

--Thurs May 13 2010 - T -1 Day and counting

For Mike Mercury, Ray Gamma and Sam Supernova the last few weeks had been a whirlwind of excitement.

From leaving their sleepy little village of Merrickville, nestled on the banks of the Rideau Canal in Ontario to now trying to fall asleep on the eve before their launch into orbit around the Earth.

It turns out it was easier for Mike & Ray to fall asleep than it was for Sam. Two weeks of intensive training and tests had left all three of them exhausted but excited. Mike and Ray were snoring in their bunks while Sam counted again... '297, 298, 299....' he groaned. 299 little ball bearings rolled around inside the box on his lap. Sam groaned because the last time he counted there were 300.

One was missing!!!

Now ordinarily this might not be a problem, but this was NASA! This was a SPACE MISSION! This was a time when every nut, bolt and hair on an astronaut's head was counted and accounted for. It was bad enough that Sam was sneaking his own experiment on board (the effect of zero gravity on 300 ball bearings), but to have lost one was disastrous! Sam thought back to the last time he counted them - it was just before the three space monkeys went to watch the payload get put aboard the shuttle - he KNEW he had 300 bearings as the payload bay doors closed shut and everyone cheered as this step in the preparation for launch was completed.

Somewhere between then and now one had gone missing. Sam fell into a troubled sleep.

--Fri May 14 2010 - Launch Day

Things start early for an astronaut on launch day - 5am to be exact. Sam, Mike and Ray joined the other crew members for breakfast and were happy to see there were plenty of bananas to go round.

After breakfast there were last minute briefings and it was soon time to 'suit up'. It was late morning when one by one the crew of the Atlantis was squeezed into their special 'lift off' suits. Mike chuckled when he realised the 'pillow' strapped to his back was actually a parachute - he wondered what it would be like to parachute back to Earth from Space!

There is a special team of folks who work with the astronauts go make sure that their suits are fitted properly and also that they are securely strapped into their seats on the shuttle. Space is cramped, and of course because the shuttle is standing on end all of the crew members are positioned on their backs looking up towards the sky! The three monkeys were strapped into the middeck area and then had almost 3 hours to wait for launch! During this time all the final tests are run and the countdown stops and starts.

Weather - GO FOR LAUNCH  
Fuel Tanks - GO FOR LAUNCH  
Computers - GO FOR LAUNCH  
Cabin Pressure - GO FOR LAUNCH

Ray wondered why they kept telling them all to 'Go for LUNCH!'

Then.. over the speaker Sam heard... "bearing found, shuttle launch ON HOLD!" He listened harder while the NASA team discussed one tiny 1/8" ball bearing that had been found on the platform outside the payload bay doors. His tummy churned as he heard the team of engineers say that the bearing was a 'CONSTRAINT TO LAUNCH' - meaning simply that they needed to make sure it hadn't fallen off the shuttle - and that there would be no launch until they were sure it was safe. Perspiration ran down Sam's face inside his helmet and he felt the little box shift in his pocket as the bearings rolled from one side to the other. The minutes seemed to turn into hours as the NASA team worked fervently to find the source of the tiny object.

Just about the same time that Sam came to the terrifying conclusion that he better fess up to his secret experiment and the fact that part of it had gone missing, the speakers came to life and a voice said "Constraint lifted! GO FOR LAUNCH!" -- the team had decided that the bearing had fallen from one of the camera arms outside the shuttle. The countdown continued and Sam let out an enormous sigh of relief, he waved to Ray and Mike who he could see in the little mirror he held. Did you know that during lift off the astronauts are strapped in so tightly that they can't move and use mirrors to see each other and other things inside the shuttle? TEN, NINE, EIGHT - Go for main engine start! SIX, FIVE, FOUR, the engines roared and the Atlantis shook, THREE, TWO, ONE 'We have LIFT OFF!' The three monkeys barely heard the words as they were hurled skyward with such a force and thunder they could never have imagined in their wildest dreams! The shuttle Atlantis rocketed skyward towards space on its final mission!

Beep, BEEP, beepity... Mike realised everything had gone quiet, all he could hear were the computers making their computer noises - so THIS is what being in space was like! He looked around the middeck and had the strange feeling he would just float away if he wasn't tied down. A tiny silver ball bearing was hovering in front of his nose, he was about to comment on it when Sam's gloved hand reached over and clumsily plucked the floating object from the air.

