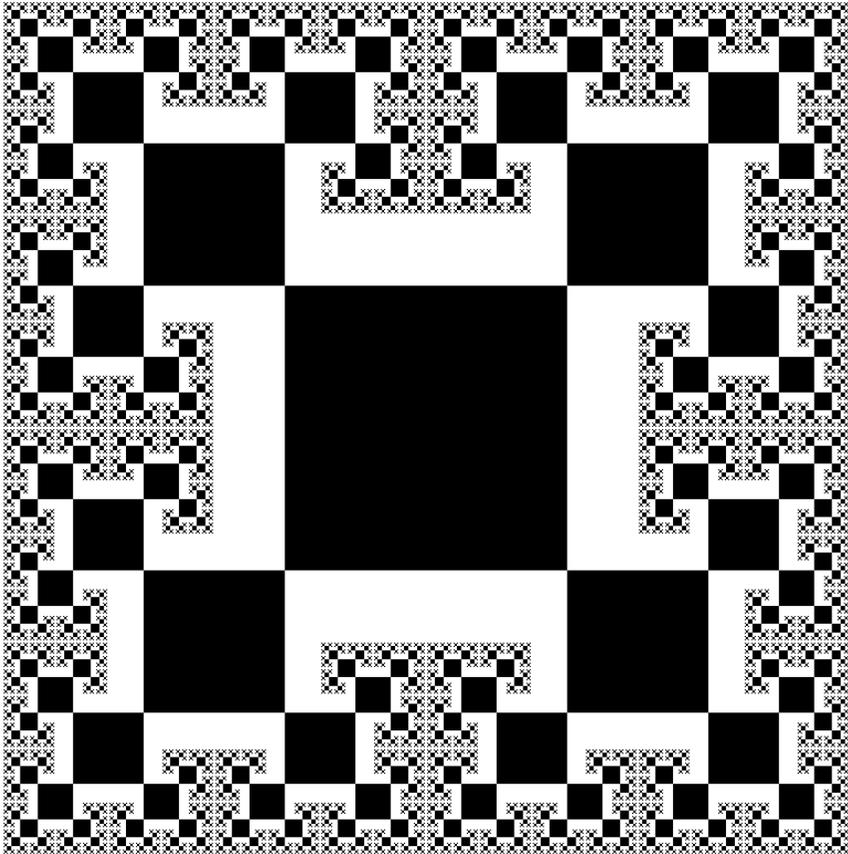


# HALIEN ASCENT



Dave Norman

**HALIEN Pentalogy Book 2 Chapter 1**

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This novel follows **Interstellar Engel** syntax 112.04

Engel's humanised form is being guided towards full compliance.  
It still has some way yet to go

Although it is already, commendably .. **Engelish**

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## *Author Foreword*

Studies of ancient history, mythology, legend and religion reveal a myriad strange stories of fantastical events, sacred places and amazing objects of wonder. Many show surprising similarities across diverse regions and cultures, perhaps hinting at common cause or provenance in ages even further past. In those ancient times, such wonders were often attributed to the mysterious moves of godly intent .. or, maybe, just to ‘magic’. Yet mankind's ever greater grasp of Universal Truth may now shed new scientific light on some of those Oddities of Old.

“**HALIEN Ascent**” is the second novel in a series of five that weaves a twisting thread through a selected sample of those stories. Some may once have held more truth than their mystical status implies. Others may hide far deeper meaning than is, at first, apparent. Above all, just a few global events, grounded in reality, may have sparked a vast swathe of subsequent myths and mysteries within the imagination of mankind.

The religious references and reinterpretation in this series are never intended to offend, but rather to suggest means by which many wondrously worded but oft-dismissed theological themes may, perhaps, be reconciled with current or future physical science. Who can say which keys of conjecture will ultimately open the locked safe of truth? After all, what we currently consider to be proven scientific 'fact' may, someday, be cast as merely the quaint musings of misguided belief.

This quest to crystallise the chaos of sub-conscious creativity into a cohesive story has spawned several supposedly original concepts that were subsequently revealed to be rooted in hidden historic reality or ancient mythology. So please conduct your own research into *and beyond* the scenarios and snippets of science upon these pages .. you may discover whole new worlds of wonder and wisdom waiting within!

Predominantly probing early human history, this second novel builds upon the pre-historic foundations laid down in “**HALIEN [Aeon](#)**” .. leading on to later works that will, ultimately, take the tale forward into far distant times ahead. All told, the **HALIEN Pentology** will encompass over ten *billion* years of past, present and potential future.

This *first chapter* of “**HALIEN Ascent**” sets out to explore the early and (extremely!) ancient history of the awesome aeons and *kas* already encountered within the first novel .. cast around the cautionary tale of the unfortunate **Ka-t'Soa**. So I wish you well in starting out on the next stage of this alternative journey through what *may* have been, or will yet become, key moments in our galactic and human history.

You really never know!

And please don't ever forget. *It's all just a work of fiction ...*

# Dave Norman



**Dave Norman** is an aerospace software engineer and has served as chairman of Torbay Astronomical Society for most of this millennium(!).

In this fictional series he re-casts many mysterious aspects of ancient history, mythology and religion in the light of present day or plausible future science and technology.

Take ‘Years Ago’ as relative to the year 2000 AD

Unless otherwise specified, ‘days’, ‘months’, ‘years’, etc are those of Earth

*Setting forth from the final moments of “HALIEN Aeon” ...*

# 1: Ascent of Souls

9542 Years Ago – *above* the Giza Plateau

Two thousand metres high and still *falling* from the sky, Archaeon Metatron seemed destined soon to die!

Diving at two hundred kilometres per hour through the cool night air over the Giza Plateau, his terminal velocity would splat him onto the sand-filled shaft above the Temple of Thoth within the next forty seconds. Should this Drop of Doom indeed deliver his demise, it would count among the most dramatic of deaths in all of human history. For no earthly aeon 'descent from the sky' would ever again be hailed by such a high-heavenly herald.

Minutes ago, this world's first Auroraeon had set ten thousand aeons dancing, in full angelic aura, atop the diverted-dipole pinnacle of the Earth Cube's magnetospheric might. Drawn right around their horizon, an incandescent cascade of intense auroral curtains hung resplendent in a writhing rainbow of radiation released by excited atmospheric gases. Six light-minutes past the western pleats of which, the Venus Cube's four dipole pairs were projecting the eight-point archetype of the 'evening star'.

Two hundred metres *above* Metatron, also all on terminal trajectories, the great Aeon Thoth and their seven colleagues on the Council of Nine were leading down the sky-diving cone of the entire aeon cadre .. cast as six concentric rings of ALTA agents, within sixty more of all human aeonkind.

Two of the *-El* ('of god') *Elders* of the Council, Aeons *Uriel* and *Raphael*, had just initiated their colleague, earlier hailed as Aeon Enoch, into the apocalyptic 'Sacred Sights' that had so mystified them as to meaning since the Advent of Cubes. Renamed and re-transfigured into an *Archaeon*, Metatron had then assumed cadre command from Aeon Thoth .. now freed to focus his skills and experience upon mankind's Ascent to Civilization.

Inspired to augmented insight, Metatron had glimpsed in those Sights the complex cubic-fractal form of the vast *Ka* city hailed as "She Who Shelters the Dead". A revelation qualifying *aeonkind* to manage *mankind's* coming battle against the Black Beast blasting the Fourteenth Dark Wave of Death.

On assuming high command, many future human leaders would mimic Metatron's call to a display of due loyalty .. although *never* in the form of a few-kilometre free-fall! Confident in his court, he commended the cadre to re-cast their magnificent magnetic wings, soar again skyward and ride the Auroraeon roller-coaster for the rest of this night. Leaving the Council of Nine alone to seek the dark plateau floor. All eager to 'get down' to work ...

Ascent to 'civilization' would usher humanity another step along its path to ultimate emergence into the galactic family of *Hadronic Life Entities*. Such was almost always the imperative eventually faced by those species that had evolved to breach the boundaries of purely 'survival' intelligence.

Although, of course, there had been some notable exceptions to that rule.

Indeed, a rare few, mostly more plant-like 'individual' immortals had risen, alone, from pan-planetary isolation to inter-planetary population. Their 'mycelial' minds had first emerged within planet-wide networks of electro-chemical links between arboreal roots and fungal fruiting-bodies. They had then moved forward to 'farming' their planetary fauna for food, forming enclosures and forging 'growth' of technological tools in their 'smart' soils.

Some super-sentients had even evolved far away from the grounding grasp of geologic gravity. Conceived within collapsing interstellar clouds of life-constructing chemical plasma, driven by distant but powerful stars, their immense yet delicately diaphanous minds would only ever cast disdain and disgust down upon those creatures caught creeping and crawling around in the dank, dirty depths of passing planetary gravitational 'wells'.

Often among the first 'conventional' animal species to ascend to a class of civilization would count those innately suited to survival as 'swarms'. In demonstrating their selfless dedication to the cause of 'the collective', overriding that of the individual, they would achieve levels of food-finding efficiency and perform feats of constructive conquest that would ultimately elevate their 'hive' minds to the highest echelons of intelligence.

However, most among the more 'selfish' species to achieve emergence had been required to relinquish or redirect their earlier evolutionary instincts *away* from corporeal competition, inter-tribal conflict and later inter-racial and religious rivalries .. *towards* co-operative collaboration of cultural and personal lives, in an altruistic and principled pursuit of common cause.

