MODEL UNITED NATIONS

DMUN XII

May 4th, 2025

Futuristic Space Council

BACKGROUND GUIDE

Chair: Rohan Shah
Moderator: Daniel Silverman

Space Piracy

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Letter from the Chair

Dear Delegates,

Welcome to the Futuristic General Assembly Committee!! This committee is unlike any other committee you have ever done because it is set in the year 4000 CE and because it will be one of the most entertaining committees of your lives. Yes, as you can tell, I'm quite a humble person. But let me introduce myself...

I'm Rohan Shah, the Secretary General of Dalton's MUN team, and your chair for this Futuristic Committee. I am beyond excited to see your collaboration, solutions, and approach to this unique topic. I have competed in numerous Futuristic committees over the course of my high school years at Harvard, Cornell, and competing in a similar committee at my freshman year DMUN. With this being my final high school MUN experience (although I'm sure to visit for many years to come), I could not think of a better way to end my career. While MUN has definitely defined my high school experience, I also enjoy pole vaulting and running hurdles for track, writing for the school paper, and biking around the city.

My moderator, Daniel Quinn Silverman (shortened and better known as DQ), is a sophomore at Dalton. He is an avid skier and loves shredding the slopes across the country. DQ has worked his way through every major mountain in America and has plans to move internationally in the future. When he's not skiing, DQ loves playing mafia with his friends, although he somehow gets caught every time. DQ is a big MUN fan and his favorite conference was Harvard 2024 where he definitely earned his name on our team. DQ is very excited to meet you all and assist in this committee.

I will offer you all some pieces of advice as you prepare for this conference. This committee is very unique given its futuristic nature. There are many aspects of the conflict, and we expect delegates to handle all of them while dealing with new changes as they arise. I look for delegates who can bring the most creative ideas and solutions to the table. In the year 4000, the technology on these planets is quite advanced and I want to see you push these boundaries in your resolutions. But most of all, I want to see intergalactic peace so do not sacrifice the safety of your fellow planets. If you have any questions about this committee, our expectations, or anything else, please feel free to reach out to c25rs1@dalton.org. We are looking forward to meeting you all!

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Introduction to the Topic

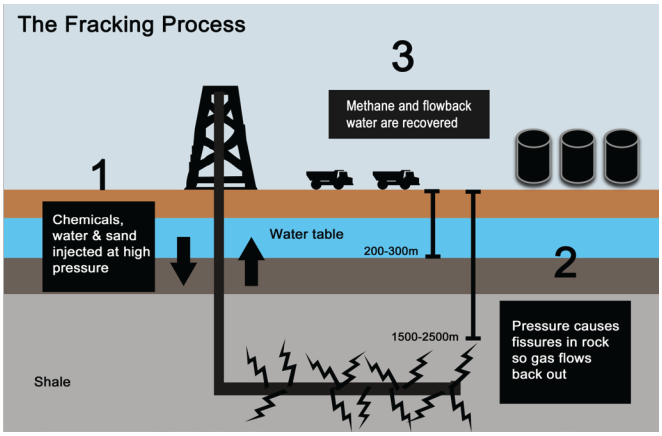
In the year 4000, the galaxy is divided into 4 sectors, or quadrants; the Alpha, Beta, Gamma, and Delta quadrants. Each quadrant is distinguished according to its relative place in the universe and has two planets recognized by the United Intergalactic Nations (UIN), which you will be a part of today. These planets are Makémaké, Eris, Zorp, Zabeth, Earth, Mars, Star Death, and Deltaria. Each planet and sector has its own diverse economy, cultural practices, and political system but all planets have one thing in common; in some sense, they rely on a substance called infinity matter to subsist.

Milky Way quadrants
Source: https://startreklives.wordpress.com/2008/09/20/milky-way-alpha-beta-delta-gamma-quadrants-2/

Infinity matter is an oil-like substance that only exists at a planet's core, one ton of which is capable of powering an entire metropolitan city, like New York, for a century. For reference, using the amount of energy needed to power one person's household appliances for one year would require 2 tons of coal. Infinity matter has allowed for humans to travel to the farthest reaches of the known galaxy and to create the necessary conditions for colonization of other planets through terraforming. Though, infinity matter is not a flawless substance. In the last century, planets have had to come to terms with the reality that infinity matter is not renewable, and shortages threaten to end human life on planets other than Earth.

