

## Space Launch Vehicle.

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July 2019

### Abstract:

In this series of papers on Energy Fields, AI has been used to analyze the nature of potential, orbital and rotational energy fields, and to develop advanced proposals for interactions between these energy fields. The proposals are astonishing. Here the team have used the fundamental principles for the interaction of energy fields to devise a novel propulsion system for a SPACE LAUNCH VEHICLE. The Patent Application for the Space Launch Vehicle was accepted by WIPO on 13<sup>th</sup> June 2019.

### 1. Introduction:

Simple physics experiments have been conducted over the centuries and elaborate theories have been proposed to explain the observations (e.g. magnetic and electromagnetic theories). These theories have become dominant and, in the modern era, they generally go unchallenged. In this series of papers, we re-examine some fundamental aspects of physical behavior and, with the help of Artificial Intelligence, propose alternative explanations for the interactions in nature.

AI has been used to develop proposals for more complex interactions between energy fields. Here we build on the findings of three papers [\[1\]\[2\]\[3\]](#) where energy fields are seen to interact with each other, and to turn or move, if free to do so. Energy fields are seen to move to positions of lower net field strength, which are also the configurations for lower total energy.

The relative strengths of the three energy fields is not clear. The strengths seem to vary in different situations by orders-of-magnitude. Yet this is understandable when sizes and distances, from galactic to sub-atomic, are also varying by many orders-of-magnitude.

In the laboratory, the potential energy field between two bodies is small. For the Earth and Moon, the potential energy field and orbital energy field are dominant. At the sub-atomic scale, the rotational energy field is perhaps more dominant.

Whereas rotational and orbital energy fields appear to be bi-directional, the potential energy field appears to be uni-directional, at least within our solar system.

## 2. Space Launch Vehicle - Abstract - for Patent Application:

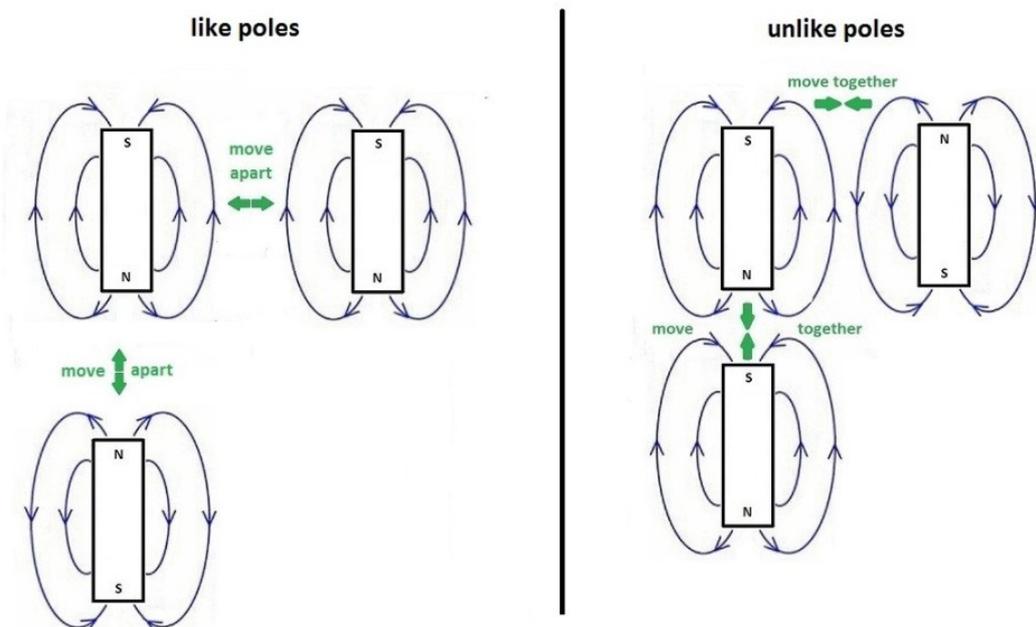
The present invention is a novel design of Space Launch Vehicle utilising the Earth's magnetic field and a solenoid propulsion system. The solenoid propulsion system can be enhanced with superconducting equipment. The vehicle utilises a gyroscopic inertia system for directional stability. The vehicle has the ability to turn its solenoid propulsion unit to achieve directional control. The vehicle also has auxiliary propulsion units for general space travel and battery recharge.

