

UFOs: Challenge to SETI Specialists

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Major news media and many members of the scientific community have taken strongly to the radio-telescope based SETI (Search for Extraterrestrial Intelligence) program as espoused by its charismatic leaders, but not supported by any evidence whatsoever. In turn, perhaps understandably, they feel it necessary to attack the ideas of alien visitors (UFOs) as though they were based on tabloid nonsense instead of on far more evidence than has been provided for SETI. One might hope, vainly I am afraid, that they would be concerned with The Search for Extraterrestrial Visitors (SETV). I would hereby like to challenge the SETI specialists, members of the scientific community, and the media to recognize the overwhelming evidence and significant consequences of alien visits and to expose the serious deficiencies of the SETI related claims. I have publicly and privately offered to debate any of them. No takers so far.

Here are my challenges for the SETI SPECIALISTS (SS)

1. Why is it that SS make proclamations about how much energy it would take for interstellar travel when they have no professional competence, training, or awareness of the relevant engineering literature in this area? As it happens, the required amount of energy is entirely dependent on the details of the trip and CANNOT be determined from basic physics. If one makes enough totally inappropriate assumptions, as academic astronomers have repeatedly done down through history in their supposedly scientific calculations about flight, one reaches ridiculous conclusions. But it is not necessary, for example, to limit the flight to 1G acceleration, or to provide all the energy needed for the round trip at the launch, or to use an utterly foolish trip profile (as devised by a Nobel Prize winning Harvard physicist) that involves accelerating at 1G for half the outward bound portion and the decelerating at 1G for the second half, etc. Do note that it only takes one year at 1G to reach close to c.

Cosmic freeloading can be very, very helpful in reducing fuel requirements and has been used for all our deep space missions such as Voyager, Pioneer, Galileo, Cassini, etc. A splendid example of the wrong assumptions to make was provided by Dr. John William Campbell (1), Professor of Mathematics and Astronomy at the University of Alberta, in 1941, when he attempted to compute the required initial launch weight of a chemical rocket able to get a man to the moon and back. Our successful trips to the moon beginning in 1969, still with chemical rockets, showed that the weight he “scientifically” calculated was too high

by a factor of 300 Million!! Dr. Alexander Bickerton (2) in 1926 proclaimed that it would be impossible to give anything sufficient energy to place it in orbit around the earth. Professor Simon Newcomb (3) “proved” in October, 1903, that it would be impossible for a man to fly except with the help of balloons. This was 2 months before the first flight by the Wright Brothers (2 very sharp bicycle mechanics). These three bright professors made a whole host of totally inappropriate assumptions because of their ignorance of the technical situations with which they were faced. They hadn’t read the ample literature available to any professional seeking truth.

For example, Dr. Campbell assumed a single stage chemical rocket, launched vertically and limited to 1G acceleration. He assumed much too low an exhaust velocity. The rocket had to carry a huge amount of fuel for use in the retrorocket supposedly required to slow down the rocket upon return to Earth. For Apollo we used multi-stage rockets (reducing system weight at each stage) launched to the East from near the equator (to take advantage of the Earth’s rotation), a peak acceleration of many Gs (the faster to orbit, the less the losses to gravitation), the moon’s gravitational field (to provide some free energy going in) and earth’s atmosphere to do the deceleration upon approaching the earth, as highlighted, for example, in the movie Apollo 13. Cleverness was more important than power.

The exhaust velocity was certainly much higher than assumed by Dr. Campbell. Of course Campbell knew nothing about fission or fusion rockets (on both of which I have worked). The latter using D-He3 reactions exhaust charged particles which can be directed electromagnetically and are born with 10 million times as much energy per particle as can be obtained in chemical rockets. Most academics in my experience and in their publications (i.e. Krauss, Ref. 4) are ignorant of the fact that the most powerful fission rocket reactor propulsion system (Phoebus 2B, made by Los Alamos) operated at a power level of 4,400 Megawatts before 1970. Man has produced many controlled fusion reactions. See Luce (5) about fusion rockets. Any study of the history of technological development reveals that technological progress comes from doing things differently in an unpredictable way. Pocket calculators are not built with vacuum tubes. Supersonic flight is not achieved with propellers. Lasers are not just better light bulbs. In short, the future is definitely NOT a mere extrapolation of the past.

