

Chapter 1 : Revelation Space Series by Alastair Reynolds

Glacial has 63 ratings and 3 reviews. Jason said: 4 StarsGreat short story by one of my favorite science fiction authors Alastair Reynolds. This is one.

The story begins on Deimos, where Nevil Clavain, a high-ranking officer in the Coalition for Neural Purity is preparing to go down to the surface of Mars. His brother, Warren, is pushing for war with the Conjoiners. As they descend, they are attacked by robotic "worms" - war machines from the previous war with the Conjoiners. Clavain destroys the first worm, but more arrive and kill Voi. Clavain just succeeds in reaching the Conjoiner base. Galiana shows him around and he suggests that the Conjoiners and Coalition team up to attack Phobos, which is apparently infested by the worms. It is revealed that the Conjoiners are constantly deploying shuttles that try to escape the planet, but are always shot down by Coalition satellites. Clavain also meets Felka, a girl who was part of an experiment to further improve human intelligence by altering the brain in the womb. It failed miserably and Felka seems completely uninterested in anything except the mysterious game she is playing - she keeps waving her hands around in a pattern. Clavain is knocked out in the ensuing battle, but the Conjoiners are able to hold off the first three waves. By then, however, their defences are exhausted and they will not last another attack. During surgery, Clavain receives basic Conjoiner implants, enabling him to see the complicated readouts that surround every Conjoiner and their devices. With these, he can see that Felka is not simply playing a game: However, the attack has damaged it so badly even she cannot keep it intact for long and soon the wall will collapse, causing the atmospheric pressure inside to be released and tear the base apart. Clavain is confident that the Conjoiners will soon be wiped out. The Conjoiners had really been digging a tunnel that they use to launch spaceships to Phobos, which they have hollowed out and turned into a massive shipyard. The Coalition was unaware the Conjoiners had control of the moon. As Galiana prepares to leave, Clavain first runs back and takes Felka with him, unable to leave without her. They take off and head for Phobos. Galiana warns Clavain that the deceleration upon landing will kill him unless he receives more extensive neural implants. He accepts, knowing he is about to defect from the Coalition. The Conjoiners have escaped upon their starship, named the Sandra Voi, to an ice planet called Diadem which orbits the star Ross. It is home to an American colony, seeded decades ago by automated robots containing human DNA, but it appears deserted. Everyone is dead and seem to have shown signs of insanity before they died. He and Galiana explore more of the colony, when they discover a corpse at the bottom of a crevasse. His helmet is detached from his suit, but Clavain realises that he would not have been able to leave the airlock without it being fully attached. He also notices the initials "IVF" carved into the ice nearby. Later on, Clavain and Galiana find a man frozen in a makeshift reefersleep unit. The Conjoiners fit him with neural implants in order to revive him, and when he regains consciousness, he claims to be Iverson. He is unable to explain the initials that were carved by the dead man. He becomes good friends with Felka who is now starting to become more human, but Clavain does not trust Iverson. He shows considerable interest in the worms, much like Setterholm was known to have done decades earlier. Eventually it occurs to Clavain that the letters "IVF" may have been the beginning of an attempt to spell "Iverson", with the man dying before he could finish carving the letter "E". In the meantime, he and Galiana are still unable to understand why everyone is dead, or why they all seemed to go insane. They eventually discover a sample of Earth bacteria that could have been altered to kill everyone. When they go to question Iverson, he and Felka are missing. Clavain and Galiana chase Iverson to an ice cave, where they find him and Felka. Galiana takes Felka away, and Clavain and Iverson talk. Clavain has realised by now that "Iverson" is actually Setterholm, who killed the real Iverson and swapped the records of their identities. Setterholm had discovered that the worms and the tunnels they dug through the ice which were coated in chemicals which determined which way the worms went down them, much like a human brain had become a massive natural information processor, which he believed either was or was becoming a sentient mind. However, the American fusion reactor needed ice, the mining of which would have killed the worms. In order to protect this intelligence, Setterholm killed everyone in the base. Setterholm denies his identity, but Clavain proves it by smashing an ice pick into the worm colony, causing Setterholm to try and stop him.

