Impact Computed at the Center of Gravity of Vehicle

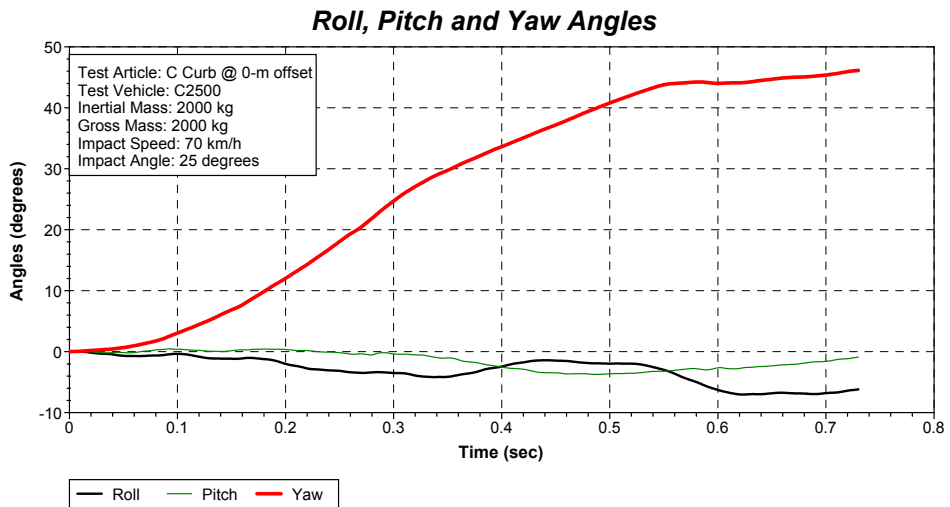
-Finite Element Analysis Results-



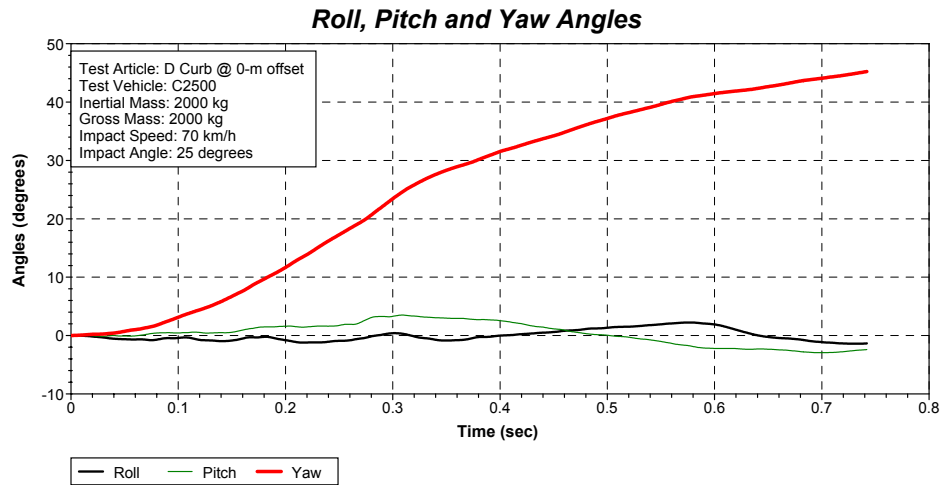
Vehicle fixed coordinate reference system.



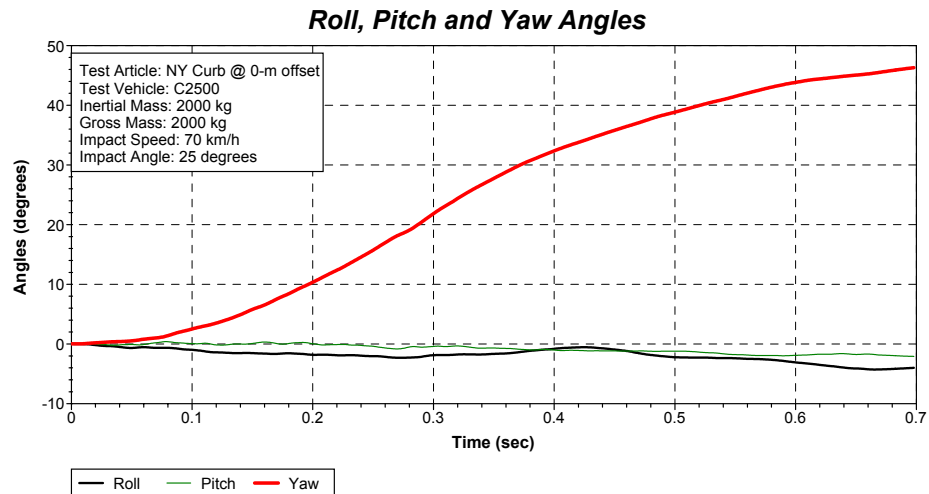
**Figure J.1:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO B Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 0.0 m.



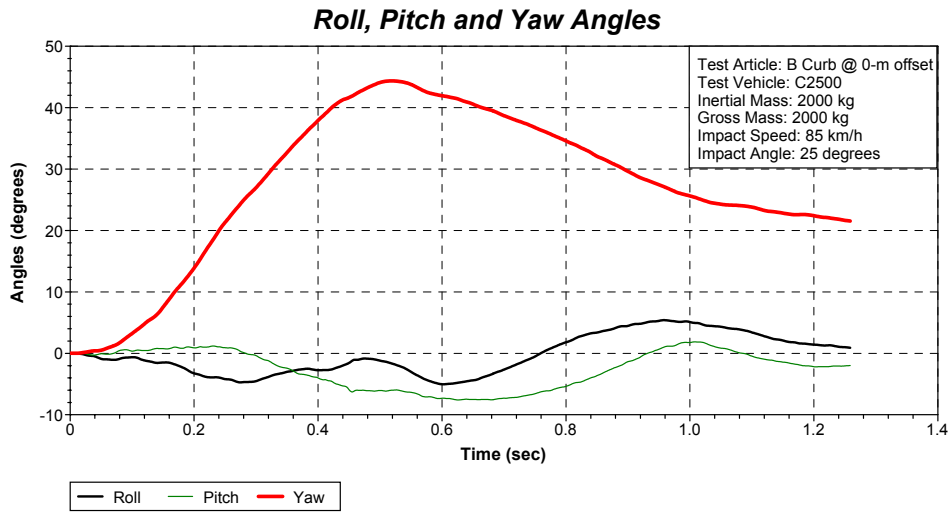
**Figure J.2:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO C Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 0.0 m.