While planets with access to infinity matter have been abiding the intergalactic standards of storage, groups from the Delta quadrant have been attempting to steal infinity matter from the other 3 quadrants, and successfully stole a sizable chunk of the infinity matter of the Zorp planet last year. The Alpha, Beta, and Gamma quadrants all have varying levels of access to infinity matter which powers a range of technology. The most prominent of which allows humans to survive on non-earth planets, but infinity matter powers almost all technology on every planet, including industrial technology, transportation, and everything from the lighting in a person's home, to their heating.

While infinity matter is incredibly powerful, it does have a few major issues which stem from its instability, rarity, extraction practices, and non-renewable nature. First, infinity matter only exists at the core of a planet and can only be acquired through intensive fracking practices which both displace people in the region and have negative environmental effects—the most pressing of which is water pollution. While all planets have the resources for an adequate freshwater supply in theory, the rising water pollution levels as a result of fracking have begun to cause public health and agricultural concerns on every planet that is actively fracking for infinity matter (which currently is all of them!). Infinity matter is also an incredibly unstable material, just 1 gram of infinity matter can cause an explosion as powerful as the atomic bomb used in Hiroshima if not stored properly. Storage of infinity matter is incredibly expensive and dangerous even under proper conditions. In order to properly store infinity matter it needs to be held in a Minimum Magnetic Field Trap which works by creating magnetic pull and trapping singular atoms so they do not have enough kinetic energy to escape the minimum, and this process requires great precision to work properly. As a result, this material needs to be held in a place deemed "non-inhabit-

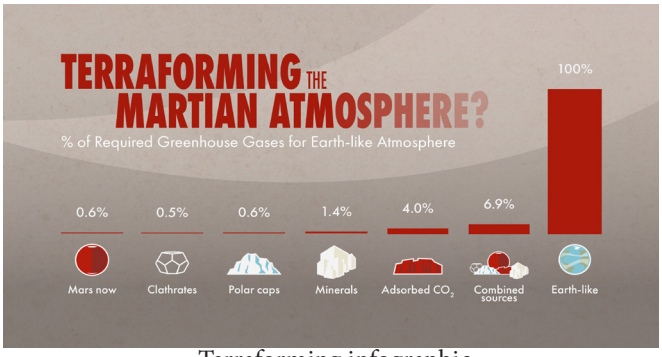


Fracking diagram
Source: https://www.shakesandquakes.ca/new-blog/2019/6/28/what-is-fracking

ed planet territory" by UIN standards. Yet, the UIN has not currently outlined any punishments or sanctions for "improper" storage of infinity matter, leaving room for planets to ignore intergalactic guidelines. Again, although infinity matter has a massive amount of energy, it can only be burned once to access its energy. This means that, no matter the current amount of infinity matter a planet has, there is a future in which there is no infinity matter. That is, a future without the main source of energy that powers society, most importantly the terraforming that supports human life on every planet but earth. With the increased population, it is simply impossible for Earth to house all of the people that would eventually become refugees from the loss of terraforming, creating the largest refugee crisis in the history of humanity. Earth is also unwilling to take refugees from every planet but Mars, citing the Separation Wars as an official denouncement of ever returning to Earth.