Clavain offers him the chance to leave, but Setterholm tries to kill him. Clavain then kills Setterholm by causing his neural implants to malfunction. He buries the corpse and returns to the others. Clavain and his family appear again as characters in *Redemption Ark* and to a certain extent *Absolution Gap*, set several centuries later. This short story is set on the moon Europa, controlled by the Demarchists. It portrays some of the events leading to the fall of Europa. As a result of a second Maunder Minimum, economic power in the Sol system has shifted to the moons around Jupiter. Both powers are vying for dominance. Marius Vargovic is a Gilgamesh agent who has been deployed to Europa to meet a woman known as Cholok, who has something that could threaten the cities of Europa. He lands in the city of Cadmus-Asterius, or C-A, a floating city whose top is built into the ice, but which descends eight kilometres into the ocean below. They meet in the city and Cholok reveals that she has a piece of "Hyperdiamond", a carbon compound that is extremely strong – individual molecules can be hundreds of metres in diameter. Floating spheres of vacuum encased in hyperdiamond keep the city from sinking. If Gilgamesh can find a way to tamper with it, they could cause the European cities to collapse. Marius is then operated on to give him the ability to breathe underwater. He asks Cholok about "Denizens", experimental cross-breeds between humans and fish to create the perfect underwater worker. She denies their existence. Marius kills her and leaves the city. As he swims northward to his extraction point, he is informed that it has been compromised. He swims southward, but the Demarchy is trailing him. He meets a group of Denizens who kill the Demarchist agents and inform him that Cholok created them, but the Demarchy turned them away and imprisoned them in their cave. The cave was warm enough to survive in, but if they went outside, their blood would freeze. Normally, they could make "glycoproteins" that would lower their freezing temperature, but the Demarchy has deactivated them. To get it, they need to drink his blood. As such, they kill him. The ship is almost wiped out, but a piece of debris destroys the pirate ship. Inigo discovers a Conjoiner girl hiding on the ship. She initially refuses to come with them, but Inigo knocks her out with a tranquilliser dart. Inigo talks to the girl who tells him that she cannot tell him her name – as a basic human, he would not be able to process it. She describes it as like the atmosphere of a gas giant, so he gives her the name of Weather. Inigo continues to speak to Weather as often as he can, but his captain refuses to let her out of her cell. He tells Inigo that he hates Conjoiners whom he refers to as "Spiders" because in the war against them, they took his wife and turned her into a Conjoiner without her consent. When the two met later on, she no longer seemed to hold any interest in him. Weather tells Inigo that the Conjoiners considered the act a kindness, but failed to realise the effect it would have on loved ones of the people they transformed. Meanwhile, the ship detects an incoming stealth vessel. Inigo, being the shipmaster, is in charge of the engines, but finds that he cannot make them accelerate without danger of nova this happens if the engines are pushed too hard, if non-Conjoiners attempt to open a Conjoiner Drive to reverse-engineer it, or if the two engines on a ship are allowed to get more than 1 mile away from each other. He gets permission to let Weather look at the engine, but she insists she cannot do anything to help. He lets her further inspect the engines. She opens one up and takes Inigo inside. They discover a brain that the Conjoiners inserted into the engine: Weather merges with him, making Inigo promise to bring other Conjoiners to help when they reach their destination. Inigo admits his love for Weather and leaves the engine. He is awoken from reefersleep a form of cryogenic suspension by Katia, a beta-level simulation of his real wife, who he had left behind on Yellowstone after the Melding Plague. He himself had been unwilling to remove his neural implants until it was too late, forcing him to flee Yellowstone aboard the ship. Katia could not come, so he covertly created a simulation of her to accompany him. She awakes him and informs him that Janos, one of the crewmembers, has been infected with the Melding Plague and needs immediate surgical assistance. As he walks through the ship, he notices he is being followed by a spectral, ghostlike figure, which disappears as he turns on the lights. Despite this, he goes ahead and carries out the operation, only to have the mysterious figure reappear before him. He is permanently blinded by the surgery and is unable to recreate the simulation, killing the low-quality copy he does create. In this story we also get to meet Dr. Trintignant, one of the main characters of the *Novella Diamond Dogs*. Grafenwalder is a collector of specimens of alien animals and freak human creations, having them on display in his bestiary. He is especially searching for a Denizen, one of the bio-engineered creatures from the Demarchist society on ancient Europa. When they reveal another collector, Ursula

Goodglass, has also got one, he bribes them to kill hers. Later, when Goodglass is showing it off, he reveals that it is in fact dead. Although he is temporarily ahead in the constant competition between animal collectors with his living hamadryad, Goodglass catches up by unveiling the living nervous system of Dr Trintignant. She offers him the choice of killing him or letting him continue to suffer.