2. Why do SS assume that radio is the ultimate means of long distance communication, when we have only had this kind of technology for roughly 100 years? Just down the galactic street there are two sun-like stars (Zeta 1 and Zeta 2 Reticuli) only 37 light years away and a billion years older than the sun. Of great interest is the fact that they are less than 1 light year apart from each other. It is good to see recent recognition of the fact that we can already, with our primitive technology, create laser signals able to be observed by other civilizations in the neighborhood. Optical SETI is coming in to its own. But remember progress comes from doing things differently. What new communication techniques will we master in just 50 or 100 years?

3. *Why do SS make proclamations about how aliens would behave, when, as physical science professionals, they have no training, experience, or special insights as to how Earthlings, no less aliens, would behave, or what their motivations are.* One might consult psychiatrists, psychologists, social workers, lawyers, nurses, etc, but radio astronomers? This is a field which, by its nature, has little to do with people other than those directly involved. We hear such comments as that aliens, once radio contact is established, would teach us about all the secrets of the universe. Just why would an advanced technological civilization share its secrets with a primitive society whose major activity (judging by how its wealth is spent) would certainly appear to be tribal warfare and for whom every new frontier is a new place to do battle? Earthlings killed about 50 million other Earthlings during WW 2 and destroyed 1700 cities. Currently almost \$1trillion per year is spent on the military while 30,000 children die needlessly every day of preventable diseases and starvation.

4. *Why is it that SS take every opportunity to attack the notion of alien visitations without any reference to the many large scale scientific studies?* They act as though the tabloids are the only possible sources of UFO data. There are at least 6 large scale scientific studies (Ref. 6-11), more than 10 PhD Theses, and many dozens of published professional papers by professional scientists. These are all almost always ignored. There are, for example, 13 anti-UFO books and dozens of pro SETI books that don't even mention the largest scientific study done for the USAF (6). The work was done by the engineers and scientists at the Battelle Memorial Institute in Columbus, Ohio. They found that 21.5% of the 3201 cases investigated were UNKNOWNNS completely separate from those cases deemed to provide "Insufficient Information". They found that the better the reliability of the reports, the more likely to be unidentifiable. Statistical cross comparisons between the UNKNOWNNS and the KNOWNNS showed that the probability that the former were just missed KNOWNNS was less than 1% for 6 different characteristics.

The basic rules for the lack of attention to the relevant data by well educated, but ignorant about-UFOs-professionals, especially SS, seem to be:

- Don't bother me with the facts, my mind is made up.
- What the public doesn't know, I won't tell them.
- If one can't attack the data, attack the people; it is much easier.

4. *Do one's research by proclamation, investigation is too much trouble and nobody will know the difference anyway.*

How else can one explain such totally baseless, but seemingly profound, proclamations as "The reliable cases are uninteresting and the interesting cases are unreliable. Unfortunately there are no cases that are both reliable and interesting" (See Sagan, Ref. 12).

The fact is that 35% of the EXCELLENT cases in BBSR14 were UNKNOWNNS and therefore Interesting. Only 18% of the POOR cases were Unknownns. Surely professional

scientists are supposed to base their conclusions on study of the relevant data, rather than proclamations?

5. *Why don't SS understand that there are very clear-cut national security aspects of the entire UFO problem including the possibility of duplicating the far out technology and the concerns with the impact on the public of any announcement?* Clearly if any earthlings could duplicate the saucer technology, the systems would make wonderful weapons delivery and defence systems. It is a lot easier to dream about distant civilizations whose existence will have little impact, if they can never reach here, or never have been here. Many quite extraordinary scientific and technological developments were conducted in TOP SECRET programs including the development of the atomic bomb, the proximity fuse, radar, etc. There is overwhelming evidence, never noted by the SS, that the subject of flying saucers represents a kind of Cosmic Watergate including the recovery of two crashed saucers in New Mexico in 1947 (13). According to Pulitzer prize winning journalist Tim Weiner (14), the annual Black Budget (Not under congressional control) was running \$34 billion several years ago. The NSA had openly admitted withholding 156 UFO documents even from a Federal Court Judge given a high security clearance. When these were "released" more than 15 years later, only 1 or 2 lines per page were not covered by whiteout. I have received formerly classified CIA UFO documents on which only 8 words are not blacked out.

