



**Ad-Astra - To The Stars
In Peace For All
Mankind**

Mankinds Next Great Frontier

Is Consciousness And Awareness Of Its Place In The Universe

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INTERNATIONAL SPACE AGENCY - “ISA”

~ PURPOSE ~

The **International Space Agency “ISA” International Space Administration**; was formed to act as an “Enabler” and “Conduit” for Peaceful, Cooperative, Collaborative, and Joint Global “International” Space Activities by the Major Space Nations, Developing Space Nations, and In General the Global Space Community; to Plan, Develop, Promote, Encourage, and Increase Overall Cooperation in the Area of Government, Commercial, Scientific, Academic, Private Cooperative Global Space Efforts and Activities, for Strictly Peaceful, Non-Military, Purposes, and to the Common Benefit of the Peoples of Earth.

~ BACKGROUND ~

The **International Space Agency “ISA”**, was Founded in 1986, and Incorporated in New York State as a Scientific & Aerospace – Research & Development and Consulting Not-for-Profit Corporation in 1990, by its Founder, Admiral, Rick R. Dobson, Jr., and had its birthplace at Cornell University in Ithaca, N.Y. The ISA is presently Seeking International Treaty -&- Charter Status by the Global Space Community, by gaining Governmental and Non-Governmental Membership and Signatories to the **ISA Charter**. The International Space Agency Organization is a strictly non-political and non-ideological organization.

From 1990 to Present, the **ISA** has conducted numerous formal International Diplomatic Meetings in Washington, D.C., and hundreds of private and informal meetings, with key persons from over 43 Nations, representing the Governmental, Commercial, Scientific, Academic, and Private Space Sectors and Communities, which participated in, and attended these meetings. These meetings have been very successful in building growing global support, and understanding, for the **ISA Charter**, and the **ISA** Vision, Mission, and Goals Globally. The **ISA** continues to the Present Day, to promote, develop, and conduct Global Diplomacy, Out Reach, and Public Relations and Efforts to this end’s.

~ RECENT ~

From October 10th to October 19th of 2002 the **ISA** had a presence at the World Space Congress in Houston, Texas. This is the largest of the international space sector events Globally, and is held just every 10 years. Every major Nation and Organization involved in the Space Sector, and Space Exploration, Technology, and Science had a presence at the 2002 World Space Congress. The **ISA** made many formal appeals for support at this event, and conducted two “2” international press conferences. The International Space Agency also participated in and attended the 1992 World Space Congress in Washington, D.C., and has since 1990 conducted or participated in hundreds of important meetings.

The desire to develop increased international cooperation in space exploration and science is at an all time high. The **ISA** has benefited dramatically from this present spirit of good will and hope by the international space community, and it is the **ISA**’s hope that this spirit of good will and hope can be fully utilized.

A number of major space nations and organizations are now very eager to make the **ISA** Vision & Mission a serious part of their future plans, and the center of any future international space activities. This support presently is at a point, that with serious interest and support by the International Space Community; Could lead to a very dramatic and historic beginning to a new and exciting chapter in Human Space Exploration by the Global Space Community.

~ FUTURE ~

Here is just one of many projects the **ISA** could undertake, “with International Support & Leadership”, to benefit its member Nations and organizations, by providing tangible cost savings, conserving limited resources, making better use of intellectual assets globally, and deploying space activities beyond the National domain and capabilities:

An International Space Plane Program, utilizing a state of the art Electromagnetic Assisted Launch System, which would provide routine and daily Single Stage to Orbit (SSTO) operations and capability, which would be Managed like Airbus in Europe. This Space Plane Technology would be a 100% reusable space launch system, which would have unlimited potential. ***Note:** In every U.S. Space Shuttle launch the 13 story high main tank, which were worth many millions of U.S.A. taxpayer dollars and represented large amounts of high-grade metal ores and man-hours, was totally wasted on every launch. As it was burned up on reentry after separation from the shuttle. All vertical launch vehicles presently in use by the U.S.A. and the world’s space powers waste about 70% of the vertical launch vehicle, similar to the same dramatic waste represented by the example of the main tank of the Shuttle Transportation System. A fully reusable International Space Plane Program would offer a sustainable and tangible solution and alternative to these substantial problems of waste of critical resources.

Just a few other space projects that would benefit from the support of the International Space Community, through the **ISA**; include: Mars Missions & Base; Return to Luna “Earths Moon” to Stay; Solar System Exploration; Astronomy; Space Sciences; Astrobiology; Complex Space Ships & Craft; Orbital Space Stations; Space & Planetary Bases and Settlements; Central Space Sciences Databases and Archives; and any future Deep Space and Extra-Solar Exploration Programs.

Why Support An International Space Agency (ISA)?

There are many reasons for supporting the concept of an International Space Agency (ISA), but first the idea should be clearly defined. When the average person thinks of an International Space Agency (ISA), the first thing that comes to mind is the United Federation of Planets and Starfleet from the science fiction series, Star Trek. by Gene Roddenberry. This certainly is a viable impression of what an International Space Agency (ISA) is, but of course, this is fiction. In such a structure, instead of having representatives from planets as in Star Trek, we have representatives from each member country on Earth that joins this international entity. Also one must remember the idea of an International Space Agency (ISA), unlike Star Trek, is scientific fact and is much more realistic. This is not a new concept and, and has been a legal corporation since 1990. and was founded in 1986. In this concept of an International Space Agency (ISA), each nation invests resources and voluntarily sends its people via a diplomatic or special visa, to serve and work in this international agency for a termed period of time. In this structure, international treaties, laws, and policies are set that each member government or organization must follow. If a member country sends any of its citizens to work in this area of international concern, than, during the period of service, that individual must abide by all international treaties, contracts, and laws, which supersede the laws of the individual's country, and follow established rules and regulations of the International Space Agency (ISA). In addition, a global international language must be set as a core standard, so that all members of the International Space Agency (ISA), and its Officers and Personnel can effectively and efficiently communicate. Since the most global Science and Technology “Internet & Academia” and Aerospace “Airline Pilots” used languages on Earth is English, its recommended the means of communication, internally with in the International Space Agency (ISA) and at the International Space Academy be set as English. This is a very serious issue, as due to the complexity and high level of the very dangerous nature of space exploration in the activities of the International Space Agency (ISA), a misunderstanding in critical operations could lead to a mishap or catastrophe that could lead to the loss of life or destruction of assets.

~ ISA AS KEY GLOBAL FOCAL POINT AND ENABLER ORGANIZATION ~

The formation of an ISA does not in any way ask for the abolition of individual space agencies like NASA, Roscosmos, CNSA, ESA, ISRO, or JAXA; or even compete directly with Aerospace & Commercial enterprises. It calls for these agencies and corporations to continue to perform the same functions for each member nation, but now in conjunction with the ISA. For those nations who do not have a national space program of their own, the ISA allows them better access to space technology and the ability to participate in the global space effort. For Corporations Globally, they will now be able to utilize, piggy back, and access a Global Space Program & Space Transportation System of unlimited potential and capability, into a New Space Frontier of unlimited resources, opportunities, and potential. This will create new global economies and employment in the many trillions of dollars, as well as opening new worlds and frontiers to human settlements and exploration. The ISA will act as a key focal point and enabler organization in this regards.

~ GLOBAL FOREIGN RELATIONS AND DIPLOMATIC BENEFITS ~

One may ask what is the purpose of all this? In the opinion of the writer of this document, there are many benefits. First and foremost is international diplomacy and cooperation. Whenever countries are brought together to work for a common goal, it enhances cooperation and increases the chance for world peace. We saw this type of cooperation between Russia and the United States with Soyuz & Apollo Link Up, MIR space station, and we are seeing this cooperation even more with the International Space Station (ISS). Since in this proposed ISA, there is no military use of space allowed “Earth Orbit Out / Beyond Earth Orbit” and countries are not competing for their own goals, there is more of a sharing between member nations, thus resulting in better foreign relations. This sharing brings about less concern for ideology and more focus on cooperation and resulting mutual benefits. This is not to say that nations cannot have a military, national space agency, or a national identity, but that is outside, and separate from, the mission and purpose of ISA.

~ GLOBAL ECONOMIC AND STANDARD OF LIVING BENEFITS ~

In addition to international diplomacy, an ISA can strengthen global economies. For example, there may be many developing countries that cannot afford the technology and standard of living of "G7" western industrialized countries and other developed countries globally enjoy. By being a member of ISA, even though these developing countries cannot afford the investments of western industrialized nations, they can certainly reap the benefits of membership. These nations will have access to science, technology, and education that would otherwise be impossible. With help of stronger industrialized nations, developing nations can learn new techniques in medicine, environmental technology, how to raise the standard of living of their citizens and how to assist their disabled citizens, through increased access to technology. As ISA matures and grows, the resulting Global Space Programs, Projects, and Missions will dramatically spawn a new non-military and peaceful civil: *Global Space Industrial Complex* and *Global Space Exploration Economy*.

~ GLOBAL MARKETS AND TRADE BENEFITS ~

An ISA can improve the world economy and make world markets more accessible and facilitate world trade in the areas of civil and peaceful science and technology. Unlike present global trade policies between countries, which compete for trade in an adversarial manner, in an ISA, competition is not based on adversarial objectives. It is just shared technology and markets, yielding mutual benefits and trade. This is not to say that competition is negative as it is the basis of capitalism, the most successful economic system to date. In the ISA, there is competition, but it is not adversarial, it is symbiotic and collaborative. For example, if Japan were a member and was selling microprocessors, and wanted to put a plant in Russia in support of a global civil space program, it would not take jobs away from Japanese. This exchange of technology would just enhance job opportunities for all member nations and would especially help other nations globally who have consistent unemployment. This brings us to the next huge benefit of ISA, is global employment opportunities.

~ GLOBAL EMPLOYMENT AND RETASKING BENEFITS ~

In the early 1990s, many defense and aerospace workers globally lost their jobs due to military cutbacks as a result of the end of the Cold War. There were lost opportunities for these employees resulting in a reverse trickle-down effect. As a result, massive lay-offs took place; people purchased less goods and services, reducing the gross national and gross domestic products of most nations. Revenues declined due to lack of employment and deficits resulted. It took the global economy some five years to recover and it is still an economy for the wealthy and CEO's or major corporations. Even with the so-called seven-year expansion, Alan Greenspan has warned us of the possibility of another recession like in 1991. When a major industrialized nation goes into a recession, this has a negative impact on the world due to the lack of trading opportunities and the effects of the nation's currency and international financial markets. We saw this with the advent of the Euro in 1999. The Euro did not perform as well as originally planned, thus having a negative impact on the nations of the European Union. With an ISA in effect, these workers that are affected by downturns in the economies of member nations can be retrained for jobs within the ISA network, and for use in Global Space Programs, Projects, and Missions. For example, the exploration and settlement efforts on Earth's Moon and on Mars. They can use academic, scientific, technical, military, or other experience and apply it to their new responsibility with the ISA to save on training costs, assisting in diversification into different professional fields, and opening up more job opportunities. Also with the Internet and the World Wide Web, an ISA is even more efficient and can now employ from each member nation a group of computer information technology specialists from each member nation, which can design their nation's webpage to be linked to the main webpage of ISA. The goal of this network would be to transmit and exchange information that is rapidly translated into the many languages of the member nations and organizations of ISA, so that for example: *Comet and Asteroid Hunters & Researchers Globally can freely and rapidly exchange critical information and research regarding potentially dangerous Earth Impactors*. Also ISA would build a central supercomputer facility that would act as a central database & archive for space & planetary sciences, astronomy, and space technology. With enhancement of fiber optics and wide area networks, this goal is becoming more easily attainable. The employment of ISA web and computer center personnel will help each member nation's employment situation and per capita income as well as revenues from employment taxes needed to cut national deficits.

~ GLOBAL COLLABORATION AND COOPERATION BENEFITS ~

Group funded launch facilities and space exploration programs would be very important benefit of an ISA, since this is one of its main goals of existence. It is more efficient and less expensive for each country to fund a space station program or planetary research and settlement program, for example, as part of a collective and collaborative group of countries. We see this efficient use of funds with European member nations with in the European Space Agency, which is a Regional European Space Agency, and is the smaller cousin of the larger Global International Space Agency. This of course results in more international cooperation and better international relations because nations are sharing a common project or program in a Global Space Program. Even group space plane launches, satellite launches, etc. bring about different ideals from the different countries involved. For example, if one country has better technology and another has better know-how or intellectual resources, the group project can take the best talents from each country. Therefore, the result will be a much higher quality and robust group space project or program. In addition, the expenses and responsibilities are shared among nations, therefore preventing huge deficits of individual national resources, while giving each nation full access to global space programs, projects, and missions at a fraction of the total cost. This strategy will allow the ISA to provide not for profit services to its member nations and organizations at substantially less cost per member nation or organization, while also providing an International Space Program & Space Transportation Infrastructure of scope, scale, and duration that is sustainable and robust, that would be outside the national domain, ability, and capability. In a way, one can think of the ISA as a national rail or highway system that is not built for profit, but is built to provide infrastructure in which governments, corporations, and individuals will utilize freely in commerce, cargo, and transportation by a wide array of unlimited potentials. ISA will simply act as the focal point, overseer, maintaining, and enabling organization of this global space program and transportation system and infrastructure, and will do so through the collective contributions and dedicated resources and support of its member nations and organizations. This will create a massive emerging global space economy in the many trillions of dollars. New Frontiers historically have always created opportunity.

~ SCIENCE AND TECHNOLOGY SPIN OFF BENEFITS ~

Spin-off technology is a huge benefit of an ISA. Unlike with individual space agencies, where the spin-off is only accessible to the people of that nation, this would make it accessible to all nations. Spin-offs can be in the area of computer technology, environmental research, the apparel industry, health and safety, medical spin-offs, and technology to help people with disabilities lead more independent and productive lives. Many of the spin-offs that have come out of these previously mentioned areas, have come out of NASA alone. If you had several member nations and their respective space agencies working together, the amount of spin-offs would metastasis logarithmically. This would allow many nations to generate technical transfers that would benefit all member nations. For example, in 1986, the American President and the executive branch had fully funded a program for NASA called the Earth Observatory System which is a high-resolution spectrometer observing the ozone layer and deforestation. With ISA, this program would have been funded, not just by one nation, but by many nations. This would result in a much larger project for which not only the western hemisphere's environments would benefit, but each member nation's ecology would benefit. As a result, there would be many more environmental spin-offs and funding would increase because the sources of spin-offs and funding would increase substantially. The benefits to global orbital remote sensing in the fields of climatology, weather, geology, natural resource management, agriculture, map making, and civil engineering, ect., would be massive, and as a result scientific & technological advances in these fields would be rapid.