"Who's seen my lunch?!!!" It was the mission Commander, "I had a peanut butter and banana sandwich here before launch" Ray guiltily wiped peanut butter from around his mouth and licked his fingers and hoped that no-one noticed...

Now that they were in orbit the crew of the Atlantis could unbuckle and experience zero gravity in real space! Mike, Ray and Sam half floated, half bounced over to one of the windows and peered out. What they saw took their breath away, curving through the blackness of space was the most wondrous sight they had ever seen, clothed in swirling clouds with pinpoints of silver light glinting on the waters was planet Earth! Everything looked so peaceful, so perfect and oh so beautiful.

Day 2 Saturday, May 15

The rest of the first day in orbit had passed in a blur of activity - unpacking and making ready for day two's tasks. These included checking the shuttle's tiles with a camera located on the tip of a robotic arm. As it turned out this was to be Mike Mercury's first unplanned EVA (Extra Vehicular Activity) of the mission!

"Mission Control we have a problem" It was the commander's voice, Ray hoped that the astronauts hadn't found the secret experiment he'd brought on board!

"Scanning of Shuttle tiles cannot proceed as planned, we have a cable that is snagged around the robotic arm preventing it from moving"

Checking the special tiles on the underside of the shuttle is an important procedure – everyone needs to know that the heat resistant surface is intact for when the shuttle returns to Earth – things get very hot when traveling through the Earth's atmosphere.

"Copy that Atlantis" came the reply from Mission Control, "Stand by while we work through a solution".

And so, that is how it came to be that Space Monkey Mike Mercury found himself strapped to the end of a long titanium pole, camera in hand, as he was hoisted out of the shuttle and into a position where he could photograph the tiles on its underside.

Meanwhile Ray had opened his locker door, before him was a box with a label that read "Acme Modified Fruit & Veg – OPEN WITH EXTREME CARE!" He ran his hand over the box and thought about his experiment that could change the world!

Day 3 Sun, May 16

With the tiles checked and new batteries for the Space Station unpacked, Sunday began early. Today was the day Atlantis would dock with the International Space Station! Since its launch the shuttle had been in orbit slowly catching up to the ISS, now they were a few 'scheduled burns' away from docking. It's OK, the monkeys were not up there lighting fires – a 'burn' is the name given to firing up one or more of the (engines/boosters) to steer the shuttle into the right position for docking.

Mike peered out of a window, it was so exciting to see the Space Station shining in the dark sky! "Ha!" he thought to himself, he knew they were not alone up there!

At precisely 9:20am and some 220 miles above the far South Pacific, Space Shuttle Atlantis docked with the International Space Station. After everything had been checked and double checked the crew entered the Space Station where an official welcoming ceremony took place.

It was with great relief that all crew members heard that some orbital debris that had been heading their way missed them by ten miles. That might seem like a big distance to us, but when you are up in space, ten miles is VERY CLOSE!

Preparations were now underway for the following day when the first spacewalk would happen AND one day closer to when Simian Shuttle Experiments would begin!

Day 4 Mon, May 17

The crew was awakened at 2:20am in the morning and this day was spent completing a 7 ½ hour spacewalk. This is what shuttle missions are all about – getting things done in space! The Canadarm was given a good polishing by Sam and Ray before it was used to hoist an antenna into place and the big batteries for the Space Station were unbolted ready to be installed on the next spacewalk. The shuttle crew went to bed at 5:50pm!! Yes that might seem early, but they'd had a long day and were feeling very satisfied with how everything had gone.

Mike stayed awake for a while, he rummaged in his locker and found the special equipment that he'd brought up for his experiment. He smiled with glee at the lights and buttons that spiraled around the barrel of the object he held in his hands. Mike 'Ray Gun' Mercury he chuckled to himself....

Day 5 Tues, May 18

At 1:20am Mike was awakened to Ray and Sam singing 'Macho, Macho Man – I've got to be a Macho Man!' he groaned and sat up in his bunk. Every morning the crew of the shuttle is awakened by a different song – this one was being played for Mission Specialist Garrett Reisman.

