



The SETI League, Inc.

2005 Annual Report
Issued 10 February 2006

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SETI scientists seek to determine, primarily through microwave and optical measurements, whether humankind is alone in the universe. Since Congress terminated NASA's SETI funding in 1993, The SETI League and other scientific groups have been attempting to privatize the research. Experimenters interested in participating in the search for intelligent alien life, or citizens wishing to help support it, should visit us on the Web at <http://www.setileague.org/>, email to join@setileague.org, send a fax to +1 (201) 641-1771, or contact The SETI League, Inc. membership hotline at +1 (800) TAU-SETI. Be sure to provide us with a postal address, to which we will mail further information. The SETI League, Inc. is a membership-supported, non-profit [501(c)(3)], educational and scientific corporation dedicated to the electromagnetic Search for Extra-Terrestrial Intelligence.



SETI League Vision

Recognizing that confirmed evidence of extraterrestrial intelligence will change forever our view of humanity's place in the cosmos, The SETI League, Inc. envisions a worldwide network of amateur and professional scientists working together to hasten our entry into the galactic community.

SETI League Mission

To encourage and support the Search for Extra-Terrestrial Intelligence by:

1. attracting a wide range of amateur and professional scientists into the SETI community;
2. developing technologies to assist the SETI experimenter in assembling a workable radio or optical SETI observatory;
3. disseminating hardware and software designs in support of SETI;
4. coordinating SETI experimenters worldwide in conducting a thorough sky survey;
5. providing a variety of forums and media for wide-ranging communication among SETI experimenters, enthusiasts, and organizations;
6. designing, assembling, and operating advanced optical and radio telescopes;
7. identifying and publicizing potential spin-off applications of SETI technologies; and
8. raising public consciousness as to the importance and significance of a broad-based Search for Extra-Terrestrial Intelligence that encompasses a variety of strategies.



A Word from our Executive Director Emeritus

Dear SETI Supporters,

What an incredible year this has been! 2005 marked The SETI League's transition to a lean and efficient all-volunteer organization, with no paid staff whatever. Nearly all of the program functions previously performed by paid staff were this year handled by a dedicated cadre of volunteers, reducing our 2005 expenditures to a mere *ten percent* of our annual average for the preceding decade.

Of course, this drastic reduction in costs was a direct response to a regrettable corresponding *ninety percent decrease* in revenues. Still, the volunteer efforts of our dedicated membership have enabled us to weather what might otherwise have been a fiscal catastrophe. We managed to finish the year in the black, with absolutely no reduction in program services or technical accomplishments. You are all to be congratulated.

Unfortunately, there is a down-side to this transition, and it's reflected in our 2005 Annual Report. With our membership services and technical programs now being carried out by volunteers, such funds as you generously contribute (and they amount to about \$2000 per month) are just sufficient to cover such necessities as basic office costs, printing, postage, telephone, and internet connectivity. Everything else still gets done, by volunteers, but one result is that our balance sheet looks somewhat skewed to potential contributors, who might rightly question why nearly half of their donated dollars go to overhead items, rather than funding The SETI League's rightful mission.

You and I know that our mission will go on, without imposing a fiscal drain in the form of direct program expenses. But, our fiscal records do not necessarily reflect your dedication. You can help, by keeping track of your volunteer hours, and reporting them to me as donations in kind. During the coming months, I will be providing forms on our website for this purpose. Your volunteer efforts are important, not only for their own sake, but also in showing the world how much grass-roots support still exists for SETI.

Our volunteer organization is now spending just 0.2 percent of what the late and short-lived NASA SETI program used to cost US taxpayers. Who says privatized science isn't working?

Yours for SETI Success,

H. Paul Shuch, Ph.D.



Case for Support

Ever since mankind first used intellect to distinguish itself from the rest of the animal world, a fundamental and profound distinction became evident --- we do not seek simply for survival, we seek to understand.

Intellectual curiosity is part of what separates man from beast. And scientific endeavor has always been driven less by need than by desire. We desire knowledge not for what we can do with that knowledge, but for the sake of the knowledge itself.

