



All-Sky Survey for Microwave Emissions of Intelligent Extra-Terrestrial Origin

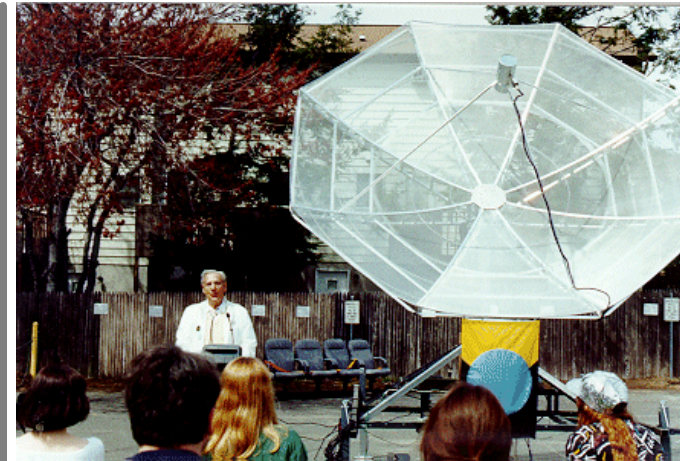
Project: ARGUS PI: Dr. H. Paul Shuch, Exec. Dir., The SETI League, Inc. (paul@setileague.org)

Description and Objectives:

Project Argus is an effort to deploy and coordinate roughly 5,000 small radio telescopes around the world, in an all-sky survey for microwave signals of possible intelligent extra-terrestrial origin. When fully operational, it will provide the first ever continuous monitoring of the entire sky, in all directions in real time.

Key Features:

- Radio telescopes from repurposed satellite TV dishes
- Ultimately, 5,000 amateur stations worldwide
- 1.3 - 1.7 GHz Waterhole frequency coverage
- Sensitivity of 10^{-23} Watts/m²; 10 Hz DSP bins
- Signal verification coordinated via the Internet



Project Argus dedication and launch ceremony, 21 April 1996, at SETI League Headquarters, Little Ferry NJ, USA

Approach:

Real-time all-sky electromagnetic monitoring with traditional research-grade radio telescopes would require up to a million instruments, properly aimed. At a cost of perhaps one hundred million US dollars apiece, such a network would exceed the Gross Planetary Product. Project Argus employs much smaller, quite inexpensive amateur radio telescopes, built and operated by SETI League members at their individual expense. Only five thousand of these smaller instruments, properly coordinated, are necessary to see in all directions at once. The equipment, although of modest sensitivity, is capable of detecting microwave radiation from technologically advanced civilizations out to a distance of several hundred light years.

Partners:

- Central States VHF Society
- Radio Amateur Satellite Corporation
- Society of Amateur Radio Astronomers

Schedule Milestones and Deliverables: Target:

1995: First Light, radio telescope prototype	TRL 2
1996: ARGUS Launch (5 operational stations)	TRL 3
1996: First candidate signal analyzed	TRL 4
2000: 100 stations and 1x All-Sky coverage	TRL 5
2020: 24/7 All-Sky coverage achieved	TRL 7

Applications:

- Search for Extra-Terrestrial Intelligence (SETI)
- Astrophysical research
- Development platform for new telecommunications hardware, software, and techniques

TRL = 6

Revised: 12 May 2005

Keywords: Project ARGUS, Radio Astronomy, SETI, All-Sky Survey, Amateur Radio, Microwave, SETI League