

# NHTSA/Honda Meeting on Small Overlap/Oblique

1/8/2013

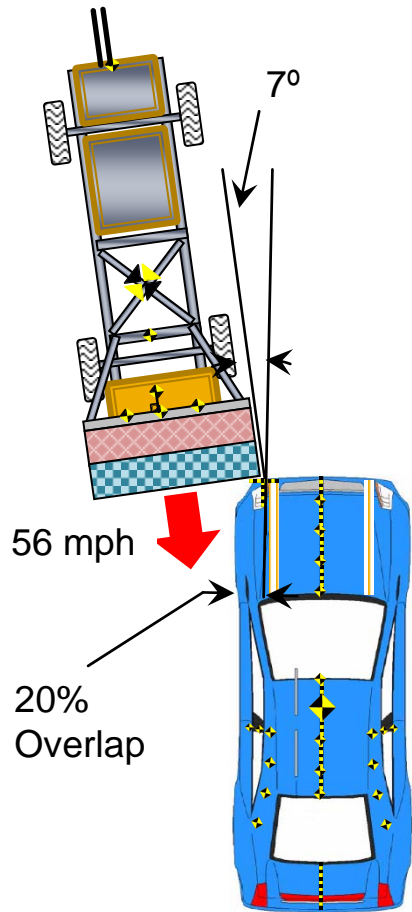


# Presentation Outline

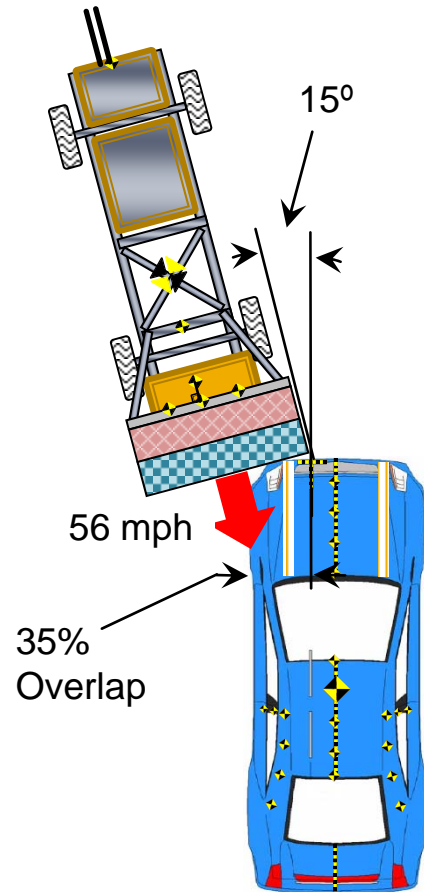
- Definition of Test Procedures
- Previous results
- Repeatability Analysis
- Research Plan
- High Sales Volume Videos

