



SearchLites

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The Quarterly Newsletter of The SETI League, Inc.

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We're Doing OK

by H. Paul Shuch, Executive Director Emeritus

By now, everybody living on this planet (and perhaps on others) is aware that Earth is in the middle of a global public health crisis. This emergency affects us all, and I won't say there's no cause for concern. Periodically, I receive queries from SETI League members and supporters from around the world, asking after our wellbeing. So, let me assure you at the offset: *we're doing OK*.

Yes, The SETI League office is adjacent to New York City, which has been hit hard - so as you might have gathered, our office is closed for the duration. Richard, Heather, and I are healthy and working from home, as probably are most of you reading this. We will continue to crank out website updates, and newsletters, and process memberships, and answer your correspondence as best we're able, but for now, *we're doing OK*.

You've probably already learned that our Annual Membership Meeting, scheduled for 26 April 2020, was canceled. Our Board of Trustees met on that date, as originally scheduled, but from our homes via electronic means. Business was conducted as usual, and The SETI League will soldier on, because *we're doing OK*.

Just about every scientific meeting in the world has been canceled, including some that we were planning to attend, and were to make presentations. It is unclear if or when these meetings will be rescheduled. We are of course disappointed, but *we're doing OK*.

In recent weeks, you've probably heard from just about every nonprofit educational and scientific organization in the SETI universe, soliciting additional contributions to help them through these challenging times. But, we're not going to do that, because *we're doing OK*.

Thanks to your generosity over the past quarter century, coupled with our organization's abstemious fiscal policies, our survival is assured. Our scientific programs still receive enthusiastic participation from our dedicated membership, and will continue for as long as the possibility of extraterrestrial contact remains credible. *We're definitely doing OK*. My thanks to all of you who have made it possible for me to be able to say this.

Now is the time for you, our hundreds of members in dozens of countries around the world, to hunker down, shelter in place, care for your loved ones, practice social distancing, and wait for better times. We are a global family. Together, we'll continue to do OK.

Yours for SETI Success, Paul

Guest Editorial:

Consciousness—Again

by Dan Duda

from the March, 2020 issue of Penn Central,
the monthly newsletter of Central PA Mensa,
used by permission

OK, I'm obsessed with "consciousness" – again. And the scientific environment these days is packed with books and articles on the subject. But let me set the stage before I get into some new thoughts on the issue.

My feeling that we know almost nothing about reality has been repeated many times, and that means that I "believe" almost nothing – but that also frees me to feel that almost anything is possible. For example, if I had lived before Galileo, I would have accepted the then unpopular "possibility" that the Earth revolves around the Sun. Had I lived in the 16th century I would have been fascinated by the ridiculous "possibility" that the force that causes the streaking flashes of light (lightning) that occur during thunderstorms might someday be harnessed to provide light and do an enormous amount of work in a future society. Had I lived in the days of the Revolutionary War I would have been excited about the totally ludicrous idea that there would, someday, be heavier than air machines that would fly.

Among the myriad of impossible ideas and prophecies that exist at any point in time, there are some few that turn out to be not just possible, but true. And, given the fact that we currently know so little about the nature of our consciousness, I'm excited about the possibility that a breakthrough in understanding may be at hand. And, that breakthrough might just turn our understanding of all of reality on its head.

In a recent *Scientific American* article, Philip Goff says "Despite great progress in our scientific understanding of the brain, we still don't have even the beginnings of an explanation of ... [what] gives rise to the inner subjective world of colors, sounds, smells and tastes..." He goes on to articulate the problem – science, by its very nature is based on quantitative study. It totally ignores all qualitative factors which comprise the category encompassing everything we "experience" consciously. Yet, we

are so locked into quantitative analysis, which has been so incredibly successful, that we are mystified by our inability to comprehend the brain/mind/consciousness enigma. Goff sums the problem up by saying "... there is a huge hole in our scientific story."

Enter Bernardo Kastrup, a Dutch computer scientist and philosopher. He turns the study of consciousness upside-down by suggesting that it could not have been something that evolved – rather, it preceded evolution, and it possibly played an important role in it. His ideas are in-line with last month's guest editorial, suggesting that the universe itself, and everything in it carries at least a rudimentary level of consciousness. According to Kastrup "Our phenomenal consciousness is eminently qualitative, not quantitative. There is something it feels like to see the color red, which is not captured by merely noting the frequency of red light."

