*ABSTRACT*

*Cosmic radiation poses a serious threat to humans as they continue to inhabit the International Space Station (ISS), as well as, embarking on missions to the Moon or Mars in the future. Many studies address the allowable doses of radiation in space, and effects of various forms of shielding against this radiation. The goal is to investigate the feasibility of using Boron-enhanced high-density polyethylene(BE-HDPE) in the construction of spacecraft for the purpose of shielding against galactic cosmic radiation (GCR) and solar particle events (SPE).*