Chapter 2 : Glacial by Alastair Reynolds | LibraryThing

GLACIAL New writer Alastair Reynolds is a frequent contributor to *Interzone* and has also sold to *Asimov's Science Fictio*.

Overview[edit] The Revelation Space universe is set in a future version of our world, with the addition of a number of extraterrestrial species and advanced technologies that are not necessarily grounded in current science. Reynolds has said he prefers to keep the science in his fiction plausible, but he will adopt science he believes will be impossible when it is necessary for the story. Instead, despite their dramatically advanced technology, they are similar to those of today in terms of their moral ambiguity and mixture of cruelty and decency, corruption and opportunity. The Revelation Space universe contains elements of Lovecraftian horror , with one posthuman entity stating explicitly that some things in the universe are fundamentally beyond human or transhuman understanding. Lascaille says that "the key" to something momentous "was explained to me [. One race of survivors, later termed the Inhibitors , having converted itself to machine form, predicted that the impending Andromeda–Milky Way collision , roughly 3 billion years in our future, may severely damage the capacity of either galaxy to support life. Consequently, they planned to adjust the positions of stars in order to limit the damage the collision would cause. Also central to the Inhibitor project was the eradication of all species above a certain technological level until the crisis was over as they believed no organic species would be capable of co-operating on such a large-scale project. Whilst they were relatively successful, certain advanced species were able to hide from Inhibitor forces, or even fight back. In human history, during 21st and 22nd centuries numerous wars occurred, and a flotilla of generation ships were deployed to colonise a planet orbiting the star 61 Cygni this becomes a major segment of the plot of *Chasm City*. Meanwhile, in the Solar System in , the Conjoiners emerged as a result of increased experimentation with neural implants. In response, the Coalition for Neural Purity was formed, opposed to the Conjoiners. Nevil Clavain fought on the side of the Coalition in the ensuing war, but defected later on after being betrayed. Clavain, and the Conjoiners, succeeded in escaping the Solar System and left for surrounding stars. For the next few centuries, the so-called Belle Epoque, humanity enjoyed a period of relative peace and prosperity, with several planets being colonised. Technologies developed included the Conjoiner Drive, a gift from the Conjoiners who resumed contact with humanity at an unknown time , advanced nanotechnology , and numerous other devices. With the exception of an attempted takeover of the Glitter Band, no major incidents affected humanity during this time. The Belle Epoque was terminated by the advent of the Melding Plague in , a nanotechnological virus that destroyed all other nanotechnology it came into contact with. Only the Conjoiners were unaffected by this disaster, which devastated the civilisation around Yellowstone. War between the Demarchists and Conjoiners erupted as a result of the plague. Meanwhile, activities around a far-flung human colony on the planet Resurgam, orbiting the star Delta Pavonis , inadvertently attracted the attention of the Inhibitors. The Conjoiners, also made aware of this event, sent Clavain to recover the exceedingly powerful "Cache Weapons" from this system said weapons having been stolen from the Conjoiners centuries before that could be used to fend off the Inhibitors while the Conjoiners escaped. Clavain instead defected from the Conjoiners, intending to use the weapons to protect all of humanity. Skade , another Conjoiner, was sent to stop him and recover the weapons. They fought around the Resurgam system, with Clavain and his allies eventually obtaining the weapons. Remontoire and his allies were now at war with the Inhibitors, assisted by alien technology obtained from Hades. Aura, daughter of Ana Khouri an ally of Remontoire infiltrated the theocracy under the pseudonym Rashmika Els. After considerable conflict, Scorpio and Aura realised that contacting the Shadows was inadvisable. They instead contacted the Nestbuilders , who provided them with weapons capable of defeating the Inhibitors. As such, the Inhibitors were effectively eradicated from human space, with buffer zones and frontiers established to keep them at bay. Humanity then enjoyed a second, year-long golden age. After this, however, came the Greenfly outbreak , in which human civilisation was destroyed by a rogue terraforming system of human origin that destroyed planets and converted them to millions of orbiting, vegetation-filled habitats. The Greenfly began to subsume most of human space, with all

efforts to stop them failing. The storyline of the Revelation Space universe thus far concludes with humanity leaving the Milky Way galaxy in an attempt to set up a new civilisation elsewhere.