Today was a big day! This was the day that the new Russian Module 'Rassvet' would be connected to the Space Station. Rassvet means 'Dawn', and Mike wished they had let him sleep until Dawn and not woken him in the middle of the night! He was having a hard time adjusting to all these time changes.

While the crew was busy with this important part of the mission Ray snuck away to his locker and once again eyed the box. He opened it and gently pulled out one of the capsules that were inside. There were six in all, each one about the size of one of those big plastic pop bottles – but these were made of shiny steel and were designed to twist open at the middle. Ray was just about to open one when he heard the crew coming back, congratulating each other on the successful installation of the new module. He quickly slid the capsule back in the box and closed his locker door, his experiment would have to wait a little longer.

Day 6 Wed, May 19

“START ME UP!!!” sang Mike at the top of his voice at 1:20am. He was determined to get his own back on Sam and Ray for the previous day's version of 'Macho Man'! Start Me Up was being played for Mission Specialist Piers Sellers and Mike secretly wondered when they were going to play 'We Like Bananas' for Simian Specialist Mike Mercury!

Today's spacewalk was the 145<sup>th</sup> for the International Space Station's assembly and maintenance – pretty amazing eh? In case you are wondering how much time all those space walks took, they add up to 908 hours and 7 minutes. The ISS was given some new batteries today, yes, even space stations need batteries!

Day 7 Thurs, May 20

Since the crew had some time to themselves in the afternoon the three Space Monkeys decided it was a good opportunity to work on their experiments. The rest of the Atlantis crew had gone aboard the ISS to watch a movie so it seemed like a perfect opportunity. Neither monkey knew what the other had brought up into space – everything was very 'Top Secret' and so they spread themselves out to different corners of the shuttle to begin their tasks.

We'll start with Ray since his experiment really set the whole extra-ordinary event in motion.

Ray opened up his box again and this time pulled out the instruction sheet that lay on top of the six capsules. The instructions explained that inside each capsule was a banana - a genetically modified banana to be exact. These bananas had been modified so that once they were exposed to zero gravity they would double in size. This would create an abundant food source for astronauts and a possible solution to end all future famine on planet Earth!

Ray read the instructions 'Remove only ONE banana from its capsule at a time until exact re-dimensioning has been completed and confirmed'.

Ray slid one of the capsules from the box and gingerly twisted it open. A most perfect banana floated before him, sunshine yellow, perfect skin without a blemish and a sweet smell of banana trees filled the cabin. Ray watched the banana, waiting for something to happen, waiting for it to begin its 're-dimensioning'. The seconds ticked by and ..... NOTHING! "Well this one's a dud" he thought to himself and decided to slide another capsule from the box. He emptied banana #2 onto the table and waited patiently for some sign of change. The two bananas lay side by side, unchanging. "I knew the whole thing was too good to be true" he muttered out loud and decided in that instant to empty the whole box and eat the 6 bananas right there and then.

Once the final banana had been removed from its capsule he made a strange discovery, each one was slightly smaller than the one he'd previously placed on the table. As he looked he realized with some surprise that banana #1 was now THREE times the size of #6 and growing larger by the second!! It was about now that he began to panic – all thoughts of a delicious banana banquet were chased from his mind by the unsettling realization that the growth of the bananas was accelerating at an alarming rate. By this time banana #1 was a good three feet in length!

Ray needed to think quickly and luckily for the crew of Atlantis he did. Just as banana #1 was nearing the 5 feet mark, he opened the hatch to the payload bay and pushed the

banana through, quickly followed by the others. He knew what he had to do, he activated the Canadarm, attached the bananas and catapulted them one at a time into space. #1 went cart-wheeling over the top of the Space Station looking a little like a giant, yellow, boomerang, closely followed by numbers 2 through 6.

There were two things that Ray hadn't accounted for –

1. The shape of the bananas caused them to spiral into an elliptical sub orbit around the shuttle and ISS. This meant that every ten minutes or so they circled the two vehicles as well as followed them in their orbit around the earth.
2. ?? Read on...

Down in the Middeck Mike Mercury had removed his ETID (extra terrestrial intelligence detector) from its case. He smiled at the thought of becoming the first person to detect a new intelligent life form in our galaxy. Little did he know what was about to happen.

On the Space Station one of the crew glanced out of a window and noticed something strange.

