North American AstroPhysical Observatory

North American AstroPhysical Observatory (NAAPO)

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[Article in magazine started on page 14]

Letters:

By: Editors

Letters are always welcome but owing to the volume it is not possible to acknowledge all of them. Also due to space limitations we reserve the right where necessary to condense or edit the contents. Letters may be addressed to: Editorial Dept., **COSMIC SEARCH**, P.O. Box 293, Delaware, Ohio 43015.

Most discussions of SETI assume that the primary topic of interstellar conversations will be science, but this may be a somewhat provincial assumption, reflecting only that the primary interest of most people involved in SETI is science. Of course, civilizations that broadcast interstellar signals are going to know a lot of science, but science may not be their primary interest. Our radio telescopes may not receive the science of many worlds, but the religions.

On Earth today people devote far more energy to religion than to science. The airways are full of religious programming, while science programming is relatively scarce. The same may hold true for the interstellar airways. Though many people assume that as a species develops science it leaves religion behind, this is not necessarily so. We may find that interstellar communication consists largely of thousands of worlds trying to make converts of each other.

It is always possible that everyone else in the universe will turn out to be Christians or Buddhists or Hindus, and that this will be considered proof of the validity of whichever religion is the religion of the cosmos, but it seems more likely to expect a bewildering diversity of religions — and this may cause major problems.

Over the past few centuries westerners have been exposed to eastern religions, and vice versa, and the result has brought self-doubts and conversions on all sides. Can you imagine what would happen if humans suddenly had not five or six major religions to choose from, but thousands, each backed up by the prestige of a great civilization, many of them far more advanced — both scientifically and psychologically — than ourselves? The result might be social chaos. Humans might decide that among so many religions our own couldn't possibly be correct, and they would adopt extraterrestrial religions, each one of which might call for different ethical values and social behaviors. These contradictory behaviors alone could cause serious conflicts. Let us not forget that humans have fought many wars because two groups merely believed in different religions.

This possibility may mean that few civilizations in the universe are searching for interstellar signals. Perhaps after a bad experience with social chaos, civilizations will cut themselves off from the universe. Or, if they go on listening, the radio telescopes will be controlled by a priesthood that censors everything dangerous, and also broadcasts their sacred texts to convert other civilizations to their religion.

Of course, all of this is highly speculative. It may turn out that only humans have religions. And even if religion is widespread, the radio telescopes of other worlds may be, as on Earth, in the hands of creatures whose primary interest is science. But if interstellar communication turns out to be primarily religious in content, civilizations will still exchange a lot of science; it is just that reports on the geology of a solar system will be inserted between sacred texts.

Don Lago
Columbia, Missouri

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Congratulations on publishing such a fine journal. I have thoroughly enjoyed the issues and have used some of the material to pique the interest of my young students.

I suggest a plan be formulated outlining how Amateur Radio operators might support SETI, and the plan be submitted to the Amateur Radio press for publication. I believe you might find fertile ground among this world-wide inquisitive and innovative fraternity.

Nelson Lecklinkner
N6AQY
Novato, California

Radio amateurs could well be interested because an extraterrestrial intelligence could provide the ultimate DX contact. — Ed.

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Thank you for the uniform excellence of your publication. The ABCs of Space combines brevity with accuracy and excitement, a combination as elegant as it is rare. It has inspired me to work my way through a college-level astronomy text.

Your magazine sometimes lists materials, such as government documents, which are hard to find. Where may I obtain them?

Joe W. Morganti
Berkely, California

U.S. Government publications can generally be obtained from the U.S. Government Printing

Office, Washington, D.C.

Most large cities in the U.S. have a Bookstore of the Government Printing Office. Check your telephone directory. Prices are very reasonable. — Ed.

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Although James Elliot of Cornell has contributed to the consideration of lunar or artificial satellite occultations combined with Space Telescope observations for planet detection purposes, he is not the originator of the idea, as suggested by the SEnTInel in the Summer 1980 **COSMIC SEARCH**. In fact, he might be considered a "Jimmy-come lately" to these considerations.

To my knowledge, the idea was proposed by Dr. Nancy Roman of NASA in *Astronomical Journal, 64*, No. 1273, 344-345, October 1959 and was further developed by L. Spitzer Jr. in *American Scientist, 50*, 473-484, Sept. 1962. The author of this letter, in collaboration with A.J. Fennelly and G. Frye has discussed lunar occultation/Space Telescope extra-solar planet detection in *Journal Optical Society of America, 64*, 531, 1974 and *JBIS, 28*, 399-404, June 1975. A review of this earlier work by C.E. Kenknight appeared in *Icarus, 30*, 422-433, 1977.

Now that I've gotten this critique off my chest, I'd like to comment that **COSMIC SEARCH** is a most splendid magazine. Keep up the good work!

Dr. Gregory L. Matloff
Brooklyn, New York

Thank you for this added information and perspective. Interested readers may find your references very useful. We regret any unintended implications. — RSD

Regardless of who proposed the planet detection idea, Elliot has used the occultation method effectively in other ways, as for example in observing the atmosphere of Mars during its occultation of Epsilon Geminorum, and in his discovery of the rings of Uranus. He is continuing this work and plans to make occultation observations of the rings of Saturn. For his observations Elliot has used NASA's Kuiper Airborne Observatory, a large 4-engine jet aircraft. — JK

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Referring to the article by Pasachoff and Kutner in "Neutrinos for Interstellar Communication" in the Summer 1979 issue of **COSMIC SEARCH** please be

advised that the possible use of neutrino beams for telecommunication not only over global but also interstellar distances was investigated and suggested in my papers, published 13 years earlier in Polish scientific journals.

I investigated the neutrino beams not only from accelerators but also from the radioactive atomic nuclei polarized in very low temperatures in magnetic fields. In the case of the accelerator neutrinos I have taken into the account the protons of 25 GeV with the neutrino beam angles 3° and 20' and protons of 300 GeV with neutrino beam angles 1°, 1', and 1". It was accepted that the accelerator generates pulsed beam of 10^{15} protons and a pulse rate is equal 10^{3} per hour. Because of the parity non-conservation in weak interactions one can get also oriented neutrino emission from the polarized nuclei. For both cases the neutrino fluxes were calculated for interstellar distances.

This will enable the start of neutrino astronomy and the verification of the possible neutrino channel used by ETI. Obviously, sending and detection of the signals over global distances (through the Earth) will be much simpler. The main results of my papers /Subotowicz, 1967/ I have presented for the second time during the 25-th International Astronautical Congress in Amsterdam, 1974. There presented paper was published recently in "Astronautica Acta," 1979. My earliest papers on this subject /Subotwicz, 1967, were mentioned in several international abstracts and bibliographies. All this is described in my paper published in "Postepy Astronautyki," Subotowicz, 1979.

References:

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Designed by Jerry Ehman.
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