# Definition of Test Procedures

## SOI



## Oblique

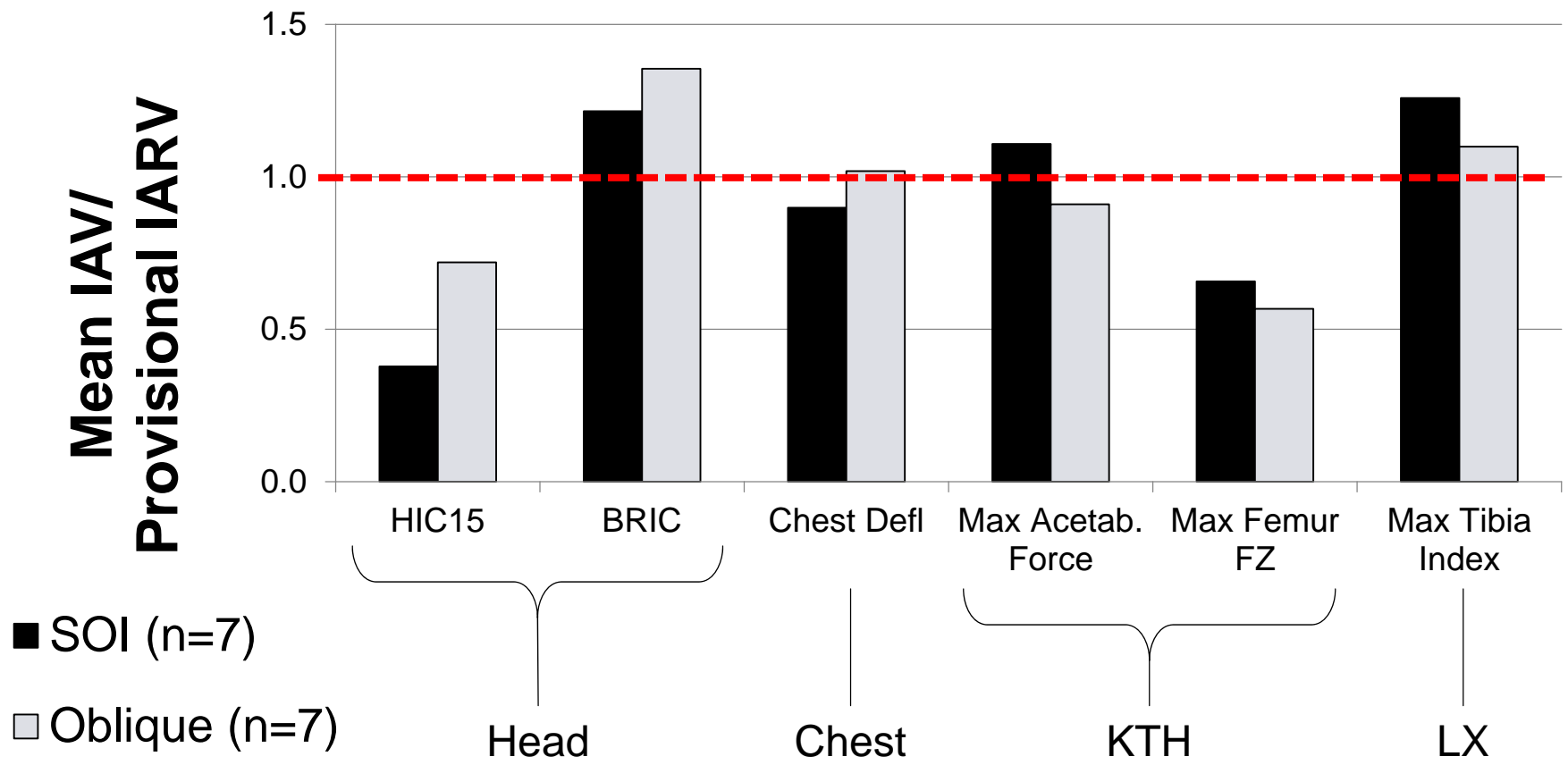


Performed 3 tests in each condition with Chevrolet Cruze

Note: 56mph RMDB yields 35 mph delta-V for average passenger car

# Test Results: Occupant Response

# Tests Exceeding Provisional IARV	HIC15	BRIC	Chest	Acetab.	Femur	Tibia
	1   2	4   6	1   4	3   2	2   1	4   1





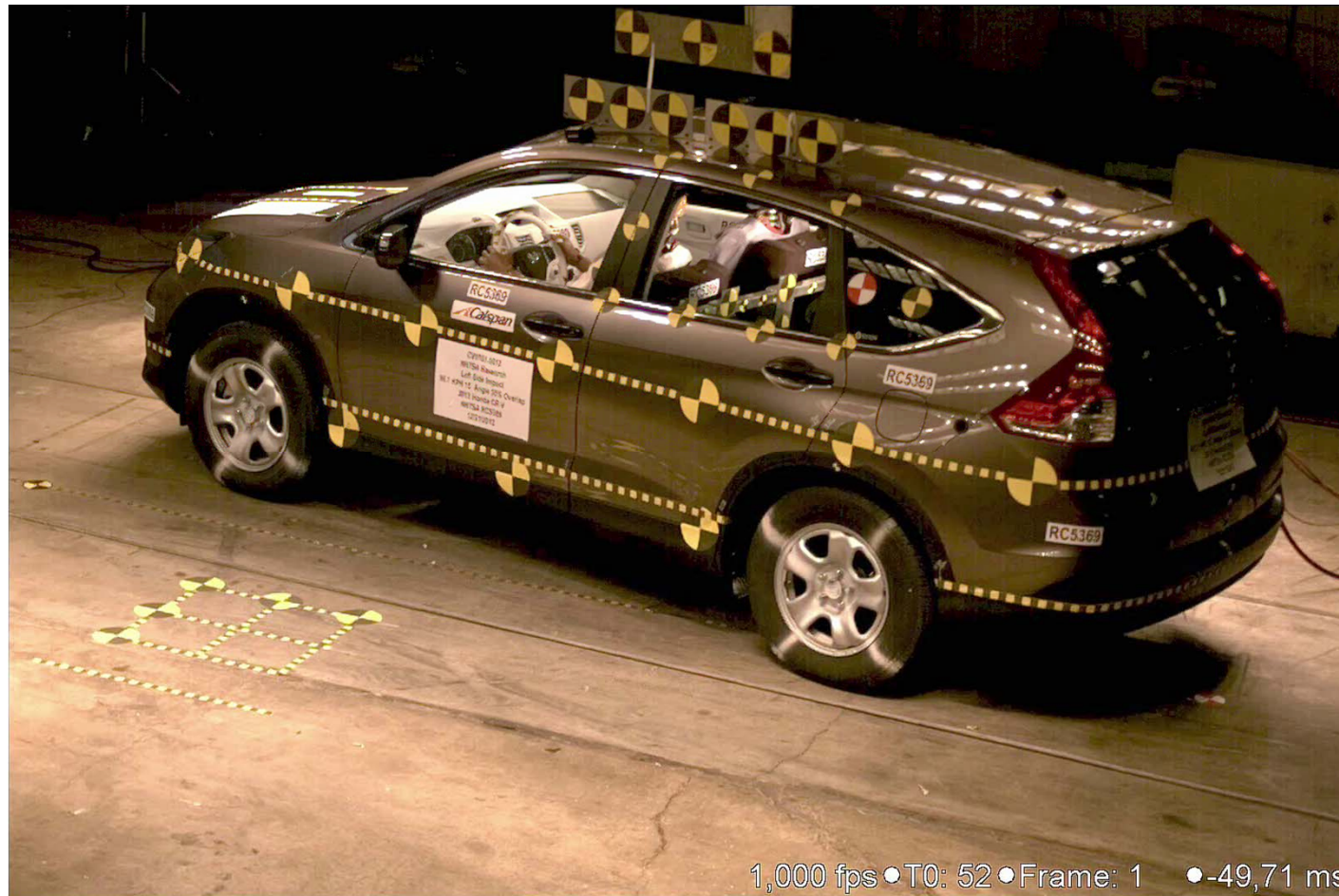
# Repeatability: SOI and Oblique

- SOI and Oblique showed similar repeatability
  - Even with SOI having no rail engagement
- Some differences observed in THOR response due to differences in:
  - Occupant compartment intrusions
  - Side air bag deployment times
- Both test procedures are at least repeatable as the existing Full Frontal and Offset Deformable Barrier crash tests
- Study limited to three tests in each condition on a single vehicle model
- To be documented in 2013 SAE paper

