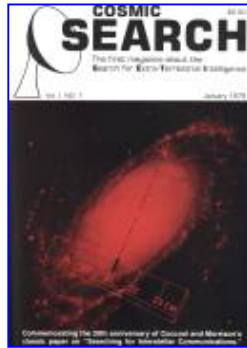




North American AstroPhysical Observatory (NAAPO)



Cosmic Search: Issue 1

(Volume 1 Number 1; January 1979)

[Miscellaneous items found throughout the magazine]

Miscellaneous Items

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Information About the Publication
(Editorial Board, Editors, Table of Contents)



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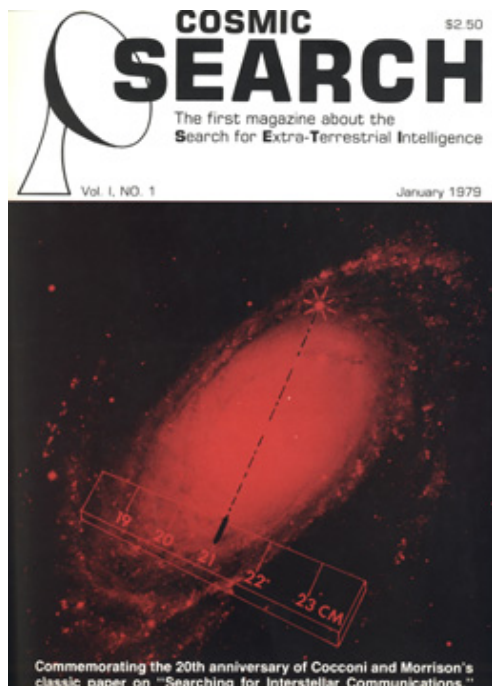
Editors: Robert S. Dixon and John Kraus, *Ohio State University Radio Observatory*

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The Cover



- **The Cover:** Impression of a beacon signal from a galactic source detected with a receiver tuned to a 21 CM (centimeter) wavelength.
- **Text at the Bottom of the Cover:** Commemorating the 20th anniversary of Cocconi and Morrison's classic paper on "Searching for Interstellar Communications."

[About COSMIC SEARCH](#)

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Purpose of COSMIC SEARCH

The purpose of **COSMIC SEARCH** is to present all aspects of the search for intelligent life in space in a popular but responsible manner.

Coming in COSMIC SEARCH

- "The Quest for Extraterrestrial Intelligence" by **Carl Sagan**
- "Extraterrestrial Politics" by **Michael Michaud**
- "Generalized Life" by **Jerome Rothstein**
- "Man's Role in the Galaxy" by **Ronald Bracewell**
- "Extraterrestrial Life: Where is Everybody?" by **Jesco von Puttkamer**
- "Interstellar Communication with Gravity Waves" by **David Douglass**
- "Cosmic Languages" by **Hans Freudenthal**
and many more
- **FORUM:** Exclusive interview on "Space Colonization and SETI" with **Gerard K. O'Neill**
- **ABCs of SETI** will explain in simple terms:
The Solar Neighborhood (the "nearby" stars)
The Galactic Neighborhood (the "nearby" galaxies)
The Second Waterhole (where is it?)
The Unique or Average Question (which are we?)
Broadband and narrowband signals (you hear them all the time)
- More **SEnTinel** news reports, "Off the Shelf" books and other special features.

Glossary

Astronomical Unit:

A unit of length equal to the distance of the earth from the sun, about 150 million kilometers.

Bandwidth:

The wavelength or frequency range to which a receiver responds. Bandwidths can be described as narrow or wide, according to their range.

Big Bang:

The beginning event in the Universe. The explosion of this primordial fireball some 15 billion years ago caused the initial outward expansion of gas and dust which formed the universe. CETI: An acronym for Communication with Extra-Terrestrial Intelligence.

