Back to the Future:

The Unexplored Power of Static and Transient Electricity

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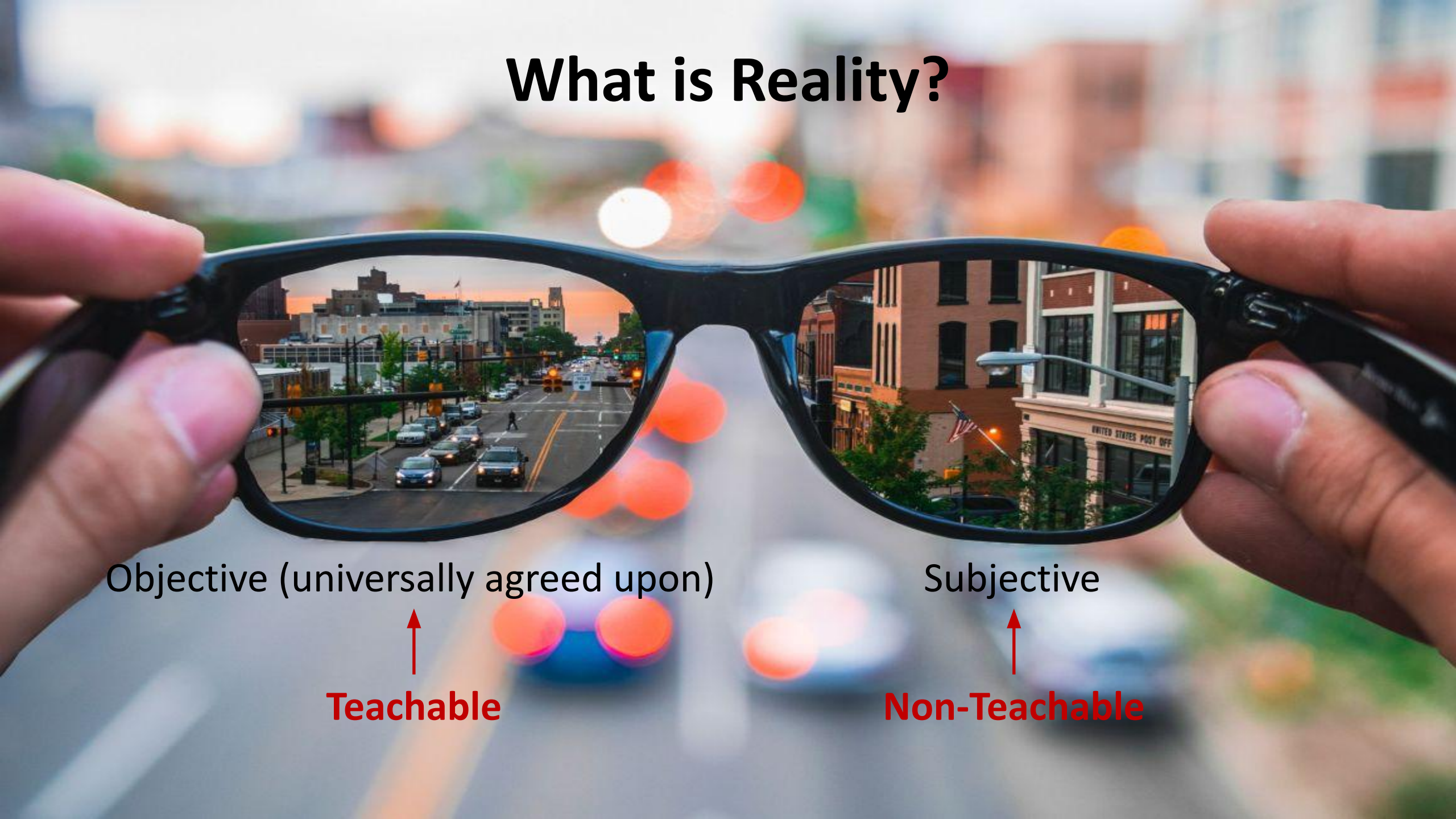
www.maximus.energy

What is Reality?



Objective (universally agreed upon)

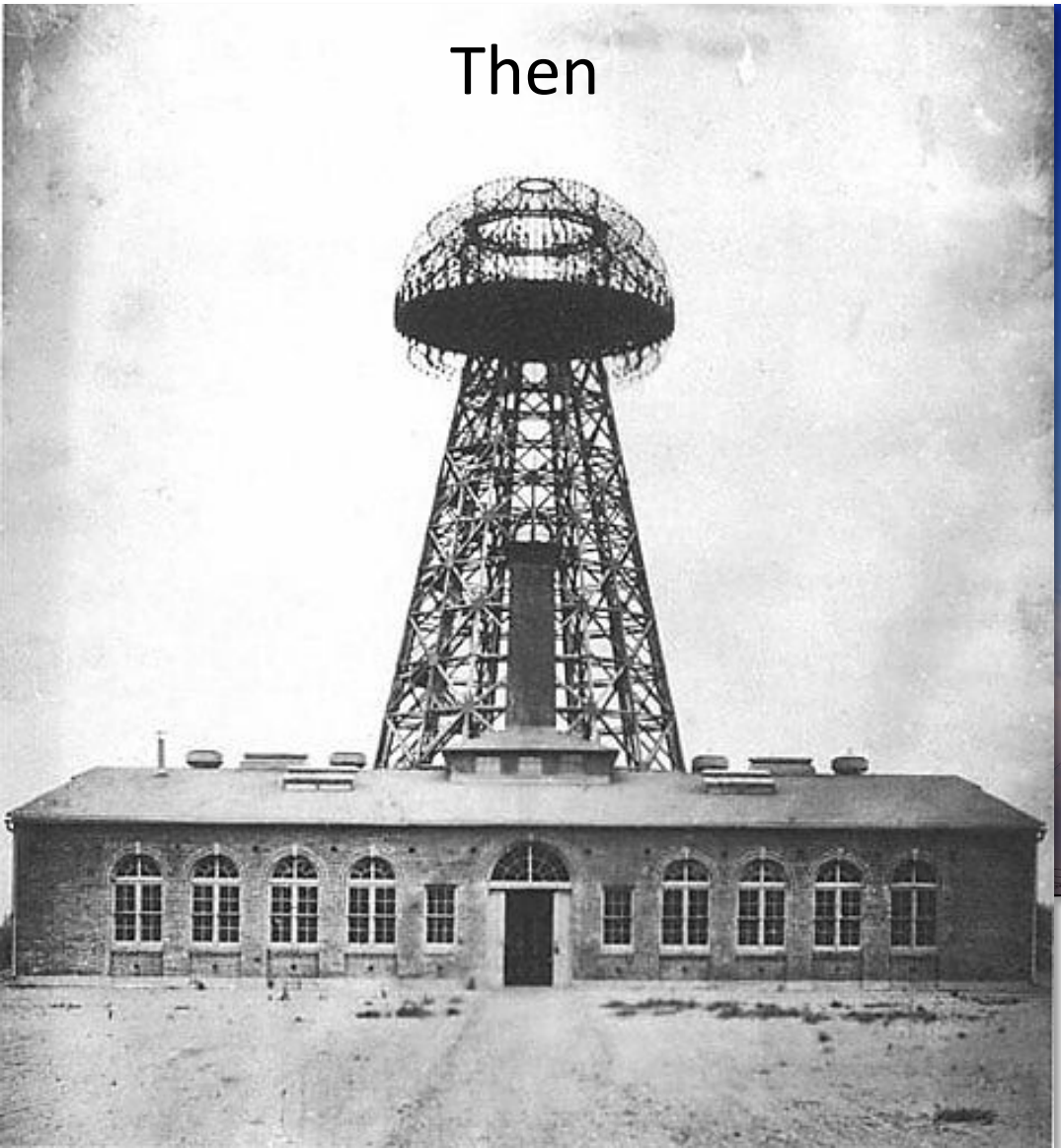
Subjective

Teachable

Non-Teachable

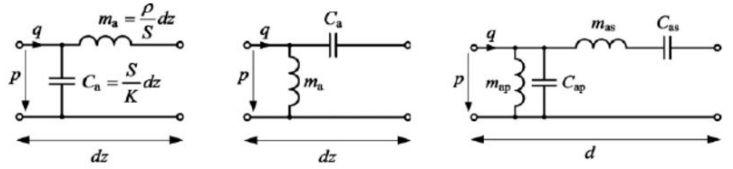
Tesla's Unexplored Legacy

Then



Now

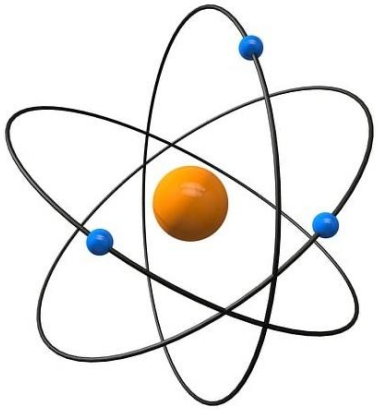
AC



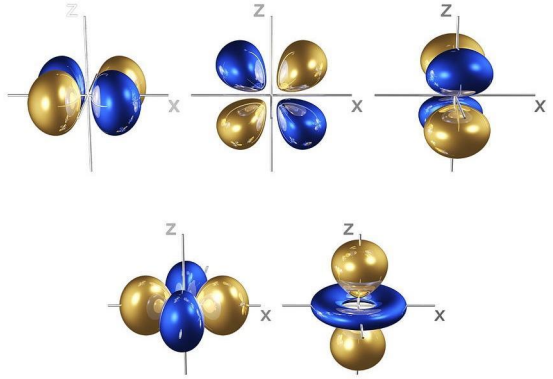
DC

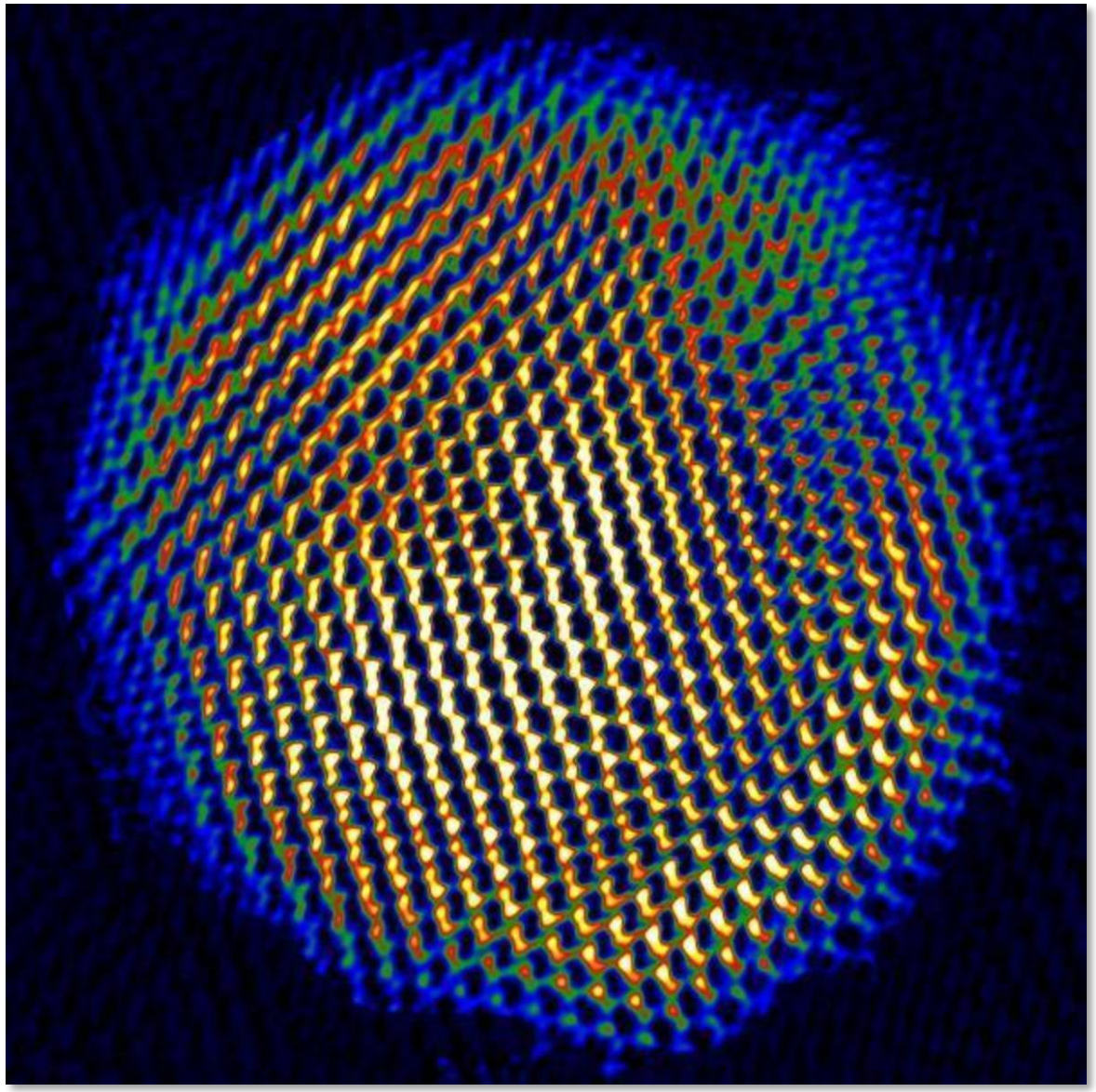
Lumped element model

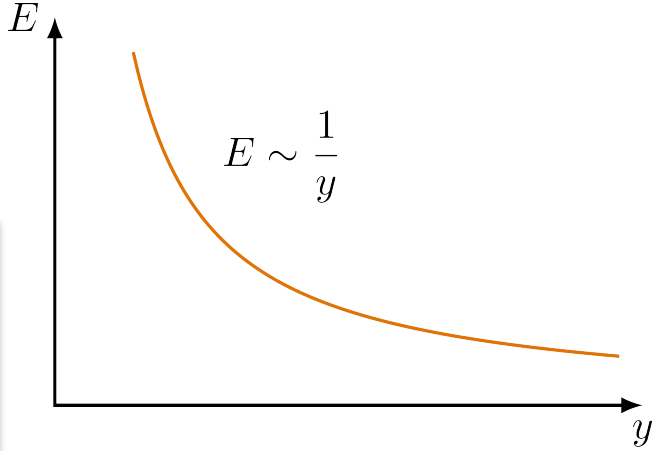
What is an Electron?

