

Geoffrey A. Landis, Ohio Aerospace Institute
"Advanced Solar- and Laser-Pushed Lightsail Concepts"

Solar sails allow the possibility of fuel-free propulsion in space. Typical concepts for solar and laser sails use reflective sails, but recently there has been some analysis suggesting that dielectric films could, in some missions, provide superior performance. The project will analyze the potential use of dielectric thin films for solar and laser sails. The advantages are extremely light weight and good high temperature properties, which are necessary for both for solar-sail missions inward toward the sun, for solar sail missions outward from the sun that use a close perihelion pass to build speed, and for high velocity laser-pushed missions for the outer solar system and for interstellar probes.