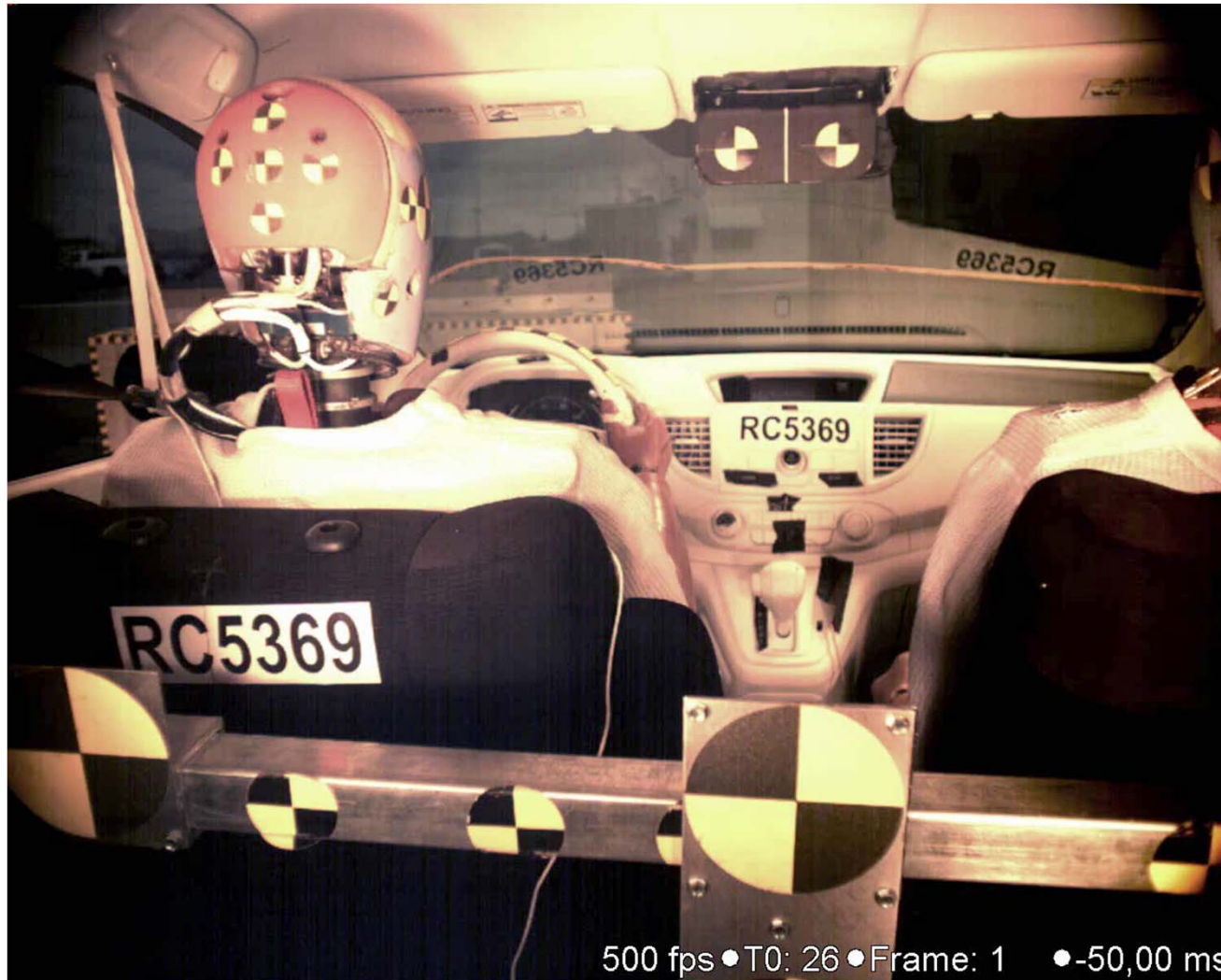
# Research Plan

- Test different classes of high volume vehicles
  - 9 vehicle tests
    - Driver and right front passenger Mod Kit THOR ATDs
  - Include two (2) right side impacts for comparison
    - Different injury mechanisms, countermeasures expected
    - Provide larger real-world benefit
  - Results to be published at ESV
- Evaluate restraint countermeasures
  - Adaptive Advanced Restraints Program
    - Develop restraint system that adapts to occupant size and position for both a soft and hard pulse (February 2015)