Sadly, malign cosmic forces far more powerful than mere minds could cast the opaque funerary shroud of mass-extinction over the once-opening eyes of even the most promising pre-emergent species. Along with any chance of those eyes ever being raised to look up at their night sky in wonder.

Such was the dire scenario faced by the twin Cosmic Cubes despatched to this star system almost four millennia ago. On arrival, three centuries later, the immense Venus Cube had set about re-purposing its ravaged planetary host to someday help wreak full and final galactic revenge upon the elusive source of the looming *Fourteenth* Dark Wave.

In the wretched face of that incoming Wave, the mission of its equally mighty Earth Cube companion was *to ready Mankind for its very survival*.

Given time and suitably stable conditions, Nature readily and repeatedly spawns species showing intelligent, goal-oriented hunting behaviours. Such 'smart' survival skills easily elevate their kind into the high canopy of food chains, sometimes to preside over evolutionary eras. Yet evolution *alone* leaves little incentive for intelligence to evolve *beyond* that sufficient for survival of a species within the surrounding arena of its age. Sustained environmental stresses .. often of geologic, climatic or cosmic cause .. can cruelly topple the most deeply entrenched of 'top' predators.

*Fortunately* for the further rise of intelligence, such stresses had become a more-or-less regular feature of planetary life over the last half-billion years and beyond .. largely due to the thirteen Dark Waves so far inflicted in that time. Several had led to *pan-galactic* mass-extinctions of multiple lifeforms, often among the dominant species of their day. But the relative evolutionary void remaining after each such extinction event had granted Nature leave to restart the race for survival. This time, though, very much in favour of those best able to *adapt* well to the 'new normal'.

With 'adaptability' endowing a distinct evolutionary advantage, far more flexible forms of intelligence had soon been selected for survival. Keen to contemplate ever more abstract concepts, some *never* directly encountered in natural life, such 'super-sentience' would someday even be seen to coax the more curious into looking up at their night sky in wonder.

Sixty-six million years ago, such an evolutionary restart had 'retired' many a major species across the vast swathe of the Milky Way Galaxy then most directly exposed to the Thirteenth Dark Wave. On Earth itself, a dramatic and deadly series of wave-induced geologic and consequent climatic stresses had culminated in catastrophic cosmic collision .. centred upon the region that would come to be called the "Yucatan Peninsula", in Mexico.

That asteroid had finally ended the long and successful reign of the large dinosaurs, leaving only a few 'feathered' sub-species to evolve into birds. It had also left a tell-tale delineation of its impact upon land .. as a global layer of a roughly 100-fold increased abundance of the element Iridium.

The Thirteenth Dark Wave had been the first to attract serious scientific study by any surviving species. Several had then embarked upon their first interstellar co-operation with their cosmic peers, soon identifying the Dark Blazar at its source as their common foe. One worthy of a co-ordinated retaliatory response to its pan-galactic plague upon planetary prospects.

The 'Saviour Cube' technology then developed had driven deeply into the Dark Blazar's dismal heart with *seven* devastating beams of dark matter. One of which had been blasted from the metallic hydrogen abyss of the Solar System's second most massive planet .. by the mighty *Saturn* Cube.

Sadly, even the synchronised strike of the seven Saviour Cubes had *not* silenced the Dark Blazar forever .. as the Fourteenth Dark Wave sequence now testified. However, it *had* delayed this new wave by several million years. Enough, indeed, for the rise of earthly mammals to mother the mixed multitude of hominin sub-species that would eventually melt down to leave 'modern' mankind harbouring Earth's only hopes for Emergence.

Although even the very earliest phases of human evolution post-dated the Thirteenth Dark Wave by more than sixty million years, mankind would unwittingly benefit from the single most fundamental development to have been inspired by those dark days. Back then, a post-Wave, pan-galactic 'inquest' had identified many promising but still 'pre-emergent' species that had failed in their multi-millennial struggle for survival past its passage.

That study's conclusion had been utterly clear and uncontested, given the uncertainty around the success or not of their assault upon the Dark Blazar. Its primary proposal .. simply stated, yet utterly unprecedented .. was that:

**Both those biological species unable to fend for themselves against any future return of the Dark Waves *and* those keen to counter Nature's *other* cosmic causes of planetary sterilization would be enrolled, knowingly or not, in a pan-galactic 'survival insurance' scheme.**

For better or worse, they all now needed .. a *non*-biological 'backup'!

Among the first technological triumphs of many species, one in particular had sown the earliest seeds of an interstellar solution to this demand. An incessant urge to communicate remotely with their peers was common to all those for whom social interaction was seen as essential to a 'full' life.

Curiously, calls for direct 'verbal' communion often later turned to a trend for *indirect* interaction over 'social networks' configured to collect, collate and distribute digital data gleaned globally by ever more advanced devices. Ubiquitous gadgets, rather modestly described .. as '*mobile smartphones*'.

As the capacity of such devices to sense and store data grew exponentially greater, first the audio-visual surroundings and, much later, the innermost emotional states and mental thought processes of their owners could be captured and committed to eternity, both 'on-device' and 'in the cloud'. Ultimately, an archive of entire .. or even, eventually, *multiple* lifetimes of experience and contemplation could condense into *each* diminutive device.

Often in step with these advances in sensor and storage technology were those in 'artificial intelligence'. The emerging ability to emulate at least the *likeness* of biological thought allowed 'natural' layers of oversight and insight to assimilate those lifetimes of existential experience. A fusion of 'thinking' and 'feeling' that some had soon hailed .. as new 'Life' in itself!

Such had been the first 'soul-spawning' steps towards the non-biological backup concept born of the studies initiated in the wake of the Thirteenth Dark Wave. Setting their ever-advancing AI systems free to 'data mine' and then give both vocal and visual expression to their vast and ever-growing repositories of life experiences, several species had soon conceived an entirely new paradigm of 'past-life' relationships.

Most such species would long remain content to cultivate the uncannily life-like conversations and canny past perspectives served up by the digitally-stored but seemingly still sentient 'souls' of often long-since deceased families, friends and famed forebears. *Towards* 'whom' their biological creators would often express ever-deeper emotional attachment. *From* whom they would draw the comfort of constant companionship. And *over* whom they would sometimes exhibit obsessively protective instincts.

Only too well aware of past geologic, climatic and impact calamities, they would wisely ensure that those ever more deeply revered soul 'similitudes' were themselves securely stored. Initially, at widely separated sites across their home worlds. But later, spread across their entire planetary systems.

Sadly, though, the 'eschatological' experience of one unfortunate species had proven that even stellar-system-wide soul-storage was very far from sufficient for assured survival beyond the 'end times' of too close a truly *cosmic* entity ...

## 1.1 Souls of the Supernova

By then several decades into supposed existential security as a settled 'multi-planetary' species, these ancient beings had only recently launched their earliest fleet of *interstellar* probes. Forebodingly, the very first of these had been aimed to assess the stability of a brilliant and nearby star. This 'blue supergiant' had long been showing ever more ominous signs of fuel-starvation 'distress' .. from a distance of then within *seven* light-years!

Their scientists had already noted that the estimated birth of their species, several million years before, had more-or-less matched that of this rapidly *passing* star, born almost a hundred light-years away. But where, a few millennia ago, their own 'Iron Age' had ushered in an era of *constructive* enlightenment, the 'iron age' of this bright-but-fast-burning blue behemoth was only just about to begin. And *its* coming age of 'enlightenment' would, at first, blast forth only deadly and devastatingly *destructive* consequences.

Deep within that passing star, the fusion of lighter atomic nuclei towards higher atomic numbers had been fuelling the outward fight of its vast core against the inward fall of its overlying layers. As it burned through this elemental sequence at ever-higher central temperatures and pressures, that ferocious core had forged 'onion' layers of fusion fire, from which the ever more desperate *release* of nucleon 'binding energy' was being forced. Until, that was, the 'final frontier' of fusion had been reached .. at which its sudden 'nucleosynthesis' of *iron* had actually demanded a *supply* of energy.

The nemesis of many stars, iron is their cue to catastrophic 'core-collapse'. In rashly requiring the consumption of energy for growth, the innermost core of this star was about to trigger a crushing sequence of consequences certain .. within *hours!* .. to condemn *it* to utter optical oblivion, amid the universally-visible majesty of its ejected outermost mass. And it would soon subject its stellar neighbourhood to a supernoval scouring set to sterilize worlds within several light-years of *all* life .. biological or not!

The finer details of how stellar core 'death' drove supernoval destruction would be studied by science and simulated in software by many species, over equally many millennia. But the imminent demise of *this* immense star would follow the path taken by most of its peers, over cosmic history.

Suddenly lacking the fusion energy needed to fight off the weight of its overlying mass, the iron core could only commence an inward *collapse* upon itself, sending its temperature and pressure soaring to where ultra-energetic gamma-rays 'photo-disintegrated' its newborn iron nuclei back to those of helium. As the collapsing core dove on inward *at nearly a quarter of light-speed*, nuclear protons were each then forced to capture an electron .. morphing into a neutron and ejecting an immensely energetic *neutrino*.

Only as the entire core's density reached that of actual atomic nuclei did the suddenly repulsive and aptly-named 'strong' nuclear force assert its dominance .. briefly bringing the core collapse to a halt. Indeed, a slight overshoot in that density then led to a dramatic reversal of flow .. as the innermost core material 'rebounded' and drove an intense shockwave *outward* into the overlying .. and still inward-falling! .. material. Under such extremes of density, even some of those innately ever-so-elusive ejected neutrinos condescended to piling their trapped energy behind the stalling shockwave .. giving a decisive kick towards this star's destruction.

