Executive Summary: Data from over four decades of research and experimentation indicate the ability to control the gravitational force. Three proprietary devices were built and laboratory results varied by material and experimental design. Weight changes ranged from decreases between 17%-38% and increases ~10%. In some cases, the weight change lasted for weeks in laboratory conditions without physical contact. These experiments are safe to perform with no observable ill effects on those doing them, during or after hours of making measurements. Scaling up the prototypes could lead to labor-saving devices for the energy, industrial, and transportation sectors. The data is consistent with our hypothesis that generating gravitational fields is achievable.

Background & Context: Since the publication of Albert Einstein's *The Foundation of the General Theory of Relativity* (Einstein, 1916), millions of dollars of university and federally funded research have yielded no experiments in which the causes are controlled and the effects are measured. The LIGO gravitational-wave experiment (1972–2006) cost approximately $1.1 billion and involved 86 institutions over 44 years (*LIGO Scientific Collaboration,* n.d.). To test the proposed warping of spacetime by Earth, the Gravity Probe B satellite was developed over approximately 40 years at a cost of about $700 million (*NASA,* 2004). Twelve additional globally-positioned experiments regarding gravity waves were conducted between 1974 and 1976, providing null results (*Science News,* 1974, 1975, 1976).

The first purported observation of gravitational waves was made on September 14, 2015, and announced by the LIGO and Virgo collaborations on February 11, 2016. The signal detected by changing the LIGO interferometer arms changed by only 2 billionths of a billionth of a meter, about 400 times smaller than the radius of a proton (NASA Jet Propulsion Laboratory, 2016).

Gravity Wave Doubts: In 2019, theoretical physicist Sabine Hossenfelder emphasized "10 to 100" daily glitches in the system of "unknown origin," stating, "A Nobel Prize was handed out, and yet we still do not have confirmation that LIGO's signals are not of terrestrial origin … In which other discipline is it considered good scientific practice to discard unwelcome yet not understood data, like LIGO does with the glitches?" (Hossenfelder, 2019, as cited in Shadbolt, 2024, para. 12). It appears, as Shadbolt stated, that the evidence is "flimsy at best" (Shadbolt, 2024).

Theoretical physicist Andrew D. Jackson said, “We believe that LIGO has failed to make a convincing case for the detection of any gravitational wave event.” (Jackson, n.d., as cited in Brooks, 2018, para. 3)

Theoretical Foundation: Contrast this with the vast range of practical applications of Newton’s laws of motion and Ørsted’s discovery unifying electricity and magnetism.

The failure to synthesize gravitation with other areas of physics, specifically, mechanics, has impeded important advances because of an oversight in the theory at the foundation of standard gravitational research. By moving beyond conventional approaches of standard gravitational research, new possibilities emerge.

Studies, together with observable facts from classical mechanics, suggests that the synthesis of gravitation and mechanics is analogous to the connection between electricity and magnetism.

Experimental Design & Methodology: The following experimental evidence indicates why the hypothesis is true.

Weight Variation: Experiments revealed that samples changed in weight after being treated by a proprietary process. Weight variations typically ranged from 5 to 9 dynes ± 0.098 dynes (See Appendix 1). The masses were placed in a sealed glass enclosure between weighings, isolated sufficiently to measure influences.

Some of the samples continued to decrease in weight for several weeks. All observed effects were produced at a distance and the masses were never in contact with the prototypes, indicating a field-like influence. Electroscopic testing was conducted to detect any electrical influence in the weight variation experiments, and none was found within the range of 0.1 to 1.0 millivolt. Direct electrostatic charging of the masses produced weight variations of 0.2 to 0.5 dynes ± 0.098 dynes. Magnetic influences were eliminated by testing nonmagnetic materials and using magnetic shielding.

Torsion Pendulum: A lead torsion-pendulum was placed in a low-pressure glass chamber (< 2 Torr) anchored in a sand bed to isolate it from external vibrations. When the pendulum was subjected to the prototype, angular deflections were observed (see Torsion-Pendulum graphs; values rounded to the nearest degree). All observed effects were produced from a distance (~1-6 cm). (See Appendix 2).

Lever-System Experiments: A lever system made of lead (Pb) was devised with a vertical extension on one end of the lever, resting on an electronic balance pan (precision ± 1 × 10^{-4}

grams). The complete weighing process operated at atmospheric pressure and was sealed in a glass housing to block air currents.

