# THE MAGNIFLUX SHUTTLE

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## OUR MODEL, AND THE PRINCIPLE BEHIND IT.

- Principle: Magnetic Propulsion.
- Our model explains,
  - A new of transport for short distances
  - A way manufacturing and using projectiles for military purposes
- Elements in our model:
  - Copper (Cu)
  - Neodymium (Nd)









#### ELEMENTS-COPPER – ADVANTAGEOUS PROPERTIES

- Low resistance
- High conductivity
- Doesn't rust or tarnish
- Malleable and Ductile
- Easily available
- Less expensive

#### ELEMENTS – NEODYMIUM

- Ferromagnetic
- Curie temperature increases when alloyed with transition metals.
- Forms an alloy-Nd<sub>2</sub>Fe<sub>14</sub>B which has exceptionally high uniaxial magnetocrystalline anisotropy.
- Relatively more abundant than other rare earth metals.
- Nd atom has high magnetic dipole moment due to 4 unpaired electrons.
- These electrons align themselves in the same direction in the alloy which gives the alloy a high saturation magnetization.



#### APPLICATIONS



- This Principle can be applied to transport and military.
- In transport, this can be used for an underground shuttle that runs in a huge copper coil.
- For the military, it can be used for the rail gun, a device that fires projectiles only using magnetic fields and current.

#### ADVANTAGES OF THESE APPLICATIONS

- Shuttle
- 1. Cost effective as only few batteries will be used for a single shuttle.
- 2. Chance of crashing is very low.
- 3. Time of transit is less.
- Rail gun
- 1. High speed of projectile
- 2. More destructive power of projectile
- 3. Lowered to almost no use of chemical propellants.

### THANK YOU

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