

SCIENCE AND TRADE INSTITUTE



The Seyllin Report

A summary of findings one year after the Seyllin incident

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This report is a joint work as part of the State-Federation reconciliation effort



This document is a summary of the accumulated information on the events of March 10th YC111, and speculative theories as to the exact causes of those events. Included is a timeline of events and a more detailed look at the underlying causes.

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Introduction

I awoke on March 10th, YC111 at my usual time of 0700 with a feeling of cautious optimism about the day ahead. I had recently passed the merit board inquiry to an acceptable level, and had been given approval by the institute to continue my work on deciphering Advanced Talocan Hypereuclidian Mathematics, and I was eager to prove that the State's choice had been the correct one. I left my apartment at 0830, and arrived at my office exactly an hour later. I immediately knew something was wrong, as Ms. Derenna, my assistant, is usually at my shoulder within seconds of my arrival, reeling of my day's schedule and providing me with a stack of documents to read or sign. I found the entire department's faculty in the kitchen, their eyes glued to the horror unfolding on the State News emergency broadcast. State Executor Tibus Heth, liberator of Caldari Prime, was on the screen, issuing a formal offer of aid to the Federation, who were apparently accusing us of invading some inconsequential system of theirs after they had lost all communications with it. I was confused, I knew that there had not been any major campaigns planned, as Heth's provists were busy pacifying Caldari Prime, and the Navy was tied up with the militia wars. Also, the swift Federation response to Uriam Kador's autumn invasion was still a strong memory in most of the State's military minds, and I couldn't see how anyone could have planned a successful invasion with the Tripwire system at an all-time high.

Then the first images arrived, and I was completely thrown by what I saw. Hundreds of thousands of pleading distress calls were flooding out of the system, pictures showed a broken world of flames and ash. The immediate, kneejerk federation response was a massive Caldari attack, possibly with some unknown superweapon, but looking at those images, I knew that not even we, with all our mighty technology, could have wrought such destruction on the scale shown here. Even the most powerful weapon we possessed at the time, the Oblivion missile system, was incapable of this. Over the course of the day, things progressively worsened, culminating in the news that the entire planet would be destroyed by a massive plasma wave that was currently en-route. I had awoken that morning thinking I would maybe solve the latest series of spatial compression algorithms delivered to my office the previous day; by lunchtime half a billion people had died, live and on-screen in front of me.

I immediately signed up to the STI committee that was formed to investigate the topological defects that formed in the wake of the event. In my own way, I hoped that I could help provide an explanation for the disaster, that so many deaths might be for a purpose. But despite gaining vast amounts of help from my friends in the official University of Caille investigation, I came no closer to shedding any light on what exactly had caused the event. But then, one evening, I received three pieces of information that made things much clearer to me. The first was a note left to me, amongst my paperwork, from Ms. Derenna, it simply said "thought you might be interested", followed by a GalNet link. I had never before received an unsolicited personal opinion or recommendation from my assistant, so I was curious as to what she had thought so urgent for me to see. Upon following the link, I found myself at the Synenose accord's postings. I had missed the Seyllin Conference, which had taken place a week earlier, but I was astounded at how much they had achieved. Evidently, our own attempts to understand these new wormholes from afar were nothing compared to what the accord were achieving in their close-up studies of the sleeper race's abandoned technology.

The second piece of information was an updated bulletin from my contacts at the University of Caille. It was the latest summary of findings for the on-going Seyllin investigation, and it seemed to be making even less sense than the last one. In particular, there was much rambling about impossible energy outputs, many orders of magnitude higher than the previous estimates. I dismissed it as useless. But then I received the third piece of information, a brief report from a contact in the Sisters of EVE. This seemingly irrelevant charitable organization shocked the universe when, shortly after the destruction of Seyllin I, they went live to the newsfeeds to successfully predict the formation of topological defects in spacetime, i.e. wormholes. How they achieved this feat is still unknown, although I believe this report may shed some light on the matter. Nonetheless, this otherwise useless report contained the hidden link I and my colleagues needed to complete our research.

And so, I present these findings to you now, one year after the disaster at Seyllin, in memory of the half a billion souls lost on that day, and in the hopes that it comes a little closer to explaining the greatest tragedy in living memory.

Summary of Findings

Wormholes are topological defects created by the accretion of a new type of exotic matter with a negative mass. This accretion can be controlled by the use of powerful quantum flux generator arrays.