When you consider this hypothesis in the context of a (potentially) conscious universe some interesting ideas emerge. Could the brain exist to limit the volume of awareness we're exposed to? Might the sheer volume of universal knowledge overwhelm us to the point of challenging our ability to survive? Could our path through time be a bridge to an evolving blend of material and qualia that will eventually allow the universe to experience itself through us?

As stated many times, I don't "believe" this stuff. But I do find there is enough scientific logic in the approach for me to label it as "compelling." It certainly would explain why we face so many conundrums in our search for truth. And why so many scientific principles hit brick walls and require rethinking (the Big Bang; the Standard Model; etc.). In the words of Bernardo Kastrup "Phenomenal consciousness cannot have evolved. It can only have been there from the beginning as an intrinsic, irreducible fact of nature. The faster we come to terms with this fact, the faster our understanding of consciousness will progress." And perhaps our understanding of many other things as well.

Disclaimer: The opinions expressed in editorials are those of the individual authors, and do not necessarily reflect the position of The SETI League, Inc., its Trustees, officers, Advisory Board, members, donors, or commercial sponsors.



Minutes of the 2020 Virtual Board of Trustees Meeting

Conducted online on 26 April 2020

Call to Order

The 2020 Board of Trustees Meeting was convened electronically at 14:22 hours EDT.

Quorum Call

Trustees and Officers present: A. Heather Wood, Richard Factor, H. Paul Shuch

Trustees and Officers absent: Martin Schreiber

A quorum is present.

Minutes of 2019 Membership and Board Meetings

The Minutes of the 2019 Membership Meeting and Board of Trustees Meeting having been previously posted to The SETI League's World Wide Web site, a motion was passed to accept the minutes as posted.

Treasurer's Report

Developed jointly by Dr. Shuch and Secretary/Treasurer Heather Wood, covering the calendar year 2019 (as e-filed).

Revenues: Dues and Contributions ,14,369; Interest Income \$12; Total \$14,381.

Expenses: Grant Disbursement \$4,056; Educational/Scientific Programs \$12,650; Management/General \$1,624; Fundraising \$1,080; Total \$19,410.

Revenues minus Expenses: (\$5,030).

End of 2019, SETI League account balances equalled \$19,634. 2019 beginning net assets \$19,634.

2020 Budget: Projected Revenues \$14,000; Program Expenses \$13,000; Management/General Expenses \$1,500; Fundraising Expenses \$1,000; Total Expenses \$15,500; Projected surplus (deficit) (\$1,500); Projected Ending Balance \$18,134.

This report was accepted by those present.

Executive Director's Report

During 2019, the Executive Director:

Published four issues of *SearchLites*, the quarterly newsletter of The SETI League, Inc.

Gave SETI public lectures in Baltimore MD and Cherry Hill NJ.

Performed 52 weekly updates of The SETI League website

Posted roughly 100 photos, plus numerous links and comments, to The SETI League Facebook page

Issued one press release

Was elected an Emeritus member of the International Academy of Astronautics SETI Committee
Responded to several dozen email and telephone inquiries from members and prospective members.

Committee Reports

Membership

Ms. Wood reports that eight new members joined The SETI League during 2019, and we have three new members so far this year.

OSETI Committee

The SETI Institute has yet to provide Mr. Factor with details regarding their OSETI equipment, though he still has plans to install an Optical SETI observatory at his Sedona AZ location.

Prof. Shuch suggests that Mr. Factor contact Dr. Andrew Siemion, director of the University of California, Berkeley SETI Program, for information about their Optical SETI projects and technology.

Awards Committee

Absent an Awards Committee Chair, only one website received the SETI SuperStar award during the year 2019. There were no Giordano Bruno Awards or Orville N. Greene Awards presented for contributions during 2019. Nominations from members for all awards will be solicited in an upcoming issue of *SearchLites*.

Old Business

Annual Report

Annual financial updates have been posted to the Website, and published in *SearchLites*.