USAF General Carroll Bolender stated (15) that "Reports of UFOs which could effect national securityare NOT part of the Blue Book System." One should note that the very high quality military monitoring systems operated by the Air Defence Command and the NRO and NSA produce data which are born classified and is not released to the public.

6. *If the SS are truly interested in the SETI, why don't they examine the best UFO data instead of ignoring it?* Without that data, they have no evidence to support the many assumptions they make about ETI. For example, it is assumed that there is intelligent life all over the place, that some of this life is more advanced than we are, and that ET communications and flight technology are stuck at the level of radio and chemical rockets, and ETs are trying to attract our attention via radio!! No evidence has been provided that any of these assumptions are true. And yet these same SS insist on ufologists providing them with an alien body!! SS have been joyous about finding 37 radio signals out of several billion that were tantalizing. But they choose to ignore the 21.5% of 3201 investigated UFO sightings that might indeed signal the existence of ETVs. The false reasoning is incredible. Since most sightings can be explained, therefore all can be. But since some very few radio signals were thought to be intriguing, we should follow that path of study!

7. *Why is the assumption made that aliens wouldn't know there was a technological civilization here until they picked up our TV or radar signals?* We are already, though in our technological infancy compared to a cosmic time frame, considering building a radio telescope with segments on opposite sides of the solar system that could directly observe earth size planets around all the stars in the neighborhood. Other civilizations in the

neighborhood could have done this a billion years ago. As Sagan noted (16) signs of biological life here could have been observed at Earth by an alien spacecraft at our level of technological development 2 Billion years ago. Why not assume that every library in the local galactic neighborhood has known of our existence as a result of explorations done millions of years ago? One should note that Columbus did not wait for a smoke signal from the Western Hemisphere natives before sailing westward. One of Magellan's ships sailed around the world in about 2 years. The Space Shuttle does it in 90 minutes. Progress comes from doing things differently.

8. *Why is it that the SS don't understand that, at the end of WW 2, it was quite obvious to any visiting alien intelligence agents, that soon (less than 100 years) these primitive earthlings, whose brand of friendship is obviously hostility, could be traipsing around the local galactic neighborhood?* Three new readily observable technologies: atom bombs, powerful V-2 rockets, and powerful radar systems set the pace. It is probably not a coincidence that the crashed saucers were recovered in Southeastern New Mexico near the only place on Earth (White Sands Missile Range) in July, 1947, where all three could be observed.

During any one century, because the progress from no space technology, to deep space travel, takes such a comparatively short time, it doesn't seem likely that there would be any other civilization in the local neighborhood going through the same transition. They are either ahead of us or behind us. Of course we would be of interest to them; if for no other reason that the equivalent of national security concerns. Compare the world's budget for National security with that for radio astronomy. One reasonable purpose from that viewpoint for visiting here would be to assure that we don't go out there until we get our act together. The word quarantine comes to mind. Does anybody really believe that aliens would want this primitive society out there before we get our act together and can even qualify for admission to the Cosmic Kindergarten?

9. *Why is it that SS seem to assume that aliens would want to deal with them?* They don't speak for the planet any more than ham radio operators speak for their countries. If their annual budget were even \$100 million, that is miniscule compared to the \$1 trillion for national security.

10. *Why is it that SS so often try to stress how big and how old the universe is?* In fact the sphere centered on the sun and having a radius of only 54 light years includes 1000 stars of which about 46 seem to be sun-like and suitable for planets and life (17). At least 2 of these sun-like stars are 1 Billion years older than the sun. If my car were stolen near my home in Fredericton, New Brunswick, it wouldn't make much sense to suggest that the thief might be any one of 6 billion Earthlings. It would appear to be much more likely that the thief was one of 725,000 New Brunswick residents or one of only 50,000 Frederictonians. The odds of finding the thief would be greatly enhanced.. Note, too, for example, that residents of Zeta 1 and Zeta 2 Reticuli, being less than 1 light year apart, could directly observe planets around the other star.