Seyllin I was not an isolated incident, but was in fact one of an estimated twenty such events that occurred on March 10th. Each one seems to have involved the detonation of a large cache of Isogen-5, followed by a brief, controlled magnetic field realignment in the direction of a large number of nearby stars.

Isogen-5 detonations appear to create a strange new type of exotic matter with a negative mass. This newly discovered type of matter causes the strange spacetime effects commonly associated with Isogen-5 detonations, and also, on a larger scale, wormholes.

There is strong evidence for a link between Isogen-5, wormholes, the Sleepers, the Talocan and even the legendary Terrans. The SOE sub-organisation known as 'the Sanctuary' also seems to be heavily involved. Please see the final section of this report for further speculation on this link.

Timeline of Events

In order to discuss the underlying causes of the Seyllin incident, it is imperative that the reader has a good familiarity with the events leading up to and culminating in the destruction of Seyllin I. I will therefore begin by outlining them below.

10-03-111 0843 – At approximately this time, the Scope reports travel delays in and around the Seyllin system. The cause of these delays is a gate lockout due to a malfunction in the state of the art “Cassandra” satellite network designed to monitor Seyllin’s solar output and stability, which occurred shortly after 0840. The monitoring facility on Seyllin I initially attributed the cause of the error to a “communications glitch” and state that service will be resumed shortly. In fact, backup copies of telemetry from the network revealed that a significant energy blast had been detected halfway between Seyllin I and the Type-O blue giant it orbits, spiking to impossibly high levels in all fields, including subspace, gravimetric and electromagnetic. According to the data, Cassandra’s last recorded transmission was that the star’s entire magnetic field had realigned towards the explosion. We now know that the Cassandra probes were destroyed by the vast waves of charged particles and EM radiation released from the star. The fact that Cassandra was able to roughly triangulate the location of the energy blast before being destroyed has been the greatest help of all during this investigation, as without Cassandra’s telemetry, it would have proven impossible to determine the cause of the main sequence anomalies.

10-03-111 0855 – ORE officially announces that their headquarters in Heart constellation have lost all contact with a mining outpost located in 3HQC-6 following reports of an emergency there. The expedition was believed to have been performing a deep core survey on the planet’s interior when the incident occurred. ORE believe the loss of communications and the declaration of emergency is due to a surveying accident, and dispatch a task force to the Sword constellation to investigate.

10-03-111 0901 – Federal Administration in Luminaire report that all contact has been lost with Seyllin I. Initial details are sketchy at best, but it is revealed that a Federation Navy task force has been diverted away from border duty to investigate, and CONCORD have become involved, offering the “full scope and breadth of its capabilities” to assist with the matter.

10-03-111 0909 – Fluid Router engineers familiar with Seyllin’s FTL Communications network reveal that the hubs are located in hardened facilities many kilometres below the planets surface, making it unlikely that anything but a deliberate effort to disrupt communications could disable them. This report heightens people’s anxieties about the situation on the planet, and begins to stir up fears of a large-scale Caldari assault similar to the one on Caldari Prime, especially due to the Thoulde constellation’s proximity to the border zone.

10-03-111 0912 – Federation President Foiritan orders the immediate mobilisation of the “Tripwire” defences along the Caldari border, in response to fears of a Caldari communications blackout in preparation for an attack on Seyllin. The Caldari Navy mobilise their own defences, leading to an intense standoff along the border zone that could rapidly ignite into all-out war between the rival nations.

10-03-111 0920 – State Executor Heth issues a statement to the media, directed at President Foiritan, denying the existence of any military operations in or around the Thoulde constellation, and offering the State’s assistance in the investigation into the communications blackout.

10-03-111 0936 – Communications with Seyllin I are restored, and almost fail immediately afterwards due to the volume of distress calls being transmitted from all four of the planet's primary cities. The fluid router logs were also updated at this time, and it was revealed that the hubs had shut themselves down to protect themselves from some external threat, after which they had autonomously rebooted. CONCORD and Federation vessels are scrambled and ordered to the planet as pleas for evacuation come flooding through. Due to the complete disarray of the planet's government and emergency services, information is piecemeal, and makes little sense. The Federation still believes some kind of Caldari super weapon, such as a doomsday device, was used in low planetary orbit and is responsible for the disaster, and maintains the high-alert Tripwire state.

10-03-111 0944 – Panic begins to spread throughout the Federation after the Scope reports that an automated warning system on Seyllin I was activated. The system was designed to withstand a concentrated nuclear attack, and to launch a communications probe in the event that one was detected, warning the Federation military that a potential planetary bombardment was underway. The Federation military officially states that there could have been any number of environmental effects, any one of which could have been mistaken for a nuclear attack, and that the distress call alone did not confirm it.

