

Stick and Throttle



January 2018

SAAFA

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SAAFA PRETORIA REACHES OUT

Ongoing support from SAAFA members, their families, friends and organisations are making a significant impact on those who need assistance within the Pretoria Branch Benevolence program. An ever-increasing amount of funds and support are being channeled towards caring for the less fortunate.

During 2017, the Pretoria branch received various donations in the form of cleaning materials, tins of food, coffee, tea, toiletries, etc. Your personal commitment and selflessness has enabled SAAFA Pretoria Branch to continue supporting our comrades in need.

A very special thank you to Grant Luden, son of Keith Luden, for the beautiful Christmas hampers donated.

Well done Fanie, Marianne and team you did us proud; and thank you to the branch members and sponsors, it's **you** that make the difference.



COUNCIL MILITARY VETERANS ORGANISATION (CMVO) ALERT

“It has come to our attention that there are individuals who are spreading false information about benefits on social media platforms. You are advised to visit www.dmv.gov.za to get information as per the Military Veterans’ act, 2011 (Act 18 Of 2011) and the Regulations (Notice 37355 of 2014). Individuals who are charging members of the public “administration fees” to facilitate application should be reported to the SAPS as this service is rendered by the Department of Military Veterans.”

SAAFA PRETORIA GOLF DAY

The Pretoria Branch will be holding their annual golf day on 6 April 2018. Please contact Nick Havenga (082 876 6150) if you wish to play or can support in any way. All profits go towards our benevolence efforts.

HAVE WE BEEN WRONG ALL ALONG? IS THE EARTH FLAT?

Mike Hughes, from California seems to think so. So he is on a mission to build and launch himself in his homemade rocket to prove the Earth is flat!¹



Mike Hughes with his steam-powered rocket constructed out of salvage parts.

Picture / AP Washington Post by: Avi Selk

Seeking to prove that a conspiracy of astronauts fabricated the shape of the Earth, Mike intends to launch himself 600m high on Saturday in a rocket he built from scrap metal.

Assuming the 800km/h flight through the Mojave Desert does not kill him, Mike Hughes told the Associated Press his journey will mark the first phase of his ambitious flat-Earth space programme.

Hughes' ultimate goal is a subsequent launch that puts him kilometres above the Earth, where the 61-year-old limousine

driver hopes to photograph proof of the disc we all live on.

"It'll shut the door on this ball Earth," Hughes said in a fundraising interview with a flat-Earth group for Saturday's flight, which ranged across theories that NASA is controlled by round-Earth Freemasons, and Elon Musk² makes fake rockets from blimps.



Hughes promised the flat Earth community to expose the conspiracy with his steam-powered rocket, which will launch from a heavily modified mobile home - though he acknowledged that he still had much to learn about rocket science.

"This whole tech thing," he said in the June interview. "I'm really behind the eight ball."

That said, Hughes isn't a totally unproven engineer. He set a Guinness World Record in 2002 for a limousine jump, according to Ars Technica, and has been building rockets for years, albeit with mixed results.

"Okay, Waldo. 3 . . . 2 . . . 1 . . .!" someone yells in a test fire video from 2012.

¹ NZherald.co.nz Thursday, 23 November 2017

² Elon Reeve Musk; (born June 28, 1971) is a South African business magnate, investor, engineer, and inventor. He is the founder, CEO, and CTO of SpaceX; a co-founder, Series A investor, CEO, and product architect of Tesla Inc.; co-chairman of OpenAI; and founder and CEO of Neuralink.

There's a brief hiss of boiling water, then . . . nothing. Hughes walks up to the engine and pokes it with a stick, at which point a thick cloud of steam belches out towards the camera.

He built his first manned rocket in 2014, AP reported, and managed to fly a couple of hundred metres over Winkelman, Arizona. The flight ended with Hughes being dragged, moaning from the remains of the rocket. The injuries he suffered put him in a walker for two weeks, he said.