History of the Topic

In the year 2521, humans, who were then limited to living within the confines of Earth, discovered an immensely powerful but unstable material called infinity matter at Earth's core. This material, as discussed, is capable of powering one city for hundreds of years, but most importantly, it is the most effective way to power an artificial atmosphere—which is required to terraform other planets. This process includes altering the temperature, atmospheric pressure, ecology, and multiple other factors of a planet to make them more suitable for human life. After 50 years of



Terraforming infographic
Source: https://mars.nasa.gov/resources/21974/terraforming-the-martian-atmosphere/

infinity matter, Earth had gathered enough infinity matter to use it to power their cities and technology; in just a few years, infinity matter made up over ¾ of Earth's annual energy consumption. Eventually Earth had acquired enough infinity matter to use it to power experiments that were previously thought impossible due to the energetic limits of the materials that were known to humanity, including colonization of other planets and interstellar travel. In 2746, this technology was perfected and the first human colony, of just over 2000 people, was sent to mars. This colony found success shortly after their landing, at the time being used by Earth as a production colony of sorts. Seeing the success of this mission, humans were sent to various other planets to colonize them, utilizing infinity matter both to travel and terraform planets upon arrival.

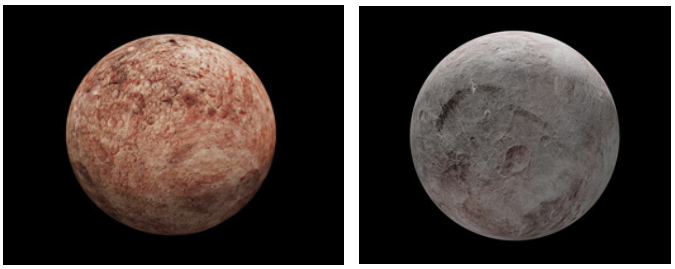
By the year 3000 the planets were fully colonized with booming cities and economies of their own, all of which existed under the governance of Earth and part of the UN. These planets had a similar political status to any other country on earth, except for one key difference; in order to continue to receive infinity matter, and other necessary supplies from earth, each planet needed to pay earth 10% of their GDP per year. Soon, ten-

sions began to emerge as the other seven planets became self-sufficient in every aspect except for the need for infinity matter. Political factions in favor of economic independence from earth began to form on each planet.

Then, in 3239, the Makemake planet discovered that infinity matter was not a material that was unique to earth; they had found the presence of infinity matter at the core of their planet. The Makemakians promptly claimed independence from Earth, declaring themselves a completely separate political entity. Other planets followed suit, realizing that they, too, had infinity matter of their own and proclaiming independence from Earth. Subsequently, Earth declared war on the other planets in 3231, in an attempt to reclaim ownership of the planets and the revenue they provided, known now as the "Great Separation Wars"

In 3235, the 7 planets won the war and formed the United Intergalactic Nations to govern intergalactic policy. The UIN consisted of one representative from each planet, adding one from Earth in 3300. Up until 3905 the quadrants existed in peace, free from any major disputes, and free to use infinity matter as they pleased. That is, until Star Death realized they were running out of infinity matter.

In 3906 Star Death, who had recently found that infinity matter at the core of their planet was running out, declared war on the Deltarians in an attempt to steal infinity matter from their closest neighbor. Before the war's end in 3909 the Star Death people and their leader Delta Vader had managed to steal almost 75% of the Deltarians already weaning infinity matter supply. In a drastic turn of events, Star Death failed to store this infinity matter properly, which resulted in a massive explosion. Luckily, this occurred in a storage unit that was in accordance with the UIN's standards and fell in uninhabited planet territory, but 34 people that were managing the storage facility perished and the infinity matter was rendered useless. Star Death and Deltaria were then faced with a pressing issue, both having minimal amounts of infinity matter. If nothing was done, Star Death could only continue to be habitable for 102 years, while Deltaria only had 189. In 3912, both planets called for a meeting of the UIN to request more infinity matter and plead their cases, but were rejected by every other planet. The alpha quadrant planets, Makemake and Eris, who are the most rich in infinity matter, claimed by their own estimates they each had 3460 and 3208 years left of sustainable conditions on their planet with the amount of



Dwarf planets Makemake (left) and Eris (right) Source: https://solarsystem.nasa.gov/resources/2374/make-make-3d-model/ & https://solarsystem.nasa.gov/resources/2390/eris-3d-model/

infinity matter they had left, respectively.

