

## The Problem:

The most dangerous form of radiation are Galactic Cosmic Rays. They pose a huge threat to astronauts because they are ionizing particles that move at velocities near the speed of light. They can easily penetrate a typical spacecraft, and even shatter the skin of an astronaut, according to NASA.



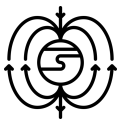
### Our Vision

We want expand our frontiers and begin boundless deep space exploration in order to fulfill the inherent human curiosity.



### Our Mission:

We will reduce the amount of radiation exposure faced by astronauts via galactic radiation shielding by using superconductive magnets.



**Creating an artificial mini-magnetosphere to reduce radiation on Mars by 70% using a Continuous Coil Toroid.**

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## Using Continous Coil Toroids to protect humans:

### Superconductive Properties

The superconductive material, titanium clad magnesium diboride, will experience zero electrical resistance which means our CCTs can develop strong magnetic fields needed to combat radiation.

### Ideal Material & Shape

Ti-MgB<sub>2</sub> is light, stable, and meets the density requirements to be a spaceborne superconducting magnet. It can channel radiation particles towards the center of the toroid and dissipated them safely.

We will configure the coils so that magnetic fields cancel out the magnetic field in the enclosed region where humans will live while also preserving the strength of the exterior magnetic field.



**“We have lingered long enough on the shores of the cosmic ocean. We are ready at last to set sail for the stars.” ~Carl Sagan**