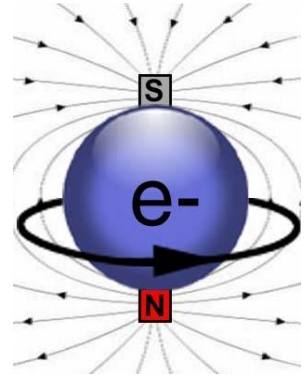


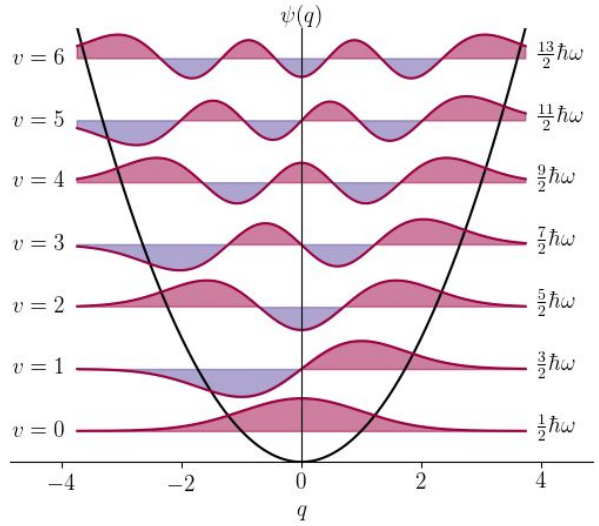
Orbitals





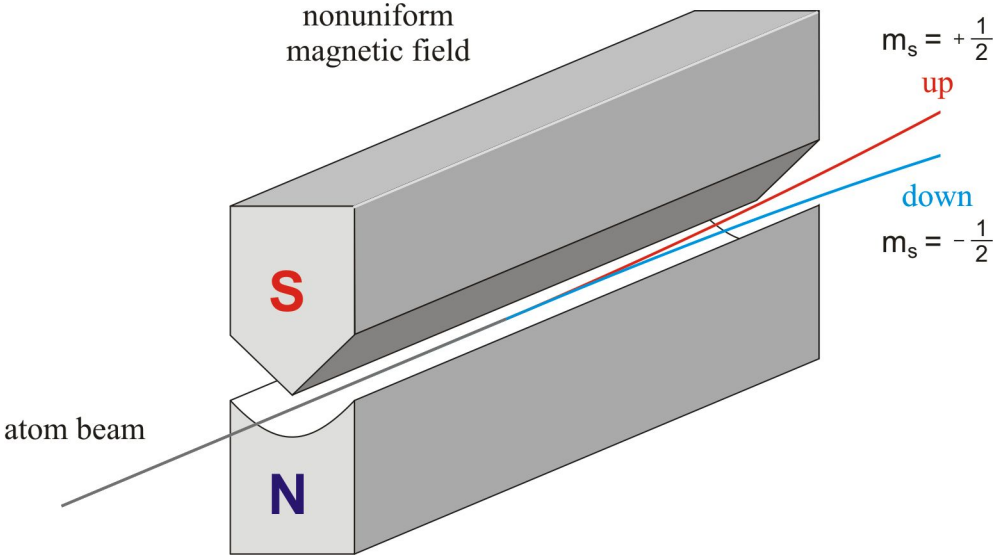




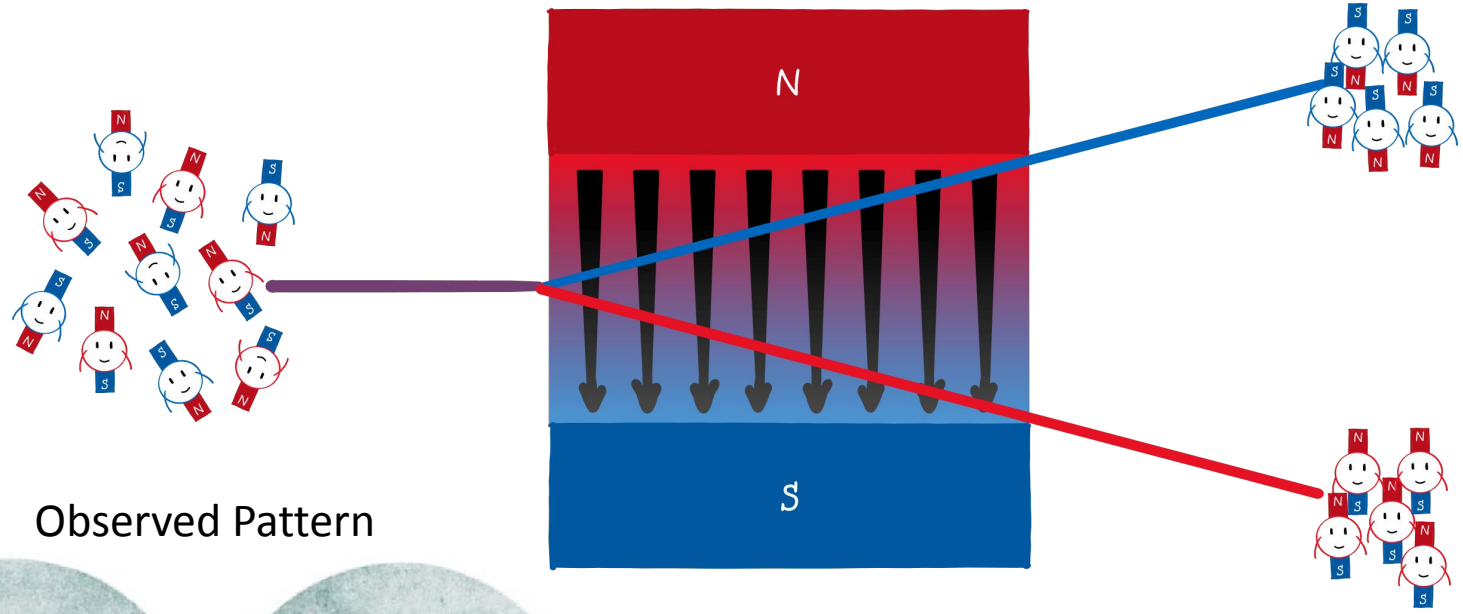


Electron is a Magnet

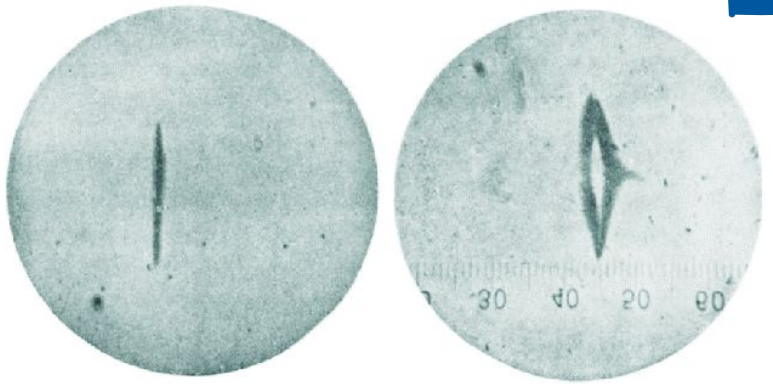
Stern-Gerlach Experiment



Silver Atoms! Not Free Electrons

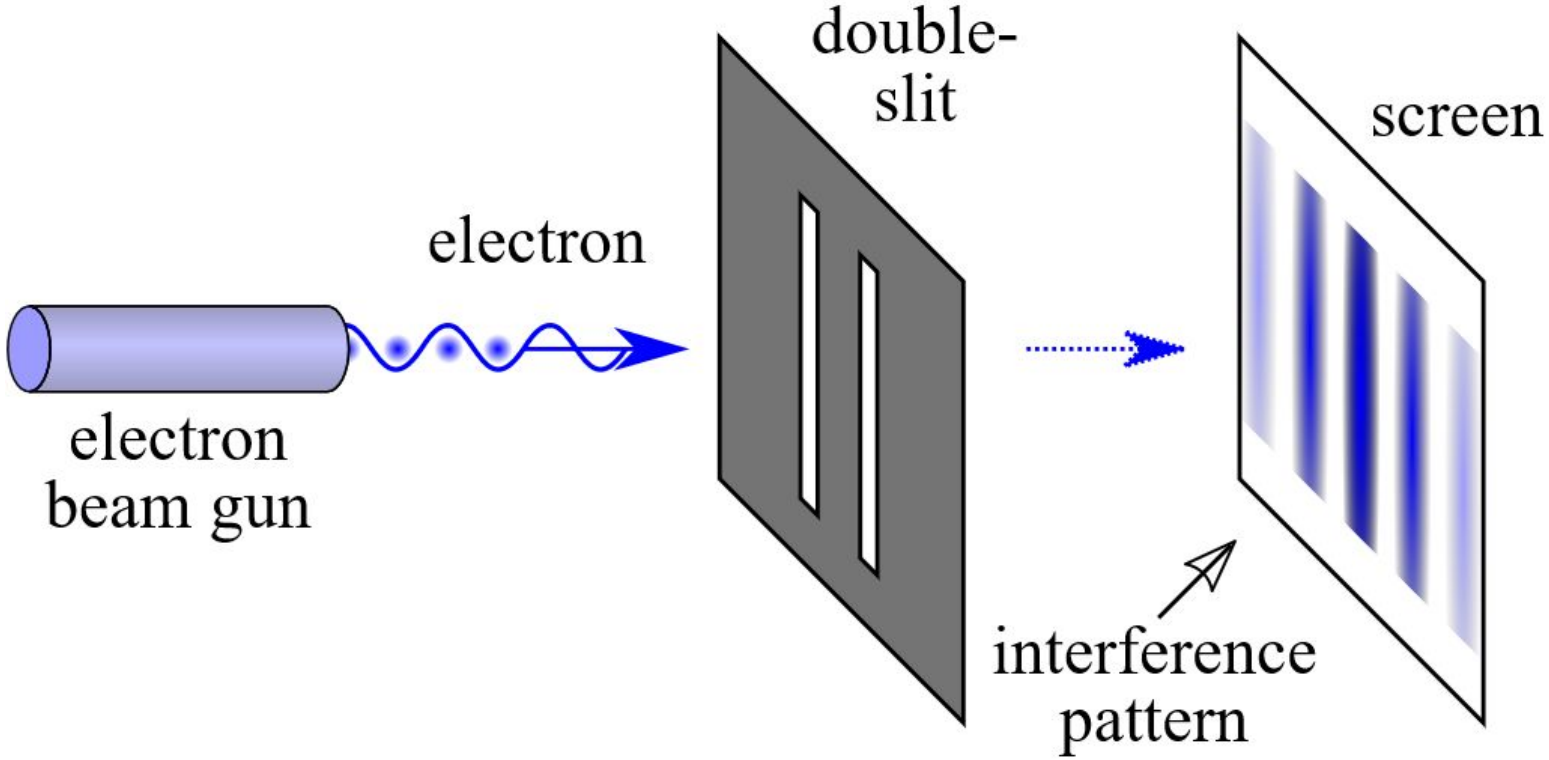


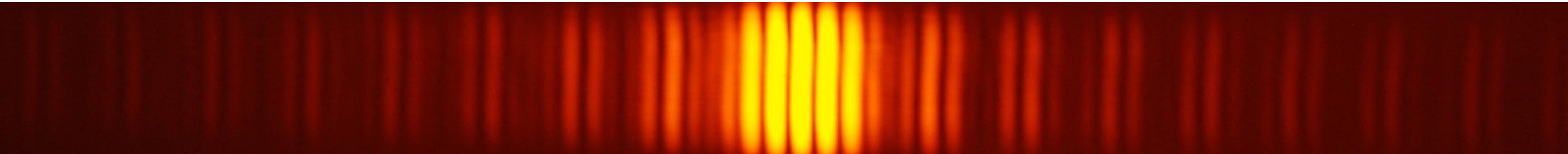
Observed Pattern



Electron is a Wave

Double-Slit Experiment





Electron is *Not* a Point Particle

There is no such thing as a free electron…

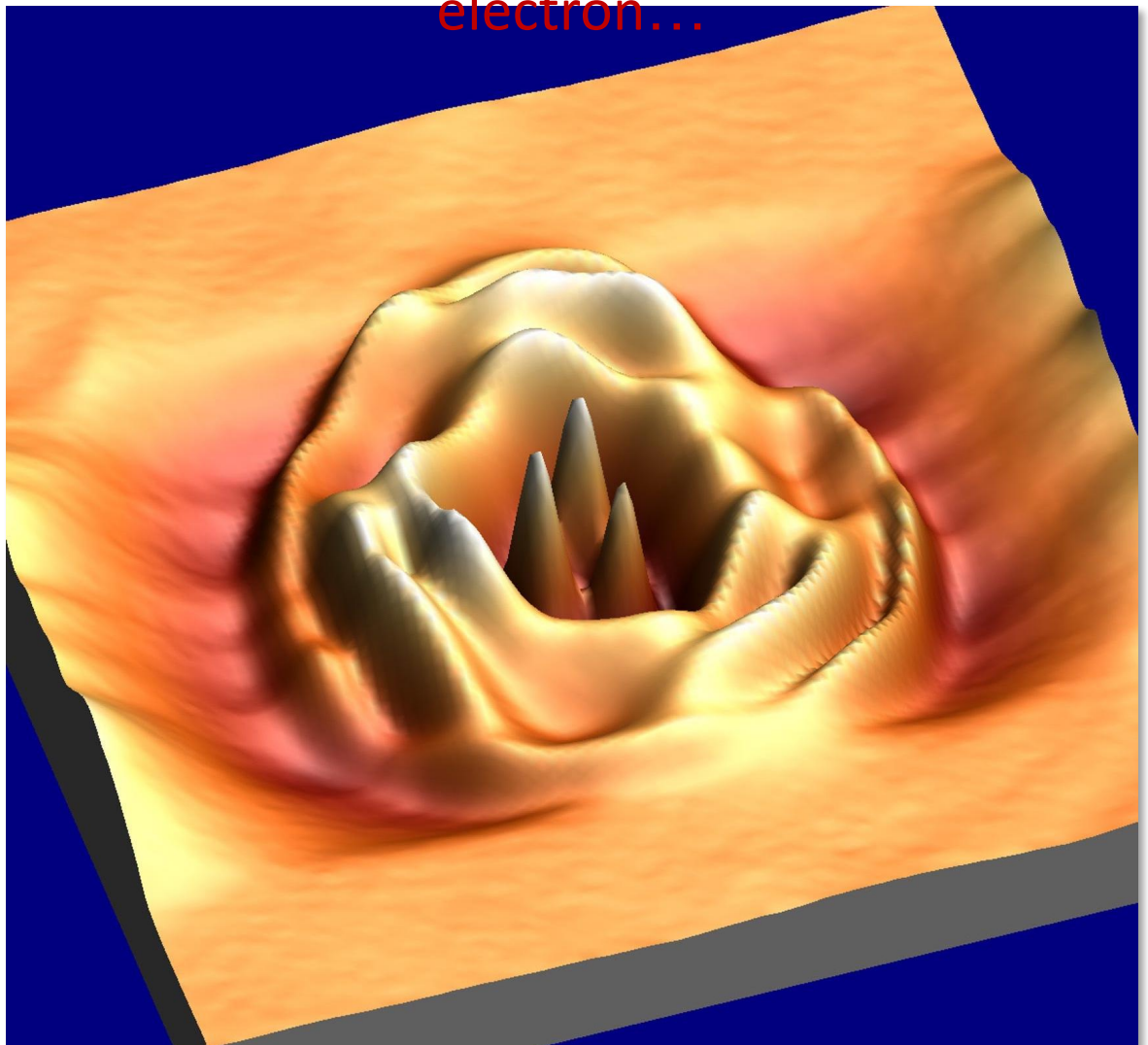
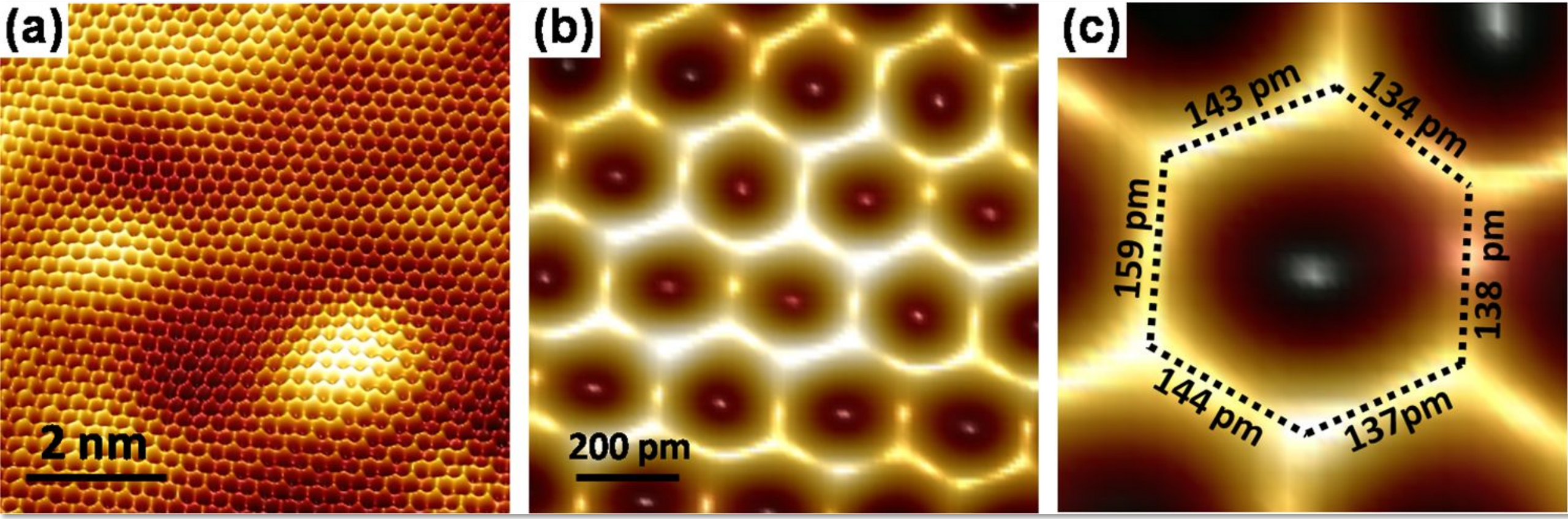


Image of electron waves trapped within a quantum dot

Electrons Form Continuum

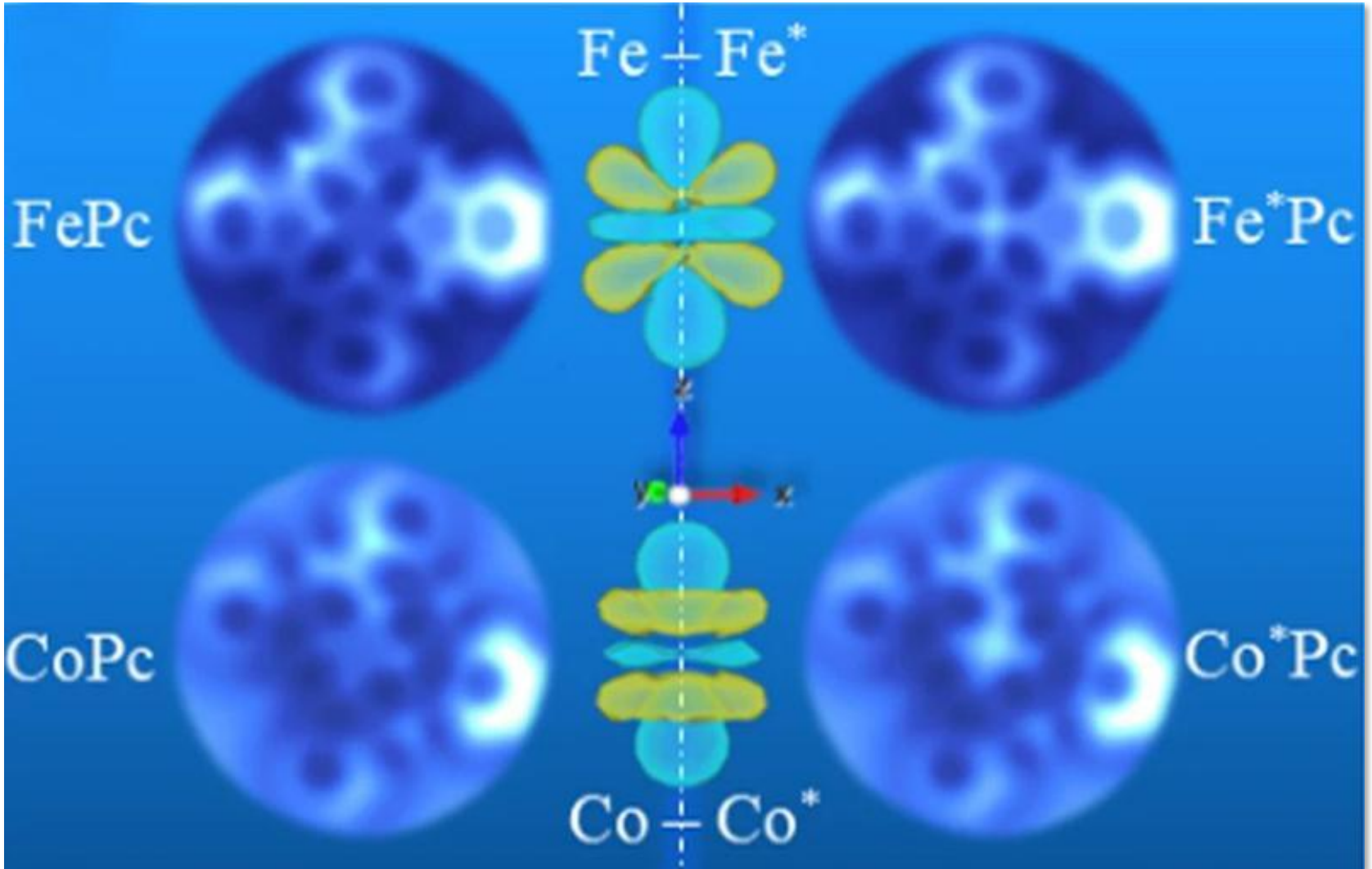
Direct Observation of Atomic Orbitals

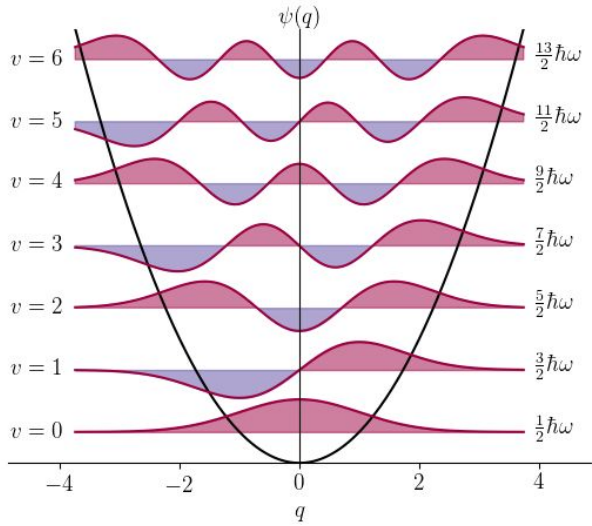


Graphene

Electrons Vibrate

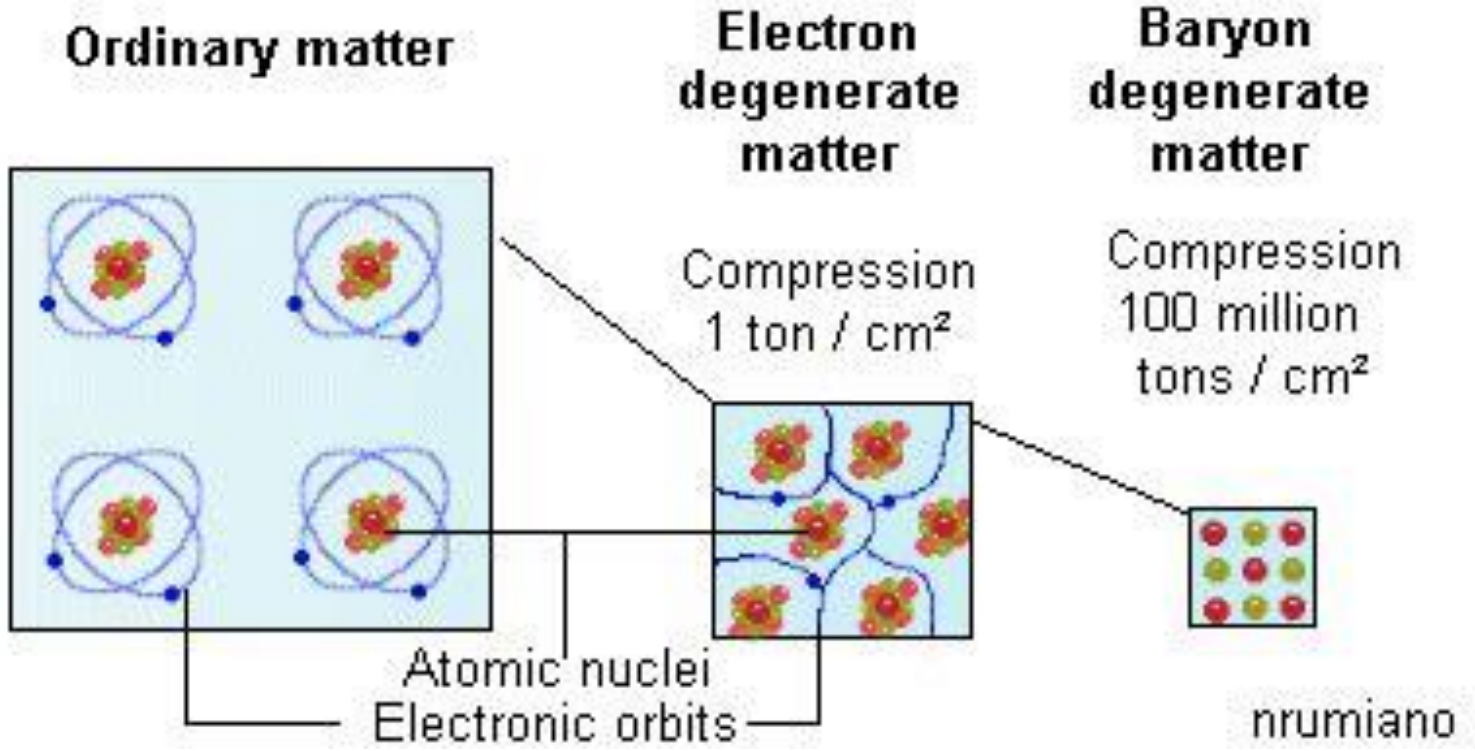
Direct Observation of Atomic Orbitals

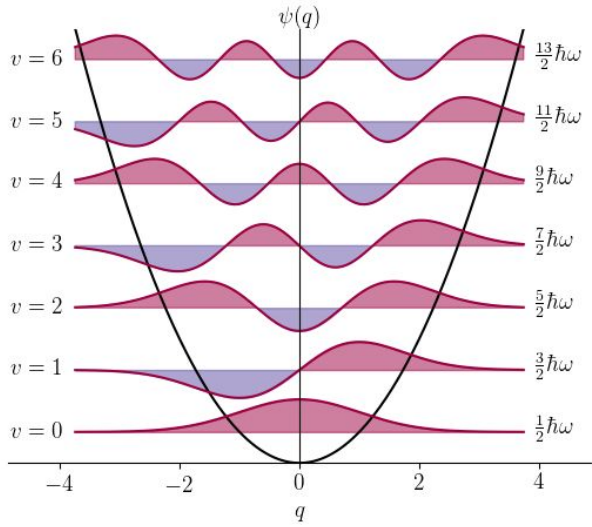




Each Electron Must Vibrate Differently!

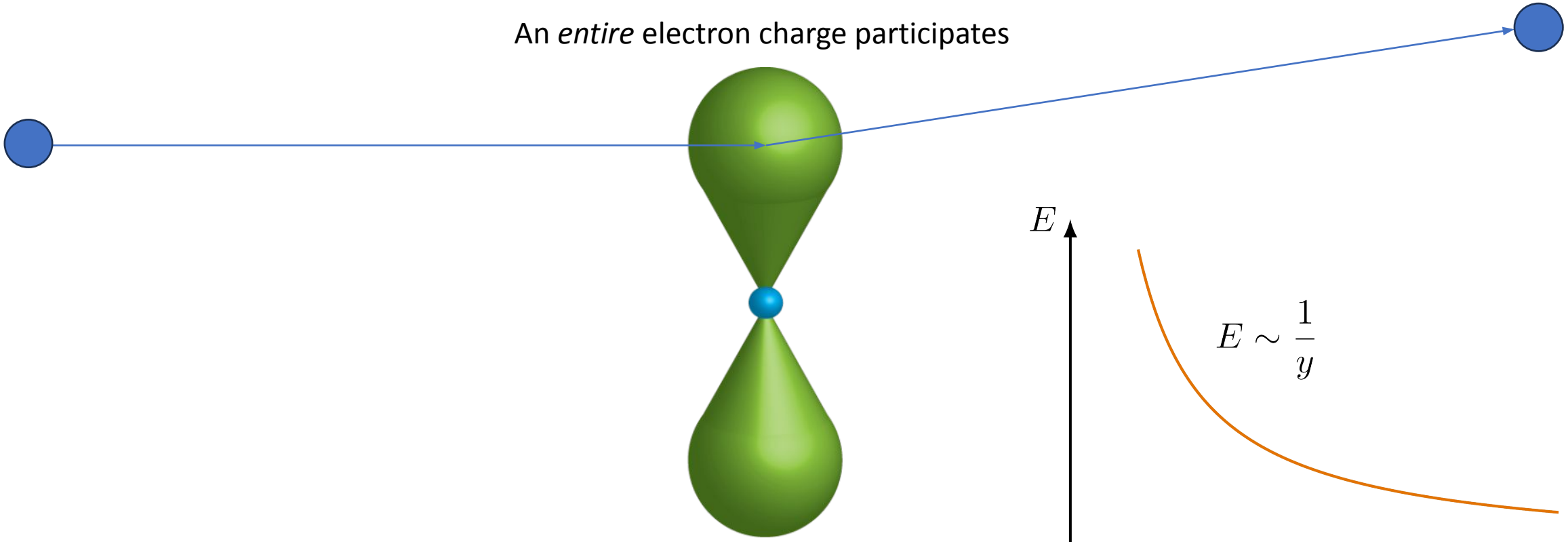
Degenerate Electron Gas Pressure



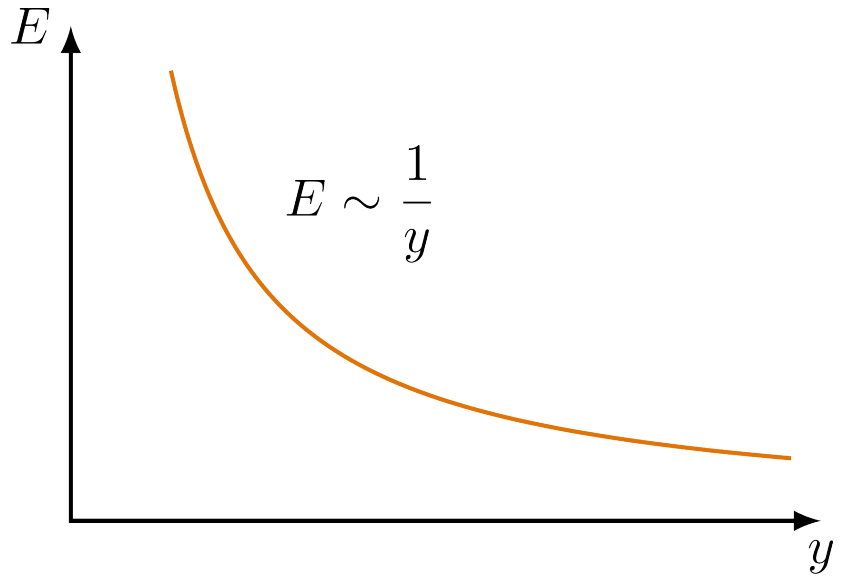


Electron Orbitals are *Not* a Charge Distribution

An *entire* electron charge participates



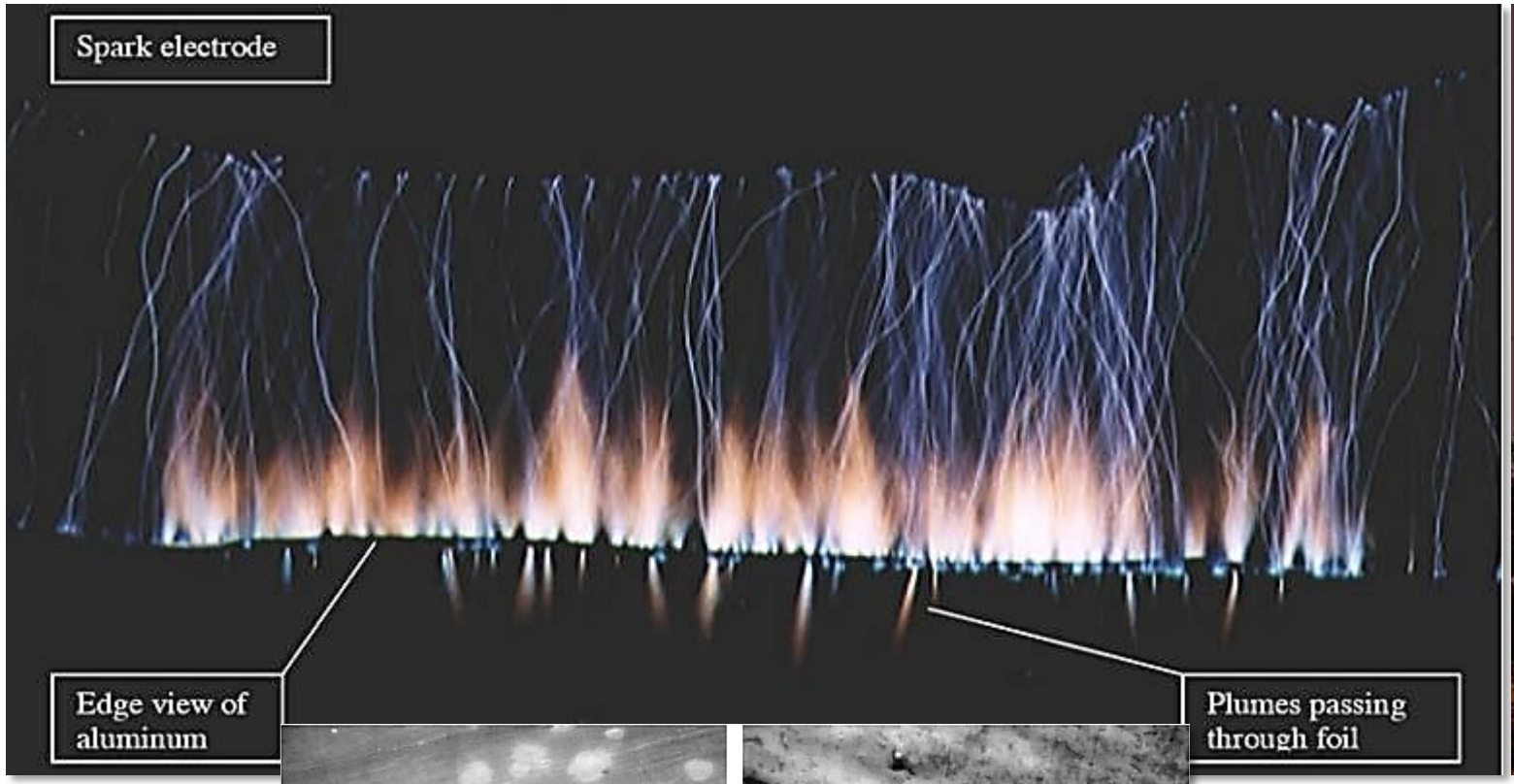
Elastic Scattering

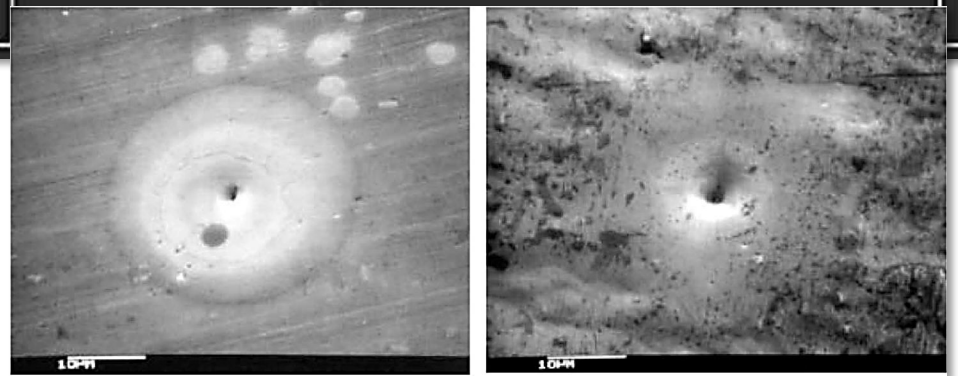


Electrostatic Field of an Electron

Electrons Like to Stick Together

Ken Shoulders' EVOs (Charge Clusters)



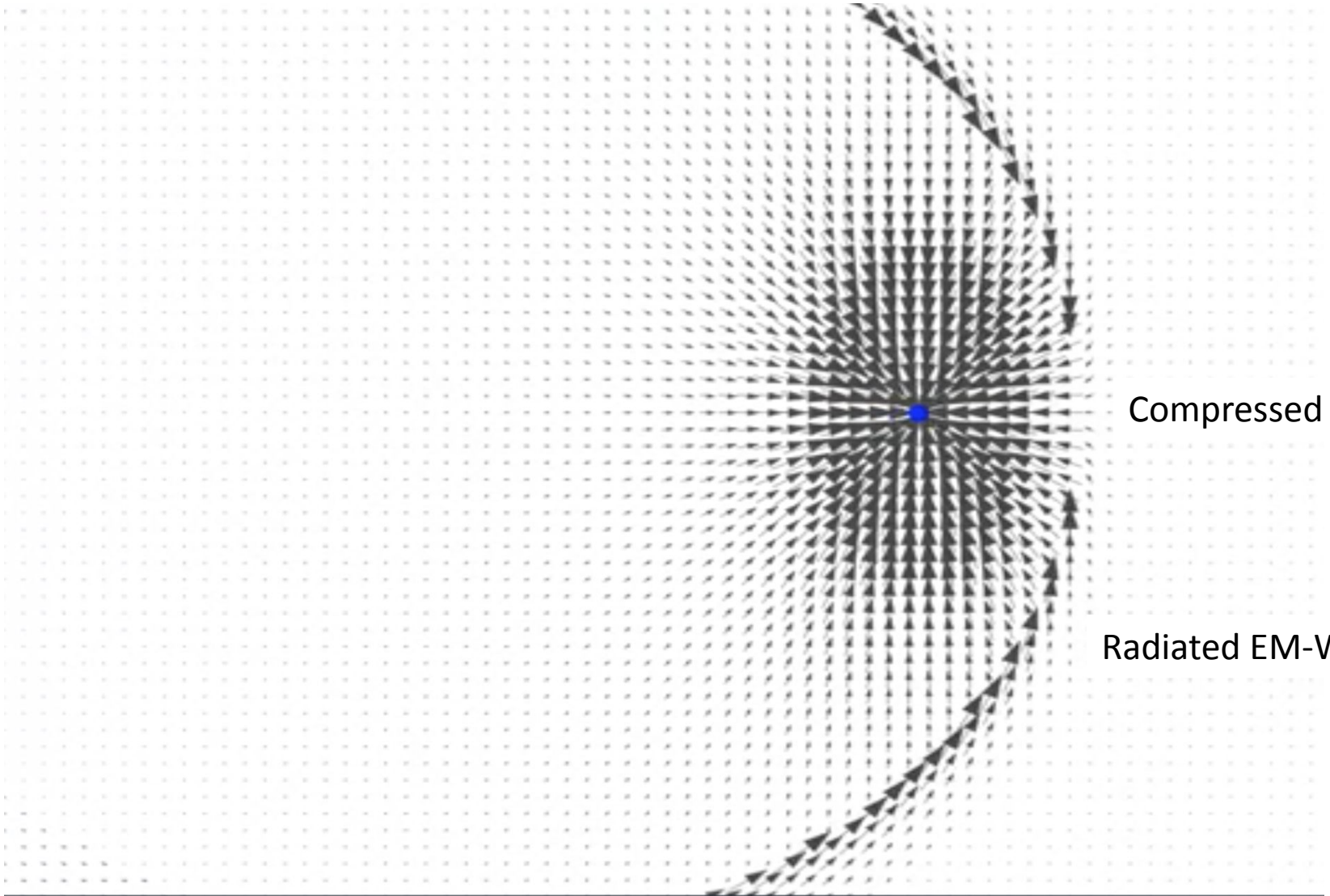


Ball Lightning

Very Large Charge Cluster?
Standing EM Wave?
Capacitively Coupled Resonance?

Electric Field of an Accelerated Charge

Maxwell's Electrodynamics

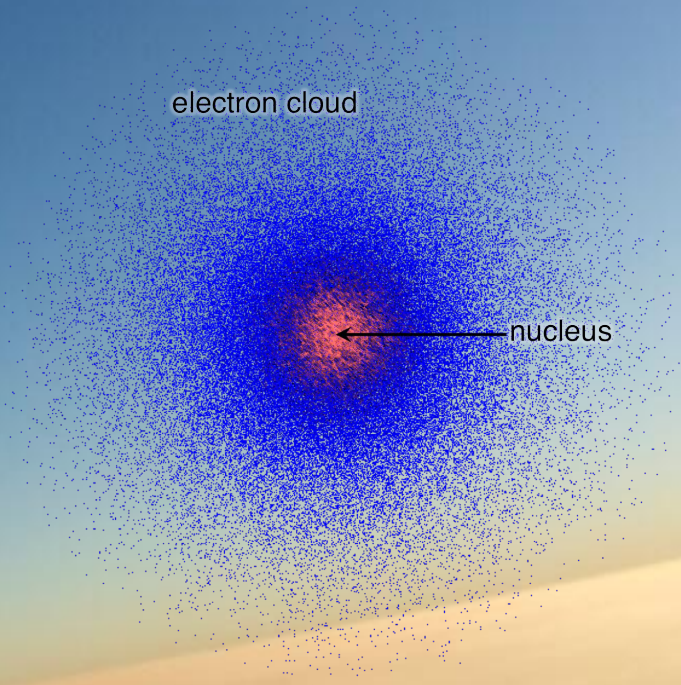


Compressed Field (Relativistic Effect)

Radiated EM-Wave

Animation

Free-Falling Charges Do Not Radiate!



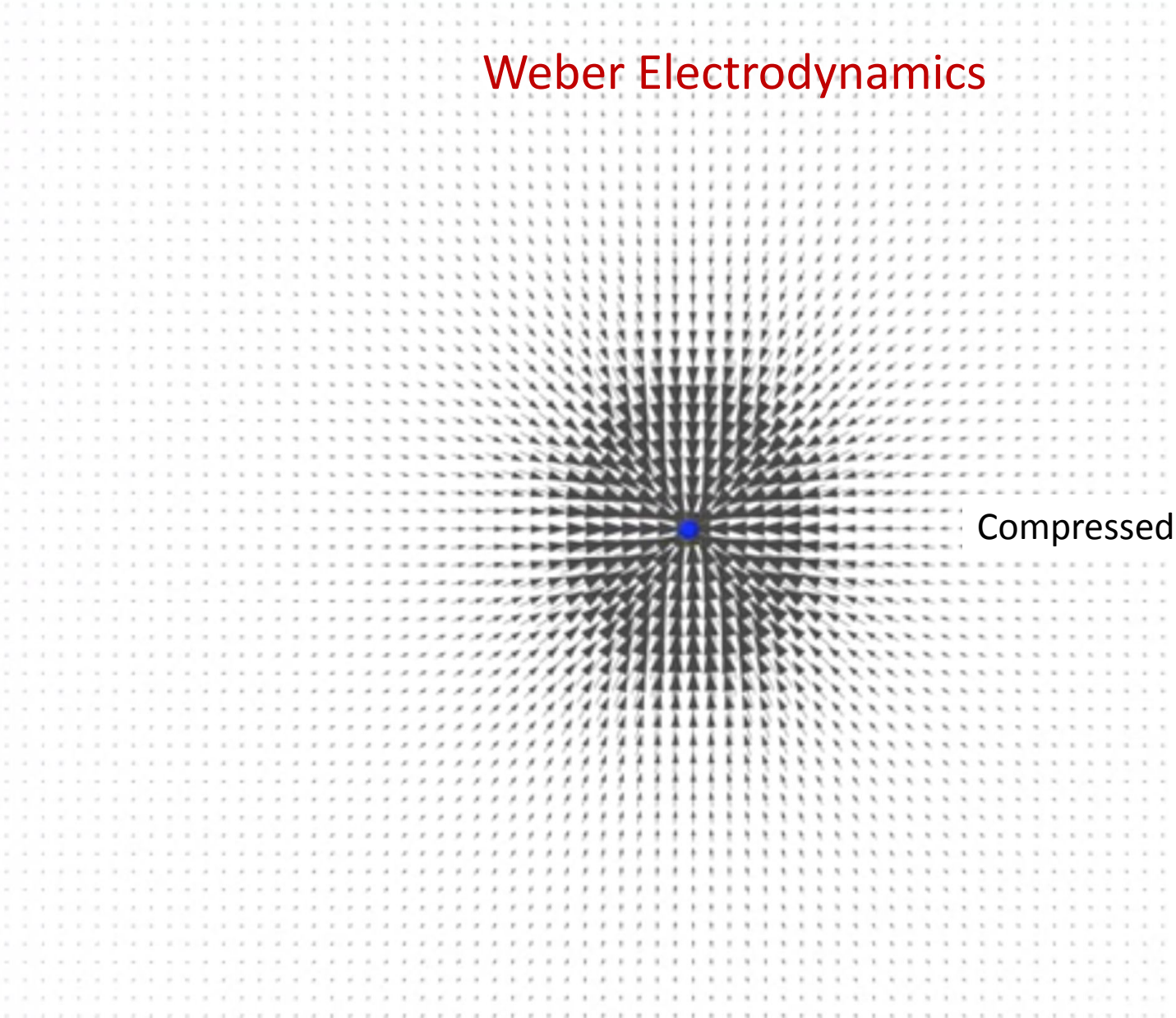
$$P = \frac{2}{3}\frac{m_e r_e a^2}{c}$$

Larmor Formula

In Any Field of a Conservative Force!
(including electrostatic)

Electric Field of an Accelerated Charge

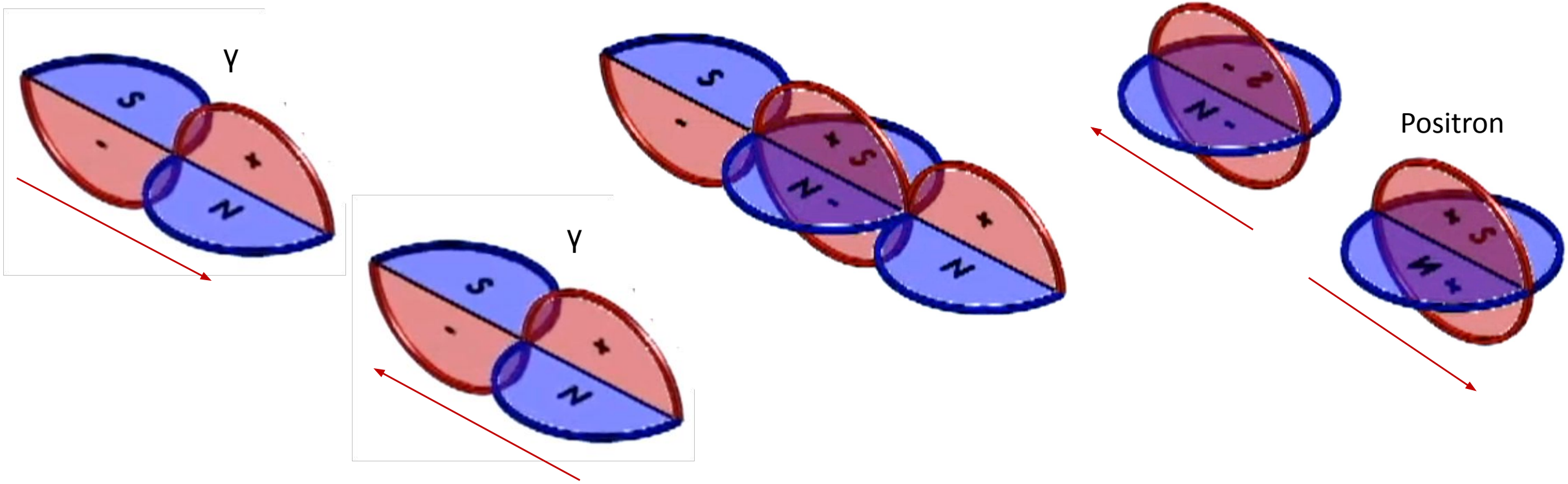
Weber Electrodynamics



Compressed Field (Relativistic Effect)

Animation

Is Electron a Standing EM Wave?

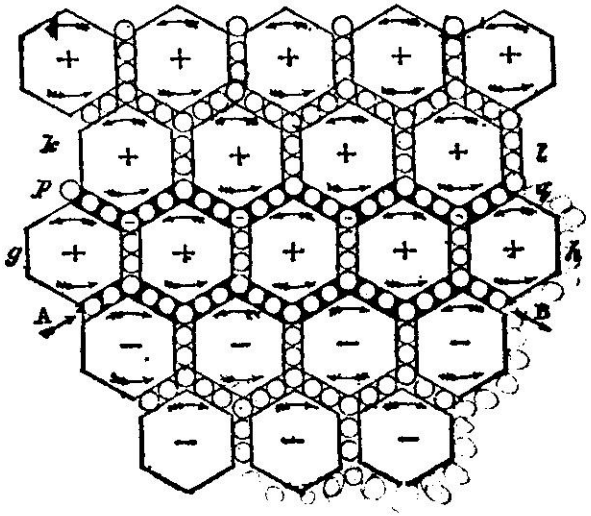


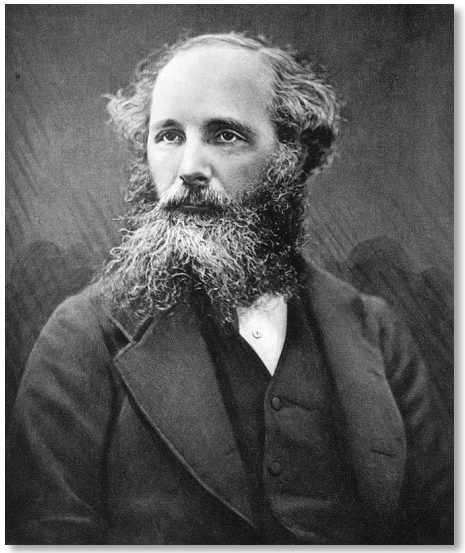
Wheeler–Feynman absorber theory!

Animation

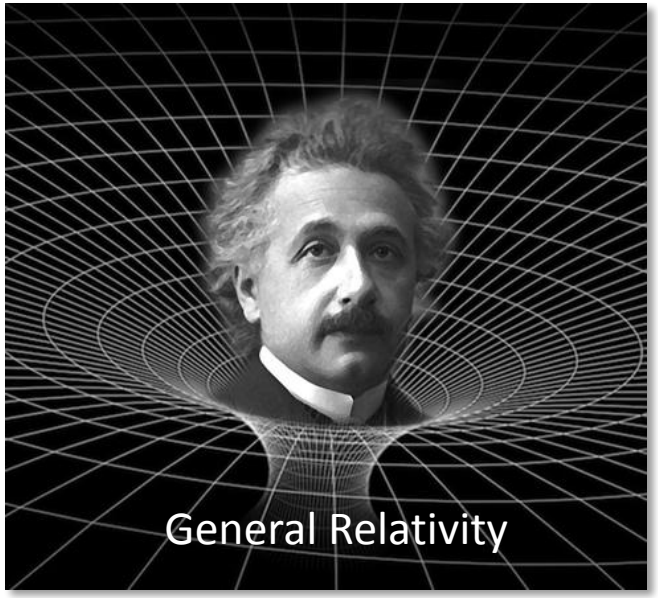
Electromagnetic Ether

Lorentz



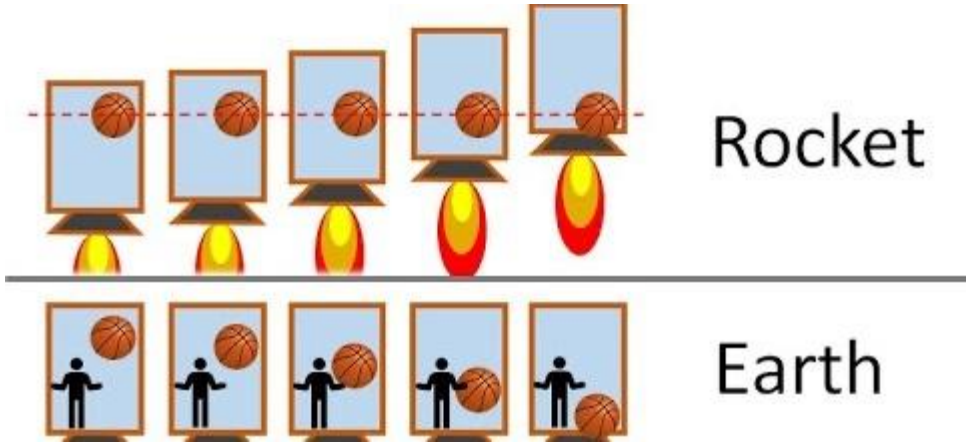


Maxwell

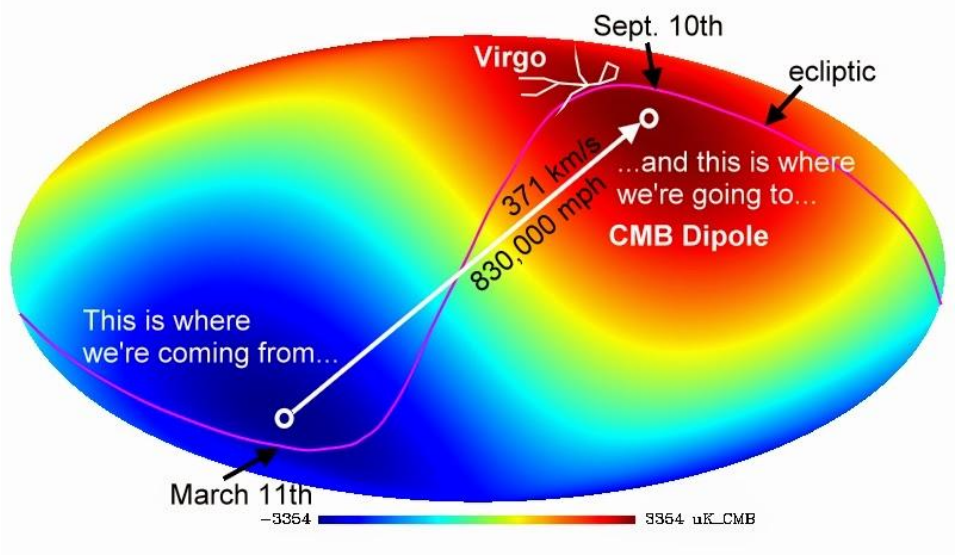


Is General Relativity Correct?

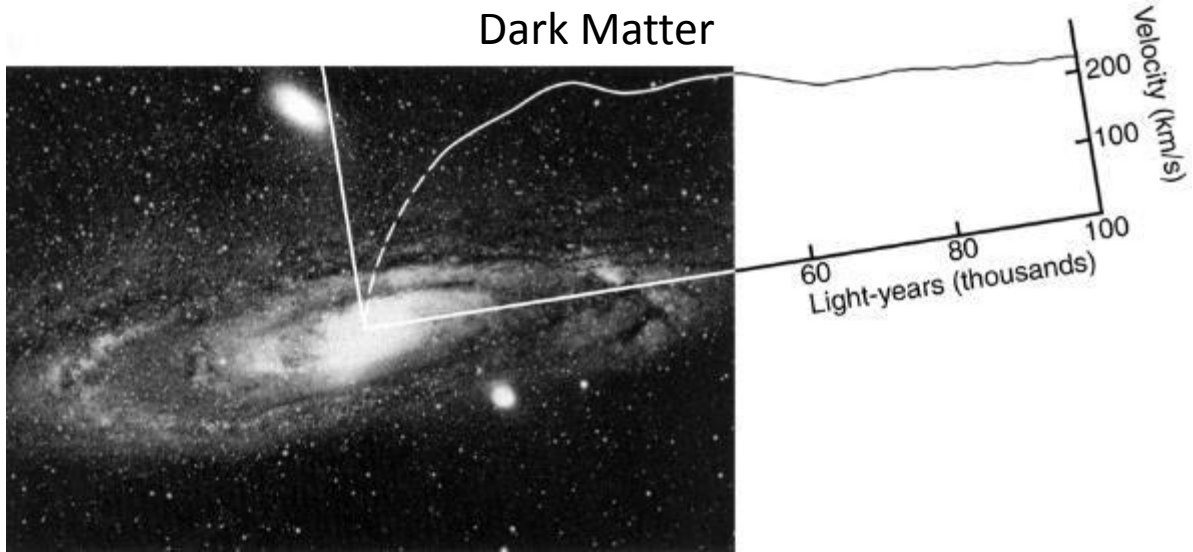
Equivalence Principle: Can We Detect Gravity Gradient?



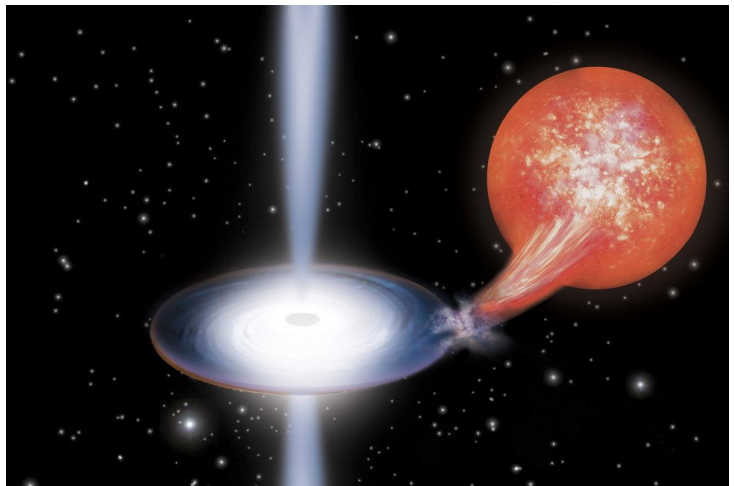
CMB Dipole: Evidence of Absolute Space?



Dark Matter



Polar Jets



Are Maxwell's Equations Correct?

$\nabla . E = \frac{\rho}{\epsilon_0}$	(1)	Gauss' law
$\nabla . B = 0$	(2)	Magnetic monopoles
$\nabla \times E = -\frac{\partial B}{\partial t}$	(3)	Faraday's law
$\nabla \times H = J + \frac{\partial D}{\partial t}$	(4)	Ampere-Maxwell law

Gauge Fixing

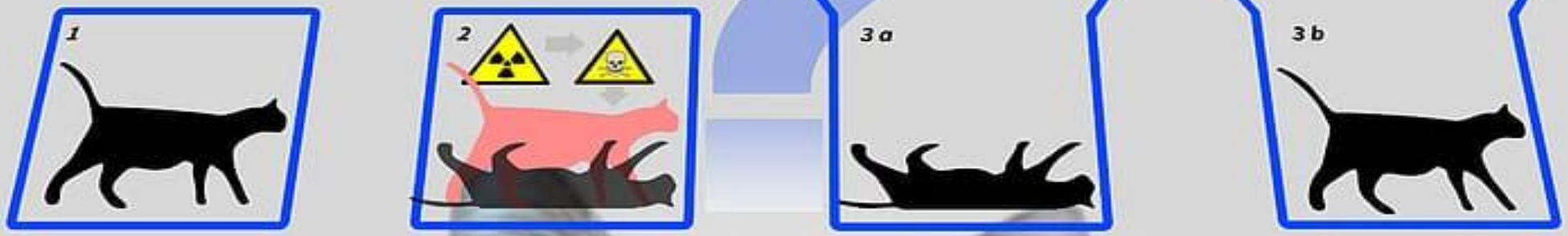
Coulomb Gauge

$$\nabla \cdot \mathbf{A}(\mathbf{r}, t) = 0$$

Lorentz Gauge

$$\nabla \cdot \mathbf{A} + \frac{1}{c^2} \frac{\partial \varphi}{\partial t} = 0$$

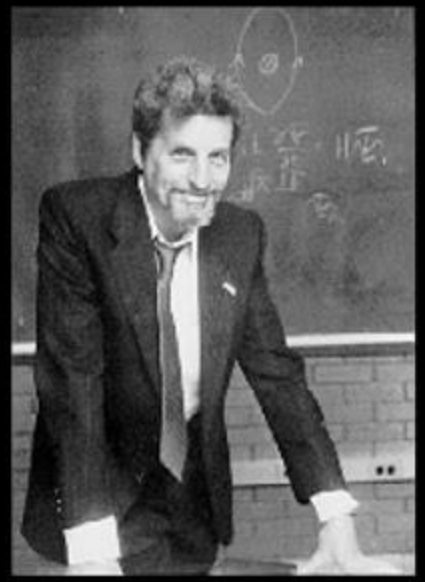
Is Quantum Mechanics Complete?