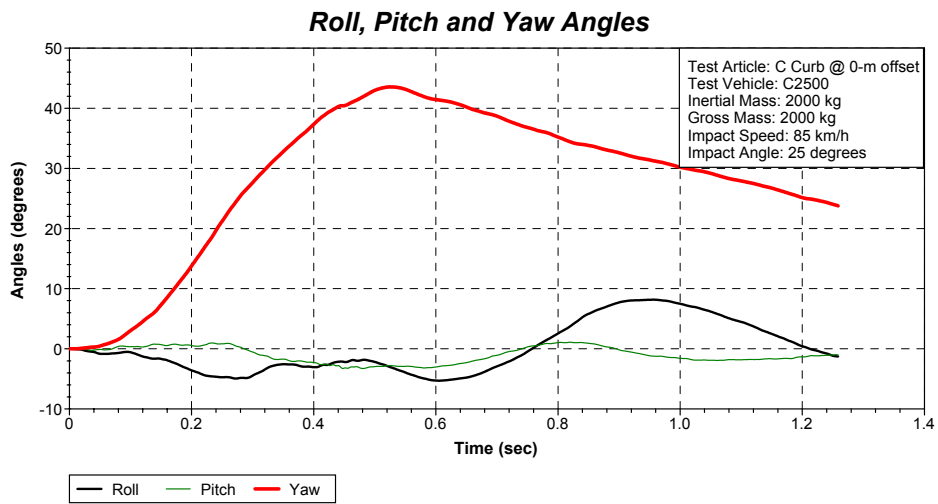
**Figure J.3:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO D Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 0.0 m.



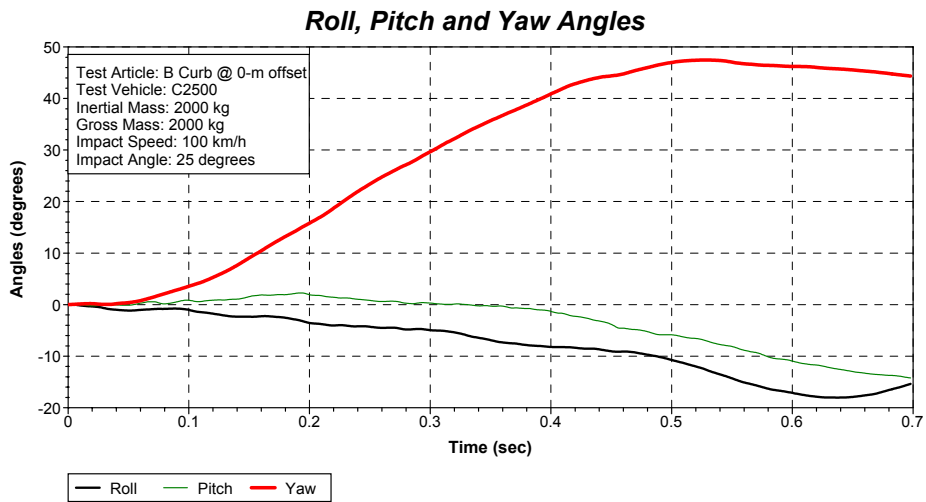
**Figure J.4:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – New York Curb (100 mm)  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 0.0 m.



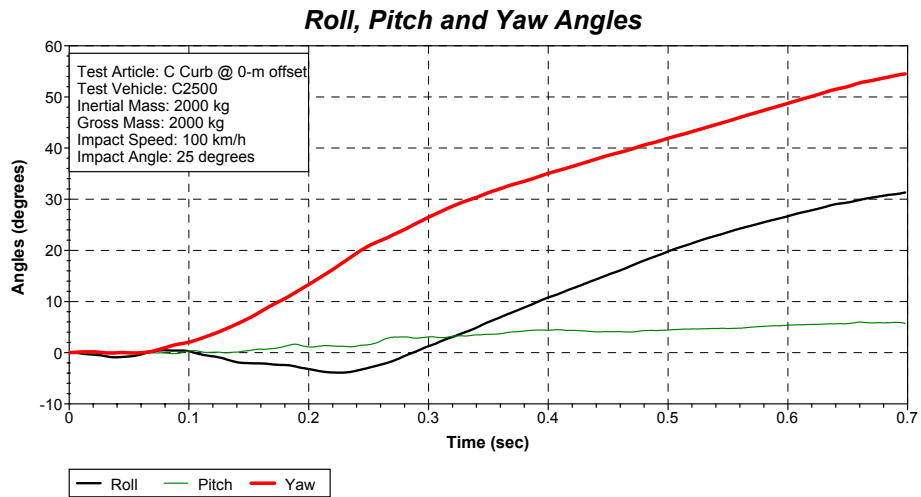
**Figure J.5:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO B Curb  
**Impact Speed** – 85 km/hr  
**Offset Distance** – 0.0 m.



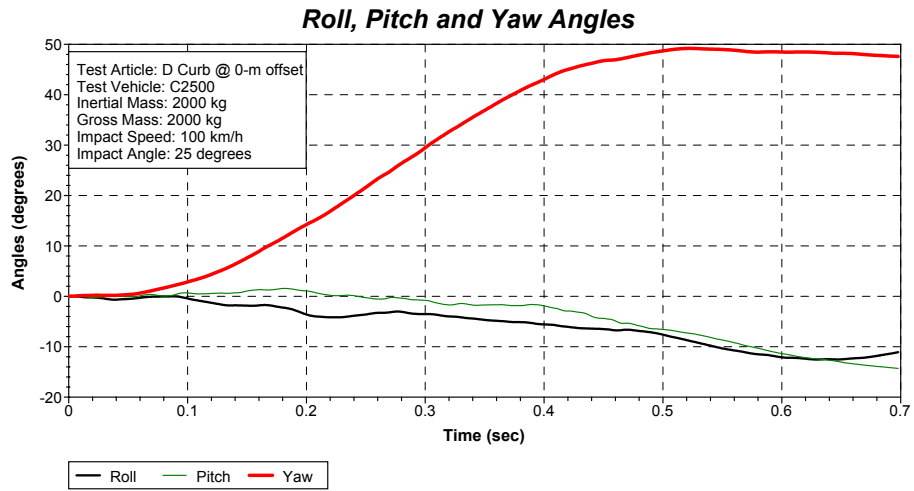
**Figure J.6:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO C Curb  
**Impact Speed** – 85 km/hr  
**Offset Distance** – 0.0 m.



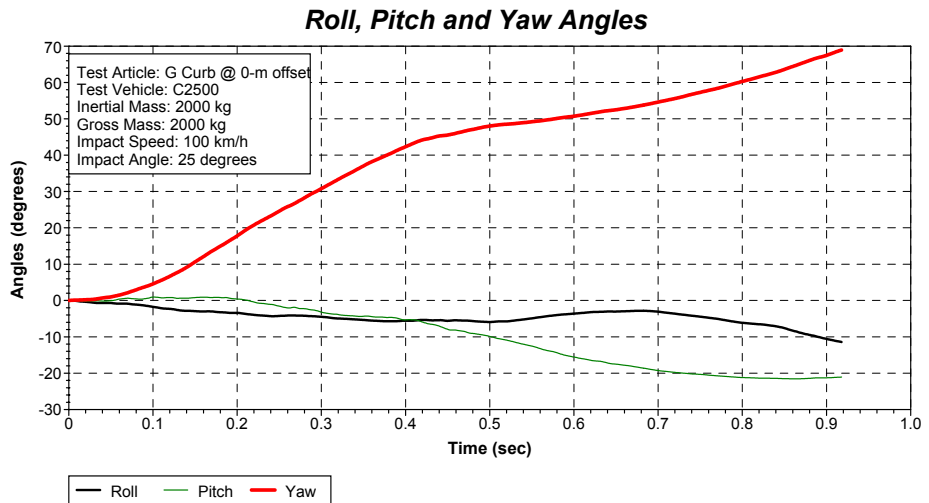
**Figure J.7:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO B Curb  
**Impact Speed** – 100 km/hr  
**Offset Distance** – 0.0 m.



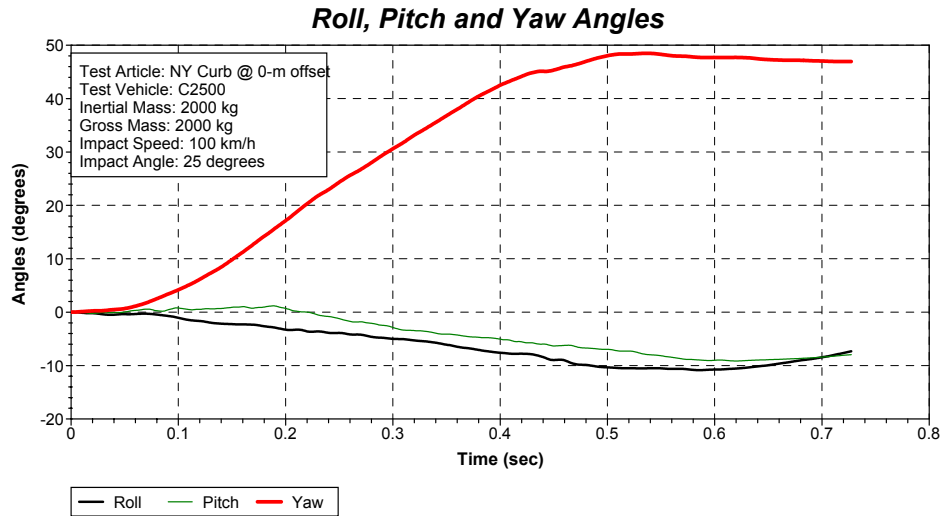
**Figure J.8:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO C Curb  
**Impact Speed** – 100 km/hr  
**Offset Distance** – 0.0 m.



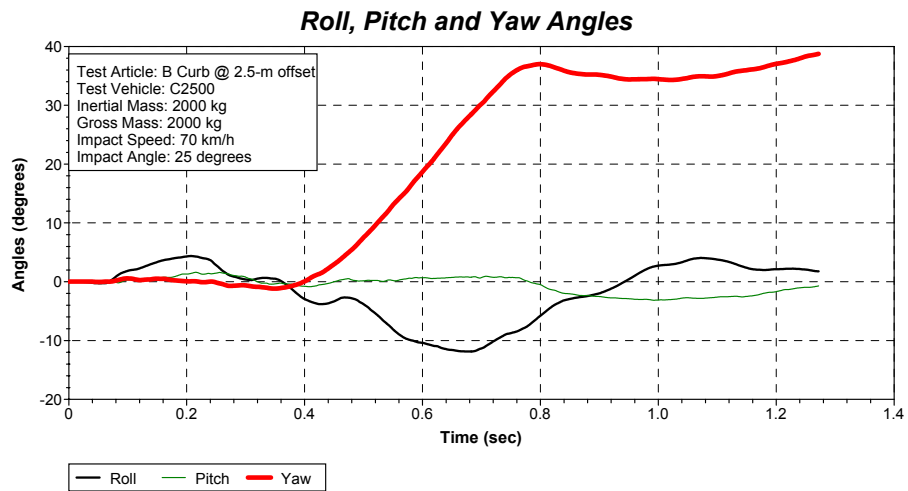
**Figure J.9:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO D Curb  
**Impact Speed** – 100 km/hr  
**Offset Distance** – 0.0 m.