Modern scientific research has until recently followed the same principle --- ask the questions, find then answers, then figure out how to apply that knowledge. But today, more and more scientific research is being dictated by a pre-determined end, an application in search of a question.

Scientific research isn't about application, but discovery. The Search for ExtraTerrestrial Intelligence (SETI) is mankind's search to know what, or who, is out there. Because it is contrary to our nature to not try and discover if there is intelligent life beyond our own world.

The SETI League was established in 1994 to continue the scientific research formerly conducted by NASA. When funding for NASA's SETI research was cut, it was left up to a handful of visionary pioneering scientists to privatize the search for intelligent life in the universe.

The SETI League is a 501 (c)(3) not-for-profit scientific research and education organization. Universal in its scope, it is international in its composition, with more than a thousand volunteers in five dozen countries participating in the organization's activities.

Project Argus is a prime example of the type of work **The SETI League** is involved in. *Project Argus* is an effort to deploy and coordinate roughly 5,000 small radio telescopes around the world, in an all-sky survey searching for microwave signals which might possibly be of intelligent extra-terrestrial origin. When fully operational, *Project Argus* will provide the first ever continuous monitoring of the entire sky, in all directions in real time.

SETI League members have developed the necessary hardware, software, protocols and procedures for distribution worldwide. Traditional research grade telescopes, of the type used by NASA, can view only a small fraction of the sky at a given time, typically on the order of one part in a million. To achieve the goal of continuous all-sky coverage would require one million telescopes, properly located and aimed. The cost for such an enterprise would exceed the Gross Planetary Product.

Project Argus has taken an innovative approach to the problem. By employing much smaller, relatively inexpensive amateur radio telescopes, built and operated by **SETI League** members at their own expense, we will be able to achieve an all-sky view for an infinitesimally smaller expenditure.

Only 5,000 of these smaller instruments, properly coordinated, are necessary to see in all directions at once. The equipment, though modest, is capable of detecting microwave radiation from sources out to a distance of several hundred light years.

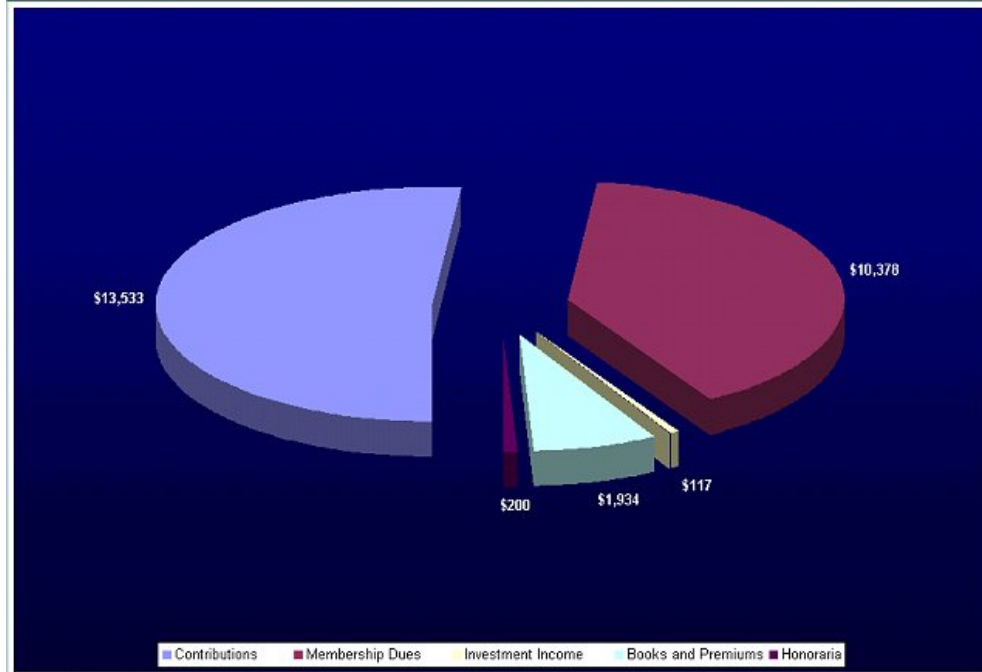
This is an example of the innovative volunteer projects that members of **The SETI League** are engaged in. And while the relative cost of these types of projects are low, there are hard costs nonetheless.