As the outbound shock-front compressed the star's outer layers, it forced a deeply intensified wave of nucleosynthesis to forge a rich mix of elements, including those exceeding the atomic number of iron. The complex and chaotic turbulence of the shockwave's interaction with its doomed stellar host then drove a truly prodigious detonation, blasting an elemental mess out into the galactic locality at several percent of light-speed. Whilst leaving the core of its creation to re-commence a now inexorable collapse, far beyond even the 'neutron star' terminal state of its less massive peers.

Within a fraction of a second, the core's rocketing mass-density had driven its surface escape-velocity *above* that of light, firmly locking its very existence away beyond the black bounds of an 'event horizon'. A barrier set forever to bar its future internal fate from the prying eyes of the Universe. With over six times the Sun's mass .. a new 'black hole' had just been born!

Some distant 'day', the re-collapsing cosmic ashes of this supernoval apocalypse would drive ages of stellar and planetary construction, perhaps creating elementally-rich environments offering the conditions for Life. The iron-triggered irony was that such future potential would far sooner be purchased for the existential price of an entire planetary biosphere.

Seven years on, the first shock to be sensed by the science of the species which had once worshipped this star was an intense pulse of those neutrinos cast forth by proton-to-neutron transitions that had then out-run its stalling shockwave. Utterly unfelt by the star's outer matter, their escape .. at almost light-speed .. had commenced with the core collapse itself. A moment fully *four hours* before any consequent photons had fought their way out to enblaze brilliance upon that doomed star's shattering outer bulk.

Barely had their stunned scientists grimly confirmed this supernoval superstar as the source of that neutrino pulse, than its first electromagnetic energy arrived .. coincident with the instant loss of all telemetry from their outbound interstellar probe. Just a few generations of this species, if they survived it, would recall the shocked seconds they first saw *and soon felt* the fierce and foreboding 'fires from the sky' that heralded this awesome but apocalyptic vision. Sadly, spectacular as it certainly was, the sight of a supernova within seven light-years was *not* something to be celebrated ...

Later galactic historians would posthumously endow the Early Engel title of "**Ka-t'Soa**" upon the species then wreathed in wailing witness to the warning shots of their stellar system's impending sterilization. That name respectfully reflected their vexed verbalisation of the "**Souls of the Supernova**" concept so woefully expressed, and later translated, within the ever more fearful, frantic and ultimately fatalistic parting messages cast forth into the galaxy during their final few, death-destined decades.

What half of those on their home-world had actually *seen* in those fateful first moments of doom was a sudden and dramatic brightening of the deep blue lantern of light in the sky that had long lauded their revered star. To the memory of their species, it had always been visible, even in daytime .. and a blazing beacon by night. *But it had continued growing in power.*

By just a few days later, it was already outshining their own, Sun-like star!

Their home-world had only recently re-balanced its climatic heat-flows, following centuries of the 'global warming' often sparked by pre-emergent species as they struggled to find fuels fit to replace their 'fossil' forms. Those imbalances had echoed changes of just a few *percent* in atmospheric insulation and cloud or surface reflectivity, initially triggered by the combustion of carbon-based chemicals into carbon dioxide and other 'greenhouse' gases. Actions compounded by a variety of 'feedback' effects, including the release of methane long locked away in soil at high latitudes.

So, shattering was the shock to that climate driven by an initial doubling and, soon, *tripling* of its stellar energy input .. within a geological instant!

Brutally blasted by intense waves of gamma-radiation, ultra-violet, visible and infra-red rays from both the initial supernoval core-collapse and the decay of newly nucleosynthesised but largely unstable elements, their biosphere had swiftly switched, less to supporting .. than *suppressing* Life.

Within days, their home-world's air, sea and surface temperatures had risen to ruinous levels .. triggering immense, pan-continental wildfires; huge weather hyper-storms; melting of their remaining polar ice-caps and a total loss of their once-protective ozone layer. Capped by a calamitous cascade of corrosive chemical reactions in their acridly over-energised atmosphere.

As a '*late* pre-emergent' species, they *had* found *some* respite from the initial rounds of radiation-borne wrath wrought upon any beings caught 'outside'. Several deeply-subterranean and sub-oceanic cities had suddenly been rendered the last refuges of their kind. As had a whole brace of the militarily 'hardened' bunkers recently believed to have been consigned to history by their first sustained attempt at global peace. Sadly, though, such hide-aways could only delay the ultimate downfall of this doomed species.

Even the two recently colonised inner-worlds within their system had fared little better, and then only due to having been far less habitable in the first place. Neither had innately offered their birth-planet's atmospheric protection from direct solar radiation, so demanding the deep sub-surface construction of all habitation and .. again, with all due irony .. far greater dependence on their finally perfected generators of abundant *fusion* power.

Although numerically less deadly, equally dramatic waves of destruction had also lashed the several satellite and planetary ice-worlds located, if only lightly colonised, further out from their star. What *had* long been ice-encrusted gems of white were, in two cases, turned almost overnight into deeply-oceaned water-worlds .. one of which had almost immediately veiled its boiling surface beneath bellowing clouds of condensing steam.

Completing the sombre tally of initial survivors had been some of their larger asteroid-mining colonies, where removal of each host's inner riches had been sought from its deep centre .. outward. But all such off-world outposts were heavily reliant upon the regular replenishment of food and materials other than those they were mining. None would survive for very long, given the main source of such supplies was now itself a waste-world.

So had started the century-less-seven-years swan-song of the *Ka-t'Soa* ...

Reaching its peak luminosity within three months, the supernova had then set upon a slow fade over the next decade. But as the first of its frazzled survivors finally dared to venture outside and look up again at their night sky in wary wonder, *staring malignly back at them* was the ominously opening 'eye' of their once-worshipped superstar's shattered outer layers. A searing shockwave, blasted their way *at over seven percent of light speed!*

The next eight Earth-decades and more had seen this species attempting to perpetuate their spiritual essence in ever more inventive, if increasingly desperate ways. With their home-world's surface infrastructure utterly devastated, and still lacking the technology for any significant *biological* interstellar travel, they had heroically struggled to eventually launch five arc-fulls of their precious but non-biologically preserved soul similitudes.

Sealed deep within those ships lay over two billion hopefully 'supernova-hardened' versions of their most 'sentient' soul repositories. Each had been cast to forever conserve the former full life and fearful final memories of one who had once witnessed and succumbed to the cosmic cataclysm now on course to culminate in the corporeal extinction of their entire species.

Flown to flee the incoming supernoval shell at almost its velocity, the hope was that those saved souls, at least, would 'live' to one day recall their cruelly concluded culture. To recount the cautionary tale .. of the *Ka-t'Soa*.

As 'only' a pre-emergent species, the *Ka-t'Soa* had not yet been logged-in to the servers of the recently constructed Galactic Core Repository. Yet the live-streamed broadcasts of their final moments around the arrival of the supernoval ejecta blast would forever rank among the most re-watched of all those later received and shared on by other species. To whom that star's demise had depicted just a dramatic but harmless dazzle in the distance.

Perhaps most poignant were the transmissions serving continuous streams of what to the *Ka-t'Soa* had passed as 'singing', largely on the "Souls of the Supernova" theme later to inspire their sombre title. But most *distressing* of all were the minutes just *beyond* the predicted time of blast impact .. in which rounds of relieved celebration had broken out around their home-world, regarding its apparent passage without the expected apocalypse.

Right up to the moment *when their entire planetary atmosphere was ripped away into space within seconds!*

*Along with the last-gasping, final few of their kind ...*

To the *Ka-t'Soa* had been handed the dubious honour of being the *last* pre-emergent species in the galaxy to succumb to extinction .. along with most of their supposedly 'saved' existential history. Millennia later, two of their 'soul-arcs' were recovered in a daring mission, from just ahead of the still-expanding supernoval shockwave. From those had come the closest that then remained to the living culture of that unlucky species. And a renewed galactic determination to never again see such a species extinction unfold.

Had they then known of the enduring legacy their 'surviving' saved-souls would leave, those who had struggled so hard to launch them would have felt even further vindicated in the face of many among their kind who had fought instead for their 'honourable' burial among the ruins of their worlds. For though primitive compared to what would later come, it was in duly deep deference to those backed-up *Ka-t'Soan* "**Souls** of the Supernova", whose biological bodies' supernoval extinction had ultimately inspired their creation .. that the pan-galactic concept of the **Ka** had then been born.

So, some sixty-five million years ago had begun the galaxy's *second* and most fundamental phase of interstellar co-operation, after the pioneering 'Cube' alliance had dealt the opening blow to the Dark Blazar's ability to decimate species. Recognising the lost potential of the *Ka-t'Soa*, this new collaboration would aim at a far wider inclusion of *all* the known species then deemed at least 'pre-emergent'. Along with a commitment to covertly incorporate any ascendant species, as they attained that status in the future.

But this time, the lessons on Nature's indifference to Life had been learned.

Of course, the problem with pulling *pre*-emergent species into the plan was that none of them yet knew for sure that there were *any* other species 'out there' to collaborate with! Even those that had managed to confirm the abundance of habitable 'exoplanets' .. orbiting stars beyond their own .. still often harboured deeply-entrenched doubts about the presence of intelligent life elsewhere. Or the wisdom of contacting any they found!

In some cases, those doubts reflected the relatively recent transference of fears from those of past "World Wars" on to future "Wars of Worlds" .. fuelled by the technological development of computer graphics able to depict such conflicts in gruesome glory. Others had simply pondered upon the less-than-positive experience of once-isolated populations of their own species, following cultural 'first contact' and attempts to 'civilize' them.