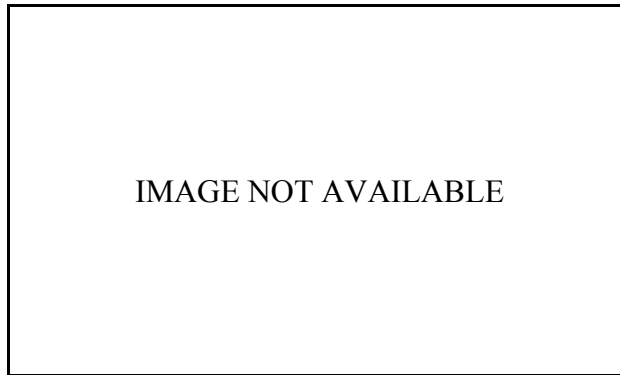
**Figure J.10:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO G Curb  
**Impact Speed** – 100 km/hr  
**Offset Distance** – 0.0 m.



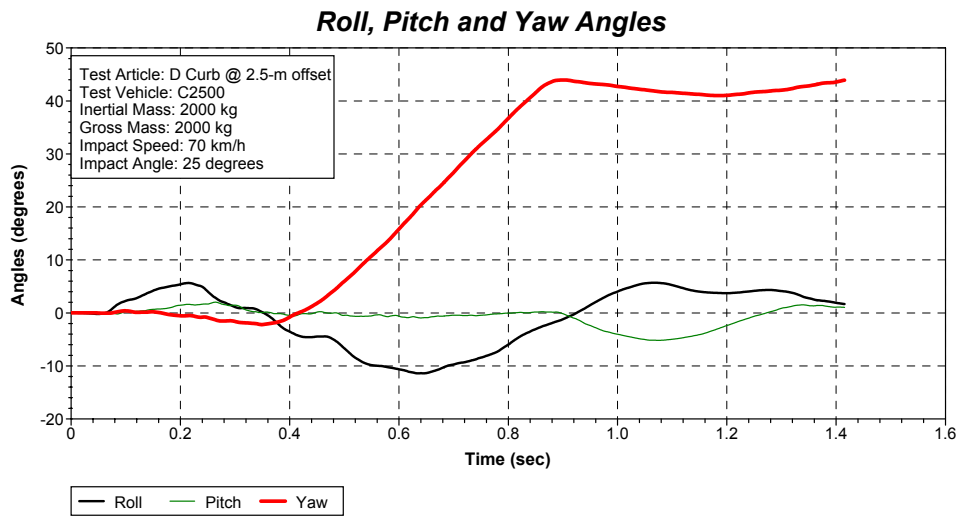
**Figure J.11:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – New York Curb (100 mm)  
**Impact Speed** – 100 km/hr  
**Offset Distance** – 0.0 m.



**Figure J.12:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO B Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 2.5 m.

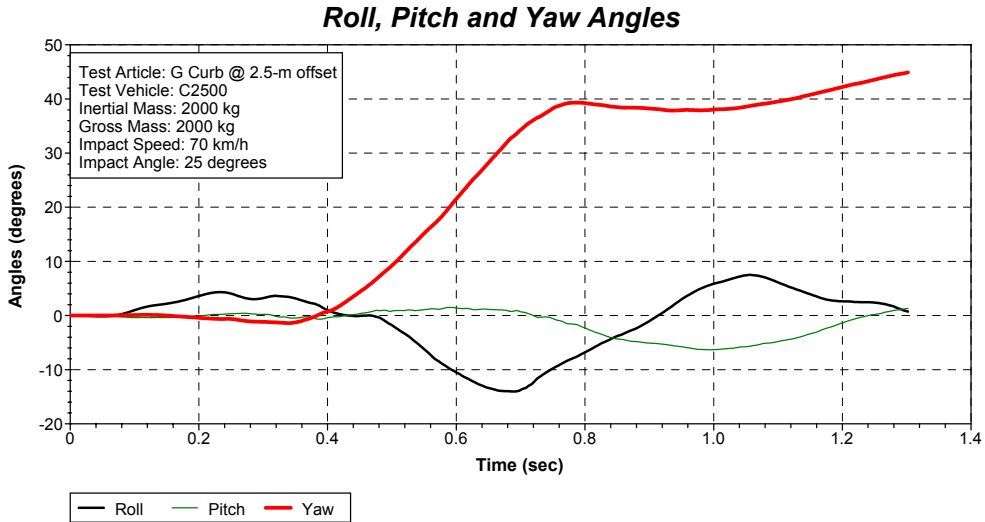


**Figure J.13:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO C Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 2.5 m.