To continue this research and expand **SETI League** activities, the organization needs to raise \$600,000 over the next three years. Membership dues, gifts and contributions will certainly help, but it is necessary to expand funding sources beyond current levels and current sources.

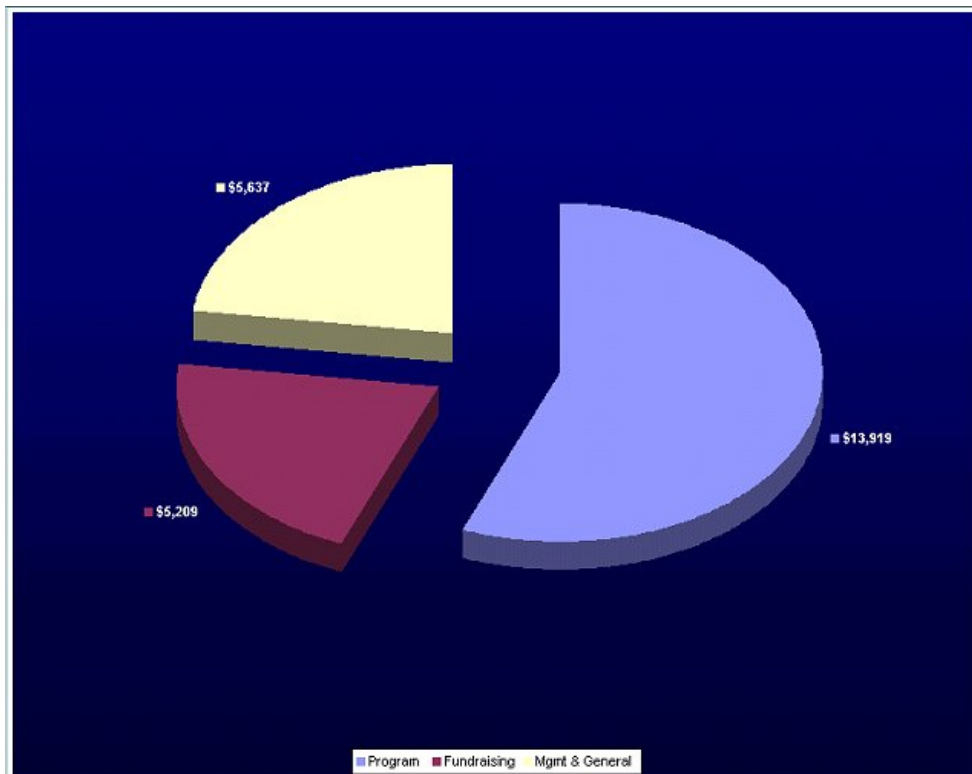
The SETI League is seeking investments of \$50,000 from foundations, corporations and individuals, those who are committed to scientific research and radio astronomy.

We welcome the opportunity to present our annual report and a full proposal for funding. And while spin-off technologies and applications are an inevitable result of scientific exploration and discovery, it is the search that inspires us, that causes us to lift our eyes to the heavens and wonder.