And the 2014 flight was only a quarter of the distance of Saturday's mile-long attempt. And it was based on round-Earth technology. Hughes only recently converted to *Flat-earthism*, after struggling for months to raise funds for his follow-up flight over the Mojave. It was originally scheduled for early last year in a Kickstarter campaign - "From Garage to Outer Space!" - that mentioned nothing about illuminati astronauts, and was themed after a Nascar event.

"We want to do this and basically thumb our noses at all these billionaires trying to do this," Hughes said, standing in his Apple Valley, California, living room, which he had plastered with drawings of his rockets. "They have not put a man in space yet," Hughes said. "There are 20 different space agencies here in America, and I'm the last person that's put a man in a rocket and launched it."

He compared himself to Evel Knievel, as he promised to launch himself from a California racetrack - the first step on his steam-powered leap toward space. The Kickstarter raised US\$310 (\$450) of its \$150,000 goal. Hughes made other pitches, including a plan to fly over Texas in a "SkyLimo". But he complained to *Ars Technica* last year about the difficulty of funding his dreams on a chauffeur's meagre salary.



A year later, he called into a flat-Earth community web show to announce he had become a recent convert. "We were kind of looking for new sponsors for this. And I'm a believer in the flat Earth," Hughes said. "I researched it for several months."

The host sounded impressed. Hughes had actually flown in a rocket, he noted, whereas astronauts were merely paid actors performing in front of a CGI³ globe.

"John Glenn and Neil Armstrong are Freemasons," Hughes agreed. "Once you understand that, you understand the roots of the deception." The host talked of "Elon Musk's fake reality", and Hughes talked of "anti-Christ, Illuminati stuff". After half an hour of this, the host told his 300-odd listeners to back Hughes' exploration of space.

Although there is not a single hypothesis for what the flat Earth is supposed to look like, many believers envision a flat disc ringed by sea ice, which holds the oceans in. What's beyond the sea ice, if anything, remains to be discovered.

"We need an individual who's not compromised by the government," the host told Hughes. "And you could be that man."

1. ³ Computer-Generated Imagery

A flat-Earth GoFundMe subsequently raised nearly \$8000 for Hughes.

By November, the AP reported, his \$20,000 rocket had a fancy coat of Rust-Oleum paint and "RESEARCH FLAT EARTH" inscribed on the side. Although his Flat-earth friends helped him finally get the thing built, AP reported, Hughes will be making adjustments right up to Saturday's launch. He won't be able to test the rocket before he climbs inside and attempts to steam himself at 800km/h across 2 km of desert air. And even if it's a success, he's promised his backers an even riskier launch within the next year, into the space above the disc.

"It's scary as hell," Hughes told the AP. "But none of us are getting out of this world alive." This is true. Yet some may dare to fly beyond its edge.

NATIONWIDE AIRLINES: -"ONE-ENGINED-ZULU"

I am sure most of our members remember the dramatic event in South Africa on 7 November 2007 when an engine fell off a Nationwide Airlines Boeing 737 on take-off from Cape Town.

Well I found this article written by *Mark D. Young*, dated 08 November 2017, and I am sure you will all find it very interesting as he shows a completely different view of what all and sundry thought happened at the time. He writes as follows:

When an engine fell off a Nationwide Airlines jetliner on 7 November 2007, many reports appeared about the incident. Few, if any, pulled together the inside details of how the emergency was handled by the several professionals involved.



In 1995 Vernon Bricknell, who had been operating charter cargo flights into Africa for various entities for some time, took advantage of the gap created in the airline market by the demise of Flitestar to found a new scheduled domestic carrier called Nationwide

Airlines. Nationwide was well supported by business travellers and grew steadily throughout the next 12 years. It attracted a group of experienced, highly regarded crew and was eventually chosen as the local partner carrier for Virgin Atlantic.

A further stamp of its professionalism and quality was achieved when it passed the IATA safety audit process known as IOSA. It also applied for, and was granted, slots to the UK and inaugurated flights between Johannesburg and London using a Boeing 767. It was planning several other international routes for 2008.