Adjusting the fulcrum position allowed smaller effects of the prototype to be detected. When the prototype was “ON” an additional force on the pan was observed, i.e. the prototype lifted the lever’s opposite end. When the prototype was “OFF” the force on the balance pan diminished (See Appendix 3). As with all previous experiments, the prototype made no physical contact with the lever system.

Acceleration: Experiments (1989–1991; see Appendices 4 and 5) were conducted with accelerating masses of different substances ($Ba(OH)_2$, sand, etc.). Significant acceleration variations were observed when a mass was repeatedly dropped at a precisely fixed height. The measurements were made with a precision of 10^{-4} m/s^2. These results indicated each drop was not independent of previous drops, contrary to the constant acceleration that would be expected according to conventional theory. (See Appendices 4 and 5).

The samples were carefully shielded from temperature variations, mechanical vibrations, and static or periodic electrical and magnetic influences. Reliable experimental evidence has been essential from the outset of this decades-long research.

Results: The current prototypes generated measurable, repeatable outcomes consistent with the proposed gravitation-mechanics synthesis. These findings imply gravitational effects may not be strictly independent and invariant at laboratory scales. In a variety of cases, the effect of changing the gravitational fields is still unknown.

Potential Applications: Scaled up, this study has multiple applications:

Energy & Industrial Systems

- Reduction of weight could significantly lower energy input required for transport in industrial environments.

Transportation & Logistics

- Weight reduction could improve fuel efficiency and payload capacity.
- Weight increases could apply to space travel.

Infrastructure & Construction

- Temporary reduction of weight during assembly could simplify large-scale construction processes.

Further Experimentation

- Precise gravitational variations could lead to new experiments for testing fundamental physical laws.
- Biological and chemical testings are yet to be explored. This could affect pharmaceuticals, agriculture, space exploration, and more.

Further Research Priorities: To advance from laboratory demonstration to practical deployment, the following research tracks are recommended:

Independent Replication

- Third-party validation under controlled laboratory conditions to establish reproducibility and eliminate systematic artifacts.

Scaling

- Determine exactly how the prototype scales with size and material variations.

Material Sensitivity Studies

- Evaluate effects in a variety of materials to determine whether mass, density, crystalline structure, or composition influences response.

Stability Testing

- Investigate whether weight changes depend on prior conditions and how they persist or decay across different materials.

Theoretical Formalization

- Develop a mathematically rigorous framework that incorporates the gravitational-mechanical coupling, yielding a testable model with predictable outcomes.

Conclusion: This research presents evidence that suggests gravitational effects can be controlled through mechanisms not addressed by conventional gravitational theory. Observable weight variations, torsion deflections, lever-system force changes, and acceleration were produced at a distance without physical contact, under conditions eliminating electrical, magnetic, thermal, and vibrational interference.

The results align with the proposed synthesis of gravitation and mechanics, conceptually analogous to the historical unification of electricity and magnetism. The ability to generate and regulate gravitational-like fields is a foundational shift in physics.