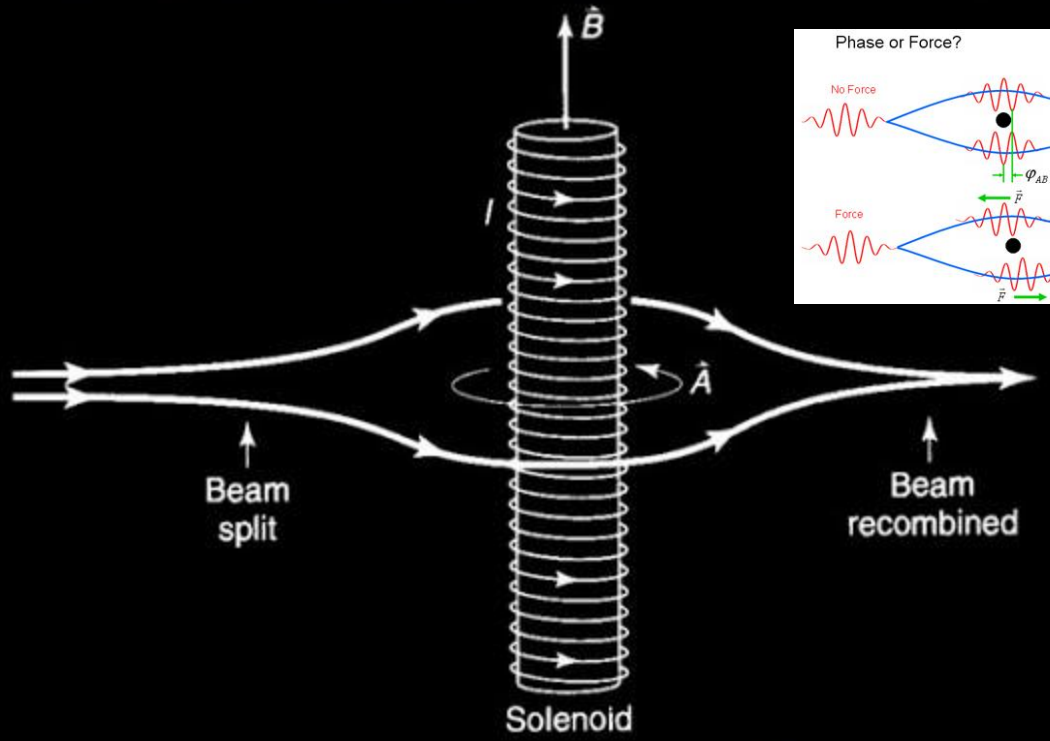


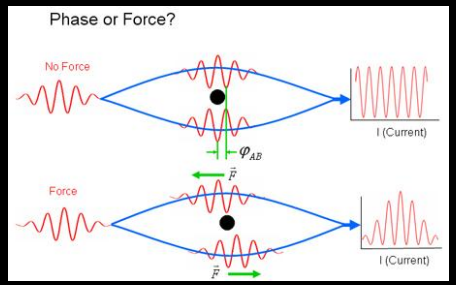
Ψ

It’s better to understand something than to know it…

Quantum Mechanics

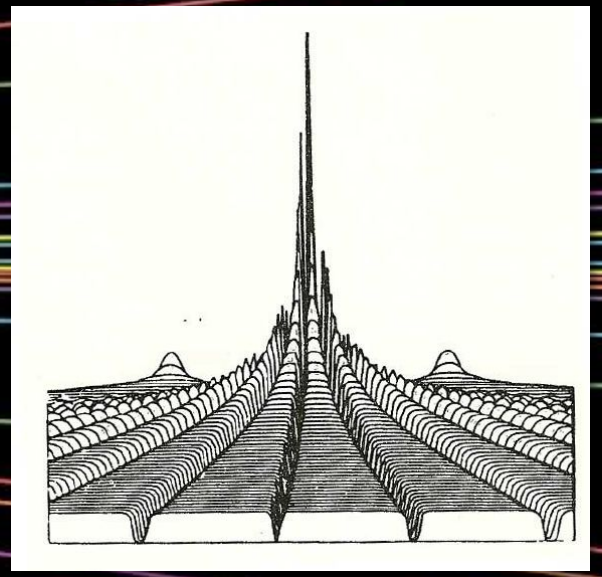






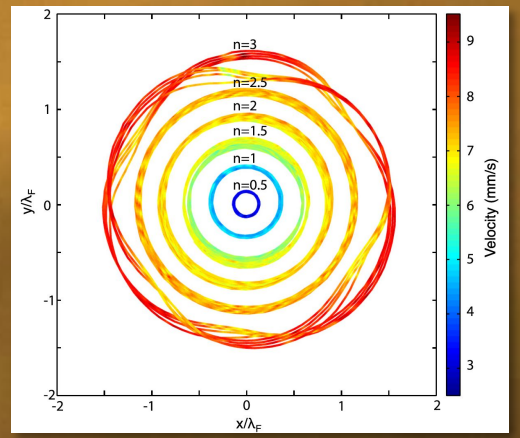
Aharonov-Bohm Effect

Bohmian Mechanics



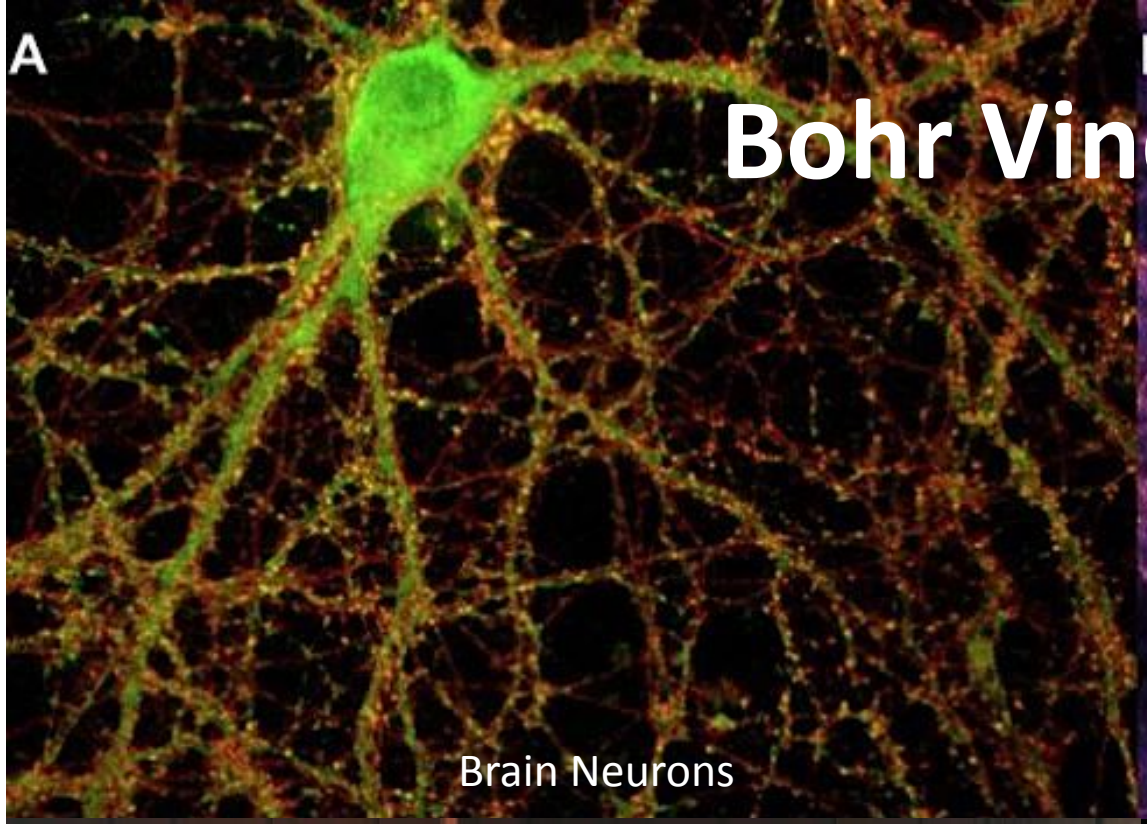
Quantum Potential

Walking Droplets

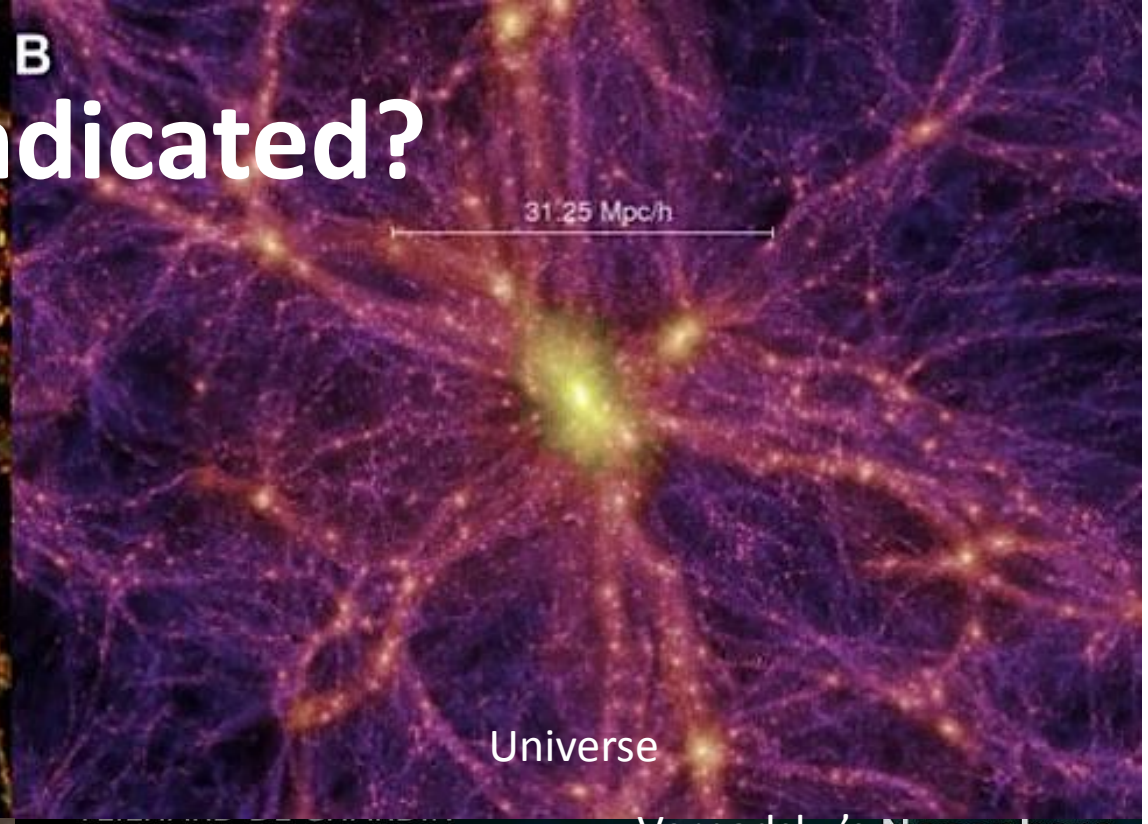


De Broglie's Pilot Wave? Bohm’s Quantum Potential?

Bohr Vindicated?

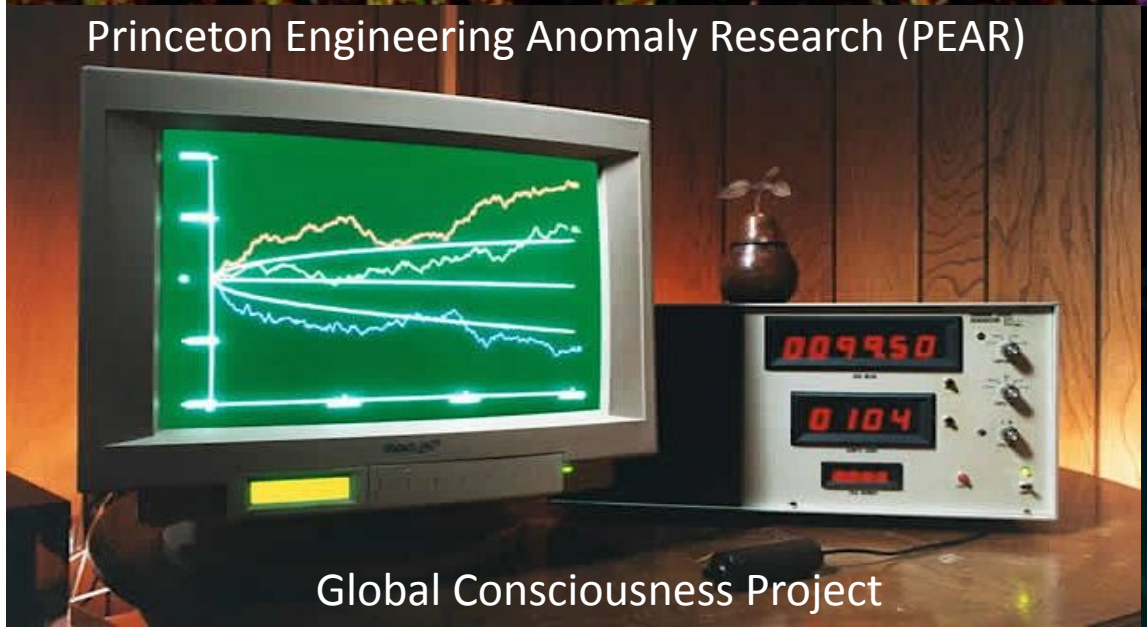


Brain Neurons



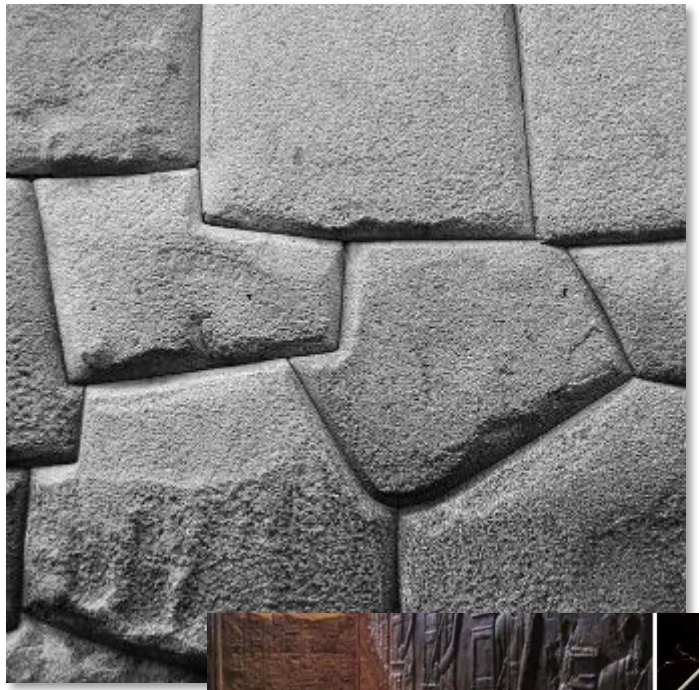
Universe

Princeton Engineering Anomaly Research (PEAR)



Global Consciousness Project

How Is This Possible?



Polygonal Masonry, Peru

Hutchinson Effect

William Jensen's Bent Drill Bits

Temple of Hathor Staircase, Egypt

The Theory of Universal Medium

Tenets

1. Electrons and Protons are ether sources and sinks
2. All interactions are fundamentally electric in nature
   - Magnetism is a an electric interaction between moving charges
3. Gravity is a residual (pushing) force that arises from the fact that it takes an integral over all space for positive and negative charges to fully compensate each other (due to their infinite 1/r2 potentials)
   - Similar La Sage's theory of gravity

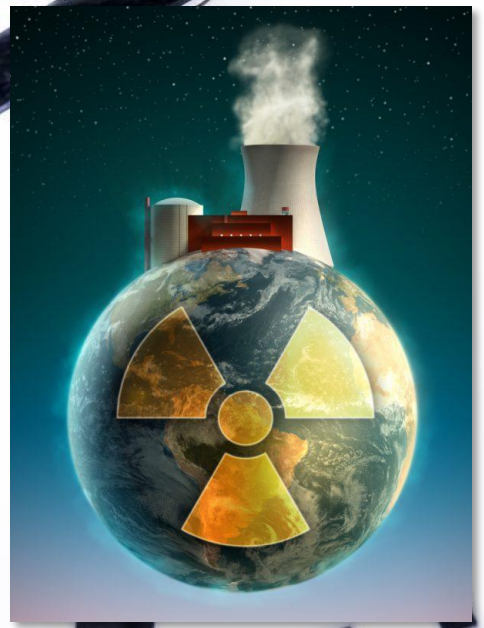
Predictions

1. High charge concentrations (depending on polarity) will speed up or slow down nuclear time
   - Fully ionized isotopes decay much faster (especially rhenium-187)
2. High charge concentrations (especially the reverse polarity charge configurations) may respond differently to gravity
   - We see effective masses of electrons increase in heavy fermion materials

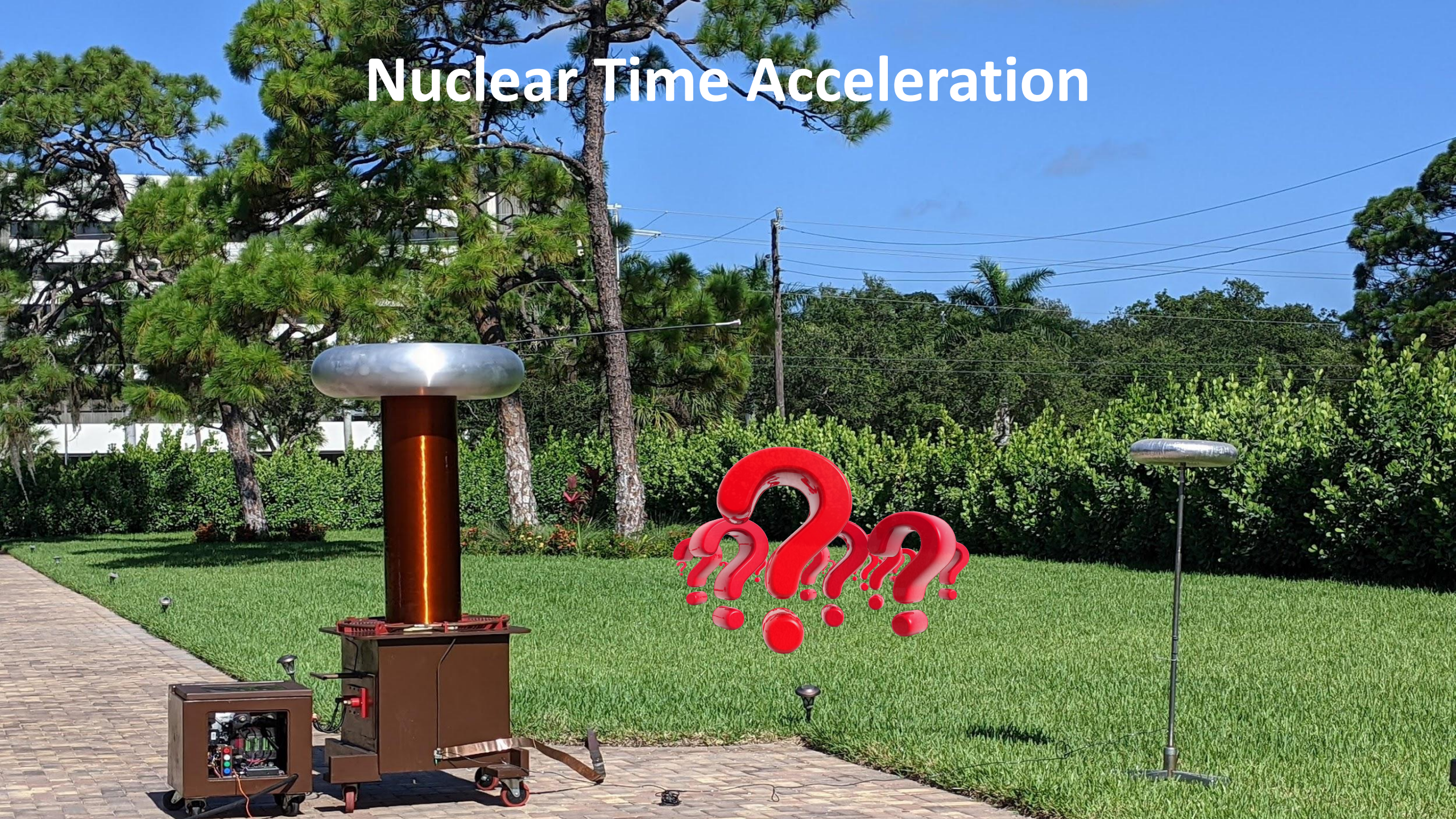
Where Does Time Irreversibility Come From?

- Noise is ubiquitous!
- Noise makes all processes irreversible.
- It is like editing an image in Photoshop: when you heavily manipulate an image you cannot recover the original by performing the same manipulations in reverse order because of noise, which accumulates with every operation.

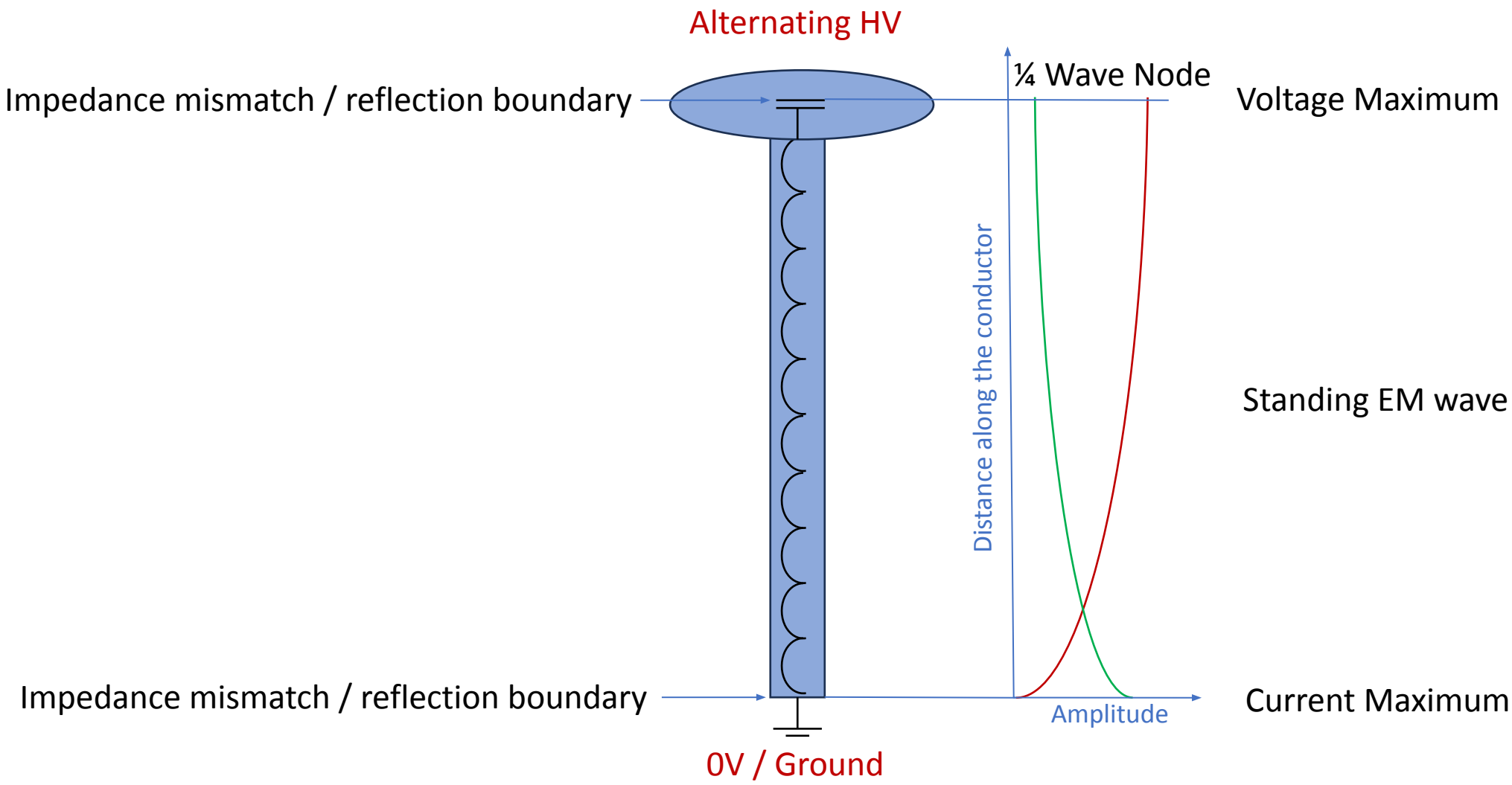
How Many Dimensions Does the Universe Have?