Financial Highlights



2005 Revenues



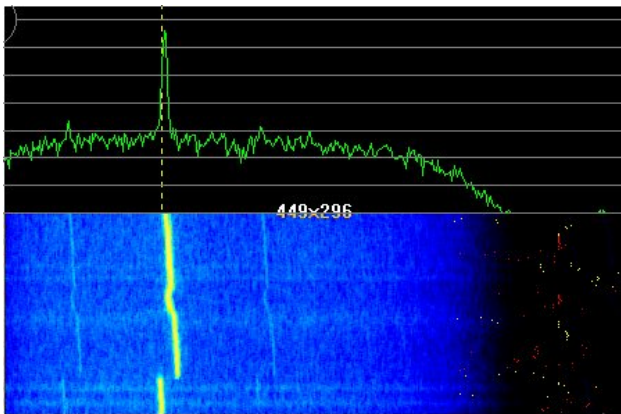
2005 Expenses



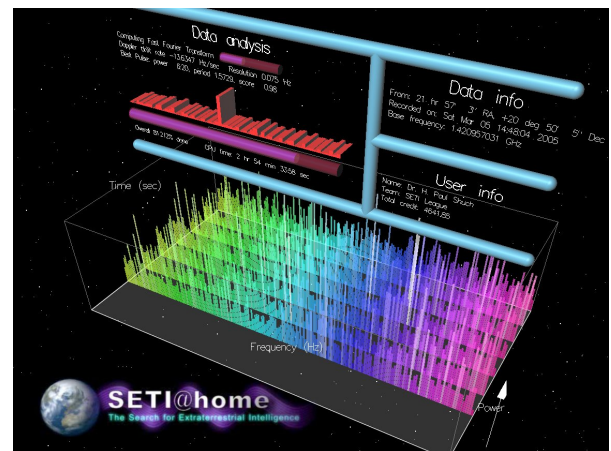
Program Service Accomplishments – Science

During 2005, The SETI League and its members made the following contributions to radio astronomy and SETI science:

- Coordinated 130 Project Argus radio telescopes in 22 countries, built and operated by our members on all seven continents, in their SETI and astrophysical observations. Argus stations analyzed and cataloged several new candidate signals during 2005.
- Members' stations monitored telemetry signals and science beacons from eight NASA and ESA interplanetary space probes, including Venus Express, Mars Reconnaissance Orbiter, Mars Odyssey, Mars Express, Deep Impact, Rosetta, SMART 1, and Advanced Composition Explorer.
- Provided Committee leadership (as co-chairman) to the SETI Permanent Study Group of the International Academy of Astronautics.
- 248 members upgraded their software to the Berkeley Open Infrastructure for Networked Computing (BOINC), in support of the SETI@home distributed computing experiment.



X-band telemetry signals from the European Space Agency's Venus Express spacecraft were first received on Earth by SETI League members in November 2005.

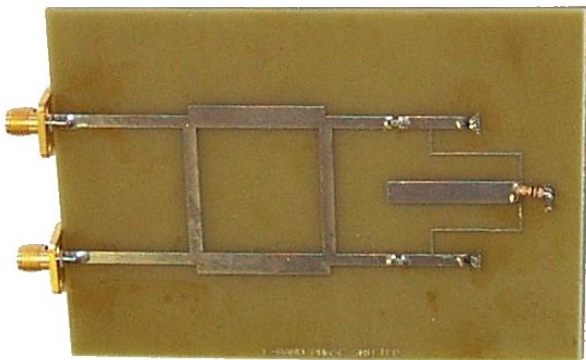


Screen capture of FFT analysis using BOINC, the latest open-source iteration of digital signal processing software for the SETI@home distributed computing experiment.

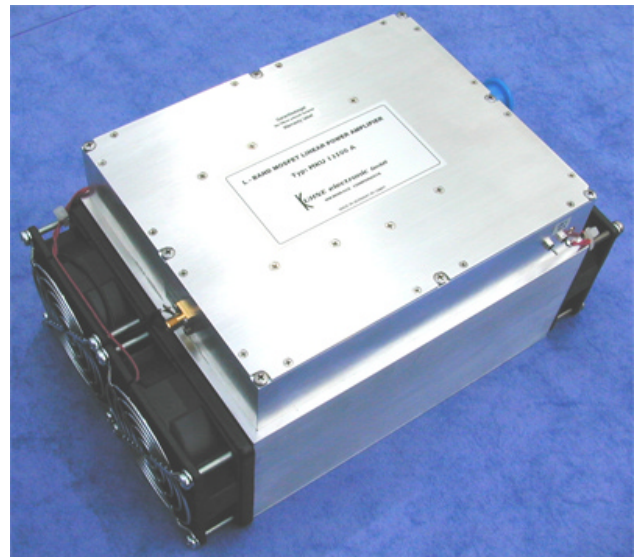
Program Service Accomplishments – Technology

During 2005, The SETI League and its members made the following contributions to technology design and development:

- Designed and tested a new analog phase shifter circuit for the Very Small Array radio telescope prototype.
- Upgraded the W2ETI Moonbounce Beacon through the acquisition of a new high power amplifier, improving microwave calibration signals provided to the world's amateur and professional radio telescopes.
- Provided ongoing design consultation and proposal assistance to the Montecorvino SETI Telescope Array (MStar).
- Coordinated and archived four closed technical email lists.
- Inducted one additional amateur radio astronomer into the Extra-Terrestrial Century Club, for a total of twelve ETCC honorees.