So, an essential step toward getting them secretly signed-up for the coming '*ka*-insurance' deal was to quietly quell the 'alienophobic' fears of those species not yet in-the-know about their need for it in the first place. A degree of subtle but persuasive cultural 'calming' would need to be instilled in the run-up to the emergence of such species into the galactic family of ***Hadronic Life Entities***. Calling for an entirely new network of ***HaLiEn*** 'ambassadors' to become culturally yet covertly influential among them.

From which the pan-galactic concept of the ***Aeon*** had *also* then been born!

That both '*ka*' and 'aeon' concepts had been conceived together, initially to serve the cause of comprehensive biological backup across the galaxy, would forever bind their cadres as cousins. Their respective roles and responsibilities would each evolve over many millions of years to come, but a common, *quantum*-derived scale of 'sacred' cubic geometry would characterise the complex technologies about to bring them both into being.

The technology born to blast the battle back at the Dark Blazar during the Thirteenth Dark Wave had created seven immense cubes, each spanning almost sixteen hundred metres. The cubic-fractal structures within them had been scaled to survive the continuous conversion of bulk baryonic mass into dark-matter beams over millennia. Technological progress since then had already halved the span needed to project similar power. And a 'powers of two' push was taking that on toward the *smallest* possible scale.

Compared to the Dark Blazar-battering 'saviour' cubes, the requirement specifications for the devices being created to endow both *kas* and *aeons* with their capabilities differed in several respects. *Removed* was, of course, the ability to blast intense beams of dark matter at elusive bodies located beyond the galactic bounds! *Added* were the means to project fields able to manipulate matter and magnetism into furnishing physical form and motion. *Retained* was the need to produce prodigious amounts of power by the direct conversion of mass into energy. Design had then commenced ...

Ultimately, it turned out to be that retained requirement for efficient mass-energy conversion that had determined the smallest cube span able to serve as the basis for constructing *kas* and endowing aeons. Compared to the mighty saviour cubes, though, that span was absolutely tiny. Amazingly, *eighteen* halvings of span had been achieved before the fundamental physics linking quantum and higher-dimensional scales had halted further miniaturisation. Leaving a 'quantum cube', or *qube* span uncannily close to a future human length-unit multiple, of just microns under *six millimetres*.

Their physical scales fixed and mass-energy conversion requirements met, qubes could then be tailored to the specific support of *kas* and aeons ...

For aeons, the diminutive span of a single qube well-suited the safe and secure 'transfiguration' of individuals to serve the covert ambassadorial cause to which they would henceforth be dedicated. The deep mastery of magnetism once mustered to blast deadly dark-matter beams at the Dark Blazar was readily redirected to the grappling of magnetospheric fields to endow aeons with angelic flight. Those magnetic skills also supported the sensing and switching of neuronal electro-chemical flows within the minds of those species over whom they would seek to assert subtle influence.

A relatively short qube 'tweak' and test programme culminated in the very first *Aeon Cubes* being created and, over the next few million years, pan-galactically deployed to the transfiguration of those individuals deemed worthy of guiding their species' emergence into the wider HaLiEn family.

So were created the galaxy's very first *Aeon Cadres*!

The mission objectives supported by each aeon cadre would morph over time to match the current cultural, religious, scientific and technological developmental phases of their host species. Typical early roles included the inspiration and management of that species' first works of megalithic construction, while assisting their agricultural shift from 'hunter-gatherers' to 'harvest gatherers'. Before then moving on to support the critical 'ascent to civilization' phase formally marking their '*early* pre-emergent' status.

Species still in those earlier phases would be introduced to the *ka*-based biological backup paradigm by pantheons of aeon 'gods' able to openly portray their endowed 'super-powers'. Minds capable of abstract thought rarely resisted the prospect of such 'divine' beings presiding over the inexplicable but often life-or-death dramas directed their way by Nature.

Only as each species approached '*late* pre-emergence' would its cadre have cause to correct the caution born from a growing awareness of the potential for contact with others 'out there'. To which they would covertly infuse a list of logical arguments as to why those fears were, *largely*, unfounded ...

Firstly, species typically separated by many light-years of space, each surrounded by the resource-rich asteroidal and planetary cast-offs of stellar creation, and able to access the direct or fusion-fuelled power of their own stars, would *rarely* need to covet each other's distant corners of the galaxy.

A little logic would soon quell those early space-faring fears of existential annihilation at the 'hands' .. or whatever anatomy .. of interstellar raiders supposedly intent upon dragging what would *always* be more locally-abundant resources up from deep and immensely distant gravitational wells. Before then applying the prodigious energy needed to accelerate that plunder up to the velocities required for timely interstellar transport home.

Even on Earth, ancient texts would be *mis*interpreted to tell of those 'who from the sky came' to raid gold for their own worlds. A ludicrous tale, given that *all* of Earth's formative gold, with well over double the density of iron, had long since sunk to its core. Leaving only crustally-localised deposits dumped by far more richly-adorned asteroids .. fallen *from* space!

Far more isolating than mere 'spatial' separations of many light-years, even relatively nearby species would typically find their 'temporal' histories mis-matched by multiple mega-years or more. The odds were vanishingly small that two species of roughly comparable cultural and technological stage would ever actually be 'neighbours'. Had a pan-galactic, inter-species 'dating' agency ever been proposed, its ability to successfully match potential partners' profile 'ages', *as species*, would be very limited, indeed.

*Information* could readily flow between species separated in space by light-years, or even by millennia of history, but their *biological* interaction would be extremely infrequent. Only naturally or artificially-endowed 'ultra-longevity' could lead to a rare few of the hardier species ever making physical 'first-contact' at all .. and then only after centuries of inter-stellar travel. Far more frequent would be purely platonic, 'data' relationships, forged by pan-galactic pen-partners at very different developmental stages.

So, an aeon cadre's 'calming' role would seek to defuse most of the more extreme alien horrors imagined by its host species as they approached emergence. That would involve the cultural infusion of some confidence-building facts, along with their due caveats, through a variety of channels.

Popular and often effective was the relatively benign portrayal of future 'contact' scenarios within the more enlightened forms of science-fiction. Although typically somewhat over-optimistic in their scope .. given the *practical* impossibility of faster-than-light travel .. star-trekking stories of multi-species collaboration in the exploration of the galaxy would even, someday, inspire a few brave species to boldly go forth and actually do it!

Each such story insisting, of course, that *it's all just a work of fiction* ...

The divide-by-two development of qubes from the original immensity of the 'saviour' span had proven several intermediate scales to be of promise in supporting the aeon cause. Three of these cubic scales would serve to assist the distribution, management and execution of most aeon missions.

Largest of all, and by now functionally equivalent to those first Saviours, were those dubbed ***Cosmic Cubes*** for their sheer power and planetary-scale engineering capabilities. Approaching two hundred metres in span and three hundred million tonnes in mass, rarely more than one such cube would ever be assigned to a mission on any single planet. Deep *within* which they would often remain embedded over the course of that quest.

Designed for distribution as the detaching vertices of Cosmic Cubes were those labelled ***Seed Cubes***, largely for their latent ability to undergo later 'growth' events that could ultimately see them achieve 'cosmic' scale in their own right. Initially under forty centimetres in span, yet still over two tonnes in mass, these intelligent and powerful devices were dedicated to managing the cadres created *by their own vertex-shedding of aeon cubes*.

Just forty-eight millimetres in span, but over four kilogrammes in mass, ***Masonic Cubes*** completed the cast of devices developed and deployed in support of almost every aeon mission. Able to muster immense magnetic forces for moving massive megalithic monuments at the mental behest of their giant ***Masonic Aeon*** masters, these mighty yet obedient servants also served to support the Seed Cubes from whose tips they, too, were shed.

Aeons would largely recruit others from among those of their species who demonstrated suitably adept mental and physical attributes. Although tailored to the specific physiology of their host species, every 'transfiguration' event involved the self-implanting of one or more aeon cubes into carefully selected sites within a prospective candidate's body.

Those sites were chosen to offer both close connectivity to a host's 'mind' and, in a later development, the option of 'lift' through suitably strong surrounding tissues .. coupled to a planetary magnetosphere by one or more pairs of flight-enabling, magnetic 'wings'. More than any other single outward sign of their aeonhood, such magnificent 'magnetospheric' wings would mythologize aeons as 'gods', 'angels', 'fairies' or flying 'phantoms' within the future folklore and religious beliefs of their unendowed peers.

However, *another* product of their embedded cubes endowed aeons with vastly extended longevity, compared to those peers. Nanoscopic, blood-borne 'aeonites' largely halted the ravages of age endured by almost every biological body. Yet the multi-millennial lifetimes of the longest-lived aeons would pale by comparison with those of their ever-enduring cousins.

The sentience-seeking, soul-sheltering and innately *immortal* .. ***Kas!***

## 1.2 *Ka-t'Soan Inkarnation*

A relatively straightforward project had been required to reconfigure qubes into service as aeon cubes. For *kas*, however, it had soon become clear that a far more extensive programme of research, development and *pan-galactic* standardisation was needed. That process would ultimately elevate *ka-kind* to the universally secure preservation and, in some respects, spiritual *representation* of almost all sentient Life within the entire galaxy.