Chapter 3 : Science Fiction and Fantasy Reading Experience: Alastair Reynolds "Galactic North", Part 2

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Works[edit] Reynolds wrote his first four published science fiction short stories while still a graduate student, in 1981; they appeared in 1982, his first sale being to Interzone. He then started spending much of his writing time on a first novel, which eventually turned into Revelation Space , while the few short stories he submitted from 1982 were rejected. This ended in when his story "Byrd Land Six" was published, which he says marked the beginning of a more serious phase of writing. As of [update] he has published over forty shorter works and nine novels. His works are hard science fiction veiled behind space opera and noir toned stories, and reflect his professional expertise with physics and astronomy, included by extrapolating future technologies in terms that are consistent, for the most part, with current science. Reynolds has said he prefers to keep the science in his books to what he personally believes will be possible, and he does not believe faster-than-light travel will ever be possible, but that he adopts science he believes will be impossible when it is necessary for the story. Five of his novels and several of his short stories take place within one consistent future universe, usually now called the Revelation Space universe after the first novel published in it, although it was originally developed in short stories for several years before the first novel. Although most characters appear in more than one novel, the works set within this future timeline rarely have the same protagonists twice. Often the protagonists from one work belong to a group that is regarded with suspicion or enmity by the protagonists of another work. In this universe, extraterrestrial sentience exists but is elusive, and interstellar travel is primarily undertaken by a class of vessel called a lighthugger which only approaches the speed of light faster than light travel is possible, but it is so dangerous that no race uses it. The trilogy consisting of Revelation Space , Redemption Ark and Absolution Gap the Inhibitor trilogy [1] deal with humanity coming to the attention of the Inhibitors and the resultant war between them. Century Rain takes place in a future universe independent of the Revelation Space universe and has different rules, such as faster-than-light travel being possible through a system of portals similar to wormholes. According to Alastair himself, no sequel will ever be made on Century Rain. It contains an alternative interpretation of the Fermi paradox: The Prefect marked a return to the Revelation Space universe. Like Chasm City , it is a stand-alone novel within the Revelation Space universe. It is set prior to any of the other Revelation Space novels, though still years after the original human settlement of the Epsilon Eridani system. It was published in the United Kingdom on 2 April House of Suns is a standalone novel set in the same universe as his novella "Thousandth Night" from the One Million A. Reynolds described it as "Six million years in the future, starfaring clones, tensions between human and robot metacivilisations, King Crimson jokes. As with Century Rain, Reynolds has said that he does not plan any further work in the universe of Terminal World.

Galactic North is a collection of science fiction short stories by British author Alastair Reynolds, published by Gollancz in It comprises most of Reynold's short stories and novellas set in the Revelation Space universe.