10-03-111 0952 – A Thukker caravan is reported missing in the Great Wildlands. In a closed meeting with Sanmatar Shakor, tribe leaders state that its last known checkpoint was a waypoint located in the SL-YBS system, and request Republic assistance in searching for the missing fleet.

10-03-111 1002 – Panic in the Federation has reached astronomical levels, leading to a deadly stampede in the commercial docking bays aboard the Federation Navy Testing Facilities at Oursulaert III. The stampede was caused when panicked passengers waiting in the commercial transportation terminal attempted to storm a waiting ship in order to secure passage deeper into the Federation. The vessel was secured, but the mob refused to disperse peacefully and riots ensued.

10-03-111 1003 – An emergency conference of scientists that had been called in the Bourynes system by the University of Caille gives an emergency press statement after hearing about the stampede in Oursulaert. They clearly and categorically state that no known nation has a weapon capable of unleashing the kind of devastation seen in the Seyllin system in such a short space of time. They instead attribute the cause of the destruction to a "solar radiological pulse" originating from the Type-O blue star. They also point out that this kind of event is unprecedented, and the possibility of an impending further collapse and supernova cannot be ruled out, despite the previous assumption that Seyllin would not do so for another million or so years. The identified effects on Seyllin I were consistent with a post-main sequence event (initial solar collapse), as the planet was subjected to high level bursts of ultraviolet, gamma and x-ray radiation. They also confirmed that those on the daylight side of the planet's surface would have a 0% probability of survival, whilst those on the night side and underground may stand a chance of surviving the thermal effects, but would still be exposed to lethal or near-lethal levels of ionising radiation.

10-03-111 1007 – ORE issue a press release from their headquarters in 4C-B7X in the Heart constellation, confirming the loss of their mining operation on the planet 3HQC-6 I in the Sword constellation. All rescue efforts were suspended after the deep core surveying team reinitiated contact for long enough to confirm the use of some form of massive nuclear strike or radiological

pulse weapon above their location, and to warn the rescuers not to come near the planet. The communications are then turned off for good. The task force were able to confirm that the planet was “shimmering with radioactivity” and that the daytime surface temperature of the world was “several times hotter than usual”. ORE officials also acknowledge the similarity of the events in Sword constellation to those on Seyllin I, and state that they are sharing their data with the scientist consortium in Bourynes and are in contact with the Gallente Federation.

10-03-111 1008 – The Federation Navy, along with CONCORD support, arrive at Seyllin I. CONCORD confirmed that “a natural disaster of unprecedented scale and consequence has occurred”, and announce a joint press conference with President Foiritan is to be held shortly. Plans for the evacuation effort are released, to be executed by the hundreds of dreadnoughts, carriers and freighters that arrived on the scene.

10-03-111 1014 – The joint President/CONCORD press conference ends, and transcripts are made public. President Foiritan is recorded stating “We do not anticipate any subsequent bursts at this time”. It would later become known that the President already knew at this point about the massive plasma wave en route to Seyllin I, and that it would completely annihilate the planet and all remaining un-evacuated people.

10-03-111 1022 – The panic in the Federation spreads to the financial sector, as Federal mining stocks across the cluster begin to tumble uncontrollably. Garoun Investment Bank release the following statement: “Seyllin is a very important system for the Gallente industry. It is clear that some sort of crisis situation is rapidly developing there. Although we cannot yet estimate its severity, we expect the volatility to spread across other market sectors in the Federation”.

10-03-111 1030 – Rescue operations for the millions of people stranded on the surface of Seyllin I are underway, with the converted freighters acting as orbital triage centres receiving and treating the sick and wounded. Overwhelming numbers of burns and trauma victims are reported, mostly due to secondary “splash-effect” damage from structures and equipment that was nearby at the time of the initial blast. However, access problems due to the planet’s poor surface infrastructure soon become apparent. Only the night-side cities of Southern Cross and Valimor can be accessed by dropships due to severe temperatures and radioactivity on the daytime side. Access to these cities is further restricted to just 37 operational spaceports, each able to accommodate up to 20 dropships at once. The largest dropships can only carry 500 people in one run, and it can take up to 20 minutes to load them fully. This resulted in a cap of about 18,500 people per minute being evacuated, whilst the total number of evacuees came to almost 200 million, meaning it would take over a week to evacuate everyone. Regrettably, this would not be possible.