~ INTERNATIONAL SPACE ACADEMY AND EDUCATIONAL BENEFITS ~

An ISA would greatly help in the area of education and training. In such a structure, there is no longer the isolated educational systems of particular countries which may not have the highest academic standards. They also may not have the best access to math, science and technology. However, with an ISA, education and educational systems would be shared by all member nations. For example, if a country like Peru which is a developing country, does not have the funding or educational quality that Japan or France have, then

Japan and France can share some of their educational acumen with this country, through ISA programs and infrastructure. These more advanced countries can help them come up with better ways of educating their citizens, such as academic programs from major universities beamed by satellite into remote and poor areas, like is done in India by ISRO. This results in stronger cooperation between nations, improved employment opportunities and improved world economies. Indeed, one of the key programs and divisions of the ISA would be the International Space Academy, which would be an academic and training academy like the U.S. Naval Academy, with elements of NASA Astronaut Training Program and Universities mixed in. Like the U.S. Naval Academy, the International Space Academy would bring a wide array of officer, scientific, and personnel recruits from all the member nations and organizations, who would then go through standardized training in order to create a uniform and cohesive core culture and high personnel standards and character in physical, academic, technical, and leadership skills. The ISA, International Space Academy would provide standardized international training programs and high quality space personnel for ISA International Space Programs, Projects, and Missions, as well to the member nations and organizations globally of ISA. The International Space Academy will bring together the best Human Talent, Expertise, and Minds of Earth, for Peaceful, Beneficial, and Nobel Deeds and Enterprises on Behalf of ALL Mankind!

~ GLOBAL TOTAL QUALITY MANAGEMENT AND STANDARDS BENEFITS ~

Total Quality Management would definitely result in establishing an ISA. TQM says quality is at all levels and anyone who receives output is your customer. It also states that all those involved in the organization are empowered in decision making that impacts the entity. In an ISA, all member nations would work together for common goals and objectives in Global Space Programs, Projects, and Missions, and international diplomacy and collaboration. Therefore, much of the decisions would be shared by the member nations, resulting in empowerment for each member. It is synergy where the whole is greater than the sum of its parts. For the organization to run efficiently, quality and standards would have to be the responsibility of each member nation. Just like in a corporation, quality circles of nations can be set up to facilitate the involvement of group decision making with the input of all member nations, even those of developing status. This can be seen clearly in multi-national corporations like Airbus Industries, where components of a completed aircraft come from many countries, and so it is critical for management, quality control, and standardization across the Airbus facilities to be effectively employed. If a tail section from one country, a fuselage from another country, and wings and engines from yet other countries, all come together in a central assembly facility in a host country, it would be a complete disaster if TQM and Standards were not aggressively employed. Any member nation that does not, or cannot, abide by the rules, regulations and quality standards of the ISA, may be forced to relinquish their membership if the deviant behavior is not rectified or solvable. This results in a cooperative and efficient organization, vertically, and horizontally, through its International Space Administration, International Space Centers, and International Space Commands, and TQM will be Engrained with in the Core Culture of its Leadership, Officers, and Personnel.

~ GLOBAL COMMON ACCOUNTING BENEFITS ~

The accounting system of ISA is something of paramount importance. Much like accounting systems of governments, there must be systems of receivables, payables, revenues, and expenses for such a large structure and a diverse array of complex and large Global Space Programs, Projects, and Missions. A "General Accounting Office" skilled in large structure non-profit accounting would be necessary in order for such a structure to be managed efficiently and effectively. A benefit here in setting up an ISA, is that all members would be under the same accounting and tax system. ISA would not be concerned or impacted with the tax and accounting systems of individual countries, since each country has its own system. The fact that ISA would have a uniform accounting system which all members must abide by, would assist in international cooperation and unified financial goals and objectives, and create core oversight leading to ethical and effective use of financial resources which have been dedicated to ISA Programs, Projects, and Missions.

~ GLOBAL HUMANITARIAN SPIN OFF BENEFITS ~

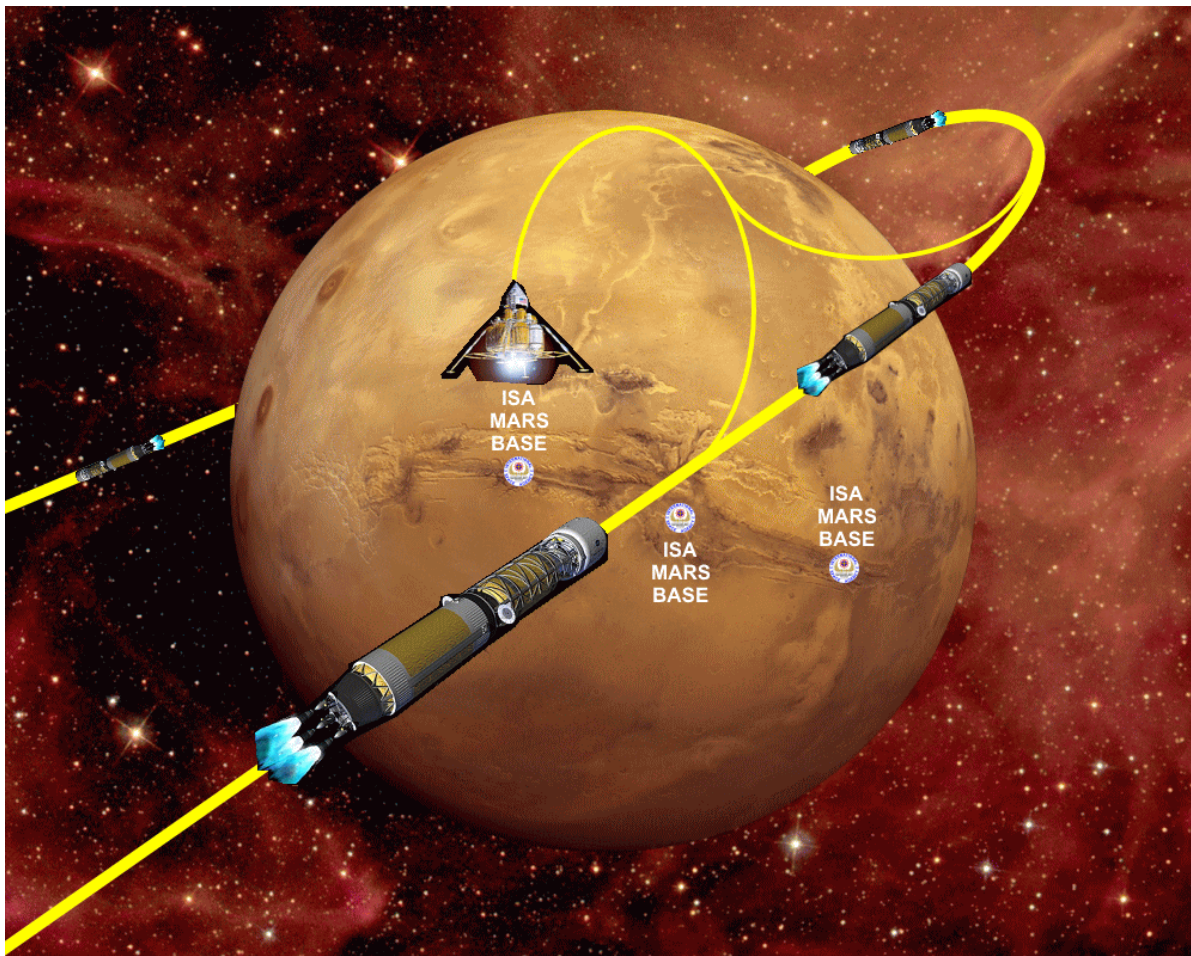
The ISA spin off technologies will provide many benefits to people with disabilities in each of the member countries. Since there are several member nations sharing technology for the good of humanity of Earth as a whole, much of the technology that comes from space spin-off technology or technical transfers, with different or new applications from space research, can be applied to aid those with disabilities. An example is in NASA's planetary probes program, there are many studies in robotics. The result of this technology came partly in the form of robots assisting a person with many severe disabilities in enhancing or performing independent living skills. With an ISA, not only do you have the expertise of the Americans, there is the technology of many other member nations. As a group cooperative, there can be improvements in adaptive software and other adaptive equipment and technologies, in the area of communications, daily living skills, mobility, processing skills, vocational and educational assistance. This will result in improved employment opportunities and adaptive aiding technologies for people with disabilities in all member nations of the ISA, resulting in stronger international economies, and improved international relations. Thus enabling many benefits of human compassion & empathy.

~ CONCLUSION ~

There are definitely many benefits to having an International Space Agency (ISA), even more numerous to mention than what has been previously discussed here. Benefits already discussed include employment opportunities, economic improvements, international diplomacy, spin-off technology, total quality management TQM, group financial and accounting systems. Other benefits include more efficient space programs, projects, and missions for member nations and for Earth at large, space programs that are less expensive per nation, improving international relations, world economies, and the lives of people with disabilities through technology. Most importantly, the International Space Agency (ISA) will provide International Space Programs, Projects, Missions, and Space Transportation Infrastructure of Scope, Scale, and Duration that is Sustainable and Robust, and is clearly OUTSIDE the Ability or Capability of the National Domain. Indeed, with all these benefits, it's therefore evident that anyone will see this pursuit of historic proportions, as a noble and worthwhile endeavor, which will surely have great benefits to all the Nations & Peoples of Earth. Presently, Global tensions are increasing and becoming more polarized, it's therefore logical that ISA offers hope to ease or reduce these tensions.

Ad-Astra! To The Stars! In Peace For All Mankind!

Manned Mars Mission In 10 Years “2027” -&- Human Settlements In 30 Years “2050”



International Space Agency (ISA) - Proposed Mars Mission Profile & First Humans On Mars by 2027-2029 With the Focus & Main Goal of Setting Up Established Self Sufficient Human Settlements on Mars by 2050

- 2020 - 6 Months -** Diplomatic and Treaty and Basic Planning Phase and Mars Mission and Crew Profile Development
 - 2020 - 6 Months -** Mars Mission Core Program Personnel and Crew Appointments, Selections, Recruitment, and Training
 - 2021 - 6 Months -** Mars Mission Basic Infrastructure Planning and Spacecraft, Vehicles, Equipment Design
 - 2021 - 6 Months -** Mars Mission Final Infrastructure Planning and Space Craft, Vehicles, Equipment Design
 - 2022 - 1 Year -** Mars Mission Prototypes Development and Testing - Phase 1 - Preliminary Development
 - 2023 - 1 Year -** Mars Mission Prototypes Development and Testing - Phase 2 - Terminal Limits & Quality Control Standards
 - 2024 - 1 Year -** Mars Mission Prototypes Development and Testing - Phase 3 - Pre-Operational & Limited Operational Testing
 - 2025 - 1 Year -** Mars Mission Final Production, Construction, Full Operational Testing, and Pre-Mission Preparation
 - 2026 - 1 Year -** Mars Mission Cargo Ships 1 & 2 leaves for Mars, 30 Days later Cargo Ships 3 & 4 Leave for Mars. When Cargo Ship 1 & 2 Safely Enter Mars Orbit, Primary Crew Ships 1 & 2 “Earth 1 & Earth 2” Leave for Mars. When Cargo Ship 3 & 4 Safely Enter Mars Orbit, Backup Crew Ships 3 & 4 “Earth 3 & Earth 4” Leave for Mars.
 - 2027 - 1 Year -** With all 8 ships in Mars Orbit, All Supply Landers, Hab Landers, Ground Trans Port Vehicle Lander and Backup Lander/Return are sent to Primary Mars Landing Sites. After all Landers are safely on Mars, the Primary Crew Lander/Return vehicles depart for Mars surface. If all Landing Operations are successful a 8 to 12 month Mars Surface Exploration Program will begin. * Once Mars Exploration successfully begins, Production of 8 more Spacecraft will be approved and production and assembly will begin.
 - 2028 - 1 Year -** If all goes well, when the first mission and all 8 space craft from Mars return to Earth the new spacecraft and crews should be ready for departure to Mars. Mission One Information and Data is rapidly evaluated and from learning and experience gained, and updates, revisions, and corrections are made to mission two.
 - 2029-2034 - 5 Years -** Once this stage occurs, the returned 8 space craft will be repaired, overhauled, refitted, re-supplied. This cycle will rotate on 1 year cycles at first, but as more space craft and crew are available the Cycles will decrease to 11 month Cycles, 10 month Cycles, and 9 month Cycles, ect. The goal would be that enough ships are established to provide monthly trips to/from Mars.
 - 2035-2043 - 8 Years -** Mars Operations for first 5 missions will be self-contained and all crew will return to Earth with their ship. Once sufficient supplies and infrastructure is established, a semi-permanent Mars Outpost and Operations will be established, and crew assignments on Mars will be rotated in 2 separate 4 year cycles. This experience will prepare the way for a permanent settlement.
 - 2044-2048 - 4 Years -** Permanent Central Mars Base & Infrastructure & Personnel is Established. Mars Planetary Exploration & Human Settlement is started in earnest. The ISA secretly selects a group of ISA personnel who will be permanently stationed on Mars.
 - 2049-2050 - 1 Years -** Non-ISA Settlers secretly selected are sent to Mars and will stay permanently. Routine ISA Missions continue.
- ISA International Mars Exploration Program Goal is to Establish Fully Self Sufficient Mars Settlement by 2050**

NOTE: It must be noted here, that it is critical for the International Space Plane (ISP) Program and International Electromagnetic Assisted Launch System to be approved in 2019/2020 for this Mars Exploration Program to be conducted on the provided time table. This is due to the fact, that the massive amounts of personnel, resources, and hardware that will have to be launched into Earth's Orbit, will require a fully reusable space launch system of scope, scale, longevity, and robustness, capable of providing 5 to 7 launches daily into Earth's Orbit. Once the ISP Program is approved, it will take 5 to 7 years for it to come on line, and be fully operational. During this time, the planning, design, and development of the Mars Mission Hardware will take place, and recruitment and preparation of the crew members who will be sent to Mars. As the ISP Program comes on line the personnel and hardware for the Mars Mission should be ready for full assembly in Earth Orbit, and preparations made for mission deployment to Mars. During this time, Mars Hardware and Systems will be tested in Earth Orbit and on Luna.