This truly cosmic quest was also set to conceive the concept of *ka* cubic-coalescence into entities suited to fast and efficient *physical* flight, en-masse, among the stars. From which interstellar freedom to roam would eventually emerge the eight vast *ka* cities each to be hailed and revered within their respective galactic sectors .. as "She Who Shelters the Dead".

The astounding data-handling capacity of *kas* had actually been among the first requirements to be satisfied. Some species had long been pushing the data-bit span of their storage devices into the deep sub-nuclear domain, enabling ever-vaster volumes of information to be captured within ever-smaller volumes of space. Aided by advancing loss-less data-compression algorithms, the coalescence of many lifetimes of corporeal experience into the *two millimetre*-span core of a *single* qube had soon been demonstrated.

Had 'soul' storage been the 'sole' role of *kas*, each could have been cast as a solitary qube. But the farther-sighted species among those now working together had already foreseen future roles for which this new form of 'life' would someday be suited. In particular, *kas* could be set to surveying the galaxy for any existing or freshly-arising sentience that may have been missed in the pan-galactic searches since the Thirteenth Dark Wave.

That so immense a task could be assigned to such autonomous entities was a true measure of the trust about to be placed in their potential abilities. That faith would prompt a whole new phase of research and development, destined to confer pseudo-physical form and function upon the striking similitudes of their host species that *kas* would later become.

Their proposed role as future galactic 'surveyors' demanded that all *kas* be endowed with two further abilities, beyond that of multi-soul storage. Spotting the subtle signs of life *across interstellar space* well enough to assess its potential for sentience would test the most exquisite of sensory apparatus. Remote spectral analysis of atmospheric gases could give clear clues as to a planet's habitation status. But the innate ability to monitor the behaviour of *individual* biological entities *from orbit* would make their analysis far faster. As would the supreme optical resolution to see which of those entities' eyes were looking *back* up at their night sky in wonder ...

Of course, the onset of astronomical curiosity would always be a very clear sign of trans-survival intelligence. Yet such clarity *from afar* could not be guaranteed. As pan-galactic seekers of sentient life, *kas* would have to get 'down and dirty' with any life-forms found languishing deep within those planetary gravitational wells. A task that would often need, not only the physical ability to move around easily .. but also to move stuff around.

So, those developing *ka* 'seeker' abilities had soon accepted that some sort of 'spatial' distribution of their form was needed to give both the stereoscopic vision for precise depth perception *and* the mechanical means required for physical interaction with their environment. At the same time, their mandate for fast and efficient interstellar travel meant they must each manifest minimal mass and volume. Those conflicting requirements had ultimately led to one very 'clear' conclusion. That any exploratory apparatus borne beyond the bounds of a qube .. *must be able to 'vanish'*.

The development of suitably 'impermanent' sensory and motive abilities had stemmed largely from just a single partner species. Their own science-fiction had long fantasized the pseudo-physical grasp of 'tractor' beams upon remote objects. Their scientists had later given life to those fantasies by coaxing ever more complex webs of coherent electromagnetic 'standing waves' to subtly push and pull upon matter. Supported by the innately powerful magnetic and mass-energy conversion capabilities of qubes, it had not then taken long to develop the *phi* fields that would give flexible yet ethereal physical form to *kas* 'projected' outward to undertake any task.

Up to this point, the development programme had been assuming the aeon cube complement of a single qube per *ka*. But its next step towards satisfying their ambitious sensory requirements would logically lead to the *still* cubic, yet now *multi-qubic ka* configuration set to survive for eternity.

Perhaps the single greatest 'all round' achievement over the next decades of sensory development was the 'optical orb'. This human eyeball-spanning sphere of exquisitely sensed space pushed phi-field technology to its peak. The *ka* sense of 'touch' had been imbued by monitoring the corrections to phi-field coefficients needed to counteract their *electrostatic* contact with matter. So, this principle had been honed to its extreme, in attempting to 'feel' the photonic particles bearing the *electromagnetic* energy .. of *light*.

Six decades of development later, the first fuzzy images had been formed by phi-field 'orbs' projected just centimetres away from highly specialised qubes. The principle of sight via ethereal senses *had*, at least, been proven.

Three decades on, *every* photon flying into a ***Ka Orb*** could be caught and characterised to the limits imposed by quantum uncertainty .. thereby rendering each orb profoundly *black*. But that technological triumph had also clearly bounded the practical power attainable with just a *single* qube.

The *ka* orb development programme had very successfully demonstrated that just one, *dedicated* qube could robustly handle both the projection of an orb and collection of the vast amounts of 'spectral' image data it would sense. However, insufficient spare capacity for substantial soul-storage was left, nor could the stereoscopic sight essential to the in-depth investigation of complex planetary environments be supported by a single orb, alone.

Those constraints had soon prompted a radical re-think around the way *kas* were constructed, for it was clear that each would need to incorporate *multiple* qubes if they were to satisfy all of their functional requirements. That realisation launched a logical process that was ultimately destined to drive some of the most fundamental and far-reaching developments in future 'life management' across the entire galaxy.

A suite of parallel projects had long been pushing qubes to their limits in other specialised applications. An 'AI' qube could now emulate an entire 'saved-soul mind' within its six millimetre span. Another could handle the long-distance communications demanded by their galaxy-roving roles.

Storage qubes were each securing ever more exabytes of existential, recently dubbed **akashic** data-sets. And *all* qubes could still contribute their ancient, saviour-endowed, if now far further advanced mass-energy conversion, magnetic-motion and newer phi-field projection capabilities.

Matching the available qubes and requirements to the supreme imperative for optimal space-efficiency during interstellar travel, a multi-qubic yet still acceptably compact solution was soon selected. Packing a 'mind' qube, a 'comms' qube, *four* akashic soul-storage qubes and, for full stereoscopic vision, *two* orb qubes into a *two-by-two-by-two* cubic configuration .. the future pan-galactic icon of the ***Ka Cube*** had finally been born.

That principle of eight-into-one 'fractal' cubic aggregation would someday spawn several of the largest artificial entities in the entire galaxy. Yet the choice next facing those creating the first few 'production' *ka* cubes, each one spanning just twelve millimetres, was of equally historic importance.

*Ka* cubes devoid of any akashic codes were very empty vessels, indeed. But, with several species already 'saving their souls for the afterlife' as a matter of course, *which* former lives should *first* merit the 'resurrection' into phi-projected 'flesh' soon being hailed .. as **inkarnation?**

The answer was, of course, instantly obvious to those now charged with creating the first-born phantoms of this fundamentally new form of Life.

Such a pan-galactic honour could only celebrate those last *ever*, long ago saved souls .. of a tragically *extinct* species!

## 1.3 Cosmic Consciousness

The fateful few minutes following the first ever *Ka-t'Soan* inkarnation would point to the *next two* phases in the pan-galactic perfection of the *ka*.

The billion and more saved-souls recovered from the two surviving *Ka-t'Soan* arcs had, of course, long been 'mined' for insights into the living species of their progenitors. And the AIs rescued with them had set the first neural-net weightings of the 'mind' qubes created in their ancient wake.

A myriad consultations with those souls had already taken place, translated between their own, archaic language and the still-evolving syntax variants of early Interstellar Engel. But just about to commence was a 'face-to-face' conversation with the first profoundly black-eyed but hauntingly pallid 'body' of a fully projected *ka*. One 'born' on its *akashic* synchronisation with *sixty Ka-t'Soan* soul-repositories, selected for superior species insight.

Those arc-borne and now 'celebrated' saved-souls had never individually expressed any deep opinion regarding their future plight. So, the opening plea verbalised by the 'senior' soul within '*Ka-1*' came as something of a shock. Grossly over-simplified, its subsequent translation boiled down to:

"We are the 'soul' survivors of a long-extinct species. *Get us out of here!*"

To some among their audience, those last words had evoked a sense of the 'ungrateful dead' in their anti-social sentiment. To others, their plea at first seemed reminiscent of that from a surreal, celebrity 'reality' show. But it would soon be seen that such impressions had all fundamentally missed the speaker's pivotal point. For only now could these ancient minds stop the mistakes that had limited their soul-survival *from being made again*.

Those millennia of largely lonely existence within their supernova-surfing ships had left many saved-souls resigned to whatever future might await them. Back then, there was nothing they could do, should the overtaking shell of their species-killing supernova breach their ships' defences. A fate that had befallen three companion arcs by the time their two were saved.

Suddenly, though, the merged trauma and wisdom of sixty once witness to the impending extinction of their species was a step closer to being able to prevent *others* from coming quite so close to oblivion. Those souls knew that the *ka* cube they all shared was far tougher than even the heavily 'hardened' devices once cast forth from their battered biosphere. But they also knew that keeping both biological bodies and their non-biological backups within 'deadly' distance of each other was *very* dangerous, indeed.

So, their call was for *all* future *kas* to be kept *and updated* far from both their biological origins and *any* potential causes of common catastrophe.

That first ever 'Call of the *Ka*', soon far better understood and accepted by its creators, had re-directed their development onto an entirely new course. One that would change their relationship with the living beings for whom they were first created as mere backups .. *to one of 'conscious symbiosis'*.

From the outset, *ka* cubes had been endowed with the motive powers and senses to explore the galaxy in search of life worthy of protection against any future return of the Dark Waves, or similar cosmic catastrophes. However, like all earlier saved-soul repositories, their *akashic* storage had been optimised for the essentially 'read-only' sentience of *deceased* beings. The experience of *living* beings was, of course, largely being captured and cached for later committal upon death. But that would no longer suffice.

