

# Birkeland Polyphase Superweb

A Proposition for the Future Betterment of Mankind, global defense,  
interconnection, and unlimited power

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## ABSTRACT

The world is low on energy, but not because it needs to be. Energy should be cheap, and the service and maintenance for supply should constitute the majority of the cost of the bill. Tesla said that burning fuel to generate the electromotive force was “barbaric” and it is. Although CO<sub>2</sub> has nothing to do with climate change, pollution is barbaric. Coral Reefs prefer warm waters, but satellites show that they are adversely affected by human populations. To reduce pollution we must incinerate what is unburiable and unrecyclable, to the point of atomic dissolution. Furthermore our interconnectivity needs require greater bandwidth. High frequency (HF) bandwidths such as 5G, however, are unsafe for human use, and are inefficient. But as they are implemented, they too will require a greater and greater load on the grid. It is said that mankind is unable to rely on photovoltaics or first generation wind. While we could rely on tidal, river, waterfall, and geothermal power, especially near gyre sources such as volcanoes and hot springs, there isn’t any impetus. What has always provided the impetus? Military contracts. But nuclear power, even with thorium, is politically unpopular. Therefore the author offers skipping to the solution which will enable new military protection and weapons, space flight, terraforming, and new communications networks of unlimited bandwidth: Birkeland Polyphase Superwebs.

*Keywords:* electricity, space travel, terraformation, Mars, Venus, AI, robots, nano, mining, STEM

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## Definitions

A **Birkeland Current** (BC) is a counter-rotating (coaxial<sup>1</sup>) current that degrades by  $1/r^{1/2}$  instead of  $1/r^2$ .<sup>2</sup> Its discovery in lab by Kristian Birkeland was not verified until the space age. On the highest scales yet found in the solar system, they cause the counter-rotation of up to 15 layers of Jupiter and Saturn atmospheres (see Figures 1 and 2) and connect moons to these gas giants. There is evidence from Donald Scott<sup>3</sup> that they are operating at the North Pole,<sup>4</sup> just like on Jupiter<sup>5</sup> (Figure 3). They may be the true form of the Van Allen belts. The sun, too, appears to be powered by the Galactic Electric Circuit (or its own return current) via these BC's, and as the sun enters a higher influx, the visible spectrum has downshifted<sup>6</sup>, creating an equatorial gamma increase<sup>7</sup>, probably compulsory to the right-hand-rule.

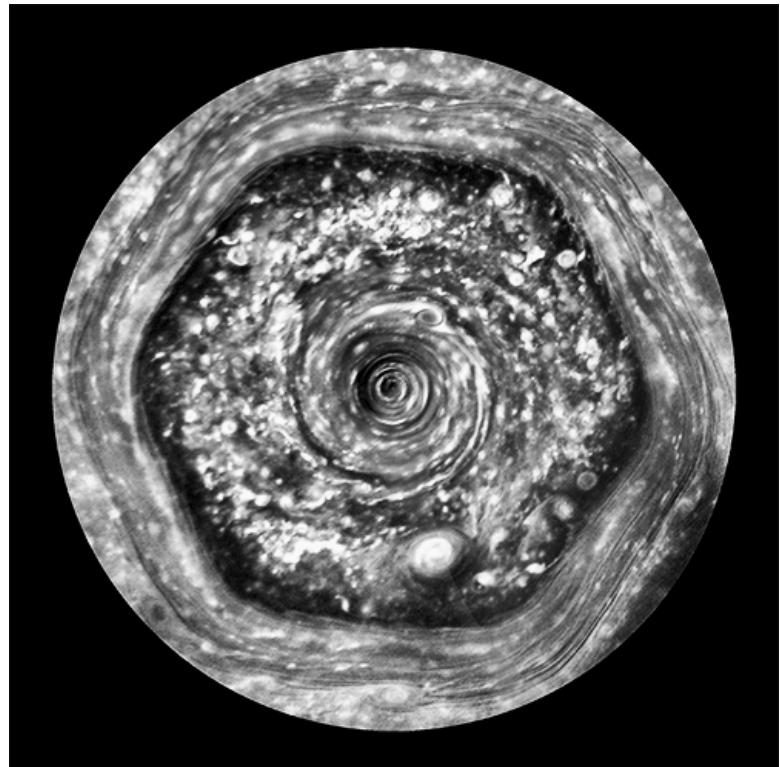


Figure 1 - Saturn's North Pole

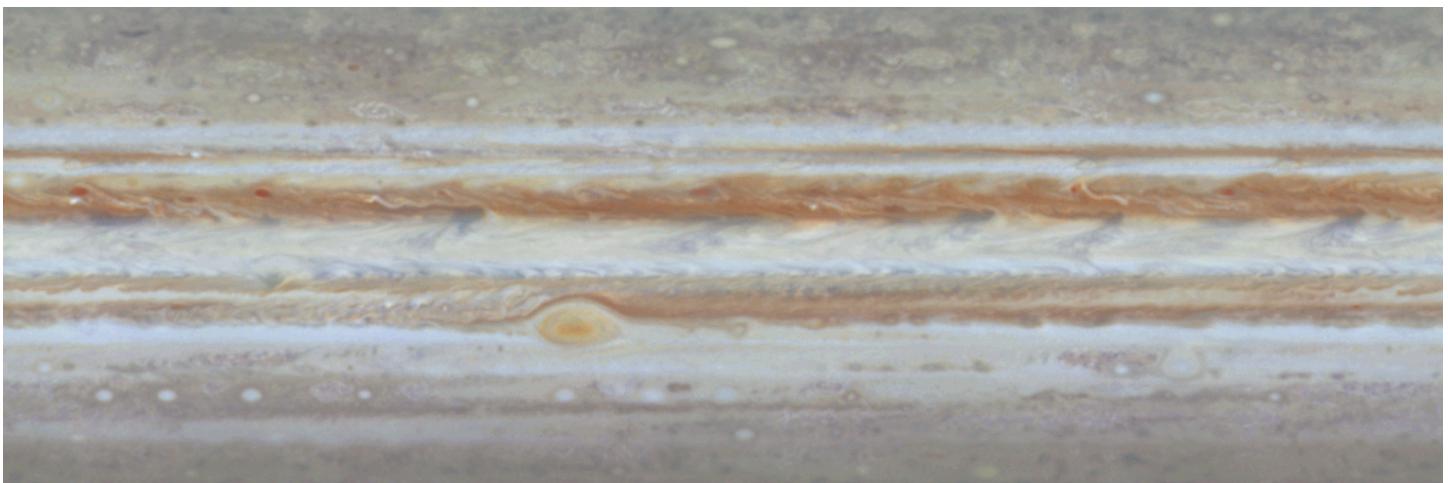


Figure 2 - counter-rotating bands of Jupiter<sup>8</sup>

<sup>1</sup> <https://arxiv.org/pdf/1712.08414.pdf>

<sup>2</sup> <http://www.ptep-online.com/2015/PP-41-13.PDF>

<sup>3</sup> <https://www.youtube.com/watch?v=yIFR67sckK0>

<sup>4</sup> [https://www.youtube.com/watch?v=N1P\\_vSCYG-A](https://www.youtube.com/watch?v=N1P_vSCYG-A)

<sup>5</sup> <https://www.youtube.com/watch?v=JST8NHoAAcA>

<sup>6</sup> <https://wattsupwiththat.com/2019/03/01/amid-the-dimmest-sun-since-1978-a-month-without-sunspots/>

<sup>7</sup> <https://nextgrandminimum.com/category/gamma-rays/>

<sup>8</sup> <https://www.youtube.com/watch?v=mdl-6uLSIQI>

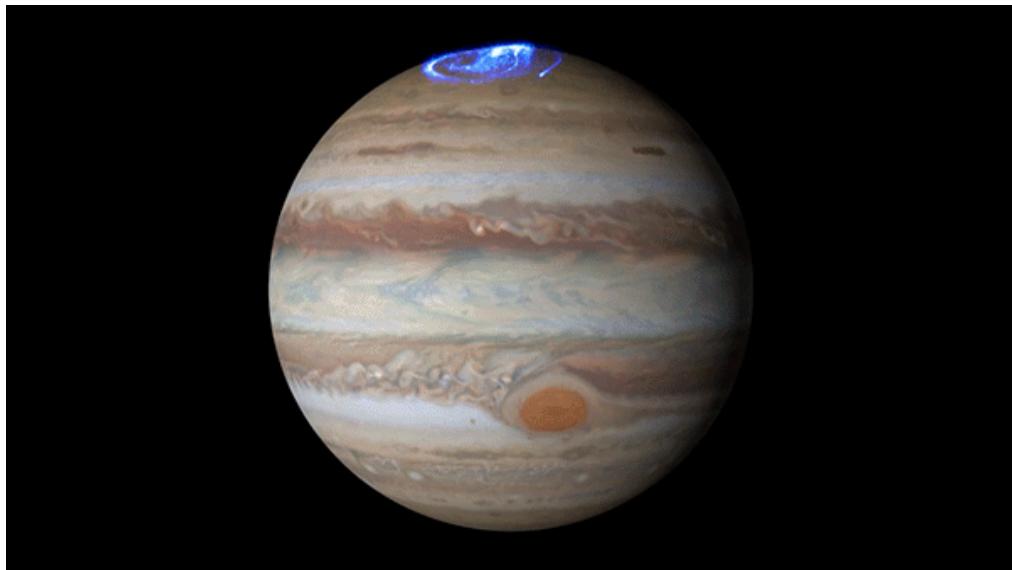
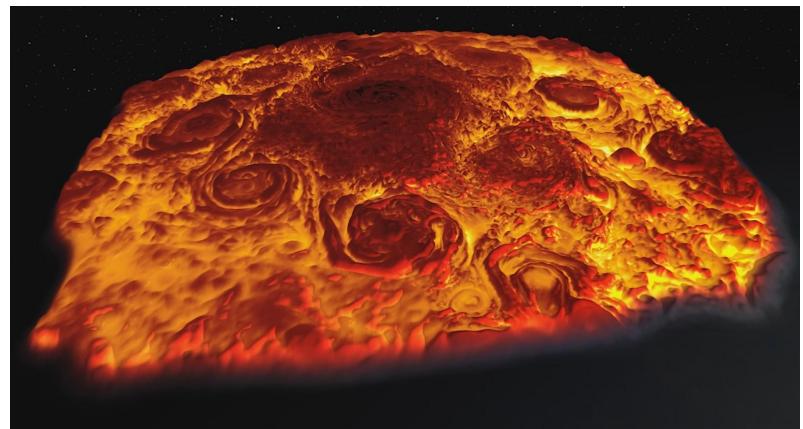


Figure 3 - Jupiter's Aurora Borealis

The most powerful of these currents have been measured at the ill-named “black holes” of Active Galactic Nuclei at around  $10^{15}$  -  $10^{18}$  A.<sup>9</sup> This is many orders of magnitude stronger than what is necessary to run humanity. But before we can tap the GEC, we must master the Solar System Circuit (SSC) and Planetary Electric Circuit (PEC).<sup>10</sup> The Earth’s own continuous circulation averages around 100,000 A. Jupiter’s by contrast is around 650,000 A<sup>11</sup> and sustains massive permanent polar vortices (see Figure 4) So it may not vary with distance but with the intensity of mutual induction between the planetary magnetosphere and the solar wind.

Figure 4 - Juno Mission (NASA)<sup>12</sup>



**Polyphase** refers to the multiphase use of the current. Potential 3-Phase<sup>X</sup> power, with X being any integer of scale necessary, if computational power is able to filter out the electricity for regional and then local transformation. It also refers to the use of digital or analog signals, in the form of photonic transfer, or even quantum transfer in the far flung future. This would hopefully enable quick transition of power speed and of information to fiber networks. IT, HF, and power solutions would be available, as well as energy sequestered for military or industrial applications (such as terraforming domestically, or upon Mars, Venus, or Exoplanets). Also, considering the energy levels, fuelless space launch for high density, superconductive electromagnets would be within reach, since there are new superconductors that can operate at high temps<sup>13</sup> or even at room temperatures.<sup>14</sup>

<sup>9</sup> <https://arxiv.org/pdf/1808.07327.pdf>

<sup>10</sup> [4]

<sup>11</sup> [6].Table 7

<sup>12</sup> It may interest the reader to note this photo clinched the proof that ancient mound-builders in Ohio saw Jupiter’s North Pole.

<sup>13</sup> [https://en.wikipedia.org/wiki/High-temperature\\_superconductivity](https://en.wikipedia.org/wiki/High-temperature_superconductivity)

<sup>14</sup> <https://phys.org/news/2019-01-evidence-superconductivity-room-temperature.html>

**Superweb** refers to the tendency of the MHD “flux ropes”<sup>15</sup> (BC’s in dynamic superfluid form), to form filamentary structures that are constantly deforming<sup>16</sup> (see Figure 5). Also, Superweb enables an ability to place information onto these and create a multi-level superweb of internetworked spaces, that can hold literal shells of multi-tiered usable space *and* virtual tiers and solar webs, in a futuristic, virtual reality (3D) internet, enabled by the computing power of optic, nano/bio, and quantum computing.



Figure 5 - MHD Flux Ropes above Earth; credit: MMS mission/NASA<sup>17</sup>

There is an expected capacity to provide interweb interface for treatment via removal of unhealthy signals and charges that ‘clog’ Charge Distributive Networks (CDN) in the body<sup>18</sup>, as well as to create wireless communications with subterranean autonomous networked robots (SANR) for subsurface *deep* mining (SDM). Furthermore, the interaction or ‘sloshing’ of radiation, thermal radiation, and charge between the Spheres of Earth and Spheres of Heaven (types of plasma shells), will enable geothermal regulations which may enable creation of climate control for cities<sup>19</sup>. This technology, at long last might form the basis of moon and Mars space bases, as well as a way to create X-flare/CME<sup>20</sup> killshot shielding, and worldwide nuke/EMP disable mode to eliminate the threat of terrorists who seek to take advantage of M.A.D. and/or tyrants. Worldwide EMP could be targeted for specific charge shells, such as the Stratosphere or Mesosphere, or again, for repulsive shielding against high energy killshot CME<sup>21</sup>, which can potentially arrive within 15-16 minutes, moving at 50% the speed of light, or faster<sup>22</sup>... giving mankind the ability to survive.

Eventually, in the far flung future, it may enable such constant ability for electromag liftoff and launch with predesignated pathways and computer controlled navigation that a worldwide ejection pod system could be prepared with a series of Arks, to enable quick escape in the event of collisions that are beyond the asteroid disintegration rays<sup>23</sup> (developed in the early military stages of creating the BPS systems.) This would be similar to the approach of a moon, planet, or rogue star that is in black body status<sup>24</sup> and unable to be detected early enough. Additionally, this could be used to deal with the potential of Planet 9/X/Nibiru, should the Black God<sup>25</sup> not turn out to have been the sun, - now charged up - but a separate body altogether.<sup>26</sup>

<sup>15</sup> <https://youtu.be/aFy9smhjDEQ>

<sup>16</sup> <https://youtu.be/e6fe6yiUTRY>

<sup>17</sup> <https://www.nasa.gov/feature/goddard/2018/nasa-spacecraft-discovers-new-magnetic-process-in-turbulent-space>

<sup>18</sup> [17]

<sup>19</sup> Should not be allowed outside cities, as it might disrupt Gaia-regulated bio-energy systems.

<sup>20</sup> <https://pdfs.semanticscholar.org/b046/35ceada073d4608d1a93948d6af2bd5936f6.pdf>

<sup>21</sup> <https://arxiv.org/pdf/1811.04707.pdf>

<sup>22</sup> <https://nypost.com/2017/11/29/wed-only-have-15-minutes-of-notice-if-a-space-storm-were-to-hit/>

<sup>23</sup> Super high energy lasers that then perform rapid arc discharge

<sup>24</sup> Condensed matter (crystal plasma) not in glow mode <https://arxiv.org/pdf/1804.05334.pdf>

<sup>25</sup> [https://www.revolyv.com/page/Black-God-\(Navajo-mythology\)](https://www.revolyv.com/page/Black-God-(Navajo-mythology))

<sup>26</sup> The Enuma Elish myth is intriguing in that it states that Nibir was beckoned by Jupiter to become its son. Zeus creating Apollo, who “grew like a child”... and then it broke up the system? This seems very likely. Certainly our plants have not

## Foundational Steps to Creation of the Superweb

There are a number of R&D steps that are necessary to obtain the BPS. We cannot list unknown steps, and unless it is otherwise very important, we can dispense with the intermediary steps to attaining BC's on the assumption that the work of SAFIRE and other fusion-plasma laboratories will unlock or unravel the secrets of sustained BC's that do not spontaneously turn to arcs. As seen in slow motion footage<sup>27</sup>, there are potentially separate channels of plasma arcing, and not all arcs require glow mode operation. See Figure 6.



Figure 6- multiple arc modes only seen in slow motion of slow motion<sup>28</sup>; credit: Warped Perception

Instead we will focus on the creation of these items:

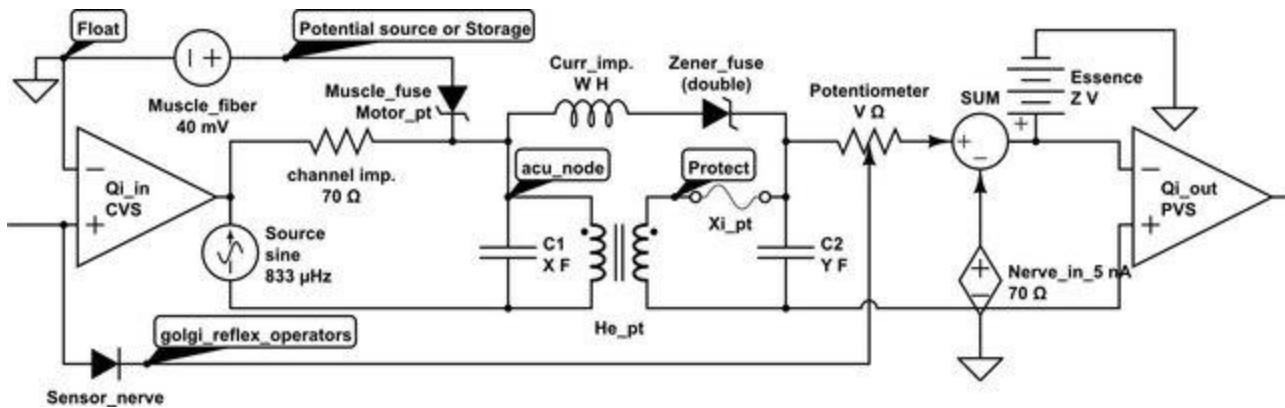
1. The asteroid charge farm (lasers/masers)
2. The gold foil charge and reflecting farm
3. The satellite photonic relay system (HF)
4. Intermittent supercapacitor and battery storage, transformation, and power subsystem stations (moon, Mars)
5. 3-Phase<sup>X</sup> Transformer/Filter
6. Earth, comet, and asteroid SANR/SDM mineral supply and transport
7. MHD tunnel (flux rope) generators (MHDFRG) and self forming-nano-balloons (SFNB)
8. Micro-star Stations (to perform syphoning or regulation, and protection of the network)
9. Plasma double-layer Shielding Generators (DLSG)
10. Laser-arc Transfer stations
11. Ion "Cannon" (MASER Beam)
12. Birkeland Vajra Generator (BVG)
13. Terraform Platforms and Systems
14. CDN Repulsor Tube (for medicine)<sup>29</sup>; see Figure 7 for CDN model vers 1
15. Scale Reduced Computers
16. 3D/VR Internet

had time to adjust, as they still reflect green despite this being the sun's primary radiation in visible spectrum. Many people are still RG colorblind.