L-band analog phase shifter circuit, developed for the Very Small Array radio telescope prototype, offers 0 to 90 degrees of phase shift when tuned over a range of 0 to +12 VDC. Tuning linearity is better than 99%.



1/4 kW Power Amplifier for The SETI League's W2ETI 1296 MHz Moonbounce Beacon.

Program Service Accomplishments – Public Education

During 2005, The SETI League and its members made the following contributions to educating the public on SETI science and technology:

- Executive Director delivered ten public lectures in five countries on three continents, dealing with radio astronomy techniques and related SETI science.
- Executive Director published ten SETI technical articles in the popular and scientific press.
- SETI League webmaster provided webmastering services to the Society of Amateur Radio Astronomers, the International Academy of Astronautics SETI Permanent Study Group, and Invitation to ETI.
- Distributed 22 CD copies of "Tune In The Universe!", a radio amateur's guide to the Search for Extra-Terrestrial Intelligence.
- Distributed 16 print and CD copies of "The SETI League Technical Manual."
- Distributed several print and CD copies of various SETI League Conference Proceedings.



Invitation to ETI

What if...

- **What if** one or more extraterrestrial civilizations long ago began probing the cosmos, to study their galactic neighbors?
- **What if** one of their autonomous space probes should happen to reach planet Earth?
- **What if** its super-smart Artificial Intelligence could figure out how to tap into the Earthlings' worldwide computer network?
- **What if** ET's advanced robotic emissary were reading this very page, right now?

Welcome to *Invitation to ETI*, a Web-based, scientifically credible SETI (Search for Extra-Terrestrial Intelligence) experiment built around those speculative questions. In these pages, you will find an [invitation](#), issued by an informal group of approximately 100 scientists, artists and futurists from around Planet Earth, to any Extra-Terrestrial Intelligence (ETI) having the capability to read it. This invitation is issued in hopes of establishing a constructive dialog between humanity and our cosmic companions.

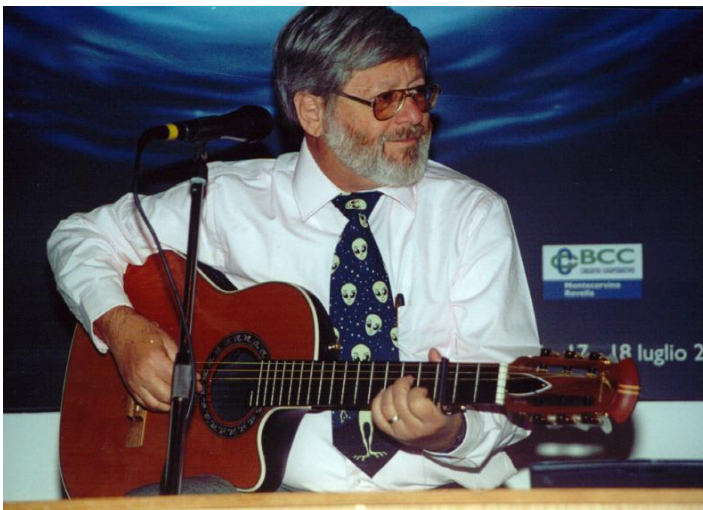
This new website for the Invitation to ETI initiative <<http://ietl.org>> is designed and maintained by The SETI League's volunteer webmaster.