Shortly after this, the Star Death people and Deltarians began to place troops in joint space stations in each sector. The other 3 quadrants were concerned about the Delta quadrant's occupation of these space stations, but nothing could be done as they were far enough away from any planet to be considered within inhabited planet territory and a security risk under the UIN's standards. Then, a year ago today, in 3999, the Star Death people and the Deltarians attacked the main Zorp storage station for infinity matter, and successfully stole around 10% of their material. This was seen as an act of war and the remaining UIN planets declared war on both the Deltarian and Star Death People.

At the same time, planets in all sectors were beginning to experience water pollution as a result of the fracking needed to acquire infinity matter. If water security measures are not made better soon or the fracking for infinity matter is not halted, planets may also run out of this vital resource.

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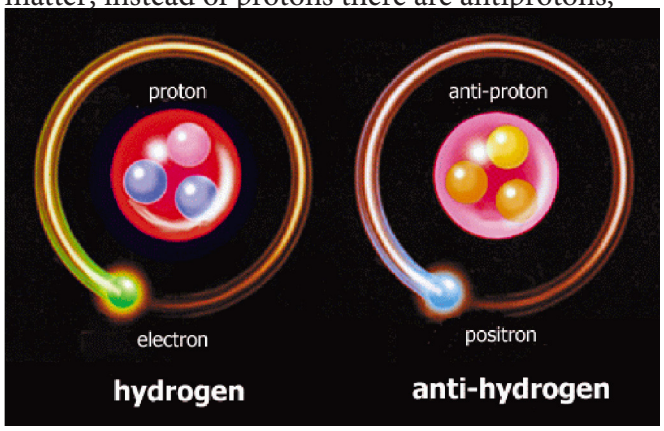
On planets with a water pollution crisis, typhoid, cholera, dysentery and jaundice are prominent. Chemical contaminants such as lead are also extremely dangerous and render water undrinkable in certain areas. On top of this, the planets' agricultural sectors are struggling as there is increasingly less water to use for crops. As a result, planets with large fracking procedures are experiencing more than just a water crisis, which negatively impacts their public health, wealth inequalities, and economies.

Despite all of these issues, there is hope for a galaxy without infinity matter. Development and research for infinity matter alternatives has already begun, and there are 2 emerging technologies in this field- Antimatter and Chronton.

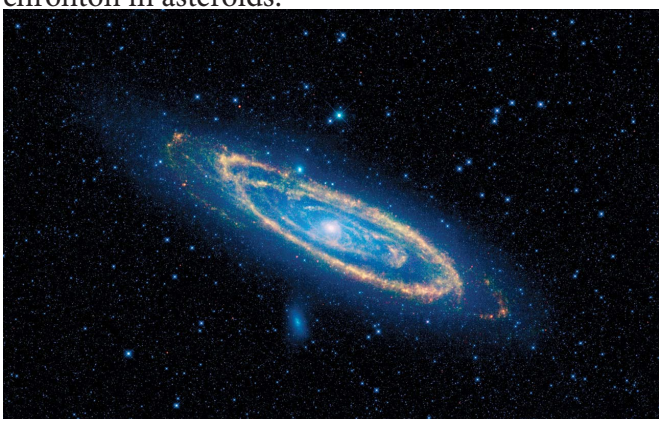
Antimatter is a substance like normal matter—it is still made up of atoms, but these atoms consist of particles with opposite charges to normal matter; instead of protons there are antiprotons,



Antimatter

instead of electrons, positrons, and instead of neutrons, antineutrons. Despite the unusual make-up of anti matter, the reason why it has so much potential for replacing infinity matter is because of the energy released when it touches normal matter. When it collides with normal matter, 100% of its mass is converted to energy, making it highly efficient for fuel usage. However, like infinity matter, antimatter still has a multitude of issues, both stemming from its production and storage. Source: https://www.zmescience.com/science/physics/coldest-anti-matter-312321/ Anti matter is an incredibly expensive substance to produce, costing $62.5 trillion USD for just 1 gram of antihydrogen. Storage wise, antimatter also requires a Minimum Magnetic Field Trap to be stored safely, which is, again, incredibly expensive and requires extreme precision to make. Even if antimatter begins to be produced consistently, there are no current guidelines for its storage and if stored improperly, just one gram of antimatter colliding with one gram of matter could destroy an entire city.

