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GIANT/RED-DWARF BINARIES: NEW SETI TARGETS AND IMPLICATIONS FOR  
INTERSTELLAR MIGRATION

**Abstract**

Giant/Red-Dwarf Binaries: New SETI Targets and Implications for Interstellar Migration

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**ABSTRACT**

If technologically advanced civilizations migrate from the vicinities of their dying stars, the solar-photon sail is a very viable propulsion system. Interstellar crossings that might require 2,000 years for departure from a Sun-like star might require only a few centuries if sail craft depart from larger and more luminous red giant stars. Unless such techniques as magnetic braking are applied, deceleration of such craft might only occur in systems including a giant star. Migrating species might therefore be found in binary- star systems containing widely separated giants and red dwarfs. They could use the giant star to decelerate and establish habitats near the very long-lived red dwarf star. Star catalogues were consulted to locate candidate stars within 150 light years of the Sun for possible SETI searches. Candidate stars within 100 light years include Beta Aquila, Epsilon Cygnus, Alpha Taurus and Theta Ursa Major. Because giant stars typically live for 100 million years and red dwarfs may exist for a trillion years on the Main Sequence, another class of possible SETI stars are white-dwarf/red-dwarf binaries. The nearest candidate star in this class is 40 Eridani at 16.4 light years from the Sun.