



by Dr. Eugene F. Mallove

Project Ozma

Project Ozma, conducted May through July 1960, was Earth's first systematic search for radio signals from extraterrestrial civilizations. The site for the search was the 85-foot diameter dish-like radio telescope at the National Radio Astronomical Observatory in Green Bank, West Virginia. Ozma took its name from the imaginary princess who ruled the fabled land of Oz - a mystical name for an other-worldly project.

Sheltered in a valley to protect their sensitive receiver from picking up man-made radio interference, astronomer Frank D. Drake and colleagues hoped to detect signals from the planets of nearby stars Tau Ceti and Epsilon Eridani. These two stars were the nearest sun-like stars visible from the latitude of Green Bank.

Several exciting false alarms occurred at the outset when apparently strong pulsing signals were detected as the radio dish tracked Epsilon Eridani. These signals later turned out to be secret military electronics tests coming from nearby aircraft.

No intelligent signals of extraterrestrial origin were ever found during the 150 hours of listening in Ozma, but this was much too limited a search to conclude anything about the probability of life on other planets.

Other radio searches for intelligent extraterrestrial life have been conducted since Ozma. They were unsuccessful because their budgets were very limited. The problem of finding signals from extraterrestrials in the right direction, at the right time, and at the right frequency is like trying to find a needle in a haystack, but is much more difficult!

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Prior to Ozma in 1959, scientists Philip Morrison and Giuseppe Cocconi were the first to propose the particular radio frequency used in Ozma at which signals from aliens might be detected. Space contains tenuous clouds of hydrogen atoms. We can detect these clouds because they continuously emit 1420.4 MHz (million cycles per second) radio waves.

Other civilizations would presume our early interest in mapping this matter with our primitive radio "ears." Thus the aliens might use this frequency as a common meeting place on the radio spectrum - we would automatically be tuned to the right channel!

Dr. Eugene F. Mallove

Dr. Mallove encourages readers to send in questions and will occasionally devote a column to them. He lectures on topics involving astronomy and the space program to groups and organizations. He can be reached at 429-7727.