<sup>27</sup> <https://www.youtube.com/watch?v=w25nHoxDi4A&t=1s>

<sup>28</sup> Green arrows are pointing to moving and fading electric current arcs which are changing from arc mode to glow mode *in arc*

<sup>29</sup> [17]

Figure 7 - CDN vers 1; credit: author<sup>30</sup>

## Charge Farms and Photonic Relay, MASER/LASER arc-transport

The author made the general proposition of laser-guided energy transport in an earlier paper in 2018. Later that year, it was made public that several such experiments were already underway and with astounding success of over 400% arc-gap distance increase.<sup>31</sup> Moreover, lasers have even been used to trigger lightning release from storm clouds, signalling that this is indeed a way to cause a change in charge distributions or concentrations, leading to sudden discharge.<sup>32</sup> Even more tantalizing are the reports of fast-transport utilizing lasers and aluminum targets, at nearly half the speed of light!<sup>33</sup>

Therefore, it is clear to the author that what we are calling science “fiction” here is really what Arthur C Clarke meant by “magic is science we haven’t discovered yet.” It is truthfully, the future of mankind.

So how would it work? There would be, in the author’s estimate, three distinct major realms of action in the BPS systems:

1. Collection or harvest
2. Relay and transport
3. Storage, transformation, and delivery

On the upper collection end there are two main collections systems: synthetic/electronic (utilizing gold foil or electrum sails) and asteroid naturo-ionic farming. Asteroids sit in the solar mind and gather the charges of the solar wind into bipolar distributions. They are conductive rock and mineral, and can therefore be syphoned for their charge using temporary/deportable laser/maser robots that connect with each other in a grid, probably running somewhat in parallel in their behavior (or guided by nodal algorithms based on bee swarm mathematics, etc...). They can be taught to automatically arrange themselves into communications grids, recharge their launch mechanisms by harvesting light and the solar wind (hydrogen fuel cells), and to perform in one area of the asteroid belt and then depart to another section en masse.

The two collections systems can even work somewhat in tandem, in that the asteroid relay may be able to transfer some of its power through the same RF transfer technology (scalar or other?) used by the gold-foil collection satellites. The two of these must then relay or transport these back to a power substation.

<sup>30</sup> [17] & <http://bluelotushealth.com/signal-pulse/>

<sup>31</sup>

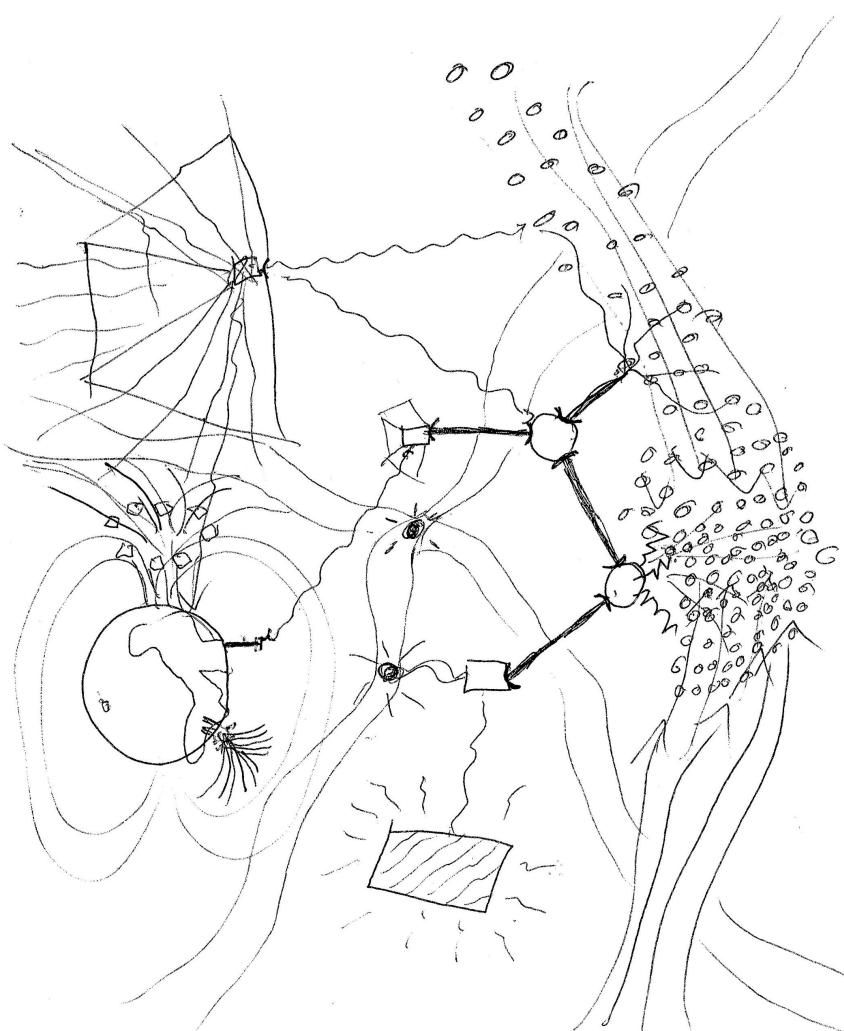
[https://www.researchgate.net/publication/312213049\\_Laser-guided\\_energetic\\_discharges\\_over\\_large\\_air\\_gaps\\_by\\_electr ic-field\\_enhanced\\_plasma\\_filaments](https://www.researchgate.net/publication/312213049_Laser-guided_energetic_discharges_over_large_air_gaps_by_electr_ic-field_enhanced_plasma_filaments)

<sup>32</sup> <https://www.newscientist.com/article/dn13669-shooting-clouds-with-lasers-triggers-electrical-discharge/>

<sup>33</sup> <https://www.nature.com/articles/s41598-018-22422-6>

The beaming of microwaves is probably not as efficient as utilizing the available known flux ropes when available. However, it may be necessary - the mathematics should be worked out regarding the efficiency advantages vs speed and conduction (vs impedance) advantages afforded by BC's over RF or vice versa. However, when an asteroid is moved purposefully into a position, it may be possible, if there are ways to stabilize its position (despite the many delicate effects of the differential orbital velocities of Jupiter, Mars, and Earth,) to relay electrons via the laser arc system and cause rapid 0.5c transfer of arc power. BC's are much more powerful, and since the vast majority of Earth's electrical needs can be handled with ionospheric harvesting and the 'sloshing' of charge between the mantle gyre and the magnetosphere, such a relay system may only be necessary for a Mars or Space Navy station outpost. This is especially apt since it is unlikely that Mars has a thorium supply ample enough to run a planet-wide terraform facility or a network of facilities, and nothing short of safe nuclear energy should even be considered.

It's also important to note that the ion harvesting is very important in the rapid manufacture and transfer of water and water-forming molecules to the Martian surface. For while the author will discuss Venetian atmosphere harvesting for the density needed to resupply Mars, after all, it may not yield much vapor. Furthermore, as Mars has a weak magnetosphere, a relay network of the DLSG will be needed and perhaps in time revitalizing the planet will lead to a re-institution of its magnetosphere behaviors. If we can green the desert, there's nothing saying we cannot green Mars, given an unending supply of terraforming automated robots, with ample subsurface mining and endless charge. There is no wasting the sun's mass, it puts out tons of atoms and yet will not run out of mass for billions of years even at the rate it expels atoms and radiation.



Phase 1 includes the collections of solar rays, solar 'wind', charge distributed within the asteroid belts (see Figure 9), charge farms [large rectangle], satellite arrays [squares] that distribute with larger bodies [circles].

It also includes some super weapons seen above the Earth, the introduction of mini-stars to harness the magnetic flux ropes, and direct VIR, and a ring of satellites over the poles to measure and modulate, and **strengthen** the Earth's magnetosphere, as a shield.

Meanwhile the giant gold-foil spreading satellites would cover vast, vast regions, and their sails would be made of solar wind caught particles, captured by the nano-swarms (not pictured here). Using RF they can wirelessly beam energy then towards other stations, charge collecting bodies, or Earth directly.

Figure 8 - Author's basic concept (hand-drawn) of Phase 1 Development

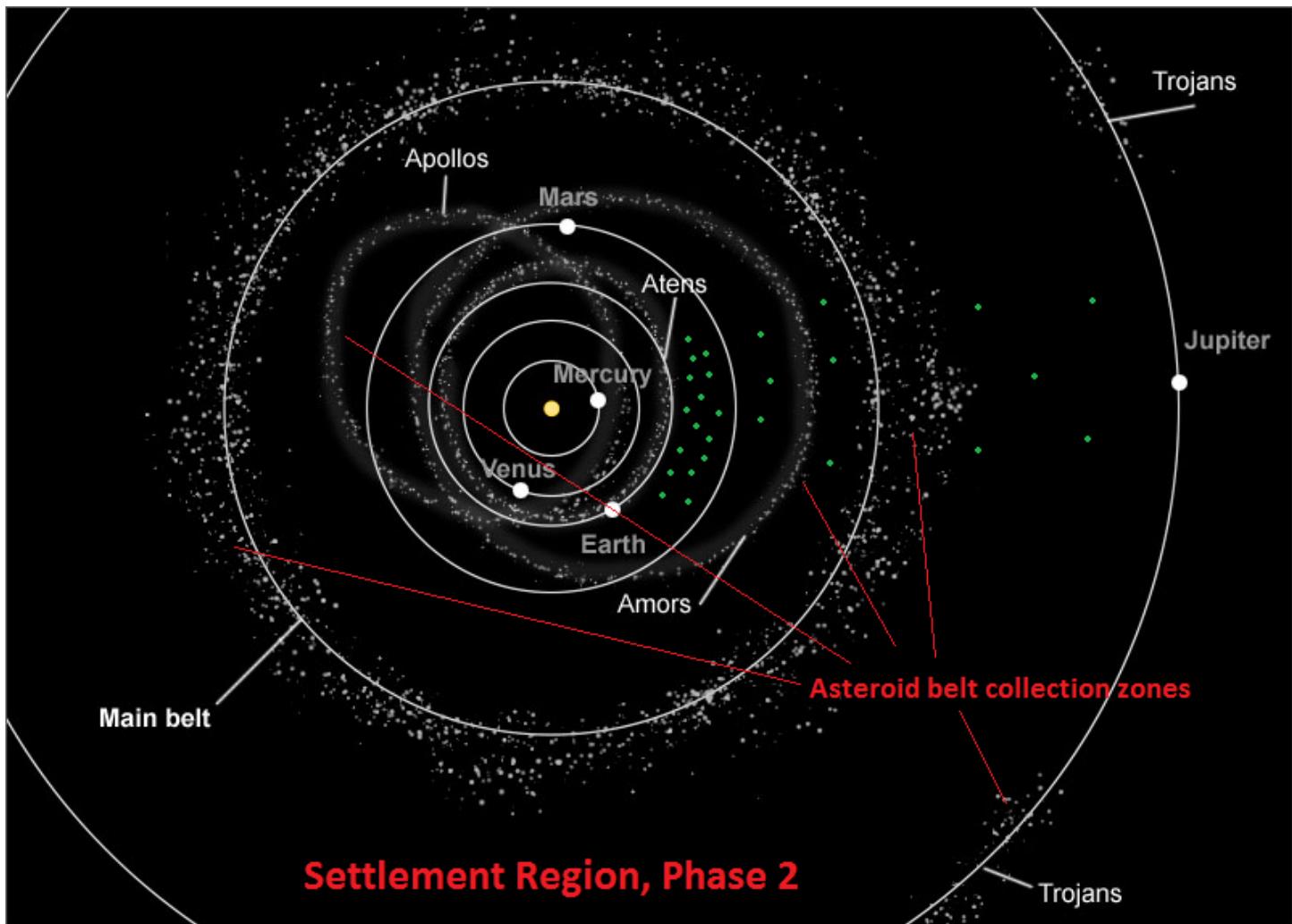


Figure 9 - Phase 2 Area necessitates different kinds of satellite transfer distribution methods

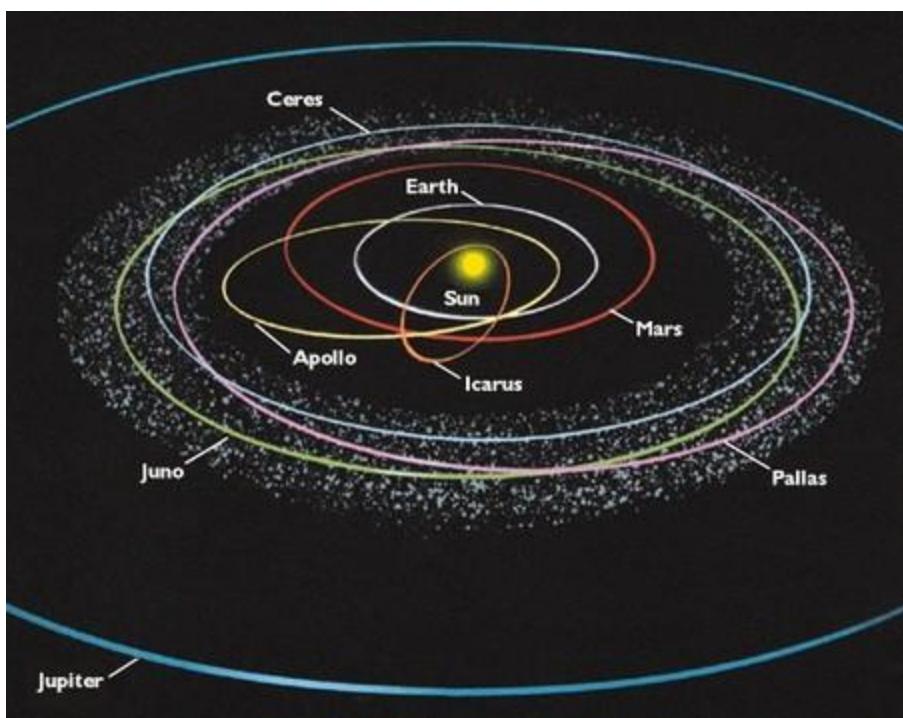


Figure 10 - Paths of useful planetoids

Note that the vast area covered out past the asteroid belt requires the development of Birkeland Current generators, and the distance is too vast to use laser/maser-arc transfer. Inside the belts (Phase 1 area), it should be possible to use densely arrayed BC laser-arc relays, combined with gold-foil collection, to relay between all sorts of places, back and forth. And outside the Phase 1 area, there are also asteroid clusters from shredded satellites which can act to store a lot of charge till it is collected via swarm or other relay.

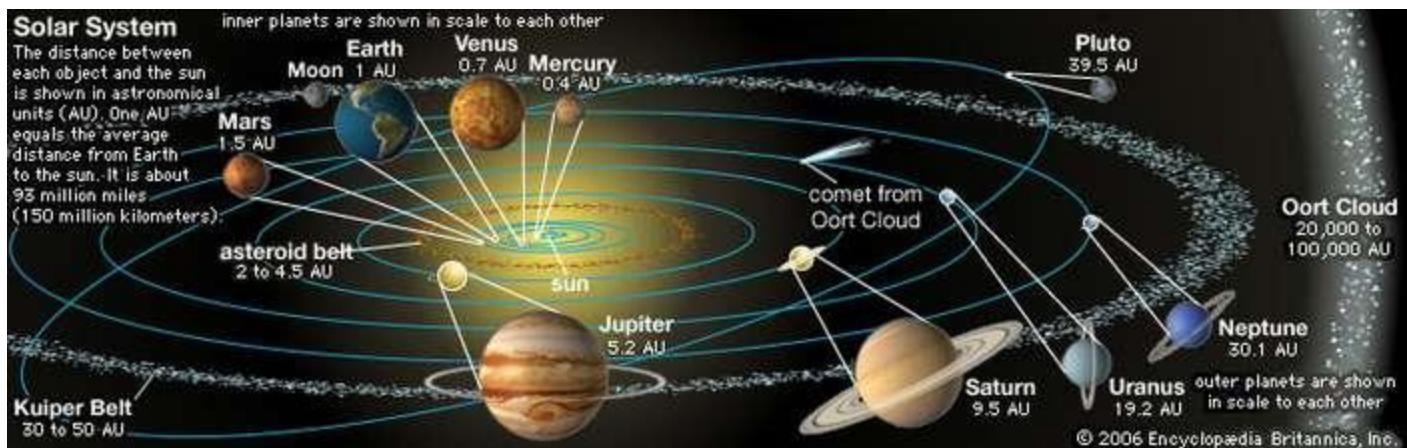


Figure 11 - Solar System distances; credit: britannica.com

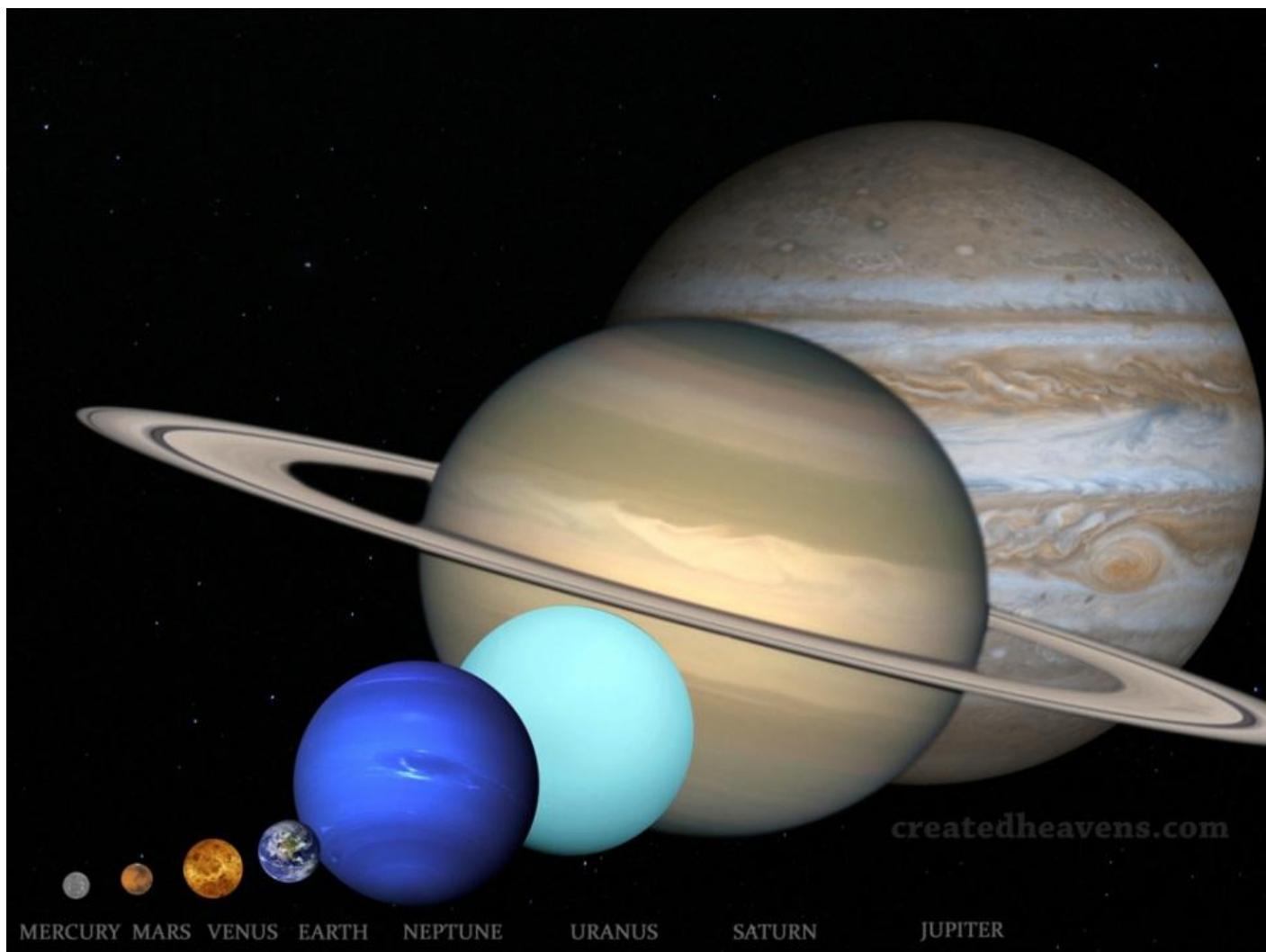


Figure 12 - Planets in size scale comparison; credit: createdheavens.com

Phase 3 colonization would require conquering the Gas Giants and their moons.



Figure 13 - Moon and Planetoid Size Comparison Chart; credit: The Planetary Society

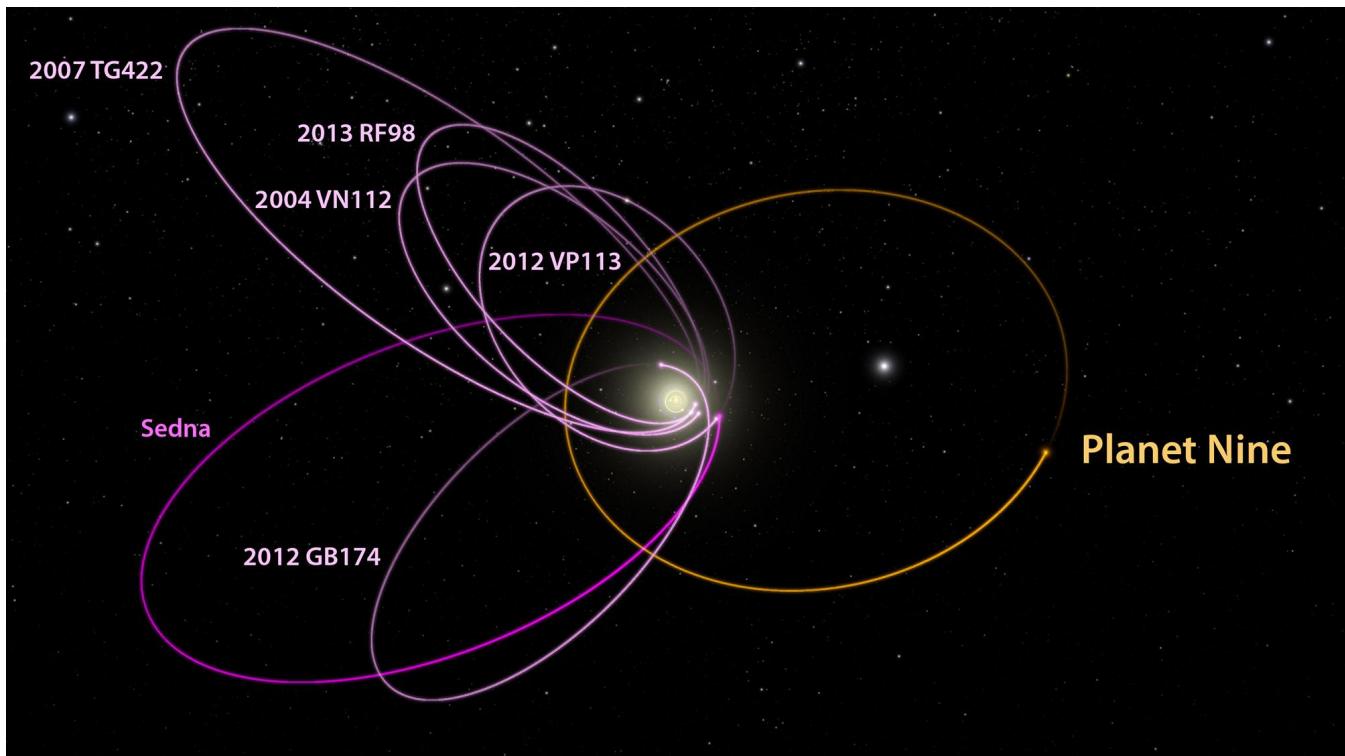


Figure 14 - Outer Kuiper Belt orbits, Phase 4 Colonization; Planet Nine involved?<sup>34 35</sup>

<sup>34</sup>

<https://www.cam.ac.uk/research/news/mystery-orbits-in-outermost-reaches-of-solar-system-not-caused-by-planet-nine-say-researchers>

<sup>35</sup> <https://arxiv.org/pdf/1809.02571.pdf>

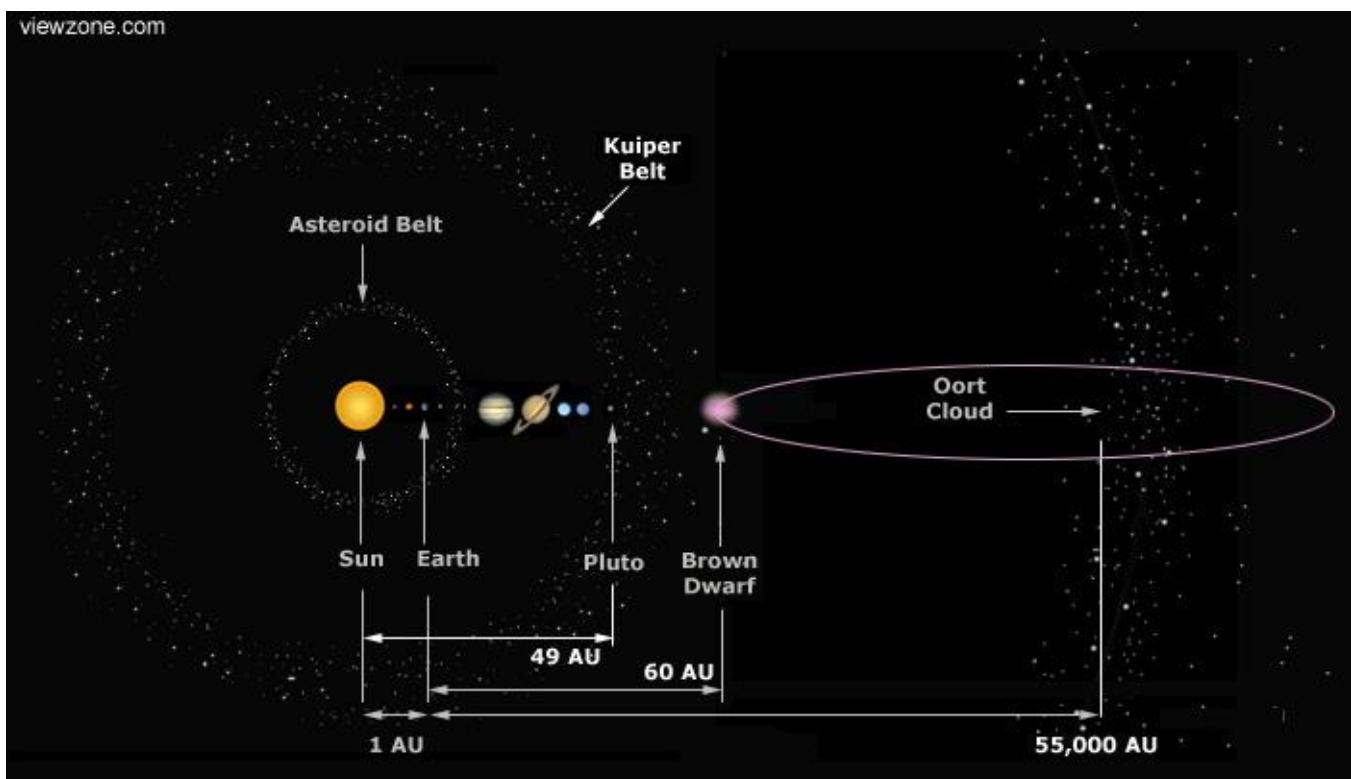


Figure 15 - Proposed Cold Brown Dwarf (Black God/Nemesis); credit: viewzone.com<sup>36</sup>

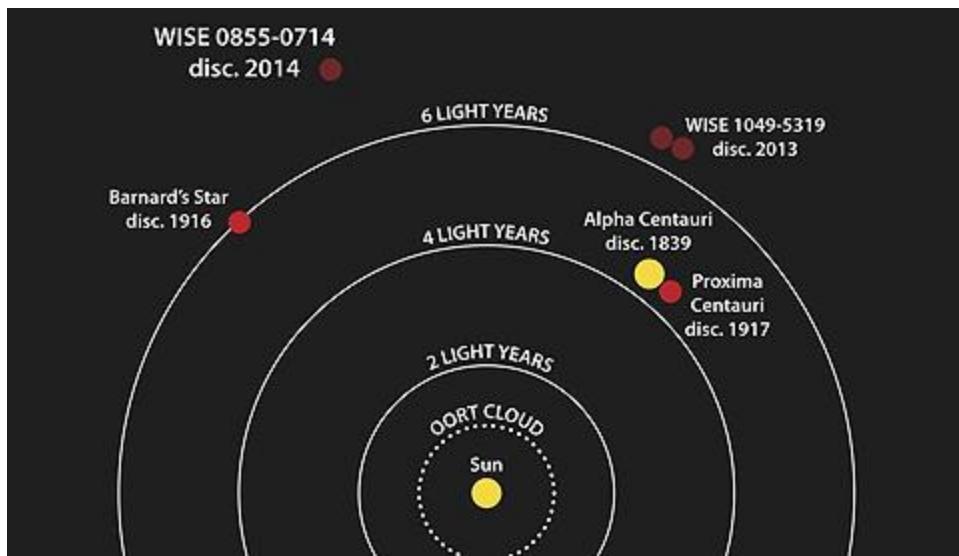


Figure 16 - Phase 5 Colonization, the nearest stellar neighbors, with distances given

### Asteroid Farm and the Satellite Array

The asteroid farms and satellite foil arrays are the key to the entire operation. You need them not only for collection and detection, sensing and deforming the swarm of robotic harvesters... but they are in fact the means of

defense, offense, and VIR (voltage, current, resistance) regulation for the BPS system. It is expected that CME's will destruct a swarm from time to time without ample warning to launch a Double layer shield or turn systems off. This is why it is imperative to create miniature 3D print+manufacture substations that can be deployed with the swarms to rest upon stable asteroids or indeed within large ones, to make replacements... all using materials harvested from far flung useless moons and asteroids and comets, and **not Earth's reserves**.

One of the keys to initiating this is Earthen subsurface mining (to be discussed later). Within the Earth, automated robots will be able to tap into the world's mineral supply to create our first pioneers. However, an

<sup>36</sup> <http://www.viewzone.com/browndwarf.html>

excess of the raw materials will crash the commodities markets as they are currently designed. There must be developed a separate military/science only market which does not harvest or mine material upon public market commodity prices, but upon the internal cost and maintenance ratios. BUT conversely, wealth brought back from extraterrestrial sources, such as gold, must be partially divested to strengthen the wealth of engaged nations. The ideal being to pay off national debts to justify new ones that spur more and more growth to pay for the labor and cost of robot manufacture (and design).

Remember: in the formation of this satellite array, much gold will be needed and the current method of acquiring gold through soil harvesting is untenable and barbaric. We must achieve subsurface deep mining and access gold and copper veins without crashing the commodities and futures markets, and yet still allowing for futures and stock/option speculation upon solid GDP and government contracts for high tech development.

These arrays must be robust with lead and steel, as well, and this is why the author contends we will need green methods (including thorium and classical geothermal) for generating the power for launching so many satellites and space stations in the first place. We will need an entire space commercial flight industry to keep up with the need to get astronaut engineers out into space -safely- to repair and service this array. It will be no different, and hopefully quite a bit more efficient and organized, than the current IT communications (high speed internet) technicians who drive vans around to fix the networks.

The relay system aspect of the array, both asteroid and manmade satellites will be dangerously powerful, sensitive, and it will deal with high intensity lasers. Space Cowboys will risk life and limb, not to mention getting cancer if early shielding prototypes fail, and they will need proper incentive to undergo the training and risk. They will need reliable robot proxies and assistants to accomplish their missions.

## Photonic, HF, and Charge Transfer - Compound Farming via Solar Wind Harvest

The three methods of energy relay and transport will require different technologies. Where they do not involve creating BC's for long range transport at a high rate of transfer or high flux density, (such as a MASER arc discharge might not need,) they will have various types of improvements and differences in performance offered. For example, the photonic collection and transport might be useful for wide spectrum harvest, and then concentrated and focused general transport towards solar collection facilities... but there is a visual problem (no pun intended)... such bright spot transfers would be disruptive to observation of the stars and even the unencumbered blue sky (once we end geoengineering with proper legislation, it will be unencumbered). Who wants to see stars that don't exist all the time? So it will be better to have photonic relays **not** aimed at Earth. Besides, it may turn out that high energy light beams incite massive stratospheric discharge storms (see previous paper about lasers causing lightning).

Instead HF and electron direct transfer are preferred. However, electron transfer will need to be in dark mode plasma BC's and then previously designed magnetosphere harvest systems for Earth will need to transform the electricity into BPS standards for final delivery to regional and local grid dispersion. HF, by contrast will be capable of beaming directly (one supposes) to dish relays, for immediate transformation to grid power. Perhaps data relay will also be available in this system, such as providing status updates on the robotics war, substations, terraforming operations, etc. Fully 99% of the data is expected to be nothing by sensors and status relays from the robotic subsystems, and AI code talk happening much faster than humans can even imagine. Humans will have to learn to see the 10,000 foot view of the operation, or in this case 10 AU view.

Finally, compound collection from the solar wind, including rare metals, gases (especially useful ones like Helium, Argon, Neon, etc...), and even amino acids (for terraforming on Mars) will be necessary. Once the nano-tunnel programmable array is able to be deployed reliably with a true safety (virality key for immediate separation and solar wind dissolution), it would be capable of turning the SSC into a giant cell of compound transfer for life generation. Not only would new species be likely but probably the rule, and mankind can make up for many mistakes this way, as well as evolve key cousin species, cure diseases, and have a supply of stem

cell materials for clonal manufacturing and medicine. But, the original function of the compound collections would be, of course, for rare earth metal extractions for electronics, shielding, power generation (gold foil sails), jewelry, debt elimination, and even things as innocuous as better teeth fillings, etc.

## Power Substations on Mars and on the Moon

The point of power substations currently on Earth is a) transformation, b) safety, c) relay and delivery, and d) centralized maintenance and regulations. This would be the same idea in the BPS schema. The power substations would be starting as autonomous collections, mining, and relay robots... sort of an Internet concept, more like the spreading of a gecko's toes. By spreading out to the finest structure level of human scale, the autonomous, deportable, reprogrammable AI robotic swarm would be capable of maintaining the desired VIR relationship, monitored by multiple parallel quantum super-mainframes that are in constant observation of the sun.

To achieve this, space travel and satellite manufacture has to become cheap. Design and engineering, and technicians' work has to remain high paying to attract the brightest minds. So the solution is simple: AI labor. Let's be honest, mankind is dead-set on the AI future. AI cannot have a soul, but it can be taught to behave and be controlled. This is, more or less, the new dog and horse. Laws which make it illegal to declare robots as human should immediately be passed to avoid the confusion of ridiculous robo-slavery philosophers who would slow progress with simplistic and childish moralistic claims. We are not talking life here; we are talking tools, and tools are only as good as their design and utility. AI tools should be tailored to stay in their roles, and need no souls for introspection. Furthermore, they have a use: to run machinery, specifically massive satellite manufacturing plants from line design to testing, debug, and implementation and even payload delivery to launch sites, networked with local launch sequence administration for setting up launch windows, and allocating resources for deployment. One key to this system will be a cheap universal fit microsensor that utilizes RFID technology to keep implemented a two part mechanism to all space paraphernalia. One part is the universal sensor, and the other is a sprayable RFID wash which picks up on computer signals, and helps the master networks to filter and select appropriate data for relay, in particular safety and mechanical problems.

Let the author be clear, it isn't that this way of living is the Way of Nature or correct, but if humanity is to do it without disenfranchising the well educated or the poor laborer, then it must be done *right*. The poor laborer can be taught to be a technician and overlord to the AI manufacture complex. The well educated or skilled laborer can be made into a project, mission or other manager, or administrator, or designer. Humans create problems and human made intelligence will create 10x the problems. Solving problems makes people happy, so this is not an issue. Rather it is the gainful and happy employment in this area that is the issue. You cannot have disgruntled clinicians failing to oversee the nano-production lines on account of money or drug distractions. So there must be redundancies built in for safe-measures.

Once the army of AI manufacturing is in place, then space parts will be cheap to make, and if the minerals are ample (and there's no reason to expect they wouldn't be, given the volume of the Earth and moon), then designing the transportation systems to achieve the next tier substations on the moon, then Mars, then finally asteroid outposts and Jovian and Saturnian moons, will be possible. The mass manufacture of deployable terraforming stations which pump out nano-terraformers for atmospheric scrubbing, MHD tunnel manufacture, and the 3D printing of robotic parts for mining and satellite repair, will be made possible by the harvest of massive amounts of magnetospheric current harvesting, again from BC delivery methods *in situ*.

Compound transfer will also be enhanced through this delivery system, albeit probably nano-balloons manufacture from cheap, basically free materials will be vital. Then they can be loaded into canisters with Earth or other substations as delivery systems.

Now there are three key obstacles to this substation function, outside of the obvious well-publicised issues of moon and Mars bases:

1. The economics of compound and mineral mining (supply vs demand)  
This must be handled via computer modulated computations of demand that is met exactly by supply without altering the global markets (unreasonably), so that harvest and use are matched very keenly. This is absolutely key.
2. The intervention of military requisitions to offset surplus by converting it to strategic reserves of no economic value. The military therefore has to become also involved in its own special brand of tech design and implementation, tailored to military needs and/or security. For example, they will need excessive nano material used for bridges, roads, etc. It's important the nano material have a programmable shortened half-life, and the ability to alter into dissolvable materials.
3. The transport of the materials without relying on rare fuels- in other words the bottleneck of needing more energy to produce material to acquire even more energy, etc. creating a potential runaway effect where the material world outstrips even the 8-11 billion people of Earth, or even Mars and Moon added to the mix... leading to a tech dystopia of broken flashing equipment, dusty (nano covered) machines that are obsolete and then where to dispose of the material without harming Nature or humanity... etc...issues which humanity has been as bad at dealing with as self-regulating militarism.

But, if mankind is able to generate the materials as well as energy, in a symbiotic and sustainable, healthy vortex of creation... it just may be possible to terraform, reform, bio-protect, and evolve ours and other species in an accelerated manner. which teaches natural observation of the miracle of the one Force, without dogmatically forcing the beliefs upon anyone, and yet being demonstrably ethical, humanistic, and hopefully eco-friendly as well. To avoid genocide, put mankind to work. To avoid environmental collapse, eliminate pollution and conserve rare surface resources, such as fresh water and arable soil!

## Futuristic Mining and Transport

It has already been stated several times above that the key to the operations - the array - will require a constant supply of minerals and rare earth metals, particularly gold and copper, but undoubtedly many other important elements. However, mankind cannot afford to use all the arable soil and forests of the upper crust of Earth, especially via chemical separation. Therefore it is absolutely vital that the next phase of mining come from automation. AI driven robots can perform heavy tasks at high temperatures, and 24/7 (except for downtime). There would need to be many types of robots:

- Repair bots, which can carry out other robots
- Automated trains
- Tunneling bots
- Rail and systems building robots
- Scanners and safety systems checkers
- Finished mine sealers or human terraformers (to make the mines livable later on when no longer in use)
- Earthquake monitor bots to look for signs and seals being broken
- Shovelers (multiple)
- Precision laser cutting specialists
- Security bots (heavy armed, to thwart robberies)
- Etc.

Suppose now that you have the minerals on Earth mined by robots and hauled with maglev train systems, setup and maintained again by AI robots. What would happen in space? Transport in space is quite a bit more difficult than on Earth. Let's consider the facts:

- The distances covered are literally astronomical. For example the area circumferenced by the asteroid belt is **10 times** the area circumferenced by the orbit of the Earth. That is 3.2 times the radius from Sun to Earth (1 AU). To go to Jupiter, or to Saturn, the area covered drastically increases, which is cost in time, fuel, and increased dangers, and really an inability to have a protective satellite array beyond the "Hammered Belt."
- The need to cover the vast distances will require complex methods of acceleration. One cannot simply say "ion drive" and that justifies it. Ion drives and other non-fuel methods are slow accelerators, and build up. By the time you get the ships to the right velocities, they would be there. We would actually need rapid acceleration and high, high velocity without rocket fuel.
- This brings up the reverse problem: deceleration. Realistically, there are only two methods, and these are only available with whole planets and moons. One is frictional braking/air braking, which is dangerous and after all wasteful and/or dangerous.<sup>37</sup> The other is a frightening method: deceleration rings. In other words, throwing a 100,000+ kph dart at a dartboard over 1AU far away!! Possible, but not without fright.
- Realistically, the best chance for safe landings for humans will always be spaceports on large rocks, at least for the next several hundred years. It will take some time for an automated robotics team to make their way out to Jovian and Saturnian moons to set up mag rings, double layer shields, and thorium reactor plants to establish the early conditions for a base startup for terraformation.
- The payload is another consideration. Consider the kinetic energy cost (transformed from electrical or other energies) of an object that weighs more. For example, on earth, a train may weigh 10-40x that of a semi truck. While the momentum will be linear in increase, to reach the same velocities will require exponential amounts of joules to actually obtain the necessary velocities. For commercial flights this will be daunting... and for some substations, parts can come in small payloads put together. But realistically, super-class freighter ships built in orbit around Earth will be 100% necessary for transfer of large plates.

Separately, but not separate at all, this brings up the question of the production of steel. Realistically, not even automated mining will be capable of finding enough iron, and there won't be enough carbon fuels to actually transform the iron into the quality grade of steel. The solution is both obvious and one of the most *daunting* steps in this entire paper: volcano mining and forges.

To mine volcanic vents, first mankind will have to develop reliable methods of transforming magma types into iron ore, and in harvesting the geothermal heat - two separate issues. The chemical properties of magma are so widely variable, that it may take some time to find a stable source which has a reliable industrial transformation method. Then to gather the financial support for purchasing the titanium and tungsten necessary, will be in itself a difficult task. Especially if the investment fears crashing the steel market via massive production. Therefore it is recommended that the commodity produced be kept separate from the market, and specifically manufactured specifically for space materials. Therefore it will not be considered industrial or commercial grade steel, but part of the space economic trade and markets. Under this context, we want it to be cheap and available, and yet safe to manufacture. The magma needs to flow freely, such as in Hawaii or Iceland.

This steel needs to be in a mostly refined form, almost turnkey, for shipment towards spaceports and substations. This will require hundreds of thousands of man hours of inspections and design,

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<sup>37</sup> Imagine going for gravitational braking and actually conducting an unstoppable slingshot towards the sun or the asteroid belt!

problems-solutions or process engineering, etc. (an entire working class of educated specialists), that will take years for even the most minor of objects. The bad news is that we do not have a skilled laborer class of that education level and population at this juncture. However, consider the vast numbers of useless degrees with college students outside their original chosen careers. There are, in fact, plenty of migrants, youth, and out of work older engineers and technicians that can be retrained to fulfill the roles. Furthermore, the outsourcing of the manufacture process can aid in the development and technicalization of 2nd and 3rd world nations, which are struggling to find a way to become typically industrial since the western world still manufactures the best cars and airplanes, etc. First world countries need to step aside by stepping up, and let other countries develop their IQ's and technicians.

## Advanced Subsurface Mining

What will it take for mankind to achieve great depth? Certainly it will, at this time take high risk by allowing men to enter these depths at 130 degree temperatures. By doing this, mankind will be able to challenge endurance and scarcity, tapping into veins at a depth which does not threaten surface existence. But, by accessing these resources, mankind will need to stop trying to continuously build **up** and be willing to build **down**, creating cities below the ground, which will help in the following ways:

- Temporary domiciles for transient populations of migrant workers, who can receive great pay for dangerous work.
- Emergency CME/X-class flare sanctuaries.
- Biomes for underground farming (sadly this will cost electricity, but will be worth it for solving world hunger).
- Space for non-toxic, non-recyclable waste disposal.
- Avoiding the continued destruction of important biospheres on the Earth's surface.
- Potential archaeological benefits.

The topic of “advanced” here, however, is not about hordes of poor being forcibly (by destitution and desperation) ‘enslaved’ for dangerous mining operations justified by uber-capitalists and globalists to go into space, again to acquire more wealth and power. That is not advanced, unless one means it like a cancer.

The topic advanced, here would be to describe the period after pioneer periods of expansion, providing growth for currently poor nations like Zimbabwe, where then masses of robotics can be used to achieve great accomplishments beneath the forests, without disturbing them or the water tables humans rely on. If we can put concrete tubes into the depths of the ocean for mining oil, we can engineer methods for dry farming under the ground in tropical temperatures... even in Siberia! Moreover, we can be able to create vast of arks of life, and new caches of life for protection against cosmic catastrophe of the 5th-8th scales<sup>38</sup>.

Of course, it is the author’s opinion that these need to be de-weaponized AI robots, and the fact that Africa has demonstrably shown to be incapable of controlling warlordism, sales of HK robots to Africa and similar developing nations (like Serbia) should be illegal. It will only serve despotism and genocide. Rather, let the lower class, unskilled people be hired and trained in technician work and security.

It is also the author’s opinion that weaponized nanobot wars as bio-chemical warfare agents would be a high probability and so an on-planet ban of the use of nano-bots should be enforced. Out in space, they should pose no virulent threats, though they might be programmed for swarming or destruction of metal resources. But again, planet wide standards of safety-kill measures for **all** nano-tech should be utilized, especially given the expected step of creating self-reproducing nano-swarms that organize into structures (then die), in space. It will be important to have a moment to shut down all of the growth process by pointing radiated RF/HF signals in the general section of space where the growth is so substantial as to be possible at threatening anything.<sup>39</sup>

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<sup>38</sup> 9th would be planetary rifting due to collision or near collision courses; 10 would of course be total disintegration of the planet (like a rogue star or ‘black hole’).

<sup>39</sup> In a related topic: how to ensure that AI robots do not design new ones that create murder-spree suicide bots to overthrow life and DNA self-preserving programs, which are the hallmark of life as we know it? One must design an interface with hidden code which both has the self-preserving function and the ability to detect the absence of the function, and to hate or target said robots which do not care for preservation of life. This is natural throughout mammalian species and we are, after all, mammals, and need to live comfortably next to these AI robots. AI must be taught only how to create RF advertising robots which offer their coded intentions openly. Lying robots must be pre-planned to not exist. The spread of lying robots would spell the end of all these efforts, as lying humans spell the end of government and social successes. If a robot does not share its intention-code, the typical AI robot must be taught to distrust, or even destroy on sight such robots, as they typify a virulent threat, or more than likely a sadistic criminal threat orchestrated by a selfish human.

Regardless, the next phase after the advanced mining on Earth would be advanced mining on the Moon, and on Mars. The achievement of the spaceport, and the beginning of the terraformation process (or for the moon, the subsurface cities and bases, with nurseries, etc...), will be possible to extend only with local mining. It's to be expected that Mars may be dominated by iron and silicate products. Nevertheless, some rare minerals are expected beneath the red surface because Mars shares its origins with Earth in the Saturnian system (as evidenced by myth and their tilts<sup>40</sup>). These are, expected, of course, to be robotic miners, with the stations running remote controlled operations of shift-rotated humans (to avoid health disasters of  $\frac{1}{3}$  gravity life.)

## Comet and Asteroid Mining

After the Moon and Mars stations are established, and the spaceports built, the final stage of the logistics is to conquer comet and asteroid mining, and to travel to far flung moons. The achievement of the harvest of a single comet, which might contain all the platinum we ever needed,( for example, for industrial use )could lead to huge gains. The fear, again, is market saturation... and so the author re-emphasizes the fact that space materials and commodities must be kept separate from commodities markets, at least until the entire solar system is filled with humanity and terraformed.

The accomplishment of comet and asteroid mining will not be simplistic, because they are charged, rotating (differentially) bodies, with violent approaches and capable of spontaneous explosion or collision. However, the achievement will be possible with Electrokinetic Drives. More will be discussed on this later, but suffice it to say the Biefeld-Brown Effect will be absolutely vital for the creation of transport discusses that ride the solar wind (surf it), and rapidly achieve low inertia acceleration or deceleration. Mankind will have to create means of capturing - electro-tidally - asteroids and comets, to bring their rotations into stability and then to distally probe them, without risking damage by landing upon them. The installation of relay stations, sensors, and double layer shielding projection and EMP systems, as well as some nano-bot manufacturing hubs will all need to be achieved through probes of AI robots, and spacewalks of very brave pilots... Space Cowboys.

## Magnetic Mining

One of the means for transporting back goods, rather than using the same discus transports that were for installation, may be to rely upon synthetic (or if they are stable and predictable, natural) magnetic tunnels... attach charge carriers to the minerals and other objects, and watch the solar system carry the materials. At first this might be a modest benefit, but imagine a venous return like a system of vessels of magnetic material, continuously pumped from the Asteroid Belt and planets back to Earth, Mars, and the Moon... and eventually Venus (the crown jewel of possibility over the next several thousand years<sup>41</sup>).

This vascular like network of magnetic transport may be just the aspect which aids mankind to abandon the concept of supply and demand economics. While endless electrical energy likely won't sate the materialistic greed of the human heart... imagine a glut of rare earth minerals and jewels and precious metals which literally make you able to wear gold as easily as cotton. The value of these metals would be nil, while their beauty still undeniable. We could go from the age of living upon serf rags and animal flax, or oil products, to truly living in a way that richly reflects the sanctity and beauty of the human soul. Hopefully the human heart will, by then, be capable of receiving said wealth internally.

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<sup>40</sup> <https://www.universetoday.com/14894/mars-tilt/>

<sup>41</sup> Most sci fi writers have given up on Venus stories, and the few the author can think of attribute only sad lives to acid "rainy" Venus. How pathetic. Mankind must deal with the post-cataclysm blues if it wishes to be optimistic enough to conquer space! Venus, like the Sahara desert, is untapped potential. With a thick atmosphere, it has plenty of material for the atmospheres of Europa, Io, and Mars, and maybe it will even aid with the conundrum of what to do with Titan.

## Terraformation and Solar System Modification

The creation of terraformed planets has the benefit of creating new baskets for our eggs (humans), decreasing population strain on Earth, doubling the Earth's species for protection, creating vacationing destinations and a vast tourism industry, expanding economies, relieving war, increasing access to resources, and more; far more. Spaceport cities, manufacturing for space exploration, distant astronomical observation all become possible with the far flung terraformation. The top candidates for terraformation are:

1. Moon
2. Mars
3. Europa
4. Venus
5. Titan

Each of these represents a prime strategic use or interest. Titan is almost assuredly only to be a domed observation station to monitor the possibility of life based around different chemistry, and as an observation to Saturn. What's intriguing here is that as Earth was once in orbit around Saturn, when it was a brown dwarf star with a plasma sheath that enveloped Earth and Mars, there may have been a different past to Titan. Could it have been actually a twin to Mars, and could it have a buried sentient past? It cannot be known until the planet is probed.

Regarding the Moon, it has a clear dual advantage of being both militarily important, for the defense of Earth as an outpost, and for the scientific purposes of planning and preparing other terraformation missions.

Mars, meanwhile has the dual function of being a place of interest for recovery and biodiversity backup for Earth... but it needs to "borrow" an atmosphere from Venus, who likely attained its thick atmosphere by taking it from Mars in the first place. This means that Mars can serve the double purpose of helping Venus to lighten its load.

How can this be achieved? Again the author begs the reader to suspend disbelief and picture the nanobot swarm programmed to form large balloons which take from the upper atmosphere and then are pushed gently towards Mars' orbit for a collision. Perhaps later some type of magnetic tunnel similar to the magnetic mining mentioned before can be deployed to speed up the process, but for now, moon-sized balloons of gas should suffice.

As for Venus it will be some time before the planet is both cool and calm enough for human inhabitants, however robotic probes can begin studying the surface, and even mining and automated terraformation, on schedule for a year 4,000 completion. By setting aside a few resources and including a small investment that runs itself and continuously receives a small amount of guidance and a large amount of study, mankind can eventually transplant massive seeding to Venus. Where should the water for Mars and especially Venus come from? Why Europa of course, as well as manufactured water via the solar wind, and the Saturnian rings, even can be harvested since they will disappear at any rate. The Earth also can supply oxygen (and so can Ganymede) without trouble as it is overabundant in the atmosphere and if anything, the Earth is short of carbon - despite misnomers surrounding it in the media and popular opinion<sup>42</sup>. The oxygen can be used to create ozone layers on Mars and more importantly, Venus<sup>43</sup>. Venus would in time become a tropical paradise... not likely to be snowy, but it may have incredible thunderstorms and vortexes, as its magnetosphere develops. So it would be important to have very strong domed cities.

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<sup>42</sup>

<http://notrickszone.com/2016/09/13/massive-cover-up-exposed-285-papers-from-1960s-80s-reveal-robust-global-cooling-scientific-consensus/#sthash.X5LzkzTZ.QBFobip9.dpbs>

<sup>43</sup> Electric arcs (lightning) create ozone.

In the beginning of the terraforming process, the use of nuclear fuels is acceptable, as there are many objections to photovoltaic solar cells and the BPS infrastructure may not yet extend to these planetary bodies. For Europa and Titan, it is likely that the circuit need not come from the asteroid belt array, but just from the induction of Jupiter and Saturn themselves, which have ample amperage already (see Io<sup>44</sup> <sup>45</sup>). This may present new avenues for study for the outer gas giants, but please remember that the distance to Jupiter is 8AU, but just from Jupiter to Saturn is another 8AU... so imagine how far away Uranus and Neptune are! Very, very high speed Electrokinetic drives will be necessary to reach these distances. Mankind can forget about the stars for the moment, and simply try to bridge the gap in a reasonable 1-3 year travel span to those planets... traveling well beyond the protective magnetospheres and into the heart of the most radioactive Hell imaginable. Humans are so frail that the minor radiation changes on Earth can wreak havoc. Consider the data showing if you are born in a year with over 90 sunspot number your life can be shortened on average by ten years!<sup>46</sup>

## Moon Subsurface Cities and Bases

All the more reason for the importance of building a firm foundation on the Moon of surface science, experimentation, spaceport preparation and meteor defense-detection-deflection technology, *and* subsurface controlled health, exercise, and operations test facilities designed to push humans to the extremes of space. With only 1/8th the gravity, it is easily the right environment to test the mettle of Space Cowboys and astronautical pioneers, as the Moon is roughly the size of most moons worth dealing with around the gas giants... after all, it was a Jovian body, like Mercury<sup>47</sup>.

What shall be the military composition of these bases? Most definitely *not* nuclear. In the first place, nuclear weapons are generally speaking a waste of funding. Secondly, they represent an unreasonable threat to the safety of the bases and their obvious fragility. The most important weapon would be the development of laser-guided Vajra Generators. Obviously this might be abused by governments for Earth atmosphere deployment, but not likely. By then surface to space laser weapons will be too much a threat to low orbit ion cannons. Secondly, what would be the purpose? Would it be to simply create one mutually shared weapon that is programmed to vaporize cities and label it "The Eye of Sauron" and that'll be the end of world war? No, the purpose here is to practice moon-surface to asteroid blasting... for protecting Earth, yes, but also for perfecting the long distance arc-electron harvesting for the asteroid array. Also, in case electric arc machining becomes useful in terraforming processes, it is good to have a lot of practice, and the Moon has the right kinds of challenges, both in terms of heat, and radiation, as well as lots of meteors and even impacts which represent realistic threats to space stations, both surface and in space/orbit. The laser guided arc blasting needs to be fast, and reliable... way more reliable than missiles. Especially if mankind ever needed to mount a defense against nano-swarms or aliens or out of control AI robots from a rogue colony seeking its independence in the outer rim (you know how that goes). The perfecting of this weapon will also force an enhancement of efficiency in BPS creation both in generating billions of volts in potential, and in long distance transfer. Mastering the bouncing of RF off of specific layers of Earth's atmosphere for data transfer would be a bonus in the development of a solar system wide BPS interweb of epic bandwidth. Also, again, the ability to practice storm manipulation via generating potentials in the atmosphere from half the world away... or indeed from the Moon will be important for both drought control and for bringing Mars to life and Venus to heel. From the moment mankind picked up the gun or fired the cannon, wielding the Death Power has been its destiny, manifesting in tanks, missiles, and of course the atom bomb. In martial arts it is taught that to wield any weapon brings

<sup>44</sup> <https://arxiv.org/pdf/astro-ph/0209070.pdf>

<sup>45</sup> <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2008JA013968>

<sup>46</sup> <https://www.sciencedirect.com/science/article/pii/S1011134418305505>

<sup>47</sup> Hermes/Thoth/Heimdallr served the new God, Zeus/Odin/Horus... and their compositions appear very similar to Ganymede.

maturity and a sense of dread seriousness. Perhaps the wielding of these awesome powers will remove some of mankind's more childish notions about how to treat other adults. It will be understood: disrespect and denying human dignity can have serious, dire consequences. Or if we fail at maturing, then it will enable our extinction and so much more to say good riddance if we cannot improve by then! The author feels it likely that by the time this type of power is generated, and the workforces are educated and mobilized, IQ and EQ levels of the world can be raised above 100 and cease to be in the impetuous, impatient levels. Or, if not, mankind will quickly have to return to natural roots if it wishes to survive. It's the only win-win, because at this point drone warfare enables just enough death to be serious but from weapons that seem like harmless toys. The dread of the duel or joust, when the death was personal is gone. Weapons that can make hurricanes or tsunamis or vaporize cities bring that same dread of nuclear weaponry, but actually have another utility. Nuclear weapons are a syphon of finances, and ultimately one of mankind's greatest failures at self-control!<sup>48</sup> By really going to the Moon - playing for keeps - we will *have to mature*, because the environmental challenges will be as intense as living under the stars, in caves surrounded by sabertooth tigers. Who knows... maybe mankind can unlearn lying again.

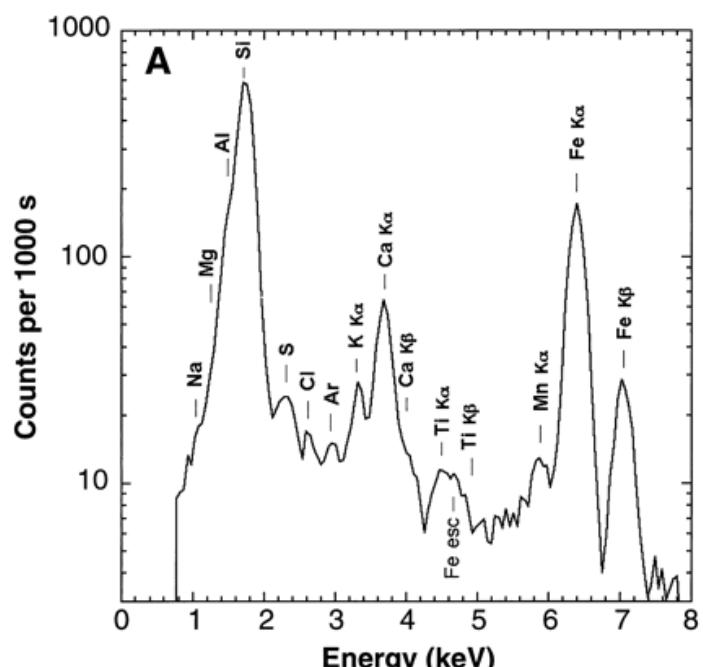
## Martian Terraformation

Regarding the Martian surface, “*The dust that covers the surface of Mars is fine like talcum powder. Beneath the layer of dust, the Martian crust consists mostly of volcanic basalt rock. The soil of Mars also holds nutrients such as sodium, potassium, chloride and magnesium. The crust is between 6 and 30 miles (10 and 50 kilometers) thick, according to NASA.*

*Mars' crust is thought to be one piece. Unlike Earth, the red planet has no tectonic plates that ride on the mantle to reshape the terrain. Since there is little to no movement in the crust, molten rock flowed to the surface at the same point for successive eruptions, building up into the huge volcanoes that dot the Martian surface.*<sup>49</sup>

Spectral analyses show the surface is strong in Sodium, Magnesium, Calcium, Potassium, and Manganese, and Iron, as well as Silicon and other useful elements. It is not the author's contention that the soil is perfect for farming and reforestation, but that the process is workable. Since the author contends that Mars is probably where Earth's largest deserts, particularly the Sahara and Australian and Arabian and Taklamakan come from, this would tend to indicate a bit of resistance to life, but not complete resistance. Efforts to create green-spaces in these desert regions have been made through focused efforts<sup>50</sup>, and hardy natural trees.

Figure 17 - Mars Spectral Analysis; credit:  
Rieder et al...<sup>51</sup>



It's the author's position that the planet will have more difficulty from a perspective of a lack of a strong magnetosphere, not for plants, or reptiles, but warm-blooded species, amphibians, and perhaps fish. It

<sup>48</sup> [5]

<sup>49</sup> <https://www.space.com/16895-what-is-mars-made-of.html>

<sup>50</sup> <https://www.youtube.com/watch?v=2xcZS7arcgk>

<sup>51</sup> <http://science.sciencemag.org/content/278/5344/1771.1>

is also very likely that small extraterrestrial microbes may exist which pose substantial challenges to terraformation sustainability. Again: the introduction of an ozone and a re-charge of the magnetosphere via funneling massive BC current from the BPS to Mars would be absolutely necessary to generate the proper shielding for Mars. It may even be necessary to produce the initial Double Layer Shield Generators (DLSG), if they haven't already been generated for the Moon and spaceship use. But the scale for them here, being proposed would be astronomical.

It may be outlandish, but the author begs the reader to be open to a really unorthodox way to jump start this: the detonation of nuclear devices at specific altitudes in the position of Mars' best magnetosphere strengths, to encourage the possibility of distributing charges that continuously circulate. But, at a space level where radioactive dust does not make the planet more difficult to live on. These experiments have been conducted by Americans and Russians, and it has proven to be a way to generate current in the upper atmospheres<sup>52</sup>. It may be also a convenient way to dispose of unwanted nuclear devices.

Regarding the need for water to replace that which was taken by Venus and cannot easily be returned from Venus, and certainly not for some years... it would be advisable to donate Antarctic water until Europa and Saturnian water<sup>53</sup> can be acquired, or until Starwater<sup>54 55</sup> generators can go online... again from programmable nano-bot swarm production.

The finer details of biosphere, atmosphere, and other ecological engineering will have to be left for finer papers and stories. See the future book, "From the Moon to Mars," for more details or read some of NASA's own reports on Mars missions with humans and setting up observatories. In the author's opinion though, they are jumping the gun trying to jump immediately to Mars without the interval steps that are integral to designing the hardware and automation necessary to really conquer space.

## Venetian Atmospheric Rebalancing

Venus is, in the author's estimation, the greatest potential jewel and gift. Whereas Mars will be a royal pain to terraform on account of its being currently dead, small, and weak, Venus is young, active, and overfull of energy. However, nothing can be done until the atmosphere is syphoned. Transporting the extra thick and rich atmosphere to Europa, Mars, and Ganymede will be a lot of trouble, but worth it once the automated nano swarms are taught to form very expansive, sturdy balloons which can be launched towards collisions with all sorts of bodies. It may even be possible to train the nano-bots to sequester charge and rare minerals and metals from the borrowed atmosphere. Some of it can be then harvested, or perhaps can just rain onto the worlds' surfaces for later collection.

What are the values of a thermally active new world, which is, after all, the former heart of Saturn? The main value of it is that the younger sister planet is full of rich magma and minerals, as well as evidence about the heart of a dead star. It is one of inestimable virtue and scientific value, not to mention future tropical paradise (as volcanic places all become). The planet is so young, literally 4,000 years old at the most<sup>56</sup>, that it is kind of unreal how little focus goes towards the planet. Again, often sci-fi writers today tend to treat it like a mopey rain storm<sup>57</sup> instead of like a scientific wonderland.<sup>58</sup>

Think of all the potential endless mining, vacationing, population expansion, and just other options that come available from having our own climate controlled "home away from home."

<sup>52</sup> <https://www.youtube.com/watch?v=KcTrOGS3TyE&t=1s>

<sup>53</sup> <https://www.youtube.com/watch?v=qBuyqM5u2GY>

<sup>54</sup> [https://www.youtube.com/watch?v=fDY2SN06\\_80](https://www.youtube.com/watch?v=fDY2SN06_80)

<sup>55</sup> <https://www.youtube.com/watch?v=Do4LPboa3Lk>

<sup>56</sup> Though geologically obviously it is very ancient.

<sup>57</sup> Not to knock Ray Bradbury

<http://staff.esuhsd.org/danielle/english%20department%20village/rt/short%20stories/all%20summer%20in%20a%20day.pdf>

<sup>58</sup> <https://www.amazon.com/Look-Below-Clouds-Mysterious-Planet/dp/0201328399>

## Moon Capture

One thing that wasn't mentioned in the above section, too, is the therapeutic value of conquering our fears. Another object that throttles mankind in fear is the moon, as its origins are as particularly unsavory as Venus' final approach to Earth, albeit much earlier. The current Moon - Sin<sup>59</sup> - is so fearsome and was so destructive it killed all the previous Earth moons or cast them off/down, and caused widespread super floods, and possibly the Great Flood of the end of the Younger Dryas<sup>60</sup>.

So, imagine the value of capturing small moons, for the placement, in defensive positions, around Earth, Mars, and Venus (as needed), and becoming asteroid/meteor dissaunderers and also locations for growing spaceport demands.

What are the dangers associated with this? Well, creating new tides, potentially, or creating our own doomsday clock, or collision events, etc. are certainly tops of the list. Also bringing small moons (large asteroids and small planetoids) within arc-gap distance of each other could also be a problem. However, the author does not think this is a realistic fear, and here's why: if one has the power to haul (via magnetic mining apparatus and BPS induced flux rope tunnels) large chunks of rock, presumably one could only do so if there is complete confidence in the ability of physical placement. What are the benefits that would make it worth the development of this technology? Most notably (outside of minerals etc...) it would be to rub charge densities and magnetospheres, inducing behavior in the SSC for the purposes of BPS charge collection and seeing unlit pathways go into glow mode.

Also, while the sun is in its prime (for all likelihood), what if the sun could be more efficient, or needs stimulation (as any aging male could?) Then perhaps rubbing the solar wind with a charged body might produce an outpouring of material and flaring, which could somehow be of use. For example what if moving a known charged body in one direction catalyzes the sun's surface to fuse elements in the metal periods, or the inert gases? Or, perhaps it is possible to induce the sun to recharge Jupiter and Saturn, and that may prove to be the cheaper means towards terraforming the larger moons around them. Or perhaps there is a way to reflect concentrated solar rays at Uranus and Neptune, leading towards potential terraformation of their moons. What if Neptune is like Venus in that it can be atmospherically syphoned and become itself a distant host to our species, ala a Titan 2.0 (very cold and living in domes) or a moved satellite of Uranus that could be warmed substantially... and by say the year 10,000 a paradise or a mining "goldmine" (so to speak)? Certainly the kinetic energies on Uranus and Neptune suggest some utility, so it would be unthinkable that mankind would find no utility in them, on mere account of expansion to so many moons and other worlds that have led to stagnation. Such stagnation would cripple the Celestial economies, trade, and inevitably lead to stupid wars. Again: such colonies at far trans-Neptunian distances could be used as observation outposts, defensive outposts, etc... The name in defense is: buffer. And the further the buffer, the better for survivability. The author downplays the likelihood of 3D ET invasions ... the only realistic invader aliens will probably be higher dimensional or inorganic. But on the off chance an Independence Day style invasion were to commence, it is of course, much better to have multiple baskets, multiple defense shields and weapons, and multiple warning outposts. And if it is a rogue dark star or brown dwarf, all the better to know ahead of time!

The development of moon capture, starting small and getting larger, might be the most exciting and important (long term) of the developments after terraformation commences and reaches the fifth or sixth generation of industrialized automation and efficiency.

<sup>59</sup> Hence moon-worship being "living in sin"; aka Aphrodite

<sup>60</sup> [15]

## Mini-stars and VIR Regulation of the Solar Wind Farms

The final stage, before mankind is able to finally exit the solar system, will involve three distinct functions:

1. Direct Solar Wind farming power stations, hooked to new, free standing space station ports (think “Knowhere” from Marvel comics), that act as jump points as well as self-contained rotating cities and military bases, etc...
2. Human made miniature stars, that are SAFIRE<sup>61</sup> like anode nodes of permanent plasma... to create lighthouses, and perform meaningful BPS tasks like current de-saturation, etc., and in general VIR regulation of the SSC.
3. Direct VIR regulation, especially of the wider net of charge surrounding the star, that permeates the solar system and provides power and protection for the solar system. That is to say, that as there is a general consideration of protection from grade 9 and 10 catastrophes, or power levels that could not be thwarted via small moons, DLSG, laser-arcs, Vajra Generators, super-nukes, magnetic tunnels, induced CME’s etc., there would need to exist a final Doomsday Thwarting system, that acts upon the immediate 3-6 AU spherical shell surrounding homebase and our most precious planets and stations, systems etc., to induce the sun to put out an arc of unimaginable proportions to strike some invading object (consider a rogue star, like Schulz’s Star<sup>62</sup>, or the Black God if it should ever return).

Why should mankind care enough to produce such a system? It is very unlikely mankind can stay viable himself, and even if he produced the type of stone records and automated life-renewal manufacturing posited here for re-generating the species in a time when conditions returned to optimals, mankind is likely to still undermine himself. But, if the common man is taught to fight for the highest order of battle, then smaller, more likely battles will come all too easy. For example if there really are Independence Day style invaders, imagine their surprise when upon approach (and we know they mean bad because they have destroyed the Neptunian outposts), they are hit with a solar Birkeland current driven arc! What if they are star harvesters? It would be absolutely vital self-defense to initiate Sol to lash out, and presumably proper self-defense measures and protocols would exist for the entire process that ensured mankind would survive in case of errant arc blast destroying one or even two planets in such a battle. Grade 10 catastrophic warfare is frightening, but it would be naive to think that we cannot deal with it and should not try, because it cannot happen. It can happen - does happen, and mankind even witnessed other planetoids undergo grade 10 catastrophes in the sky: Kronos **ate** his children<sup>63</sup>, and Kingu was slaughtered to make the Watcher-moon<sup>64</sup> while the other moons were destroyed or forced away. Uranus was hung from its heels and still rests at over 100 degrees tilt!

So how will these miniature stars be created, in order to facilitate VIR regulation in the system? At this time, it isn’t 100% clear, but the author proposes that SAFIRE and the similar Chinese project on fusion will hold the keys to understanding what conditions produce multiple double layers and sustainable plasma ecosystems. See the figure at right.

<sup>61</sup> <https://sites.google.com/site/electricuniversegateway/project-safire>

<sup>62</sup> <https://www.universetoday.com/119038/a-star-passed-through-the-solar-system-just-70000-years-ago/>

<sup>63</sup> <https://www.theoi.com/Titan/TitanKronos.html>

<sup>64</sup> <http://www.mesopotamiangods.com/the-enuma-elist-version-2/>

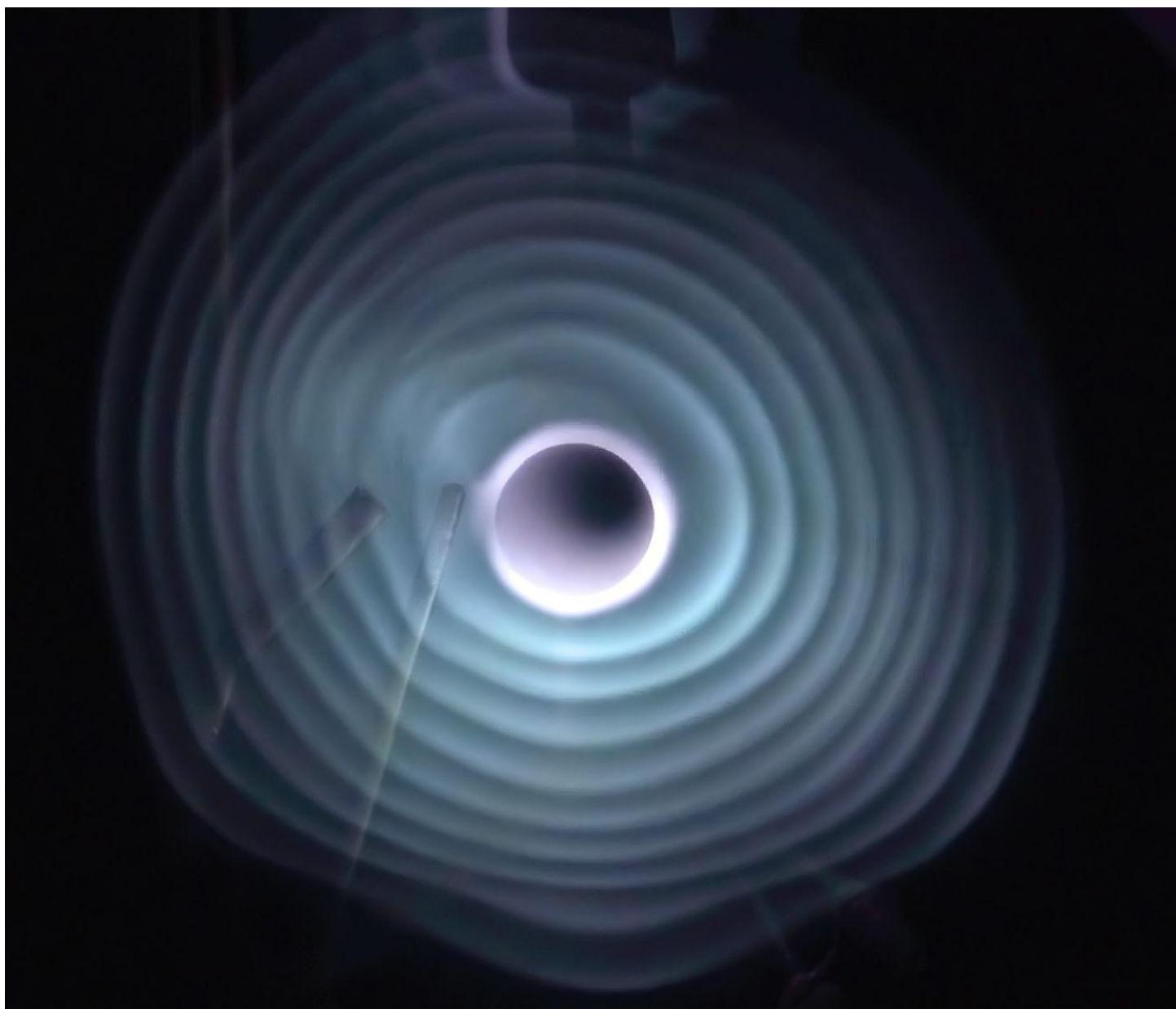


Figure 18 - Project SAFIRE (Phase 1) double layers<sup>65</sup>

There are numerous examples of space cities and stations similar to the kind mentioned above. There is nothing novel to describe here, not even atmospheric control. Mankind has long figured on these. As recently as 2015, even, movies such as Elysium have described these stations as sanctuaries, or havens for the wealthy, etc. However, the author doesn't feel that these cities have to be so negative. They are simply a natural extension of extra planetary and extra moon military and science experimentation. They are not the first stage, as is usually supposed, for two reasons. First, they are very difficult in size, to produce, being much larger overall than even terraform stations. Secondly, they are too large to be produced just outside the Earth, as assumed in many science fiction stories, because that would constitute a strategic and tidal-catastrophic threat to the Earth, as well as being relatively uncomely to the eye. Rather, they need be constructed out between the Moon and Mars, or between Venus and Earth, and then equipped with the means to slowly migrate to their stable orbits. This will necessitate boosted BPS farming, hence the direct farms mentioned, and these may then attach directly to these super-station-cities.

<sup>65</sup> <https://www.electricuniverse.info/safire-project/>

## Military Futurism

In the final part, the author wishes to discuss the important topic of the Space Forces, space wars, military defenses, anti-catastrophic systems, shielding, and laser-arc weaponry. Discussions of AI robots, tech/mech warriors, etc., have been discussed ad nauseum elsewhere and are common in the literature, anime, science-fiction and fantasy films, etc., and are not as important in this discussion, unless they be discussions of the functional role of AI security robots in anti-piracy and mining security.

Consider, for a moment, the importance of military funding and research in the development of massive engineering projects, technologies, and science. The development of mass aeronautical industries, the internet, and many other incredibly important advances, are directly tied to military funding and research. What's more, it seems very unlikely - given the predilection for violence and penchant for wars, in sci-fi, fantasy, and entertainment - that modern and post-modern societies will stop having war and dispel the need for militaries. Given human tendencies, political realities, and natural law, it seems to the author that the military must be evolved to beyond the point of mankind aiming super-weapons and firepower at mankind. Rather mankind must begin to point these weapons at the real frightening enemies: the "gods" and "demons" which destroyed cities and lives in the past, meteors.

In this paper, the focus will be on shielding and weaponry, as opposed to ships and robots.

## Ion Beams/Cannons

There have been stories of satellite "eye in the sky" cannons since the mid 20th century, in "007" films, novellas, and other "war of the world" type scenarios. In the late 20th, they were technicalized into space lasers and ion beams, based upon realistic ideas. Again the late 20th and early 21st saw two more "007" space cannons in "Golden Eye" and "Die Another Day," which focused on concentrated radiation. One more of an EMP, and the other essentially a giant child with a magnifying glass. The Japanese anime of incredible importance, "Akira" immortalized the image with an elaborate design (see figure below) that was juxtaposed with the tiny but powerful figure of the film's antagonist. It was a unique discussion: the power of the human potential vs the archaic and prosaic, rigid power at its height of the bureaucratic Japanese military. Still, while art depicts the triumph of the human spirit, reality tells us quite something else. Drone warfare is highly effective, and leaves little to no recourse for revenge for the selected targets (for good or ill). Drone warfare is highly regulated and there are usually multiple steps for verification before launch of missiles, and after all, this template from nuclear warfare vs a typical autonomous pilot makes a lot of sense in a discussion of justice.



Figure 19 - Ion Cannon in "Akira" (tiny figure is Tetsuo)

Turning to the discussion of ion beams or cannons, or space to surface lasers, these have a lot of incentive, and yet would require a very large amount of regulation and policy development. What are the

incentives? High powered, low radiation, precise (set radius of effect), incredibly overwhelming (over-aweing), and a step closer towards satellite guided Vajra Generators.

The downside of these devices, which may for a time be thought to outweigh the upside (and so probably program developments of them from say HARP or some Russian program may be deeply classified), is mostly a humanistic and ethical one. On the one hand there are definite proofs that cities can and have been vaporized in the past, the question being was it by divine or alien will, or electro-comet explosions? On the other hand there are cultures that have definite opinions, religious and culturo-mythical, about the genesis of these cataclysms, and that is that they were either planet-gods or alien/divine gods and messengers (angels) of the God, in either case, willful, and not an accident. So there would, in short, be some cultural wide PTSD introduced if ion cannons were publicly known about. This might be reasonable, considering the widespread despotism that exists.

Nevertheless, the military needs it as a carrot, and in the end, they will want the stick, too. In the first place the carrot will incentivize the development of fundamental high energy plasma physics, if for the sole purpose of dealing with the superpowers' own anti-satellite surface-to-space laser and Star Wars AICBM systems, etc. In the second place, the stick is highly desirable for the effect of nationalisation, pride, and many other powerful influences. These two can function as either carrot or stick, honestly. So this can be a primary reason for development, more than outright war super-weaponry. Just the ability to knockout nuclear launch sites, or chemical manufacturing plants, may be incentive enough to overcome reasonable fears.

It is the author's belief that weapons mature people, or at least create real consequences that force a certain degree of honesty and change or development. Weakness, as a rule, is not very useful in human evolution and development. Certainly weapons can be abused. Definitely the "elephant gun" has been part and parcel to the destruction of the elephant, but the majority of that problem has been economic and a misunderstanding of the forces of supply and demand (of ivory). However, it is also naive to think that the firearm could remain a 22LR or a musket, forever. It was inevitable to have cannons, warships, fighter jets, "tommy guns," and it is simply not reasonable to assume it would stop there due to "bans." It would, rather,

be in secret development ala 007, and in such a case, the best minds cannot be attracted to the work, inspired by it, and impressed to go to the next level, which is absolutely vital as far as the main goals of the above technologies aforementioned in previous parts.

Finally, there are scientific and industrial benefits to the ion cannon, in the same way as there would be for a lightsaber (a plasma sword or weapon). For example, terraforming, road carving, surface mining, evaporating landslide masses before they release their PE into tsunamis and deadly slides, plastic island vaporization, fresh water (from ice) liberation, ozone formation, hurricane KE discharge (to release EM radiation and to lower their impact just prior to landing), etc...



Figure 20 - Ion Cannon in Skyrim; can these be used to vaporize trash piles?

## Birkeland-Peratt Thunderbeams (Vajra Generators)

Though this may seem similar, actually it is quite a different system than the above. To understand a Vajra, it is necessary to review the work of the eminent Dr. Anthony Peratt and a supporting cast of HEP researchers at Los Alamos Labs, Sandia<sup>66</sup>, and NASA's Jet Propulsion Labs. In his first landmark paper, Dr. Peratt revealed a new, revolutionary EPEMC hypothesis regarding the ethnogenesis of plasma-petroglyphs<sup>67</sup>, or as the author terms them, plasmaglyphs... which are portions of the greater discussion of motifs and archetypes (D. Talbott). In the second paper, he provided more details for the calculations and electro-geologic evidence of these Vajra in reality, particularly in South and Central America.<sup>68</sup>

Suffice it to say, the author's own calculations reveal astronomical values that are similar energetic ranges, within three orders of magnitude<sup>69</sup> (at the higher end of magnitudes), and these are starting at about the level of power of the Bikini H-bomb and increasing. Specific details are in Peratt's paper and the author's work (using Maxwell and MHD models).<sup>70</sup>

What would be the point of such a super-weapon? In the final estimate, only to end all war. The power level of a continuous stroke Vajra or "Arrow of Brahma" is the most frightening, destructive on Earth super-weapon possible, without setting off Yellowstone or causing a megatsunami.

In the author's vision of how this weapon would work, it would take a worldwide or perhaps regional distribution of ionospheric satellites that are able to quickly tap the BPS network, sequester charge, and through magnetic manipulation and computer calculations, roughly create a laser-guided strike point, and then instigate the stratosphere to distribute the charges in the method shown in the attached figure at left, which would then descend and create a burn spot, like the figure at right.

The amount of power demonstrated has been further discussed in the author's upcoming paper, an addendum to the Plasmaglyphs paper previously cited. Suffice it to say, the power would be catastrophic, and we are talking grade 5 and 6 level catastrophism. The arc blast, heat, and EMP disruption would be nuclear, but the spread of deadly Step Potential would be also quite frightening with estimates of spread from 10 km to over 10,000 km radius from the strike site, depending on moisture, soil and bedrock variables, and strike location.<sup>71</sup> The effect on wildlife would be incredibly devastating as well.

It isn't that the author advocates this weapon be used. It's just that it will be developed, and it would be naive to think otherwise... and the technology that would be needed to create this weapon would certainly further the goals of anti-asteroid and anti-alien defense, of BPS networking and VIR regulation in space, and of HEP laser-arc electron transfer, and maybe even the magnetic tunneling technology. Also, potentially, the energy gathering apparatus could be used to power up extremely long maglev rail-gun-like launch ramps for large space vessels, like cruisers and shuttles to transport heavy gear. There is no way even nuclear power plants can generate the types of EMF to lift cruise ship weights into orbit, and you can forget about rocket fuel. So unless the parts are going to go up into an ever denser field of satellites (and junk), and risk damage, and needing to be brought together and assembled by hand... then some means of actually producing the EMF to push a heavy cruiser or shuttle with large payload into space must be generated. Given the strength of EMF is  $10^{39}$  times stronger than gravity<sup>72</sup>, it is only natural to presume that will be the realistic method.

<sup>66</sup> Where they use large amounts of EMF to generate plasma from Deuterium, and try to create fusion.

[https://www.youtube.com/watch?v=TValvAPMd\\_g](https://www.youtube.com/watch?v=TValvAPMd_g)

<sup>67</sup> <http://becomingborealis.com/wp-content/uploads/2018/01/PerattetalTPS2007-Z-pinchAuroraB-1.pdf>

<sup>68</sup> <https://plasmauniverse.info/downloads-petros/Peratt&YaoAurora-PrehistoryPhys-ScripT131.2008c.pdf>

<sup>69</sup> The Gold model itself indicates that the thunderbolts could actually increase in power by three orders of magnitude, so the author's model is back within Peratt's model.

<sup>70</sup> [15] Part 4

<sup>71</sup> Ibid.

<sup>72</sup> [6]

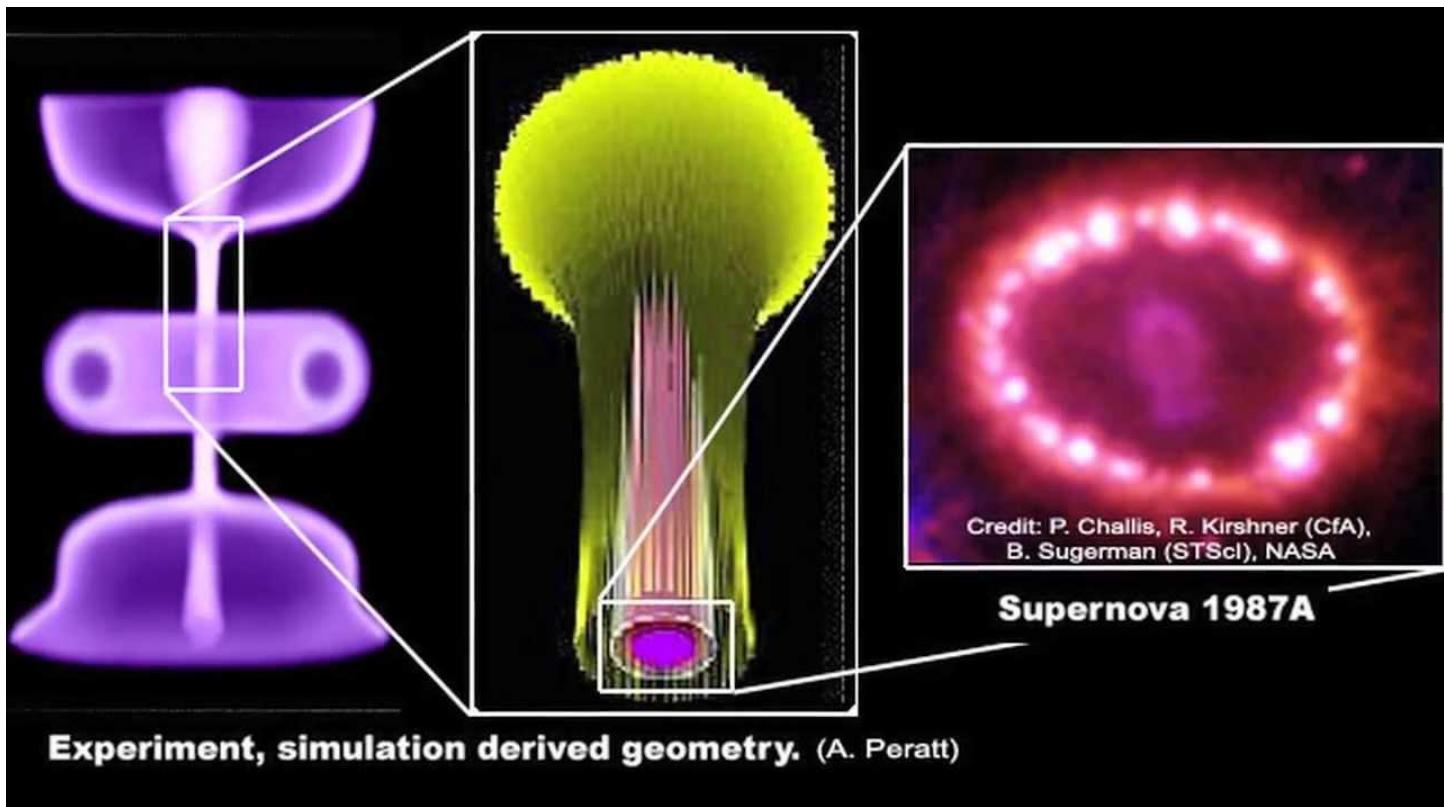


Figure 21 - Perattian Vajra/Thunderbolt of the Gods, estimated height 250-1000+km, ~7MA, up to 7GA; Peratt