# Small SUV (Side View)



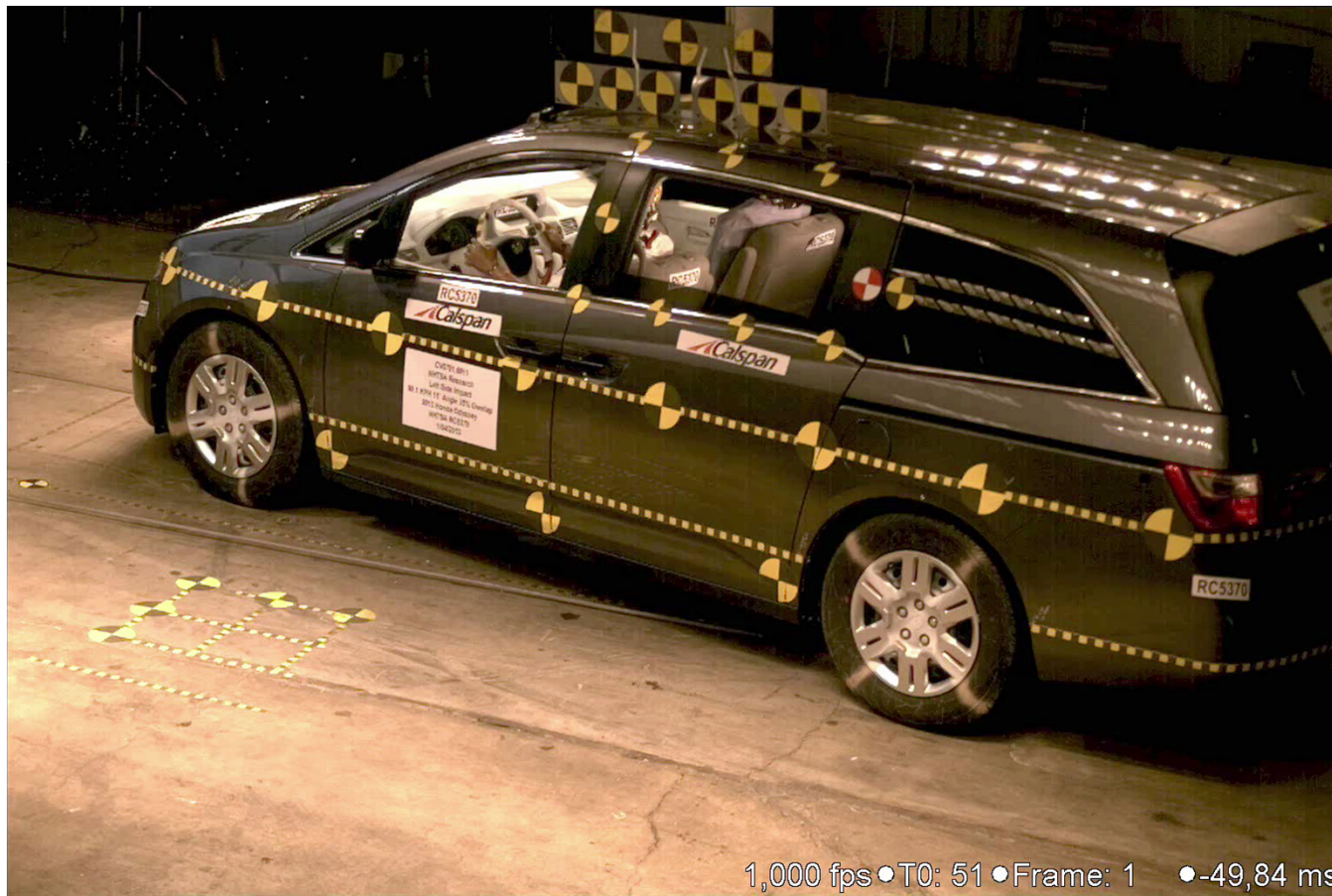
# Small SUV (Occupant Kinematics)