10-03-111 1035 – The Scope reports that the Federation, after a minor confrontation, had given permission to a large fleet of Serpents Corporation vessels to approach Seyllin I and aid the rescue process. Serpents had brought large amounts of medical equipment and personnel, as well as large amounts of specialised excavation equipment provided by ORE, who when questioned, had simply stated to the press that “using Serpents to dispatch the equipment was the fastest way to get it to Seyllin, and that the loss of their survey team in Outer Ring makes their own participation in the Seyllin rescue effort deeply personal to them.”

10-03-111 1040 – The Scope reports on a dropship collision at an evacuation point killing an estimated 4000 people. The collision occurred when an overloaded dropship that was having difficulty breaking orbit was caught on the same flight path as an incoming dropship whose pilot refused to obey his superior's commands to wave off. The situation on Seyllin is beginning to deteriorate and officials are losing control of the situation

10-03-111 – At approximately 1100 (records of the bulletin are now seized or destroyed), the worst disaster of the day occurred. Scope Chief Editor Lars Kiormen releases an emergency bulletin to the public, warning of an impending plasma wave en route to Seyllin I, that will completely annihilate the planet. The bulletin itself stated that this would happen within the next hour, and concluded with a heartfelt goodbye to the Scope employee's still trapped on the planet, this was then followed by a Scope commentary questioning the legality of the Federal detainment of their employees. The bulletin was almost immediately decried by CONCORD, who denied the existence of any countdowns, but they were too late to prevent the outbreak of mass panic on Seyllin I, as riots and stampedes broke out as soon as the story broke.

News after this point is no longer time-stamped, so I shall simply have to do the best I can with the records. It appears that shortly after this point, a prison outbreak occurred, which forced the Navy to re-task valuable dropships to prevent a mass-breakout of high-security convicts. Panicked citizens were outraged at this news, sparking a fresh wave of riots. Crowd control methods are failing by this point, and armed troops have been posted at most dropship gangways to prevent terrified civilians from overfilling the ships. News is also received from the Intaki Syndicate, of yet another main sequence anomaly nearly destroying a station.

At this point, the University of Caille, realising that the plasma wave's cover was blown, decided to issue a direct appeal via the newsfeeds for anyone in the position to send them useful data to do so. This decision, whilst opposed by the Federal government and by CONCORD, has proven invaluable since, especially the CreoDron magnetic field data, which was vital to developing a working explanation of what happened at Seyllin. This was further reinforced by Sanmatar Shakor's announcement that the Thukker Caravan which was reported missing earlier had been completely destroyed by another similar main sequence event, bringing the total up to four recorded events.

The disaster came to a head shortly afterwards, with the navy pulling out shortly before the final destruction of Seyllin I by the massive plasma wave, which occurred at midday. The initial reports indicated no survivors, backed up by the complete lack of any fluid router contact with the planet. This was later corroborated when, before the CONCORD/Federation Navy blockade was lifted, a Serpents vessel that had been stranded inside the system during the final evacuation reported from the former location of Seyllin I that the planet was completely destroyed, before contact was permanently lost. It has since been assumed that the unfortunate vessel was caught up in the debris field that was present shortly before the remains of Seyllin I coalesced back into planetoid shape. It was also at this point that the Sisters of EVE issued their now infamous prediction that a series of topological defects would shortly begin to manifest themselves throughout the cluster, successfully predicting the first natural wormhole formations since the collapse of EVE itself.

Topological Defects – Causes of Spatial Destabilisation

And so now we come to the crux of this document's subject, the cause of the Seyllin incident, and the wormholes it spawned. Immediately I will have incited debate with just those simple words, please, if even now you are silently demanding for me to provide proof of a link between these events, rest assured that it is there. In order to describe this area fully, I must explain how we arrived at the conclusions we did, so I will begin with our initial investigations.

In the immediate aftermath of the Seyllin incident, we had masses of raw, unanalysed data on many different subjects. Much of this came from two vital sources, the Cassandra probe network and the CreoDron magnetic field detection array. Upon analysis of each of these data sets, I received an updated summary of findings through my contacts at the University of Caille, who were given the data in order to perform their official inquiry into the incident.

The Cassandra Report, as it is known, gives a summary of the data collected by the Cassandra Solar Monitoring Array, which was reported as offline before the crisis on Seyllin I began. The report finds that Cassandra was able to triangulate the massive energy blast, initially assumed to be the opening stages of a supernova, to a point halfway between Seyllin I and the Type-O blue star. It's sophisticated sensor suite spiked across all spectra before being overloaded. It also simultaneously detected a shift in the star's magnetic field, which began realigning itself towards Seyllin I, after which all contact with the probe was lost.