Chronton is a material similar to infinity matter in that it is non-renewable and requires mining to access. Unlike infinity matter though, chronton is almost exclusively found in the Andromeda Galaxy, far beyond the current reaches of humanity. Chronton is extremely radioactive and holds energy amounts similar to infinity matter, but it has only historically been accessed by mining asteroids which contain the material. The issue with this is that there is no current way to tell whether or not an asteroid contains chronton, meaning that planets, more often than not, waste money and resources trying to access chronton when there is none there. In order to begin consistently accessing chronton, planets would need to either find a way to improve travel to be able to reach the Andromeda galaxy, or create technology capable of detecting the radioactive signature of chronton in asteroids.



Andromeda galaxy
Source: https://www.britannica.com/place/Andromeda-Galaxy

Current Status

While infinity matter has always been a nonrenewable resource and has always had the negative environmental effects it does currently, the influences of infinity matter usage are catching up to the UIN planets. If action is not taken soon, millions of people could be displaced from the planets they call home and become intergalactic refugees, or worse. Even on planets who have enough infinity matter to last them thousands of years into the future, the infinity matter will eventually run out—prompting planets to consider other materials for powering their planets and more conservative infinity matter usage plans. To effectively address this issue, planets must do one, or preferably more of the following things: find a new energy source capable of powering terraforming and other sectors for the foreseeable future, find a planet with earth like conditions to house their population when infinity matter eventually runs out (and devise a plan to transport people there), or find another source of infinity matter.

The water crisis is also exacerbated on planets with more infinity matter access, as the fracking that it takes to extract the material is the cause of water pollution. As discussed, this pollution is detrimental to both the public health and economy of a planet; threatening to spread disease, chemical poisoning, and destroy agricultural sectors.

On top of all of this, the Delta sector has no plans to stop attempting to steal infinity matter from other worlds and the Gamma, Alpha, and Beta sectors have all recently declared war on the Delta sector. Planets must consider how to resolve this conflict, whether it be through brokering infinity matter deals under the UIN, creating harsher punishments for the Delta sectors actions, or any other means to stop the Delta sector from stealing infinity matter. The Delta sector, themselves, either needs to find more ways to access infinity matter or find alternative ways to power their planet. If nothing is done to resolve the conflict soon, the intergalactic community will crumble.

Finally, the UIN has discovered the prescience of a plethora of multi-species planets in previously uncharted territories of each region. These planets, using infinity matter for various purposes, have been invited to this committee gathering. The UIN is aiming to broker a deal with these worlds, as well, given the fact that many of them do not need to maintain a human-catered atmosphere and ecosystem. Each representative from these planets have been taught English in advance of the meeting, and it has become clear they, too, would like to keep their infinity matter (and perhaps obtain more…). Representatives from these planets will each have their own sets of policies, and it is up to them and the committee to determine how they will fit into the UIN.

Planet Positions

Alpha Quadrant

The Alpha quadrant consists of two planets, Makemake and Eris, and is the most rich in infinity matter of all of the quadrants. Despite this, the water resources on both planets are severely polluted due to fracking. As a result, water borne illness is spreading among lower class people, while those in power can afford water purification technologies. The agricultural sector, which is the main source of income in the Alpha sector, is also suffering.

Makemake

Makemake is a right leaning dictatorship, with leader Inspector Spacetime. Inspector Spacetime is the secretary-general of the UIN. The Makemake social system consists of an economic based hierarchy, which Inspector Spacetime enforces through a commercialized water system. Irregardless of his divisive policies on his own planet, Inspector Spacetime is a large proponent of intergalactic unity, by whatever means necessary.

Inspector Spacetime delivered a speech to the UIN following the Delta Sector's attacks on Zorp, stating that "the UIN must re-unite the sectors whether that means through diplomatic means or full scale military intervention. Right now, it looks like the latter will be more effective."

