Paper ID: 60766
student

23rd IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM (A5)
Virtual Presentations - 23rd IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM (VP)

Author: Ms. Alexandra Martha Walser
Switzerland, ale.walser@outlook.com

SOLVING THE RADIATION PROBLEM ON A TRIP TO MARS USING ELECTROMAGNETS

Abstract

Humanity's next goal is to go to Mars. There are many challenges. One of them is radiation. My idea is to solve this problem by creating an artificial magnetic field around the manned spacecraft. For this, batteries, transistors and copper wires are needed. This would then create an electromagnet, which creates a magnetic field just like our planet Earth. It would have to be scaled up for a real spacecraft. There are many advantages to this solution. Firstly, it is lightweight. Secondly, the astronauts inside don't have to think about radiation. It also protects all the electronics from potential damage. This would probably only work for charged particles.