

Project Dorothy: the 50th anniversary of Project OZMA, Worldwide Joint SETI Observation

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In 1960, humanity's first attempt to detect interstellar radio transmissions (Project OZMA) was carried out (Drake 1960). Since then more than 100 SETI projects have been performed. In case we detect evidence of an ETI signal, the "post-detection SETI protocol" of the International Academy of Astronautics is to be observed. According to this, the discoverer should promptly inform other observers, to confirm the discovery by independent observations and to establish a world-wide network to enable monitoring of the signal.

To commemorate the 50th anniversary of Project OZMA, we carried out Project Dorothy, a worldwide Joint SETI Observation in November 2010 and spring 2011 as preliminary practice for the discovery of an ETI signal. A total of 27 related organizations in 15 countries registered for this project.

The two original OZMA stars (τ Cet and ϵ Eri), the host stars of Goldilocks planets (GJ 581, HD 69830 and 55 CnC), HabCat stars (η Ari and HD 168746) and Kepler objects of interest (potentially planet-bearing stars) were selected for study. SETI observations were made at 14 sites at 150 MHz - 8.3 GHz.

If an exo-civilization 100 ly away were to transmit the same power as the Arecibo planetary radar (10^{13} W, EIRP), its flux of 10^{-24} W/m² could be detected with the 32 m dish of Yamaguchi University (Narusawa et al. 2011). Here we present the project and its preliminary results.