Civilization:

According to the Russian astrophysicist Kardashev, civilizations can be classified according to their energy outputs as follows:

Type I:

A civilization capable of using all of the energy falling on its planet from its "sun" for interstellar communication. (For us this would be equal to 10,000 times the present total energy consumption by mankind for all purposes.) Hence, we are more like a "Type O" civilization.

Type II:

A civilization capable of using the total energy output of its "sun" for interstellar communication.

Type III:

A civilization capable of using the total energy output of our galaxy for interstellar communication.

Dipole:

A configuration with a plus and minus charge. An antenna one-half wavelength long.

Doppler Shift:

The resulting frequency change caused by the relative motion along a line of sight between two observers.

Exobiology:

The study of extraterrestrial life forms.

Fourier Analysis:

The decomposition of a signal into its simplest harmonic curves (sines and cosines).

Galaxy:

A large system of stars. Our galaxy, the Milky Way, is a spiral galaxy containing some 100,000 million stars, 100,000 light years in diameter and 10,000 light years thick.

Gigahertz:

A unit of frequency equal to 1,000 million hertz.

Hertz:

A unit of frequency equal to one cycle per second.

Hydrogen:

The most abundant element in the universe. It radiates naturally at a wavelength of 21 centimeters.

Light Year:

The distance traveled by light in one year, about 10 trillion kilometers.

Light (speed of):

In empty space: 300,000 kilometers per second.

Maser:

A sensitive amplifying device employing energy jumps of atomic particles.

Megahertz:

A unit of frequency equal to one million hertz.

Parametric amplifier:

A sensitive amplifying device which employs the properties of non-linear elements.

Redshift:

A shift toward the longer wavelengths of the optical spectrum due to recessional velocity (the Doppler effect).

SETI:

An acronym for Search for Extra-Terrestrial Intelligence.

Zeeman effect:

A broadening or splitting of radiation from a substance into several wavelengths because of the presence of a magnetic field.

SEARCH AWARDS

For best papers on SETI

Category 1. Undergraduate students

Category 2. Graduate students

Category 3. Anyone else under 30 years of age

Papers may be on any aspect of the Search for Extra-Terrestrial Intelligence (SETI). Papers must be double-spaced typewritten with one inch margins on 8 1/2 by 11 inch bond paper and less than 2000 words in length. Any illustrations must be clearly executed.

Authors of best papers will be given a **SEARCH AWARD** of \$100 and the paper will be published in **COSMIC SEARCH**. Authors should include their full address and telephone number. Authors should enclose a self-addressed stamped envelope if they wish to have their manuscripts returned. Manuscripts accepted and published are copyrighted and become the property of **COSMIC SEARCH** magazine.

Manuscripts may be submitted at any time. Their review is a continuous, on-going process. Each article received is reviewed by a special committee and if judged worthy, either in its original form or after revisions, will be given a **SEARCH AWARD**. The opinion of the committee is final.