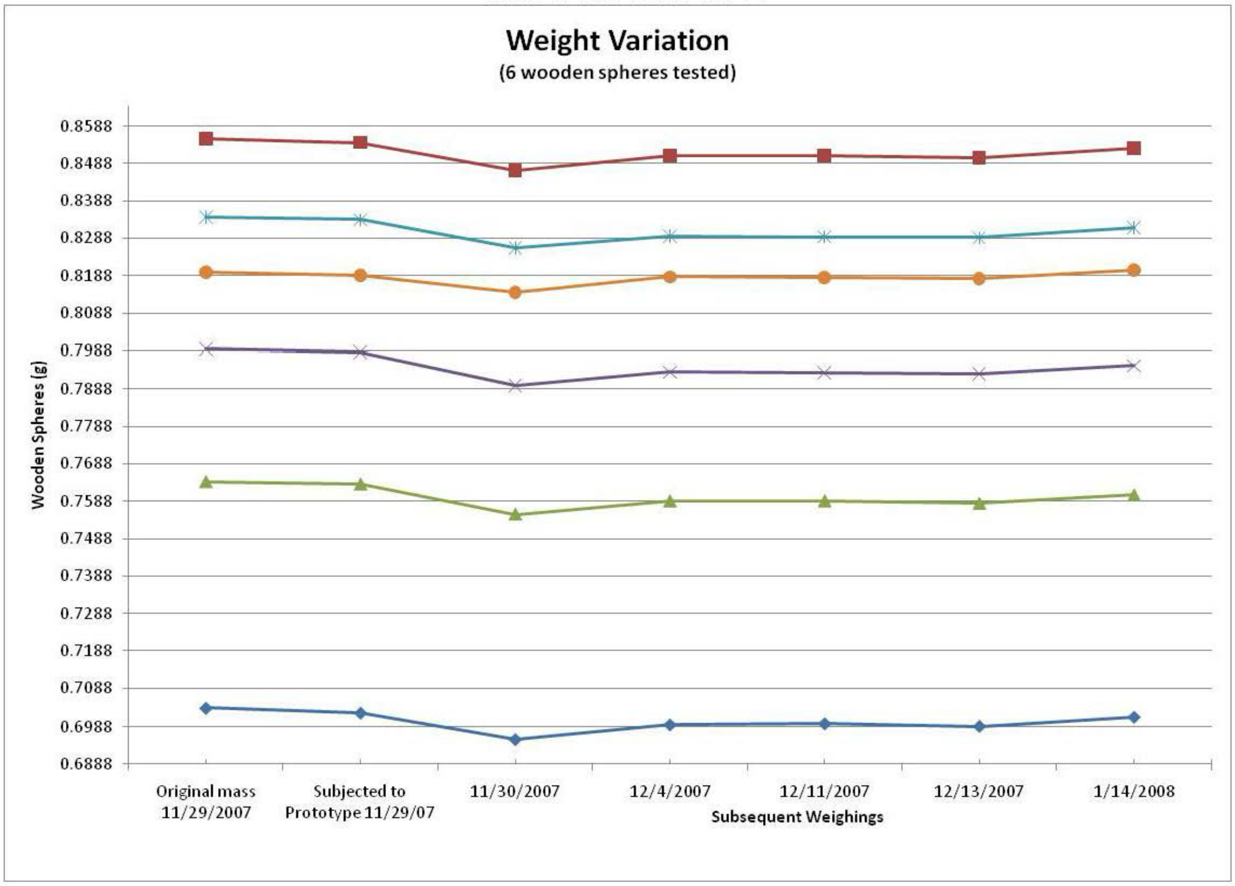
The evidence establishes a proven, testable pathway forward to expand the research. Independent verification, scaling, and further theoretical work provide a practical basis for advancing science in this field.