“ISS to Mission Control – it appears that we have some ...er... company up here”

“Say Again?” came the request from Mission Control

“We have some COMPANY” repeated the crew member “Six objects of unknown origin are circling the Shuttle and Space Station”

“Space Station, we confirm this” replied Mission Control “We have them on visual”

Outside of the Space Station and Shuttle a formation of six yellow objects could be seen.

“Can you give us a description?” Asked Mission Control “We are just seeing radar blips”

“Darndest thing” came the reply “If I didn't know better, I'd swear they were giant bananas!”

Mike had been listening to the conversation from his position on the Atlantis, he turned on his detector – what better time to try it out than on some real unidentified craft!!

Now, the next part of this story happens quickly, almost in the blink of an eye but I will try and describe it in detail so that you don't miss anything.

Ray re-entered the Shuttle to see what was going on, he'd been out there in the open payload bay and hadn't seen any U.F.O's – it would be so typical for him to miss something as exciting as this!

The ETID hummed to life, it's lights flashed and the orbital screen showed six pinpoints of light that appeared to be the unexplained objects.

Sam it seems, and it turned out to be a very lucky thing, had just taken out his ball bearing experiment to run some tests in the middeck.

Mike carefully aimed the gun in the direction of the circling objects and pushed the 'fire' button. A beam of crypto-particles shot from its barrel!! Don't panic, its ok! Because

crypto-particles are so tiny that they pass right through solid objects and so did no harm at all to the space shuttle. Once they enter space they change their molecular structure in order to be able to bounce off extra terrestrial life forms.

The crypto-particles shot straight toward the unidentified objects and made impact. What happened next might be because bananas are NOT particularly intelligent, or maybe the detector malfunctioned, but the beam of particles hit the bananas and did not bounce back – they hit with such force that they disintegrated bananas into a spectacular cloud of ...MUSH!

Now these Acme bananas had seeds that had also grown larger, and the force of the beams impact caused the seeds to ricochet out of the bananas and towards the Atlantis! Each of the seeds, now the size of a peppercorn flew with such force and velocity that they shot clear through the Shuttle's skin! Hundreds of tiny holes appeared and Atlantis began to rapidly loose pressure.

“Mission Control we have a problem.” This was Commander Hamm's voice he had re-entered the Shuttle to see what was going on.

“Atlantis, prepare for immediate evacuation to the ISS” came the call from Houston.

At the exact moment that Mike pushed the ‘fire’ button and the gun emitted the fateful stream of particles the middeck was filled with a strange odour. The crypto-particles had caused a disturbance in the atmosphere of the Shuttle – ions and zootrons had collided and created the unmistakable scent of Arctic Chinchillas – something that Sam had always been highly allergic to.

“Ah”

“AHH”

“AHHHHH....”

“CHOOOOOOOOOOOOO!!!” Sam sneezed! He sneezed hard and loud and with the force of that sneeze 300 tiny ball bearings rose from their box and flew across the middeck. Thank goodness no-one was standing in the way for if they had been hit it would surely have felt like 300 bee stings!

Each ball bearing zipped through the zero gravity of the middeck and then a miraculous thing happened. One by one each ball bearing came to rest in one of the 300 tiny holes that the banana seeds had created – sealing the leak and allowing the Shuttle's atmosphere to return to normal.

“Effect of ball bearings in zero gravity” thought Sam smugly to himself. “Who would have thought that 300 ball bearings could save the Space Shuttle!”

“Mission Control, emergency has been averted” spoke Sam into his mic “All systems have returned to normal”

You can imagine that the rest of this day was spent celebrating the saving of Atlantis' last mission by Sam Supernova!

It's probably a good job this was the last voyage for the Atlantis as it's unlikely that the three Space Monkeys would have been invited back for another mission!

In the following days Atlantis undocked safely from the Space Station and made preparations for its return to Earth. Sam, Mike and Ray spent as much time as possible enjoying the views of the Space Station and planet Earth from the windows of the Shuttle.

On the last day of the mission the three monkeys were awakened to the song "Space Oddity" played just for them!

\*\*This story is a work of fiction, it contains some elements of truth about the final mission of the Space Shuttle Atlantis – I will leave it to your discretion to decide which parts are true and which came from my imagination!

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