Cargo Ship 1A) Un-manned & Automated Cargo Ship: Primary Mission Craft "Emergency Manned Capable"

- * 8 Lander Pods: 1 Mars Base Supplies, 2 Support Equipment, 3 Power, 4 Sewer/Water, 5 Land Rover, 6 Science, 7 Construction, 8 LivingHab
- * Cargo Ship in Mars Orbit Has Orbital Communications & Support Capability and has 1 Reserve Lander/Return Vehicle for emergency use
- * Cargo Ships Are Designed For Low Fuel Use, Slow Long Duration Flights *Each Cargo Ship Carries A Space Tug & Transfer Vehicle

Cargo Ship 2A) Un-manned & Automated Cargo Ship: Backup Mission Craft "Emergency Manned Capable"

- * 8 Lander Pods: 1 Mars Base Supplies, 2 Support Equipment, 3 Power, 4 Sewer/Water, 5 Land Rover, 6 Science, 7 Construction, 8 LivingHab
- * Cargo Ship in Mars Orbit Has Orbital Communications & Support Capability and has 1 Reserve Lander/Return Vehicle for emergency use
- * Cargo Ships Are Designed For Low Fuel Use, Slow Long Duration Flights *Each Cargo Ship Carries A Space Tug & Transfer Vehicle

Crew Ship 1A) Manned Space Craft: Primary Ship - "Earth-1" (A Crew)

- * 4 Crew Modules with Artificial Gravity & 9 Core Micro-Gravity Modules & 1 Mars Lander (Primary Lander/Return Vehicle)
- * Normal Crew: 8 (Emergency Max Crew: 16) **Note:** 2 Crew must have MD's and will act as Ships Medical Staff
- * Command Crew 4: Ship Captain & Chief Pilot, Pilot/Navigator, Pilot/Flight & Propulsion Engineer, and Pilot/Computer Systems
- * Scientific Crew 4: Biology Specialist, Radiation Specialist, Chemist, General Planetary Sciences with emphasis on Geology
- * Crew Ships Are Designed For High Fuel Use, Fast Short Duration Flights *Each Crew Ship Carries A Space Tug & Transfer Vehicle

Crew Ship 2A) Manned Space Craft: Backup Ship - "Earth-2" (B Crew)

- * 4 Crew Modules with Artificial Gravity & 8 Core Micro-Gravity Modules & 1 Mars Lander (Primary Lander/Return Vehicle)
- * Normal Crew: 8 (Emergency Max Crew: 16) **Note:** 2 Crew must have MD's and will act as Ships Medical Staff
- * Command Crew 4: Ship Captain & Chief Pilot, Pilot/Navigator, Pilot/Flight Engineer, and Pilot/Computer Systems
- * Engineering Crew 4: Mining/Drilling Engineer, Construction/Civil Engineer, Materials/Structures Engineer, Machinist/Mechanical Engineer
- * Crew Ships Are Designed For High Fuel Use, Fast Short Duration Flights *Each Crew Ship Carries A Space Tug & Transfer Vehicle

Cargo Ship 1B) Un-manned & Automated Cargo Ship: Primary Mission Craft "Emergency Manned Capable"

- * 8 Lander Pods: 1 Mars Base Supplies, 2 Support Equipment, 3 Power, 4 Sewer/Water, 5 Land Rover, 6 Science, 7 Construction, 8 Living Hab
- * Cargo Ship in Mars Orbit Has Orbital Communications & Support Capability and has 1 Reserve Lander/Return Vehicle for emergency use
- * Cargo Ships Are Designed For Low Fuel Use, Slow Long Duration Flights *Each Cargo Ship Carries A Space Tug & Transfer Vehicle

Cargo Ship 2B) Un-manned & Automated Cargo Ship: Backup Mission Craft "Emergency Manned Capable"

- * 8 Lander Pods: 1 Mars Base Supplies, 2 Support Equipment, 3 Power, 4 Sewer/Water, 5 Land Rover, 6 Science, 7 Construction, 8 Living Hab
- * Cargo Ship in Mars Orbit Has Orbital Communications & Support Capability and has 1 Reserve Lander/Return Vehicle for emergency use
- * Cargo Ships Are Designed For Low Fuel Use, Slow Long Duration Flights *Each Cargo Ship Carries A Space Tug & Transfer Vehicle

Crew Ship 1B) Manned Space Craft: Primary Ship - "Earth-3" (C Crew)

- * 4 Crew Modules with Artificial Gravity & 9 Core Micro-Gravity Modules & 1 Mars Lander (Primary Lander/Return Vehicle)
- * Normal Crew: 8 (Emergency Max Crew: 16) **Note:** 2 Crew must have MD's and will act as Ships Medical Staff
- * Command Crew 4: Ship Captain & Chief Pilot, Pilot/Navigator, Pilot/Flight & Propulsion Engineer, and Pilot/Computer Systems
- * Scientific Crew 4: Biology Specialist, Radiation Specialist, Chemist, General Planetary Sciences with emphasis on Geology
- * Crew Ships Are Designed For High Fuel Use, Fast Short Duration Flights *Each Crew Ship Carries A Space Tug & Transfer Vehicle

Crew Ship 2B) Manned Space Craft: Backup Ship - "Earth-4" (D Crew)

- * 4 Crew Modules with Artificial Gravity & 8 Core Micro-Gravity Modules & 1 Mars Lander (Primary Lander/Return Vehicle)
- * Normal Crew: 8 (Emergency Max Crew: 16) **Note:** 2 Crew must have MD's and will act as Ships Medical Staff
- * Command Crew 4: Ship Captain & Chief Pilot, Pilot/Navigator, Pilot/Flight Engineer, and Pilot/Computer Systems
- * Engineering Crew 4: Mining/Drilling Engineer, Construction/Civil Engineer, Materials/Structures Engineer, Machinist/Mechanical Engineer
- * Crew Ships Are Designed For High Fuel Use, Fast Short Duration Flights *Each Crew Ship Carries A Space Tug & Transfer Vehicle

Mars Program & Mission Funding: (32 Mission Crew = Crew A – 8, Crew B – 8, Crew C – 8, Crew D 8

1) 77% Government Funding (12 Crew): USA (14%)(2 Crew), Russia (14%)(2Crew), China (14%)(2 Crew), Europe/ESA (14%)(2 Crew), Japan (7%)(1 Crew), India (7%)(1 Crew), Other Countries (7%)(2 Crew) through their National Space Agencies dedicate Manpower, Expertise, Resources, Funding to provide the Central Infrastructure & Space Craft Elements. This would cover 77 percent of the total Infrastructure and Program Costs.

2) 7% Corporate & Commercial Funding (1 Crew)

3) 7% Scientific & Academic Funding (1 Crew)

4) 7% Private Support & NGO Funding (1 Crew)

5) 2% Media & News Pool (1 Crew)

6) ISA Dedicated Command & Operations Crew (16 Crew)

A – IME/ISC/ISP Program - Administrators & Program Management – \$1,810,000

01) ISC Program – Program Director – 1 PHD Chief Engineer – \$100,000	\$0,000,100,000
02) ISC Program – Director of Administration & Personnel – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
03) ISC Program – Director of Personnel & Talent Recruitment – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
04) ISC Program – Director of Personnel Benefits & Payroll – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
05) ISC Program – Director of Personnel Training & Qualifications – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
06) ISC Program – Director of Personnel Travel & Housing – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
07) ISC Program – Director of Dispersing & Accounting – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
08) ISC Program – Director of Records & Databases – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
09) ISC Program – Director of Public & Media Relations – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
10) ISC Program – Director of Media Services & Historical Archives – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
11) ISC Program – Director of Meetings & Conferences – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
12) ISC Program – Director of Manuals & Publications – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
13) ISC Program – Director of Facilities & Physical Assets – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
14) ISC Program – Director of Ground Transportation & Motorpool Assets – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
15) ISC Program – Director of Aircraft & Aviation Assets – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
16) ISC Program – Director of Information Technology & Webmaster – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
17) ISC Program – Director of Computer & Electronic Security – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
18) ISC Program – Director of Personnel Security – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
19) ISC Program – Director of Facilities Security – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000
20) ISC Program – Director of Information Security – 1 PHD/MSci/BS/BA – \$90,000	\$0,000,090,000

B - IME/ISC/ISP Program - Engineering & Technology & Research & Development Management – \$5,400,000

01) ISC Program – Director of Ship 0-Gravity Protocols & Design – 1 PHD Engineer – \$90,000	\$0,000,090,000
02) ISC Program – Director of Ship Artificial-Gravity Protocols & Design– 1 PHD Engineer – \$90,000	\$0,000,090,000
03) ISC Program – Director of Ship Superstructure & Structures – 1 PHD Engineer – \$90,000	\$0,000,090,000
04) ISC Program – Director of Ship Mechanical & Control Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
05) ISC Program – Director of Ship Electrical & Power Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
06) ISC Program – Director of Ship Power Storage & Battery Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
07) ISC Program – Director of Ship Electronic & Computer Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
08) ISC Program – Director of Ship Communications & Navigations Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
09) ISC Program – Director of Ship Radar & Sensing Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
10) ISC Program – Director of Ship Life Support & Atmosphere Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
11) ISC Program – Director of Ship Environmental Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
12) ISC Program – Director of Ship Propulsion & Thruster Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
13) ISC Program – Director of Ship Nuclear Systems & Radiation Shielding – 1 PHD Engineer – \$90,000	\$0,000,090,000
14) ISC Program – Director of Ship Fuel Storage & Cryogenic Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
15) ISC Program – Director of Ship Atmosphere Integrity Emergency Repair – 1 PHD Engineer – \$90,000	\$0,000,090,000
16) ISC Program – Director of Ship Fire Suppression & Monitoring Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
17) ISC Program – Director of Ship Emergency Crew Escape Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
18) ISC Program – Director of Ship Airlock & Hatch & Docking Port Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
19) ISC Program – Director of Ship Maintenance & Repair Tools Design – 1 PHD Engineer – \$90,000	\$0,000,090,000
20) ISC Program – Director of Ship Micro Meteorite Shielding & Design – 1 PHD Engineer – \$90,000	\$0,000,090,000
21) ISC Program – Director of Ship Cosmic Radiation Shielding & Monitoring – 1 PHD Engineer – \$90,000	\$0,000,090,000
22) ISC Program – Director of Ship Water Storage & Purification Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
23) ISC Program – Director of Ship Waste Storage & Reclamation Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
24) ISC Program – Director of Ship Hygiene & Biological Waste Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
25) ISC Program – Director of Ship Personal Hygiene Bay Design – 1 PHD Engineer – \$90,000	\$0,000,090,000
26) ISC Program – Director of Ship Crew Galley Design – 1 PHD Engineer – \$90,000	\$0,000,090,000
27) ISC Program – Director of Ship Food Storage & Preparation Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
28) ISC Program – Director of Ship Medical Bay Design & Systems – 1 MD/PHD Engineer – \$90,000	\$0,000,090,000
29) ISC Program – Director of Ship Physical Fitness Bay Design & Systems – 1 PHD Engineer – \$90,000	\$0,000,090,000
30) ISC Program – Director of Ship Berthing Bay & Personal Space Design – 1 PHD Engineer – \$90,000	\$0,000,090,000
31) ISC Program – Director of Ship Crew Ergonomics & Interior Design – 1 PHD Engineer – \$90,000	\$0,000,090,000
32) ISC Program – Director of Ship Crew Comfort & Furniture Design – 1 PHD Engineer – \$90,000	\$0,000,090,000
33) ISC Program – Director of Ship Crew Entertainment Bay Design – 1 PHD Engineer – \$90,000	\$0,000,090,000
34) ISC Program – Director of Ship Crew Uniforms & Linen Design – 1 PHD Engineer – \$90,000	\$0,000,090,000
35) ISC Program – Director of Ship Crew Space Suit & Safety Gear Design– 1 PHD Engineer – \$90,000	\$0,000,090,000
36) ISC Program – Director of Ship Machinist – Quality Control – 1 PHD Engineer – \$90,000	\$0,000,090,000
37) ISC Program – Director of Ship Machinist – Safety & Standards – 1 PHD Engineer – \$90,000	\$0,000,090,000
38) ISC Program – Director of Ship Machinist – Specifications Verification – 1 PHD Engineer – \$90,000	\$0,000,090,000
39) ISC Program – Director of Ship Machinist – Blueprints & Microfiche – 1 PHD Engineer – \$90,000	\$0,000,090,000
40) ISC Program – Director of Ship Machinist – CNC Programmer – 1 PHD Engineer – \$90,000	\$0,000,090,000
41) ISC Program – Director of Ship Machinist – CNC Operations – 1 PHD Engineer – \$90,000	\$0,000,090,000
42) ISC Program – Director of Ship Machinist – Tool & Die Fabricator – 1 PHD Engineer – \$90,000	\$0,000,090,000
43) ISC Program – Director of Ship Machinist – Composite Materials – 1 PHD Engineer – \$90,000	\$0,000,090,000
44) ISC Program – Director of Ship Machinist – Ferrous Materials – 1 PHD Engineer – \$90,000	\$0,000,090,000
45) ISC Program – Director of Ship Machinist – Non-Ferrous Materials – 1 PHD Engineer – \$90,000	\$0,000,090,000
46) ISC Program – Director of Ship Machinist – Heat Resistant Materials – 1 PHD Engineer – \$90,000	\$0,000,090,000
47) ISC Program – Director of Ship Machinist – Natural-Magnetic Materials – 1 PHD Engineer – \$90,000	\$0,000,090,000
48) ISC Program – Director of Ship Machinist – Electro-Magnetic Materials – 1 PHD Engineer – \$90,000	\$0,000,090,000
49) ISC Program – Director of Ship Machinist – Electroconducting Materials – 1 PHD Engineer – \$90,000	\$0,000,090,000
50) ISC Program – Director of Ship Machinist – Exotic & Rare Materials – 1 PHD Engineer – \$90,000	\$0,000,090,000
51) ISC Program – Director of Ship Machinist – Fasteners & Rivets – 1 PHD Engineer – \$90,000	\$0,000,090,000
52) ISC Program – Director of Ship Machinist – Welding & Fusing – 1 PHD Engineer – \$90,000	\$0,000,090,000
53) ISC Program – Director of Ship Machinist – Glues & Adhesives – 1 PHD Engineer – \$90,000	\$0,000,090,000
54) ISC Program – Director of Ship Machinist – Foundry & Molding – 1 PHD Engineer – \$90,000	\$0,000,090,000
55) ISC Program – Director of Ship Machinist – Grinding & Polishing – 1 PHD Engineer – \$90,000	\$0,000,090,000
56) ISC Program – Director of Ship Machinist – Laser & Water Cutting – 1 PHD Engineer – \$90,000	\$0,000,090,000
57) ISC Program – Director of Ship Machinist – Electroplating & Ion Coatings – 1 PHD Engineer – \$90,000	\$0,000,090,000
58) ISC Program – Director of Ship Machinist – Corrosion Control – 1 PHD Engineer – \$90,000	\$0,000,090,000
59) ISC Program – Director of Ship Machinist – Protective Coatings – 1 PHD Engineer – \$90,000	\$0,000,090,000
60) ISC Program – Director of Ship Machinist – Lubricants – 1 PHD Engineer – \$90,000	\$0,000,090,000

C - IME/ISC/ISP Program – Manufacturing & Assembly & Construction Personnel – \$117,500,000

01) ISC Program – Component & Parts Design - Design & CAD & Drafting - Personnel - 50 x \$50,000	\$0,002,500,000
02) ISC Program – Foundry Pour/Mold/Casting of Raw Components/Parts/Metal Stock - Personnel - 50 x \$50,000	\$0,002,500,000
03) ISC Program – Metal Rolling & Stamping of Raw Components/Parts/Metal Stock - Personnel - 50 x \$50,000	\$0,015,000,000
04) ISC Program – Machining Of Raw Component & Parts - Machinist / Factory Technician - 300 x \$50,000	\$0,015,000,000
05) ISC Program – Component & Parts Manufacturing - Machinist / Factory Technician - 300 x \$50,000	\$0,015,000,000
06) ISC Program – Component & Parts Inspection & Preparation - Machinist / Factory Technician - 200 x \$50,000	\$0,010,000,000
07) ISC Program – Component & Parts Assembly - Machinist / Factory Technician - 100 x \$50,000	\$0,005,000,000
08) ISC Program – Systems Manufacturing & Assembly - Machinist / Factory Technician - 100 x \$50,000	\$0,005,000,000
09) ISC Program – Major Structures Manufacturing & Assembly - Machinist / Factory Technicians - 50 x \$50,000	\$0,002,500,000
10) ISC Program – Final Module And Bay Manufacturing & Assembly - Factory Technicians - 50 x \$50,000	\$0,002,500,000
11) ISC Program – Electricians & Electrical - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
12) ISC Program – Avionics & Electronics & Computer Hardware - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
13) ISC Program – Ducting & Vents - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
14) ISC Program – Plumbing & Piping - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
15) ISC Program – Surface Coating - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
16) ISC Program – Module & Bay Interior - Finishers & Technicians - 50 x \$50,000	\$0,002,500,000
17) ISC Program – Space Suit Design, Manufacture, Assembly - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
18) ISC Program – Propulsion & Thruster Systems - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
19) ISC Program – Fuel Systems & Cryogenic Liquid Storage Systems - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
20) ISC Program – Heating / Cooling & Environmental Systems - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
21) ISC Program – Atmosphere Processing & Pressure Systems - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
22) ISC Program – Human Fecal/Urine Storage & Reclamation Systems - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
23) ISC Program – Water Storage & Reclamation Systems - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
24) ISC Program – Radar & Sensing Systems - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
25) ISC Program – General Factory & Manufacturing - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000
26) ISC Program – Linen & Uniform & Clothing Manufacturing & Tailoring - Specialists - 50 x \$50,000	\$0,002,500,000
27) ISC Program – Furniture & Cabinet Manufacturing & Assembly - Specialists & Technicians - 50 x \$50,000	\$0,002,500,000

D - IME/ISC/ISP Program – Astronaut’s – \$10,800,000

01) Primary Mission One / A & B Crew – 36 Astronaut’s – 36 x \$100,000 =	\$0,003,600,000
02) Primary Mission Two / A & B Crew – 36 Astronaut’s – 36 x \$100,000 =	\$0,003,600,000
03) Backup Mission Crew for Mission One & Two A & B Crew – 36 Astronauts – 36 x \$100,000 =	\$0,003,600,000

E - IME/ISC/ISP Program – Astronaut Trainers & Support Specialists – \$3,680,000

01) Buoyancy Tank Specialist – 1 Master Diver – \$90,000	\$0,000,090,000
02) Buoyancy Tank Specialist – 8 Divers – 8 x \$50,000	\$0,000,400,000
03) Nutrition Specialist – 1 MD/PHD – Doctor of Nutrition – \$90,000	\$0,000,090,000
04) Nutrition Specialist – 4 PHD/MSci – Nutrition Specialist – 4 x \$50,000	\$0,000,200,000
05) Hygiene Specialist – MD/PHD Doctor of Sports Medicine – \$90,000	\$0,000,090,000
06) Hygiene Specialist – 4 PHD/MSci Physical Trainer – 4 x \$50,000	\$0,000,200,000
07) Physical Trainer Specialist – MD/PHD Doctor of Sports Medicine – \$90,000	\$0,000,090,000
08) Physical Trainer Specialist – 4 PHD/MSci Physical Trainer – 4 x \$50,000	\$0,000,200,000
09) Medical & Biology Specialist – 1 MD/PHD – Chief Flight Surgeon – \$90,000	\$0,000,090,000
10) Medical & Biology Specialist – 4 PHD/MSci – Medical Specialist – 4 x \$50,000	\$0,000,200,000
11) Mental Health Specialist – MD/PHD Doctor of Psychology – \$90,000	\$0,000,090,000
12) Mental Health Specialist – 4 PHD/MSci Mental Health Specialist – 4 x \$50,000	\$0,000,200,000
13) Survival & Safety Equipment Specialist – 1 MD/PHD – Doctor of Physiology – \$90,000	\$0,000,090,000
14) Survival & Safety Equipment Specialist – 4 PHD/MSci – Physiology Specialist – 4 x \$50,000	\$0,000,200,000
15) Mother Ship Simulator & Systems Trainer Specialist – 1 PHD Chief Engineer – \$90,000	\$0,000,090,000
16) Mother Ship Simulator & Systems Trainer Specialist – 4 PHD/MSci Engineers – 4 x \$50,000	\$0,000,200,000
17) Lander/Return Simulator & Systems Trainer Specialist – 1 PHD Chief Engineer – \$90,000	\$0,000,090,000
18) Lander/Return Simulator & Systems Trainer Specialist – 4 PHD/MSci Engineers – 4 x \$50,000	\$0,000,200,000
19) Habs/Modules Simulator & Systems Trainer Specialist – 1 PHD Chief Engineer – \$90,000	\$0,000,090,000
20) Habs/Modules Simulator & Systems Trainer Specialist – 4 PHD/MSci Engineers – 4 x \$50,000	\$0,000,200,000
21) Rovers/Equipment Simulator & Systems Trainer Specialist – 1 PHD Chief Engineer – \$90,000	\$0,000,090,000
22) Rovers/Equipment Simulator & Systems Trainer Specialist – 4 PHD/MSci Engineers – 4 x \$50,000	\$0,000,200,000
23) Space Suit Trainer Specialist – 1 PHD Chief Engineer – \$90,000	\$0,000,090,000
24) Space Suit Trainer Specialist – 4 PHD/MSci Engineers – 4 x \$50,000	\$0,000,200,000

A + B + C + D - Total For One Year: \$139,190,000**A+B+C+D E – IME/ISC/ISP Program - 8 Years Of Pre-Mission Design, R&D, Construction – \$139,190,000 x 8 Years = \$1,113,520,000****F - ISC Program - Mission 1A - 4 Ships – (Mars Equatorial Base 1 of 7) \$1,000,000,000**

01) Crewed (8) - Ship One / Mission 1A - Materials & Consumables –	\$0,250,000,000
02) Crewed (8) - Ship Two / Mission 1A - Materials & Consumables –	\$0,250,000,000
03) Cargo - Ship Three / Mission 1A - Materials & Consumables –	\$0,250,000,000
04) Cargo - Ship Four / Mission 1A - Materials & Consumables –	\$0,250,000,000

G - ISC Program - Mission 1B - 4 Ships (Mars Equatorial Base 2 of 7) – \$1,000,000,000

01) Crewed (8) - Ship One / Mission 1B - Materials & Consumables –	\$0,250,000,000
02) Crewed (8) - Ship Two / Mission 1B - Materials & Consumables –	\$0,250,000,000
03) Cargo - Ship Three / Mission 1B - Materials & Consumables –	\$0,250,000,000
04) Cargo - Ship Four / Mission 1B - Materials & Consumables –	\$0,250,000,000

H - ISC Program - Facilities & Centers – \$1,000,000,000

01) Foundry & Metal Fabrication Factory –	\$0,250,000,000
02) Machining & Manufacturing Factory –	\$0,250,000,000
03) Final Assembly Factory And Mission Preparation Center –	\$0,250,000,000
04) Administration / Space Operations / Research & Development - Complex & Centers –	\$0,250,000,000

I - IME/ISC/ISP Program - Launch Infrastructure & Launch Of Ship Components & Consumables Into Earth Orbit - \$3,657,257,077

01) International Space Plane (ISP) Program – (1) Space Plane Orbiter First Proof Of Concept Test Prototype:	\$0,130,007,077
02) International Space Plane (ISP) Program – (1) Space Plane Orbiter First Operational Production Prototype:	\$0,077,250,000
03) International Space Plane (ISP) Program – (10) Space Plane Orbiters Operational Production Models, Each: 10 x \$50,000,000 =	\$0,500,000,000
04) Equatorial / Mountain Based / Electromagnetic Assisted Launch System & Operational Infrastructure / Base:	\$1,250,000,000
05) 8 To10 Years Of Personnel Resources & Talent – Administration / Pilots / Space Crew / Scientists / Specialists / Technicians / Personnel:	\$1,700,000,000

A+B+C+D+E+F+G+H+I - Total IME/ISC/ISP Program Cost (Achievable in 8 to 10 Years) To First Humans On Mars: \$7,770,777,077**Proprietary Information, Trademark & Copyright Protected, 1986 to 2019, International Space Agency, ISA, United Space Federation, Inc.**

1986, 2013, 2019 Proposal – International Mars Exploration (I.M.E.) Program International Space Agency (I.S.A.) – International Space Administration

A. General Information

Project Title:	International Mars Exploration (I.M.E.) Program / Office (of the International Space Agency, ISA)
Brief Project Description:	The I.M.E. Program / Office will, Firstly, On Behalf Of ISA Member Nations & Organizations , will, Promote, Organize, Design, Build, Support, Operate, and Maintain all ISA Infrastructure , Stations, Bases, Facilities, Spacecraft, Aircraft, Vehicles, Machinery, Equipment, Assets, Personnel, Activities, Programs, Projects, and Missions on the Mars Surface & Subsurface , and in Mars Atmosphere & Orbit ; and, Secondly, As Approved, To The Peoples Of The World Community, Earth, ISA will; act as an Enabler, Bridge Head, Conduit, and Focal Point for all National Space Agency & Civil/Private: Industrial, Mining, Manufacturing, Commercial, Research & Development, Scientific, Academic, Tourism, and Settlement activities on Mars , in achieving their Non-Military and Peaceful Civilian Objectives and Endeavors, in regards to their own independent Mars activities and endeavors. In General, The ISA , will; “be/act as” the Key Core/Central Administration & Management, Quality Control & TQM Standards, Search & Rescue, Medical & Health Services, Research & Development, Navigations & Communications, and Critical Infrastructure & Assets Umbrella Organization on the Mars Surface & Subsurface , and in the Mars Atmosphere & Orbit . The ISA will provide the Core/Central Infrastructure, Personnel, and Operations on the Surface, Subsurface, Atmosphere, and In Orbit Around, Mars , and all End Users will provide independently, or approved to be contracted through ISA networks, all support services, materials, personnel, consumables, and equipment for independent activities outside the Direct Control or Charter/Treaty of ISA . It is highly advised, that no Earth Government be allowed to have Military or Sovereign control of Mars , like is Presently The Established Treaty Protocol In Antarctica .
Prepared By:	Admiral, Rick R. Dobson, Jr., Chairman & CEO, International Space Agency, “Redacted/Proprietary - ISA Personnel”
Date:	Cir. June 1986- Original Proposal / 20 October 2013 - Updated & Republished / 3 May 2019 – Updated & Republished

B. Project Objectives:

PURPOSE: The **International Mars Exploration (I.M.E.) Program / Office** will function as the Core/Central Specialized Knowledge & Expertise Base and Focal Point of Excellence & Standards for all of **Mars Infrastructure**, Operations, Projects, Missions, and Programs of **International Space Agency**. It will be the Key Initiator, Enabler, Conduit, Promoter, and Organizational Instrument for all endeavors specifically related to the exploration, utilization, and human settlement & activities of **Mars**. This will include (but is not limited to) coordination of the mapping of **Mars Surface** (initially planning robotic lunar rovers, Aircraft, and Satellites to map **Mars**, Google Maps is a good example of what **ISA** should be looking to achieve.) to identify suitable landing sites, and possible locations for **Mars Bases and Facilities**, planning and execution of a **Mars Orbital Space Station and Space Craft “Infrastructure”** to shuttle Personnel, Supplies, Materials, and Equipment from the **Mars Orbit “to/from” Mars Surface**; and various Surface and Subsurface activities and facilities on **Mars**.

Areas of Operations, Programs, and Missions Authority:

- Building a Knowledge & Expertise Base related to all things required for the Exploration, Utilization, and Human Settlement of Mars.
- Researching & Planning Most Effective & Best Possible Locations to Enable Landings, Launch, and Surface/Subsurface Activities.
- **Explore Possible Transportation Systems “from/to”:** **Mars to Earth / Mars to Luna / Mars to Solar System**
 - Conventional Chemical Propulsion/Power Technologies / Nuclear “Fission & Fusion” Propulsion/Power Technologies
 - Ion Thrusters Propulsion Technologies / Solar Cell Based Propulsion/Power Technologies
 - Hybrid, Non-Conventional, and Closed Loop Propulsion/Power Technologies
- **Explore Possible Transportation Infrastructure and Systems “from/to”:** **Mars Surface to Mars Orbit**
 - Conventional Chemical Propulsion/Power Technologies / Nuclear “Fission & Fusion” Propulsion/Power Technologies
 - Ion Thrusters Propulsion Technologies / Solar Cell Based Propulsion/Power Technologies
 - Hybrid, Non-Conventional, and Closed Loop Propulsion/Power Technologies
 - Electromagnetic Rail Launch & Recovery Systems, Mechanical Leverage Launch, Equatorial Space Elevator
- Soliciting & Selection of Suitable Government & Private End Users & Costumers for Robotic & Human Exploration & Activities
- Design of suitable spacecraft, aircraft, vehicles, and equipment for Robotic & Human Exploration & Activities
- **Design and Planning of Suitable Structures, Buildings, Facilities, and Utilities on the Surface & Subsurface**
 - Personnel Living Quarters / Tourist & Hotel Accommodations / Special Purpose Accommodations & Facilities
 - Suitable Structures & Facilities to support a wide range of working and living requirements on the Surface & Subsurface.
 - Environmental structures & buildings to grow food and keep animal livestock for consumption, store & process water & waste.
 - Structures & Facilities to House: Environmental & Atmosphere, Heating & Cooling, Water & Waste, Systems & Infrastructure.
 - Structures & Facilities to House: Commercial & Industrial, Scientific & Research, Academic & Training, Infrastructure.
 - Structures & Facilities to House: Power Systems, Navigations Systems, Communications Systems, and Computer Systems.
 - Structures & Facilities to House: Medical & Health Services, Search & Rescue Services, and Security & Judicial Services
- Initial explorers will require laboratories in which to experiment with life support systems to enable humans to live on **Mars**, and the Primary Focus of Materials & Personnel will be on Construction & Natural Resources Exploration & Utilization.

BENEFITS: The **International Mars Exploration (I.M.E.) Program / Office** will be the Core/Center of Specialized Knowledge, Expertise, Excellence, Standards, Personnel, Space Stations, Spacecraft, Vehicles, Equipment, Structures, Bases, Facilities, Programs, Projects, Missions, and Human Activities In Orbit, On The Surface, and Under The Surface, able to supply its Infrastructure, Resources, and Operations to National “Government & Civil” and Private Space Exploration Agencies, Organizations, Companies, Institutions, Foundations, Societies, and Private Individuals. Enabling them to Benefit Symbiotically, Collectively, and Co-Operatively on the Promotion, Planning, Building, Operation, and Maintenance of a Robust, Extensive, and Long Duration Transportation & Support Infrastructure of Scale & Scope “**Out Side The National Domain Or Capability**”, which is easily accessed, with all costs optimized, and enhanced and rapid technology development. The **(I.M.E.) Program** will work very closely with, and in tandem, with the **(L.L.E.) Program, (I.S.E.) Program, and (I.S.P.) Program** as all elements of these **KEY ISA Programs**, will collectively depend on each others existence to ensure overall broad **ISA** program operation, advances, and longevity.

FUNDING: Costs for all International Space Agency infrastructure & operations on **Mars**, will be obtained primarily through a pay for use strategy “**Toll or Fee**” by all end users, whether they be National Governments or Non-Governmental Entities, Organizations, or Persons; and, augmented by approved Multi-National & Joint Programs Participants, Government & Private Grants, and Private Philanthropy. A proposed initial amount of **(\$7 Billion)** U.S. Dollars is sought for **IME Program** start up funding, for perpetual operations of the **ISA IME Program**.

1986, 2013, 2019 Proposal – International Luna Exploration (I.L.E.) Program International Space Agency (I.S.A.) – International Space Administration

A. General Information

Project Title:	International Luna Exploration (I.L.E.) Program / Office (of the International Space Agency, ISA)
Brief Project Description:	The I.L.E. Program / Office will, Firstly, On Behalf Of ISA Member Nations & Organizations , will; Promote, Organize, Design, Build, Support, Operate, and Maintain all ISA Infrastructure , Stations, Bases, Facilities, Spacecraft, Aircraft, Vehicles, Machinery, Equipment, Assets, Personnel, Activities, Programs, Projects, and Missions on the Luna Surface & Subsurface , and in Luna Atmosphere & Orbit ; and, Secondly, As Approved, To The Peoples Of The World Community, Earth, ISA will; act as an Enabler, Bridge Head, Conduit, and Focal Point for all National Space Agency & Civil/Private: Industrial, Mining, Manufacturing, Commercial, Research & Development, Scientific, Academic, Tourism, and Settlement activities on Luna , in achieving their Non-Military and Peaceful Civilian Objectives and Endeavors, in regards to their own independent Luna activities and endeavors. In General, The ISA , will; “be/act as” the Key Core/Central Administration & Management, Quality Control & TQM Standards, Search & Rescue, Medical & Health Services, Research & Development, Navigations & Communications, and Critical Infrastructure & Assets Umbrella Organization on the Luna Surface & Subsurface , and in Luna Orbit . The ISA will provide the Core/Central Infrastructure, Personnel, and Operations on the Surface, Subsurface, Atmosphere, and In Orbit Around, Luna , and all End Users will provide independently, or approved to be contracted through ISA networks, all support services, materials, personnel, consumables, and equipment for independent activities outside the Direct Control or Charter/Treaty of ISA . It is highly advised, that no Earth Government be allowed to have Military or Sovereign control of Luna , like is Presently The Established Treaty Protocol In Antarctica .
Prepared By:	Admiral, Rick R. Dobson, Jr., Chairman & CEO, International Space Agency, “Redacted/Proprietary - ISA Personnel”
Date:	Cir. June 1986- Original Proposal / 20 October 2013 - Updated & Republished / 3 May 2019 – Updated & Republished

B. Project Objectives:

PURPOSE: The **International Luna Exploration (I.L.E.) Program / Office** will function as the Core/Central Specialized Knowledge & Expertise Base and Focal Point of Excellence & Standards for all of **Luna Infrastructure**, Operations, Projects, Missions, and Programs of **International Space Agency**. It will be the Key Initiator, Enabler, Conduit, Promoter, and Organizational Instrument for all endeavors specifically related to the exploration, utilization, and human settlement & activities of **Luna**. This will include (but is not limited to) coordination of the mapping of **Luna Surface** (initially planning robotic lunar rovers and Satellites to map **Luna**, Google Maps is a good example of what **ISA** should be looking to achieve.) to identify suitable landing sites, and possible locations for **Luna Bases and Facilities**, planning and execution of a **Luna Orbital Space Station and Space Craft “Infrastructure”** to shuttle Personnel, Supplies, Materials, and Equipment from the **Luna Orbit “to/from” Luna Surface**; and various Surface and Subsurface activities and facilities on **Luna**.

Areas of Operations, Programs, and Missions Authority:

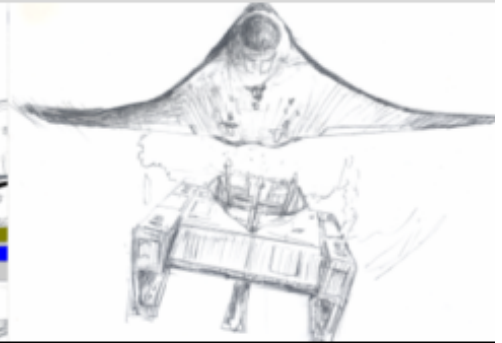
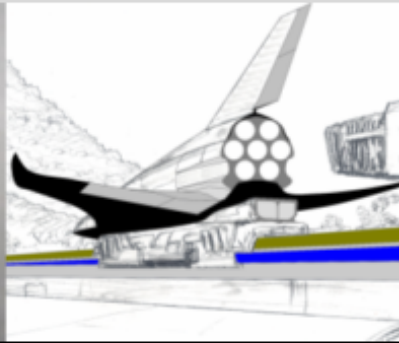
- Building a Knowledge & Expertise Base related to all things required for the Exploration, Utilization, and Human Presence on **Luna**.
- Researching & Planning Most Effective & Best Possible Locations to Enable Landings, Launch, and Surface/Subsurface Activities.
- **Explore Possible Transportation Systems “from/to”:** **Luna to Earth / Luna to Mars / Luna to Solar System**
 - Conventional Chemical Propulsion/Power Technologies / Nuclear “Fission & Fusion” Propulsion/Power Technologies
 - Ion Thrusters Propulsion Technologies / Solar Cell Based Propulsion/Power Technologies
 - Hybrid, Non-Conventional, and Closed Loop Propulsion/Power Technologies
- **Explore Possible Transportation Infrastructure and Systems “from/to”:** **Luna Surface to Luna Orbit**
 - Conventional Chemical Propulsion/Power Technologies / Nuclear “Fission & Fusion” Propulsion/Power Technologies
 - Ion Thrusters Propulsion Technologies / Solar Cell Based Propulsion/Power Technologies
 - Hybrid, Non-Conventional, and Closed Loop Propulsion/Power Technologies
 - Electromagnetic Rail Launch & Recovery Systems, Mechanical Leverage Launch, Equatorial Space Elevator
- Soliciting & Selection of Suitable Government & Private End Users & Costumers for Robotic & Human Exploration & Activities
- Design of suitable spacecraft, aircraft, vehicles, and equipment for Robotic & Human Exploration & Activities
- **Design and Planning of Suitable Structures, Buildings, Facilities, and Utilities on the Surface & Subsurface**
 - Personnel Living Quarters / Tourist & Hotel Accommodations / Special Purpose Accommodations & Facilities
 - Suitable Structures & Facilities to support a wide range of working and living requirements on the Surface & Subsurface.
 - Environmental structures & buildings to grow food and keep animal livestock for consumption, store & process water & waste.
 - Structures & Facilities to House: Environmental & Atmosphere, Heating & Cooling, Water & Waste, Systems & Infrastructure.
 - Structures & Facilities to House: Commercial & Industrial, Scientific & Research, Academic & Training, Infrastructure.
 - Structures & Facilities to House: Power Systems, Navigations Systems, Communications Systems, and Computer Systems.
 - Structures & Facilities to House: Medical & Health Services, Search & Rescue Services, and Security & Judicial Services
- Initial explorers will require laboratories in which to experiment with life support systems to enable humans to live on **Luna**, and the Primary Focus of Materials & Personnel will be on Construction & Natural Resources Exploration & Utilization.

BENEFITS: The **International Luna Exploration (I.L.E.) Program / Office** will be the Core/Center of Specialized Knowledge, Expertise, Excellence, Standards, Personnel, Space Stations, Spacecraft, Vehicles, Equipment, Structures, Bases, Facilities, Programs, Projects, Missions, and Human Activities In Orbit, On The Surface, and Under The Surface, able to supply its Infrastructure, Resources, and Operations to National “Government & Civil” and Private Space Exploration Agencies, Organizations, Companies, Institutions, Foundations, Societies, and Private Individuals. Enabling them to Benefit Symbiotically, Collectively, and Co-Operatively on the Promotion, Planning, Building, Operation, and Maintenance of a Robust, Extensive, and Long Duration Transportation & Support Infrastructure of Scale & Scope “**Out Side The National Domain Or Capability**”, which is easily accessed, with all costs optimized, and enhanced and rapid technology development. The **(I.L.E.) Program** will work very closely with, and in tandem, with the **(I.M.E.) Program, (I.S.E.) Program, and (I.S.P.) Program** as all elements of these **KEY ISA Programs**, will collectively depend on each others existence to ensure overall broad **ISA** program operation, advances, and longevity.

FUNDING: Costs for all International Space Agency infrastructure & operations on **Luna**, will be obtained primarily through a pay for use strategy “**Toll or Fee**” by all end users, whether they be National Governments or Non-Governmental Entities, Organizations, or Persons; and, augmented by approved Multi-National & Joint Programs Participants, Government & Private Grants, and Private Philanthropy. A proposed initial amount of **(\$3 Billion)** U.S. Dollars is sought for **ILE Program** start up funding, for perpetual operations of the **ISA ILE Program**.

1988 / 2005 / 2017 / 2019 Proposal - Operational & Programs Charter For The “International Space Plane (ISP) Program” -and- “Electromagnetic Assisted Space Launch (EASL) System”

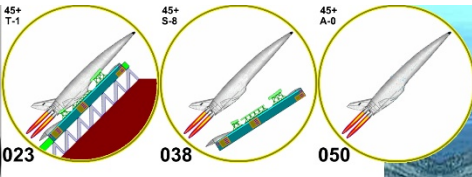
A. General Information



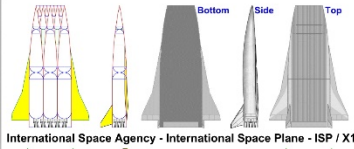
Project Title:	<i>International Space Plane (ISP) Program - & Electromagnetic Assisted Space Launch (EASL) System</i>
Brief Project Description:	The International Space Plane (ISP) Program, which was started in 1988 by the International Space Agency (ISA) at Cornell University in Ithaca, New York State, in the United States, and is based on the work of the Father of the Rocket Age and Designer of the Apollo Moon Rockets, Dr. Werner von Braun, and is presently looking for a Mountain Launch site on the Earths Equator, and most specifically in Brazil. The ISP Program has its conceptual roots in, Ref1: “Silver Bird” WW2 German Space Plane & Assisted Launch System.; Ref2: 1952 Movie “When Worlds Collide” in which the work of Werner vaun Braun and NASA where show cased. Of course these earlier designs used “Rocket Sleds” to achieve first stage assisted launch, but in the (ISP) Program more powerful and modern application of Electromagnetic Repulsor “Rail Gun” Technology is used to achieve first stage assisted launch. <i>54 page detailed thesis paper is included with this condensed proposal synopsis.</i>
Prepared By:	Dr. Alexander Bolonkin – Russia / United States Member, Board of Directors -&- Chief Science Officer (CSO) , International Space Agency, ISA Director , International Space Plane (ISP) Program, International Space Administration Admiral, Rick R. Dobson, Jr. - United States Chairman, Board of Directors , CEO, Founder , International Space Agency, ISA Assistant Director , International Space Plane (ISP) Program, International Space Administration Mr. Robert D. McGown, MSci - United States Member, Board of Directors , International Space Agency, ISA Director, International Mars Programs Office , International Space Administration Advisor , International Space Plane (ISP) Program, International Space Administration <i>2005 / 2017 - Advisor & Contributor - Dr. Kenneth House, Scientist & Meglev Systems Researcher, NASA, United States</i> <i>2002 / 2006 - Advisors & Contributors - Mr. Jerald Schneider, PE, SE - United States -and-</i> <i>Mr. Vadim Makarov, PE, SE - Russia / United States -and- Dr. David Maker, Scientist - United States</i>
Date:	ISP Concept Work Completed 11 June 1988, Re-Released 17 May 2005, Re-Released 1 May 2017

B. Project Objectives:

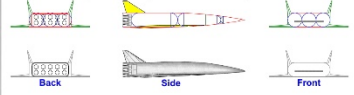
<p>PURPOSE: The International Space Plane (ISP) Program Is Based On 5 Basic Principles.</p> <ol style="list-style-type: none"> 1) “<i>Ballistic & Non-Aerodynamic Lifting Vehicles</i>” which are designed as Disposable (<i>Expendable</i>) Launch Vehicles are not efficient; waste large amounts of precious materials and human resources; and present a space debris hazard in Earths Orbit (<i>Orbiting Debris</i>) and on the Earths Surface (<i>Reentry Debris</i>). SpaceX and its so called reusable boosters are a money mill that leads to a dead end, and will never achieve RLW/SSTO. 2) Using <i>EXTERNAL</i> energy sources not carried on (<i>in</i>) a space launch vehicle increases the launch vehicles fuel efficiency and cargo carrying capability, (<i>Assisted Launch</i>), and applies “First Stage” Launch Velocities “Or Substantial Part Of” Single Stage To Orbital Insertion Velocities. 3) A totally reusable one-vehicle architecture is most cost, materials, and labor effective & operationally sound strategy to employ in a space launch vehicle. <i>Launch Return “LR”- Reusable Space Vehicle “RSV”- Single Stage To Orbit “SSTO” – Aerodynamic Lifting Body “ALB”</i> 4) Utilizing Earths atmosphere for aerodynamic lift and braking, and Oxygen (<i>O2</i>) for propulsion, will increase the space launch vehicles efficiency and capabilities. Strategically Launching from the Earths Equator will also add free launch to orbital velocity to any launch vehicle. 5) Creating a <i>NEW</i> launch philosophy, systems, technologies that will allow for wide range of mission requirements & capabilities with out numerous, repetitive, costly, wasteful redesign and reconfiguration. In effect, the system employed in an Aircraft Carrier for Launching Aircraft of varying Types, Weights, Capabilities; except the (ISP) Assisted Launch System would be scaled up and more sophisticated technologically. <p>CAPABILITY: Specific Areas of Mission & Operations & Management Authority:</p> <ul style="list-style-type: none"> • Airbus Industries Management and Manufacturing Model Applied to the ISP Program, with Pay Per Launch Funding Strategy • Launch Goal of 3 to 7 Launches Per Day Capability (1095 to 2555 Launches Per Year) Manned & Unmanned Operations • Totally 100% Reusable Launch Vehicle and Robust Ground Assisted Launch System, “<i>No Waste of Materials or Labor</i>”. <p>BENEFITS: Cheap, Routine, Robust, and Safe Access to Earth Orbit, in a Program of Sufficient Scope & Scale to Insure Longevity.</p> <p>FUNDING: A Single or Combined Grant or Donation in the sum of \$7 Million U.S. Dollars is sought, to fund a “Start Up” Perpetual Research, Development, and Operations Program, to obtain/secure key Scientific, Engineering, Flight Personnel, Facilities, Equipment, and Materials required to build, organize, and operate an International Space Plane (ISP) Program.</p>	
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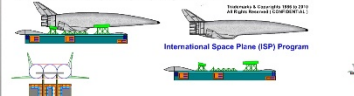
2G to 3G ~ Assisted Launch Acceleration
 at 45 Deg to 60 Deg at 4 to 7 Miles
 at 8000 to 10,000 Feet ~ Height Base to Top
 at 1,500 MPH ~ Release Top
 at 851.3 MPH ~ Start Run Base



International Space Agency - International Space Plane - ISP / X1



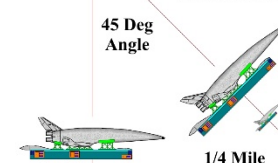
Reusable Launch Vehicle (RLV) - Single Stage To Orbit (SSTO)
 Assisted Launch System (ALS) - Pay Per Launch Operation (PPLO)



Commercial Airfield



Vehicle & Launch Sled Processing Complex



45 Deg Angle

1/4 Mile to 1/2 Mile Transition Arch



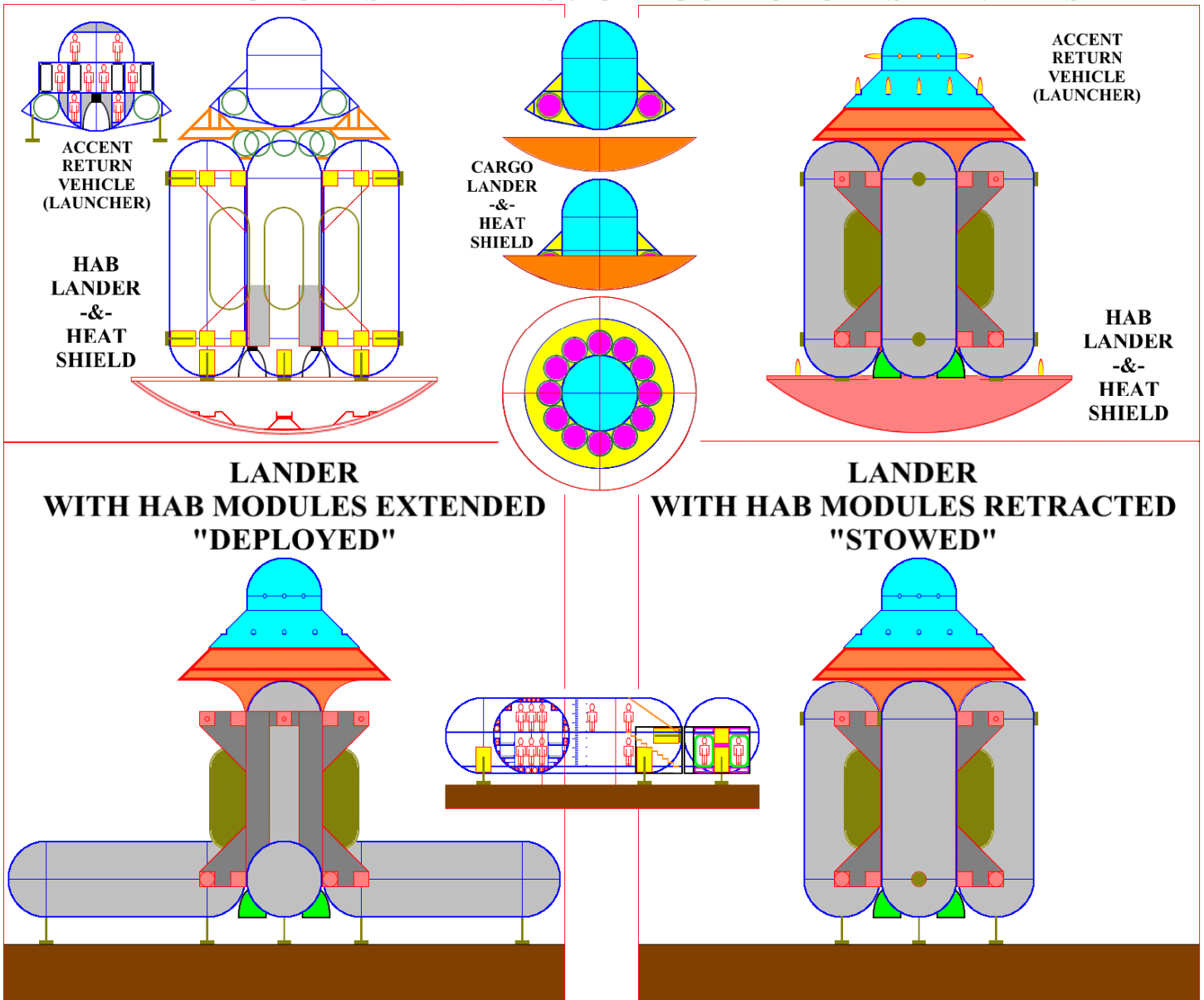
Crew Loading & Launch Station

PROPOSED MOUNTAIN LAUNCH SITE IN BRAZIL

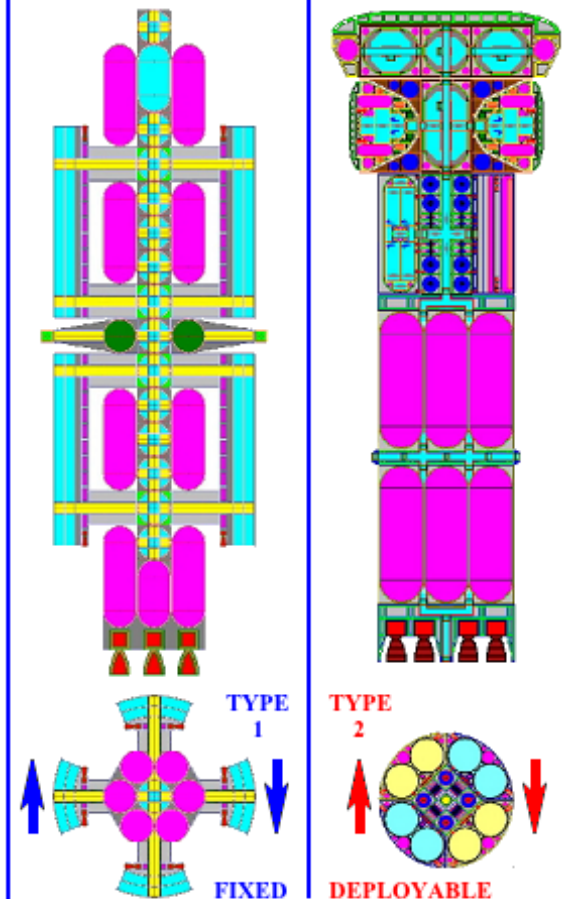
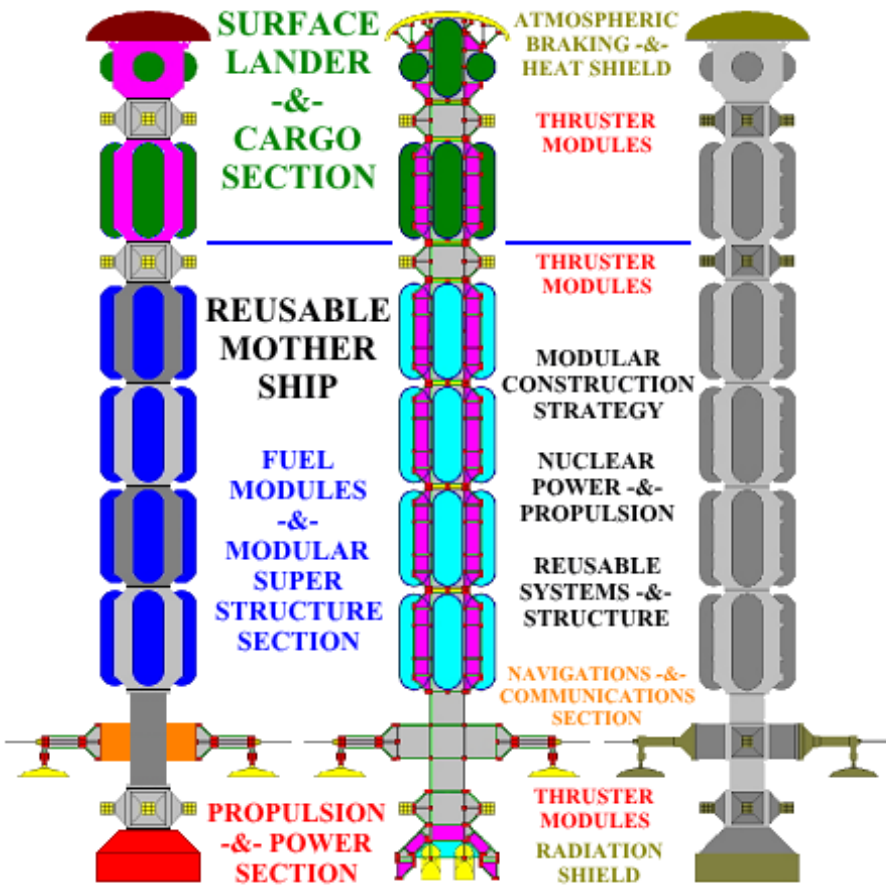
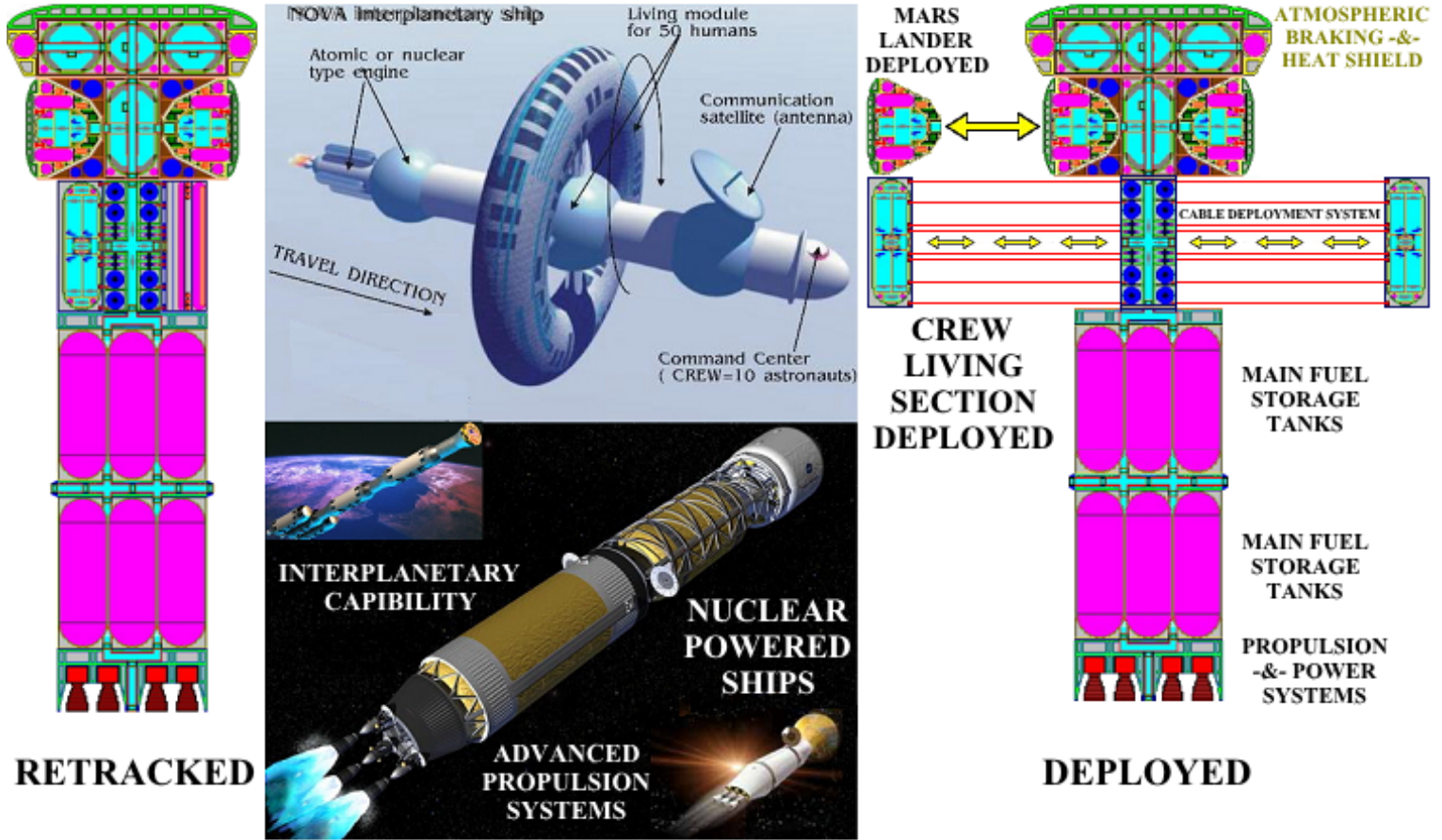
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INTERNATIONAL PLANET / MOON (ASTEROID) LAUNCHER / LANDER PROGRAM
SURFACE TO ORBIT - LAUNCHERS / ORBIT TO SURFACE LANDERS
HAB MODULES LANDERS / CARGO MODULES LANDERS



INTERNATIONAL SOLAR CRUISER PROGRAM NUCLEAR POWERED INTER-PLANETARY SHIPS



ZERO GRAVITY "CARGO"

SPUN GRAVITY



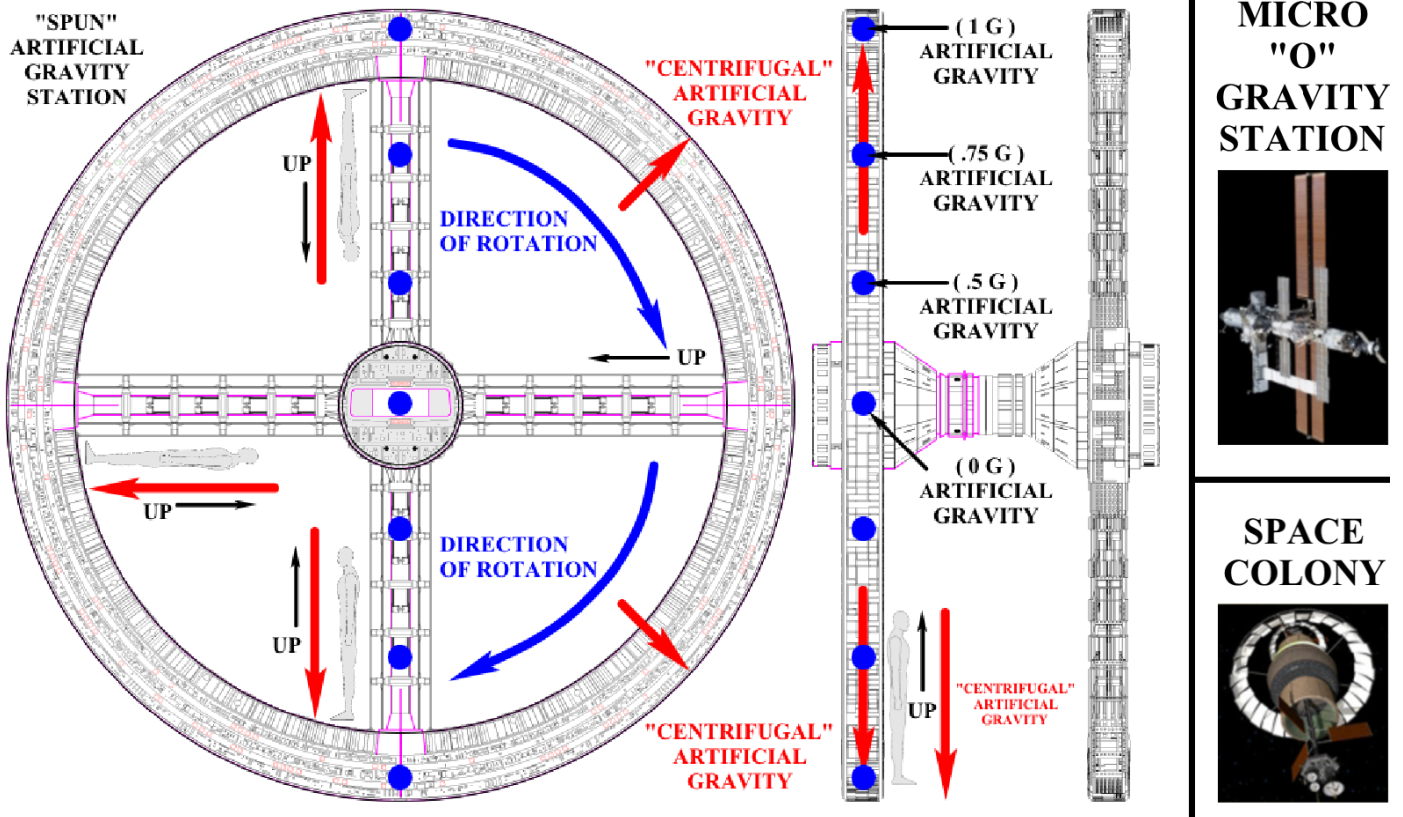
International Space Agency - I.S.A.

International Space Administration

PURPOSE: The International Space Station (I.S.S.) Program / Office will function as the Core/Central Knowledge and Expertise Base and Focal Point of Excellence and Standards for all Earth Orbital Manned: Facilities, Stations, Operations, Programs, Projects, and Missions of the International Space Agency, I.S.A.. It will be the Key Initiator, Enabler, Conduit, Promoter, and Organizational Instrument for all endeavors specifically related to Manned Facilities & Stations in Earths Orbit. This will include (but is not limited to) Planning, Establishing, and Operation of Artificial "Spun" Gravity and Micro-Gravity Orbital Space Facilities for Space Craft & Station Construction in Earths Orbit, Fuel & Materials Storage in Earths Orbit, Earth Remote Sensing & Communication Infrastructure in Earths Orbit, Stations and Space Craft "Support Infrastructure" to Shuttle Personnel, Supplies, Materials, and Equipment "to" & "from" Earth Orbit from the Earths Surface, and To Points Beyond Earths Orbit, such as Planets/Moons/Asteroids, and Interstellar Space.

INTERNATIONAL SPACE STATION (I.S.S.) PROGRAM

"SPUN" ARTIFICIAL GRAVITY STATIONS / MICRO "0" GRAVITY STATIONS / FUEL SUPPLY FACILITIES
 ORBITAL SHIP YARDS -AND- MANUFACTURING FACILITIES / LARGE SPACE STRUCTURES "COLONIES"



2013 Proposal - Operational & Programs Charter For The "International Super Computer Center & Program Office" (I.S.C.C.P.O)

A. General Information



Project Title:	International Super Computer Center & Program Office (I. S. C. C. P. O)
Brief Project Description:	The ISCCPO will support and maintain a secure central international space sciences, astronomy, and space technology data base, and advanced computer simulation capabilities for advanced International Space Agency, ISA, and international, space technology programs, projects, missions, and advanced international space research & development activities.
Prepared By:	Mr. William Kraemer - United States Director , International Super Computer Center & Program Office, International Space Agency, ISA Mr. Joshane Kelsy - India Assistant Director , International Super Computer Center & Program Office, International Space Agency, ISA Mr. Rick R. Dobson, Jr. - United States - Chairman, CEO, Founder , International Space Agency, ISA
Date:	4th of October, 2013

B. Project Objectives:

PURPOSE: The **International Super Computer Center & Program Office (ISCCPO)** will function as an important operational division, center, and program office of "**International Space Agency, ISA**" and will be a catalyst & enabler to facilitate & support all research & development, and space technology programs, and the central management of Computing Capabilities & Services and Supercomputer Facilities & Hardware that will be directly or indirectly supporting the vision and mission of the International Space Agency Organization; and its Operational Divisions, Departments, Centers, and Commands. **ISCCPO** will also be the command & control authority of the **International Super Computer Facility (ISCF)** and **International Super Computer Program Office (ISCP)**, and will include the collective personnel resources of **ISCCPO** Officers, Management, Technicians, and Personnel.

CAPABILITY: Specific Areas of Mission & Operations & Management Authority:

- Data Computing & Storage for Global Space Technology, Space Science's, Astronomy, and ISA Operations
- International Data & Computing Collaboration, Cooperation, and Joint Efforts, by/for ISA Member States & Organizations
- Cost Savings & Resource Preservation through Utilization of a Central International Data Base, Software, Hardware, and Facility
- Central & Secure Virtual Operating Environment, Database's & Archive's, and Management & Personnel
- Central International Database & Archive's, Simulation's & Calculation's Processing, Hardware & Facilities.
- Verbal & Digital Multi-Language Interface Capabilities "Voice Commands & Teletype/Keyboard & Digital"
- Language Translation Capability "Universal Translator System"
- Advanced State Of The Art - Data Storage Systems, User Friendly Program "Software" Architecture, Computer/Human Interfaces
- Advanced Scientific & Technology Simulations & Calculations Capabilities
- Advanced Display & 3D Projection Systems and Virtual Reality Capabilities
- Dedicated Point to Point Laser, Microwave, and Satellite Communications Network to International Space Agency Infrastructure.
- Hardened & Secure Deep Underground Facility for Housing All Primary ISCCPO Data, Software, Equipment, and Personnel
- Research & Development of Artificial Intelligence Systems and Durable Computer Systems Suitable for Space Environments

BENEFITS: The **ISCCPO** will ensure the smooth functioning of the **ISCF** Program & **ISCO** Operations, and will streamline & combine many selected & approved international, multi-national, and national space science & technology data bases & archives into one unified and easy to access and use international data base & archive. The **ISCCPO (ISCF & ISCO)** Project will create a "**First Of Its Kind**", permanent & secure International Super Computer Facility & Database and Archive's, with Dedicated Staff, to maintain International Space Agency and selected, approved, and authorized international space technology & scientific databases & archives, and to provide advanced simulation & computing ability for the International Space Agency Organization and international space technology & scientific research & development programs. Security, both physical & systems operations, will protect **ISCF** databases & archives, and allow the information to be segregated or shared as the International Space Agency, and **ISCF**, Member Nations, NGO's, and Data Originator's may so desire or authorize, or as jointly approved. The benefits to the advancement of scientific knowledge of space, and the opening & utilization of the space frontier by humanity, as a result of the success of the **ISCF** project will be tremendous, and will surely become an invaluable resource to Humanity of Earth.

FUNDING: A Single or Combined Grant or Donation in the sum of Seven Million U.S. Dollars (\$ 7,000,000) is sought, to fund a "Start Up" Perpetual Research, Development, and Operations Program, to obtain/secure key Scientific, Engineering, Computer Personnel, Facilities, Equipment, and Materials required to build, organize, and operate an **International Super Computer Facility & Program**.

2013 Proposal - Operational & Programs Charter For The *“International Space Academy (The Space Academy)”* *-and- “International Space Agency Training Programs”*

A. General Information



International Space Academy

Project Title:	International Space Academy “The Space Academy”
Brief Project Description:	The International Space Academy "The Space Academy" Is An Academic, Physical Fitness, and Leadership Training Institution, Which Has A Primary Function Of Providing Highly Trained And Capable Space Operations, Scientific, Technical Leaders And Personnel To The International Space Agency, And Its Member States And Organizations; And As A Secondary Function, To Operate As An Academic Training "University" Institution To The Global Space Community And Global Space Sectors. The International Space Academy "The Space Academy" Is A Division Of The International Space Agency Organization.
Prepared By:	Mr. Rick R. Dobson, Jr. - United States - Chairman, CEO, Founder, International Space Agency
Date:	4th of October, 2013

B. Project Objectives:

PURPOSE: To Educate, Train, and Prepare the Future International Leaders, Space Personnel, and Global Society, for the Exploration, Development and Colonization of our Solar System, and the Infinite Spaces of the Next Great Human Frontier, SPACE.

CAPABILITY: Specific Areas of Mission & Operations & Management Authority:

The International Space Academy will Provide to the Member Nations and Organizations of the International Space Agency, and its Agents, Contractors, and Approved Individuals; Entrance into the Following Academic and Training Programs :

- International Space Academy – Administration, Professors, and General Staff
- 2, 4, 6 year - Training Programs – International Space Academy "Commissioned Officers – Officer Cadets" Officer Training
- 2, 4, 6 year - Training Programs – International Space Academy "Non-Commissioned Officers - NCO Cadets" NCO Training
- 2, 4, 6 year - Training Programs – International Space Academy "Enlisted Personnel - Recruits" Enlisted Training
- 2, 4, 6 year - Training Programs – International Space Agency "Internal Personnel Training Programs"
- 2, 4, 6 year - University Courses & Classes: (Diplomatic) , (International Space Agency Private) , (The General Public)
- University & College & High School : (Summer Camps & Special Programs For Young Adults & Youth)
- To Support, Host, and Enable International Space Conferences, Meetings, and Events.
- Seek Support From: National Naval Academies Programs Globally "Submarine Communities In Particular", National Space Agency Astronaut/Cosmonaut Training Programs Globally, and Private Commercial Payload & Technology Programs Globally, which will be sought out for Assistance, Support, Collaboration, Cooperation, and Joint Training & Operations Endeavors
- To engage and network with Universities, Colleges, Academic Institutions, and Scientific & Research Organizations Globally.

BENEFITS: To Provide Highly Trained And Capable Space Operations, Scientific, Technical Leaders And Personnel To The International Space Agency, And Its Member States And Organizations; And As A Secondary Function, To Operate As An Academic Training "University" Institution To The Global Space Community, Global Space Sectors, and the General Public.

FUNDING: A Single or Combined Grant or Donation in the sum of Three Million U.S. Dollars (\$ 3,000,000) is sought, to fund a "Start Up" Perpetual Space Sector Academic Training Academy and Programs, and Administrative and Educational Operations, and to obtain/secure key Space Technology, Science, and Administration Educators; and Academic, Technical, Language, Physics, Mathematics, Scientific, Engineering, Computer, Physical Fitness, and numerous other specialties, disciplines, and fields Professors, Administrators, Personnel, as well as Facilities, Equipment, and Materials required to build, organize, and operate an **International Space Academy and Programs**. This funding will provide the initial Main Facilities & Property, and Staffing & Operations for 2 to 3 years start up, thereafter, Cadet & Student Fees, Conference & Meeting Fees, and Research Grants will fund ongoing operations.

~ Primary International Space Agency (ISA) – International Mars Exploration – Goals, Objectives, Priorities ~

2 Duplicate Mars Mission Sets are each made up of 8 Fully Reusable Space Craft utilizing Nuclear & Ion & Conventional – Main Propulsion & Thrusters & Power *All 8 ships will have identical main structures and primary systems (Modular Profiles & Construction) **Note:** This is done to streamline manufacturing, assembly, maintenance, and operations, and in the case of a mission accident or emergency the components and systems of all ships will be identical and interchangeable. The program goal is to establish 7 outposts equally spaced out around the Mars Equator, with each outpost having a geostationary satellite positioned directly overhead. The equally spaced outposts along the Mars Equator will allow the land rovers to transit between the equatorial outposts, giving access to a large percentage of the Mars Surface. The geostationary satellites also equally positioned around the equator of Mars, will establish a communications relay and satellite navigations system that will have near total real time access to the entire surface of Mars, and will bridge all the equatorial outposts together, as well linking Mars-Earth-Luna communications unobstructed by Mars planetary rotation. These geostationary satellites will also give ships coming from Earth-Luna precise navigations information as they approach Mars for orbital insertion, as well navigational information as they break Mars Orbit to return to Earth-Luna. Also, North and South Pole Outposts will be established, with precisely placed communications and navigations beacons that will be positioned exactly on the Mars Rotational Axis. A primary purpose of the polar outposts, will be to access frozen water resources to be transported to the equatorial outposts for use in the form of liquid water. A high priority program for the Mars Equatorial Outposts, will be to conduct surface core drilling all along the Mars Equator between the Equatorial Outposts, to identify the geologic make up and structure of the subsurface strata of Mars in order to identify minerals, ores, and resources that can be used for civil engineering and manufacturing, as well to identify any subsurface water resources that may exist and be utilized. Also subsurface bedrock and mountain & canyon geologic sites will be sought out and identified, in which tunneling/mining technology can be utilized to carve out sub-surface tunnels to be sealed and pressurized for use as living space, agricultural space, and industrial and manufacturing space. Identification and Utilization of Mars resources for construction, manufacturing, agriculture, and atmosphere/life support is a primary mission critical objective.