His first novel, *Revelation Space*, was widely hailed as one of the major SF books of the year. His most recent novel is a sequel to *Revelation Space* also attracting much notice, *Chasm City*. Upcoming is another big new novel, *Redemption Ark*. A professional scientist with a Ph. In the taut and absorbing story that follows, he takes us to the arid and frozen wastelands of a distant alien planet, where one man must solve an intricate and puzzling mystery before the clock runs out -- and his own life runs out with it. The field stretched away in all directions, gouged by sleek-sided crevasses. They had mapped the largest cracks before landing, but he was still wary of surprises; his breath caught every time his booted foot cracked through a layer of ice. He was aware of how dangerous it would be to wander from the red path that his implants were painting across the glacier field. He only had to remind himself what had happened to Martin Setterholm. They had found his body a month ago, shortly after their arrival on the planet. It had been near the main American base; a stroll from the perimeter of the huge, deserted complex of stilted domes and ice-walled caverns. But Clavain had been troubled by the gaps and had wondered if any further dead might be found in the surrounding ice fields. He had explored the warrens of the base until he found an airlock which had never been closed, and though snowfalls had long since obliterated any footprints, there was little doubt in which direction a wanderer would have set off. Long before the base had vanished over the horizon, Clavain had run into the edge of a deep, wide crevasse. Clavain had gone back to the others and had them return with a winch to lower him into the depths, descending thirty or forty meters into a cathedral of stained and sculpted ice. The body had come into view: The helmet had ended up a few meters away. No one died instantly on *Diadem*. The air was breathable for short periods, and the man had clearly had time to ponder his predicament. Even in his confused state of mind he must have known that he was going to die. He felt sorry for him but could not deny himself the small satisfaction of accounting for another of the dead. Setterholm had been among the missing, and though he had waited the better part of a century for it, he would at least receive a proper funeral now. There was something else, but Clavain very nearly missed it. Setterholm had lived long enough to scratch out a message in the ice. Sheltered at the base of the glacier, the marks he had gouged were still legible. Three letters, it seemed to Clavain: The message meant nothing to Clavain, and even a deep search of the Conjoiner collective memory threw up only a handful of vaguely plausible candidates. The least ridiculous was *in vitro* fertilization, but even that seemed to have no immediate connection with Setterholm. But then again, he had been a biologist, according to the base records. Did the message spell out the chilling truth about what had happened to the colony on *Diadem*: Something to do with the worms, perhaps? He was hardly unique anyway: Basic safety procedures -- like not wandering into a crevasse zone without the right equipment -- had been forgotten or ignored. Machines had been used improperly. Drugs had been administered incorrectly. Sometimes the victim had taken only themselves to the grave, but in other cases the death toll had been much higher. And it had all happened so swiftly. Galiana talked about it as if it were some kind of psychosis, while the other Conjoiners speculated about some kind of emergent neural condition, buried in the gene pool of the entire colony, lurking for years until it was activated by an environmental trigger. They were everywhere, after all, and the Americans had certainly been interested in them -- Setterholm especially. Clavain himself had pressed his faceplate against the ice and seen that the worms reached down to the depth where the man had died. Their fine burrowing trails scratched into the vertical ice walls like the branchings of a river delta; the dark nodes of breeding tangled at the intersections of the larger tunnels. The worm biomass in this one colony must have been several dozen tons at the very least. Time away from the others always seemed to fly by, like sleep to an exhausted man. Perhaps the analogy was accurate, at that: And for Clavain -- who still needed normal sleep -these periods away from the others were when his mind took a rest from the business of engaging in frantic neural communion with the other Conjoiners. He could almost feel his neurones breathing a vast collective groan of relief, now that all they had to do was process the thoughts of a single mind. Two hours was nowhere

near enough. If he were lucky, the sample might even hold a breeding tangle; a knot of several dozen worms engaged in a slow, complicated orgy of cannibalism and sex. There, he would complete the same comprehensive scans he had run on all the other worms he had picked up, trying to guess just why the Americans had devoted so much effort to studying them. And doubtless he would get exactly the same results he had found previously. The worms never changed; there was no astonishing mutation buried in every hundredth or even thousandth specimen, no stunning biochemical trickery going on inside them. They secreted a few simple enzymes and they ate pollen grains and ice-bound algae and they wriggled their way through cracks in the ice, and when they met other worms they obeyed the brainless rules of life, death, and procreation. That was all they did. Galiana, in other words, was right: He had fought against her Conjoiners on Mars and she had taken him prisoner at the height of the war. Later -- when he was older and an uneasy truce looked like it was on the point of collapsing -- Clavain had gone back to Mars with the intention of reasoning with Galiana. Later, along with Galiana, Felka, and their allies, Clavain had escaped from the system in a prototype starship, the *Sandra Voi*. Diadem had been their first port of call. A month ago, at the beginning of the expedition, it had been much easier to justify these excursions. Even some of the true Conjoiners had been drawn by a primal human urge to walk out into the wilderness, surrounding themselves with kilometers of beautifully tinted, elegantly fractured, unthinking ice. It was good to be somewhere quiet and pristine, after the war-torn solar system that they had left behind. Diadem was an Earthlike planet orbiting the star Ross. It had oceans, icecaps, plate tectonics, and signs of reasonably advanced multicellular life. The largest land-based animals were still small by terrestrial standards, since nothing in the oceans had yet evolved an internal skeleton. There was nothing that showed any signs of intelligence, but that was only a minor disappointment. Yet even before Galiana had sent down the first survey shuttles, a shattering truth had become apparent. Someone had reached Diadem before them. The signs were unmistakable: Upon inspection from orbit they turned out to be ruined structures and equipment, obviously of human origin. We have to be the first. No one else has ever built anything like the *Sandra Voi*; nothing capable of traveling this far. Now -- later still than he had promised -- Clavain made his way back to the waiting shuttle. He climbed up and stepped through the transparent membrane that spanned the entrance door, most of his suit slithering away on contact with the membrane. By the time he was inside the ship he wore only a lightweight breather mask and a few communication devices. He returned the equipment to a storage locker, placed the worm sample in a refrigeration rack, and clothed himself in a paper-thin black tunic and trousers before moving into the aft compartment where Galiana was waiting. She and Felka were sitting facing each other across the blank-walled, austere furnished room. They looked like a mother and daughter locked in argumentative stalemate, but Clavain knew better. He issued the mental command, well-rehearsed now, which opened his mind to communion with the others. It was like opening a tiny aperture in the side of a dam; he was never adequately prepared for the force with which the flow of data hit him. Galiana and Felka, dressed dourly a moment earlier, were now veiled in light, and appeared superhumanly beautiful. He could feel their thoughts, as if he were overhearing a heated conversation in the room next door. Most of it was nonverbal; Galiana and Felka playing an intense, abstract game. The thing floating between them was a solid lattice of light, resembling the plumbing diagram of an insanely complex refinery. It was constantly adjusting itself, with colored flows racing this way and that as the geometry changed. About half the volume was green; what remained was lilac, but now the former encroached dramatically on the latter. Felka laughed; she was winning. Galiana conceded and crashed back into her seat with a sigh of exhaustion, but she was smiling as well. "I appear to have distracted you," Clavain said. Felka had been a failed Conjoiner experiment in the manipulation of foetal brain development; a child with a mind more machine than human. She had no interest in people -- indeed; she could not even discriminate faces. But when the nest was being evacuated, Clavain had risked his life to save hers, even though Galiana had told him that the kindest thing would be to let her die. She had begun to show signs of recognition in his presence, perhaps sensing on some level that they had a kinship; that they were both strangers stumbling toward a strange new light. Galiana rose from her chair, carpets of light wrapping around her. She thought it was funny. He liked his beard, even though it was trimmed to little more than gray stubble so that he could slip a breather mask on without difficulty. It was as much a link to his past