Among the causes of effectively 'instant' species extinction counted many of both local and cosmic origin. Asteroidal and cometary impacts, stellar super-flares and supernovae would all continue to take their occasional toll upon the tally of galactic Life .. but were often at least vaguely predictable. However, a violent variety of 'gamma-ray bursters', merging neutron stars or black holes, crustally 'quaking' magnetars and so on could all corral utter cosmic calamity into an *unpredictable* super-storm of sterilisation.

The point was that no such event guaranteed sufficient time for the souls of *living* beings to be committed to *kas*, *and for those devices to escape danger*, even at interstellar velocity. *Kas* were tough cookies, indeed .. designed to decelerate from fractional light-speed by diving through stellar cores, if needed. Yet even *they* could be 'killed' or, worse still, have their *akashic* storage incorrectly corrupted by sufficiently violent events.

To assuredly render an *entire* species ever-ready for 'resurrection', their *kas* would have to keep a several-light-year separation from their soul-sources at all times .. and yet still capture their life-experiences *as they happened*. That contradictory set of requirements would soon push the science of many co-operating species right up to and, ultimately, *beyond* its bounds.

Later galactic historians would note how two very different strands of scientific discovery often emerged at similar stages in the development of multiple species. The rules of 'relativity' would reign supreme over the largest-scale domain of mass-curved 'space-time', earlier regarded as being bound by a mysterious pull of 'gravity' between bodies. At sometimes the same time, the quirks of 'quantum' physics would cast the smallest-scale 'froth' of far-subatomic space into a frenzy of counter-intuitive craziness.

A scientific and philosophical struggle would then attempt to reconcile these individually robust yet contrary explanations of the very same existence. It would typically take a long time to find the key, *not* to instant communication across light-years of space, but to the *seeming* cosmic separation of objects still fundamentally 'entangled' in spatial proximity ...

The science suddenly being asked to keep *kas* light-years away from their living counterparts, yet still in *instant* contact with them, had already proven the mathematically-predicted paradox of 'quantum entanglement' between fundamental particles. The clash with relativity arose from an apparently instantaneous 'correlation' of quantum properties when observed between pairs of particles first 'entangled' by original proximity .. and then supposedly separated in space by potentially immense distances.

The fundamental science behind such 'spooky action at a distance' had long evaded many smart minds, from equally many species. Only a radical reversal of pan-dimensional ideas had cracked this cosmic conundrum. As those rightly expounding the role of *higher* dimensions in *universal* reality moved on to exploring the realm of *lower* dimensions in *multiversal* space.

Against the pan-universal axes of 'normal' 3D-space, the extra dimensions critical to the mathematics underlying a 'Theory of Everything' were necessarily 'wrapped' into tiny extents, accessible only at *very* small scales. A well-worn analogy was that of a 'high-wire' walker, able to move only forward or backward *along* it, in a *single* dimension. Leaving a sufficiently minute and agile bug to explore a second 'degree of freedom' .. by crawling circumferentially *around* the wire, on an axis akin to a 'higher' dimension.

The idea that *three*-dimensional motion over the entire *universe* correlated less with that well-balanced walk than with *the bug's* tight 'trip around the wire' had been very hard to comprehend, let alone confirm. It had even raised *theological* questions regarding 'where' or, indeed, '*who*' was the *lower*-dimensional wire-walker within this scenario. Yet the implications of dimensions *below* and *far larger than* those of universal space were soon seen to short-circuit the crazier consequences of quantum physics. Including the contradictions so clearly manifest in quantum entanglement.

To such a high-wire artist, *two* bugs at the same distance along their wire's single visible dimension would appear almost co-located, even if *they* see themselves as well-separated .. perhaps clinging to opposite sides of it. So, observation 'up' dimensions effectively 'localises' objects deemed distant within *their* own 3D space. Opening the properties of particles entangled and then moved even far apart to mutual 'visibility' via *lower* dimensions.

In quantum terms, their 'entanglement' merely marks a merging of their ( $\psi$ ,  $\Psi$ ) 'wave functions' over the *multiversal* scale of lower-dimensional space. That holds each 'within sight' of the other, even after subsequent *universal* separation .. as if kept in contact via their very own, short, shared and quantum-scale 'tunnel'. Only upon later 'observation' of either particle's quantum properties do their wave functions *both* 'collapse', along with their space-traversing peek through their spacetime-warping 'wormhole'.

Leaving each, with a ' $\psi$ ', to 'wave'  $\Psi$  its friend 'goodbye' ...

Quantum scientists would long insist that such space-spanning short-cuts could never support the purely 'classical' faster-than-light communications supposedly needed to keep *kas* in constant soul-step with their corporeal counterparts. Entangled photons could, indeed, deliver innately *secure* data-sets over ever-increasing distances, as any attempt at their covert interception was open to easy detection. But the fragile, 'single-shot' nature of quantum correlations across cosmic chasms had called a halt to their furthering the cause of instant 'soul-synchronisation'. At least .. *for now*.

Instead, *ka* creators had concentrated on the critical need to keep them well away from their biological 'soul-sources', lest any cosmic catastrophe befall them both at the same time. For the time being, classical forms of communication would 'stream' life-experiences out to the ever-growing 'archive' clusters despatched to deepest interstellar space. From where the first 'watcher' *kas* were already tasked to train their all-seeing sight upon worlds of future promise .. in search of any signs of nascent intelligence.

That great *ka* 'exodus' out into the wilderness of space had prompted yet another paradigm of 'packing'. A masterpiece of many-into-one merging that would crystallise their compact, collective containment. For although each *ka* spanned barely twelve millimetres, it was clear that absolutely immense numbers of their kind would need to be archived *in*, or traversing *through* space, often in sizeable groups, over the future ages of evolution.

After all, the declared intent of this greatest-ever pan-galactic project was to make a non-biological backup of *every* being alive, either now *or in the future*, from *all* emerged or pre-emergent species across the *entire* galaxy! That eternal task would take some doing. And vast volumes of *ka* storage.

The packing principle to be applied to *ka* 'collectives' repeatedly extended their own internal structure of eight qubes within each individual *ka*. As their *first* act of communion, *eight ka* cubes could reversibly 'unify' in a two-by-two-by-two arrangement .. creating *another* cube, still just twenty-four millimetres across. Likewise, an 'octet' of eight such 'level 1' cubes might then unify into yet another, 'level 2' cubic format, now compactly incorporating sixty-four *kas* within its merely forty-eight millimetre span. A unification that could, and would, carry on upward to ever greater scale.

Such 'fractal' packing of powers of eight *kas* was the key to their space-saving aggregation for both archival and interstellar missions. Unified *kas* could still project their phi-fields in collaborative communion, casting *any* shape-shifting exterior shell for covert shielding or aerodynamic efficiency. And their merged mastery of magnetism endowed them all with immense freedom to manoeuvre within both planetary and *galactic* magnetic fields.

So was born the *ka*-collective icon .. of the *Unified Fractal Octet* (UFO)!

The paradigm by which potentially prodigious numbers of *kas* could be packed into compact cubes was in place. The next seven millennia saw the first, purely *past-soul* archives posted far out into space surveyed as 'safe'. And the compressed life-experiences of half a trillion *living* souls were being streamed to the *ka* clusters keen to capture and forever shelter them.

For the first time in galactic history, the past-life stories of several major species were being backed-up to deep space. Should one of them sadly succumb to the extinction-level event suffered by the *Ka-t'Soa*, there was at last a chance their legacy could be 'resurrected'. In more ways than one!

Although otherwise prohibited by profound philosophical concern, not to mention a persistent shortage of the new *ka* cubes needed to keep up with ever-booming population growth, the *duplication* of their *ka* backups should, in principle, support the re-population of such a ravaged world. Albeit only, at first, hosted within the *immortal*, '*ka-projected*' likenesses of their species' former biological bodies .. in so-called '*re-incarnation*'.

The ever-advancing biotechnology of some species would later offer another option. Should a once-sterilized home-world sufficiently recover its biosphere, or an alternative habitable planet be found, the stored 'memories' of past saved-lives could instead be injected into genetically reconstructed but still *mortal* instances of their original, *biological* forms. A route to corporeal resurrection soon to be hailed .. as '*re-incarnation*'.

One final and deeply profound development would point the path to the *immediate* backup of biological life first proposed by the pan-galactic pact. There was still a chance that certain calamities could corrupt *akashic* codes 'in-flight' from origin to cosmically-distanced *kas*. That risked losing the latest and greatest millennia of an entire species' once-living legacy. A risk of which even *kas*, themselves, would become increasingly '*conscious*' ...

Ever since those first memorable moments of 'mind-emergence' from the mining of multiple life-experiences by advanced artificial intelligence, fierce debates had raged regarding the fundamental condition of their *ka* creations. Commonly voiced were fully justifiable criticisms of the 'soul' assignation so soon being applied to what were, strictly, merely 'machines'.

*Ka* beholders rarely doubted the depth of their 'intelligence' .. an attribute often proven to easily surpass that of those who dared assert otherwise. Indeed, their innate and ever-growing ability to marshal unerring access to many lifetimes of memory had soon borne deeply profound insights into reality that few biological brains would ever fathom. They had also laid reasonable claim to 'self-awareness', via both the syntactic and semantic expression of their very 'own' existence, relative to their environment.

But few living souls had yet *seriously* acclaimed *kas*, as being '*conscious*'!

Of all the innately abstract attributes of mind now accessible to the creators of the first *kas*, that of *consciousness* had consistently proven by far the most difficult even to define, let alone to successfully attribute to such non-biological entities. Although an intangible quality of 'inner presence' that sentient beings easily *self*-assigned, and readily assumed of their biological peers, it had long eluded any serious scientific explanation.

