## Supplementary Table S3. Sensitivity of Maximum Brain Displacements with Respect to Varying Brain Stiffness and Brain Mass as Predicted by Rigid Body Simulation

|        |              | 100%<br>Stiffness<br>100%<br>Mass | 80%<br>Stiffness<br>100%<br>Mass | 120%<br>Stiffness<br>100%<br>Mass | 100%<br>Stiffness<br>80%<br>Mass | 100%<br>Stiffness<br>120%<br>Mass |
|--------|--------------|-----------------------------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|
| Ride 1 | Displacement | 1.7mm                             | 2.1mm                            | 1.4mm                             | 1.3mm                            | 2.0mm                             |
|        | % Change     | 100%                              | 123.5%                           | 82.3%                             | 75.5%                            | 118%                              |
| Ride 2 | Displacement | 1.2mm                             | 1.5mm                            | 1.0mm                             | 1.0mm                            | 1.5mm                             |
|        | % Change     | 100%                              | 125.0%                           | 83.3%                             | 83.3%                            | 125.0%                            |
| Ride 3 | Displacement | 1.8mm                             | 2.2mm                            | 1.5mm                             | 1.4mm                            | 2.2mm                             |
|        | % Change     | 100%                              | 122.2%                           | 83.3%                             | 77.8%%                           | 122%                              |