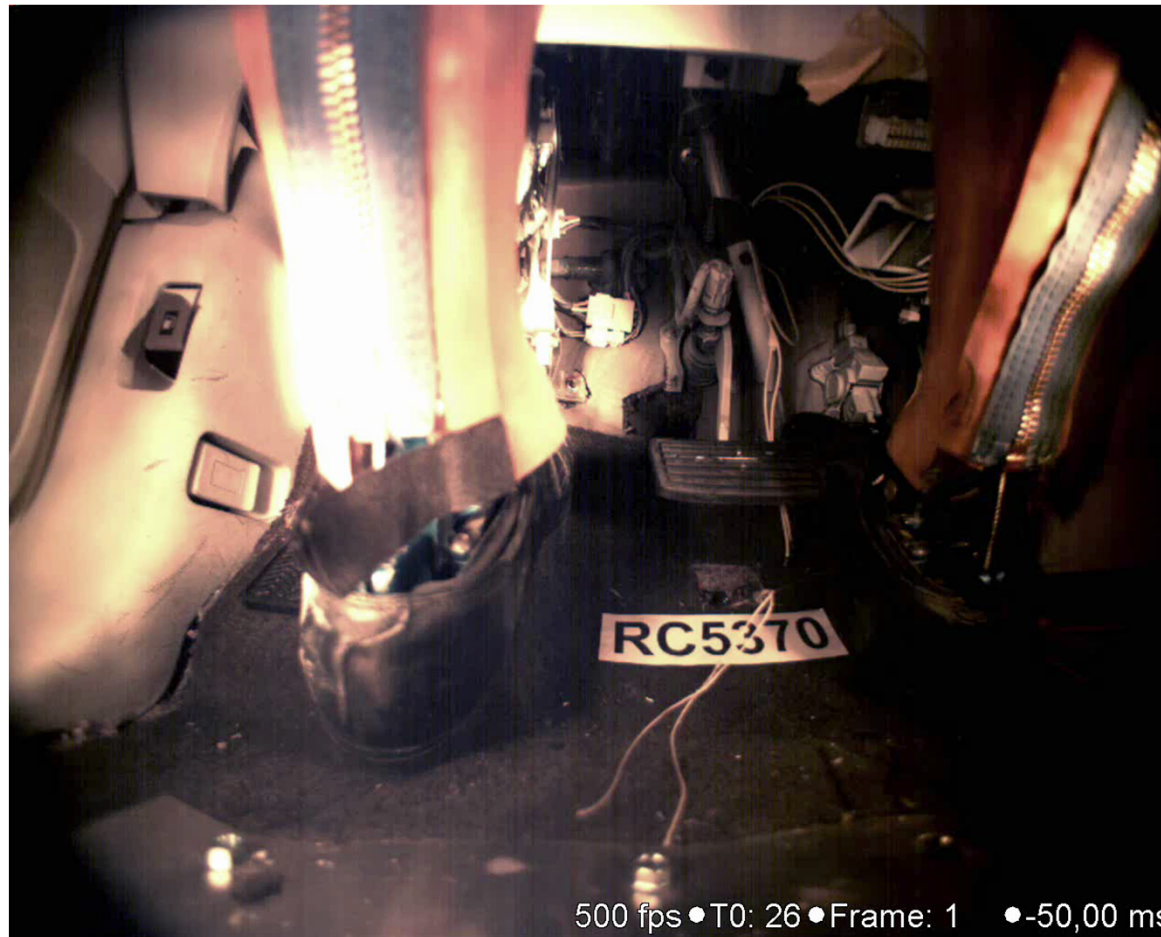
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# Minivan (Side View)



# Minivan (Feet Kinematics)





# Minivan (Passenger Kinematics)