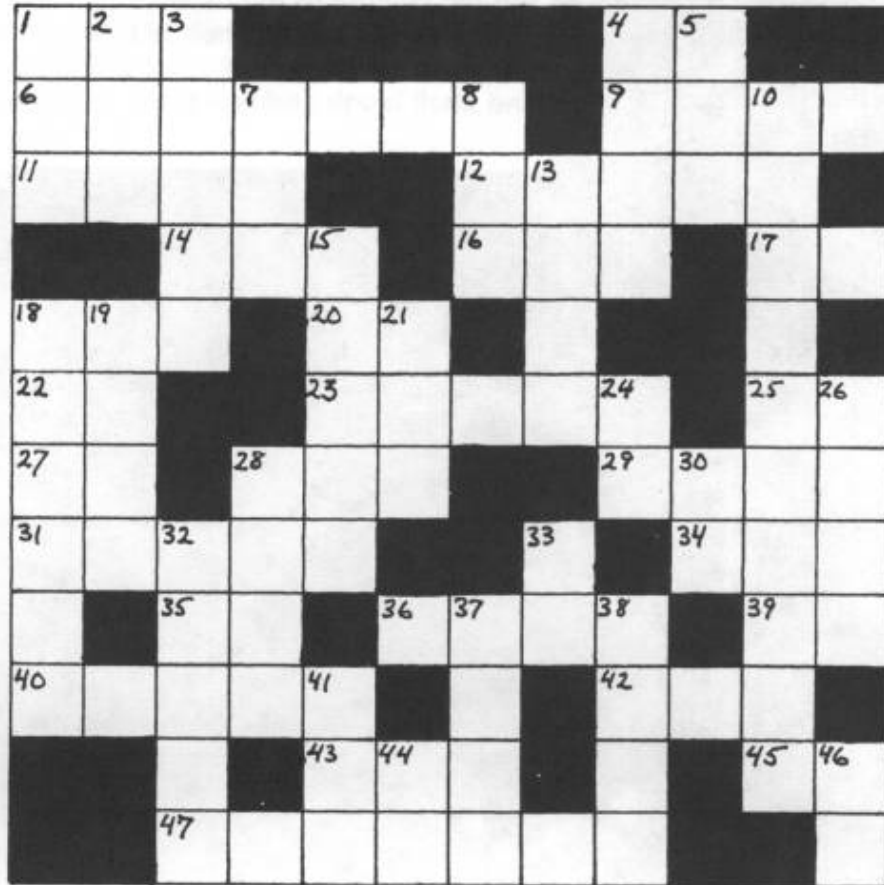
A contestant may submit and have under review only one manuscript at a time and be eligible for only one **SEARCH AWARD** in one category. However, it is possible for one person to achieve **SEARCH AWARDS** sequentially in each of the three categories.

Address **SEARCH AWARD** Committee, Radio Observatory, P.O. Box 293, Delaware, Ohio 43015.

SEARCH PUZZLE

[Click on image below to obtain a larger version. In your browser you may need to uncheck the preference that says something like "Resize large images to fit in window" to avoid seeing a scaled image that appears smaller than the image below.]

SEARCH PUZZLE



Across

1. Curve
4. Moon of Jupiter
6. Metallic element
9. Grabs
11. Weighty book
12. Celestial prefix
14. Little person
16. Earth (prefix)
17. Exclamation
18. Stroke
20. Pronoun (neut.)
22. Present near
23. Opposite to zenith
25. Mother
27. Radio observatory (abbrev.)
28. Saint (Span.)
29. ----tric
31. Not big
34. Consumed
35. Sun god
36. ____ lens
39. Letter
40. Region
42. A gas
43. Edge
45. Thus
47. Indications

Down

1. Abbrev. for aerial
2. River (Span.)
3. Celestial visitor
4. Enters
5. Boat item
7. Sound unit
8. Optical unit
10. Heat meas. devices
13. Famous acronym
15. Last
18. Distance unit
19. Small particle
21. Sun ____
24. Again
26. High cards
28. ____ bang
30. Musical note
32. Constellation
33. Toward
37. Famous SETI project
38. Charts
41. Energy unit
44. Preposition
46. All right

Answer to puzzle in next issue (March 1979).

Miscellaneous Quotes

The following quotes are not directly associated with any article. They are listed here in the order in which they appear in the magazine; page numbers are given. Uncredited quotes should be credited to the Editors of **COSMIC SEARCH** magazine.

Quote on page 6

"Observe how system into system runs;
What other planets circle other suns;
What varied beings people every star."
Alexander Pope (1688-1744)

Quotes on page 24

"Does it make sense to work at guaranteeing supplies of energy for our population in the year 2025 while ignoring the finite probability that a nuclear (war) could annihilate this same population before that date?"

Harold L. Davis, Editor of "Physics Today," endorsing statement by Victor Weisskopf that abolition of the nuclear arms race "is the first and foremost problem of our time."

