A flying carpet might take us to Pluto

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A U.S. scientist says a giant solar panel unfurled in space like a carpet might one day make space flights possible without using nuclear propulsion.

Space scientist Rudolf Meyer at the University of California-Los Angeles has designed a "flying carpet" formed of a solar-electric membrane. The membrane would supply power to an array of ion engines, in which xenon ions are attracted to a high-voltage grid and pushed from a nozzle.

The proposed design will require significant advances in solar panel technology before becoming a reality, but it might provide an alternative to nuclear-powered spacecraft such as NASA's planned Prometheus mission to Jupiter and its moons.

Nuclear power is considered undesirable because an accident, or the dumping of crippled or spent spacecraft, would pollute interplanetary space with radioactive material.

Meyer explains his theory in the space-flight journal Acta Astronautica.