

- SHARD -

by Tim Machan

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“God! Out here there’s never any daylight, only this damnable darkness!” cursed Johnson under his breath as he struggled to keep his craft in one piece.

The small ship was darting between large chunks of rock in the outer reaches of the asteroid belt. Of course, while he angrily cursed each threatening fragment, he skillfully maneuvered his craft to avoid potentially disastrous collisions. The rest of his crew was stationed in form fitting seats, each busily maintaining his vigilance at the consoles of the craft’s sophisticated search equipment. Outside the thick armored hull of their ship, powerful search lights and invisible scanner beams probed the dangerously cluttered darkness around them.

Suddenly the crew was tossed violently against the restraints securing them as their ship veered sharply to avoid a planetoid the size of a large building. Just as the ship cleared it by a neat three hundred meters, one of the crew shouted out loud.

“There!”

Immediately responding to the cry, Johnson quickly rendezvoused with that large asteroid to try get a better look at what his crewman had spotted. Unfortunately, this immediately placed his ship in jeopardy as smaller pieces of rock that were traveling in a variety of orbits around that asteroid began to shower the ship. These clanged loudly against the ship’s thick outer shell, and their multitudinous and forceful onslaught quickly began to mar it. They scraped deep gouges into its hardened surface, and in no time at all they had almost completely defaced the tall red letters painted on the ship’s side which spelled out “A.C.D.Craft #34”.

Johnson’s face, which was already beaded with sweat, quickly became streaked as those beads joined to run in rivulets down his tensed neck. The pressure he was under increased ten fold in this new orbit, and he worked hard to control his ship. He called upon all his skills to maintain a stable orbit around that rough hewn lump of rock.

Although the larger fragments made the ship shudder with their forceful impact, and represented the only real danger to the ship, the myriad of loud banging and scraping sounds created by the smaller ones pelting the ship was incessant. This noise quickly began to work on the crew’s nerves as each simply worked to fulfil his purpose.

“There’d better be something here Blanchard!” Johnson shouted into his headset to be heard above the din. And everyone heard him, including the crewman who’d spotted something, however none acknowledged the captain as each focused his full attention on the planetoid they circled so closely. They were all working hard to keep the ship’s powerful lights and sensitive scanners steady as their craft veered again and again to avoid collisions.

There was nothing “new” to this search procedure. The crew of Number Thirty Four all knew that any time an object of interest was spotted, their ship would be placed in jeopardy. Seasoned veterans, they had complete trust in each other that their lives would not be compromised without just cause.

Following standard procedures, they carefully swept the uneven surface with their lights and sensors. Unfortunately, the asteroid’s convoluted surface resisted their probing. Not only did it have deep crevasses, but its rugged terrain cast a myriad of shadows as the ship’s lights coursed across it. The rough surface had been ravaged by time and the erosive effect of its hostile environment. The shadows created by the brilliant lights coursing across its tormented terrain resembled surrealistic projections of pitch black against bright white.

After several futile minutes of probing the general area in which Blanchard was sure he had seen something, Johnson was about to break off the search, when suddenly, a bright flash from the asteroid’s surface blazed into the ship through its view ports.

“There it is!” Blanchard shouted excitedly.

“What the...!,” a fellow crewman cried out in alarm, as the interior of the ship was suddenly engulfed in smoke and showers of sparks exploded around them. Something was overloading their scanners and burning them out!

As the interior seemed to explode into flames, the crew was automatically encapsulated in their chairs. A clear, shell-like barrier rotated out of the floor to cover each of them, locking into place and isolating him from the fiery interior of the ship. Meanwhile, other automated systems cleared the interior of the dark smoke. The fire control system purged the ship’s interior of oxygen by opening several large air locks. This fire control system was simple yet highly effective, eliminating the oxygen on which the fires fed and at the same time radically reducing the interior temperature of the craft, which further reduced the damage to the ship.

However, even though the flames were extinguished nearly instantaneously, and the smoky interior cleared rapidly, the now completely isolated members of the crew saw that almost every one of their consoles was

damaged beyond repair. Meanwhile, the incessant din of the barrage of rocks pelting the ship continued unabated in their ears.

Only moments had passed since the initial flash, and the subsequent squelching of the fires, when Johnson began asking for damage reports. As he listened calmly to the concise but disturbing reports, he fought the usually smooth controls that now were responding slowly and sluggishly. With what control remained, he attempted to maneuvered the ship so that he could more closely inspect the place from which that blinding spot of brilliance had come. He was angry; that instant's flash had almost totally disabled his ship, and he wanted to know what had done it.

Through the view ports along his side of the craft, the site from which that flash had come could be clearly seen. Although it was no longer dazzlingly brilliant, one narrow beam from one of the ship's remaining operational spot lights lit the area. In the center of that beam, something stood out against the dull monotony of the grey-brown rock.

"It looks like a tiny blue-white star!..." Johnson commented of the small spot of brilliance which was radiating thin spokes of light. "What do you make of it?" he asked his crew of highly trained observers and scientists.

One answered, but he spoke in a vague tone... "I don't know..." his voice trailed off.

"Great!" a frightened but angry voice added on the open communications channel that the encapsulated crew shared. "A God Damn 'something' knocks us on our asses, and he 'don't know'!"

"Shut up Richards," Johnson yelled at the offensive crew member who'd spoken out. "Hicks?"

"Yes sir," replied the ship's Vehicular Specialist.

"Can we snatch it?"

"That depends. We've only got a small reserve of pressure for the hydraulics, and we'll need some of that for engine control..." Hicks hesitated, then added. "The hydraulics are about all we have left! Whatever 'that' is, it blew out almost all our electrics! Christ, all we've got left that's fully operational is our personal capsule life-support systems... thank God!... and the last of the backups for the navigational computer is still on line..."

"Hicks, that's nice to know, but all I asked was, 'can we snatch it?'"

"If it's small and not embedded, yes! But otherwise I suggest we mark the location and come back later!"

"What?!" yelled Johnson. "We'd be lucky if we got back out here in two years! If at all! AND, Damn it, whatever that 'mother' is, I want it!... Now!"

An electronically synthesized voice intruded on Johnson's strong words. It's tone, cool yet assured, asked, "Sir!?"

"Yes Thomas?" Johnson answered.

"If we snatch the object in question within six minutes, we can clear this area on a vector that will assure our safety using only ten percent of our remaining fuel and requiring only fifty-six percent of our current hydraulic reserves."

"Thank you, Thomas."

"You're welcome, sir."

Johnson had to admit he was relieved. Even though it was using only its last backup, his ship's Navigational Computer System, "Thomas", sounded fully functional... "His" input was important, to say the least.

"Well Hicks, you heard Thomas! So, I'm gonna slide us in close, and I want you to get me that little pretty!"

"I'll give it my best shot sir," Hicks replied, then commented, "I sure hope its just a piece of crystal, not the tip of a damn iceberg!"

"Hicks, cut the dramatic crap, and just get it for him!" sounded off another of the tense crew.

"Yeah, Hicks! Then maybe we'll get outta here fast enough to stay in one piece!" chimed in another.

"And once we're clear, I'll deploy a beacon, and Control will come and pick us up!" added Thomas in his confident manner.

"That's right Thomas, you tell'em," added but another voice on the open comm line.

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Months later in a secluded subterranean research lab on the dark side of the Moon, three miles from the main base of the complex, the small crystalline object that Hicks extricated, and the crew of the A.C.D. Craft #34 had successfully managed to bring back, was under detailed scrutiny by two hooded

long time since you've had anything of real interest to report.”

“It has been a good long while, Tasin... But for many good reasons. And, by the way, I know who we may have to call... Thank God, we've a good idea of how they'll react to our report, when we place it, thank's to this conversation...”

“First, they'll doubt us, and then even after they see it, they'll try to reject it,” Tasin said, finding himself pointing at the experiment in progress... “You know Zelda, I've even had the creeping suspicion that somehow that shard of crystal is mocking us!”

“You're right Tasin! After all, look at the state of mind in which we find ourselves... And it just sits there and calmly defies all the natural laws of optical transmission!”

“Zelda...” Tasin began, but stopped as he noticed that his companion's attention had suddenly focused elsewhere. From experience, he knew this was a time not to interrupt the older scientist. Tasin was fortyish, just a child compared to the wizened scientist Zelda, and he had often seen her slip into an almost trance-like state of concentration. He knew from past experience, that she was unreachable. He simply returned to scanning his instruments while he waited for her conscious attention to return to the lab and the test in progress.

In deep thought, Zelda had walked over to the bench and had pressed herself against it, her large bulk was now bent at what was probably her waist and her upper body extended a short distance past the high edge of the lab table. She was in a state of deep contemplation, as she moved her face closer to that shard. As the facts and figures from the test results swirled in her head, she slowly stood upright and removed her heavy bulky hood. In the energized atmosphere of the lab, her whitened hair glowed an eerie crimson, and her face, whose features had been hardened by time were stood out sharply in the red glow.

When she first removed her hood, Tasin saw her facial expression was momentarily frozen in painful anguish. What he saw was the traumatic effect that the situation was forcing on Zelda. She was being forced to make a very difficult decision, at a time when she least wanted to make one.

“Well Tasin,” she finally said after three long minutes of silent contemplation, “I guess we'll have to notify the Alien Culture Discovery Department first... After all, those 'wise-ass space explorers' are the ones who laid this little gem in our laps in the first place... I'll take great pleasure in letting them know that they've finally sent the first sample our way that's worth more than a plug nickel...”

“It's about time, after all these years of junk!...” Tasin chimed in, but Zelda, ignoring him, continued.

“I'll transmit them an encoded message when you end this sequence... Then we'd better alert security and have them lock down the lab “air tight”... When they hear what we've got, they'll probably want to coordinate with the A.C.D. and make sure that the security at the site of the find is nailed down as well!... Lucky for us, Tasin, all we've gotta do is finish the rest of our scheduled preliminary tests, and we'll be able to wash our hands of this mess!”

Tasin noticed that Zelda's tone was serious, and that her voice carried an edge of anxiety as she rattled off this string of thoughts. Her statements were strung so close together that Tasin knew she was thinking out loud. Of course, because her words were important, he listened, but the manner in which she spoke was cold and impersonal. He didn't like this, so he interjected a question to remind her that he was there.

“What about the physics big shots back at the Main Base? And what about the military?” he asked, referring to the “all-hated big shot administrators” as Zelda so “fondly” Zelda referred to them. Of course, his question was directed more to get her attention than to evoke a direct response, and it had a marked effect on her. Zelda despised the bulk of the administrative scientists, who'd worked there way up to where they could rest on their laurels instead of continuing to apply their minds. Not to mention the tunnel visioned military officers that only came to Zelda's labs looking for new weapons and the associated hi-tech hardware an optics research lab was “supposed” to produce. So, Tasin's tactic worked its own little miracle, and even though she continued running through her plans, Zelda's voice almost immediately shifted to a more personal tone. In doing so, she acknowledged his presence, but just then her monologue ended, and she directly addressed his question.

“Well, Tasin, we're gonna to have to let them in on this sooner or later... But to be realistic, if this little miracle suddenly blows up in our faces, we'd look pretty foolish if we pulled either of those groups in too soon... “ she paused, and Tasin saw a devilish grin appear on her face. “Then again...” she said very deviously, “Maybe that's exactly what we should do!... We might get lucky and take a few of 'em out with us!”

“Now Zelda!” Tasin said as he mockingly shook his finger in her direction.

“All right... All right... Just kidding!”

“Well then, Zeld,” Tasin said seriously, to put the kidding aside, and to continue their discussion of this mutually agreed to be difficult situation, “I guess we might as well conclude this test sequence right now... After all I've been pouring energy into that thing for three hours straight. And, if it's going to explode... or perhaps implode... considering how much energy I show we've lost, it should do it now

or never!... Permission to power down?"

"No Tasin... Hold it for a second or two while I run on down to the shelter!" Zelda replied. She turned towards the lab's doors and then turned back towards him and said, "Oh, never mind, at my age and considering my speed, I won't even make it to that door by the time you complete the disconnect... Go ahead and shut it down!"

Tasin was relieved to hear more of his superior's usual poor humor returning to her dialogue. Zelda was starting to sound like her old self again which made him feel a lot better. He voice commanded the room's control computer. "Auto power down, room lights on!"

Instantly, the ruby glow in the laboratory ended, and the low pulsing hum of the high energy that had been feeding the crystal was replaced by the usual sounds of the room as it responded to his orders. The room was nearly silent. The only noticeable sound was the air flowing from the duct work and those sounds filtering in from outside. Only a few muffled voices from the adjacent work areas, and the noises from the busy corridor just outside the lab's heavy sliding doors reached their ears.

"Well, no disaster!... yet," stated Tasin after ten seconds passed. Of course, he had actually held his breath for that ten count, anticipating that something might take place in those seconds after the laser was shut down. He was very relieved that nothing did, and commented, "Zelda, it's hard to imagine that we're the only two people who have ever seen anything like that... Of course, that could become quite a responsibility!"

"That it may, my friend," Zelda said, agreeing with his words.

Of course, Tasin had been pulling his protective headgear forward and up to clear his wire rimmed glasses, before he let it fall to hang against his chest, and he'd heard her words but hadn't seen the wide grin on Zelda's face.

"Responsibility my ass!" she kidded. "Bet ya a week's pay it'll end up the biggest and most royal pain in the ass..." Zelda stopped abruptly and exclaimed, "Tasin! Look at the latest readings!"

He quickly scanned the array of monitors that were mounted at eye level, and then back again at the test bench, the look on his face was one of near disbelief. Yet, there, bathed in the lab's artificial white light, the small rough crystal shard simply maintained its look of innocence. Yet after hours of intense energy saturation, it lay completely inert, and according to the data on the readouts, the crystal was still sitting at room temperature!

"No heat! No residual radiation or emissions on any wave length! Not a damn thing!" he remarked. "And there it is," he pointed to one monitor in particular, "concrete evidence that the total energy levels within the lab were decreasing radically during the test!... What could possibly absorb that amount of energy, and not show any sign of it?"

"I don't know!... Yet!... But I do know one thing for sure," Zelda wanted to share a quick deduction of hers, "And I wish it weren't so damn obvious... the military is just going to love getting their hands on this gem. Not only does it convert focused laser energy into some altered energy beam, but it also has the ability to absorb energy!... They'll see it either as a weapon, a shield, or both!... Tasin, we've got to figure out how to keep it here long enough to understand it!"

"A weapon? A shield? The possibilities scare me!" said a justifiably worried Tasin.

"That's reality my boy!"

"But, my mind can't even begin to consider possible applications until we get past understanding the theory of a concept..."

"That never slows down the war mongers Tasin!"

"Are they that bad?"

"Tasin, I've spent too many years finding so little, but boy do they pay well anytime I can make a new theory sound like it has strategic applications... That's the only way I've been able to go on getting the funding I needed for all this!..." Zelda pointed to the lab around them.

"I always wondered how you pulled that off." Tasin remarked.

"Hell, I'd been fighting for contracts for forty-five years before we even met Tasin..."

"That's a long time!"

"You bet it is, and I'll tell you that every time I made anything look too "juicy" from a weapons point of view, that the military would clamp the lid on tight. I'll tell you Tasin, their security measures made real research nearly impossible, and a couple of times they took away my projects 'For others to complete' I was told!"

Even though Zelda's mind had wandered a bit, Tasin always enjoyed her reminiscence of her past, so he let her ramble on.

"Of course, that's when I first figured out how to make them leave me alone, even though I produced a useful quantity of what they were looking for, I started 'crying wolf' more often than was warranted. Of course, by intentionally disappointing them more often than surprising them, they finally began to leave me

and prepared the ruby excitation laser for another high energy burst.

"How setting the barrier just beyond the predicted range of the blue beam, and then have the rack move in bit by bit?" suggested Tasin.

"Good idea!" answered Zelda. "Once you've got it set, join me behind our mirror-shield. We'll get on our helmets and watch the show!"

Tasin hurried to secure the barrier to the rack built into the lab's floor. Then after double checking the fasteners holding it, he walked over to join Zelda behind the safety shield. By then, Zelda had pushed the mantis-like scanner off to one side, and had slipped on her headgear.

"Room lights out!" commanded Tasin as he eased his hood over his glasses.

"Laser activate!" Zelda ordered.

As the bright ruby red laser beam struck the crystal, the expected 'miracle' took place and the solid looking blue rod again extended out the opposite side of the shard. It stopped just inches away from the target barrier.

"Ok Tasin, dial it in," ordered Zelda.

"I'll close the gap a few millimeters at a time," said Tasin, and he couldn't help but to add, "And by the way, if anything goes wrong, I'll see you where-ever!" "That's really tacky, Tasin. But if something does goes wrong, and YOU manage to survive, I'll be waiting there for you... And I just know the first thing you'll say to me was 'I told you we should have been more careful!'"

With this last comment, the two turned their attention to their readouts while they awaited whatever events were going to unfold before them.

After what seemed an eternity, the blue beam finally touched the target. This contact immediately brought a loud cracking noise, and a thick vapor rose from the barrier where the beam touched it. Showers of sparkling particles lit the room as brightly as lightning. Falling like a waterfall of white light, they spilled onto the lab floor.

This bright light and the loud crackling sounds accompanying it were the only hints that the two scientists had of the power being unleashed at the contact area.

"We'll bring the barrier in a full ten centimeters!" yelled Zelda. "And by the way... I'll bet you a week's pay that I know what we're gonna find when we shut down!"

"Zeld, how can you place a bet like that?... Have you had another spell of that famous woman's intuition?" yelled a questioning Tasin, who was trying hard not to divert his attention away from his monitors, but couldn't help but to spar with his superior.

"Yup!... I've got a really strong suspicion about the nature of that beam."

Time passed and the rack continued to move slowly towards the shard. All the two watching saw and heard was the sparkling and spitting of bright destruction taking place. Around them, the air thickened with smoke and the acrid odor of burning would have filled their nostrils, had it not been for the filters built into their helmets. Meanwhile, the room's powerful ventilators powered up adding their loud sound to those in the lab. The motors powering these fans, labored to clear the air.

Finally, Zelda called out, "Power down!... Room lights on!... Now, my friend," she directed to Tasin, "Let's go take a look see!"

But as she rose from behind the protective one way mirrored shield at the control console, and started towards the target, Tasin made her stop.

"Wait a minute Zelda... I don't want you to pull one of those 'See just like I thought' routines on me... Tell me right now what you expect we'll find over there?"

"You don't trust ME?... Would I really do that to you?" Zelda asked, a bit startled by Tasin's impetuous accusation.

"Zelda..." was all he needed to say in a mockingly 'knowing way,' and she surrendered to him.

"Well," she began, "if my hunch is correct, we'll find that the edges of the barrier are burnt to a rough circle but that the very center of the target area will have a cone shape etched out of it... Unless, of course, the beam burned through it."

"OK, let's go check it out."

As the two, stepped towards to the still smoking barrier, they couldn't even hear their footfalls over the noisy ventilators whose whine had risen almost to a shriek as they worked to suck away the last of the smoke in the lab.

As the air cleared, Tasin, who'd reached the barrier first, stooped to inspect the target area.

"Well, I'll be damned!" he exclaimed. "You're right!"

"In many ways, I was almost hoping that I was wrong!" said Zelda. And as the old scientist said this, she pulled up a chair over near the barrier and sat down. She removed her headgear, slowly pulled

a pack of cigarettes from her a deep lab coat pocket, lit one, and after a long draw followed by a slow exhale, she continued.

“This find is going to change things in a big way... Including the way in which we perceive our reality.”

“How’s that?” questioned Tasin, who had no idea what she meant.

“Well Tasin, you have an active imagination, so let me trigger it... Let’s see if I can set your mind in motion down the right path and see if you can figure out the reasoning behind my intuitive conceptualization of what’s taking place here... which by the way though miraculous... may not be a miracle at all!”

“I’ll see if I can be guided, but we’ve got a lot of data to sort through too!”

“Forget the data and just try to follow along... First, I want you to think about the ‘wildest’ science fiction stories you may have read when you were a youngster... Hint, think about your childhood toys, or your daydreams about the likes of light sabers and variable swords.”

It took only a moment for this thought to register with Tasin. But the full impact of Zelda’s suggestion, and the consequence that monumental changes might take place based on what this meant at first evaded him. He could relate to the blue beam as a light sword, based on the obvious visual similarities, but the general look on his face that Zelda saw was one of puzzlement.

“Zelda, I always imagined that such weapons could exist, but of course, only in books or dreams,” he answered. “I can see how that concept relates to what we’ve seen, but I’m not sure how it really relates to what’s happening inside that shard?”

“OK, that didn’t work, so let’s try this way... You’d have to look a long ways back into the history of physics to find the theory that may support my theory...”

“Well, I’m still with you... though a bit confused,” Tasin told his respected superior.

“Tasin, do you realize that there used to be a theory about the speed of light being a wall?”

“Yes, I vaguely remember something like that...”

“And do you remember that because man has always insisted on things fitting into his neatly preconceived scheme of things, that he theorized that such a wall HAD to have two sides.”

“Yes, but Zelda they proved long ago, due to things like Cerenkov Radiation that any particle in our universe that tries to accelerate above the speed of light will actually give off energy in order to stay on below that velocity... Those particles that produced the glow emitted radiation proving that we can’t go above that speed... So, we know that there is a speed limit in our universe, now I remember, it’s a speed limit! Not a wall!”

“AH! But if it were a wall, an object, then it would have two distinct sides wouldn’t it?!... And therefore, particles would exist on both sides... Am I correct?”

“Yes, but that’s all an ancient concept that was abandoned hundreds of years ago! Not even the most fanatic believers of those principals never detected even the slightest evidence that such particles exist.” argued Tasin.

“That’s right Tasin!... No evidence whatsoever... until now!”

Zelda waited for the impact of her insight to register with her young understudy, and so it did! But, he sought to refuse her premise.

“But those particles were proven not to exist!...” Tasin argued. “The barrier, even if there was one, was accepted as being one sided!”

“TASIN... can’t you see that THIS!!” she pointed at the crystal, “Changes all that!...” After another puff on her smoldering cigarette, she continued. Tasin, who was momentarily spellbound listened carefully.

“Tachyons... That was the name chosen for the particles that would exist on the other side of the wall, particles that always move at above the speed of light. Those were the missing particles, the ones never observed until now... This crystal, and what we’ve been discussing as ‘miraculous’ test results, my dear young friend, provide the evidence that the wall indeed has two sides!”

Tasin broke out of his spell and blurted out, “Tachyon! I never would have thought of that!”

“Of course not!... I guess there’s still some valve in being old, and holding onto some of the ‘old school’ concepts,” said the wizened Zelda. “Of course, I understand the look of doubt on your face, and the fact that your schooling never would have allowed you to acknowledge such an ancient concept, let alone to attribute its qualities to the phenomena of the ‘miracle’ you’ve been witnessing. But the original theory of the existence of such a particle does seem to fit into an explanation of this crystal’s unique properties, and my guess as to the damage done to that target.”

Even though energized by her conversation with Tasin, Zelda’s energy level was dropping, minute to minute, she looked more and more fatigued. As this happened, she seemed to be slowly slumping lower and lower into her chair. This was the only obvious sign of the weight her “discovery” seemed