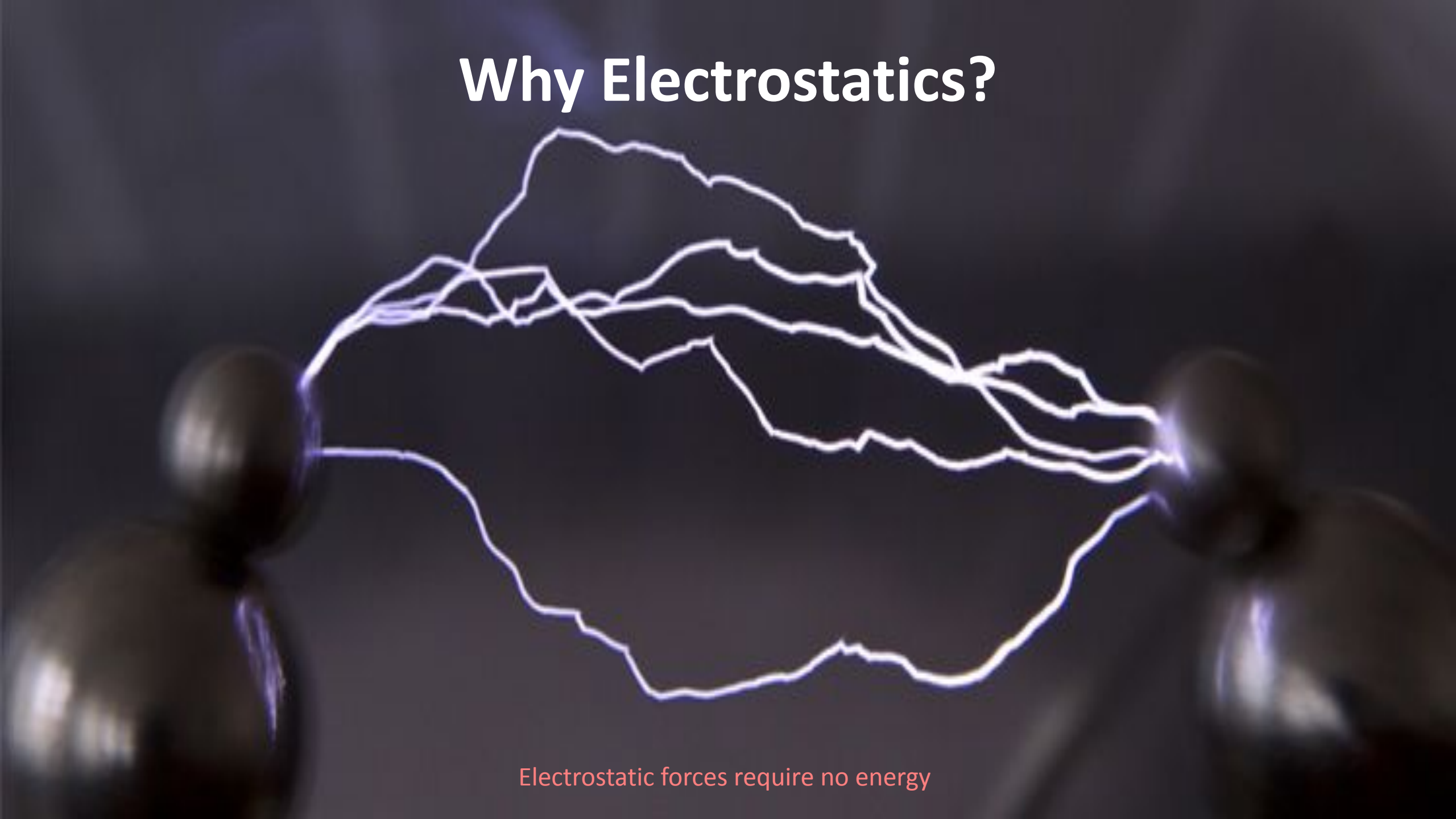
Nuclear Time Acceleration



What is Tesla Coil?

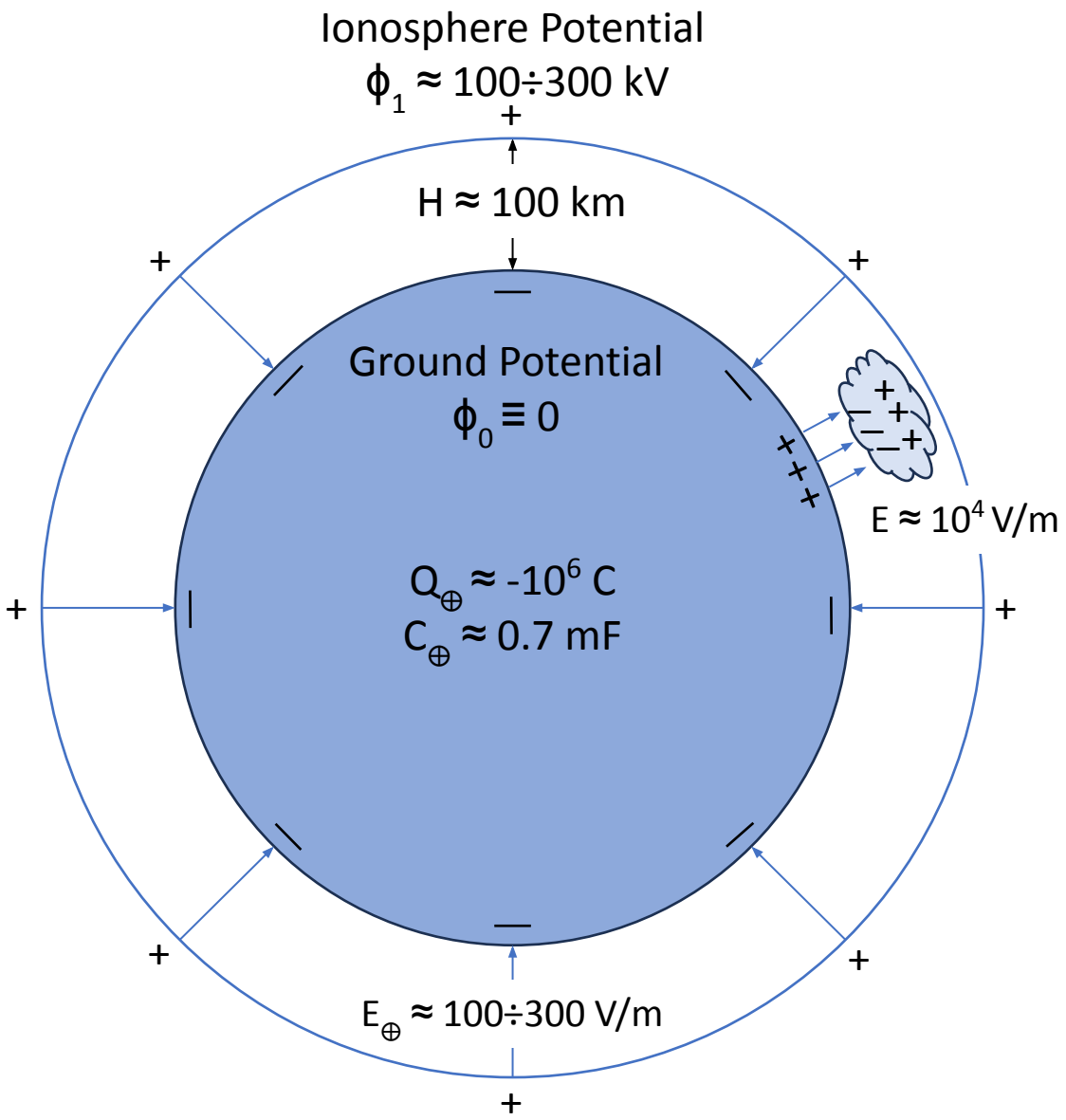


Why Electrostatics?



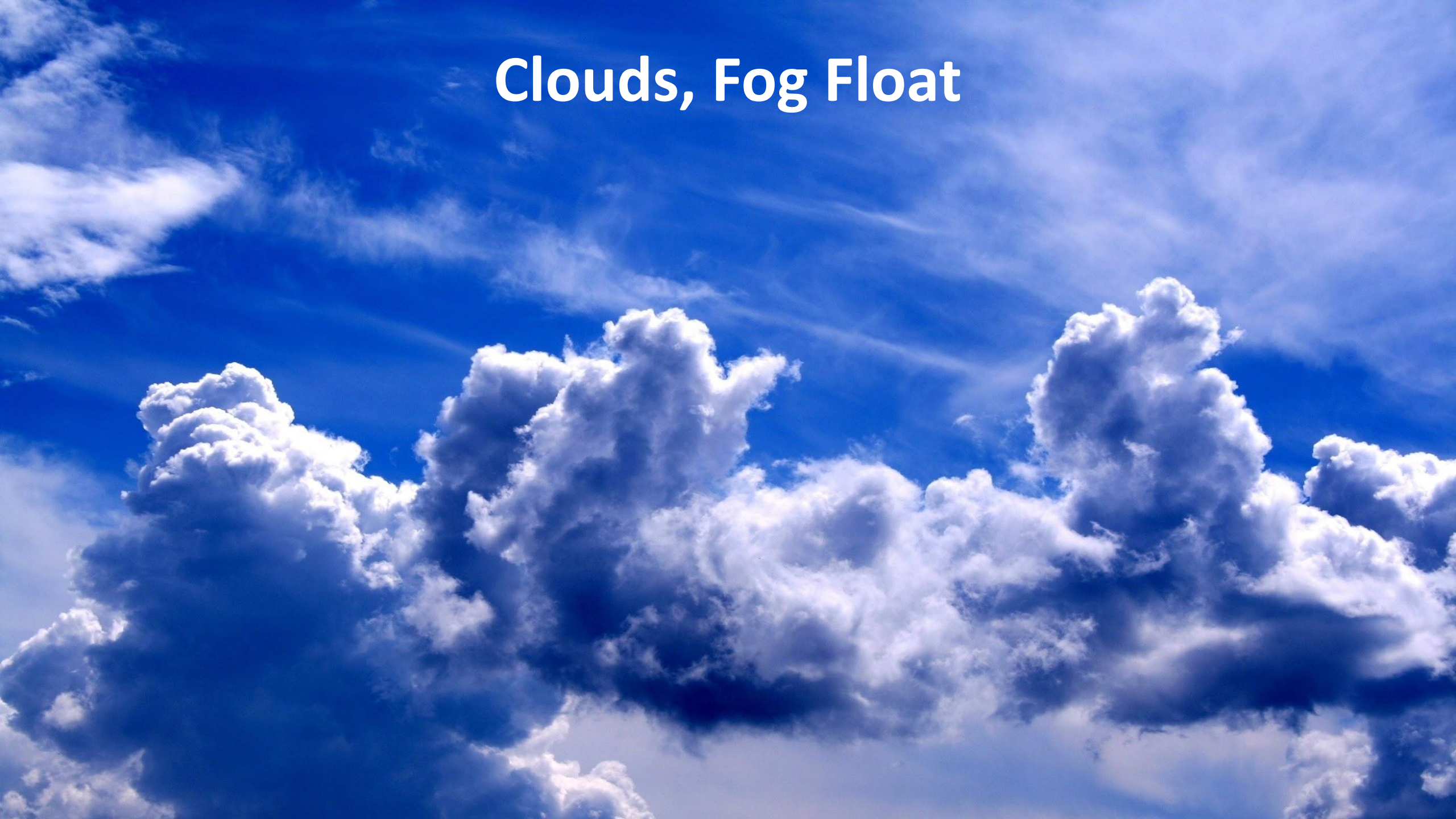
Electrostatic forces require no energy

Earth Is Electric!

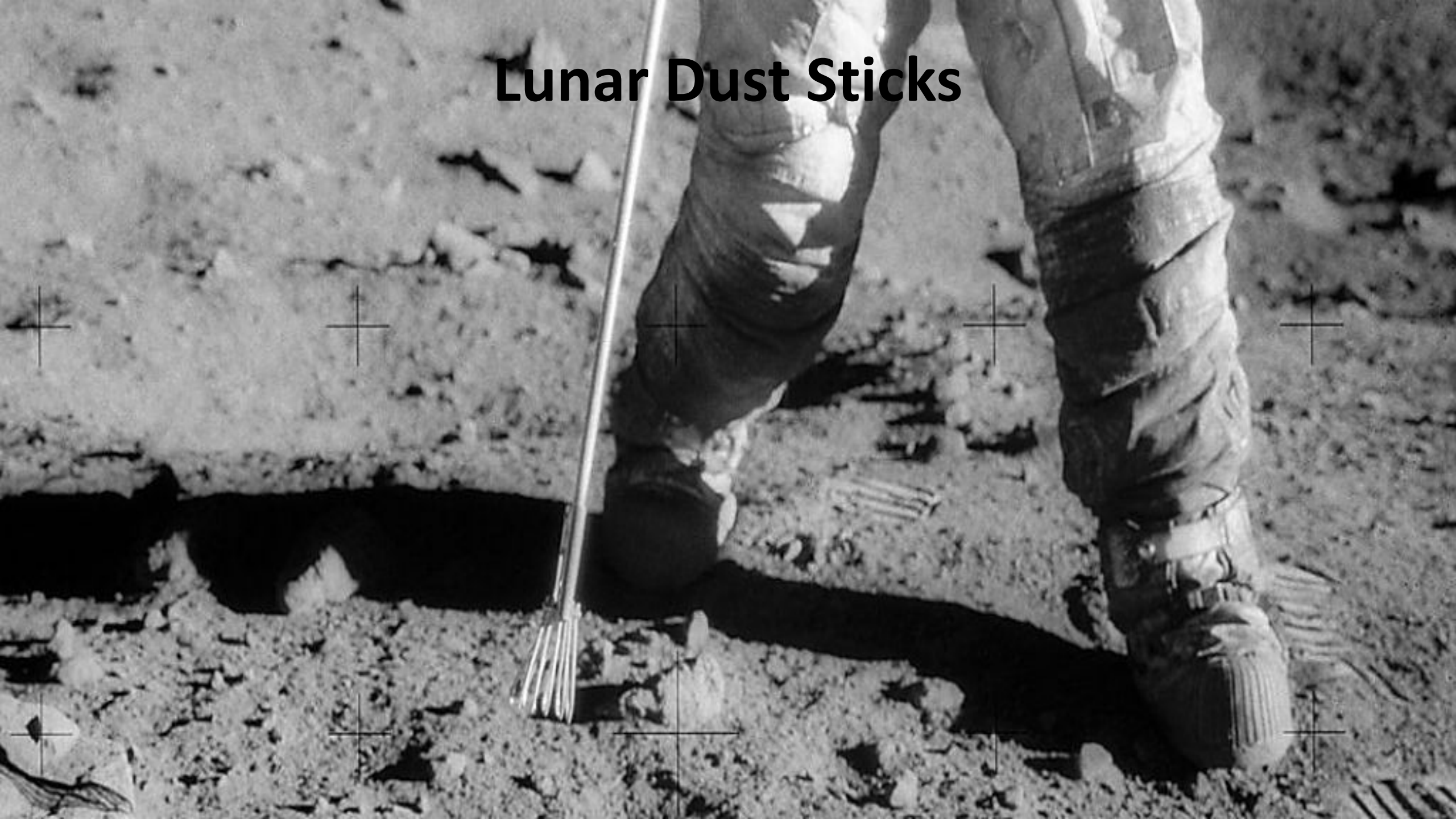


Ballooning Spiders Levitate!