Appendix

Appendix 1: Weight Variation Test

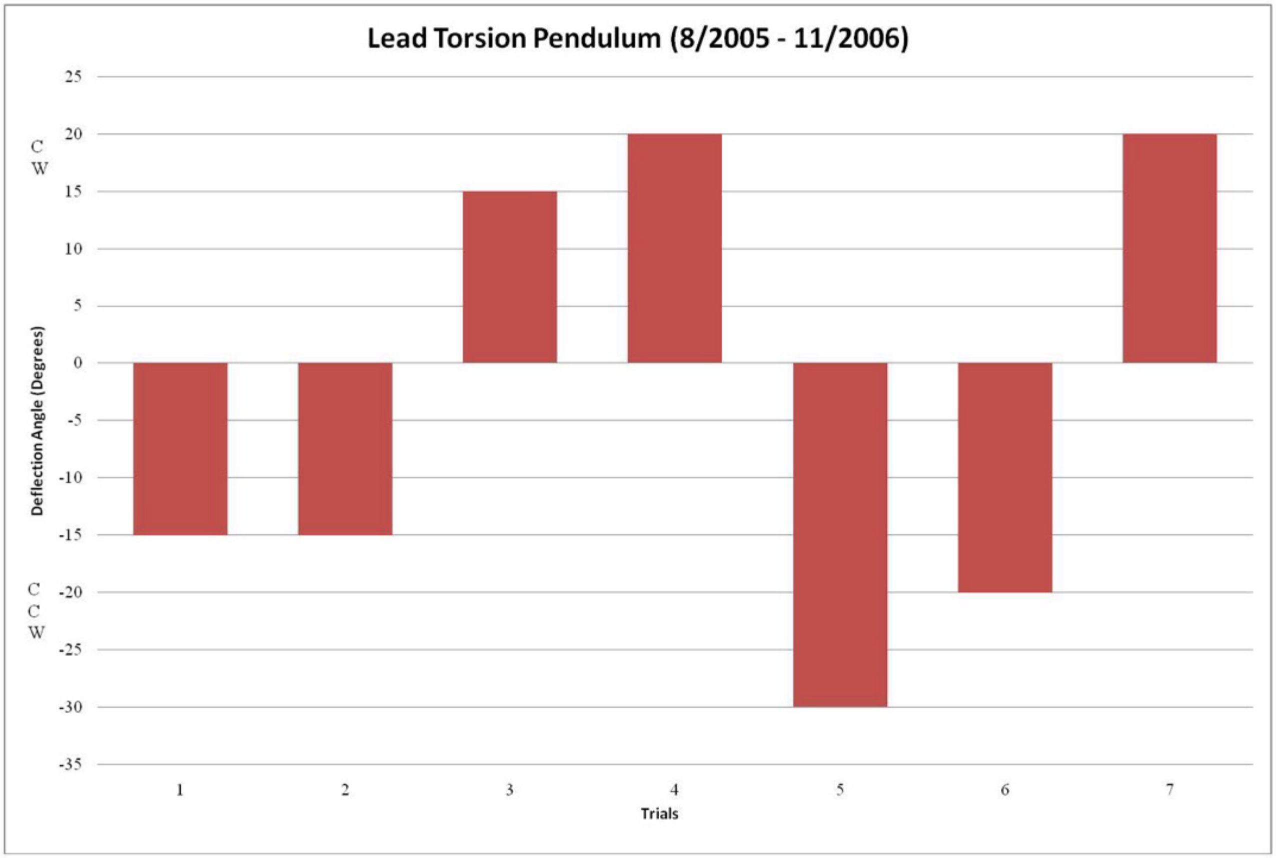
EXHIBIT A – GRAPHS

WEIGHT VARIATION GRAPH



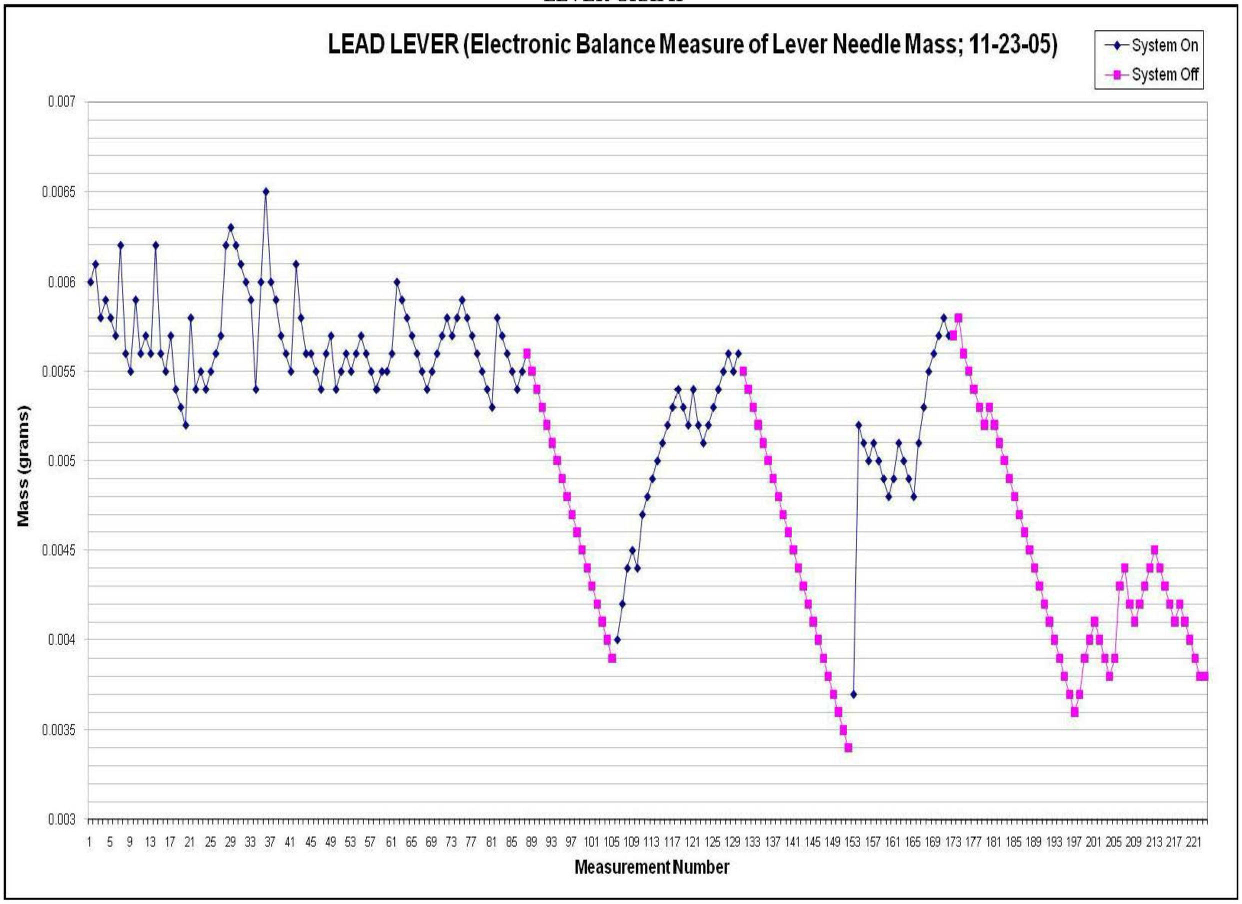