as his memories or the wrinkles Galiana had studiously built into his remodelled body. I could have put that thought into your head in a microsecond, if you allowed me to do so -- but you still insist that we communicate by making noises in our throats, the way monkeys do. They settled into adjacent seats while avionic displays slithered into take-off configuration. So his implants obliged, hallucinating a joystick inset with buttons and levers, and when he reached out to grasp it his hands seemed to close around something solid.

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In this section, known as the fracture zone, the ice mostly moves as a single unit. Ice in the fracture zone moves over the top of the lower section. When the glacier moves through irregular terrain, cracks form in the fracture zone. These cracks can be up to 50 meters deep, at which point they meet the plastic-like flow underneath that seals them. The lower layers of glacial ice flow and deform plastically under the pressure, allowing the glacier as a whole to move slowly like a viscous fluid. Glaciers flow downslope, usually this reflects the slope of their base, but it may reflect the surface slope instead. Thus, a glacier can flow rises in terrain at their base. The upper layers of glaciers are more brittle, and often form deep cracks known as crevasses. Moving ice-snow of a glacier is often separated from a mountain side or snow-ice that is stationary and clinging to that mountain side by a bergshrund. This looks like a crevasse but is at the margin of the glacier and is a singular feature. Crevasses form due to differences in glacier velocity. As the parts move at different speeds and directions, shear forces cause the two sections to break apart opening the crack of a crevasse all along the disconnecting faces. Projected in effect over three dimensions, one may settle and tip, the other upthrust or twist, or all such combinations due to the effects of each floating on the plastic layers below and any contact with rock and such. Hence the distance between the two separated parts while touching and rubbing deep down, frequently widens significantly towards the surface layers, many times creating a wide chasm. Crevasses seldom are more than feet deep. Beneath this point the plastic deformation of the ice under pressure is so great for the differential motion to generate cracks. Crevasses can be transverse flow, as a glacier accelerates where the slope steepens, or they can be longitudinal parallel to flow where the central part of the glacier is moving faster than the marginal portion. These crevasses make travel over glaciers hazardous. Subsequent heavy snow may form a fragile snow bridge, increasing the danger by hiding their presence at the surface. Below the equilibrium line glacier meltwater is concentrated in stream channels. The meltwater can pool in a proglacial lake, a lake on top of the glacier, or can descend into the depths of the glacier via a moulins. Then within or beneath the glacier the stream will flow in an englacial tunnel. Sometimes these tunnels reemerge at the surface of the glacier. Speed Edit The speed of glacial displacement is partly determined by friction. Friction makes the ice at the bottom of the glacier move more slowly than the upper portion. This was confirmed by experiments in the 19th century, in which stakes were planted in a line across an alpine glacier, and as time passed, those in the center moved farther. Mean speeds vary from stagnant areas with no motion where trees can establish themselves on surface sediment deposits such as in Alaska. Velocity increases with increasing slope, increasing thickness, increasing snowfall, increasing longitudinal confinement, increasing basal temperature, increasing meltwater production, reduced bed hardness and A few glaciers have periods of very rapid advancement called surges. These glaciers exhibit normal movement until suddenly they accelerate, then return to their previous state. During these surges, the glacier may reach velocities far greater than normal speed. They only occur below icefalls but not all icefalls have ogives below them. Ogives are likely linked to seasonal motion of the glacier as the width of one dark and one light band generally equals the annual movement of the glacier. The ridges and valleys are formed because ice from an icefall is severely broken up thereby increasing ablation surface area during the summertime creating a swale and creating space for snow accumulation in the winter creating a ridge. Mountain glaciers are widespread e. On mainland Australia no glaciers exist today, although a small glacier on Mount Kosciuszko was present in the last glacial period, and Tasmania was widely glaciated. In New Guinea small glaciers are located on its highest summit massif of Puncak Jaya. As temperature decreases with altitude, high mountains "even those near the Equator" have permanent snow cover on their upper portions, above the snow line. Conversely, areas of the Arctic such as Banks Island and Antarctic, Dry Valleys are arid and receive little snowfall despite the bitter cold. Cold air, unlike warm air, is unable to transport much water vapor. In Antarctica, the snow does not melt even at sea level. This is because these peaks are located near or in the hyperarid Atacama