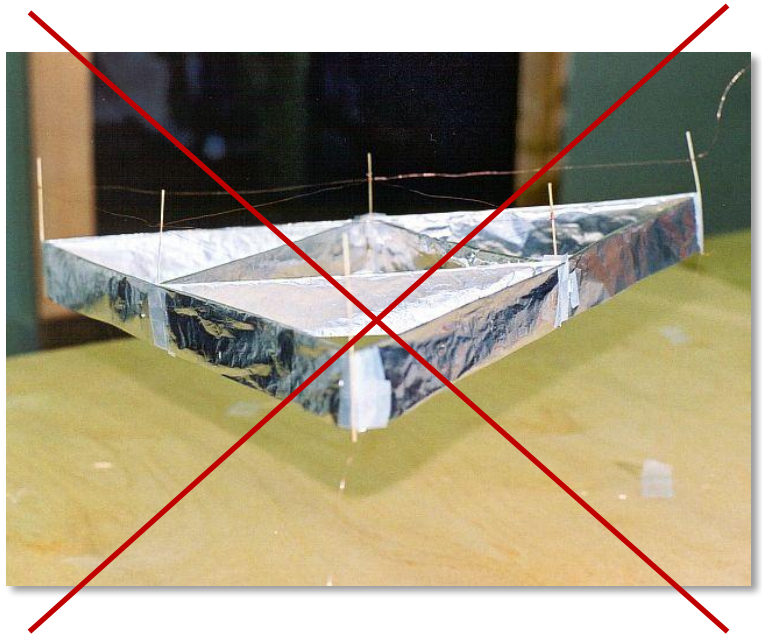
Clouds, Fog Float



Lunar Dust Sticks

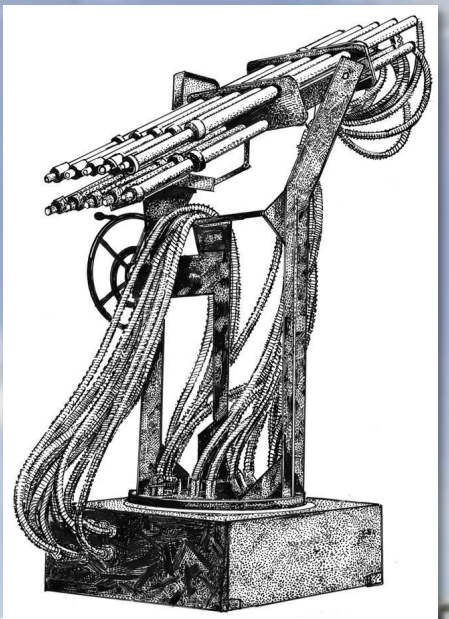


Biefeld-Brown Effect



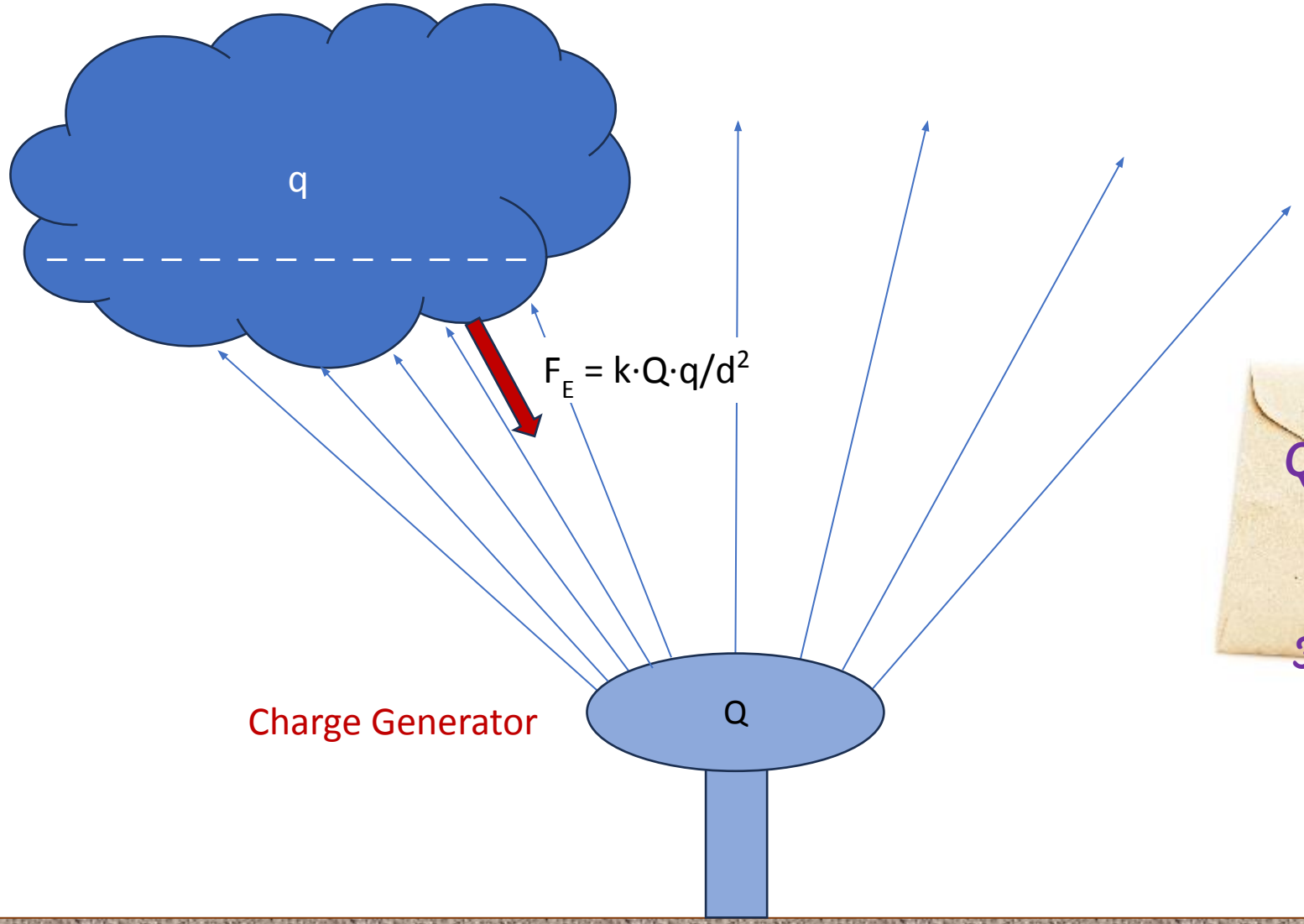
Ion Wind Lifter

Orgone / Cloud Busting



Reich's Cloud Buster

Cloud Tugging



$Q = 1\ MV \cdot 10\ nF = 0.1\ C$

$q = 10\ C$

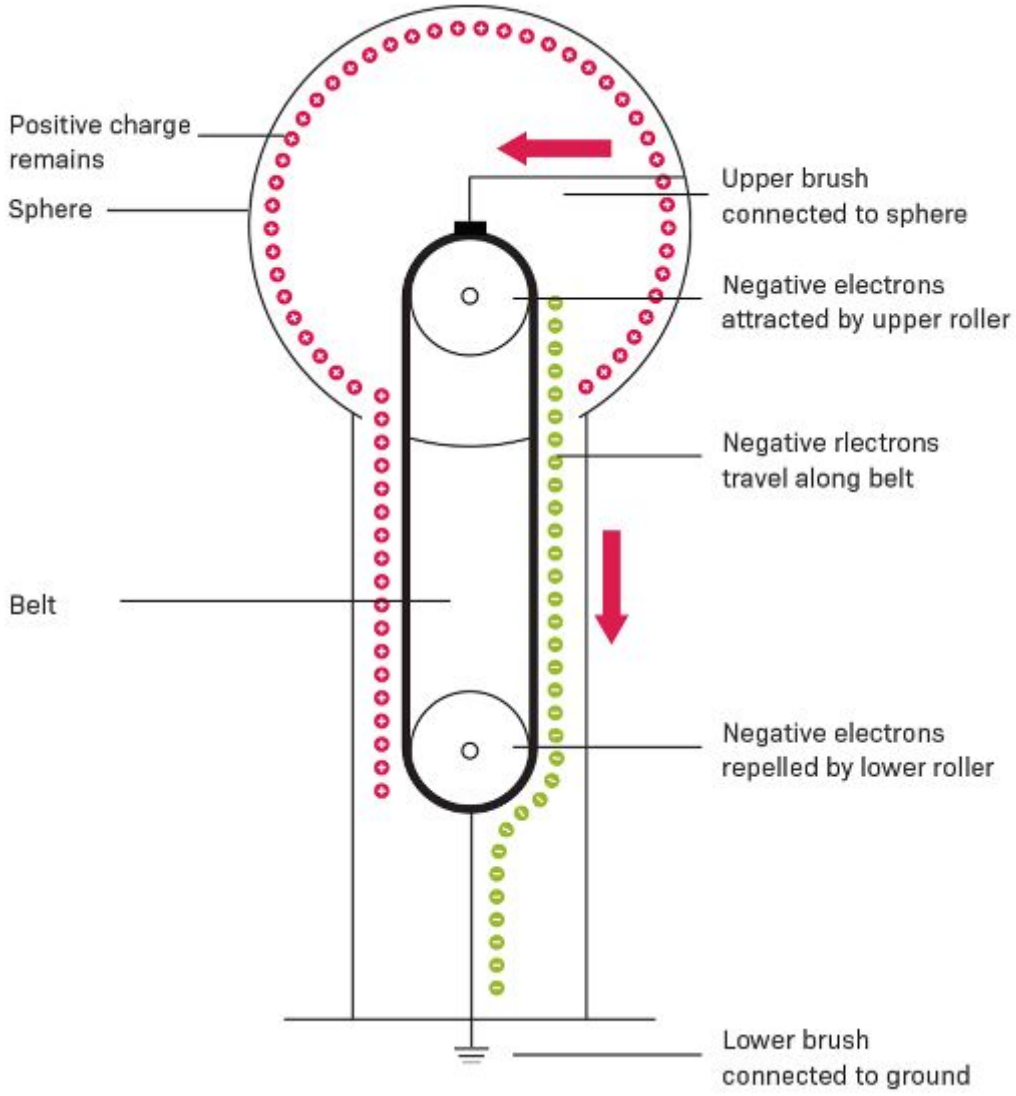
$d = 1000m$

$F \approx 10^{10} \cdot 0.1 \cdot 10 / 1000^2 = 10^3\ N$

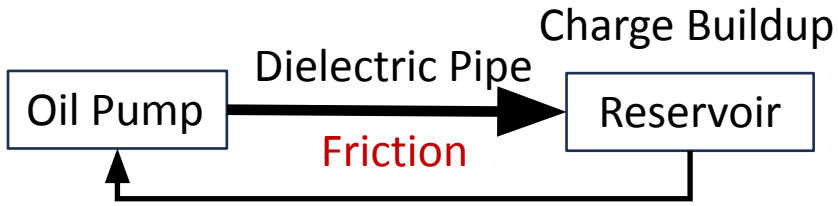
Hurricane Deflection

Van der Graaf Charge Generator

Potentials in excess of 10 MeV are possible



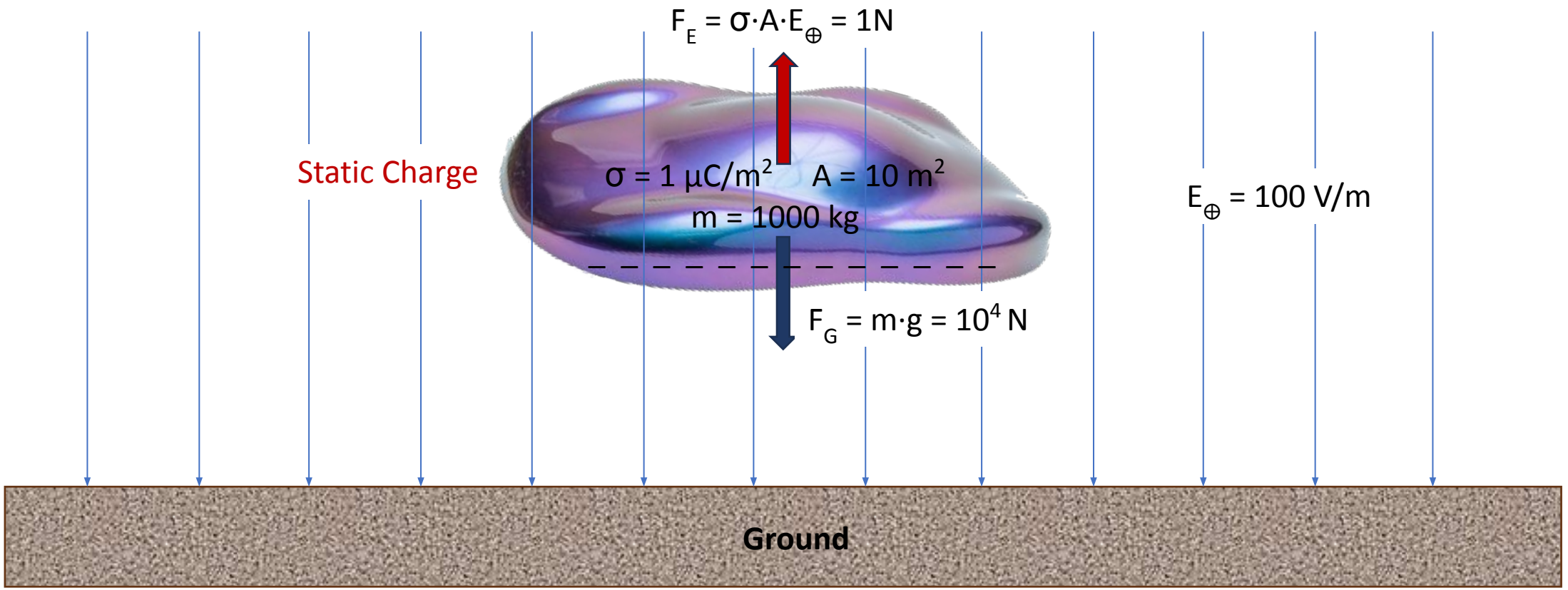
Flowing Oil Charge Generator



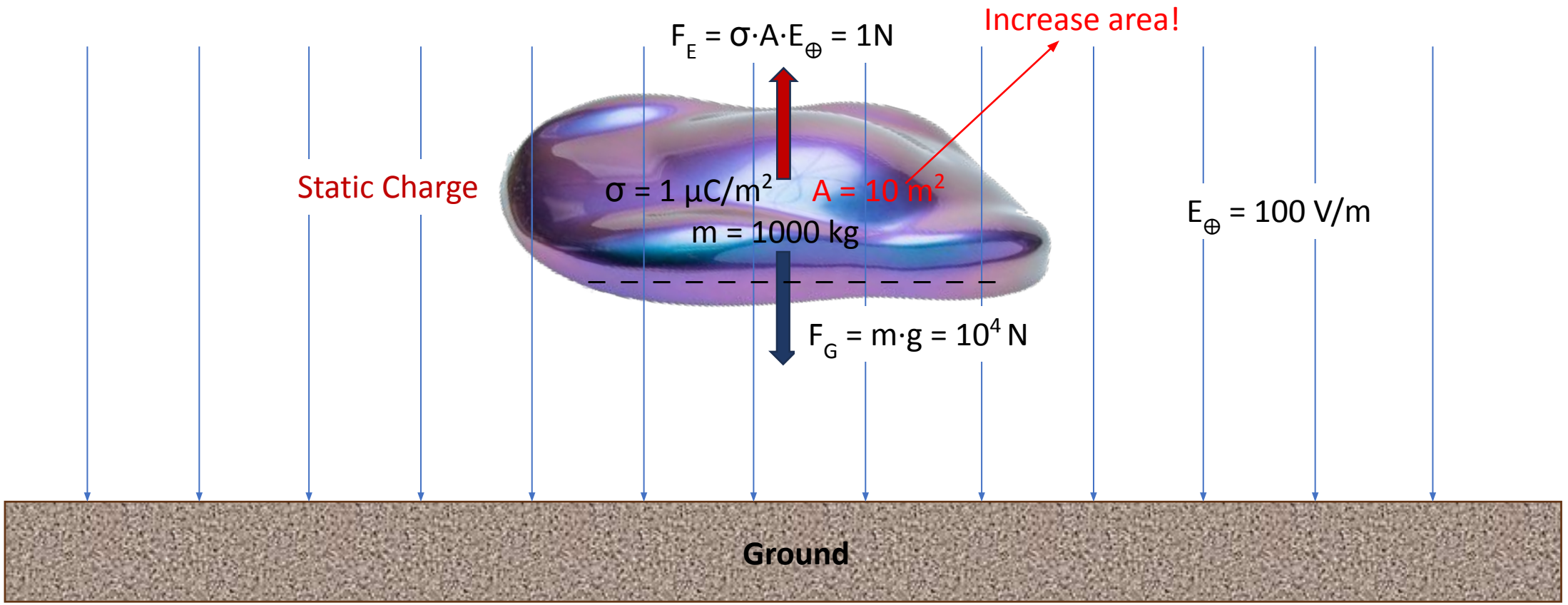
Electrets

- Permanent electrostatically charged materials
- Unipolar charge possible
- Charge densities up to $\sigma = 1\ \mu C/m^2$
- Teflon, polypropylene, polyethylene, etc.
- Charging through friction or corona discharge

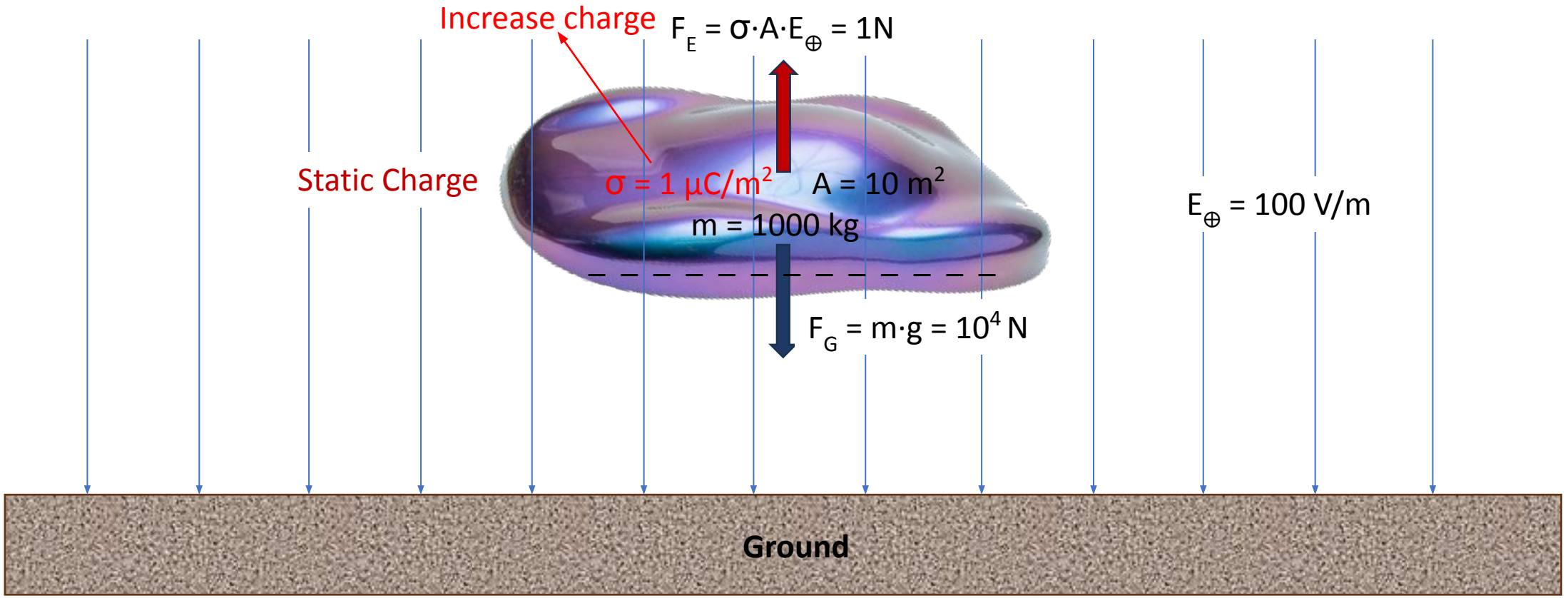
Electrostatic Levitation: Earth



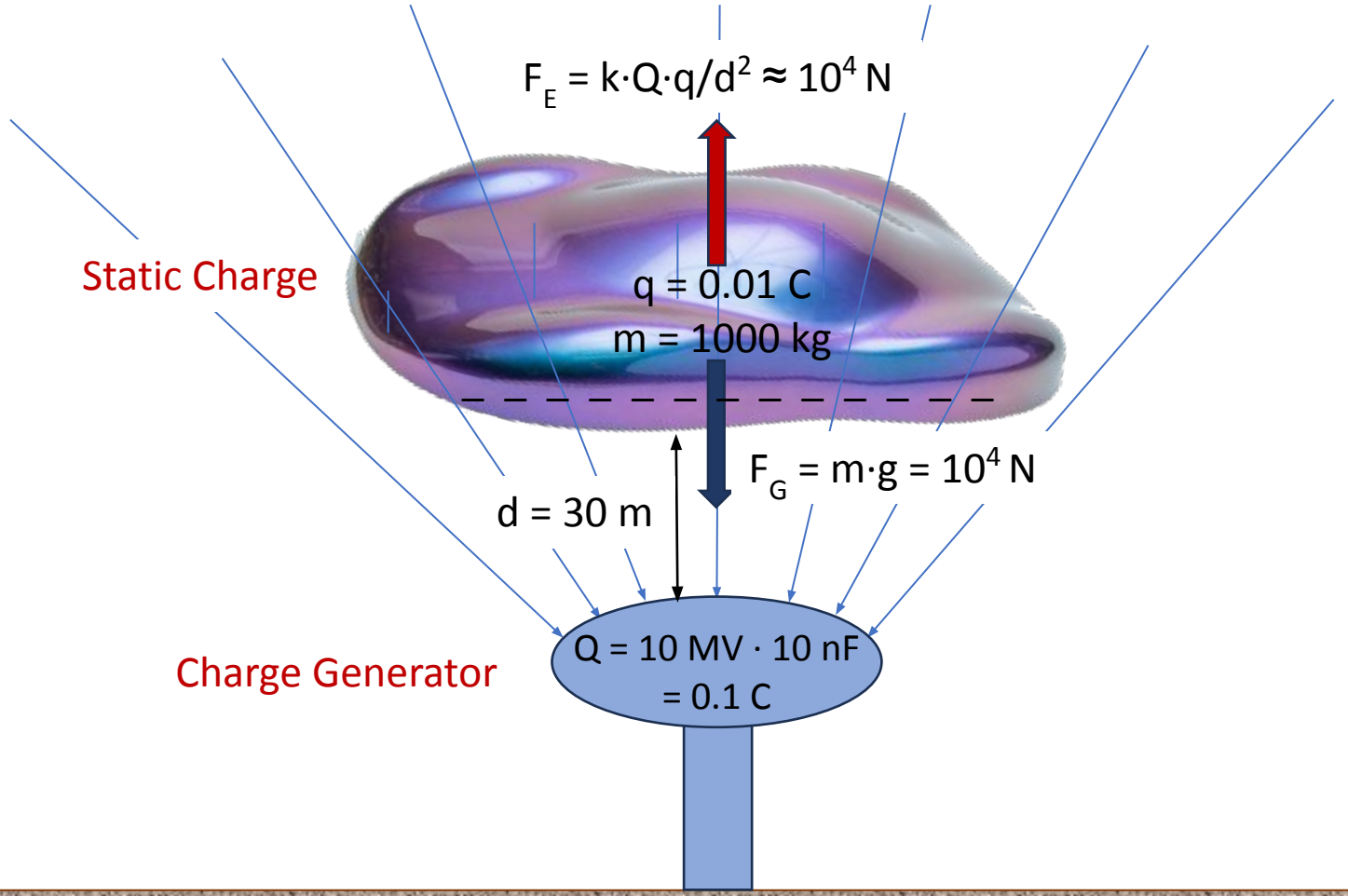
Electrostatic Levitation: Earth



Electrostatic Levitation: Earth



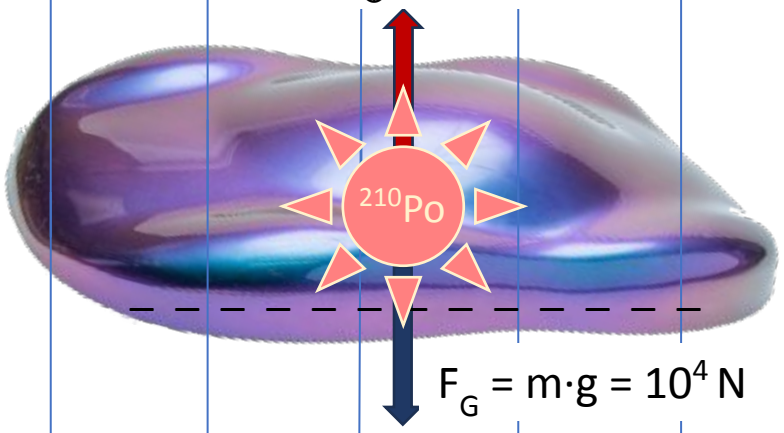
Electrostatic Levitation Using Charge Generator



Levitation Due to Radioactive Decay

$F = q \cdot E_{\oplus} > 10^4$ N ?

Dynamic Charge Generation



$F_G = m \cdot g = 10^4$ N

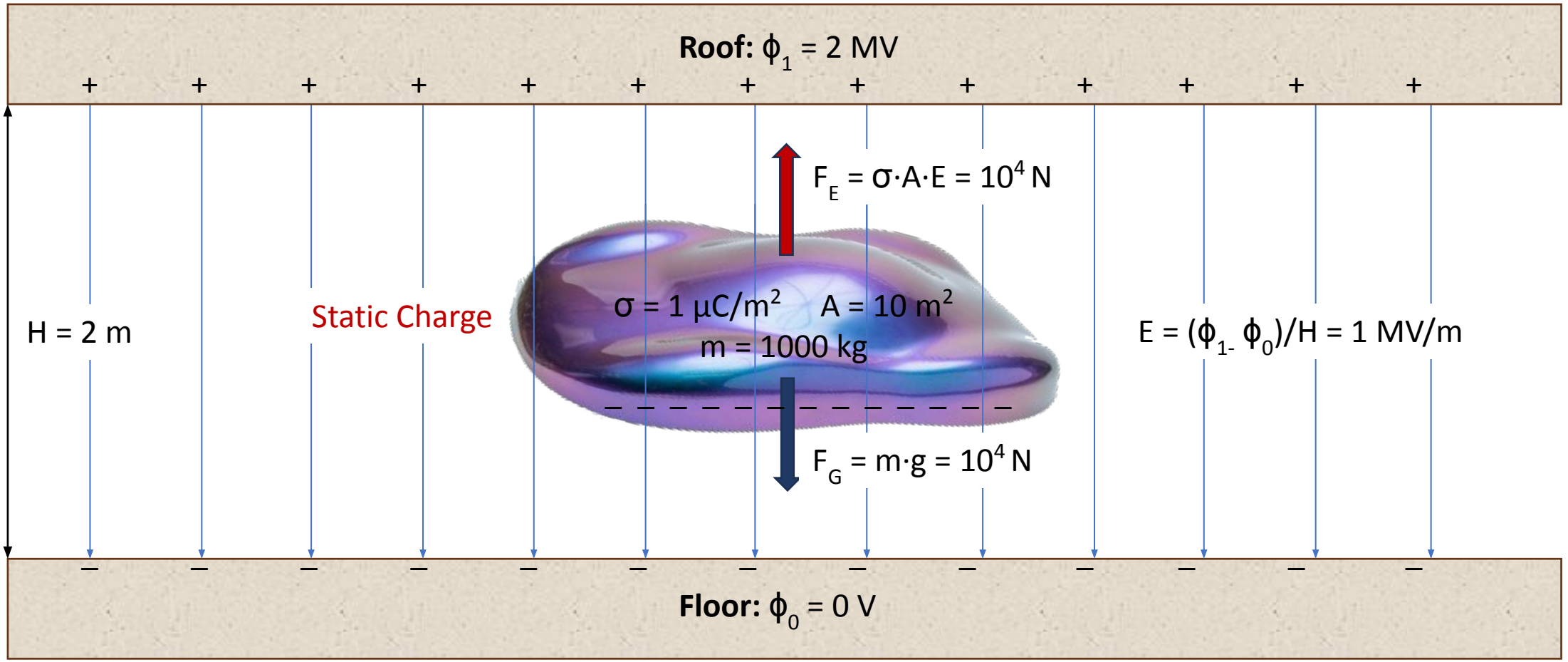
$E_{\oplus} = 100$ V/m

???

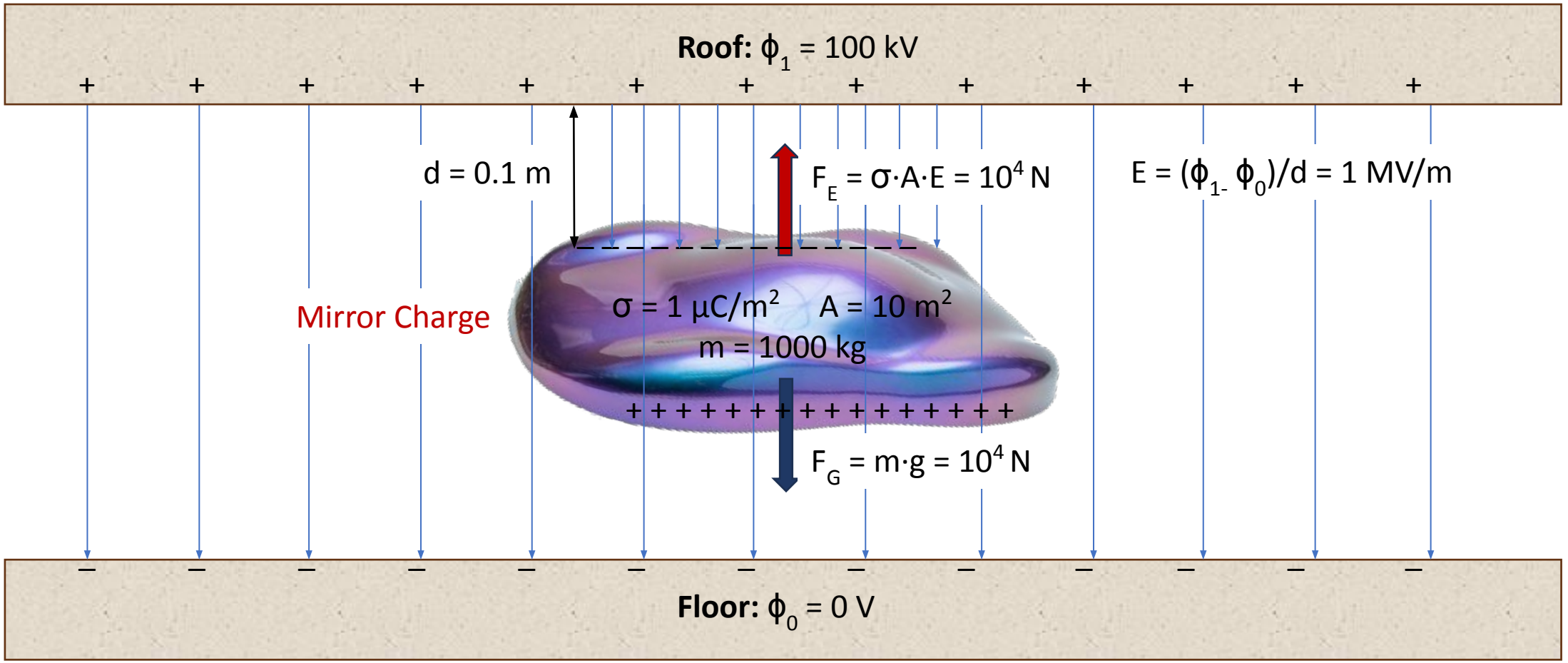
- 1 Ci of ^{210}Po emits 3.7×10^{10} α-particles/second
- 1 Ci of ^{210}Po weighs 0.2 mg
- 1 kg of ^{210}Po will generate ≈ 0.05 C/s
- Final charge q will depend on the rate of charge loss