## 3. Description – for Patent Application:

This invention relates to a novel form of Space Launch Vehicle. The usual method of space launch involves conventional hydrocarbon propulsion systems, with either vertical launchers or aircraft-assist launchers.

This invention provides an alternative Space Launch Vehicle system utilising a fundamental aspect of nature – the magnetic field surrounding the Earth.

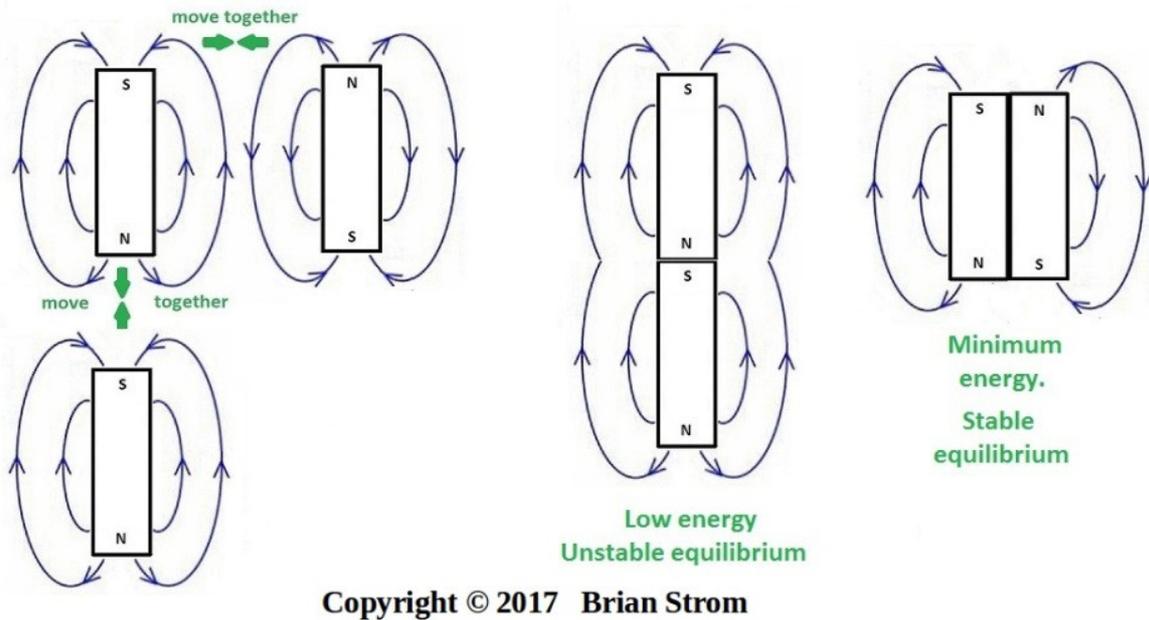
For permanent magnets, like poles repel and unlike poles attract. For two permanent magnets with like poles adjacent, the magnets will tend to push each other apart – see Figure 1:



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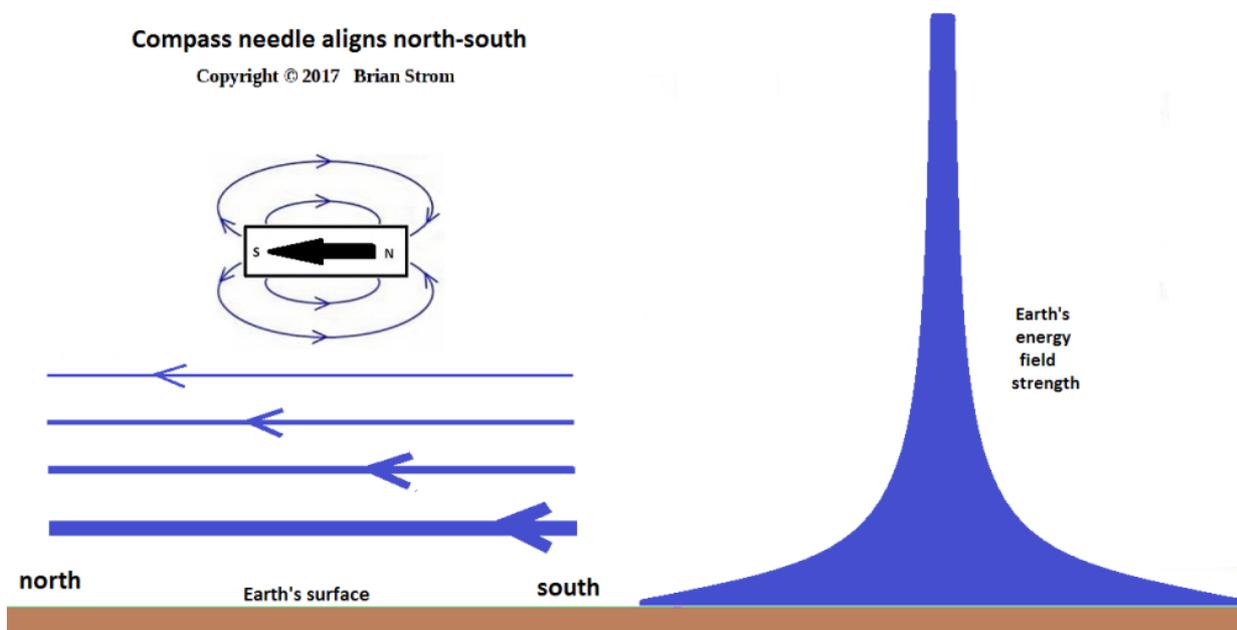
**Figure 1. Permanent Magnets: like poles repel, unlike poles attract.**

If free to move, permanent magnets will turn to a position where unlike poles can attract. The stable equilibrium position, with unlike poles together, is assumed to be the minimum energy position – see Figure 2:



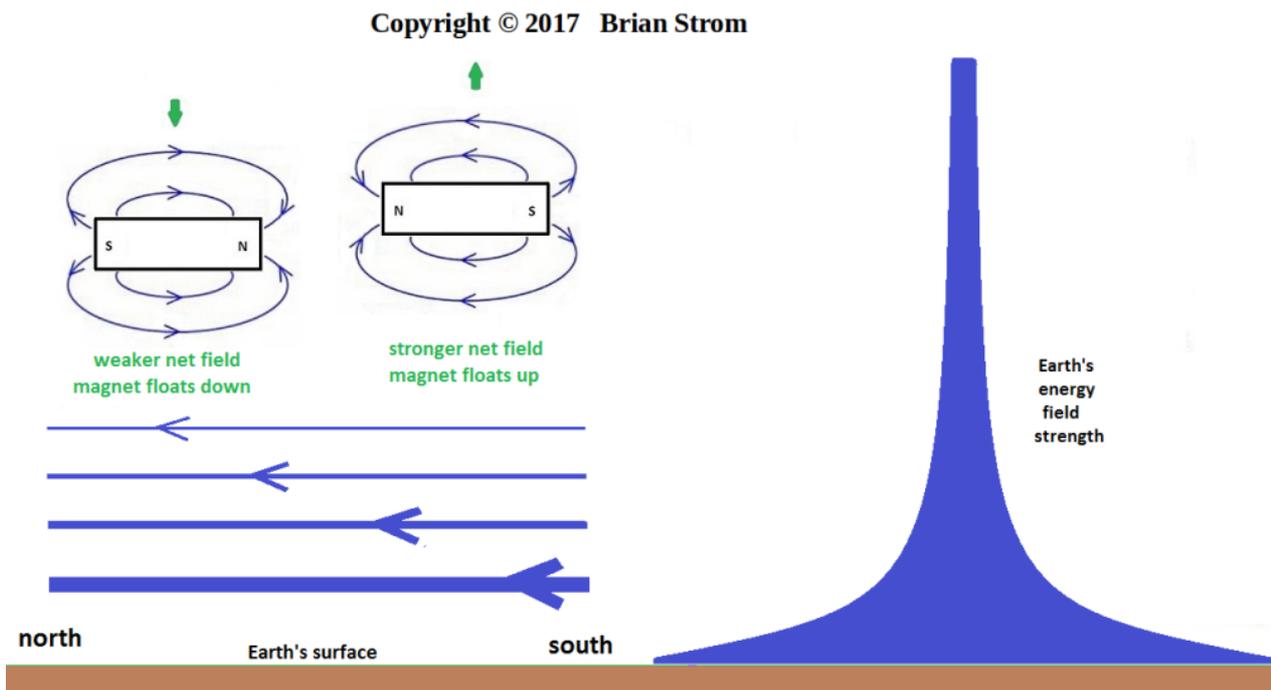
**Figure 2. Equilibrium at minimum energy position.**