All this progress, however, came to an abrupt halt on the afternoon of 7 November 2007.

On that day, a Nationwide Airlines flight was scheduled to fly between Cape Town and Johannesburg 13h15local time. The aircraft allocated to operate the flight was a twin-jet Boeing 737-200 Advanced airliner, serial number 22118 and registered in South Africa as ZS-OEZ (Oscar-Echo-Zulu in aviation's phonetic alphabet). ZS-OEZ was one of 11 Boeing 737-200 aircraft operated by the airline. It had, to that date, accumulated 57 075 hours of operation since being manufactured in 1981.

The Captain of the aircraft was one of South Africa's most experienced Boeing 737 pilots, Captain Trevor Arnold. At the time, he was 50 years old. Captain Arnold had more than 13 860 hours to his name. Three thousand three hundred hours were on the Boeing 737. He originally joined Nationwide Airlines in 1997.

Captain Arnold and his first officer for the sector, Daniel Perry, had both just signed-on for duty after a night-stop in Cape Town. First Officer Perry, 25 years old at the time, had joined Nationwide a month earlier on 3 October 2007. He had 1007 hours of flying experience with nearly 300 hours of those on the Boeing 737.

As the crew up-front did their preparations, the cabin staff were welcoming 106 passengers aboard. Captain Arnold had asked First Officer Perry to handle the actual flying to Johannesburg.

During an exclusive interview with the writer, Daniel Perry shared his memories of the day.

“I regarded it as a privilege to be flying under the tutelage of someone such as Captain Arnold so early in my tenure at the company. He was known as ‘*The Headmaster*’ by the rest of us in the firm. This was an affectionate reference to his firm adherence to rules and procedures. I was looking forward to learning from him.”

First Officer Perry, as the Pilot Flying (PF) conducted his pre-flight briefing prior to start-up. Part of the briefing included setting out his actions in the event of an engine failure on take-off. In addition, the courses to be flown for a normal and abnormal departure were rehearsed along with other procedures he would follow should anything go amiss.

The aircrew had no inkling of the fact that, unlike with the many other take-offs they had each flown to date, the value of the Crew Resource Management (CRM) procedures they followed on that day would shortly become apparent.

Once all flight deck and ground handling procedures had been completed, the aircraft doors were closed and the crew called for and received start-up clearance from Robert Russell who was the ground controller on duty. Within a few minutes the aircraft was pushed-back and it taxied through the light rain that was falling. Take off was towards the north on Runway 01 and clearance was given by the tower controller, Fanie Grobler, for them to expedite their take off as soon as a landing Bombardier/Canadair Regional Jet (CRJ) airliner of SA Express had departed the runway at taxiway Echo.

Fanie had 35 years of experience as a controller. He was handling a fairly busy period with an SAA airliner at 4 miles on final approach on the instrument landing system (ILS) with another five inbound aircraft due in another few minutes.

As soon as the CRJ had passed them and landed, Daniel lined up the aircraft. As the CRJ left the runway, and clearance was given, he advanced the throttles to maximum power and flight CE723 began accelerating down the runway.

“As per my training, once the V1 call came, I removed my hand from the throttles. This is to avoid the temptation to grab the throttles and power-down beyond V1. Any problem you have then you take into the air.” explained Daniel. “In the event this was a very good thing as the ‘rotate’ call came a second or so later. As I eased back on the yoke, there was a very loud bang and a lurch to the left from the aircraft. The right hand throttle stalk whizzed backwards so hard it made a deep indentation in the pedestal. If my hand had been there I am fairly sure it might have been badly injured.”

As the lever snapped back, the right hand thrust-reverser warning light illuminated on the engine instrument panel.

What had taken place, unseen to the crew, was that, at the point of rotation, the centrifugal forces in the engine which place a load on the engine mountings - a load safely carried by the engine mountings on many flights to that date – had caused a stress-fractured cone-mounting bolt on the rear engine mounting of No. 2 engine to fail.