Web Server

Mr. Factor reports that the website continues to function well. We continue to use a commercial email service for official SETI League communications. Prof. Shuch reports that his emails to secretary@setileague.org are going unanswered. Ms. Wood replies that she has not been checking this email address, and Prof. Shuch requests that she do so periodically.

Interstellar Beacon

The Electrical Engineering department at Florida Institute of Technology has concluded its grant activity in support of the Interstellar Beacon initiative. All Grant funds have been remitted. Prof. Shuch reports that he and Mr. Kitchen have deemed unlikely the viability of achieving meaningful interstellar range at sufficiently high data rates, using available telescopes and laser

transmitters. The project has therefore been terminated.

Press List

For the past several years, Ms. Wood has been unsuccessful in migrating our email Press List to Mail Chimp. Thus, The SETI League website and Facebook page remain our only two means of disseminating press releases.

Telecommunications

Ms. Wood continues to retrieve voicemail messages occasionally via cellphone. Prof. Shuch requests she try to do so once per week. She reports that the vast majority are spam calls. Mr. Factor notes that some telephone companies offer voice to text services, and asks Ms. Wood to check on the availability of such a service from MCI, who provides The SETI League's phone lines.

New Business

Election of Officers

The following slate of officers was retained for an additional one-year term:

President - Richard Factor, serving without compensation

Secretary/Treasurer - A. Heather Wood

Executive Director Emeritus - H. Paul Shuch, serving on a volunteer basis

Registered Agent - Anthony Agnello

Annual Budget

The draft 2020 Budget is adopted by the Board.

Tax Return Filing

The Secretary/Treasurer reports that she was successful in eFiling our organizational tax return using the electronic Form 990N postcard, and having it timely accepted by the IRS.

Mid-Year Renewal Letter

Ms. Wood reports that a letter to lapsed members, offering them discounted dues for renewal, is forthcoming.

New Jersey Charities Registration

Ms. Wood was informed by the State of New Jersey that we were delinquent in our annual New Jersey Charities registration. She reports that all forms have been filed and fees paid. Prof. Shuch reports that he continues to receive requests for further information from the State of New Jersey. Ms. Wood requests that he forward all such requests to her.

Next Meeting

The next Annual Meeting will be held on Sunday 18 April 2021. The date has been verified as not in conflict with the National Association of Broadcasters meeting, Easter, or Passover. The meeting will be at Eventide, Inc. at 1300 hours EDT, to be followed immediately by the Board of Trustees meeting. The date and time will be announced to the membership via the website and newsletter.

Personnel matters

The Executive Director Emeritus reviewed with the Board of Trustees the previously adopted terms for cost-sharing of his health insurance premiums, as a program expense, which will continue at last year's percentage, pending availability of funds and subject to periodic review.

Advisory Board

The Executive Director Emeritus thanks members of our Advisory Board for more than two and one-half decades of service.

Good and Welfare

The SETI League's Facebook page www.facebook.com/setileague has (as of this morning) attracted 1,416 "likes" (up 62 since last year), 1444 "follows" (up 80 from last year), numerous member posts, and considerable discussion among members.

Adjournment

The Annual Board of Trustees Meeting was adjourned by the Executive Director Emeritus at 14:54 hours EDT on 26 April 2020.

Respectfully submitted by Prof. H. Paul Shuch, Executive Director Emeritus.



Executive Director Emeritus H. Paul Shuch convenes the electronic Board meeting from his office in Pennsylvania.

2019 Financial Report

2020 Budget

| 990 Line | REVENUES: | 2019 (budget) | 2019 (filed) |
|----------|-----------------------------------------|--------------------------|-------------------------|
| 1d | Dues, Grants & Contributions | 15,000 | 14,369 |
| 4 | Interest & Investments | 0 | 12 |
| 12 | Total Revenues: | 15,000 | 14,381 |
| | EXPENSES: | 2019 (budget) | 2019 (filed) |
| 10 | Grants | 4,000 | 4,056 |
| 13 | Educ. and Scientific Programs | 12,000 | 12,650 |
| 14 | Management & General | 2,000 | 1,624 |
| 15 | Fundraising | 1,000 | 1080 |
| 17 | Total Expenses: | 19,000 | 19,410 |
| 18 | Excess or (Deficit) for the year | (4,000) | (5,030) |
| | BALANCE SHEET: | 2019 (budget) | 2019 (filed) |
| 19 | Beginning Net Assets | 21,663 | 21,663 |
| 21 | Ending Net Assets | 17,663 | 16,634 |