Makemake has the second largest fracking practice in the galaxy, given they have the most infinity matter. The effects of this in conjunction with the planet's commercialized water system has resulted in widespread water pollution in which people of lower class are forced to either find ways to filter their water themselves or purchase water from the state, which is being sold for increasingly higher prices. As a result, farmers on Makemake cannot afford the water they need to support produce and the planet's agricultural sector is failing. Chemical poisoning is one of the leading causes of death and Makemake is beginning to face resistance from the Beta and Gamma Sectors who claim that Makemake is violating human rights.

Eris

The Eris planet is an autocracy. Significantly less conservative than it's Delta quadrant counterpart Makemake, Eris is led by a center right leader Clemmens and is home to the largest fracking practice in the galaxy. Eris' economy mainly relies on the revenue from fracking infinity matter with just over a quarter of the jobs on Eris coming from fracking. The other piece of Eris' economy is mainly agricultural based and provides over half of the food consumed in the galaxy. With the water pollution issues due to fracking, much of the galaxy's agricultural supply is at risk and the economy of Eris is on thin ice.

Clemmens recognized this issue and asked the UIN to provide them with water purification technology to prevent an immediate crisis. The UIN provided this technology, but even with the purification resources, only a small part of their agricultural sector is able to be supported by this technology. He will be tasked with continuing to look for solutions to Eris' water crisis whether that be through improving water purification techniques or limiting fracking.

Beta Quadrant

The Beta quadrant is rich enough in infinity matter to not need to worry about the risks of extinction in the immediate future, yet most of their infinity matter is still at the planet's core, not in storage. They are also experiencing water pollution but not to the same extent as the alpha quadrant. This quadrant's economy is mainly industrial and exports 68% of the transportation vehicles and materials that UIN planets purchase. With increasing demand for their products, both planets are tasked to keep up production while also considering the waning infinity matter supply.

Zorp

Zorp is a center-left democracy with leader Zorpglorb. The Zorps are the largest developers of the motors used to power the rockets used for intergalactic travel in the galaxy. The Zorp economy is almost entirely reliant on this industry as of now, but Zorpglorb has recently attempted to diversify the economy through expanding into other economic sectors. Zorpglorb also recognizes the negative effects of fracking and has been attempting to build up water security infrastructure- in a public speech in 3998 he said " I recognize the risks of fracking, but the Zorp economy cannot withstand a decrease in infinity matter mining."

Zorpglorb will be tasked with finding a way to replace the economic revenue infinity matter provides and solving the water crisis as a result of fracking.

Zabeth

Zabeth is a strongly liberal democracy with leftist president Zabeth. The Zabethees are the main distributors of rockets in the galaxy and 1 in 3 people on the planet are employed by Zorp Rocket Inc. While president Zabeth firmly believes in the need to find infinity matter alternatives, Zorp

Rocket Inc. exclusively builds cars that run on infinity matter. The company has attempted to limit fracking procedures from interfering with water supplies given that Zabeth laws require fracking to take place a certain distance away from water, but there has still been pollution.

President Zabeth will need to continue her mission of searching for infinity matter alternatives, while simultaneously working to impose laws that restrict companies from over- fracking.

Gamma Quadrant

Given that the gamma quadrant was the first place for infinity matter to appear, their resources are significantly lower than the Beta and Alpha quadrants. Earth does not need to worry about the effects of losing infinity matter on terraforming given that the conditions are suitable for life without it and has enough room for martians to come in the event of an emergency, but they are both experiencing a water crisis similar to the Alpha quadrant. Earth and Mars also do not make their own space travel material, they acquire it from the Beta quadrant in exchange for infinity matter. With waning supplies, the gamma quadrant is threatened to not be able to travel beyond the confines of their solar system, leaving them susceptible to attacks from other quadrants and unable to participate in intergalactic politics or the economy.

Earth

Earth is a democracy led by President Jonah Ryan. While the people of Earth do not need to worry about terraforming ending, they are directly affected by the infinity matter shortages in the beta sector. Earth does not currently have the facilities to develop their own transportation production given that they are low on infinity matter themselves, meaning that there is a real possibility of Earthlings being unable to travel to other planets. Again, this would mean that Earth would be almost entirely separated from intergalactic politics and the economy, but also Earth would be unable to keep an eye on the other sectors.