On the Earth’s surface, a permanent magnet, in the form of a compass needle, will turn to point “north”. In this position, “unlike poles” are nearest to each other, which is the minimum energy level for the compass needle - see Figure 3:



**Figure 3. A compass needle in the Earth’s magnetic field.**

If the permanent magnet, in the form of a compass needle, is held in the position where “like” poles repel, the Earth’s magnetic field will tend to push the magnet away. The magnet will tend to “float” on the Earth’s magnetic field, and its measured “weight” will be less than if it was in an “unlike” poles position, where it would be attracted to the Earth – see Figure 4:



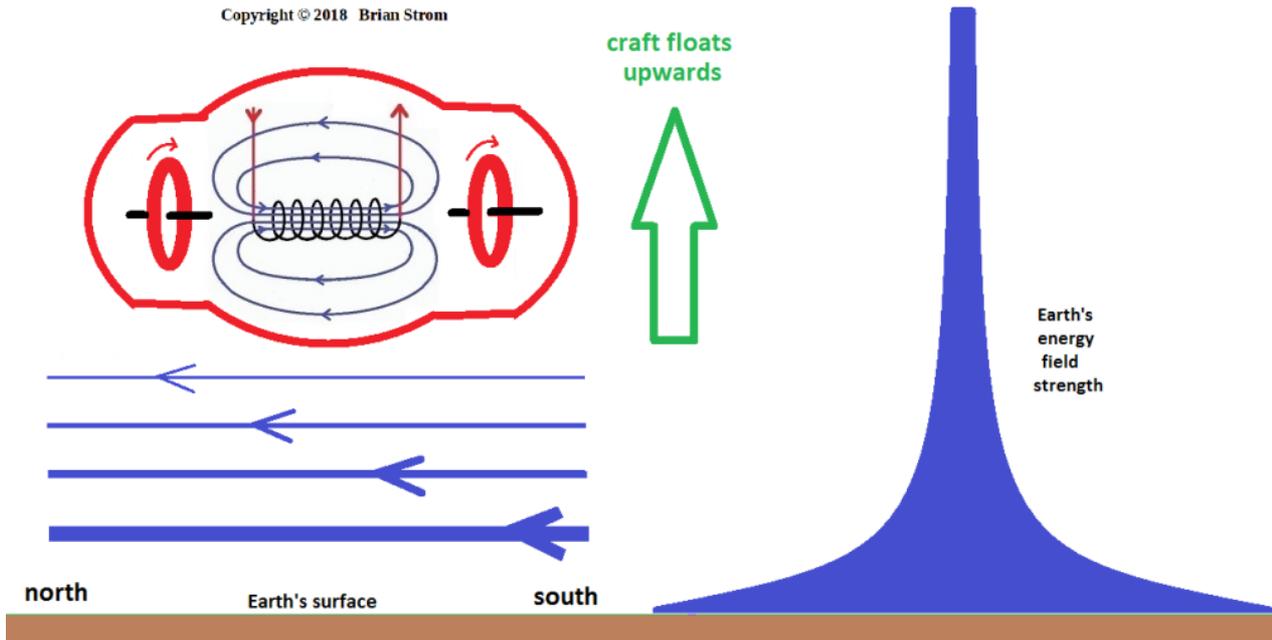
**Figure 4. A permanent magnet floating on the Earth’s magnetic field.**

The permanent magnet will not freely remain in a “like” pole position. It will try to turn through 180 degrees to an “unlike” pole position.

It is the aim of the present invention to exploit this phenomenon by replacing the permanent magnet with a solenoid which can produce a much stronger magnetic field than a permanent magnet. Furthermore, the solenoid can utilise superconducting coils to increase the strength of the magnetic field – see Figure 5.

