

Name	Partner	Date			
Glider Mass, m :	Sonic Ranger Calibration (Gain and Offset): Gain = 172.2 m/s Offset = 1.90 m				
	Force Probe Calibration (Gain and Offset): Gain = -12.54 N/V Offset = 0.0045 N				
Data for glider colliding with different object types					
Object	Initial Momentum p_i (kg m/s)	Final Momentum p_f (kg m/s)	Impulse J (N s = kg m/s)	Momentum Change $\Delta p = p_f - p_i$ (kg m/s)	Coefficient of Restitution ϵ
Spring					
Rubber Bumper					
Clay					
Show an example of how you calculate the momentum change (and uncertainty)					
Show an example of how you compare the momentum change to the impulse using the difference method.					
Write a short paragraph that summarizes whether your data supports the principle that the change in momentum of the glider is equal to the impulse it experiences in the collision.					

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Write a statement comparing the coefficients of restitution for the different collision types.		
Attachments: <input type="checkbox"/> Graphs showing position, momentum, and force versus time for the simulated collision in VPython.		