Program Service Accomplishments – Media and Outreach

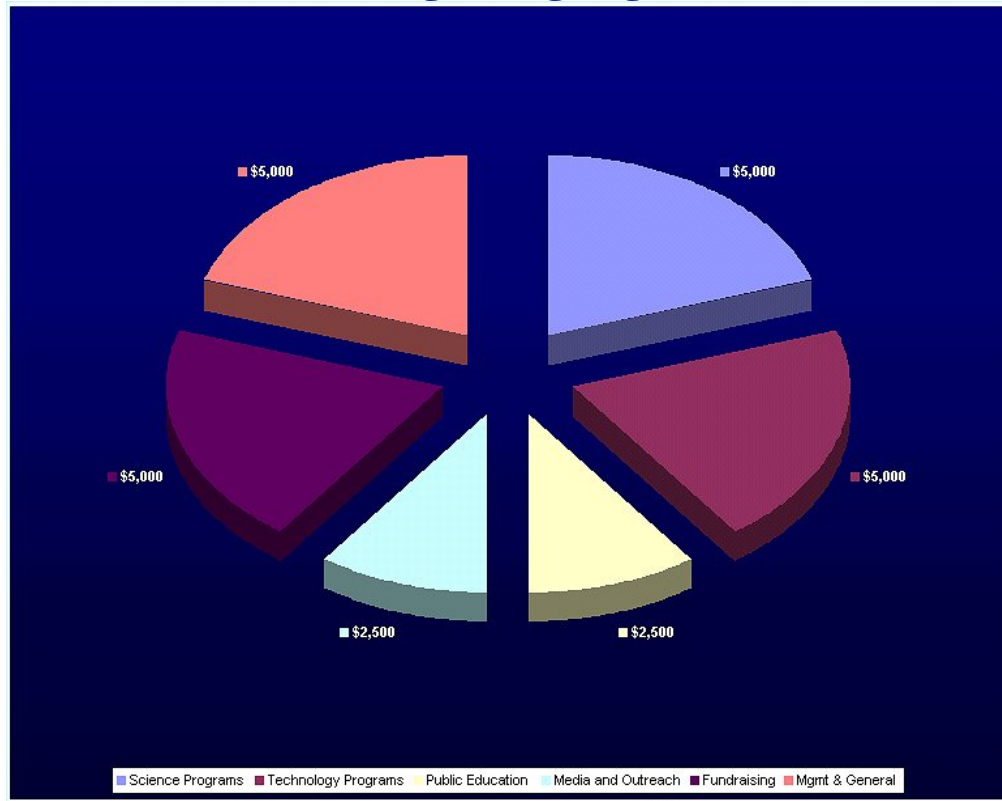
During 2005, The SETI League and its members engaged in the following media and outreach activities:

- Published four issues of SearchLites, the quarterly newsletter of The SETI League, Inc.
- Coordinated and archived two open public email lists.
- Distributed nine Press Releases and twelve Editorials to over 700 media outlets worldwide.
- Filed 52 weekly updates to The SETI League's extensive website, bringing its total document count to over 2900 pages.
- Several of our 65 volunteer Regional Coordinators in 49 countries conducted print and broadcast media briefings and interviews.
- Executive Director granted print media and broadcast interviews in the US, Japan, Canada, San Marino, and Italy.
- Presented the eleventh annual Giordano Bruno Memorial Award, the fourth annual Orville N. Greene Service Award, three Best Ideas Awards, and twelve SETI SuperStar Awards.



SETI League executive director H. Paul Shuch delivering one of his popular SETI lecture/concerts, in Montecorvino Rovella, Salerno Italy, in July of 2005. This was the second consecutive year in which Dr. Shuch was asked to headline at the Universitas conference.

Annual Budget Highlights – 2006



2006 Expense Budget

990 Line	REVENUES:	2006 (anticipated)
1d	Dues, Grants & Contributions	25,000
4	Interest & Investments	150
12	Total Revenues:	25,150
	EXPENSES:	
13	Educ. and Scientific Programs	15,000
14	Management & General	5,000
15	Fundraising	5,000
17	Total Expenses:	25,000
18	Excess or (Deficit) for the year	150
	BALANCE SHEET:	
19	Beginning Net Assets	8,562
21	Ending Net Assets	8,712



Trustees and Officers

In accordance with Article V, Section 2 of the Bylaws of The SETI League, Inc., as amended, “The Board shall consist of all officers along with such other trustee positions as determined by the Board of Trustees at their annual meeting.” At its annual meeting on 17 April 2005, the Board confirmed the following Officers and Trustees to serve for a term of one year:

<u>Appointee</u>	<u>Position</u>	<u>Professional Affiliation</u>
Richard Factor	President	President, Eventide Inc.
A. Heather Wood	Secretary/Treasurer	Executive Secretary, The SETI League, Inc.
Martin Schreiber, CPA	Trustee	Accountant, Brand Sonnenschine LLP
Marc Arnold, Esq.	Trustee	Attorney, Arnold and Lofaro
H. Paul Shuch, Ph.D.	COO	Chief Technology Officer, QorTek, Inc.