It appeared from the investigation later conducted by the Civil Aviation Authorities that a secondary support, intended to stop the rear of the engine from swinging downwards in the event of such a failure, may have failed for “unknown reasons”. The secondary support on the engine was never recovered. Given that the investigation uncovered an apparent lack of

paperwork regarding the inspection and service trail for the mounting system, it is also possible that the secondary support was not re-fitted during one of the scheduled checks of the engine mountings. As that paper trail at Nationwide Aircraft Maintenance ceased 5 years prior to the accident, nobody will ever know for sure. Nevertheless, the combination of failures permitted the right hand engine on ZS-OEZ to momentarily pivot downwards and sideways on the forward engine mount and generate an upward motion on the right wing.

Study of the flight data recorder shows that Daniel immediately corrected the unusual movements by applying the correct inputs to the controls. The recorder showed that the change in altitude during these actions was less than 50 ft. This feat of flying is remarkable in that no other Boeing 737 had ever experienced this type of failure, at that stage of flight.

The airliner continued climbing away from the runway and once a positive rate of climb had been established, the undercarriage was retracted. As the airliner reached about 150 feet, barely a second or so after becoming airborne, the crew heard a loud thud and a tearing sound as the now over-stressed front engine mounting failed.

Witnesses on the airfield saw, in their words, "A large object" falling from the aircraft. According to Fanie Grobler, Rob Russell, the ground controller working alongside him in the tower, jumped up and called out that "Nationwide has lost an engine!" Fanie was busy with the SAA airliner on short final but turned to look at the departing flight.

"I saw the aircraft at about 100 feet, facing 45 degrees to the right with a white stream behind it. I immediately hit the crash alarm" recounted Fanie.



Following the second lurch of the aircraft and the unusual noises, inside the cockpit the instrument panel readings for number 2 engine were dropping. At about this point the airliner stopped climbing momentarily although, according to the DFDR⁴ plot, no altitude was lost.

From the tower, the flat trajectory made it appear as if the airliner was descending. "It looked as though they were heading for the Pick 'n Pay storage building beyond the threshold of runway 19." added Fanie. "I was convinced I was going to witness the first airliner crash of my career. Luckily, somehow, the Nationwide pilot managed to keep her flying and gained altitude and they flew towards AFB Ysterplaat."

It is interesting to note that within a very short period between activating the crash alarm and the aircraft climbing away, Fanie had called the SAA aircraft on short final with the option to go around due to the debris on the runway and he also called the approach controller on the intercom to alert him to the contaminated runway and the difficulties CE723 was experiencing.

Aboard ZS-OEZ, Daniel knew thrust had been lost on the right engine. "It's pretty obvious given the lack of readings for the right engine and the strong yawing to the right. I was also needing to apply increasing amounts of rudder and aileron to keep the aircraft level. 'We've lost number 2' I called to the Captain."

In the cabin a passenger seated over the starboard wing was startled to see the engine disappear and she turned to other passengers to inform them what she had seen. According to media reports on the day, one of the passengers seated nearby calmly said "Don't worry. These aircraft can fly safely on one engine."

⁴ Flight Recorder

In the cockpit Daniel had to work increasingly hard to correct the trajectory of the airliner and continue the climb. In addition to the loss of all the readings for the right hand engine, the hydraulic system normally powered by the missing engine was losing pressure, increasing the difficulties they faced. Daniel managed to keep control of the airliner while Captain Arnold went about confirming that the fault was, indeed, with the starboard engine.

"The Kegworth accident⁵ came to mind and I was mindful of that while I went through my parts of the engine failure procedures." said Daniel.

Fanie Grobler had called Nationwide 723 and told them they had left a lot of rubble on the runway and that it would need to be cleared before they could land. Captain Arnold, who as the PNF (Pilot Non-Flying) was handling the radio calls, acknowledged this call and then informed the tower that they had lost thrust on an engine and they were experiencing hydraulic problems as well. According to the controller he declared an emergency and requested permission to return to the airfield. Then, according to the CAA report, via the intercom, he informed the cabin controller of the decision to return to the airfield.