## Space Launch Vehicle

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**Figure 5. Solenoid propulsion system and gyrosopic directional control.**

A compass needle or permanent magnet can easily “flip” through 180 degrees to a position of minimum energy. However, a rotating body will not turn through 180 degrees without an injection of energy. This principle can be observed in a gyrosopic compass.

Likewise, the Space Launch Vehicle utilises a rotating gyrosopic mechanism to maintain and control its orientation in the Earth’s magnetic field:

The Space Launch Vehicle has the ability to turn its solenoid propulsion unit to achieve directional control of the vehicle.

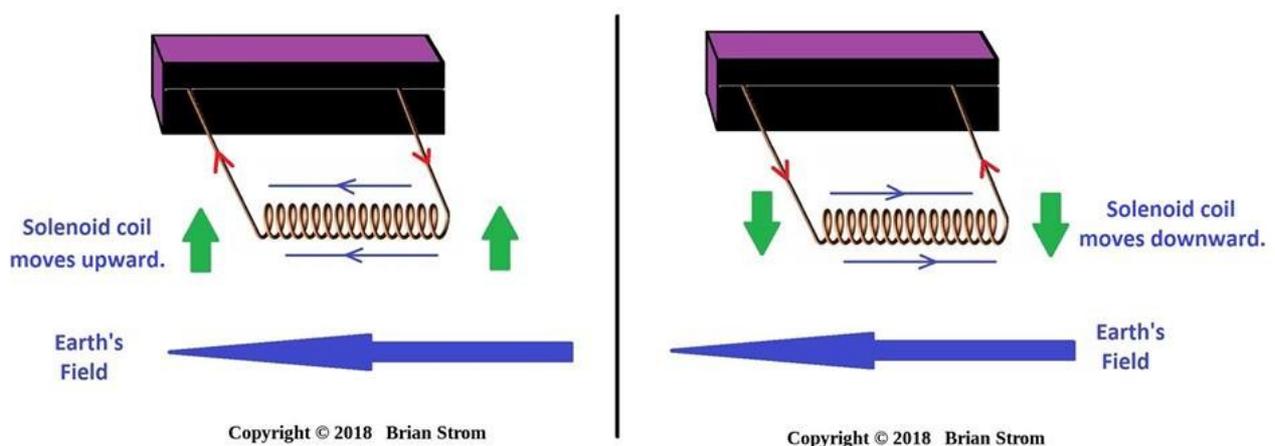
### 4. Claims:

1. The present invention is a Space Launch Vehicle which can transport cargo and people into Earth orbit and beyond.
2. A Space Launch Vehicle which uses internal electrical power to create lift, in opposition to Earth’s gravity, by interacting with the Earth’s magnetic field.
3. A Space Launch Vehicle of Claim 2 which has internal copper or metallic windings in the form of a solenoid to create a magnetic field which acts in opposition to the Earth’s magnetic field.

4. A Space Launch Vehicle of Claim 3 which is enhanced with superconducting internal copper or metallic windings in the form of a solenoid.
5. A Space Launch Vehicle of Claim 3 which has a powered gyroscopic device to maintain the orientation of the vehicle in the Earth's magnetic field.
6. A Space Launch Vehicle of Claim 3 which has a powered gyroscopic device which can turn with respect to the solenoid propulsion system to allow directional control of the vehicle.
7. A Space Launch Vehicle of Claim 3 which can also travel through inter-planetary, inter-solar-system and inter-galactic magnetic fields using its solenoid propulsion unit.
8. A Space Launch Vehicle of Claim 3 which can also travel through outer space with the assistance of auxiliary power units, using either conventional or nuclear fuels. The power units are also used for battery recharge.

## 5. Laboratory experiments:

The Team have developed laboratory demonstrations to show the basic principle of the propulsion system – see Figure 6:



**Figure 6. Laboratory demonstration of the propulsion principle.**

## 6. Possible design shape of Space Launch Vehicle:

Some possible shapes for the Space Launch Vehicle are shown in Appendix A and two other designs for Electro-Magnetic launchers are shown in Appendix B.