Appendix 2: Torsion Pendulum Test

TORSION-PENDULUM GRAPH



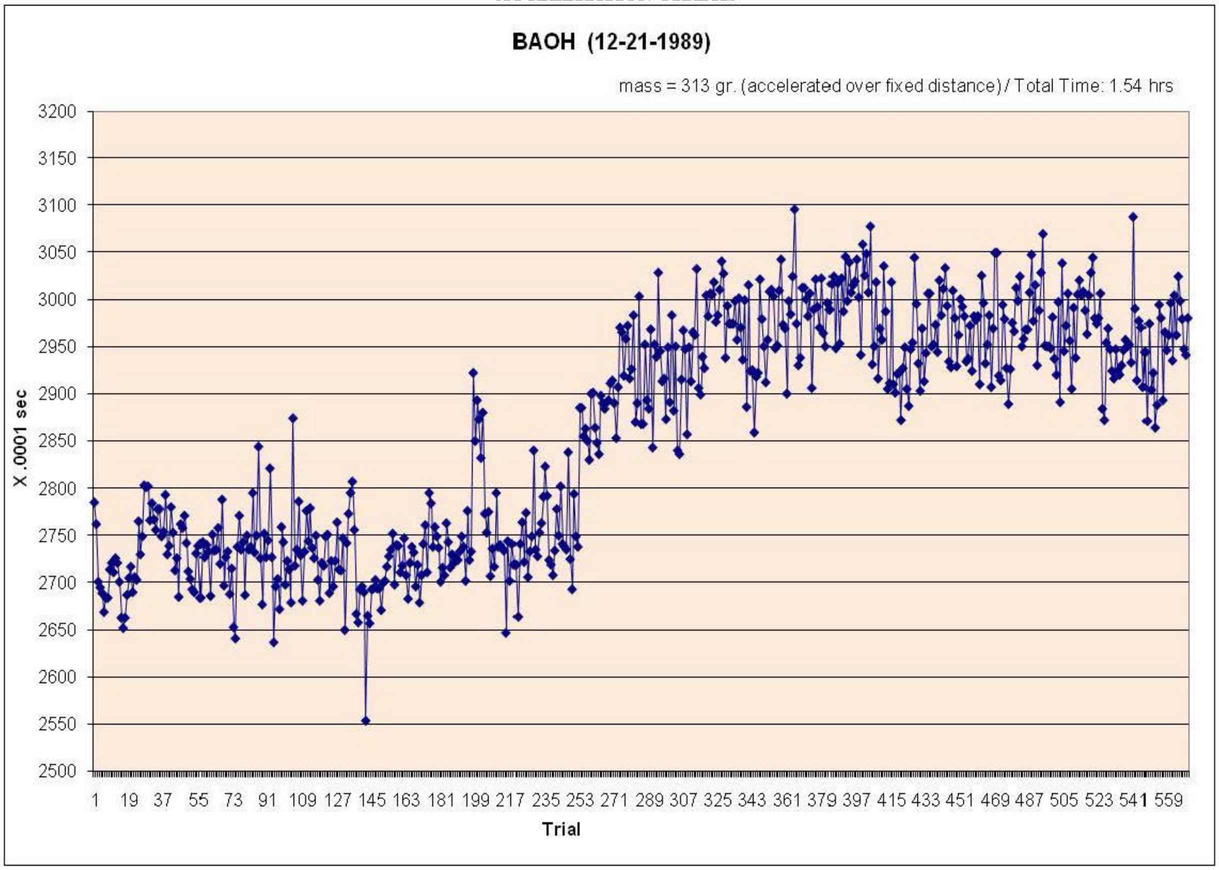
Appendix 3: Lead Lever Test

LEVER GRAPH

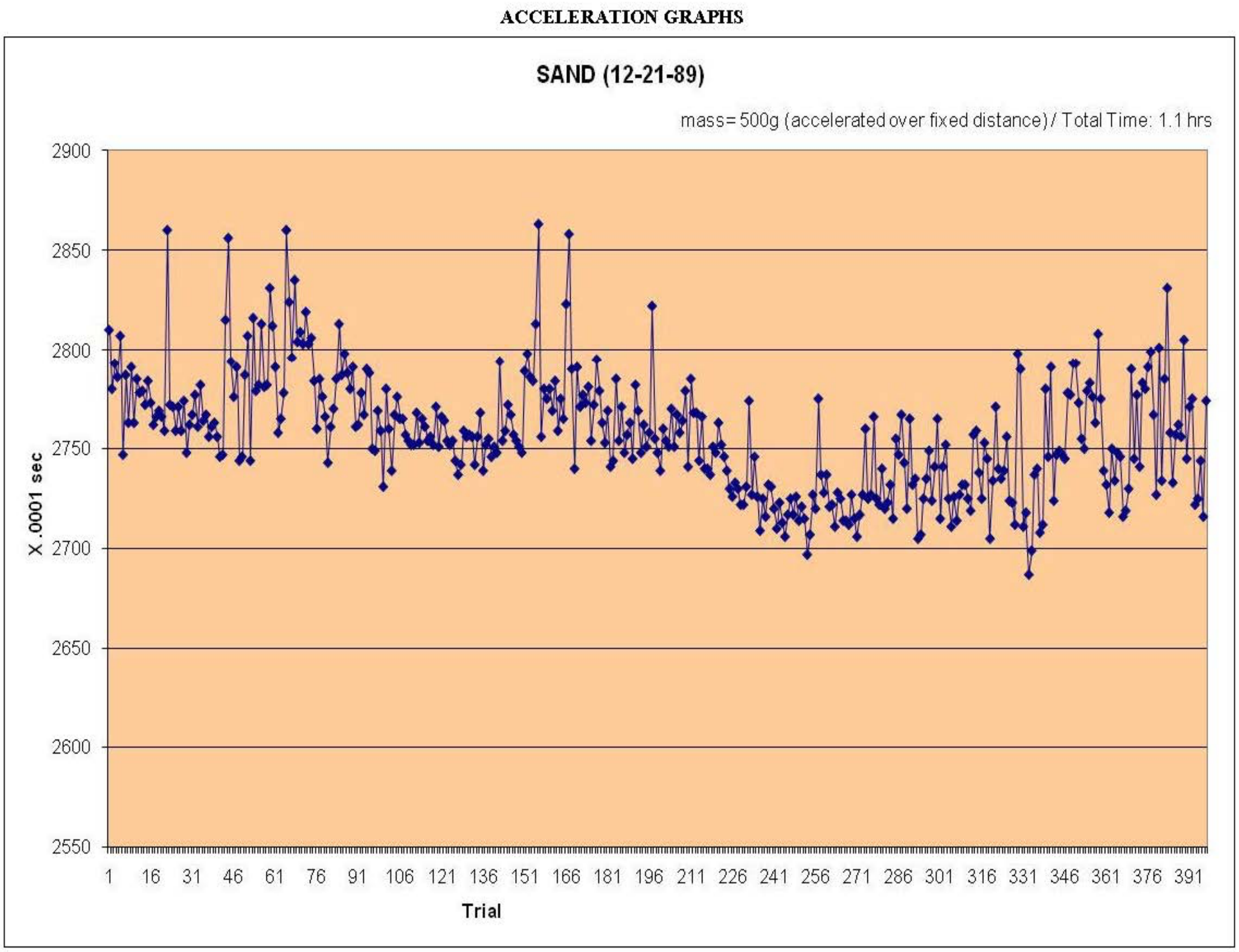


Appendix 4: Acceleration Results (Barium Hydroxide)

ACCELERATION GRAPHS



Appendix 5: AccelerationResults (Sand)



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