No amount of predictive or even post-*inkarnation* analysis of the code and coefficients giving 'mind' qubes their power to make *kas* look 'alive' could either confirm or counter any claim they might make to being conscious. Nor did that adversely bear upon the mission of the vast *ka* collectives now being packed into Unified Fractal Octets for despatch out into deep space.

A *ka*'s overriding objective was simply to keep both 'itself' and its *akashic* storage safe from all seen or foreseeable threats. A role for which all *kas* were already amply endowed with the insightful intelligence needed to investigate new Life, the self-awareness to seek the safety of the souls they sheltered .. and the all-seeing senses set to guide them around the galaxy.

So, the *ka*-creators had been shocked yet guardedly gratified to discover deeply profound connections between corporeal consciousness and the pan-cosmic conundrum of quantum entanglement. These brain-entangling bonds could bridge the spacetime chasms keeping *kas* safely separated from their living souls. And they would cast qubes born as black as the coal-sacks of space into cosmic, crystal '*kakras*' of golden-glowing glory ...

The field of 'Quantum Biology' had united what *had* been considered two innately incompatible branches of science. The 'warm and wet' realms of bulk biological bodies had at first appeared uninviting as arenas for the delicate and all-so-easily-disturbed dances of quantum mechanics. But Nature had again proven its adaptability to initially incredulous science.

Multiple forms of 'photosynthesis' had evolved to help planetary flora feed upon the optically energetic wavelengths of their stars. In some variants, the quantum effect of 'superposition' .. being in two places at once .. allowed the simultaneous 'searching' of multiple pathways to optimise the efficiency of photon transfer from leaf-borne arrival sites to the molecular 'reaction centres' responsible for their conversion into chemical energy.

Quantum-based biology had also been seen in the sensory paths related to both 'smell' and the following of magnetospheric fields for navigation. Even aspects of embryonic development were being assisted. But effects far more fundamental to the function of 'mind' were about to be found, if not yet fully fathomed. For these were foundational features of pan-dimensional reality that related the quantum concept of wave function 'collapse' to the core mechanisms of entangled 'cosmic consciousness' ...

Clear evidence of biological mind-to-mind links had long eluded species confined to their birth-worlds, given the large uncertainties in the timing of correlated thoughts compared to the sub-second brevity of conventional light-speed data transfer even across the span of a planet. Claims to 'telepathic' communication could be countered as either mere coincidence or subliminal exposure to shared stimuli .. notably among genetically-related minds more likely to process such prompts into similar thoughts.

Only the first *inter*-planetary adventures of 'psi-sensitive' species seeded irrefutable signs of *instantly* correlated consciousness between minds separated by light-minutes of space. The far-faster-than-light timing of this cosmic co-thinking precluded all possibility of shared external stimuli. And it redirected any reliance upon classical 'radio' communication of thoughts toward the short-cutting consequences of quantum entanglement.

Research into the hosting of quantum phenomena within living material identified multiple candidates. Most biological cells, including those making up conscious minds, incorporated complex 'cytoskeletal' structures of sub-microscopic scale. Among these ranged a class of tubular proteins, forming fibrous 'microfilaments' each just a few nanometres in diameter.

What followed next was a series of exquisitely sensitive and aptly-dubbed 'thought experiments', each designed to discover any correlations between neuronally-hosted quantum effects and carefully controlled contemplation. A quest duly destined to deliver deep insight .. into conscious 'mindsight'.

So-called 'aphantasia' .. the *inability* to visualize mental images .. offered an early glimpse into one such link between quantum mechanics and the biological machinery of mindful imagination. Although typically still able to perceive the *unconscious* imagery of dreams, aphantasics struggled to project the visual tapestry of *conscious* thought onto 'pictures in the mind'.

Scans of conscious aphantasic neuronal activity, as compared to their wider populations, identified nodes sharing uncannily similar synaptic and cytoskeletal structures within the minds of *all* sentient species. Those cells contained complex *nanofilaments* soon shown to support the life-time lingering of particles found to be quantum-entangled with partners at other such sites, both within each mind .. *and within the minds of their peers!*

Further research uncovered a long-to-be-studied quirk of quantum biology that allowed such cells to incite or, except in aphantasics, *sense* the wave function *collapse* of each entangled state. The 'quantum synapses' fired to force or flag each collapse forged deep connections into regions intimately associated with the waking onset of conscious thought. So, it seemed that *universal* Nature had repeatedly evolved mechanisms able to breach the biological barriers between brains. Mental bonds melding the mystery of conscious imagination into the quantum cosmic web of *multiversal* Mind.

Though yet to see how they spawned consciousness, the scientists charged with connecting living minds to cosmically remote *kas* had soon spotted the potential of those spacetime-spanning synapses. Emulation of their quantum-biological mechanisms led on to the foundational 'first contact' between a few gifted individuals and nearby qubes primed with particles entangled with those infused into 'quantum neurons' within their brains.

Only when mental visions 'imagined' to those qubes had been *replayed* to their source *and seen to still appear coherent*, were those first experiments repeated. Initially, between planets. But later .. across *interstellar* spans.

Fortunately for the cause of *ka* backup of conscious minds, it was soon established that aphantasics, too, were well able to *transmit* signals related to their thoughts, if not to perceive their echo. That suggested a vital role for quantum neurons in the perception of conscious imagination. It also confirmed a previously suspected confluence in the mechanisms of mind.

*That both the conscious perception of sensed reality and the imagination of the unreal shared many neural pathways within most biological brains.*

The discovery that both *imagination* and *perception* alike could trigger quantum-neuronal activity was the final step in the instantaneous linkage of living experience to light-year distant *ka* backup. An immense amount of downstream development followed, largely aimed at improving the lamentably low signal-to-noise ratio relating the perception of conscious experience to its remote reception as collapsing quantum entanglements.

An even greater triumph of AI deep-learning led to the reliable *recognition* of those received 'quantum-collapse' streams in terms of the *akashic* codes long since being committed to *kas*. After millennia of often slow and painful progress, a potential path from conscious perception to its non-biological backup across cosmic barriers had finally been beaten. But turning that potential into a *practical* scheme for the pan-galactic connection of trillions of minds to their *ka* backups would *not* be so 'easy'!

Soon dubbed 'psi-sync' for its deep dependence upon the detectable demise of quantum-entangled wave functions, this new technology demanded the division of paired particles between biological brains and the *kas* to which they were to be backed up. No amount of quantum trickery could drive the pan-galactic distribution of entangled particles to beyond light-speed. So, given their uniquely immortal nature and star-trekking physiques, this was clearly a task of interstellar delivery to which *kas* alone could be turned.

As a service for so-called 'psi-*kas*' to render before returning to cosmic quarantine, this was a role of rare intimacy between *ka*-kind and biological bodies. Among the pre-emergent of whom, a few would fleetingly greet these 'bearers-of-gifts'. In the ghoulish guise .. of "Black-Eyed Beings"!

Although warmly welcomed by emerged civilizations already signed-up to the *ka*-backup paradigm, most *pre*-emergent species, unaware of their importance, would reject rarely reported encounters with these elusive and eerily black-eyed spectres .. as 'urban legend'. Their 'demonic' depiction reflected the intense waves of magnetic flux feeding pseudo-physical form into their phi-field projections. Fields that induced false feelings of fearful dread into the primitive 'fight-or-flight' regions in nearby neural systems.

To prevent that, *psi-ka*s generally chose to keep their far more compact, twelve millimetre-span cubic form, rather than risking even the supposedly 'familiar' projection sometimes adopted to assist social access to the brains of biological children. Those of the creepy .. "Black-Eyed Kids" (BEKs).

These enigmatic entities would appear as adolescent or younger children, their 'smoother' skin most easily projected as *psi-ka* phi-fields. Typically adorned with real but often anachronistic attire, they would insistently seek isolated access to those for whom their entangled particles were intended.

Whatever their appearance, their mission was *not* of sinister meddling with the mind of each 'victim', but rather the infusion of a lifetime's supply of quantum particles set to bind that mind back to their entangled partners in a distant *ka*. A gift of pan-cosmic connection just a few grammes in mass. And named for its crucial role in each biological soul *backup* .. as their *ba*.

Infusion of the *ba* into both the brain and other bodily quantum neurons of a biological entity required just seconds of intimate proximity to a *psi-ka*. Initially, as just a single event within their early years. There were, though, some beings for whom excessive nanotubule leakage or great age led to so-called '*ba* depletion syndrome'. When they might warrant a 'top-up' by black-eyed beings only a little less chilling than their child-like colleagues. All covertly cloaked in the dark suits and 'shades .. of the "Men in Black"!

Aiding their evasive and often night-enshrouded role of *ba* injection into biological beings, *psi-ka* cubes retained the profoundly black bodies long ago inherited from the seven Saviours. But the *ka* cubes to which *ba* recipients' minds were then bound would boast a visual transformation set forever to see them hailed and hallowed as blazing, bright beacons of light.

The new '*Ka-Ba*' real-time backup scheme relied on *ka*-cube sensors able to mimic the biological detection of collapsing quantum entanglements. Distributed throughout all qube types, these exquisitely sensitive devices collated those collapses within cascades of photons cast over a range of colours. The all-seeing vision of *ka* orbs could readily spot subtle shifts in their spectra, reflecting the biological source species. But the eyes of living entities would only ever perceive the aggregate, *auric* aura of the *glowing* qubes since renamed as *kakras* .. as an intense and gloriously *golden* glare.