Marilyn Rink, the cabin controller, was asked to do a damage assessment and she reported to the crew that they had lost some pieces of the right engine. She did not tell them the entire engine had fallen away. "She later told me she had not wanted to alarm us." said Daniel. "In any event, that information would not have changed our situation. We still had a very sick airliner to fly."

The aircraft was leveled off at 3000 feet to permit time for the clearing of the runway. The crew used this period to take stock of their situation.

"Once all the applicable check lists had been completed and the appropriate switches and controls set, Captain Arnold asked to take over the controls so that he could get an idea of what was happening with the aircraft."

"He placed his hands on the yoke and called for me to hand over. As I did so he felt the forces at play and, probably due to the degraded hydraulics position we were in, she rolled and yawed quite a bit and he had to make large inputs to gain control. He then asked me to carry on doing what I had been doing. So I flew her again for the rest of the flight." Daniel recalled.

Captain Arnold then made an announcement to the passengers regarding the planned return to the field. The passenger emergency landing briefing was then conducted by the cabin controller. Behind and below them on the airfield, all other incoming flights were diverted to George Airport and the airfield was closed. The ground controller asked the emergency services for all available hands to clear the runway to permit CE723 to land.



"I impressed on him that we needed it clear within 15 minutes. Start to finish, it was done in 18." said Fanie. "Considering how much stuff they had to clear that was impressive teamwork by everyone involved".

"Our take off to touchdown time was only about 25 minutes or so, but for us those minutes seemed

very long." commented Daniel.

⁵ The Kegworth air disaster occurred when a Boeing 737-400 crashed on to the embankment of the M1 motorway near Kegworth, Leicestershire, England, while attempting to make an emergency landing at East Midlands Airport on 8 January 1989.

As they flew southwards on the downwind leg of their return circuit, Daniel had almost full opposite rudder as well as a large amount of left aileron applied. Daniel reported that the crew became aware that not only was the hydraulic system bleeding off pressure, but the fuel gauge on the right tank was also dropping rapidly. They attempted to set the fuel system to feed only from the left side but this did little to stop the lowering of the reading on the right. This was due to the fact that the fuel line to the now missing engine had not parted at a predetermined point which would have had a stop-valve in place. It had torn away ahead of the stop-valve and this permitted fuel to stream away into the airflow.

The crew's concentration was interrupted by a radio call.

"Nationwide 723, Cape Town" came a voice. It was Peter Rau, the approach controller. He was now handling the diversion of several flights as well as the CE723 emergency.

"Things were getting a little stressful for me by then. We were in cloud too. However, if there is one lesson I recall from that day it is to always maintain situational awareness. We were dealing with several things and I remember the approach controller calling us repeatedly. We may have said words to the effect of 'Go away. We're busy'. He then called back calmly and added some words, very, very clearly. **'Nationwide 723 – Cape Town Approach. Terrain ahead.'** That got our attention. He then gave us a new course to steer."

Due to the instrument flight conditions, its lower than normal altitude, a steady side-wind and the control difficulties, the airliner was headed towards mountains and the precipitous call by the approach controller was an opportune intervention that permitted the crew of CE723 to make careful adjustments to their course with ample time to spare.

"We were definitely not in any position to make rapid changes to our course at that point so having that controller carefully watching our progress and predicting things well in advance, was a huge blessing. He then asked us what our situation was?"

"Captain Arnold relayed that we had increasing difficulty in controlling the aircraft and that there was no certainty on the hydraulic systems. I noticed that the fuel situation, while not yet an emergency, was affecting the trim of the aircraft. In my mind we had little room for a go-around for another approach if the initial one had to be aborted."

As the aircraft flew over nearby areas witnesses on the ground noted that it appeared to be trailing smoke from the right hand side. In reality this was fuel and hydraulic fluid running out of the severed pipes in the area of the now absent engine.

The approach controller had taken careful note of the prevailing wind direction and speed and gave the crew some additional headings to steer for a long approach to the airfield from over False Bay. First Officer Perry followed these headings to point CE723 back towards the runway.