The 2005 SETI League Annual Meeting was held at The College of New Jersey in conjunction with the Trenton Computer Festival, giving our members an opportunity to hunt for bargains to enhance their radio telescope systems.



Accountant's Report: Audit Not Required

William R.
Hoffmann, LTD.

Certified Public
Accountants



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Professional Building
416 Pine Street
Williamsport, PA 17701
(570) 326-1938 - Phone
(570) 323-6667 - Fax

February 7, 2006

Dr. H. Paul Shuch, Executive Director
The SETI League, Inc.
433 Liberty Street
Little Ferry, NJ 07643

Dear Dr. Shuch:

In accordance with New Jersey charitable registration guidelines, you are not required to have an audit of your 2005 financial statements since total gross receipts are less than \$100,000. You are required to send a copy of your 2005 federal Form 990 and a copy of your internal financial statements along with your New Jersey registration forms.

If you have any questions or need additional information please feel free to contact our office.

Very truly yours,

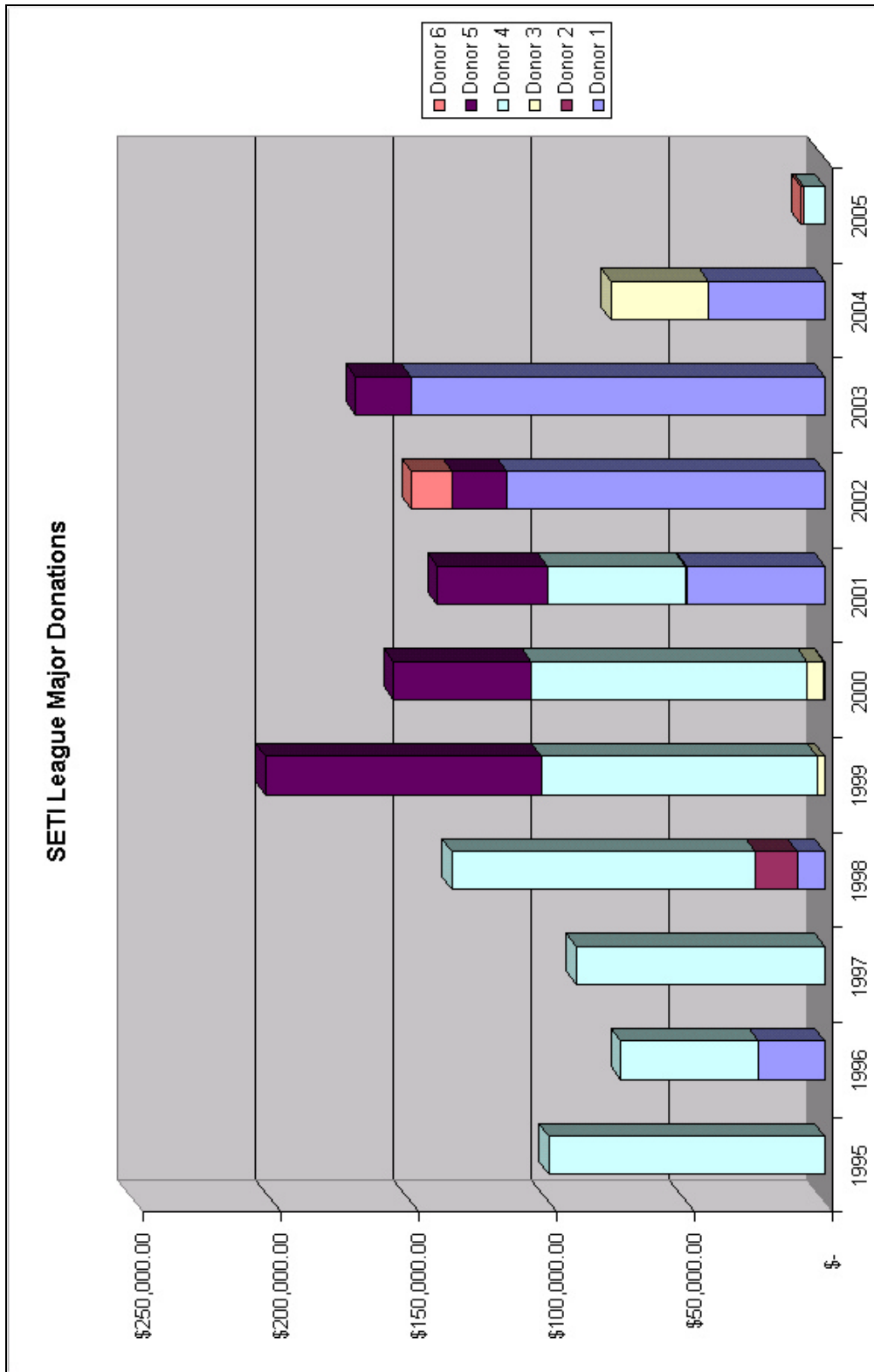
WILLIAM R. HOFFMANN, LTD.