On top of Earth's incredibly tumultuous history with the other planets, President Ryan, known for his Earth-centric policies, is a fairly controversial figure among other planetary leaders. This means that both surveilling other UIN members and regularly attending UIN meetings is key to preventing Earth from entering into any potentially detrimental conflicts. Without the transportation necessary to do these things, Earth faces a future in which they are cut out of the intergalactic community, or worse, subject to unforeseen attacks by other planets.

Mars

Mars is a centrist democracy led by Captain Martian. Captain Martian is known as the peacekeeper of the UIN, often settling disputes between other planets through offering monetary aid. Mars, despite their relatively low infinity matter supply now, has a large sum of money from selling infinity matter to other planets that they acquired from Earth in the 2000s. Similar to Earth, Mars also does not have the infinity matter reserves to supply their own transportation technology long term. Without Captain Martian's presence as a mediator in the UIN, the other planets may quickly devolve into conflict.

While Earth has offered to take in Martians in the event infinity matter runs out entirely, President Ryan has established that Martians coming to Earth would entail Captain Martian relinquishing his leadership. This would also remove Captain Martian from the UIN entirely, but on top of this, the Martians would have no political representation beyond President Ryan. Captain Martian would need to either find a way to prolong terraforming or begin talks with Earth if he wants to maintain his status in the UIN and allow the Martians to have their voices heard.

Delta Quadrant

Both planets in this quadrant have very little infinity matter but as a result are free from the water crisis present in many of the other sectors.

Star Death and Deltaria both are in urgent need of infinity matter; more than the recent attacks gave them access to and they are not being offered refuge on other planets. They must either continue to steal infinity matter, broker trade deals, or find a new way to power their terraforming systems.

Star Death

Delta Vedar is the supreme leader of Star Death and general of the Star Death army. His main goal is to acquire as much infinity matter as possible, often risking intergalactic backlash as a result. The Star Death Planet is naturally a very hostile environment and cannot support life without the aid of terraforming and without infinity matter, the Star Death people will be forced to evacuate their home planet. Beyond this, Delta Vader has no desire to stop stealing infinity matter once he gains enough to power Star Death for the foreseeable future, or to search for alternative energy sources. Rather, Vader wants to gather as much infinity matter as possible and require other planets to agree to join an empire under his rule if they want infinity matter.

Star Death and Deltaria are allies of circumstance. In light of infinity matter shortages both planets have decided to put their past behind them and join forces to steal infinity matter supplies from the other planets. Yet, tensions may arise as Deltaria wants infinity matter so that life on their planet may continue and if another material is discovered the alliship of the two planets could deteriorate.

Deltaria

Deltaria is an autocracy under the power of Deltarion. The Delterian people are facing the same issues as every other planet facing infinity matter shortages but to a greater extent given their crisis is the second worst in the galaxy. Unlike Star Death, the Deltarians are only stealing infinity matter because they need to acquire it to survive. Beyond stealing infinity matter, Deltarion has also established a research program on his planet to try to find alternative energy sources. Deltarion wants to find an energy source for his people no matter it's origin. If the Deltarians end up finding an alternative material, conflict could potentially start with Star Death given that the Deltarians would no longer have a need to help the Star Death people attack other planets. While Deltarion needs to find a way to power his planet by whatever means necessary, he must also plan to find ways to avoid and conflict with the Star Death planet.

Questions to Consider

These following questions are aimed to be researched and will help kickstart your research on this topic:

1. How can water best be protected from fracking, in this case, as a result of infinity matter mining?
2. What technology can be used to detect radioactive materials in space?
3. What infrastructure is required for antimatter storage?
4. How can antimatter be produced in large quantities?
5. Other questions (non-external resources):
6. What intergalactic standards can be implemented to ensure the safe usage of fuel?
7. How could planets best prolong their infinity matter supply?
8. Should infinity matter be rationed to the planets to prevent conflict?/If so, how should this be done?

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