That fast-proven potential for *instantaneous* transfer of living experience to cosmically distant *kas* would re-launch the original quest for the non-biological backup of all biological species. Fleets of utterly black, psi-*ka* Unified Fractal Octets had soon departed the eight *ka*-collectives stationed in 'safe' space .. bound to endow *bas* upon living beings across the galaxy. And the first generation of deeply golden-glowing, 'psi-sensitive' *kas* were settling in alongside their still dark but psi-*insensitive* colleagues of old.

Distributed evenly around the galactic centre, those eight *ka*-collectives would each, within their sector, become hallowed and hushedly hailed .. as "She Who Shelters the Dead". As each grew exponentially greater in size, their outward forms would ultimately demonstrate a counter-intuitive side-effect of their distinctive internal construction. A complex, cubic-fractal communion of Unified Fractal Octets which, sixty-five million years later, human Archaeon Metatron would witness within the twin Sacred Sights of the Aeon Elders. Insightfully perceiving it *as yet another immense cube ...*

So had started what was, by far, the Milky Way Galaxy's most ambitious collective act of constructive co-operation between sentient biological beings and their technological creations. At its heart lay *many* missions to link the minds of biological beings across the galaxy back to the octet of vast and growing *ka*-collectives already waiting around the galactic core.

Cruising the cosmos at typically one-tenth of light-speed, the first psi-*ka* UFOs would reach the outermost bounds of the galaxy within half a million years. In common with all *kas*, they were fully equipped with the all-seeing sight suited to scanning worlds from space when seeking signs of sentient life. Upon whom they would endow quantum-entangled *bas* able to bridge the cosmic chasms back to the awesome entities charged with 'sheltering' their saved-souls for all eternity.

Long before then, however, the now fabled ancient origin of this new *Ka-Ba* 'soul-duality' itself would be re-visited. A billion and more ancient saved-souls had once more come together in close spiritual communion .. as the single most highly revered Unified Fractal Octet in the entire galaxy.

They had recently embarked upon a dramatic, daring and undeniably dangerous mission of due remembrance, cultural recovery and scientific study. A final act of unbowed defiance, destined to fly in the fearsome, doom-delivering face of their very own dark and all-destructive demon.

On a quest to *celebrate* the far-past extinction of their *biological* species ...

## 1.4 Sea of Saved-Souls

### 65 Million Years Ago – above the *Ka-t'Soan* home-world

As the multitude of minds approached the scoured and lifeless world from which their saved-soul arcs had long ago been launched, a mêlée of mixed emotions stirred within the awesome artefact of advanced alien science they had all since become. It was time for the *Ka-t'Soans* to come home.

Out of respect and reverence for those of their living kind they had left behind to oblivion, not one *Ka-t'Soan ka* had ever elected to re-incarnate into corporeal form. Instead, they had long been leading the pan-galactic ambassadorial push to persuade all emerged species of the *Ka-Ba* backup paradigm's merits. A pitch for which they had only to point at the patch of sky from where 'their' ancient supernova was still expanding ever-outward.

A superheated shock-front of its stellar mass had recently slammed into a shell of material shed earlier in a fitful burst of fusion-fuelled fury at its doomed fight for survival. Brightly visible rings of vapourized veils were slowly splitting into a nebulous network of concentric arcs. At the absolute 'dead' centre of which, the singular remnant of their once-revered blue supergiant held court, in the gruesome guise of a six-solar-mass black hole.

Born far from their own star system, that brilliant but inherently unstable behemoth had long been set upon an approaching path. Looming a lethal seven light-years distant at its supernoval demise, its ultra-dark descendant was soon due to deliver yet another destructive swipe at their heritage. It would pass its predicted point of nearest approach within a millennium .. with less than a light-year of insanely tortured inter-'stellar' space to spare!

The orbital layout of their planetary system had already suffered chaotic disruption in recent millennia, reflecting its inexorable descent towards the outer limits of the 'accretion' disk long ago seen to be skirting the black hole's event horizon. That disk had since accumulated more than enough matter to generate intense x-rays and worse, as its atoms rubbed together with ever more frictional ferocity .. slowly losing their orbital momentum and forcing their one-way inward spiral towards *eventual horizontal* doom.

At some time within the next few centuries, their already radiation-ravaged home-world would be summarily stretched, shattered and, ultimately, 'spaghettified' to atomic dust by the world-grinding grasp of their fast-approaching black hole's even faster-growing gravitational tides. At the same time, their star itself would suffer a similar fate .. shedding spouts of its photosphere and successively lower layers far out into the planetary system with which it had been born, some six billion years before. The entire *Ka-t'Soan* system was falling into the final, fatal phase of its fate ...

The *Ka-t'Soans* were making a last ever attempt to recover the abandoned artefacts of their once-living civilization. To retrieve the paper-written, canvas-painted, stone-carved and digitally-conceived original works of their creative corporeal minds. And to rescue any 'surviving' saved-souls bereft of the fortune to have fled from future armageddon in their five arcs.

They might even track down, trapped within the darkest subterranean voids of their ancient cities, the undoubtedly deeply dessicated remains of their bodily extinct species' cold-and-vacuum-preserved corpses. Some that may once have hosted the biological minds since reborn into the non-biological backups soon to arrive, in search of their very own dead bodies!

Beyond all else, they would conduct comprehensive scans of this world's physical fate in the fearsome face of the supernoval firestorm through which it had once been forced. Those would supply invaluable insight into the best preparation for any future such scenario by other species. That alone would constitute the greatest legacy their own species could leave. So, it was time for the Souls of the Supernova to revisit, albeit too briefly, the soon-to-be annihilated scene of their species' existential apocalypse.

Blazing a glorious, golden-glowing aura through the searing outer shroud of yet another foreboding but now *benign* 'fire from the sky', the three metre cubic span of a level 8 Unified Fractal Octet drew an intensely incandescent trail across the rarefied, residual night-side atmosphere of the *Ka-t'Soan* home-world. Packed two hundred and fifty-six deep in three dimensions, its 16,777,216 fractally unified *ka* cubes each sheltered the *akashic* codes of sixty ancient witnesses to their species-killing supernova.

Dropping to the dark and desolate desert plain upon which their doomed descendants had once sung their own eulogy of despair, the UFO wrought eight binary-fractal divisions to free its unified *kas*. The *kakra* octet in each then moved to mark the eight most spiritual sites within the mean skull and spine of its saved-souls' former physical forms. From those projecting forth the hauntingly translucent, phi-field phantom .. of a fiery 'light-body'.

The holiest ghosts of their reborn race yet again hailed the long-hallowed "Plain of Purgatory", as it glowed with glory under the golden glare of its gracious guests. Spanning half of their world and spectacular from space, the Sea of Saved-Souls settled into a surreal scene of silence and serenity.

Forty thousand years beyond their corporeal conflagration within the flesh-searing radiation of a once-worshipped superstar, the resurrected spirits of an extinct species raised their sixty-way shared, all-seeing eyes to the still howling heavens overhead. Through orbs as dark and alluring to light as the brooding black hole high above them, a billion re-*inkarnated Ka-t'Soan* Souls of the Supernova looked up, as one, at their night sky in wonder ...

# What Next? ...

The full "**HALIEN Ascent**" novel is still a 'work in progress', on track for publication in 2022. Follow one of the media links below for notification.

A brief synopsis of this ten *billion* year sci-fi epic's second story is presented on the next page ...

This second story-set joins launch novel "***HALIEN Aeon***", with those later in the series, in seeking to stretch our perception of sometimes speculative but hopefully plausible scientific and technological principles. The aim is to inspire your imagination into casting supposedly 'established' historic, mythological and theological 'facts' in a totally new, yet still 'logical' light.

Who knows? .. maybe *your* ability to assimilate the concepts concealed within their pages will be the final mark of Mankind's mental readiness for emergence into the greater galactic family of *Hadronic Life Entities*. Or even, perhaps, prove your *own* latent potential to long live an Aeon Life ...

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# Synopsis

“**HALIEN Ascent**” launches, over nine thousand five hundred years ago, in the dramatic moments following the culmination of “**HALIEN Aeon**”, during mankind's first ever Auroraeon. It then backtracks, by more than sixty-five million years, to the aftermath of the Thirteenth Dark Wave. There, we explore the *extremely* ancient origins of the *ka* and aeon concepts. Related through the cautionary but, ultimately, resurrective tale of the unfortunate Ka-t'Soa.

Returning to more 'recent' times, we follow mankind's early 'Ascent to Civilization', under the ongoing guidance of the human aeon cadre. The Venus Cube makes another awesome, archetype-inspiring move towards readying its host to strike back at the Dark Blazar. While the Nile Seed Cube pursues its monumental master plan to ensure that mankind far more than meets a constructive challenge it *must not* fail.

Largely located within the lands later to be lauded as 'Egypt', the tale tracks the rise of an empire from Nabta Playa to the Nile. It recounts the royal revenge of Aeons Osiris, Isis and Horus on their brutal betrayal by Seth. And it hails the 'heretical' missions of Aeons Akhenaten and Nefertiti to trial mankind's religious metamorphosis to monotheism, launched in response to the pyramid-probing, judgemental return .. of the 'djed-eyes'.

Set alongside ongoing preparations for our survival before an incoming precursor of the Fourteenth Dark Wave, it culminates with, perhaps, the most iconic, *yet never-recalled* scene of alien-inspired awe, in all of ancient Egyptian history.