Romey D. Fagnano
Certified Public Accountant

Member:
American Institute of
Certified Public Accountants
Pennsylvania Institute of
Certified Public Accountants
National Conference of
CPA Practitioners



Major Donations, Since Inception





2005 Donors

The SETI League recognizes the extraordinary commitment of our Major Donors, each of whom has provided contributions in excess of \$1000 US, in cash or in kind, during 2005:

- Mark G. Pankhurst
- Pisgah Astronomical Research Inst
- Richard Factor
- The Second Foundation
- H. Paul Shuch

We gratefully acknowledge the following members, who this year have made financial contributions to The SETI League above and beyond their membership dues:

- Reginald Peter Butt
- Rob Jones
- Daniel J. Kinsella
- Dennis R. Murphy
- Roy H. Norris
- David M. Ocame
- Malcolm I. Raff
- Christopher G. Rossi
- Pat Santoro
- Jeffrey Slade
- Susan Tonkin
- Allen Tough
- Matthew Turnbaugh
- Stephen A. Zarkos

The SETI League welcomes the following individuals, who became new members of The SETI League during 2005:

- Richard Bishop
- Jack "Chuck" Boudreaux
- Frank Breslford
- Allene H. Butler
- Iban Cardona
- Laura L. Dos Reis
- Matt Ettus
- David E. Fields
- Seymour Hersh
- Rob Jones
- Don Lallier
- Jim McKeegan
- Robert Melville
- Kathy Miley
- Alan Miley
- Robert Ockenberg
- Andre O'Sullivan
- Keith Payea
- Shanni Prutchi
- Richard C. Smith
- James Stratigos
- Justin Trottier
- Matthew Turnbaugh
- Steve Ulrich
- Eugene F. Von Achen
- William Walker
- John A. Williams



Additional Information

For additional information about The SETI League, Inc. and its various educational and scientific programs, please see the following pages on The SETI League website.

Main Page	http://www.setileague.org
Financial Information	http://www.setileague.org/finances
Membership Services Department	http://www.setileague.org/admin
Publications Department	http://www.setileague.org/articles
Press Relations Department	http://www.setileague.org/press
Photo Gallery	http://www.setileague.org/photos
Technical Programs:	
Project Argus	http://www.setileague.org/argus
Very Small Array	http://www.setileague.org/vsa
Array2k	http://www.setileague.org/array2k
Moonbounce Beacon	http://www.setileague.org/eme
Awards Program	http://www.setileague.org/awards
Hardware Support	http://www.setileague.org/hardware
Software Support	http://www.setileague.org/software
Technical Symposium	http://www.setileague.org/seticon
Dr. SETI ® On Tour	http://drseti.org