At the same time, the Seyllin CreoDron station's Magnetic Field Detection Array (MFDA) was active, and registered a severe shift in the star system's magnetic field. However, the more accurate MFDA readings revealed a useful piece of information, the field hadn't simply realigned towards the energy blast, nor had it realigned towards Seyllin I. In fact, the field had split into many small but powerful magnetic 'channels', each aimed at a different star in the regions surrounding Seyllin. These channels all passed through the point of origin of the energy blast, but, crucially, split apart after this point. However, the field only realigned momentarily, after which, it returned to its normal state. Unfortunately for the inhabitant's of Seyllin I, this was long enough for the star's already unstable outer layers to vent a large wave of plasma along the new field vectors, propelling it towards Seyllin I, and dooming the planet to destruction.

These reports mean little, and only add to the confusion, until viewed in conjunction with the additional data gathered by the University of Caille. Light, as many of you will undoubtedly know, travels at a fixed speed of approximately 300,000,000 m/s. Since it has now been exactly one year since the Seyllin incident, the light from the blast will have travelled a vast 9,500,000,000,000 km, or, as it is more commonly known, one light-year. There are several stars within a 1 ly radius of Seyllin, from which it has been possible to observe the blast wave and take readings, allowing an accurate estimate of its energy output. The results of this work bordered on the ludicrous.

Initial estimates placed the output of the blast at equal to about a trillion supernovae, with most of the energy (99.99999999999999% of it) being in the form of a highly concentrated neutrino burst. At these levels, the only reason that Seyllin I survived the blast at all was due to the fact that neutrinos are so weakly interacting the vast majority of them will have passed straight through Seyllin I, however, in such vast quantities, even neutrinos have an ionising effect, and this is probably heavily responsible for the surface of Seyllin I's daytime side being reduced to radioactive slag.

As to what could have caused such an extreme energy output, it was beyond comprehension. Even assuming one could make enough antimatter to react with it, it would still take several stars annihilating to generate that kind of output, the mass requirements would be so severe that it would have been immediately detectable by the sophisticated sensors present in the system.

I can comfortably say that it was I who found the missing link, by piecing together information from three sources. Firstly, the University of Caille report on the expanding light sphere around Seyllin. Secondly, the Synenose Accord's Seyllin Conference Transcript. Thirdly, the Sisters of EVE purchasing department summary (to those inquiring as to how and why I acquired this, don't ask, it's a long story). As I was reading through the purchasing summary I noticed something that prompted me to double-check the Seyllin Conference transcripts, both contained references to Isogen-5. Isogen-5 is a highly unstable variant of the Isogen family of minerals, which happens to only be found near Type-O blue stars. For some reason, the Sanctuary had recently been acquiring samples of this substance, for their own arcane research no doubt, but it was also mentioned in the Seyllin Conference transcript that several controlled Isogen-5 detonations had taken place and their energy harnessed. The key factor here is that Isogen-5, for some unknown reason, releases masses of energy when destabilised. The problem is that Isogen-5 is inherently volatile, and the slightest friction or exposure to high temperatures causes it to violently explode. The only detectable trace of the substance left behind is a heavy neutrino burst and a strange footprint on spacetime, something that would be classified in Hypereuclidean Geometry as a minor topological defect.

This astounding revelation had me hooked. I hypothesized what if the Isogen-5 is in some way responsible for the formation of the wormholes? What if the energy burst itself was caused by the Isogen-5 detonation required to generate them? Firstly, I had to examine the energy burst data. I found that it complied exactly with the standard pattern for an Isogen-5 detonation, albeit on a much larger scale than ever before observed. But how could this cause the creation of wormholes? As it turned out, this was another startling piece of information that we already possessed, we just had not looked in the right places yet.

To understand the mystery of Isogen-5's role in wormhole creation and propagation, you must know a little about how they work. Simply put, wormholes are defects in the structure of spacetime. Spacetime is the framework of the universe, it is the platform on which all objects lay and within which all events take place. But spacetime can be manipulated by the objects that reside within it, specifically, it reacts most strongly to mass. Mass 'pulls' spacetime around itself, resulting in spacetime contracting or curving near objects of high mass. This is one way in which to generate wormholes, by exploiting the harmonics of graviton waves between massive objects, you can create abnormally large distortions with less mass than usual.