desert. Glaciers on Mars File: Especially the south polar cap is compared to glaciers on Earth.

Alastair Reynolds - Turquoise Days. Read more. Alastair Reynolds - Minla's Flowers.

The plot of *Redemption Ark* involves the pursuit of the "hell class" weapons stored on the ship *Nostalgia for Infinity* introduced in *Revelation Space*. Humanity has split into several factions. These include the Conjoiners, humans who have incorporated technology that allows them not only to share thoughts, but to enhance many aspects of their existence such as vision enhancements, pain blocking, fastidious memory collection and recall, etc. The other featured faction is the Demarchists, baseline humans who originally practiced a form of decentralised mass-participatory democracy, but whose civilisation was all but destroyed by the Melding Plague. These factions, allies before the plague, are, in the time frame of the novel, at war with each other, with a Conjoiner victory imminent. Plot The novel takes place around the planets Yellowstone and Resurgam, in two story lines which converge near the climax of the novel. Yellowstone Edit The novel begins in the year 50, where Skade has been tasked with investigating a Conjoiner ship that has returned to the Conjoiner headquarters, the Mother Nest. It is revealed early on that Skade is a Conjoiner woman who appears to be in touch with secret circles of control within the theoretically egalitarian Conjoiners society. In the ship, she discovers Galiana, the original founder of the Conjoiners, who left Conjoiner space decades previously on an exploration mission. In space, she encountered the Inhibitors, who have unleashed an agent into her ships which has taken control of it and killed her crew. It now controls her mind as well. Galiana requests that Skade kill her, but Skade only places her in suspended animation in the hope that she can be helped in the future. Ten years later, Nevil Clavain is facing problems in the Conjoiner mother nest; he is struggling to find answers as to what happened to Galiana he is unaware that she is still alive and about Felka, who he believes may be his daughter. He ponders this as he leaves on a mission, during which he rescues Antoinette Bax as she buries her father in the gas giant Tangerine Dream. Her ship severely damaged, Antoinette limps back to the Rust Belt, a ring of orbital habitats around Yellowstone. Skade now informs him about the Inhibitors, convincing him to undertake a mission to reclaim lost Conjoiner Cache Weapons and taking him to see the fleet of advanced starships that the Conjoiners have been building in secret. Although, Skade claims that the weapons and ships will be used to defend humanity against the Inhibitors, Clavain is convinced that they will actually be used simply to evacuate the Conjoiners and abandoning the rest of humanity. Clavain is followed by Scorpio and Remontoire, but they along with Antoinette and Clavain are captured by the mysterious underground figure known as H. H reveals what happened to Skade during a Conjoiner raid into Chasm City. This was when Skade discovered the secrets that would lead her to develop inertia suppression technology, and when H believes she was subverted by an alien intellect. H supplies ships and his own version of the inertial suppression technology, while Scorpio supplies an army of hyper-pigs for the pursuit. Skade and Clavain race to the Resurgam system employing various creative long-distance strategies against each other and pushing their vessels to higher and higher speeds. Clavain and crew arrive in the Zodiacal Light ready to recover the cache weapons. Resurgam Edit Several years on roughly 50 from the start of the book, Triumvir Ilia Volyova and Ana Khouri are on the planet Resurgam and have discovered a new threat; the Inhibitors, alerted to the presence of humanity during events described in *Revelation Space*, have begun dismantling several rocky moons across the system and are moving their components towards the gas giant, Roc. They resolve to evacuate Resurgam by enlisting the aide of the rebel Thorn who has been attempting to evacuate Resurgam all along, by open communications with Captain John Brannigan who is in direct control of their ship due to the nanotechnological Melding Plague, and by enabling the Cache Weapons as a last resort against the Inhibitors. Successful in all three endeavors Volyova, Khouri, and Thorn begin the lengthy evacuation, while the Inhibitors continue their mysterious construction project. It is at this point that a beta-level simulation of Clavain arrives in a laser transmission, and attempts to negotiate the peaceful turn over of the cache weapons to the soon to be arriving Zodiacal Light. Volyova rejects his requests, explaining that she has greater need to the weapons and continues deploying them. When Zodiacal Light arrives in the system, and because of the failure of the beta-level to negotiate a handover, Clavain attacks *Nostalgia for Infinity* using Scorpio and his