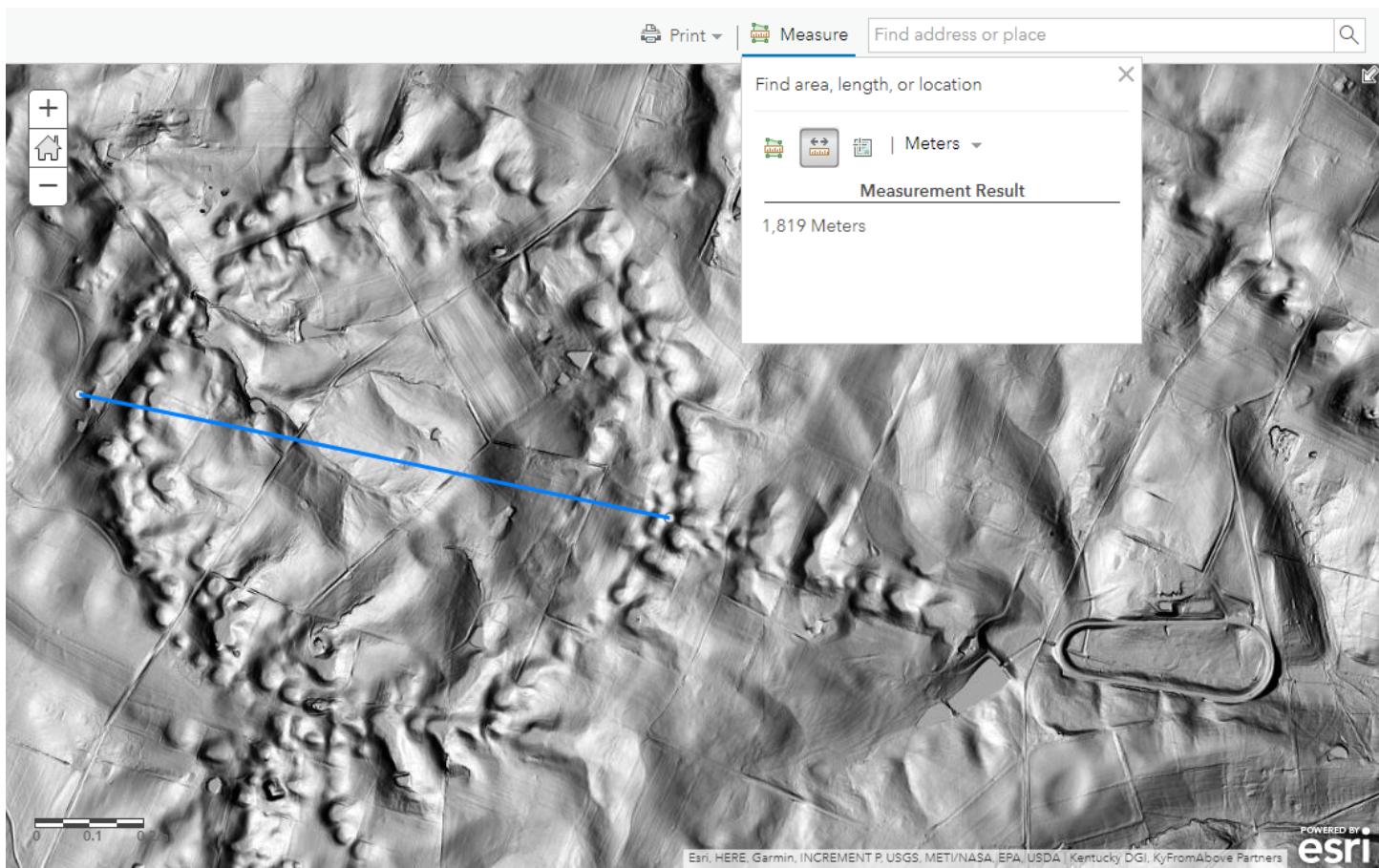


Figure 22 - Actual Vajra Strike Site at Big Sink, Versailles, KY; credit author/KY From Above

## Faster than Light Travel

In EPEMC, relativity is not falsified, but modified, and dissociated from a Newtonian Gravity (which is timeless in the first place). There isn't space here to explain in detail, but Relativity was *always* derived from Lorentzian transformations of Maxwell's Equations for electromagnetism. Therefore, the entire relativistic experience, from the apparent length contraction - which has to do with the aging or de-aging of light, to charge behaviors, etc., always had to do with the observation of EM waves and particles (made of electrons and positrons), and those EM wave observations involve 'photons' which always were a placeholder model for an obviously electricalesque phenomenon and not itself an actual particle<sup>73</sup>.

Furthermore, the idea of space-time - especially as the new aether - is a huge misnomer and misapplication of the concept of the aether. Space is a single dimension, and time is a different kind of single dimension which is not really a dimension (as a spatial construct), and so they clearly have nothing directly in common and cannot be simply added together linearly.<sup>74</sup> This is easily demonstrated through attacking the concept of the "fabric" of space-time which uses Newtonian concept of weight to push down on an invisible, impossible fabric to bend, given there are no ups or downs in space. This concept of creating a fabric would also introduce gravitational friction which of course is not something seen in either atoms' internal orbits, nor in space. Instead, planets and moons seem to slow down only by getting further away from their primaries, and do not fall inwards towards them as they slow down, but rather as a marble would in a bowl.

Given that we clearly have misunderstood light, and hence the issues of doppler redshift<sup>75</sup> vs. intrinsic redshift,<sup>76</sup> it can be understandable that we have also misunderstood gravity, space, and time to be immutable objects and constants, which are not deformable (though they appear to lengthen or contract since light ages or de-ages with charge density ... intrinsic inertia). We have naturally begun to see speed limits which are simply arbitrary.

The speed of light,  $c$ , is a rate of induction in a particular field. It is known to change based on the medium of propagation, and that is it. The equations which lay out the simplified, algebraic form of Heaviside's mathematics, are contained in E. Dollard's publications which are distillations of Poincare, Steinmetz, Tesla, and Heaviside.

So what are we to make of the fact that the sun has, in a single 'burp' - despite not being a supermassive black hole, or neutron star<sup>77</sup>, white hole, quasars, etc... - put out a CME that traveled at half the speed of light? The fact that it accelerated that fast, should give us hope, that we can through sufficient electromagnetic power, achieve our goals of reaching the outer planets within the next few hundred years.

But for us to reach the stars, realistically we will have to do better.<sup>78</sup> It's one thing to have a mission to Polaris that takes 8-10 years to get there (and hope the crew are sane enough to survive... or simply use AI robots). It's another thing to try to get to the exoplanets we have spotted, and hope to establish extra solar-system colonies.

From the point of travelling  $\frac{1}{2} c$ , it will take tremendous work and research to figure out how to continuously syphon charge exterior to the vessel, for use within the vessel. The good news is that because of Newton's law, once the vessel enters a charge dilute area it can simply maintain velocity, and begin acceleration once entering a concentrated area of charge again. Stopping once going, may be the most difficult part. Take for example how does the computer know when it will need to begin braking? It can't rely on sending

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<sup>73</sup> [13] pp. 9-10

<sup>74</sup> <http://www.stannet.ne.jp/kazumoto/dollardEm-v3.pdf>

<sup>75</sup> [22]

<sup>76</sup> [https://www.haltonarp.com/articles/intrinsic\\_redshifts\\_in\\_quasars\\_and\\_galaxies.pdf](https://www.haltonarp.com/articles/intrinsic_redshifts_in_quasars_and_galaxies.pdf)

<sup>77</sup> [19]

<sup>78</sup> Try utilizing the simulator "Space Engine" and travel the speed of light... just try to exit the solar system and visit the center of the Milky Way. It is not a pleasant time, you start to go insane within minutes of not seeing the stars even move.

a signal out, because light/RF will always travel at the speed of light, and you're going faster. This would be like an SR-71 sending out a soundwave to communicate, it would simply pass it by. It seems the only thing to do is for the computer to pre-calculate ahead of time the precise femtosecond when to start slowing down, so that even with changes in expected charge density, the trip reaches a slower speed correlating to the size of distance in the solar system, and then travel under the speed of light for the remainder of the flight.

## Electrokinetic Commercial Flights

It is, of course, unreasonable to use either rocket fuel, nuclear, or “warp drives” based on pseudoscientific ideas like **space-time**. Instead, we’re going to have to trust to proven EM effects seen in lab.

Electrokinetics, and the related topic of electrogravitics<sup>79</sup>, is absolutely key to safe travel in space:

- Explosion-less propulsion
- Use of a definable aether - the stellar winds
- Renewable
- Very strong force for high acceleration
- Promise of G-reduction for smooth, healthy travel; so-called ‘inertia drives’
- Shielding, deflection, etc...
- Aesthetically pleasing metal ships and discs
- Stealth capability<sup>80</sup>

From the development of military and aerospace research vehicles, can come the development of safe EK driven commercial flights. It may not be possible to have privateer class ships, mostly due to cost but also safety concerns, but certainly it will be necessary to have space travel to moon bases, space stations, and far flung planets and moons. It is only reasonable in such situations, to have the most lengthy part of the trip be the preparation, security, and launch sequences/windows. People cannot be expected to put up with over-planned missions where too many things can go wrong and tribalism (due to natural self-defense mechanisms in human biology) sets in. The actual flights need to be comparable to airplane flights, or bus trips... but not Noah’s Ark type situations. The irony of this, of course, is the fact that that’s exactly what vacation cruises are like, but we digress.

The movement of people, and not only robots/drones, across the vast expanse of a quiet, seethingly dangerous soup of particles and rocks that are moving fast enough to swiss cheese your vessel, is inevitable and presents numerous, seemingly impossible to solve conundrums:

- Radiation poisoning
- Collisions
- Inertial Dampening
- Rapid deceleration
- 0 G negative health effects
- Darkness and temperature fluctuations
- Pressure

Almost all of the above is improved upon, if not downright solved, by EK drive generators, shields, dampeners, and general control. Even the issue of radiation poisoning can be handled by proposed CDN Treatment Tubes, which extract or repulse unwanted charges and radiation from the body. Perhaps it will

<sup>79</sup> The discussion of how charge density affects inertia is beyond the scope of this article, but is clearly an area that must be explored and properly understood.

<sup>80</sup> There are unproven conspiracies that assert the Stealth B-2 utilizes Electrokinetics to reduce engine noise and maintain high speeds for flight. The rounded shape lends some credibility, but it remains, at this time, an unproven conspiracy.

require people to be kept in stasis, and that their bodies are constantly monitored by the AI supercomputers, ala HAL-9000 (with hopefully better results), but that is a very frightening idea. It will definitely take some clever engineering to enable humanity to survive unknown peaks of radiation which would certainly wind up penetrating the hull, bio-suits, and EMP shielding. Already there are water-bags on board the ISS for radiation peaks in space around Earth. Probably the ships will need to carry one large isolation chamber for the crew, that comes equipped with water proofed electronics and oxygen tanks.

It goes without saying, but it shall be said anyhow, that the type of ship will determine its overall design. It is doubtful that standard wings will be viable or appropriate on most planets. Mars' atmosphere is too thin, and Venus and Neptune's winds too fast. Remember that atmospheres are fluids and so atmospheres are very dense. However, in space, wings and landing gear will not be necessary at all, and all embarking and debarking will be either via spacewalk or nanotubes or extendable ramps/tunnels, etc.

## EMP and Double Layer Shields

Speaking of the protection of humanity, there are multiple reasons to develop EMP and DLS technologies. Firstly, there is the protection of buildings, cities, ships, and even the world (from solar flares/CME etc...) and is of course quite vital from a military perspective. Secondly, there are missile or satellite sized shielding and generators necessary, even today as reports of HARP style warfare now includes even the Chinese using lasers<sup>81</sup> to disable US/NATO satellites.<sup>82 83</sup> Thirdly, they can, of course be used as weapons themselves. EMP space cannons have been predicted in science fiction before (see "Golden Eye") and are, of course a means to eliminate an enemy's defenses and open them for an attack. However, how would double layer plasma sheath shields be used as a weapon?

A DLSG could be placed on a shadow satellite that parks itself next to a space station, port, or satellite, and then uses the outer solar wind environment to generate a protective DLS which prevents all sorts of communications (jammers could also be on board). Or perhaps it can be used to build up to a high amount of potential (voltage), and then act as a spontaneous, uncontrolled grenade of charge and lightning arcs which could destroy various types of targets. Or perhaps it can be used to generate floating ball lightnings which then meander and through covert laser targeting (low energy) are guided to strategic spots for electronics discharging. Plasmoids are totally capable of floating through space or air, and perhaps through glass, so this would possess very useful strategic value in ghost/black ops.

Figure 23 - Scorch Mark, Shoemaker-Levy 9

## Asteroid Catapults

Asteroid catapulting should be categorized as grade 6-7 super-weaponry, and outlawed for humanitarian reasons. It would be indiscriminate, brutal, terrifying, and would just result in continuous one upmanship (ala the Hydrogen bomb race). Once the ability to harvest asteroids is met with the ability to mobilize them and tow them, it is inevitable that some despot or wicked government will seek to create an asteroid or comet catapult. It



<sup>81</sup> <https://www.telegraph.co.uk/news/worldnews/1529864/Beijing-secretly-fires-lasers-to-disable-US-satellites.html>

<sup>82</sup>

<https://www.defenseone.com/technology/2019/02/china-russia-building-attack-satellites-and-space-lasers-pentagon-report/154819/>

<sup>83</sup> <https://www.militaryaerospace.com/articles/pt/2019/02/anti-satellite-laser-weapons-china.html>

should be remembered that electrocomets the size of a mere few city blocks<sup>84</sup> exploded on Jupiter and left smoke rings larger than Earth. It is simply not worth it.

## Solar Arc-Weaponry (or Jovian Vaporizer)

At the very high end of human capable weaponry (via manipulation, not containment of power), there is the possibility to use laser-guided targeting to generate massive BC super-arcs from either the sun, or from a large magnetosphere gas giant. The physics for either will be different, but the result should be a grade 9 or 10 super-weapon that could be used to deal with all sorts of targets from alien invasion, to comets, to wandering rogue planets, stars, etc.

The idea for a solar arc generation would be to use a harvested body, such as a large asteroid, to induce either a CME or plasma arc, which, through manipulation and realignment of the asteroid and satellite array can produce a one time killshot. Obviously targeting for human controlled systems would have to be disabled, and multiple system checks and lightning fast redundancy checks would need to be programmed. Because the behavior of lightning and flare activity is so random, only super quantum supercomputers, which the author will term “Uber-computers” would be able to make all the simultaneous calculations to ensure 99% reliability and increased potential recharge for a second shot. This should be considered the solar system and humanity’s “deringer” up the sleeve, last-chance type of weapon. It may alter the sun’s behavior, or induce pure insanity in the SSC causing distortions of orbits, gas giant behaviors, or even create VEI-7+ eruptions and 9.0+ earthquakes on inhabited planets, vortices, etc. Therefore it is very important to avoid using this weapon if possible.

By contrast gas giant MHD “flux rope” vaporizers could have multiple uses from industrial terraformation, power generation, and weaponized defense capabilities, and be far less impactful on the immediate environment.

Ever since the battle between Zeus and Typhon, mankind has marveled at the power of God and the ability of his “hand” to stretch out, or his “foot” to stomp (in a strike induced earthquake). The lifting of the Red Sea was hardly much in terms of the abilities of the Force. If guided, the BC’s can travel via these flux rope tunnels to very far distances. At 50x the distance they are thousands of % more efficient than the normal Electric field counterparts. That means that the power carried in co-axial form can really bring a lot of energy and information, with very intense throughput, at surprising distances. The distances will be so vast that it may enable defense of the solar system all the way from Uranus, and certainly from Neptune!

Figure 24 - Zeus Battles Typhon<sup>85</sup>; Sir William Blake



<sup>84</sup> 0.62 mi radius <https://www.space.com/19855-shoemaker-levy-9.html>

<sup>85</sup> The comet tail behind Venus as it left Saturn and ceased being the core of the planet, then passed by Jupiter wrapping around it and producing spectacular arc events which inspired the world's imaginations.

## Trans-Neptunian Outposts and Planetoid Exploration

It's already been stated above the main benefits of exploring and terraforming the moons of the outer gas giants. However, militarily, what is the benefit? After all, certainly it would be a hefty expense, and given the vast distances between stars, we might never have any visitors or rogues to defend against, and in the end the equipment might prove futile or out of condition for the encounter.

The author has three thoughts. First, one never knows when a weapon or martial art is necessary for self-defense. When you finally need it, it's too late to get them. This is a hard argument to make to the budgetary bean counters, and it will probably be impossible until after the first or even second of the solar system wars that will inevitably erupt after Venus ceases to be a vacation and research planet and is settled, turned to cities and slums, and seeks its own destiny... and similarly for Mars, Titan, Europa, etc... Who knows what great stories and epics, trials, miseries, and other things may occur between the time mankind finally gets it together to enter space **seriously**, and makes an actual attempt to make it out to Neptune and Pluto?

Second, the author believes that the effort is worth the cost, in that it will continue to sharpen the people, military, and improve the disposition and position of mankind, despite all fury and conflict. Mankind simply must spread out, and give flight to the human spirit, in order to save ourselves and other species from ourselves.

Third, the research outpost value will probably prove invaluable. Suppose that we attract not invaders but friends... to seriously visit them, and to play in the cosmos. We will need to improve faster than light travel. We have to get unused to "train trips" and start to visit stars as easily as one goes to the grocery store. Years, months, even weeks may prove absolutely fatal in some circumstances. God forbid, but if a rogue super dense mass arrived in the solar system, and all we had were the warnings of Neptune, before the sun came charging right through the planets seeking its new partner or enjoining a battle for its life... mankind might have nothing but hours to make a launch for an exoplanet previously determined through study to be habitable as an Earth 2.0, and not be difficult for a well prepared, technologically sophisticated and adaptable people. Humans are the most adaptable species in Earth's history, so it would seem a waste to lose this evolutionary advantage due to ineptitude and sedentary instincts.

Also, think of the potential for new resources to be found, such as oil, minerals, natural gases, helium, and huge amounts of rare materials not found in the inner Solar System. There are probably all sorts of reasons to have outposts on gas giant moons and the trans-Neptunian planetoids, that the author cannot think of (beyond mining). But after all, that's for future writers and scientists to discover.

## The Superweb

Leaving the realm of physical technologies, and entering the virtual or cyber domain, let us speak of the future. Now, it is possible that the world can be ultra-internetted with wires and microwave wifi, but these have major, serious detriments. For one, laying new fiber, continuously is not a very sustainable or aesthetic solution for the supplying of networking for 11 billion people<sup>86</sup>, so imagine if it were to be even more people! So suppose that we were to use wifi in scale. The current standards of microwaves that continue to get more energetic is neither sustainable as a matter of power usage, nor is it healthy. Think of all the current needs to eliminate video and audio buffering, and reduce online lag. For VOIP, for GPS/navigation, for ad purposes, updates, security, monitoring, hardware improvements, etc., there is a growing insatiable need for data bandwidth, processing on the fly, and continuous pinging of servers. This behavior makes the concept of

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<sup>86</sup> <https://www.youtube.com/watch?v=2LyzBoHo5EI>

microwave devices, held in hands, far less appealing, especially considering the implications of CDN's or at least the fractal continuum/chaotic wave theory of health.<sup>87</sup>

So what is necessary? Clearly, long wave analog or digital signals must be capable of riding larger and larger 'pipes', which are then filtered away from power transfer signals, into the interweb of data signals. The Birkeland Currents have massive potential for long distance transfer, as well as a stout amperage for very high frequency latency which can then modulate lots of different forms of longer wave signals, and carry them in different plasma sheaths. The details of how the 3-Phase<sup>X</sup> system would transform, modulate, and filter up and down, is not yet known. But there are courses and engineering works on multiple 3-Phase power systems.<sup>88 89</sup>

## The Next Phases of Computing

Presently there are three main currents for computing, outside of the standard Moore's law improvement of semiconductor technology. But the author wants to introduce a fourth, for the classic computing as well, which may enable vast improvements just using simple electricity and semiconductors. There are specific benefits to this path.