| 990 Line | REVENUES: | 2020 (budget) | 2020 (filed) |
|----------|-----------------------------------------|--------------------------|-------------------------|
| 1d | Dues, Grants & Contributions | 14,000 | pending |
| 4 | Interest & Investments | 0 | pending |
| 12 | Total Revenues: | 14,000 | pending |
| | EXPENSES: | 2020 (budget) | 2020 (filed) |
| 13 | Educ. and Scientific Programs | 13,000 | pending |
| 14 | Management & General | 1,500 | pending |
| 15 | Fundraising | 1,000 | pending |
| 17 | Total Expenses: | 15,500 | pending |
| 18 | Excess or (Deficit) for the year | (1,500) | pending |
| | BALANCE SHEET: | 2020 (budget) | 2020 (filed) |
| 19 | Beginning Net Assets | 19,634 | 19,634 |
| 21 | Ending Net Assets | 18,134 | pending |



Due to the COVID-19 pandemic, President Richard Factor participates in the virtual Board meeting from his home in Arizona.



Secretary/Treasurer Heather Wood participates in the online Board meeting from home in New York.

Event Horizon

SearchLites readers are apprised of the following conferences and meetings at which SETI-related information will be presented. League members are invited to check our World Wide Web site (www.setileague.org) under *Event Horizon*, or email to us at info@setileague.org, to obtain further details. Members are also encouraged to send in information about upcoming events of which we may be unaware.

June 9 - 11, 2020: *Global Space Exploration Conference*, St. Petersburg, Russia. (**Canceled** due to the COVID-19 emergency)

July 6 - 9, 2020: *Penn State SETI Symposium*, State College, PA. (**Rescheduled** due to the COVID-19 emergency)

July 9 -12, 2020: *Readercon 31*, Quincy, MA.

July 10 -12, 2020: *Shore Leave 22*, Towson, MD.

July 29 - August 2, 2020: *78th World Science Fiction Convention*, Wellington, New Zealand.

August 15 - 23, 2020: *43rd COSPAR Scientific Assembly*, Sydney Australia. . **Rescheduled** due to the COVID-19 emergency

August 29 - September 5, 2020: *International Union of Radio Science General Assembly and Scientific Symposium*, Rome, Italy.

October 12 - 16, 2020: *71st International Astronautical Congress*, Dubai, United Arab Emirates. (**Rescheduled** due to the COVID-1 emergency)

October 15 - 18, 2020: *Microwave Update*, Sterling, VA.

October 16 - 18, 2020: *Capclave*, Rockville, MD.

November 20 - 22, 2020: *Philcon 2020*, Cherry Hill, NJ.

June 21 - 24, 2021: *Penn State SETI Symposium*, State College, PA.

August 25 - 29, 2021: *79th World Science Fiction Convention*, Washington, DC.

October 25 - 29, 2021 *71st International Astronautical Congress*, Dubai, United Arab Emirates.

2022 (dates to be announced): *72nd International Astronautical Congress*, Paris, France.

2023 (dates to be announced): *73rd International Astronautical Congress*, Baku, Azerbaijan. ❖



Happy Birthday, Frank Drake!

Most SETI League members will know Frank Drake as the father of observational SETI. In 1960, as new employee at the National Radio Astronomy Observatory in Green Bank WV, a 29-year-old recent Harvard Ph.D. graduate conducted the world's first scientific search for extraterrestrial intelligence. Frank went on to convene the world's first SETI conference in Green Bank the following year, and for its agenda, created the equation which now bears his name. Later the Director of the Arecibo Observatory, Drake co-designed and transmitted the famous Arecibo Message of 1974. Dr. Drake turned 90 years of age on 28 May, 2020. The SETI League thanks him for his many contributions to SETI science, and passes along warm birthday greetings.