However, these wormholes are not so crude, they are relatively stable for long periods of time (24 hours is far longer than most wormhole types last), and are only really disturbed by large masses passing through them. It also seems that the larger and more stable the wormhole is when it forms, the longer it will last and the more mass it can handle. In short, the only conceivable way for these wormholes to have formed is by the introduction of some type of exotic matter possessing an extreme negative energy density.

For those who cared little for basic physics, energy density is a measure of the energy in a given mass or volume (J/kg or J/m^3). To gain a negative energy density, you need to either gain a negative

energy (considered impossible due to the zero-point energy), or a negative mass (no prior evidence for the existence of such a substance). However, it appears that in the case of Isogen-5 decay, an extraordinary process occurs. It decays according to the principles of conservation of energy as outlined in the ancient equation: $E = mc^2$, but with an extra surprise, giving: $m_1 = \frac{E}{c^2} - m_2$, where m_1 is the mass of Isogen-5 provided, E is the energy released by the detonation, c is the speed of light constant, and m_2 is the mass of the resulting exotic matter. Note that m_2 is *negative*, this is not a mistake, nor is it just an artefact of the equation. The decay of Isogen-5 really does produce an as yet unobserved type of exotic matter, with the unique property of having negative mass. The energy required to create it is positive, but is strange in that whereas normally vast amounts of energy must be focused on a single spot for it to “condense” into a matter-antimatter pair, in this case, vast amounts of energy are suddenly projected outwards, from a single spot, where the exotic matter appears. It appears, based on preliminary experimental observations, that this process is in some way related to the zero-point energy of the Isogen-5, but the volatility of this substance makes it hard to determine the exact link.

Furthermore, it can be deduced that this new form of matter does not interact with the electromagnetic force, at least not in the same way that ordinary matter does. It has been theorised that perhaps this matter uses its own type of photons that obey the same rules as normal photons except they don’t interact with ordinary matter. This is self-evident, as we can see through wormholes, and our ships do not “bump” into any exotic matter as we pass through them. It would also stand to reason that this exotic matter does not interact via the strong or weak forces either, however, it appears that it does interact with gravity. This is indicated by the fact that ships of higher mass tend to destabilise the wormholes to a greater degree, indicating that gravitational interactions are responsible for this destabilisation. It is also partially due to the ranked order of the forces, if a key symmetry between this matter and ordinary matter breaks after gravity, it stands to reason that it remains broken from electromagnetic through to strong force, based on our current knowledge of physics.

This explains how wormholes form, but there’s a small catch: we still didn’t know the ratio of energy to exotic matter formed. However, we were able to come up with an estimate. The negative energy density required to create a wormhole is approximately one billion times greater than the energy density of a neutron star. Therefore, we can calculate from this the approximate amount of negative mass required to create such a number, based on some predicted properties of the exotic matter created. This gets highly technical, but in the end, we get the negative mass required to open and maintain a single wormhole. However, at any given point in time, there are approximately 20,000 wormholes open, based on estimates made by the University of Caille. Additionally, Seyllin was not the only place where this occurred, we know that there were confirmed reports of similar instances in the Syndicate, Delve, Great Wildlands and Outer Ring regions. The University of Caille now have a list totalling ten confirmed main sequence events. It can be safely assumed that a further ten occurred in w-space, as otherwise the wormholes formed here would have no reason to link to those systems rather than to each other.

Therefore, we simply divide the estimated number of wormholes by the number of main sequence events to get the nice round number of 1000. Therefore the Seyllin incident had to produce at least 1000 times the negative mass required to generate a wormhole. Using these numbers, we get an insane result. The Isogen-5 detonation involved enough material to fill twenty-five large hangers.

This is a simply impossible amount of material for any known facility to store, as without some as yet undiscovered method of containment, the mineral cache would likely have destabilised long before this volume was gathered. Therefore, the only logical conclusion from this is that some form of massive facility based upon as yet undiscovered technologies existed half way between Seyllin I and the system's star. Not only this, but the facility could not have been new, the sheer volume of Isogen-5 gathered would take a long time to achieve, barring the possibility of some recent breakthrough in science allowing this impossible construct. Furthermore, this facility, and the others like it, throughout all of their operational lives, must have remained completely undetected by our most sophisticated scanning techniques, no small feat for an object the size of a station.