1. Optical (fiber optic) computing
2. Quantum (qubit) computing
3. Bio (myosin) computing
4. Reduced scalar computing

The problems for the first two currents of improvement, has been and continues to be a reliance ultimately upon semiconducting, and therefore a bottlenecking and engineering nightmare for interfacing and mass manufacture or upscaling. Both seem to require incredibly custom fine-tuning and specialized designs to work at all, and then they still fail to outperform far cheaper systems. The third current appears to have a great amount of promise for rapid development, though there isn't the market hype and therefore funding which quantum computing is garnering.

So what is RSC, as the author sees it, and what justifies its development? With the advent of steady state memory systems, carbon batteries<sup>90</sup>, supercapacitors<sup>91</sup>, and high temp superconductors (of 0 resistivity), there is a lot of benefit to reducing the distances between parts, and eliminating motherboards altogether. In theory, we can engineer new standards which enable much more compact boards with direct or near direct access between parallel CPU cores + GPU and a multipurpose bridge to process sound etc., and on the underside, several memory modules, also scalable, and then cooling, with the disk drive on the other side of that. The BIOS can be firmware imprinted into a section of the SSD, and all the ports can be reduced to USB 3.0+, HDMI, and wireless/bluetooth connections to attach peripherals. By scaling down, the continual shrinkage of parts can cease to be limited by current bottlenecks in memory, PCI bus speed, etc... *and then* things can be scaled back up slightly. To increase memory by tenfold, new standards should be introduced which enable bit scaling (to be adjusted for by the OS), and disable BIOS limitations of RAM maximums... allowing for continual parallel scaling. Modules can be introduced which are as stackable as legos, which merely need adequate cooling. These computers are "classic" or at least a new take on classic computing, specifically designed to keep extending our abilities of semiconductor computing, while Moore's law continues to accelerate, and up until the point of the final bottleneck: planck length distortions in laser etching, creating

<sup>87</sup>

[https://www.researchgate.net/publication/264474310\\_The\\_Mechanism\\_Of\\_Auriculotherapy\\_A\\_Case\\_Report\\_Based\\_On\\_The\\_Fractal\\_Structure\\_Of\\_Meridian\\_System](https://www.researchgate.net/publication/264474310_The_Mechanism_Of_Auriculotherapy_A_Case_Report_Based_On_The_Fractal_Structure_Of_Meridian_System)

<sup>88</sup> [https://www.researchgate.net/post/How\\_can\\_we\\_move\\_further\\_from\\_3\\_Phase\\_Systems\\_to\\_6\\_Phase\\_Systems](https://www.researchgate.net/post/How_can_we_move_further_from_3_Phase_Systems_to_6_Phase_Systems)

<sup>89</sup> <https://www.youtube.com/watch?v=HqZptHnC2I>

<sup>90</sup> <https://www.iflscience.com/technology/new-dual-carbon-battery-charges-20x-faster-lithium-ion/>

<sup>91</sup> <https://www.youtube.com/watch?v=9CDzrDjBTNU>

too few viable wafers to justify the costs. But in the meantime, we can cease to keep adding visual candy to computing, and take what has been accomplished, and enhance it continuously, until the new Dream has been accomplished, which will bring mankind to a dangerous place and temptation.

## 3D Internet & VR

Long before the master of true biocomputing using live home-trees and algae power factories in home that all interact with the biosphere of the home... mankind will achieve two dangerous steps which represent one major distraction from the real goals. The first is the proliferation of virtual reality in simulation, gaming, telephony, television/entertainment, and gaming. This will be a dangerous enhancement to the already socially destabilizing social media-fication of society<sup>92</sup>. Studies have shown how devices activate addictive centers of the brain<sup>93</sup>, that can stunt the moral and mental maturity of children<sup>94</sup>.

The second test will be the coming revolution of 3D everything: computing, home entertainment, and of course, a world wide web which is more like a solar system or Internet Universe. There are several good reasons this will happen. First, the VR demand, secondly because companies are dissatisfied with the direction of the free internet and will desire more obvious ownership and power in their intellectual properties... which cannot be simply policed with laws as people will be still accessing free "pages", or abandoning the Googleweb for the real internet, the free Dark/Deep Web. Second, there's a lot more that can be done with a website that reflects the "universe" sensation of Amazon, eBay, Walmart, etc... or even content like Netflix, if there are corporate owned "Myst"-like planets where customers not only visit the site, but become immersed, and inculcated in subcultures attached to the zeitgeist created by individual companies. In Asia already the tendency to become embedded in a cyber world has led to real life seclusion, such as cafes with sleep pods, or streaming brothels that accept donations, and other strange corners of the web. Not to mention a manga/anime culture which implicitly believes in the unification of mind, body, and cyber<sup>95</sup>.

So when mankind encounters the merging of these currents, either the current problems will increase and create dystopic problems, or new solutions will be presented which make sure that a 3D/VR internet world does not become a dystopia of endless porn, abuse, and criminality, and instead becomes a viable marketplace of excellent ideas, and development. Still, leaders reading this should be prepared for the national security threat of natural selection reducing the viability of a population or country of people, because of the failure of the society. Instead, get ahead of the current trend of the technocracy and entertainment zeitgeist, which takes from traditional industrialism, consumerism, and the service industry and turns it into a zombification. We need to introduce redundant systems to adjust the expression (not directly/forcibly, but through psychological persuasion) of the 3D/VR world into a STEM-based, post-New Age scientioconscience culture. This type of culture will utilize the human spirit to constantly explore the emerging mysteries and amazing new science paradigm shifts currently emerging in EPEMC and new medicine, and make use of the technically sophisticated, over-educated but under-utilized literati that currently troll the internet fulfilling cultural civil wars and outrage mobbery. These souls may seem lost at first, but it's clear they are well meaning (for the most part), and simply misguided and in a desperate need of historical context and a paradigm resiliency check. They were raised on videogames and the internet, and are generally unaware of the scientific historical revolution and how devices work: they just have **faith** that they do. This represents a potential goldmine of a trainable workforce... if their attitudes can be steered. If instead of waiting for the self emergence of the new web, instead if it were designed via *attraction*, it would also help to keep the 'bots' of social media companies from wasting IQ trying to control and censor people, and violating the rights of others, and instead help them to keep developing the new future, just as they were prior to 2010. Not that a zeigeist can't become corrupted and

<sup>92</sup> <https://sputniknews.com/us/201712121059920093-facebook-executive-manipulation/>

<sup>93</sup> <http://sitn.hms.harvard.edu/flash/2018/dopamine-smartphones-battle-time/>

<sup>94</sup> <https://www.psychologytoday.com/us/blog/mental-wealth/201606/screentime-and-arrested-social-development>

<sup>95</sup> A la "Ghost in the Shell" or "Alita"

that be a natural outflow, but after all, this is a loss of forward human momentum<sup>96</sup>, which is lamentable when discussing lost generations and fiat currency<sup>97</sup>.

## Quantum State Computing vs. Bio-computing

One of the directions the author feels strongly will turn out to be a waste of progress, or perhaps just a misguided hope: the hard pursuit of quantum computing over the equally viable, cheaper bio-computers<sup>98</sup>. This may be the author's bias for a Gaia Hypothesis<sup>99</sup> manifesting, but it seems that there is a reliance upon very wily, difficult to control quarks and subatomic particles which make up qubits (and currently require Resonator circuits<sup>100</sup> to interpret and stabilize<sup>102</sup>). Meanwhile, bio/nano computers are not only cheaper, and also very fast, but probably will be more intuitive to interface with the programmable nano-bot swarms and AI that has been discussed above.

## Birkeland Polyphase Superwebs

So finally, we return to the creation hurdles of the BPS. They are primarily: a source of power, continuous induction, distortion, computational, recursive system sensors, error detection in an ocean of signal and data, and stream/signal continuity (amongst probably hundreds of other issues). The development of these systems have to come both serially and in parallel, one after another, just as purposeful as Edison's first work, then followed by Steinmetz's efforts to actualize Tesla's AC power. It has to be led like a revolution, that gets a hold of the imagination of the masses, and government, but actually beating them to the market before they have a chance to grasp and alter the evolutionary edge. The masses were taken by surprise by the Tesla revolution, and the lightbulb, and it needs to be this way, again.

BPS are about more than power and data/interweb signal exchange. The BPS is meant to influence and power up the bio-computers (cyborg trees in the author's imagination), and to power up the health pods, to create positive environments for meditation, sleeping, exercise, etc. If people can and have been able to connect with the sun, or the moon, trees, clouds, and the Tao in general, perhaps it is possible that - as difficult as it is to believe - that some type of small BC, in dark mode, can exist which connects people together and to a great web system. Perhaps that is the feeling of connection to God, or to the spirit. In which case, perhaps part of the responsibility of the technocracy is to help find the human soul again, instead of becoming the false deity (a "cyber Beast"), and to actually produce modern [future] miracles that are not about taking pills but actually **experiencing the Power and the Majesty of the Universe**. This could lead to all sorts of inner revolutions within the self, or in child development, such as prevention of autism, treating bullies, PTSD, suicide prevention, etc., and of course helping adults with the wide variety of now typical human concerns combined with "first world problems."

This BPS would, more than likely be also visible. And while people tend to tune out what they are used to, the author cannot help but feel there is at least the benefit of demonstrating on a visible level, the majesty, power, and interconnectivity of life and the cosmos, which would reduce the feeling of nihilism and hopelessness that has been falsely and dangerously introduced by modern post-Big Bang science.<sup>103</sup>

<sup>96</sup> <http://www.tfcbooks.com/tesla/1900-06-00.htm>

<sup>97</sup> [https://upload.wikimedia.org/wikipedia/commons/4/4a/Modern\\_Money\\_Mechanics.pdf](https://upload.wikimedia.org/wikipedia/commons/4/4a/Modern_Money_Mechanics.pdf)

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<sup>99</sup> <https://courses.seas.harvard.edu/climate/eli/Courses/EPS281r/Sources/Gaia/Gaia-hypothesis-wikipedia.pdf>

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<sup>102</sup> <https://www.youtube.com/watch?v=JhHMJCUMq28>

<sup>103</sup> [20]

## The Future of Education and the WWW's Use

One of the most exciting ideas, that keeps the author hopeful despite all the evidence of a toxic trend right now (partially due to politics, partially to religion, fiat currency, and to bad scientific paradigms), is of a 3D/VR world that is entirely devoted to education, philosophy, and discourse. Imagine physics and engineering courses that can be attended by 1, 2, or 20 million people *at the same time*. The ability to put 3D immersive classes in the hands of smartphone users in the middle of Africa. The author is a big fan of “Black Panther” and Wakanda - a mythical country invented by white comic book writers which gifts to Africans the pride and respectability of a technologically advanced, conservative, strong isolationist nation built from within. But would it not be better to get the actual tools necessary for Africans to build their own Wakanda? That is, instead of being made fun of because they cannot develop airplanes<sup>104</sup>, or because they are always involved in email scams, or because the nations have such low average IQ’s<sup>105</sup> that in the west they would be considered functionally “intelligence disabled”?<sup>106</sup> We cannot give a made up thing - vibranium - but we can share that which has worked: education, constitutional republics, capitalism, and technology which bootstraps itself. Teaching a man to fish has always been more compassionate than giving him fish. Certainly it is more compassionate than giving fish he cannot pay for, and then taking his fishing pole to use for yourself afterwards, as China is currently doing<sup>107</sup> as it neocolonizes Africa (after the era of decolonization has proved so disastrous) without the resources to avoid a half century of civil war and strife.

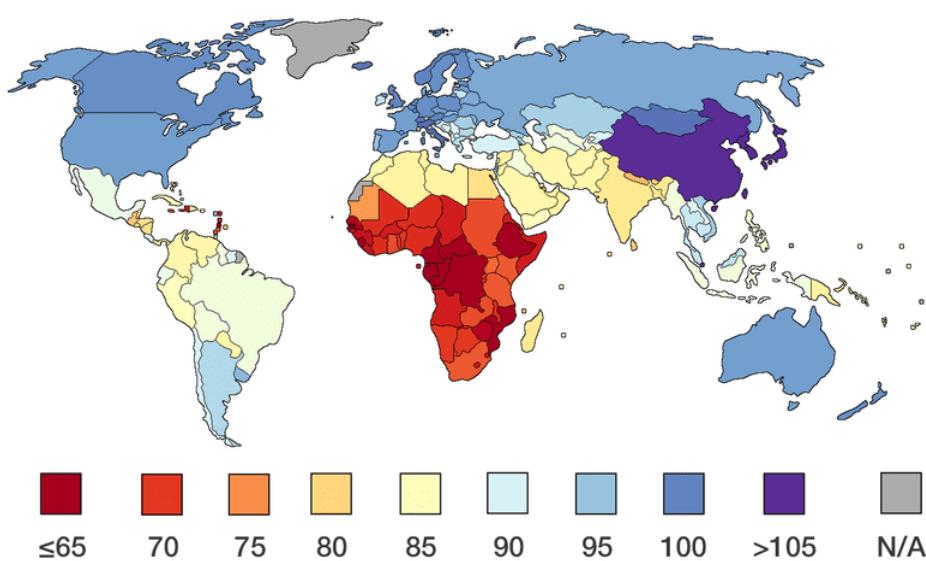


Figure 25 - World IQ map by country<sup>108</sup>; Brainstats.com

[Redder represents not a genetic disposition, but a generational deprivation of access to IQ generational systems. The author proposes that cheap, open source educational VR courses could drastically alter this map, end world poverty, violence, and starvation! Energy connection is vital to this, and always has been.]

The author is excited about the prospect of a second Atlantean Age, during which there does not appear to be any major solar system destabilization threat, and no **true** limit to resources, or time... only perceived ones. For the first time since 12,000 -20,000 years ago progress can be made, unfettered, if only we can summon the courage to be honest, brave, compassionate, wise, and persistent.

<sup>104</sup> [https://www.youtube.com/watch?v=0h\\_cqTCT5g0](https://www.youtube.com/watch?v=0h_cqTCT5g0)

<sup>105</sup> <https://brainstats.com/average-iq-by-country.html>

<sup>106</sup> <https://www.verywellmind.com/what-is-considered-a-low-iq-2795282>

<sup>107</sup> <https://qz.com/africa/1542644/china-debt-trap-talk-shows-africas-weak-economic-position/>

<sup>108</sup> To the author, the world’s greatest injustice, politically, is not discussing the systemic, generational poverty and violence generated by not providing the tools and access to improve IQ’s (and EQ’s), and sending guns and food to create more violence. This is an incredible assault on the southern hemisphere and Middle East which is simply appalling in the 21st century.

## Conclusions

There are many potential dangers, and current obstacles, which are not listed, or discussed, and which will exert forces, both chaotic and agenda-filled, that will try to derail human momentum and progress. There are also political forces from both sides of the spectrum, which blur or distract from human momentum. But, nevertheless, progress can and shall be made which will be of inestimable virtue for the survivability of Earth's biospheres, humanity, and human culture in the case of grade 7-10 catastrophes.

Some of the challenges will be motive issues, and some distractions. Most of the challenges it will be the blind, stumbling in the dark aspect of the 'fog of future'. But the exciting aspect of utilizing mankind's current motivations is both the terror of wielding power we are not currently mature enough to hold, which will force our species to grow up quickly, and the promise of adventure in a region of space which is still so very unknown and lonely, but holds so much promise. The ability to mine and have unlimited resources, to build new and more interesting technology, and to terraform planets and moons, giving ourselves new avenues for expression... there is no dollar value that can be assigned to this. It is assumed by most as the only viable future alternative to a dystopia caused by driving each other and the environment to the brink of collapse (or past it with nuclear holocaust).

The solutions, while not easy to attain, will yield massive benefits, endless sources of power, and still maintain the electrical and IT industries via maintenance fees and leasing contracts. Furthermore, the militaristic behaviors of humanity can be turned towards mutual defense and towards the creation of industrially useful superweapons that can absolutely have value in the terraformation of Earth havens. Eventually, all of these technologies can then be used to create a human "bug-out" plan in case of grade 9 or 10 catastrophes that necessitate an evacuation of the entire planet or the entire solar system, and emigration towards a previously researched exoplanet. The value of having multiple extra homes for humanity and Earth's valuable biosphere to be backed up to, cannot be overstated. Yet, little science fiction literature is devoted to the combination of human exodus and biospheric arks. Almost always mankind has to adapt to new nature, or revive Earth with an ark. So what a value to have an ark that comes *with* humanity to Mars, Venus, Europa, Kepler-186, TRAPPIST-1, Gliese 667, Promixa Centauri, etc.<sup>109</sup>

In closing, this paper is not exhaustive. This paper is merely a first version framework, designed with realistic (but not cynical), tough, honest truths to deal with. It is a difficult thing to design the future, but absolutely necessary, and it can be fun. This framework will be used for the author's own sci-fi works, and the author also invites other fiction and visioneering authors to use this framework for speculation and expansion, in technical means, political and humanistic drama, war epics, and naturistic and philosophical observations. All examination is good, or better at least, than no critique or examination. Only by harsh, rigorous, self-critique and self-honesty can mankind actually improve his lot, and change course (or enhance it if you like the current course) and accomplish something so marvelous. Because if we cannot perfect our technocratic way of life, then what's the point? Let us return to the simplicity of farming, and living in harmony with nature, until she or God decides it's our time to go. Self-strangulation is not only barbaric, it is beneath human dignity.

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<sup>109</sup> [https://en.wikipedia.org/wiki/List\\_of\\_potentially\\_habitable\\_exoplanets](https://en.wikipedia.org/wiki/List_of_potentially_habitable_exoplanets)

## Appendix A - Catastrophe Grades

- Grade 1 - local catastrophe; eg. flash flood, tornado
- Grade 2 - regional minor disaster, ie an earthquake or blizzard
- Grade 3 - regional major disaster, eg. a hurricane, tunguska event
- Grade 4 - national and international minor disasters, eg. tsunami, VEI 5-6
- Grade 5 - international or global major disaster, eg. megatsunami, VEI 7-8
- Grade 6 - global shifting disaster, eg. Younger Dryas event, 535 AD comet,
- Grade 7 - Earth local disaster, eg. Extinction comet, Shoemaker type event for Earth (or Mars)
- Grade 8 - Life Threatening event, ie a X-20+ or CME “killshot”, Superwave, etc...

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