Erratum for *Radiation Shielding Using Magnetic Fields* by M.W. Sailer and H.M. Doss

Currents selected for the article were higher than critical currents. A recalculation with appropriate currents still demonstrates a shielded crew area with a maximum field of 1.14×10^{-4} T in the center when the split toroid design is fully confined, but the wire mass has increased to 8.08×10^{4} kg. The currents for the recalculation are based on the correct current to mass ratio of the Ti-MgB_2 superconductor as described by Musenich et al. [1] considering the critical current. The former currents selected were based on the current density without considerations of the critical current. Even though the limits of MgB_2 superconductors are much higher as seen in Buzea and Yamashita's data [2], a shielding design on a space ship requires a stable superconductor current using a sheath. For this reason, the lower current to mass ratio Ti-MgB_2 superconductor is proposed for this project.

Using these values, a new number of wires is necessary to create the *B*-field. The outer deployable loop requires 90 wires while the inner loop requires 20. The split toroid is created with a wire density of 600 wires per meter. These wires give the new mass of 8.08×10^{4} kg. The toroid's and deployable loops' spatial dimensions will not be affected.

Finally, the maximum *B*-field created by the split toroid was mistyped. The correct value of the maximum toroidal field is 0.47 T instead of 0.57 T as originally noted. This does not affect any of the calculations or shielding ability of this method.

[1] R. Musenich, D. Nardelli, S. Brisigotti, D. Pietranera,, M. Tropeano, A. Tumino,... & G. Grasso, "Ti-MgB2 Conductor for Superconducting Space Magnets," *IEEE Transactions on Applied Superconductivity*, **26**, 4, 2015.

[2] C. Buzea, & T Yamashita, "Review of superconducting properties of MgB_2", *Superconductors, Science & Technology*, **14**, 11, 2001.