"The earth is our cradle,
The solar system our kindergarten,
The galaxy our middle-school and
The universe our university."
Sedgewick Seti

"99.9 percent of the species that have ever lived on the earth are now extinct."
Richard Lewontin in "Scientific American."

"Mankind are very odd creatures."
Benjamin Franklin

Quote on page 31

"It is reasonable to believe that

- the search for extra-terrestrial intelligence will contribute significantly to the solving of our problems here on earth."
 - these signals from the cosmos could contribute vastly more to our future security than instruments of mass annihilation."
 - the future of the human race may depend upon keeping the rendezvous with infinity."
-

Miscellaneous Photos

The following photos are not directly associated with any article. They are shown on this webpage at a relatively small size in the order in which they appear in the magazine. Click on each photo to obtain a larger size version.

Photo on Inside Front Cover

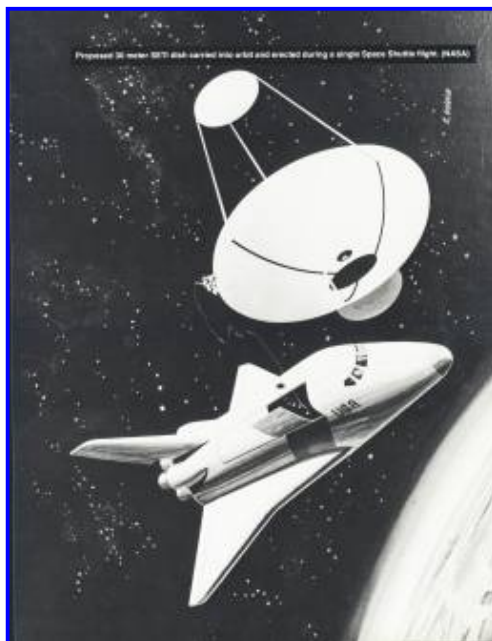


Photo on Page 48

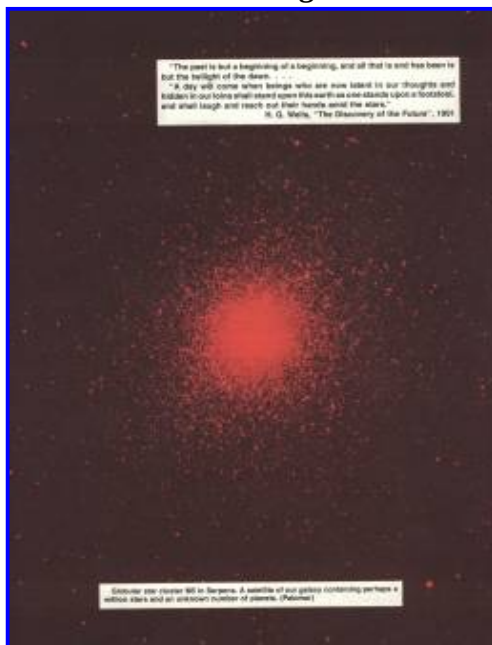
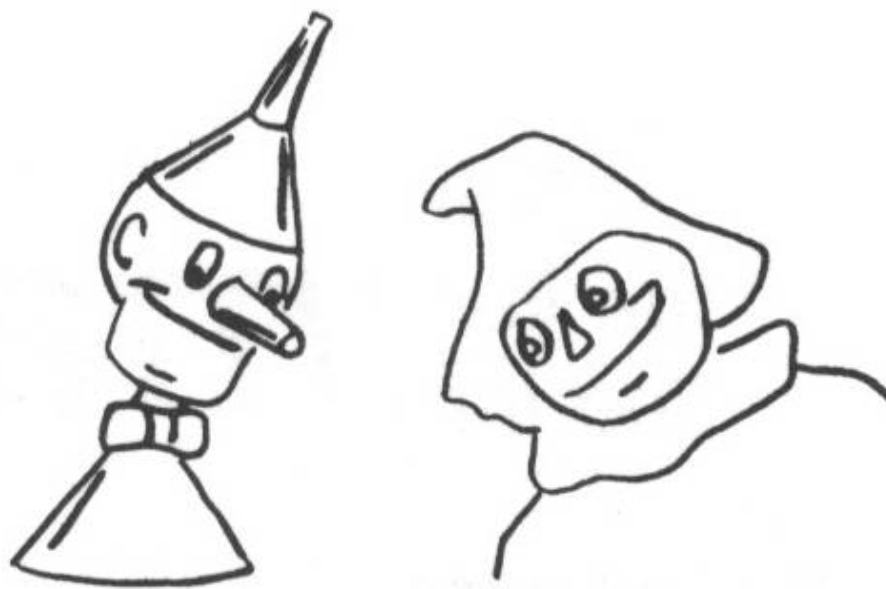


