Ecological Benefits of a Magnetohydrodynamic Drive

Stancill, Jonathan (School: The Mississippi School for Mathematics and Science)

Many modern engines for watercraft, from personal boats to cargo ships, all rely on the same propulsion method: internal combustion engines driving a rotating propeller. This design has several major flaws when their environmental impact is considered. These loud engines create vast quantities of noise pollution, which interferes with local marine life. For example, noise pollution can mask whale's natural sonic communication, causing them to become separated from the rest of their pod, leading to them becoming easy prey or starving to death. This is a major issue because 7 out of 13 whale species are endangered, meaning we need to do everything we can to protect them as a species. These engines also often expel their exhaust straight into the water. This contributes to rising carbon concentration in oceans, which negatively impacts the entire biosphere. Proper application of a Magnetohydrodynamic Drive (MHD) would allow for these two major issues to be corrected. A MHD has no moving parts, thus there is virtually no noise pollution from the propulsion unit itself, just a slight increase in noise from the watercraft as it moves through the water. Also, a MHD is powered by electricity and requires no fossil fuels to operate. This would decrease the pollution greatly and there would no longer be carbon emissions being pumped directly into the oceans. These combined effects would have many positive impacts on the wildlife and future of the world.

Awards Won: