



The SETI League, Inc.

2014 Annual Report
Issued 30 April 2015

Offices:

433 Liberty Street
Little Ferry NJ
07643 USA

Phone:

+1 (201) 641-1770

Facsimile:

+1 (201) 641-1771

Email:

info@setileague.org

Web:

www.setileague.org

President /

Enrolled Agent:

Richard Factor

Executive Director

Emeritus:

H. Paul Shuch, PhD

Secretary/Treasurer:

A. Heather Wood

Board of Trustees:

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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 message from our Executive Director Emeritus:

Entering the Twenty-First Century **by Prof. H. Paul Shuch**

One would assume that an organization whose mission is to seek contact with our cosmic companions would be well versed in the very latest in communications technology, wouldn't one? If so, one would be wrong.

It's not as though The SETI League hasn't tried. More than twenty years ago, one of my first tasks as your Executive Director was to establish a significant presence on the newly emerging Internet. A nonprofit with a global reach, I reasoned, must develop a conduit for educating and informing not just its members, but the general public as well. An expansive website seemed the ideal way to accomplish this, so with the assistance and encouragement of Heather Wood (now our secretary/treasurer), I began to teach myself the fine art of webmastering.

HTML the old-school way required me to learn the relevant tags, and then type them directly into a simple text editor, taking great care to leave no tag stranded, abandoned and unpaired. This was before the advent of today's fancy web editing software, that turns any document instantly and automatically into hypertext (albeit replete with an abundance of extraneous tags, the digital equivalent to the volumes of junk DNA that inhabit and expand the human genome).

Website in place, I set about to establish a plethora of email discussion groups, allowing collaboration between our members in a wide variety of interdisciplinary SETI's multiple specialties. For quite a while our membership was very well connected. And it worked.

Then, seemingly overnight, the digital communications landscape changed. Suddenly, websites were becoming passe, as social networking began to dominate. Powerful handheld devices allowed us to tweet, text, post, like, follow, and share anything, with anyone, from anywhere. The SETI League was slow to respond, clinging steadfastly to our email lists and weekly web updates. In doing so, we began to lose our appeal to the younger generation on which we depend for the very future of SETI, which itself was looking more and more like a multigenerational endeavor, offering little to he or she who demands instant gratification.

In 2014, The SETI League finally took a bold and belated step into the future, with the establishment of an aggressive Facebook presence. Slowly, our website was relegated to providing an historical archive, province to evergreen content, while fast-breaking news in support of our members' instantaneous communications needs began to migrate to Facebook.com/setileague. The transition was traumatic for some, but inevitable.

To those of our members (and there have been more than a few) who say "I don't do Facebook," I say, give it a try. I post pictures and updates just a few times a week, trying to find the sweet spot between isolation and information overload. And, I encourage you to post your SETI-relevant thoughts and photos there from time to time. Working through social media, we can communicate and collaborate more effectively. If you happen to hear from ETI, won't you ask him to post?





The Case for Amateur SETI

When the NASA SETI Program was cancelled in 1993, the US government accomplished three things: they reduced their science expenditures by 5 cents per US citizen per year; they reduced the federal deficit by 0.0006%; and they drew a curtain across the sky, shielding us from possible membership in the cosmic community. The initial reaction most SETI supporters was dismay. That gave way to elation a year later, with the founding of The SETI League and the privatization of SETI science.

The giant radio telescopes once employed to scan the heavens for signs of life have a limitation. They are incredibly sensitive, but can only view a tiny portion (perhaps a millionth) of the sky at a given time. That means that if such an instrument is turned on, at precisely the right frequency, at precisely the instant The Call comes in, there's still a 99.9999% chance it will be pointed the wrong way.

One solution is to build a network of a million such instruments. But, at a cost of a hundred million dollars apiece, we'll quickly exceed the Gross Planetary Product.

Fortunately, there is another way. Amateur radio telescopes are less sensitive than NASA's dishes, but each can see two hundred times more sky. Which means that only five thousand of these smaller instruments (which cost only a few hundred to a few thousand dollars apiece to build) can, if properly coordinated, accomplish something which no government project ever contemplated: See in all directions at once.

Around the world, around 150 of such amateur radio telescopes have already been built, using discarded satellite television dish antennas, home computers, and readily available signal analysis software. The SETI League envisions a day when thousands of stations will be online, and our great goal achieved: that no direction on the sky shall evade our gaze.

Privatized science makes good sense. When governments get involved in large-scale projects, they often end up taking twice as long, costing twice as much, and working half as well. The SETI League is now doing its modest search on just half a percent of NASA's old SETI budget. But, we do need your support and participation, to keep that search alive. Whether you choose to operate your own radio telescope, to help develop new technology, or merely to share vicariously in the thrill of discovery, you are invited to join The SETI League. Together, there's no limit to what we might yet accomplish.

Program Service Accomplishments – Science

During 2014, The SETI League and its members made the following contributions to radio astronomy and SETI science:

- Supported 147 Project Argus radio telescopes built by members in 26 countries on all seven continents. Coordinated their SETI and astrophysical observations. Argus stations analyzed and cataloged several new candidate signals during 2014.
- Members' stations continued to monitor telemetry signals and science beacons from several NASA and ESA interplanetary space probes.
- Members provided leadership (as chair and vice-chair) to the SETI Permanent Committee of the International Academy of Astronautics.
- Several SETI League members served on the advisory board for the New Horizons Message Initiative, an effort to upload a Message from Earth into the digital memory banks of the New Horizons spacecraft now approaching Pluto.
- SETI League members continue to lend computer support to the SETI@home distributed computing experiment, through the Berkeley Open Infrastructure for Networked Computing (BOINC).



Over 90 enthusiasts (including several SETI League members) gathered at the National Radio Astronomy Observatory in Green Bank, WV in July 2014, for the annual technical conference of the Society of Amateur Radio Astronomers, a SETI League affiliate.

SARA photo

Program Service Accomplishments – Technology

During 2014, The SETI League and its members made the following contributions to SETI science and technology:

- Assisted several members in upgrading their Project Argus radio telescopes.
- Responded via email to numerous technical queries from members and the general public.



In Oak Ridge, TN, SETI League member Dr. David Fields operates this hydrogen-line radio telescope. The antenna is nicknamed "Moby Dish," so the control room seen to its left is obviously dubbed "Piquad."

SETI League photo

Program Service Accomplishments – Public Education

During 2014, The SETI League and its members made the following contributions to educating the public on SETI science and technology:

- Executive Director Emeritus delivered the Billingham Cutting Edge Lecture at the 2014 International Astronautical Congress in Toronto, ON, Canada, as well as public SETI lectures and concerts in Canada, Florida, Maryland, West Virginia, and Tennessee.
- Members participated in technical conferences of two SETI League affiliates, the Society of Amateur Radio Astronomers (SARA) and the Radio Amateur Satellite Corporation (AMSAT), presenting papers and conducting workshops.
- Executive Director Emeritus published three peer-reviewed technical articles in Conference proceedings, served as a manuscript reviewer for the International Academy of Astronautics, and as a member of the British Interplanetary Society's editorial board.
- The SETI League provided webmastering and website hosting services to the International Academy of Astronautics SETI Permanent Committee.
- Secretary distributed CD copies of "The SETI League Technical Manual".
- Officers and volunteer Regional Coordinators answered email queries from around the world on technical and societal aspects of SETI.
- Distributed print and CD copies of various SETI League Conference Proceedings.

At Roane State College in Tennessee, SETI League executive director emeritus Prof. H. Paul Shuch gave one of his popular ' Dr.SETI ' lecture/ concerts in November 2014.

SETI League photo



Program Service Accomplishments – Media and Outreach

During 2014, 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.
- Filed 52 weekly updates to The SETI League's extensive website.
- Posted two Press Releases and twelve Editorials to our website.
- Mailed out dozens of membership brochures to email requesters.
- Several of our 62 volunteer Regional Coordinators in 48 countries conducted print and broadcast media briefings and interviews.
- Awards Committee chairman designated recipients for twelve SETI SuperStar Awards.



Executive Director Emeritus H Paul Shuch met at NRAO Green Bank WV with astrophysicist Joe Taylor, K1JT. Joe, who shared a Nobel prize with his graduate student Russel Hulse for research at Arecibo involving binary pulsars, is best known to weak signal radio amateurs as the developer of the JT-65 digital signal processing protocol.

SETI League photo



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 in April 2014, the Board confirmed the following officers and trustees to serve for a term of one year:

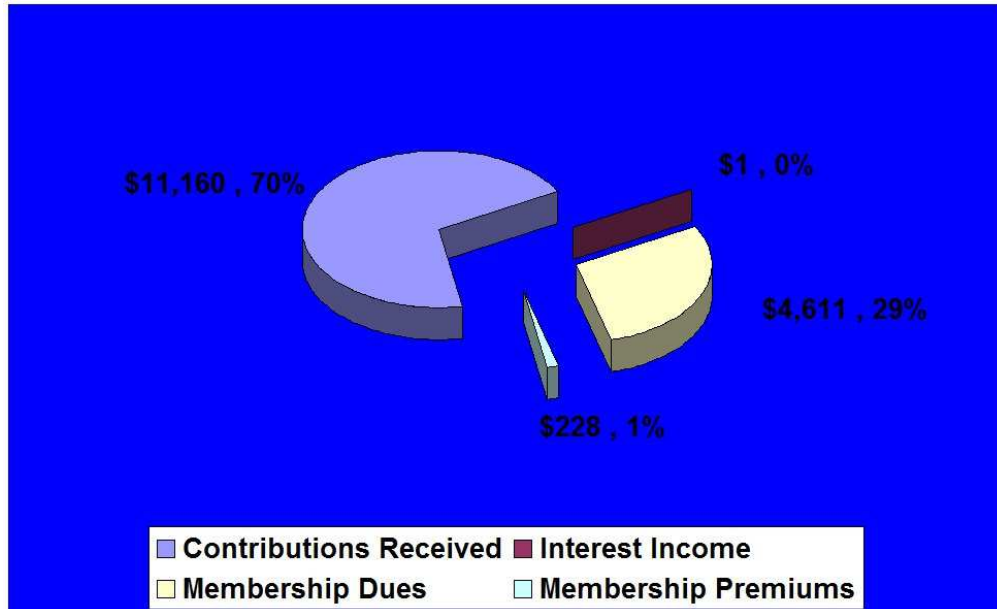
<u>Appointee</u>	<u>Position</u>	<u>Professional Affiliation</u>
Richard Factor	President	Chairman, Eventide Inc.
A. Heather Wood	Secretary/Treasurer	The SETI League, Inc.
Martin Schreiber, CPA	Trustee	Brand Sonnenschine LLP
H. Paul Shuch, Ph.D.	Executive Director Emeritus	AvSport of Lock Haven

SETI League regional coordinator Steve Carver, K5PT, gave a SETI presentation at the November 2014 meeting of the Arkansas River Valley Amateur Radio Foundation. It was covered thus in the December issue of the ARVARF newsletter: "Steve Carver, K5PT, gave us a great presentation at our last meeting on his many years involvement with ham radio and SETI in particular. Steve presented his experiences, frustrations and successes and gave us a good understanding of what we just might find out there. Hint: They're pretending they're not home."

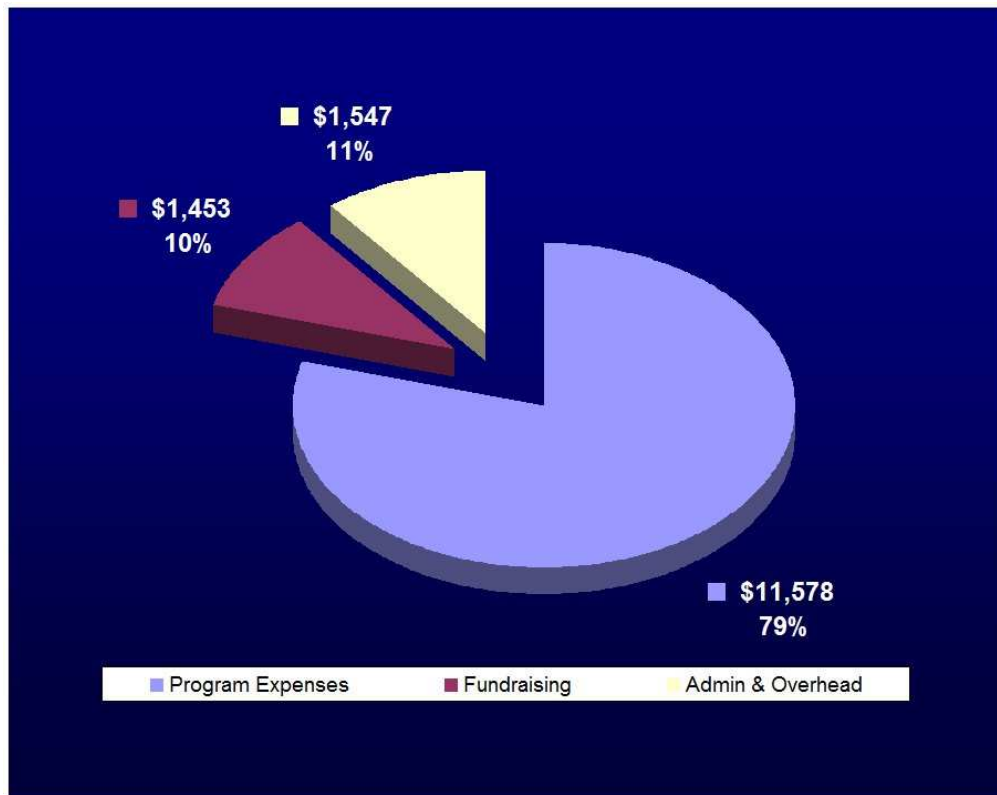


K5PT photo

Financial Highlights



2014 Revenues (unaudited)



2014 Expenses (unaudited)



Financial Results – 2014

2014 SETI League Financial Statement

The following table represents the preliminary operating budget of The SETI League, Inc., for the year indicated.

990 Line	REVENUES:	2014 (budget)	2014 (filed)
1d	Dues, Grants & Contributions	15,000	15,998
4	Interest & Investments	1	1
12	Total Revenues:	15,001	15,999
	EXPENSES	2014 (budget)	2014 (filed)
13	Educ. and Scientific Programs	11,520	11,578
14	Management & General	1,600	1,547
15	Fundraising	1,450	1,453
17	Total Expenses:	14,570	14,579
18	Excess or (Deficit) for the year	569	1,420
	BALANCE SHEET:	2014 (budget)	2014 (filed)
19	Beginning Net Assets	4,825	4,726
21	Ending Net Assets	5,394	6,147



Annual Budget – 2015

2015 SETI League Budget

The following table represents the preliminary operating budget of The SETI League, Inc., for the year indicated.

990 Line	REVENUES:	2015 (budget)	2015 (filed)
1d	Dues, Grants & Contributions	14,999	pending
4	Interest & Investments	1	pending
12	Total Revenues:	15,000	pending
	EXPENSES	2015 (budget)	2015 (filed)
13	Educ. and Scientific Programs	11,500	pending
14	Management & General	1,600	pending
15	Fundraising	1,500	pending
17	Total Expenses:	14,600	pending
18	Excess or (Deficit) for the year	400	pending
	BALANCE SHEET:	2015 (budget)	2015 (filed)
19	Beginning Net Assets	6,147	pending
21	Ending Net Assets	6,547	pending

2014 Donors

The SETI League welcomes the following individuals, who became new members of The SETI League during 2014:

- James Oberg, IL USA
- David Gilpin, TX USA
- Preston Ozmar, VA USA
- Ralph Campbell, OH USA
- Douglass White, IA USA
- JR VanHise, CA USA
- Frederic Jones, CA USA
- Wenhao Xuan, Hangzhou China
- Russell Legeikis, SC USA
- Daniel Wallace, IN USA
- Susan Seliene, CA USA
- Giancarlo Madiari, Liguria Italy

We also acknowledge member Dennis Murphy, who upgraded to Life Member in 2014.

The SETI League recognizes the extraordinary commitment of our Major Donors, each of whom has provided significant contributions, in cash or in kind, during 2014:

- Mr. Richard Factor (USA)
- Second Foundation (USA)
- Mr. Mark Pankhurst (BWI)
- Prof. H. Paul Shuch (USA)

The SETI League thanks the following members for their additional 2014 contributions above and beyond membership dues:

- Barry Wepman
- Aaron Brownell
- Sumio & Yoriko Nakane
- Shelley Rogers

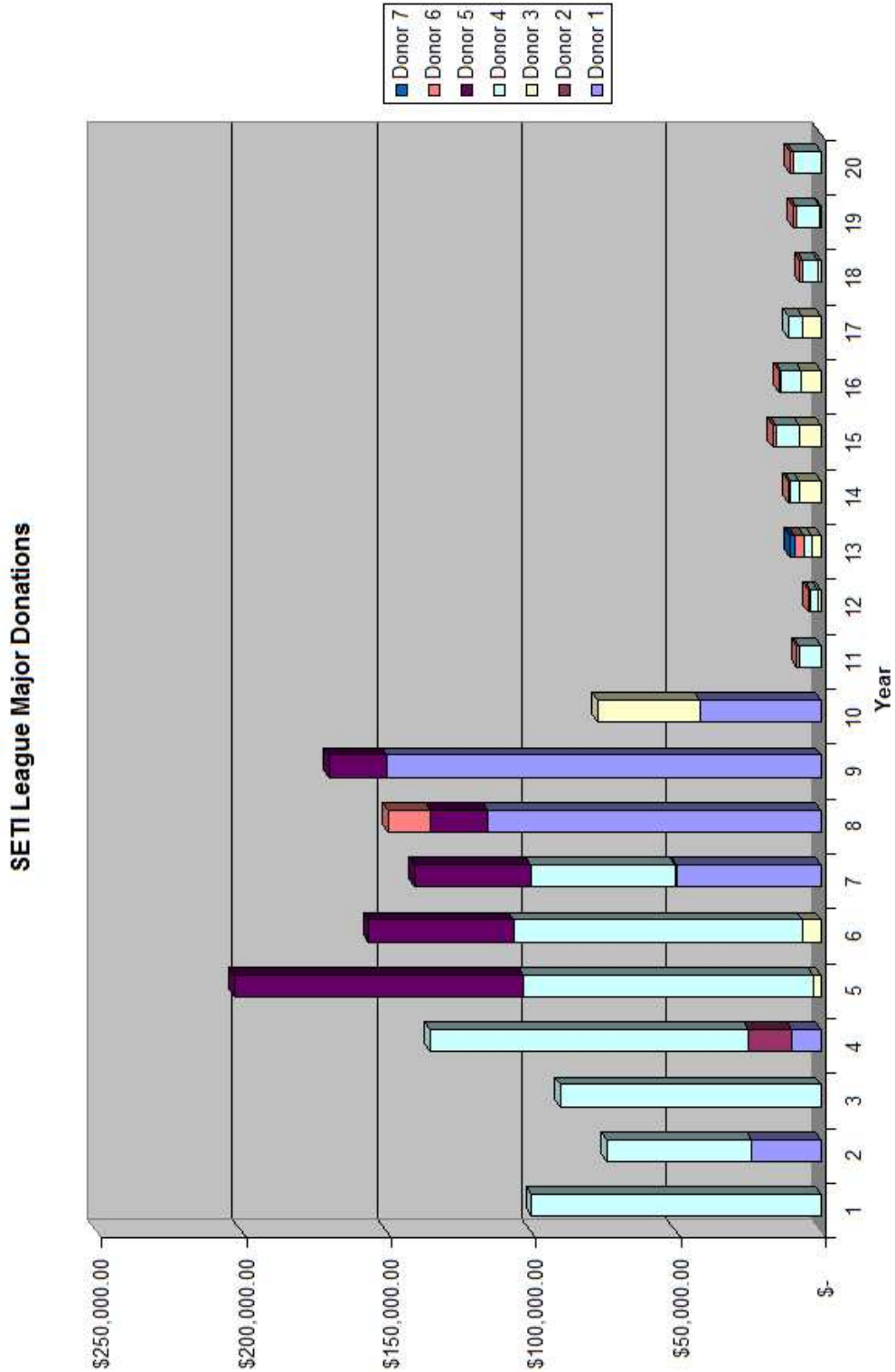


At the 2014 International Astronautical Congress in Toronto, SETI League regional coordinator Stephane Dumas encountered his first Little Green Man.

SETI League photo



Major Donations, Since Inception

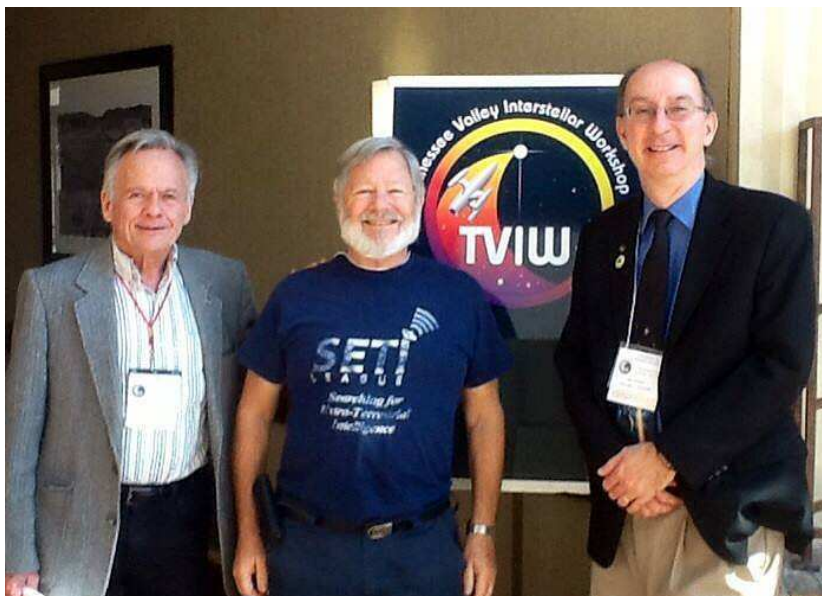




Additional Information

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



SETI League members David Fields and H. Paul Shuch met with NASA scientist Les Johnson, at the 2014 Tennessee Valley Interstellar Workshop in Oak Ridge TN.

SETI League photo