Ground

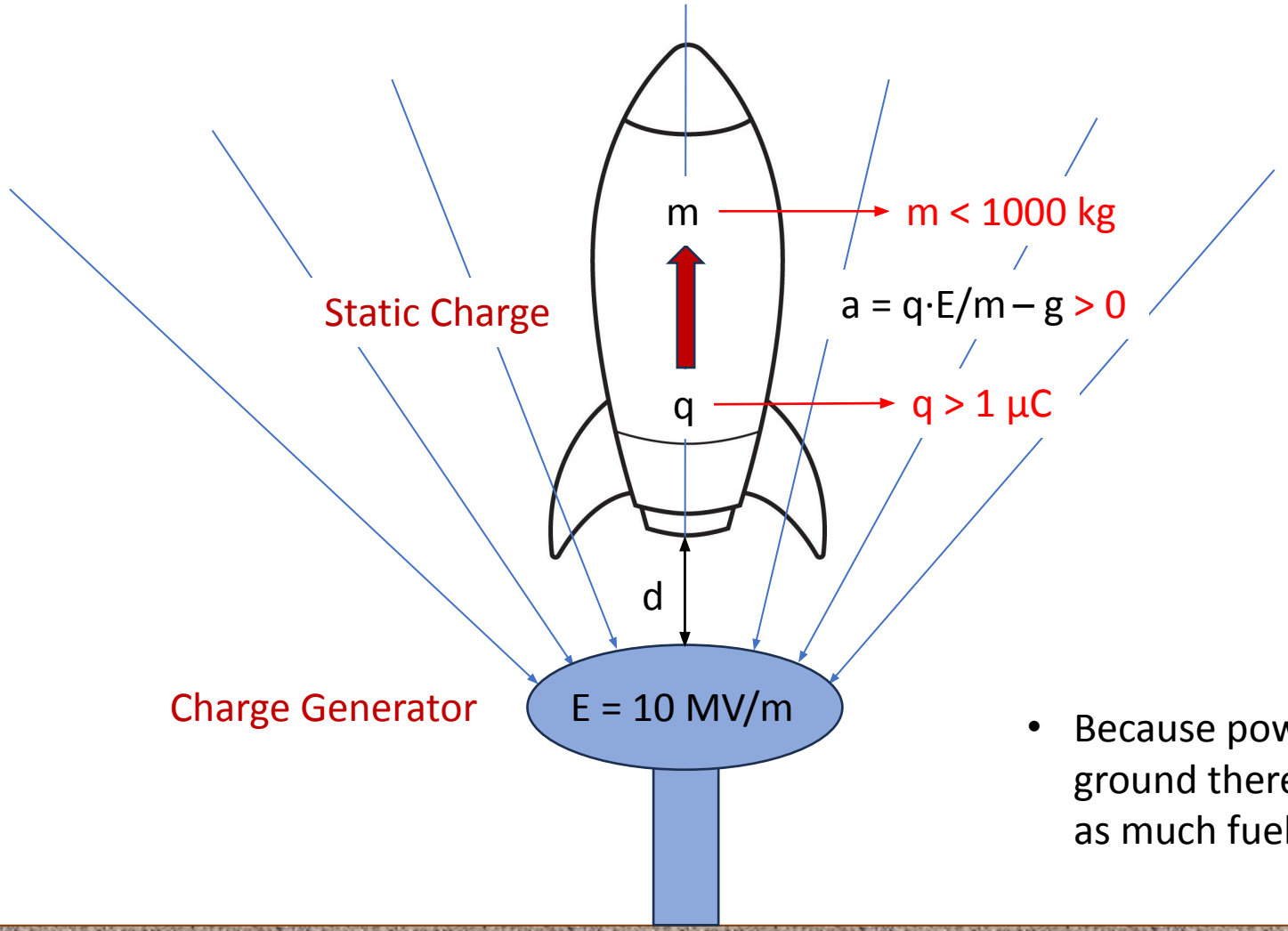
Electrostatic Levitation: Tunnel



Electrostatic Levitation: Tunnel



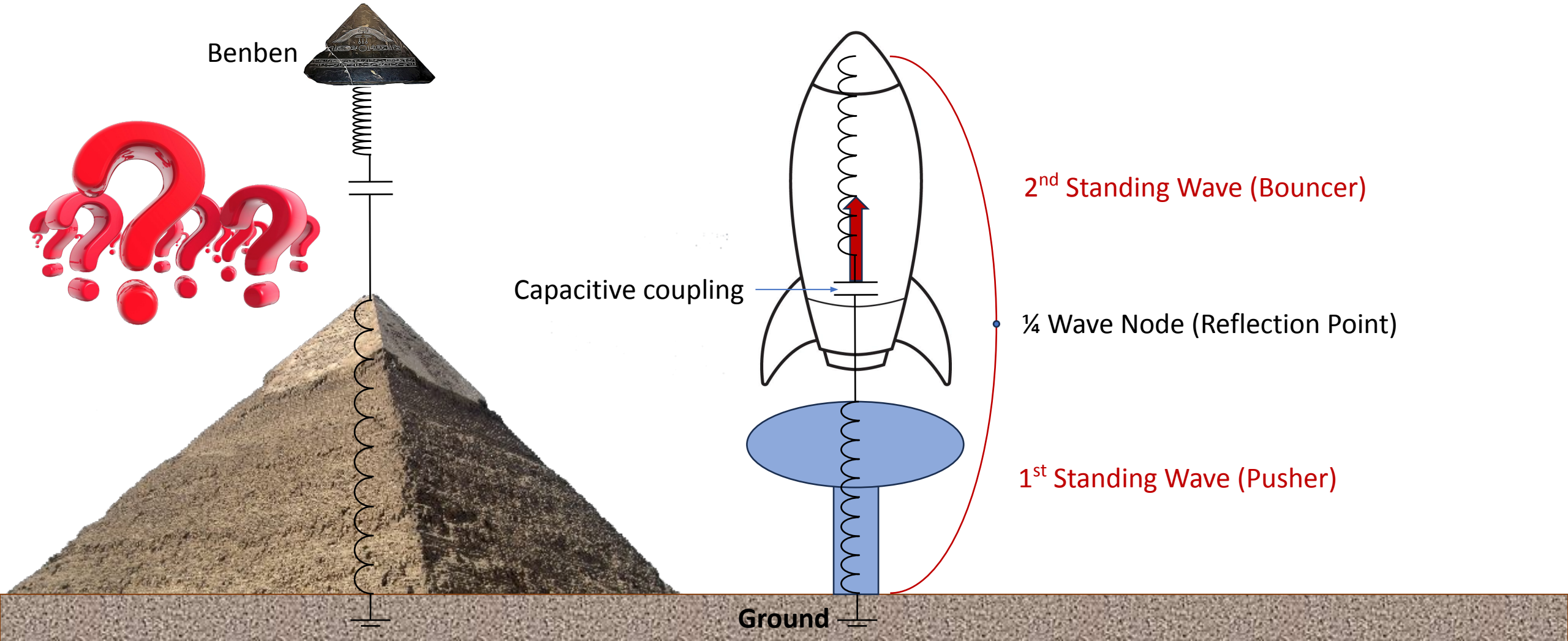
Electrostatic Space Launch System



- Because power is provided from the ground there is no need to carry nearly as much fuel!

Electrostatic Space Launch System

Repulsion between two capacitively coupled standing EM waves



Electrostatic Space Launch System

Repulsion between two capacitively coupled standing EM waves

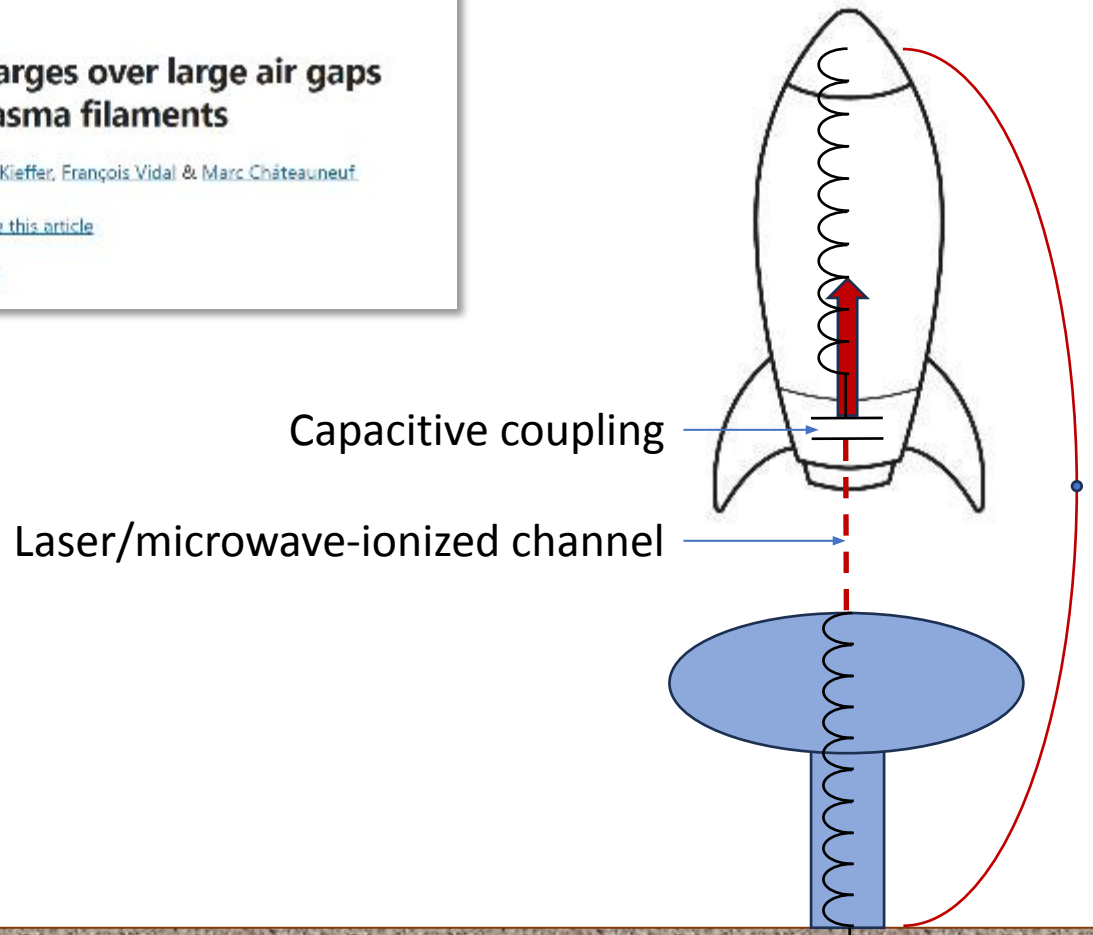
nature > scientific reports > articles > article

Article | Open access Published: 05 January 2017

Laser-guided energetic discharges over large air gaps by electric-field enhanced plasma filaments

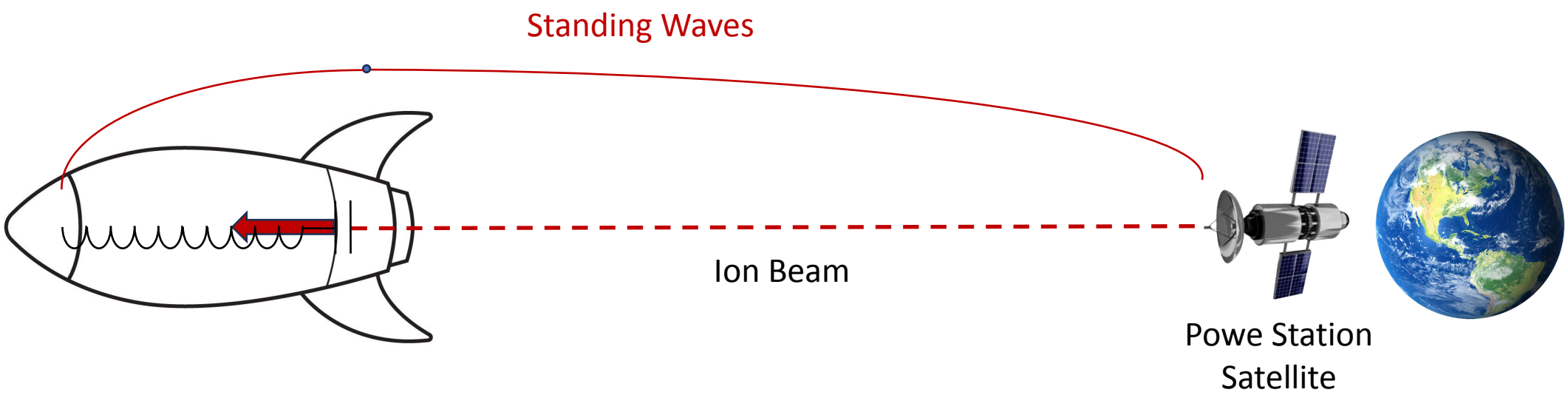
Francis Théberge, Jean-François Daigle, Jean-Claude Kieffer, François Vidal & Marc Châteauneuf

Scientific Reports 7, Article number: 40063 (2017) | Cite this article



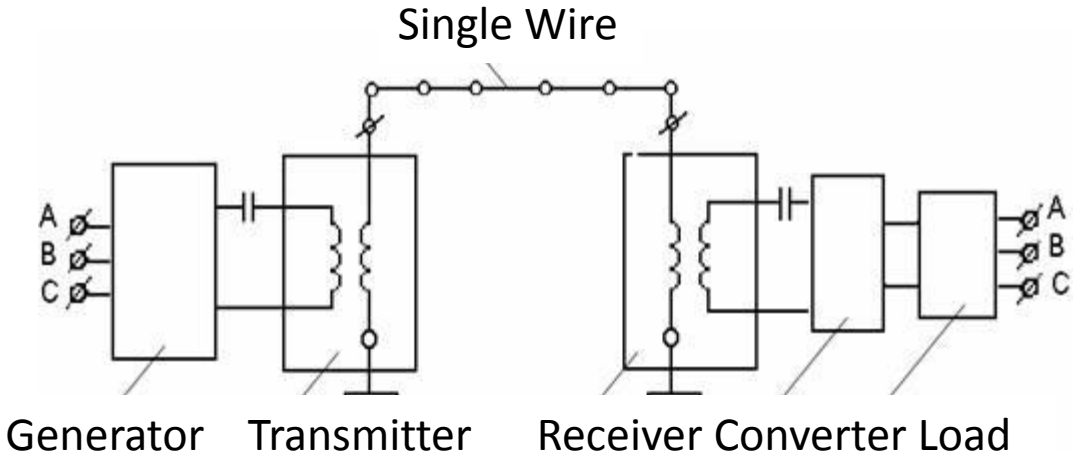
Electrostatic Deep-Space Propulsion

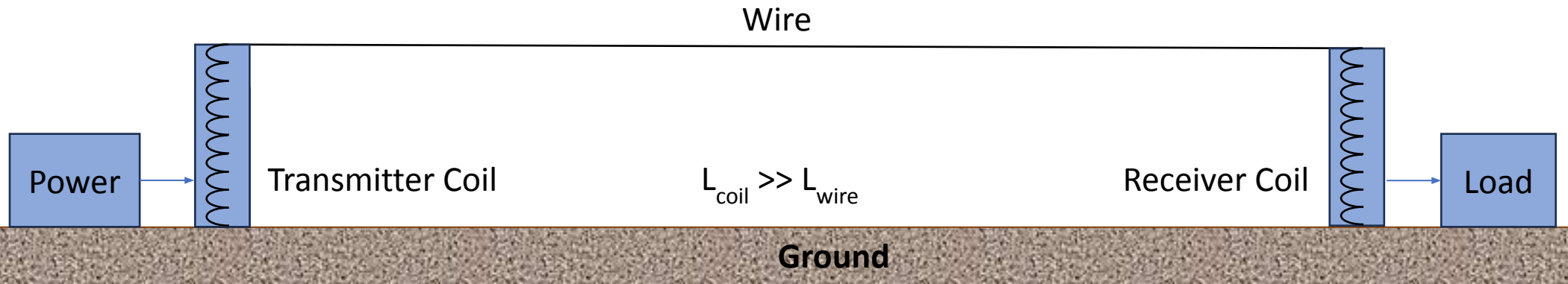
Conduction channel is afforded by the ion beam



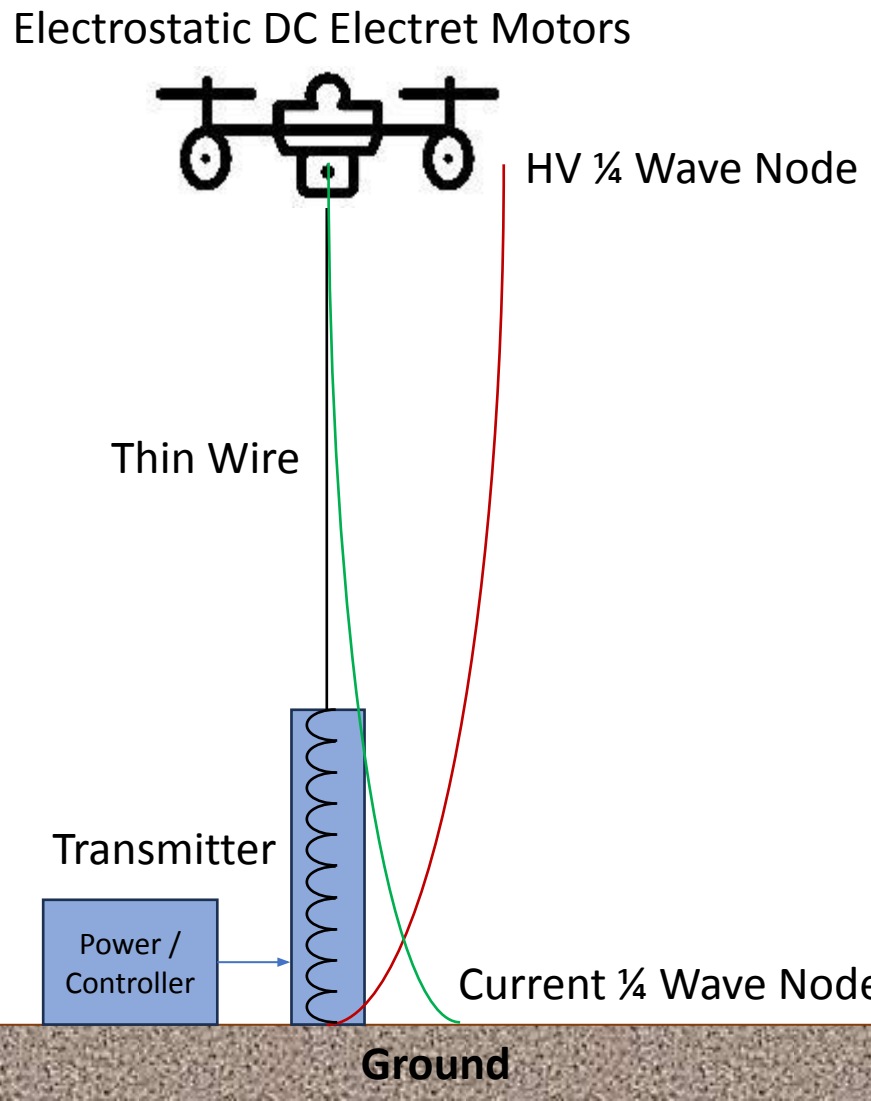
Single-Wire Power Transmission

High Voltage / Low Current / AC / High Power

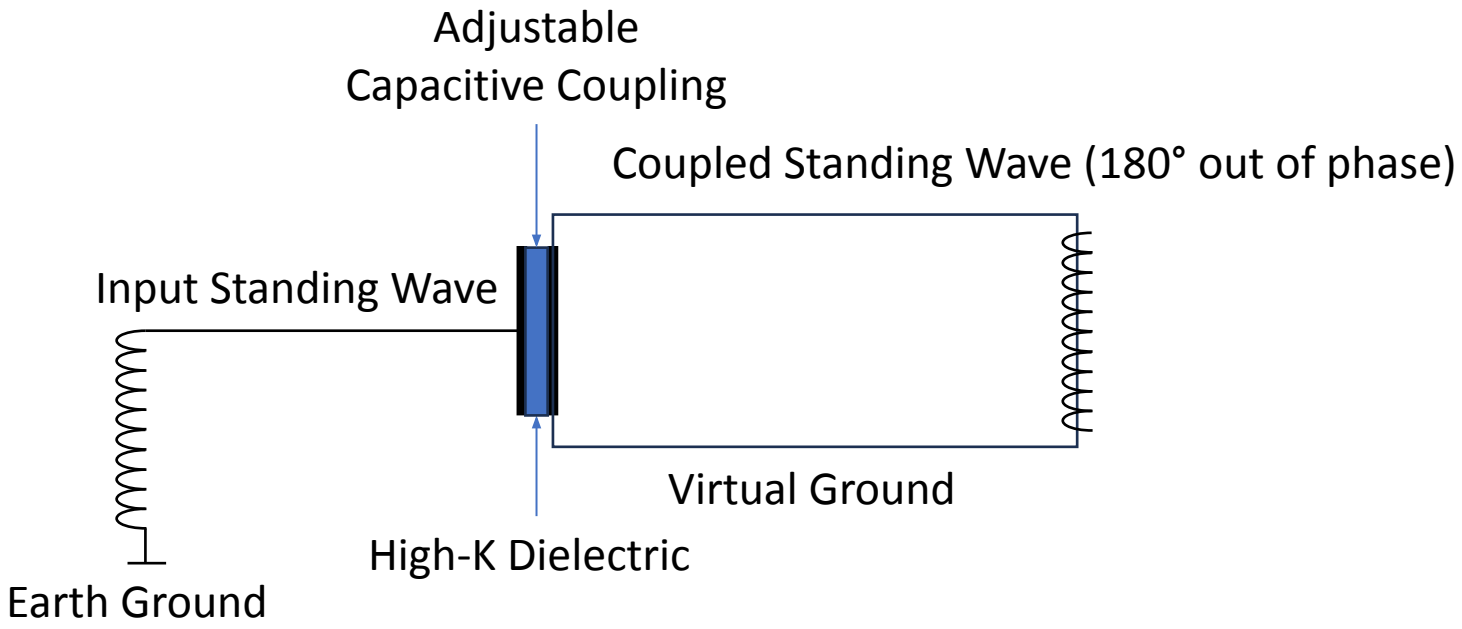




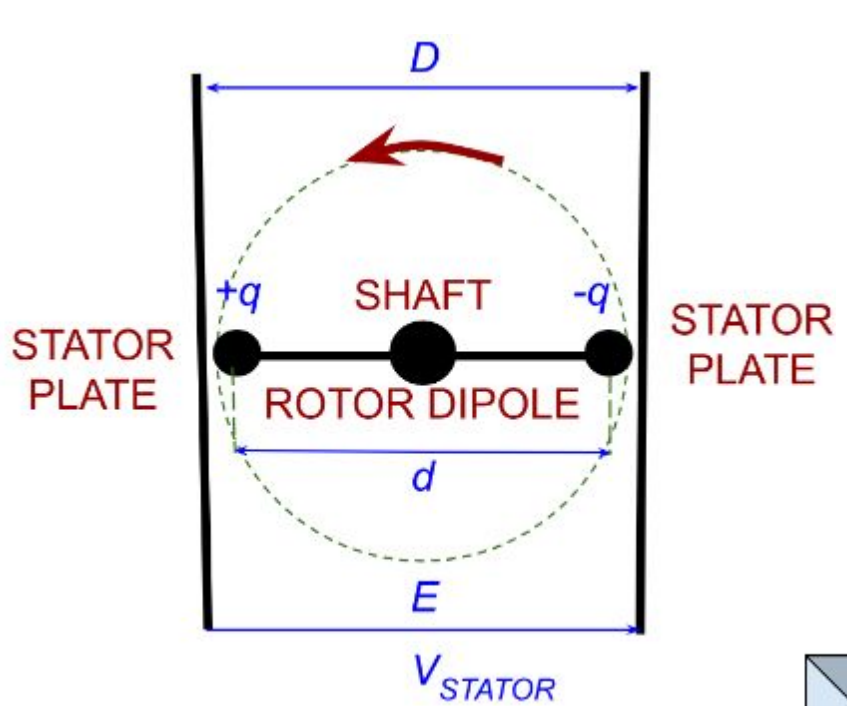
Single-Wire Drone

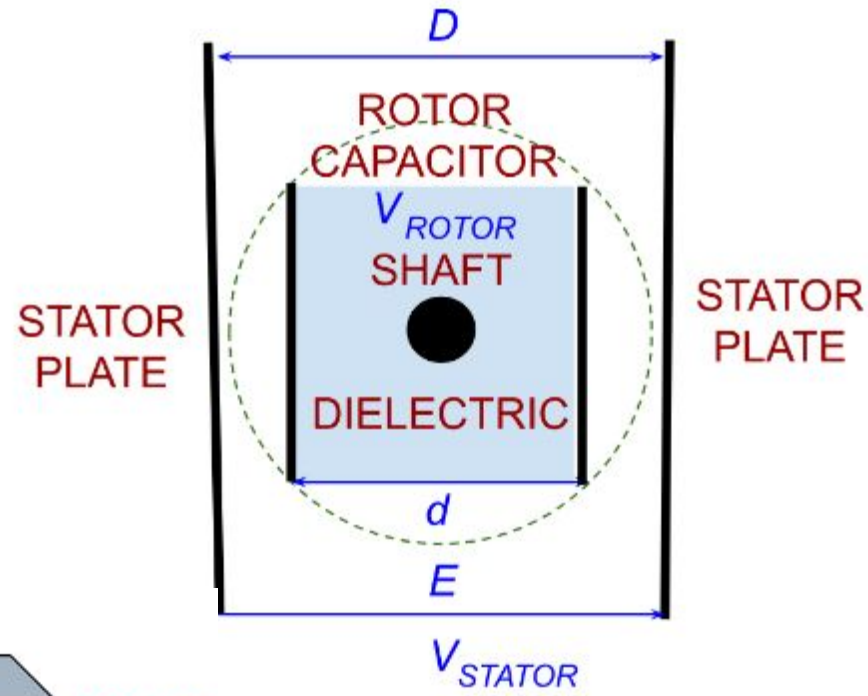


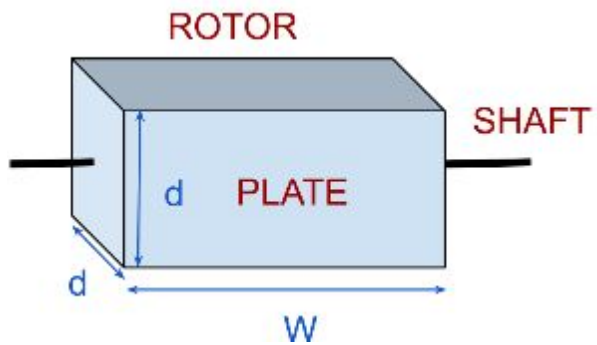
Capacitive Coupling for Power Take-Off



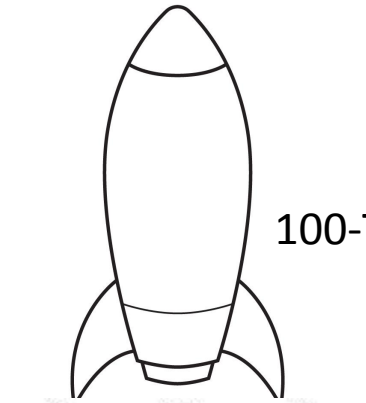
Electrostatic DC Electret Motor







Single-Wire Space Launch System



100-Ton High-Altitude Launch Vehicle

Engines:

- 10x Siemens SP2000
- Thrust: 10 · 100 kN (1.5-m propeller)
- Power: 10 · 2 MW

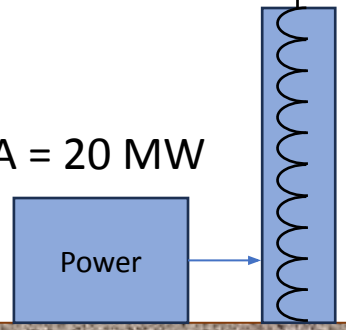
Tethered Booster

Tether:

- Copper over commercial 18-ga fishing line
- Wire resistance: 21 Ohm/km
- Power loss: 43 kW/km
- Wire weight: 7.5 kg/km

Altitude ~ 10 kM

Input Power = 2MV·10A = 20 MW



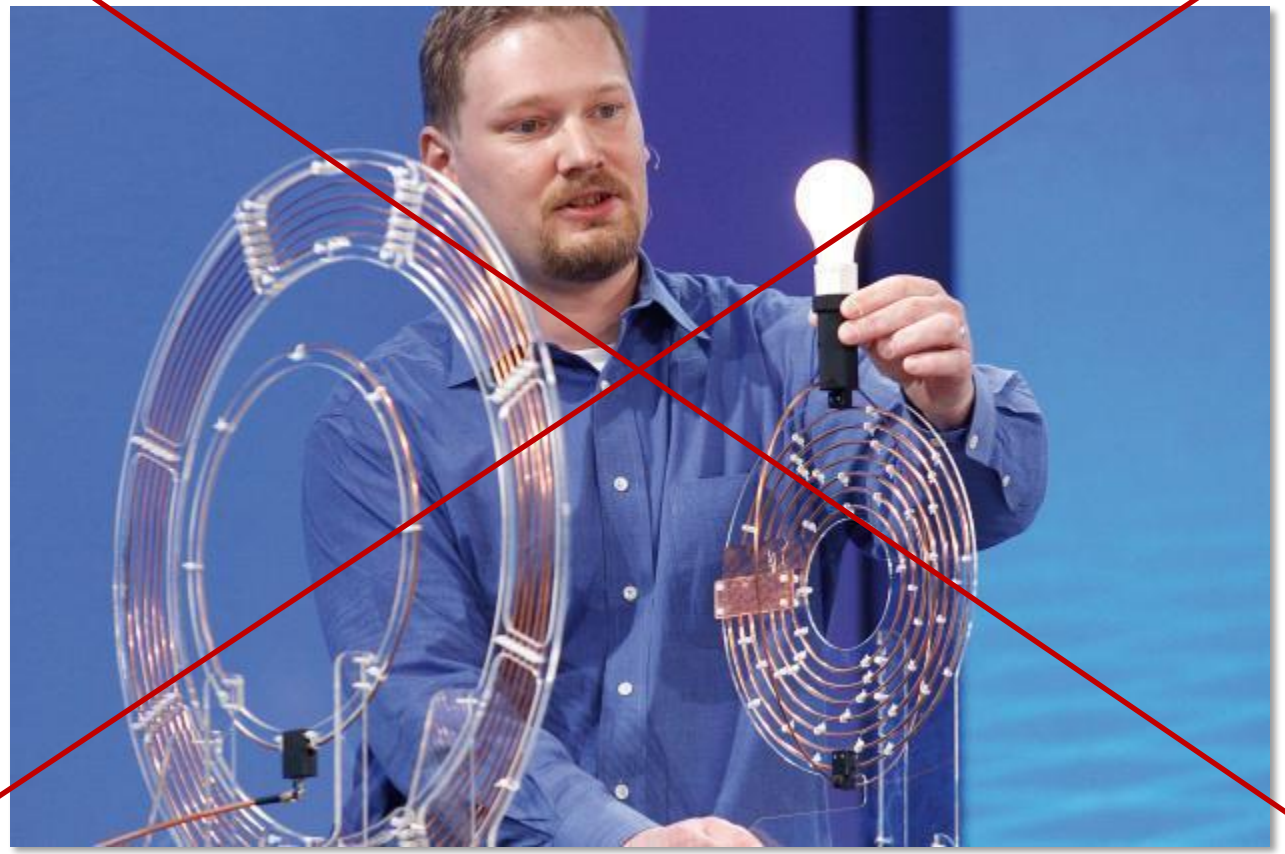
Ground

- High-altitude launch to LEO saves 2-3% of fuel.
- Because most payloads are only to 2-5% of the rocket mass, launching from high altitude allows increasing payload 50-100%.
- Doubling payload to LEO possible.

Wireless Power Transmission

WiTricity

WARDENCLYFFE



UNITED STATES FEDERAL COMMUNICATIONS COMMISSION

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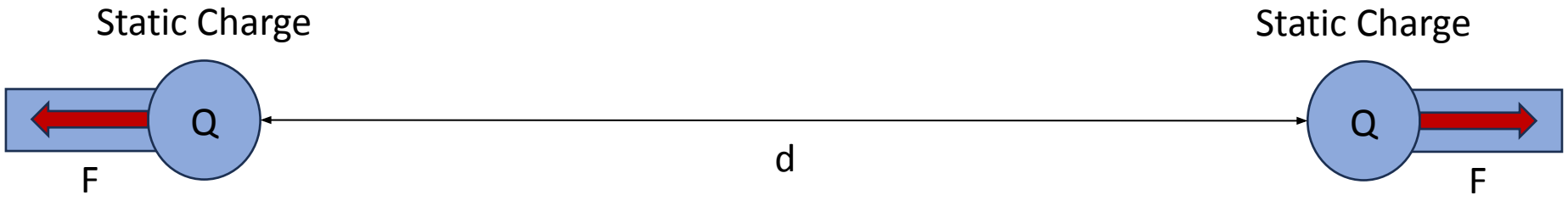
Remote Force Communication (Magic Wand)

Capacitive Coupling ⟶ Electrostatic Force!

Coulomb Repulsion

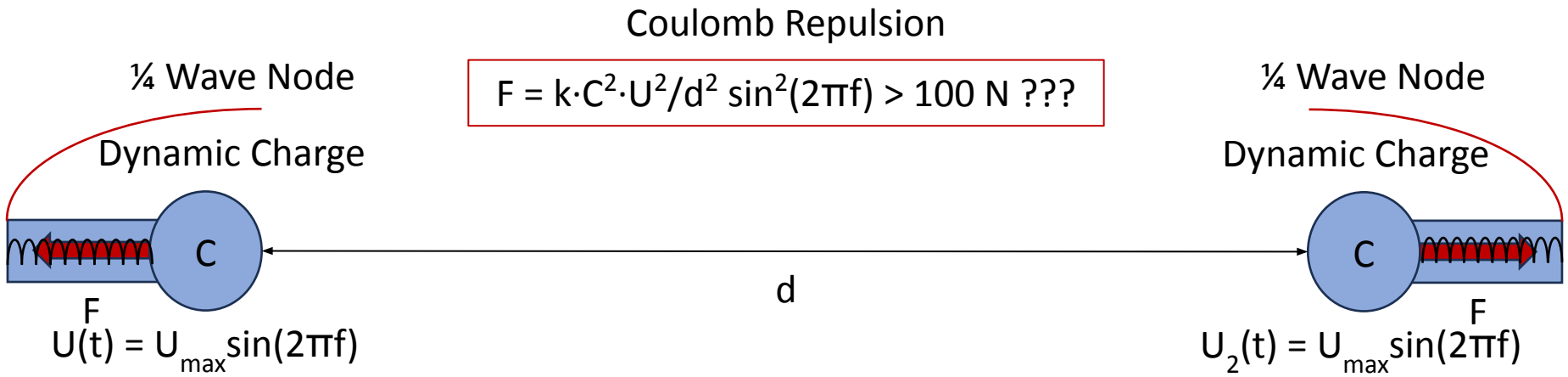
$F = k \cdot Q^2/d^2 = 100\ N$

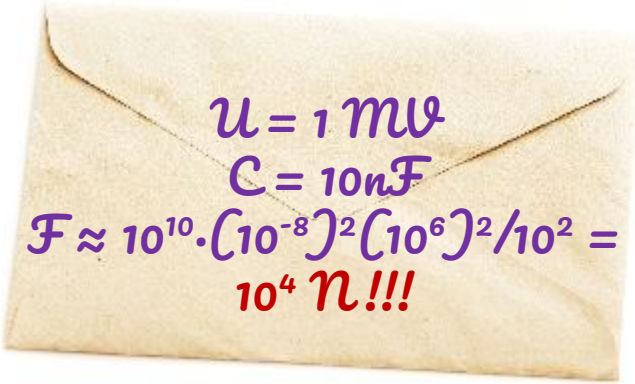


$Q = 1\ mC$
$d = 10m$
$F \approx 10^{10} \cdot (10^{-3})^2/10^2 = 100\ N$

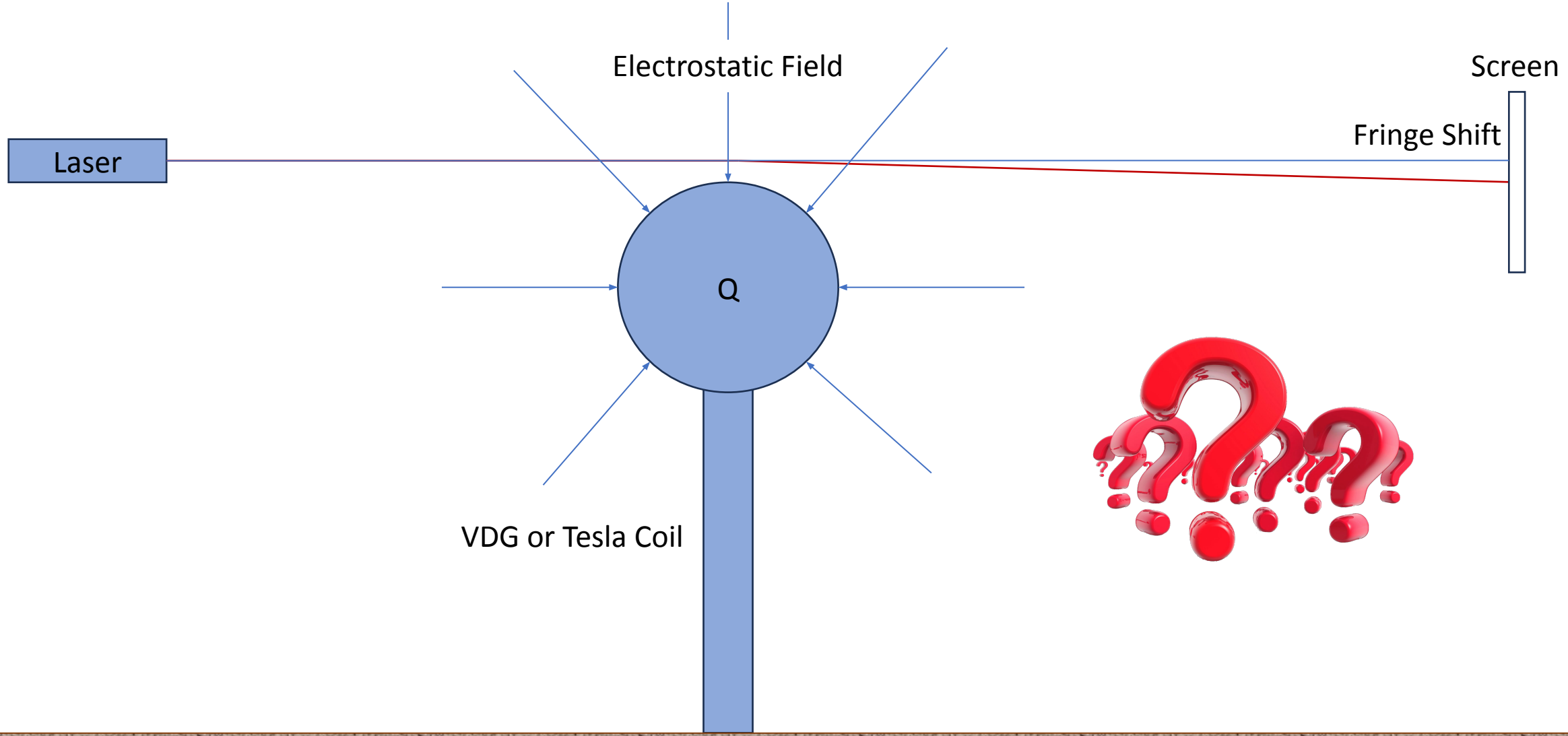
Remote Force Communication (Magic Wand)

In-Phase Standing Waves → Modulated Electrostatic Force!

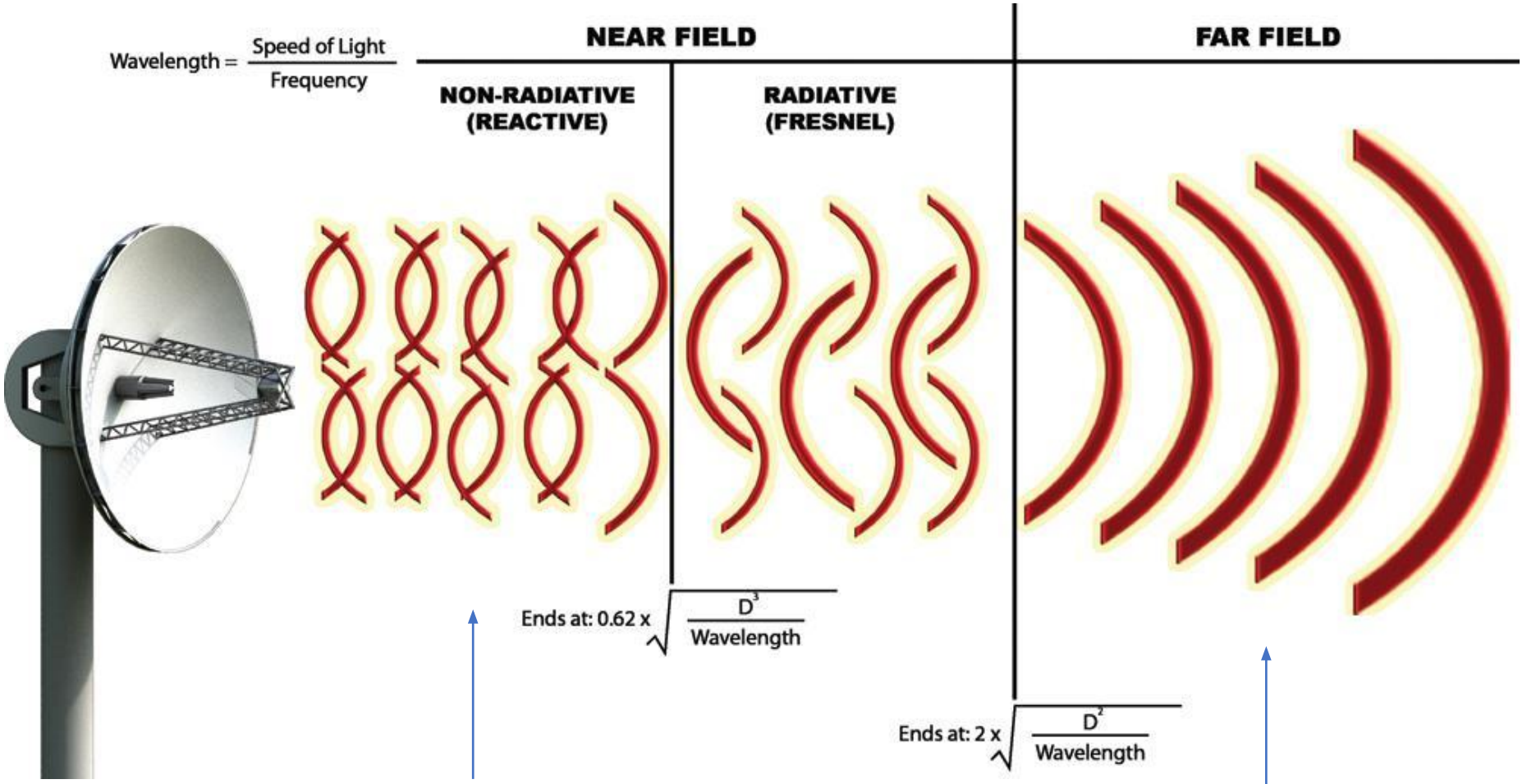




Does Electric Field Bend Light?



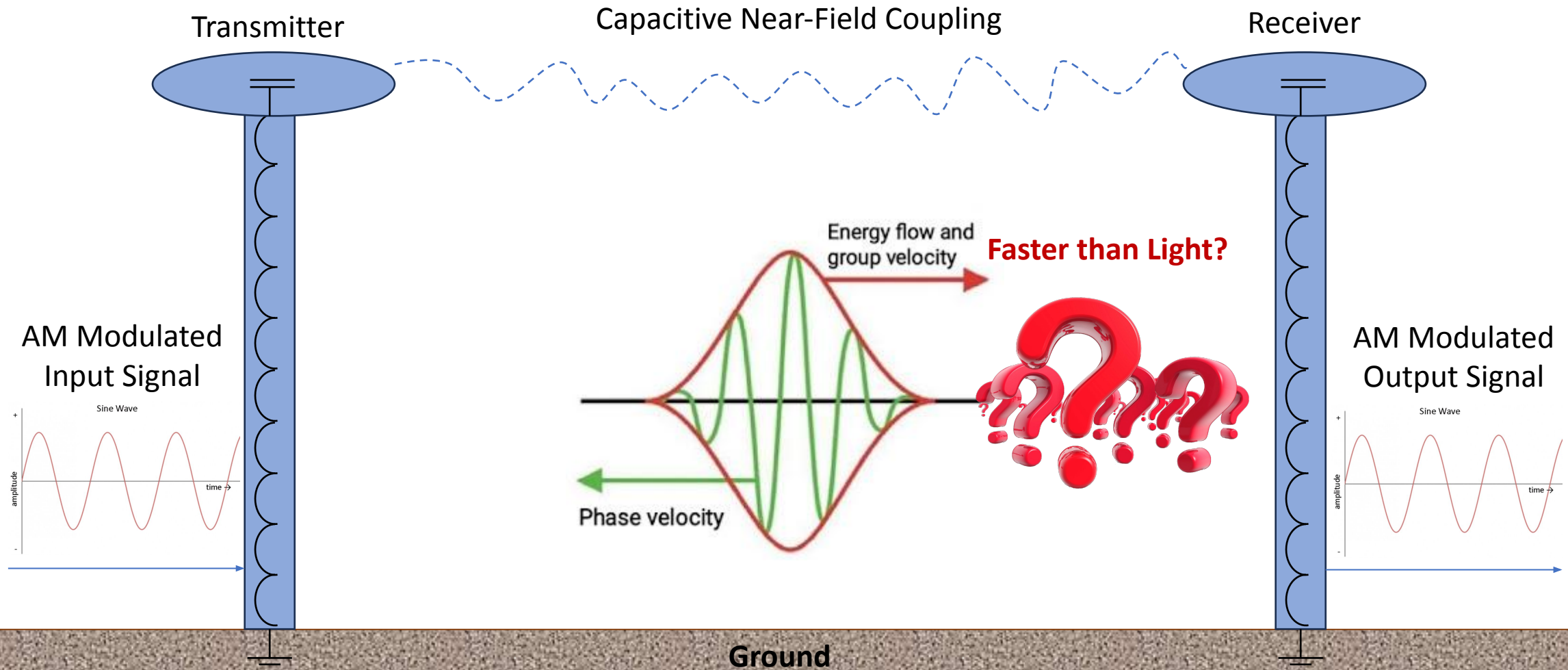
Near vs. Far Field

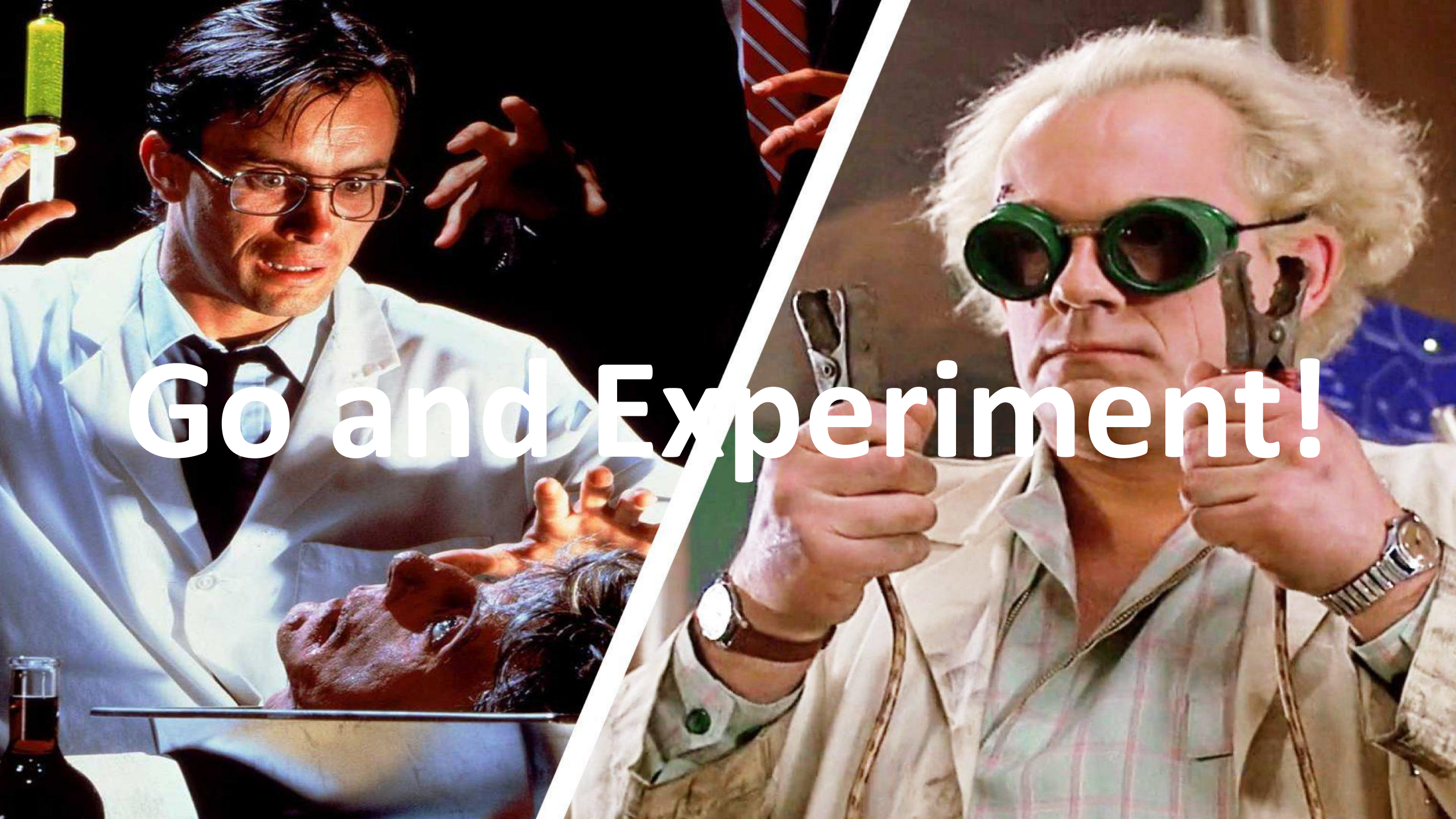


Static and transient EM potentials, propagation speed is 0 to ∞, capacitive coupling, Newtonian reaction

EM wave solution to Maxwell's equations, EM waves propagate at the speed of light

Faster-Than-Light Communication




Go and Experiment!