SETI League members are encouraged to nominate SETI-relevant websites for our monthly SETI SuperStar Award. Nominating emails to our Awards Committee may be sent to: Awards_at_setileague_dot_org. Please be sure to indicate the URL of the candidate website you are nominating, and a brief explanation as to why you consider the site worthy of recognition.

← Want a painless way to support The SETI League? Browse to www.smile.amazon.com. In the "Pick your own charitable organization" box, just type in "SETI League." Now, every time you shop Amazon, they will donate a half percent of your purchase price to SETI research!



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ADDRESS SERVICE REQUESTED

Annual Renewal: Is This Your Last SearchLites?
SETI League memberships are issued for the *Calendar Year*. Please check the expiration date indicated on your mailing label. If it reads December 2019 or earlier, you have already expired, and *must* renew your SETI League membership **now!** Please fill out and return this page along with your payment.

Please renew my membership in this category:

| | |
|--------------------------------------------------------------|--------------|
| Full Member | \$50 / yr |
| Supporting Member (elderly, retired, or disabled) | \$35 / yr |
| Scholarship Member (full-time students only) | \$25 / yr |
| Household Member (same address as a Full Member) | \$15 / yr |
| Household Life Member (same address as a Life Member) | \$300 |
| Life Member (until we make contact) | \$1,000 |
| Sustaining Life Member – a generous <i>annual</i> pledge of: | \$1,000 / yr |
| Patron (priority use of The SETI League’s radio telescope) | \$10,000 |
| Director (Patron membership plus seat on advisory board) | \$100,000 |
| Benefactor (a major radio telescope named for you) | \$1,000,000 |

Annual memberships are issued for the calendar year. Those processed in January through April expire on 31 December of that year. Those processed in September through December expire on 31 December of the *following* year. Those members joining in May through August should remit half the annual dues indicated, and will expire on 31 December of the same year.

Order Your Membership Premiums:

| | (u/c)* | (o)* |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------|------|
| Pocket protectors | \$ 3 | \$ 4 |
| Mouse pads | \$ 5 | \$ 7 |
| <i>Tune In The Universe! (CD-ROM)</i> | \$25 | \$30 |
| <i>Proceedings of SETICon01</i> | \$20 | \$27 |
| <i>Proceedings of SETICon02</i> | \$20 | \$27 |
| <i>Proceedings of SETICon03 (CD)</i> | \$15 | \$18 |
| <i>Proceedings of EuroSETI04 (CD)</i> | \$15 | \$18 |
| <i>Proceedings of SETICon04(CD)</i> | \$15 | \$18 |
| <i>SARA Conference Proceedings:</i> | | |
| 2006, 2007, 2008, 2009 (specify) | \$20 | \$27 |
| <i>SETI League Technical Manual (CD)</i> | \$10 | \$13 |
| <i>Project Cyclops 2nd Edition</i> | \$20 | \$30 |
| <i>The Listeners</i> by James Gunn | \$15 | \$21 |
| <i>Sing a Song of SETI</i> (Songbook) | \$10 | \$13 |
| <i>Sing More Songs of SETI</i> (Songbook) | \$10 | \$13 |
| <i>Sing a Song of SETI</i> (music CD) | \$15 | \$18 |
| <i>Sing More Songs of SETI</i> (music CD) | \$15 | \$18 |
| <i>Demented!</i> (music CD) | \$15 | \$18 |
| T-shirts, specify M, L, or XL | \$15 | \$22 |
| SETI Nerd Gift Set (one each Mouse Pad, Pocket Protector, <i>Project Cyclops</i> and <i>Tech Manual</i>) at 20% Savings to <u>Members Only</u> : | \$30 | \$45 |

***Includes postage to (u/c) US/Canada, or (o) other locations**
Payments in US Dollars, check payable through a US bank

Pleased to Accept PayPal

The SETI League invites you to pay your membership dues and additional contributions via credit card, using the PayPal online payment system. Simply log on to www.paypal.com and specify that your payment be directed to paypal@setileague.org.

Name: _____

Address: _____

 Phone: _____ email: _____
 Ham call: _____ URL: _____
 Contribution enclosed (US Dollars): _____