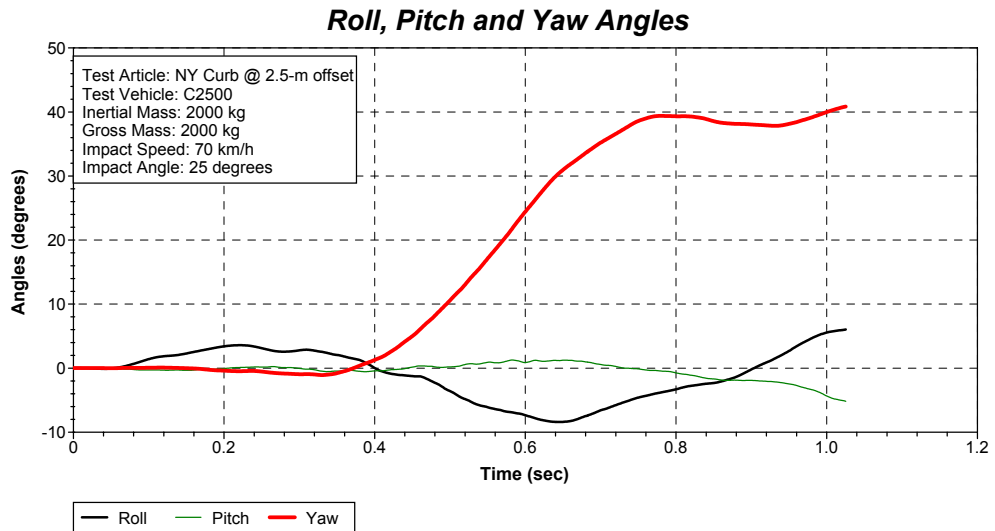


**Figure J.14:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO D Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 2.5 m.

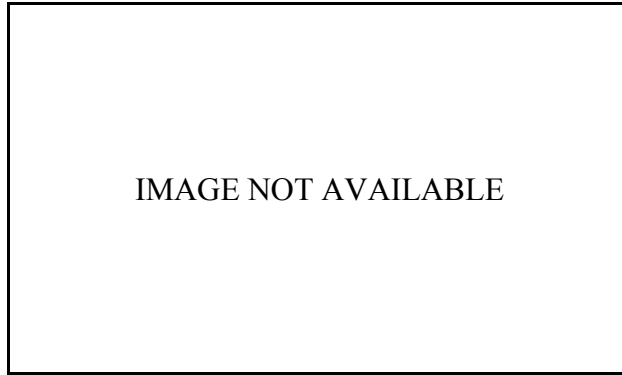




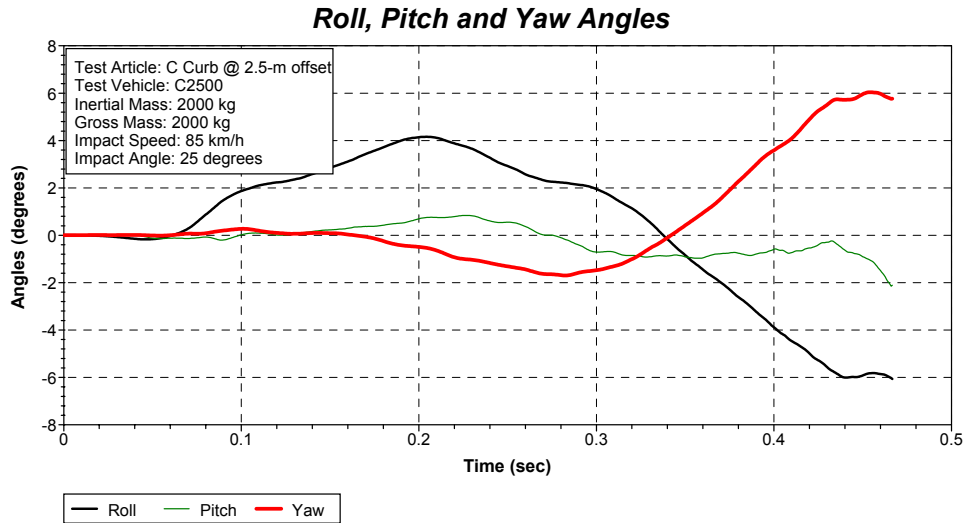
**Figure J.15:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO G Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 2.5 m.



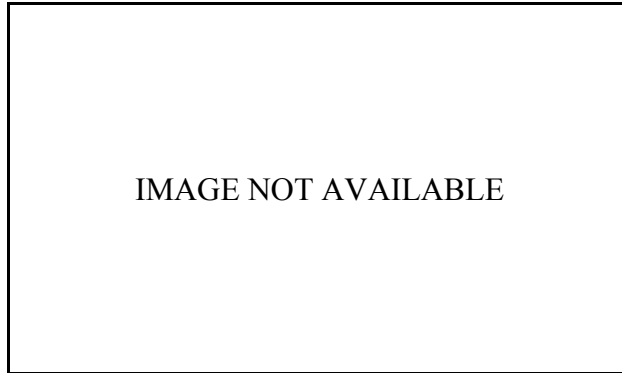
**Figure J.16:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – New York Curb (100 mm)  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 2.5 m.



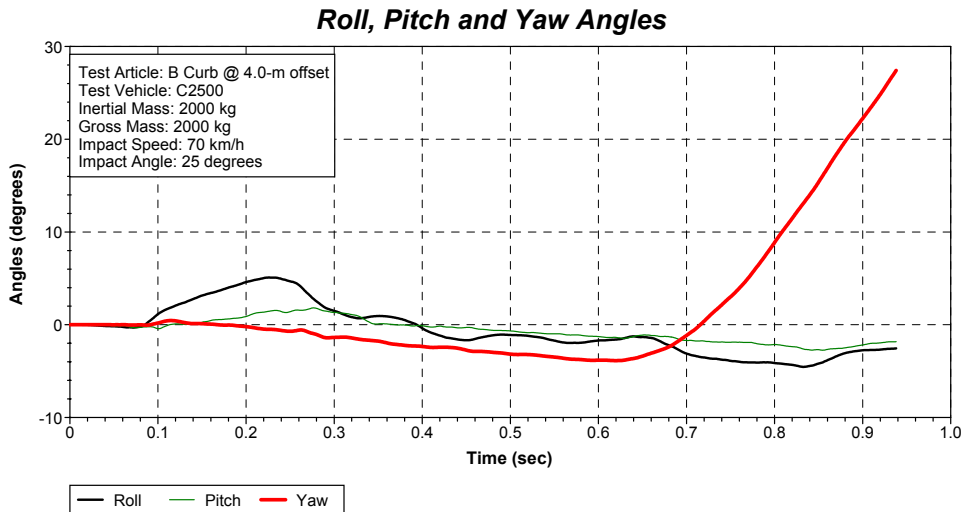
**Figure J.17:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
Curb Type – AASHTO B Curb  
Impact Speed – 85 km/hr  
Offset Distance – 2.5 m.