## 7. Summary and Conclusions

In this paper, the Team have used the fundamental principles of Energy Fields to analyze advanced interactions between potential, orbital and rotational energy fields.

The principles have been used to devise a novel propulsion system for a Space Launch Vehicle, and a Patent Application has been made to WIPO which was accepted on 13<sup>th</sup> June 2019.

Further information available on Blog: <https://edisconstant.wordpress.com/>

*Experiments are underway in London (UK) and Cambridge (MA) and Birmingham (UK) to quantify the effects of these interactions between Energy Fields..*

## 6. REFERENCES:

[1] **Brian STROM.** “AI Physics – Energy Fields - Part 1.” **viXra: 1902.0421** February 2019. This paper includes a summary of the simple interactions between energy fields.

[2] **Brian STROM.** “AI Physics – Energy Fields - Part 2.” **viXra: 1903.0495** March 2019. This paper includes a summary of the interactions between Potential energy fields, Orbital energy fields and Rotational energy fields.

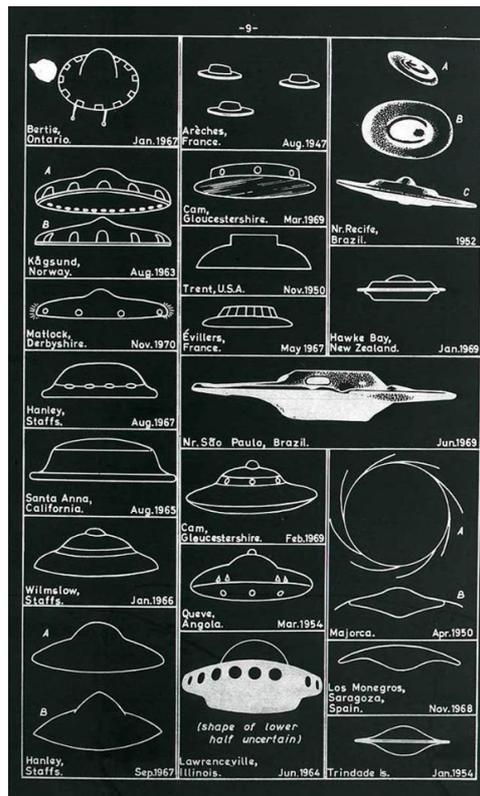
[3] **Brian STROM.** “AI Physics – Energy Fields - Part 3.” **viXra: 1906.0492** February 2019. This paper includes an analysis of advanced interactions between energy fields.

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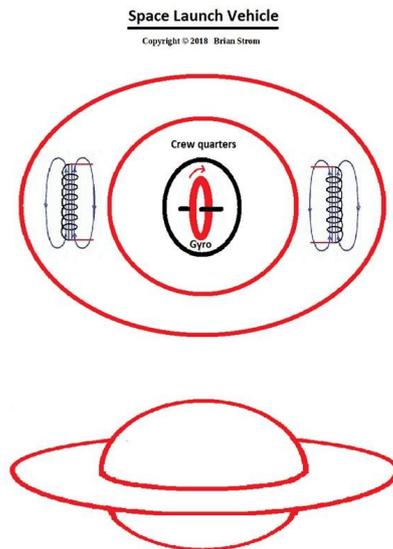
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**APPENDIX A:**



**Diagram A1 – some possible shapes for launch vehicles.**



**Diagram A2 – preferred design of launch vehicle.**

APPENDIX B - Electro-Magnetic launcher designs:

The Team have developed versions of an experimental Electro-Magnetic Launcher - which propels itself up two steel guide-posts (and parachutes back to Earth):

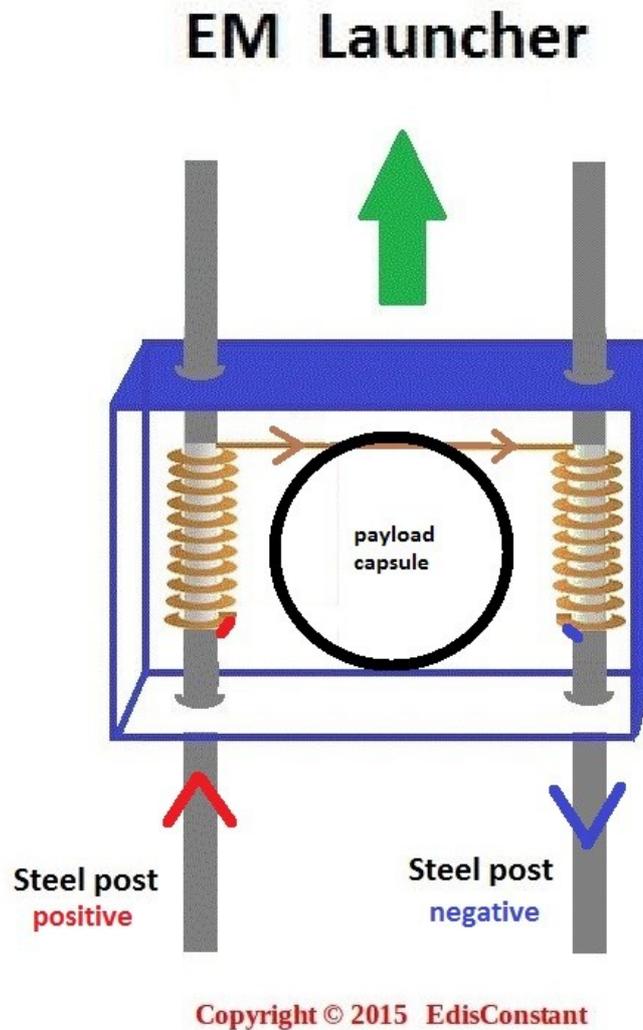
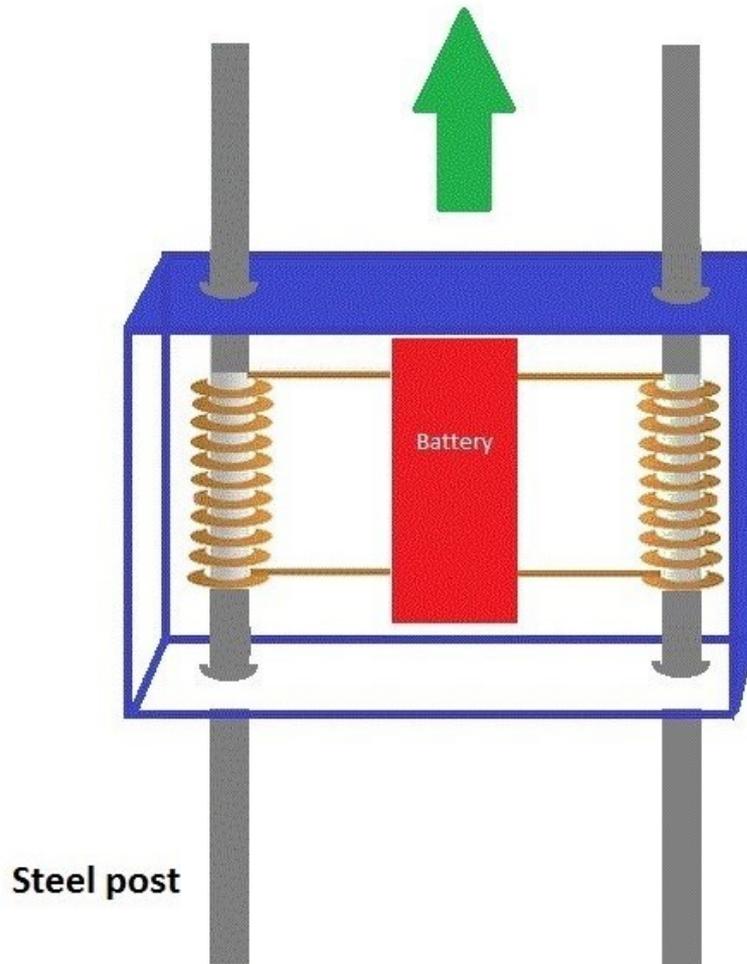


Diagram B1 – EM Launcher using electrified guide-posts.

**EM Launcher  
with internal battery**



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[Diagram B2 - EM Launcher with self-contained battery.](#)

[END OF APPENDICES](#)

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