army of pigs as a boarding party. Negotiations resume and the two sides come to terms. The evacuation is completed with the help of the Storm Bird and Nostalgia for Infinity departs; Volyova, who is dying from injuries suffered during a suicide attempt by the Captain takes half of the cache weapons and attacks the Inhibitors in the Storm Bird, to no effect. Remontoire and Khouri remain in the system in the Zodiacal Light to try and contact Dan Sylveste in the Hades Matrix in hope that he will be able to supply information that can be used to fight the Inhibitors. The novel ends with Nostalgia for Infinity establishing a colony on an unnamed Pattern Juggler planet in the following novel Absolution Gap it is called Ararat , waiting for the Zodiacal Light to catch up with them so that they can continue the fight against the Inhibitors. Inhibitor Asides Edit In addition to the two plot lines there are occasional asides explaining the history and motivation of the Inhibitors. These asides explain the galaxy was once filled with star faring civilizations. They had determined that collision could be most easily dealt with if intelligent life was kept isolated to individual star systems, leaving the Inhibitors to perform any necessary manipulations of stars and planets to reduce the damage caused by the collision. The asides also reveal that the Inhibitors were not as brutal in their past, but their performance has degraded over the millennia. They have been detecting civilizations at later stages, and required to commit wholesale extinction more often. Clavain, however, is not convinced that the Inhibitors are right about the coming catastrophe and believes that their degrading performance may give humanity a chance for survival that other species have not had. As such, he rejects the Inhibitor requests to stand down. Redemptions Edit A number of characters in the novel have committed more or less terrible crimes, and express a desire to redeem themselves. John Brannigan tries to commit suicide because he does not want to live any longer with the memory of his past crimes. When he does not succeed, he permits his ship to become an ark for the refugees from Resurgam. Iliia Volyova equally sees her final attack on the inhibitors as an act of redemption. The alpha-level simulation on the Storm Bird, a convicted criminal, sees his suicidal assistance to Iliia Volyova as equally redemptive.

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Alastair Preston Reynolds (born 13 March) is a British science fiction calendrierdelascience.com specialises in hard science fiction and space calendrierdelascience.com spent his early years in Cornwall, moved back to Wales before going to Newcastle University, where he read physics and astronomy.

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Redemption Ark is a hard science fiction space opera novel by Welsh author Alastair Reynolds. It is the second book in the Revelation Space series, and it continues the story of Nevil Clavain begun in the short stories "Great Wall of Mars" and "Glacial".