This is further complicated when the MFDA data is considered alongside this. The initial problem with our hypothesis of Isogen-5 being responsible for topological defects and wormhole creation is that all of the negative mass would be concentrated in the location, creating a limited number of "super-wormholes", one per each system in which the detonations occurred. This is clearly not the case, so something must have caused these particles to propagate throughout the nearby space. This is where the MFDA data comes in, as it indicates that for a brief moment, a series of magnetic channels between Seyllin and about 500 surrounding systems were created. Due to the strange properties exhibited by matter with negative mass, it is actually possible for the particles of this substance to travel faster than the speed light, making them tachyons. Due to strange properties exhibited by tachyons, the particles created were able to travel through time at a much reduced rate to normal particles, so long as they maintained a speed above c . This allowed them to complete their entire journey in the brief time that the magnetic field was realigned. The initial magnetic field realignment seems to have sent tachyon streams to those 500 nearby systems. However, upon approaching their destination stars, the negative mass began to create a reverse gravitational effect, causing the particles to slow as they approached.

As they neared the star, their speeds finally dropped to sub-relativistic levels and they began to be repelled by the star's immense gravity. The particles were usually fired into star systems along the poles of their magnetic fields, the "path of least resistance", as this path is often relatively free of the strong, unidirectional current of particles referred to as solar winds. As the exotic matter neared each star, it was repelled evenly along the solar plane, spreading it throughout the star system. However, negative mass has a gravitational pull on other negative mass, and is gravitationally repelled by positive mass, causing it to clump together in empty regions of space in each star system. If enough of this exotic matter gathers together at a single point, a wormhole is formed. However, these constructs are unstable, and will tend to be ripped apart over time by nearby gravitational forces. They are also disturbed when large masses pass through the wormholes, causing the sphere of exotic matter to break apart slightly, weakening it and therefore the wormhole it creates. When a wormhole collapses, its matter is spread evenly outwards in all directions on both sides of the wormhole, causing a "ripple effect", resulting in the creation of more wormholes elsewhere in the affected systems. This effect can be propagated using a device known as a quantum flux generator, which effectively forces the exotic matter to accrete faster and more frequently.

This also generates more questions about the mysterious Isogen-5 facilities. How could they have manipulated a star's magnetic field in such a way? It is far beyond the abilities of any known organisation in New Eden to do this, in fact, we don't think that even the Jovians have the technology to affect electromagnetic fields on this scale. I now venture away from the comfort of

knowledge based on hard data, and look more deeply into the events surrounding that fateful day, as we now try to find out exactly what chain of events led to such catastrophic loss of life on Seyllin I.

Further Speculation on the Causes of the Seyllin Incident

From this point on I abandon all pretences. What I state here is not fact, nor is it based on fact. So why, you ask, am I including it in a scientific report on the Seyllin Incident? The answer is that I feel that the information here may be of use to researchers in the same field as myself, perhaps pointing them in the right direction. Perhaps it may also loosen the tongues of several tight-lipped organisations, which seem to know far more about the nature of the Seyllin Incident than they are letting on. If nothing else, I might at least spark some further debate and controversy on the issue, which is always a healthy thing. I will let you draw your own conclusions.

Firstly, on the facilities mentioned in the previous section. To summarise, they are vast warehouses for the collection and storage of Isogen-5, built quite some time ago for some unknown purpose. They are however, despite their age, in full working order, and able to store two dozen hangars worth of Isogen-5 in some unknown containment mechanism. They are also able to manipulate a star's magnetic field in a very precise manner, and do so in a way that spreads the resulting Isogen-5 exotic matter evenly across the known (and parts of the unknown) universe, indicating advanced knowledge of the structure of Isogen-5. Finally, this entire facility and all of its hyper-advanced technology were completely undetectable by our most sophisticated sensor systems.

However, there is a further twist. Only three groups in the universe are known to have ever worked with Isogen-5. The first is the University of Caille, who briefly experimented with it in an attempt to discover a way to harness its immense energy output, but this work was abandoned after an entire research facility was lost to a devastating accident involving the mineral sample. This is where most of our contemporary data on Isogen-5 came from, the data which I used in my analysis, the results of which are in the previous section. The next group known to have worked with Isogen-5 is the Sleeper's. They are the only known organisation to have successfully harnessed the mineral as a power source, albeit in a very crude and unrefined way. However, even they did not have the level of sophistication required to build such an advanced facility, so even if it turns out that they triggered the destabilisation of the Isogen-5 caches, I think it unlikely that they could have built the facilities in which they were contained, at least not without some form of outside help.