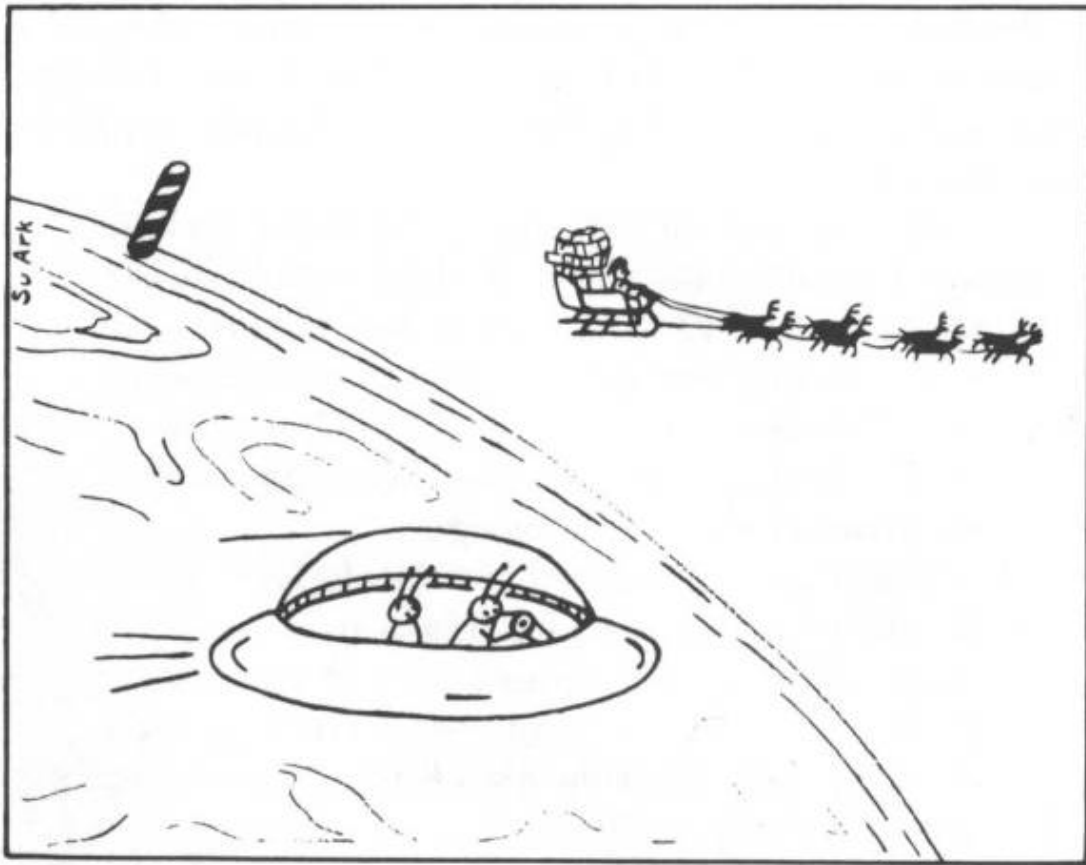
Photo on Outside Back Cover



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"No doubt about it. The earthlings' space vehicles **are** primitive!"

TIGER

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