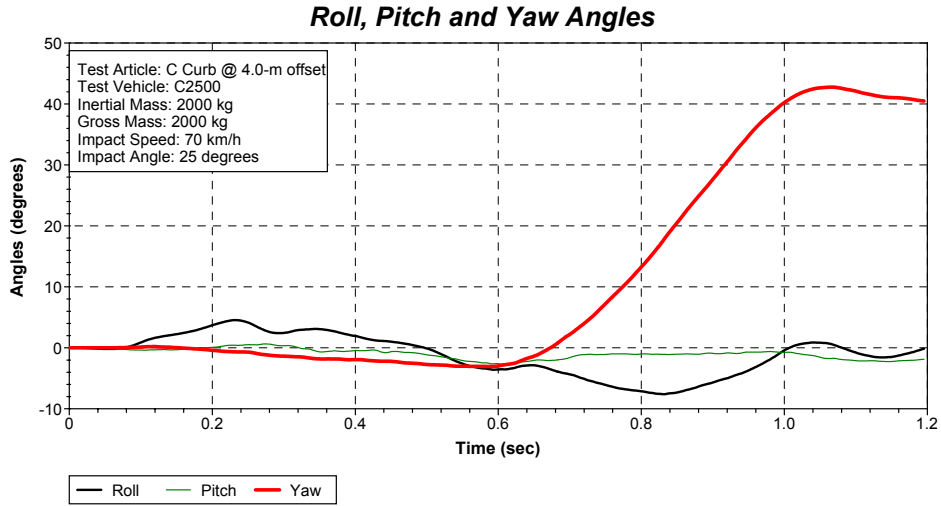
**Figure J.18:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
Curb Type – AASHTO C Curb  
Impact Speed – 85 km/hr  
Offset Distance – 2.5 m.



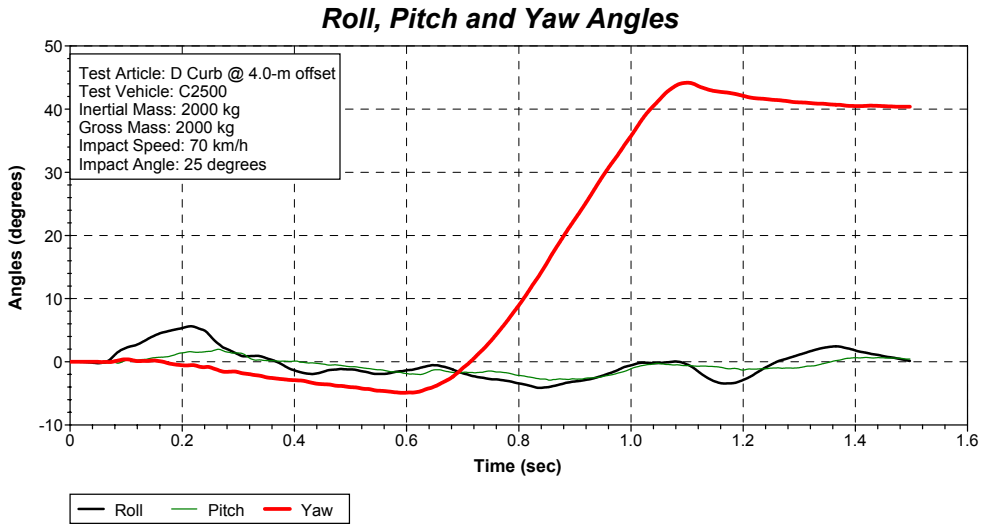
**Figure J.19:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO G Curb  
**Impact Speed** – 100 km/hr  
**Offset Distance** – 2.5 m.



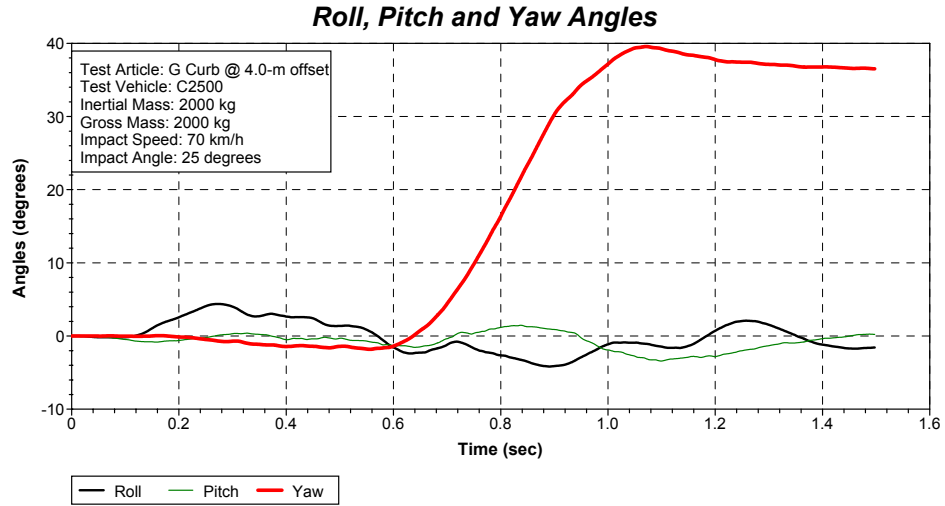
**Figure J.20:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO B Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 4.0 m.