The final group known to have been performing experiments with Isogen-5 is the most mysterious of them all, The Servant Sisters of EVE. This quasi-religious charitable organisation is usually thought of as a collection of simple aid workers, largely thanks to the actions of their satellite agency, food relief. However, as well as their religious and charitable works, the SOE also have a scientific research wing, known as the Sanctuary. This immensely secretive organisation has a single ultimate goal, the reactivation of the EVE gate in the New Eden system. However, none of their work in this field has ever been published, but a lot of their work can be assumed, inferred or guessed based on a few key facts.

Firstly, the legend of EVE. This states that our ancestors, a civilisation who we think called themselves the Terrans, arrived in New Eden through some form of natural wormhole, thousands of years ago. They founded our civilisations, and it is assumed that they are also the forefathers of the now lost Sleeper, Talocan and Yan-Jung civilisations as well. Then, through some unknown calamity, the link between New Eden and a place we believe was called Terra, was shattered. The gigantic structure known only as the EVE gate was destroyed when this happened, and Terran civilisation slowly collapsed without the support of our home on the other side of the gate. Many have claimed

that our galaxy is littered with abandoned and derelict Terran technology, most of which is cloaked by the Jovians to prevent us from finding and abusing it.

The SOE accept this story, and have actually incorporated it into their religion. As stated above, it is the Sanctuary's primary, overriding goal to somehow reopen EVE, and to make contact with whatever resides on the other side of it. However, in the pursuit of that goal, they must also perform vast amounts of research into Terran civilisation and artefacts in order to learn more about the gate.

As you may recall, my research into Isogen-5 was initially prompted when I noticed on a series of SOE purchasing records that the Sanctuary seemed to have been performing research into Isogen-5 throughout late YC110 and early YC111. This, coupled with their startling and straight-faced prediction of the formation of stable wormholes, leads to the obvious conclusion that the Sanctuary's research into Isogen-5 had led them to discover the exotic properties of this material long before March 10th. Not only that, but they had somehow known that the main sequence anomalies were not caused by unusual solar activity but were in fact caused by detonations of large caches of Isogen-5 across New Eden. But how could they have known all of this before the events of March 10th? And more importantly, why did they keep this knowledge to themselves, even after the event which caused the most pain and suffering in living memory?

I believe that the answer lies with the Terrans. I propose that the Sanctuary discovered evidence that the Terrans, in their final days, were working on reopening the EVE link, and were possibly using Isogen-5 in parts of their work. Millennia later, the Sanctuary stumbled across some remnant of this work, and succeeded in unravelling the scientific mysteries behind it, even managing to replicate it on a small scale in their laboratories. However, is it possible that in doing this, they could have caused the disaster that struck Seyllin? From what we have seen of the Sleepers, our ancestors guarded their secrets well, is it possible that the simultaneous detonation of the Isogen-5 caches was actually just an ancient self-destruct mechanism, issued in response to the Sanctuary's investigations?

Unfortunately, the Sanctuary's motives are their own, and they keep their work hidden from the public to such an astonishing degree that it is pointless to ask questions like these. We may never know their true role in the events of March 10th, but we can nonetheless be sure it was an intimate one.

Another possibility is a far more disturbing one. Could the Sleepers have had something to do with this? It is alarmingly apparent from the Seyllin Conference transcripts that the Synenose Accord has a widely-held belief that the Sleepers have already made it to our known space. Could they have already arrived here long before March 10th? Could it have something to do with the ruins of the less sophisticated Sleeper and Talocan settlements already present here? Could they, with their knowledge of Isogen-5's properties, have deliberately triggered the blasts? And for what purpose would they do this? Whilst they lack the technology to build safe containment systems for holding volatile Isogen-5 for long periods of time, they certainly have the capability to collect it and store it in pre-existing systems. Could they perhaps have been exploiting an older system, which was already in place?

Regrettably, it seems that the Sleeper problem also ultimately leads back to the Sanctuary. In my investigations I repeatedly came across references to an SOCT member named "Dagan", who

appeared to know something important about Sleeper drones. However, when I inquired further, it seemed that this person disappeared a short while ago, in a situation apparently involving Rogue Drones and (not surprisingly), the Sisters of EVE.

In this brief discussion, one thing has become glaringly obvious. The Sisters of EVE, and specifically, the Sanctuary, are heavily involved in the events surrounding March 10th. If we are ever to find answers, this charitable religious foundation will have to open up and begin talking about its darker side. Only through their honesty can we hope to unravel the growing mysteries surrounding the Seyllin Incident.