~ Continuous Pressurized Sub-Surface Mars Equatorial Tunnel System Is Key To Human Settlement Of Mars ~

As resources and capability grows to allow large scale civil engineering, the first critical project will be to dig a continuous sub-surface tunnel system that will completely circle the Mars Equator. This continuous sub surface tunnel system will contain a fully pressurized mass transit system and water/power/communications grid, to allow the efficient connection of the independent equatorial outposts into a continuous and interconnected infrastructure. Using the data from the Chunnel Tunnel Project that now links France and Britain under the British Channel, it is within the realm of doable to construct a continuous sub-surface tunnel around the Mars Equator in 10 to 15 years. Future Mars Settlements and Cities would piggy back on this continuous sub-surface tunnel around the Mars Equator. Once self-sustaining outposts have been established on Mars, and if a systematic geometric and grid planning philosophy and strategy is employed and utilized, large populations of settlers and knowledge, resources, tools, machinery, and technology can be shuttled to Mars for the establishment of large settlements and cities along the continuous sub-surface tunnel system around the equator of Mars. Acidic Ideologies & Politics MUST be avoided!

~ Human Nature & Global Realities Are The Main Threat To Human Space Exploration & Mars Settlement ~

If human nature, political correctness, and acidic ideologies are aloud to set the standards for settlers that will be selected to settle Mars, all hope for Mars Settlement will collapse, and this chance for humanity to have a new fresh start will be destroyed, likely along with Human Civilization on Earth. It's very important that those humans selected for this endeavor be of the highest physical, mental, and aspects of character, regardless of which nations or peoples of Earth they originate from. The mere fact of the extremely high level of scientific & technological needs and demands required of the settlers on Mars, and the extremely rugged and dangerous nature of the environment and reality that settlers on Mars will face. If the demented and sociopathic ideologies presently abounding everywhere on Earth are interjected into this new Human Frontier and the Human effort to settle Mars, it is absolutely assured that a massive disaster will transpire. The picking and training of International Space Agency (ISA) Personnel and the selection process of any potential Mars settlers MUST be done in the strictest secrecy outside the public domain for this reason, and conducted by the strictest TQM standards and protocols. It is sad that this very hopeful opportunity for humanity must be dealt with and addressed in this manner, BUT if it is NOT, it is absolutely guaranteed that every human malcontent and degenerate on Planet Earth will show up at International Space Agency (ISA) training and operations centers, throwing human feces and spewing ignorant rants at ISA Personnel and International Scientists working on Mars Exploration and Settlement efforts. If any person reading this, that has NOT the wisdom and integrity of mind to acknowledge this FACT of the dark side of Human Nature, they are not only in full denial, but will surely become the leaders of the human malcontents and degenerates who will storm the gates of the ISA while hurling human feces and spewing ignorant rants. Every major government on the face of the Earth, REGARDLESS of political/religious/cultural ideologies, has secret plans to deal with the masses if a major disastrous event man made or natural catastrophically collapses civilized society, because THEY KNOW the dark side of human nature. And these SECRET PROTOCOLS are NOT to deal with potential enemy nations or adversaries, but to deal with their OWN PEOPLE! As the Space Frontier Opens and Mars Settlement becomes reality, those member nations of the ISA must secretly and seriously address this very real and daunting issue. Also, in this same vein, the potential reality of a planetary disaster scenario, where a Noah's Ark last resort program to move human populations to Mars must also be secretly addressed. I am sure the Dinosaurs wished they had an International Space Agency and an escape plan, when that asteroid hit the Earth!? Such serious, scary, and very real topics as this, MUST be addressed secretly, for obvious reasons, but must indeed be addressed, none the less!

~ Humanity Is Now At A Critical Pivotal Point In which Its Very Existence Is Now At Stake ~

The Ancient Egyptian Pyramids were not Tombs, they were Archives, Libraries, and Maps of Heaven on Earth. They are also remnants and symbols of a Once Great Ancient Civilization. These marvels of human endeavor were likely built by slaves, tradesmen, engineers, and some of the greatest thinkers, doers, and builders of their time. They were built specifically to last the ages, and were indeed maps of the Stars in the Heavens on Earth, **literally**; as we now know today that the great pyramids were a physical map of the Sirius Star System on Earth. Human Organizations, like the Pyramids, if built on the Limestone Foundations of Vision, Truth, Wisdom, and Knowledge will indeed last the ages. What will those 4000 years in the future remember of the great Nations and Peoples of Earth in 2019 AD? Hmm! The Ancient Egyptians built the Heavens On Earth; the International Space Agency will take Earth to the Heavens. We are Not Alone in this Infinite Universe, as; ***“It Is On The Earth, As It Is In The Heavens!”*** ALL the Human Horrors and Wonders of Earth, are Not a Single Grain of Sand in ALL the Deserts and Oceans of Earth, compared to the infinite expanses of creation, the Universe! If We, Humanity, do not go to the Stars First!, indeed, the Stars may come First to US! When this day comes, and it will, ***if it has not already occurred?*** Humanity of Earth may NOT be the smartest or strongest! Any house, even one as large as Planet Earth, lives or dies by the age old wisdom, in which: ***“A House Divided Will FALL, and, A House United Will PREVAIL!”***. Indeed, this is the wisdom of the ages, which has been manifested and repeated again and again throughout human history on Earth, both for intentions of evil, and for good.

The Nation State is a modern extension and evolution of the City States, and the City States owe their existence and prominence to the Kingdoms and Tribes of the ancient ***“Peoples”*** of Earth. One day Earth will attain status as a Planetary State, but this will NOT be possible for many generations into Future Human History and affairs, due to the fundamental and engrained flaws in Human Nature. However, due to the fact that the Secrets of Knowledge, Science, and Technology have escaped the confines of the Priesthood of Pandora’s Box, and the Apple of Knowledge has now been consumed by Adam & Eve, we citizens of Earth are today faced with terrible weapons of mass destruction under the Whims, Desires, and Lusts of Human Nature and Raw Corruptible Power Unleashed. If the Kings and Tribal Leaders of Earth are not given a way to save face, and the means and foundations to peacefully coexist and survive, and to redirect this awesome Knowledge, Science, and Technology and Human Energy outward into peaceful and productive endeavors, with benefits for all the Inhabitants of Earth, the end result sadly, and predictively, will only lead to utter destruction, mayhem, and horrors of unimaginable magnitude. It is unlikely that humanity and civilization as we know it today in 2019, will survive this, and indeed it is unlikely that most living things on Earth would survive.

Many wisemen and teachers of Earths past and present cultures, societies, and empires have already since ancient times prophesized this very thing, **ALREADY**. We cannot change the past, no more than to cry over spilled milk. The present is a dilemma, because the old minds and past realities of Earth and its Human History, are locked into perpetual conflict over control and dominance dictated by Human Nature, and thus is incredibly hard to gain any real change or progress. However, the future is a blank slate on which the powers at be in the present, can contemplate and learn from the past, and then postulate and prepare for the new possibilities of the Future. Thus, it is only in the future where any real change can, or must, be planned and preparations made for; and it is the new minds of a new Heaven and Earth that will achieve this ends. WW1 and WW2 began to display the utter mayhem, destruction, and horrors of scientific and technologic based human warfare, in which in one single battle, more destruction and death occurred than ALL the ancient battles COMBINED up to that date. Humanity will not survive WW3.

Another key and major stumbling block of human nature, and affairs on Earth, is that some human beings have already evolved and advanced to sophisticated societies capable of producing extremely advanced machines like the American Space Shuttle, and Nuclear Weapons, while others only an arm distance away still cloth themselves in animal skins and forage and hunt daily to survive, and engage even today in tribal cannibalism, head hunting, and extremely dangerous tribal customs and behaviors unsuitable and acidic to any refined advanced and peaceful human society. A member of a highly advanced refined society is no more prepared or able to enter an undeveloped tribal hunter gather society, then would be a member of a hunter gather society be prepared or able to enter an advanced refined society. There are very real dangers in migrations in both directions, but the most dangerous destructive migration flow, is when hunter gather societies migrate into advanced refined societies, as when backwards and undeveloped tribal customs and nature obtains the infrastructure and advanced knowledge, science, and technology ***“Nuclear Tipped Spears”*** of advanced refined societies, it is akin to giving a small child a box of matches in a room full of gasoline. A small child is NOT mature or experienced enough to have a box of matches, let alone an ignorant, demented, or psychotic human adult. Human History is FULL of stories of Refined Advanced Societies coming into collision with Tribal Hunter Gather Societies, and as far as I am aware, most of these refined advanced societies did not survive it, and are gone today.

A Space Faring Society, offers a solution to this collision of Societies and Cultures, as it allows the refined and advanced societies a natural path to continue to advance in relative safety and seclusion from hostile and war like tribal human societies and cultures with limited transfer of knowledge and science which would have harmful repercussions for all concerned, while at the same time leaving the many tribal hunter and gather societies alone and undisturbed to mature and evolve naturally, with out interference. Those that can or want to evolve and advance, will, but mark my word, on the future day a crew on a Star Ship from Earth visits another Planet in another Star System, there will still be humans on Earth hacking each other to death with swords, and humans in tribal enclaves naked or clothed in animal skins hunting and gathering off the land and forests of Earth. There is now over 12,000 years of agreed on main stream human history and archeology, and 80,000 to 100,000 years of controversial and fragmented human history and archeology on Earth, and today many humans live and are bound by tribal customs and nature which have not evolved or advanced much in that long span of human history, and it is unlikely that the fundamental realities of human nature, culture, and potential will, or even can, change much in the next 12,000 years. When the refined advanced society is backed

into a corner by the hostile tribal society, and faces annihilation at the tip of a spear, the last action before the on set of death, will be a single press of a button, and in a flash of intense white light, all will be annihilated. There are those who are very controversial and not recognized by main stream academia, that say this scenario has already happened in the ancient and forgotten history and consciousness of Earth, in many repeating cycles, and some philosophers and religious persons are warning us it is about to happen again. Those who fail to learn from the failures and disasters of human history, are doomed to repeat it.

However, small bands of human societies and advanced refined culture, may resist human urges and nature of the primal tribal past and culture of Earth, to escape and expand into the Space Frontier to evolve and create a new Space Faring Society of peaceful, consciously, and spiritually refined beings, that will use advanced knowledge, science, and technology for peaceful, constructive, and collectively beneficial enterprises and human endeavors. This next stage of human development will not, and can not, happen on Earth, it will and can only happen as those rare and gifted humans who will represent the cream of the crop of men and women from the four corners of Earth, who will carry human awareness and consciousness beyond the confines of Planet Earth. As human society of Earth expands outward on the Space Frontier, we will very likely meet others like us, conscious beings, among the vast infinite Frontiers of Space. Some will be xenophobic and reclusive, others benign or peaceful, and yet others will not be peaceful and could likely pose a mortal danger to any being or creature unlucky enough to fall into their path or awareness. Even if they are friendly or benign, what if they are innocently and unwittingly carrying some virus or pathogen that Humans or Life on Earth have no natural resistance to, the implications of such an encounter would cause a pandemic of UnEarthly Proportions and would be horrific and catastrophic? As we venture into the Frontiers of Space, indeed, some of the most dangerous enemies we may yet encounter will be microscopic viruses and pathogens lurking underneath some rock or crevice somewhere, or some natural danger we are not yet even aware of, or know about, let alone even remotely understand. I doubt the Dinosaurs and 80% to 90% of all life and creatures on the Earth had even the remotest sense or understanding of what was about to happen to them, as the massive “*Asteroid/Comet*” headed for its fateful and eventual impact with the Earth off the eastern shore of Mexico. This impact was so powerful, that massive earthquakes and volcanic eruptions caused by the impact waves through the outer crust and tectonic plates of the Earth, where everywhere on the face of the Earth, ocean tidal waves hundreds of feet high circled the Earth faster than a supersonic jet, and the atmosphere of Earth was superheated causing forests and foliage around the Whole Planet to burst into infernos that covered hole continents. All of this happened with in only mere hours after the massive impact. That massive impact crater can still be seen today by Satellites in Earths Orbit. There have been several modern events in the last 300 years of similar events on smaller scales, but still on the scale that a modern city like New York City would have been totally destroyed had any of these recorded events happened over the city. The intimate danger we humans pose to ourselves, the extreme realities of natural events that could have planetary implications, and that the vast infinite creation of the Universe, holds vast yet unknown possibilities and dangers we are not even yet aware of, or even know about. Indeed, it is unrealistic to think that among the vast infinite frontiers of space that Humans of Earth are the only conscious living beings in the universe, and this reality could have some very serious implications as well. Humanity must explore and advance into space, if it is to survive the ages. We must be prepared for what is OUT THERE, lest we encounter it, or it COMES HERE!

The ISA is a PEACEFUL and PRODUCTIVE TOOL and BRIDGE between the OLD and NEW Worlds, and Minds, of Earth. One day in the Future, maybe in few Hundred Years if Humanity does not destroy itself, or is destroyed, Earth may be ready for a Planetary State and a World “Earth” Space Agency “*ie: Like The Science Fiction Star Trek Federation*”. However, the present realities of Human Nature and the Nation State does NOT present the fertile ground for any such reality to transpire or materialize, in Our Time, and in fact; those secret forces TODAY pushing for a NEW WORLD ORDER, if successful, will create the most Ruthless and Evil Human Institution to ever see the light of day on Earth; and will INDEED, because of their evil nature and lust for power, wealth, and control, will very likely destroy themselves, along with nearly every other living thing on Earth.

The true success of Earths Future, will fall on to the shoulders of the brightest and strongest young men and women from the four corners of Earth, who will come to the International Space Academy of the International Space Agency, and train and learn together in a peaceful unified core culture, and will then venture outward from their common home, Earth, to distant points to live, learn, grow, and die together as citizens of Earth. It is these new minds and spirits that will look out the port holes of their bases, stations, and ships and see in the distance one pale blue dot, Earth, from which they ALL owe their heritage and existence to. It is ONLY THEN, when this fertile ground of Human Awareness and Realization, is achieved, and when these voyagers of mind, body, and spirit who once came from the four corners of Earth, return HOME to THEIR EARTH; will the New Heaven and the New Earth become a reality in the Collective Consciousness of the Human Inhabitants of Earth.

I will never likely live to see this day, nor will you, but every long journey begins with a single step. Our true success and contributions in this existence, in this realm, in our time, is not what we can take with us past our brief lifespan, but what we leave behind for future generations. I have sacrificed much to see that this endeavor, enterprise, and gift to future generations of Earth is successful and manifested from vision into action, from action into existence, and from existence into a legacy that will last the ages. One day a crew from Earth will visit another Star System, they will owe that day, to what we do today. In fact, the very continued existence and survival of Humanity, and Human Civilization as we know it today, will most surely be the result of the actions and deeds of this very generation TODAY. As we near the year 2020 on the Roman Calendar, the very narrow window of opportunity for Humanity to be able to become a full and established Space Faring Civilization, is indeed, the very event that will either doom Humanity to turn in on itself in an Armageddon of self-inflicted destruction over a Finite Earth, or propel Humanity into a Peaceful and Hopeful future into the Infinite Domains of the Space Frontier now within our grasp. **Chose well.....!!!!**