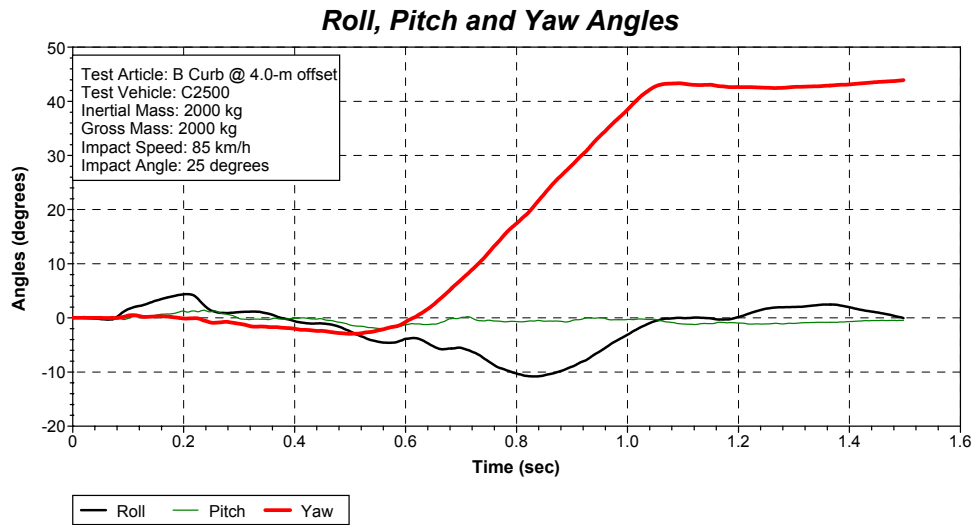
**Figure J.21:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO C Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 4.0 m.



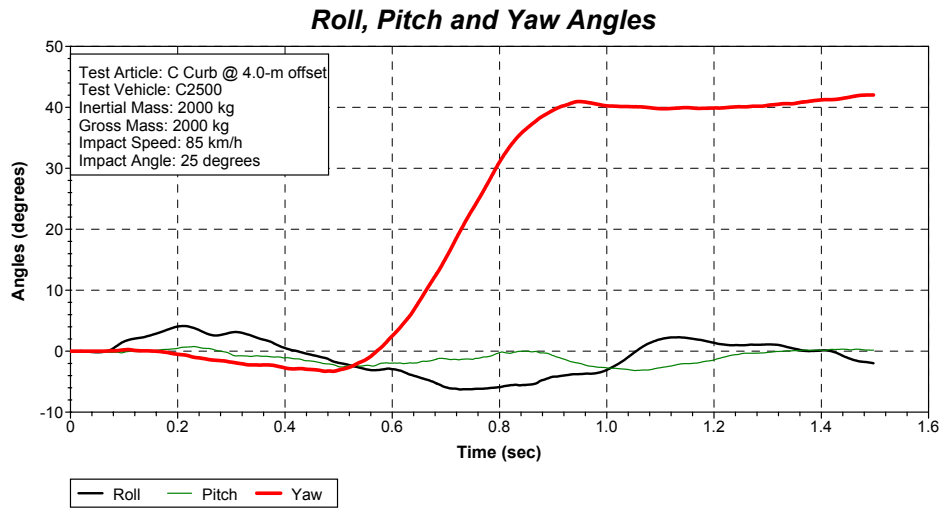
**Figure J.22:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO D Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 4.0 m.



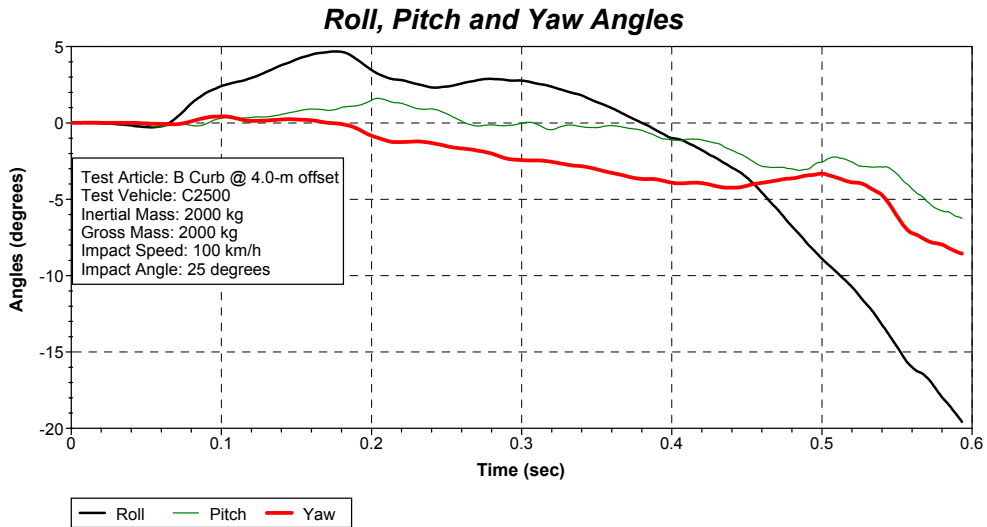
**Figure J.23:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO G Curb  
**Impact Speed** – 70 km/hr  
**Offset Distance** – 4.0 m.