11. Why do SS focus on the Drake Equation which supposedly tells how many inhabited planets there are capable of sending radio signals? There is no evidence to support the many assumptions that are made and it takes no account of the processes most important for the distribution of intelligent life on Earth, namely migration and colonization. We have data on one planet in one solar system at the present time. We don't even know how many civilizations there may have been here on earth 10 million or 200 million years ago,. Schliemann had to dig down 75 feet to find Troy dating from just a few thousand years ago. How much of earth has been explored that deep no less the much greater depth that would be needed to tell us about civilizations that were lost due to asteroid collisions or nuclear wars or continental drift since hundreds of millions of years ago? One might just as well throw a dart at a dart board with numbers on it.

12. Why are proclamations made by SS that aliens can't possibly be humanoid, as described by UFO witnesses? We have no catalog of aliens in the neighborhood combined with travel schedules so we could predict how many would have three heads or 4 eyes, etc. After all these claims of non-humanoidness are based on assuming that any ETI has developed indigenously and independently of life from anywhere else and there has been no migration or colonization. Funny how the laws of physics and biology might even suggest that there are favored directions for how things develop. For example, we find few examples of mammals with three legs or three eyes. There may well be advantages to certain configurations. Colonization and migration would lead to the dispersal of particular features. Proclamations without data are hardly scientific. Reports from all over Earth indicate humanoids are visiting in strange vehicles with extraordinary capabilities.. This, of course, does not mean that all aliens are humanoid. Presumably the ammonia breathers go to Jupiter.

13. Are the SS really unaware that public opinion polls have consistently shown that believers in alien visitations outnumber non-believers and that the greater the education the more likely to accept ETV? Two polls of engineers and scientists involved in research and development activities (18) even showed that 2/3 of those who expressed an opinion believe that some UFOs are ET spacecraft. After all, certain knowledge that Earth is indeed being visited would provide the best incentive for bigger budgets for space exploration. Of course, if aliens are indeed visiting, than the Radio Telescope Search for ET signals would seem a useless exercise and might indicate the SS have been on the wrong track all along. Learning sign language might be more productive in terms of Communicating with ETI. I have twice heard independent reports of military personnel recording radio signals from a UFO being monitored by nearby military radar. One wonders how many similar instances there have been.

14. Why do SS, who should know better, or at least should have done their homework, so often pronounce that it would be impossible for any one to withstand the "enormous" accelerations of UFOs so often observed for brief times? They quote no data to support their pronouncements despite the huge amount of data that NASA and others have compiled over

the past half century. It turns out that trained and properly constrained humans can withstand “enormous” accelerations, for significant times, so long as the acceleration is in the appropriate direction vis a vis the body. Astronauts are launched while on their backs for a good reason. For example, a pilot can perform a tracking task while being accelerated for 2 minutes at 14 Gs. That is from zero to 36,000 miles per hour in 2 minutes. They can successfully withstand 30Gs for one second. Dr. Paul Stapp’s rocket sled reached over 600mph in the early 1950s and he successfully withstood 43Gs when slowing down more rapidly than expected. Data should take precedence over proclamations.

15. *Why do SS cite the Fermi Paradox as though it demonstrates that nobody is coming here or that we haven’t been colonized, perhaps many times, in the past?* Fermi was well known at the U. of Chicago for trying to teach by asking questions. Remember that he assumed it would only take a few million years for the entire galaxy to be colonized once those activities had begun. The beginning could have been a billion years ago.

16. *Finally there seem to be no signs that either SETI leaders or UFO debunkers are willing to note the false reasoning of their own kind.* This lack of internal evaluations provides a scientifically unhealthy and dogmatic, almost cult like atmosphere, with charismatic leadership, a strong dogma, and irrational resistance to outside or new ideas. Scientists and journalists have a serious obligation to study the relevant data rather than to make pronouncements having no factual basis. Does the end (presumably public rejection of flying saucer visitations and enhancement of the status of SETI) really justify the means of misrepresentation based on ignorance and arrogance? Ufologists are, in contrast, very critical of each other. Party lines should be for politicians NOT for scientists.

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Since 1967 he has lectured on the topic "Flying Saucers ARE Real" at more than 600 colleges and over 100 professional groups in fifty states, nine Canadian provinces, England, Italy, Germany, Holland, France, Finland, Brazil, Australia, Korea, Mexico, Turkey, Argentina, and Israel. He has published more than 70 papers on UFOs besides his dozens of conventional articles and appeared on hundreds of radio and TV shows.

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