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## SUNSHINE SEEN AS BEST POWER FOR SPACE SHIPS

Space ships that utilize sun-rays to "fly" indefinitely and to send messages back to earth are within the realm of possibility. United States scientists, eager to tap the free unlimited energy given off by the sun, are perfecting solar devices that may enable space ships to maneuver anywhere in the solar system. The direct conversion of sun-energy into electric power for propulsion of space ships and operation of instruments in the vehicles is a promising new development that challenges astronomical engineers. The vehicles they eventually build may be as fantastic in appearance and achievement as the imaginative solar ship designs of present-day artists.

3-8 A large plastic disk coated with evaporated aluminum, similar to this model, may be used to "fly" a space ship on a journey to the moon or to other planets. Known as a "solar sail," the disk is designed to collect sunshine and convert it directly into power for propulsion of a manned or unmanned space ship. The sail which would be housed, in a collapsed form, in a satellite rocket-boosted into orbit could carry the satellite far out into space beyond the gravitational pull of planets. Scientists at Los Alamos Scientific Laboratory, where the solar sail is under development, estimate that a 1,000-pound disk one-fourth of a mile wide could propel a space vehicle to Mars and back to earth in two and one-half years.

3-8 Un gran disco de finísimo plástico, semejante al que se ve en la fotografía, se utilizará para propulsar una astronave en su viaje a la Luna o los planetas. La "vela solar" concentrará los rayos solares convirtiendo su energía térmica en electricidad destinada a la propulsión. Irá plegada hasta que el vehículo esté fuera de la atmósfera, en donde empezará a actuar hasta llevarle fuera de la atracción de la gravedad planetaria. Según los científicos del Laboratorio Científico de Los Alamos, una vela de 400 metros de diámetro y 400 kilos de peso podrá propulsar un vehículo del espacio que en dos años y medio haría el viaje Tierra-Marte-Tierra. (59-14451)



SCIENCE - ASTRONAUTIC - RESEARCH