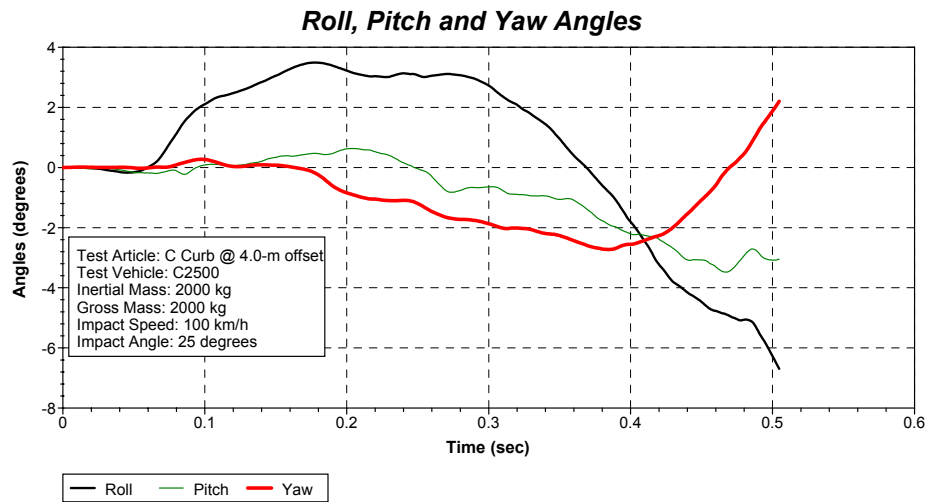
**Figure J.24:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO B Curb  
**Impact Speed** – 85 km/hr  
**Offset Distance** – 4.0 m.



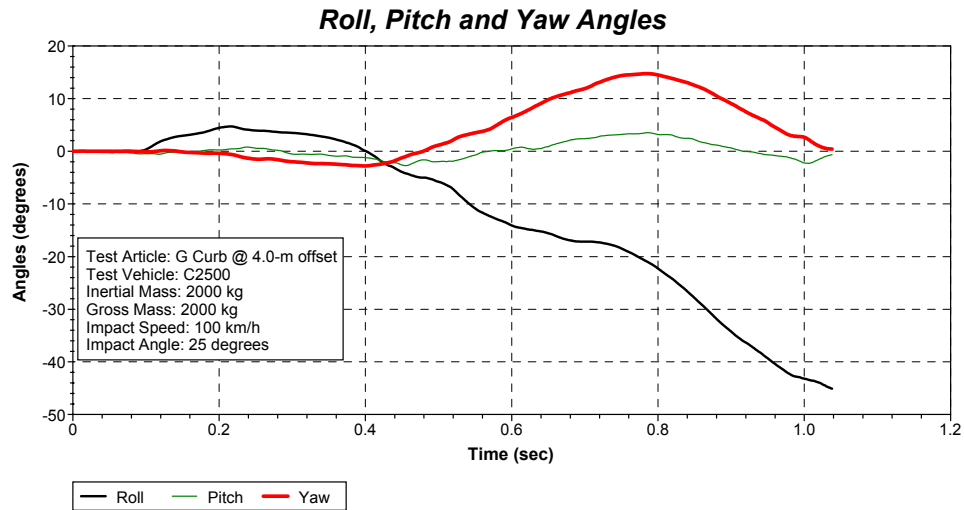
**Figure J.25:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO C Curb  
**Impact Speed** – 85 km/hr  
**Offset Distance** – 4.0 m.



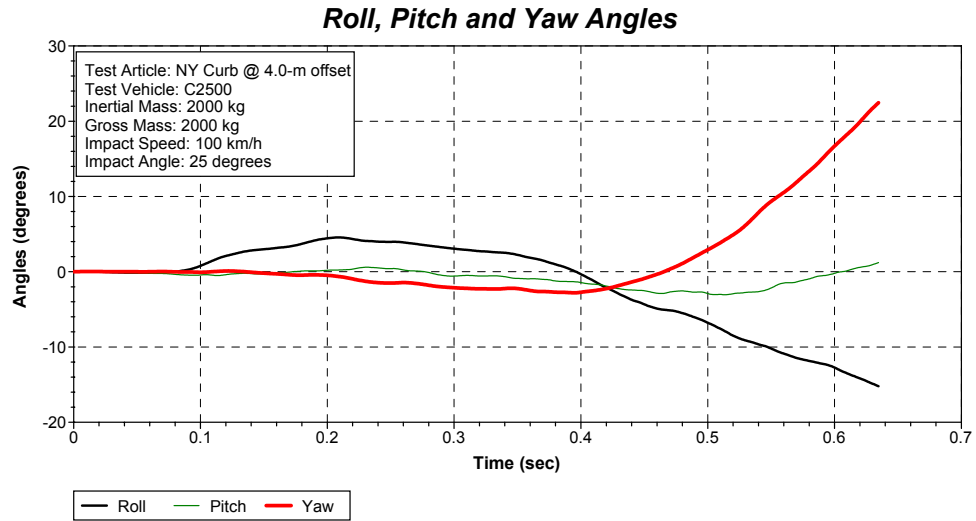
**Figure J.26:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO B Curb  
**Impact Speed** – 100 km/hr  
**Offset Distance** – 4.0 m.



**Figure J.27:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO C Curb  
**Impact Speed** – 100 km/hr  
**Offset Distance** – 4.0 m.



**Figure J.28:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:  
**Curb Type** – AASHTO G Curb  
**Impact Speed** – 100 km/hr  
**Offset Distance** – 4.0 m.



**Figure J.29:** Angular displacement-time histories at C.G. of pickup truck in local coordinates:

<b>Curb Type</b>	– New York Curb (100 mm)
<b>Impact Speed</b>	– 100 km/hr
<b>Offset Distance</b>	– 4.0 m.