"By the time they had been handed back to me the weather had deteriorated and the cloud was very low with rain. I could just about see the N2 to the south of the airfield." explained Fanie. "I briefed the aircraft about the situation and waited for them to appear out of the cloud."

According to the CAA report, as the aircraft entered the final approach, Captain Arnold briefed the passengers on the landing to be carried out and issued an instruction for the passengers to adopt the brace position. As the speed dropped on the final approach the handling of the aircraft became increasingly problematic and Daniel had to call on all his flying skills to maintain control.

"I was a bit concerned when I looked out after turning final to see we were closer to the western shore of False Bay than I expected. What Peter Rau had actually done is work out where we needed to turn so as to let the wind drift us over the threshold by the time we reached it. When we broke cloud we were exactly lined-up with the runway for touchdown.

That was some incredible mathematical work by the controller and I am eternally thankful for his presence of mind and professionalism throughout the whole emergency.”

The touchdown was remarkably smooth and, despite a compromised braking system caused by loss of fluid, sufficient retardation was, thankfully, available to slow the airliner.

As the aircraft began slowing and it was evident that the landing had been completed safely, the relative quiet that had prevailed in the cabin was shattered by a loud and prolonged

round of applause and cheering from the passengers.



“Steering on the ground was difficult due to the loss of pressure from the severed lines. I managed, however, to turn ZS-OEZ onto the cross runway 24 and stop her. Shortly thereafter, engine number one was shut down.”

Captain Arnold entered the cabin to have a look at the number 2 engine and was greeted by a loud cheer from the passengers. Once he had a chance, he looked at the right wing.

“When he returned to the cockpit and sat down in his seat I was shocked to see how drained of colour his face was.” explained Daniel. He told me the entire engine was gone. What do you mean gone? I asked”

Thus the enormity of the incident had only become fully apparent to Daniel after the aircraft had landed

“While I was trying to get my head around this Captain Arnold then made a call to the head of the airline to appraise him of the situation.”

A few minutes later the aircraft passengers were disembarked by means of a portable stairway.

The civil aviation authority was informed of the accident and investigators were dispatched to Cape Town airport to arrive later that afternoon. In the interim the airliner sat in the drizzle on the taxiway.

“As I eventually walked away from the aircraft it occurred to me that her registration letters could also indicate **ONE-ENGINED-ZULU**. That is what she will always be to me.” reflected Daniel.

For the people aboard the flight that afternoon, the Captain and crew were their heroes.

“We did not see ourselves as heroes” explained Daniel. “We wanted to go home just like everyone else. I had a very capable Captain supervising things and I just applied my training and followed the correct procedures. We had an incredible team on the ground helping us as well. The air traffic controller, approach controller, emergency crews and ground controller. Without their work the outcome might have been very different for dozens of people.”

Owing to some internal company politics that very rapidly bubbled-up in the wake of the accident, Daniel resigned from Nationwide Airlines the next day. He was immediately snapped-up by another, private, local domestic carrier for whom he flew until a few weeks ago. He now flies for a famous international cargo airline out of Chicago.

This same modesty about simply “doing my job” has, on reports, been evidenced by Captain Arnold. The International Airline Pilots Association gave Captain Arnold its Polaris Award for exceptional airmanship for 2007 in recognition of the safe outcome of the emergency.

Several people with whom the author has spoken, have questioned why the award was not also given to Daniel Perry?

“Well, they couldn't really, I was not a member of IALPA at the time anyway.” said Daniel when question on the topic. “Captain Arnold was a member. In any event he was in command. The flight was, ultimately, his responsibility and there was no way I could have flown the aircraft and handled all the other items he calmly attended to at the same time. It was a real team effort so a fair call on their part as far as I am concerned.”

There can be little doubt that, on this occasion, the several inter-connected aspects in the aviation safety chain, overlaid and intertwined as they are, held fast to prevent tragedy and ensure the safe return of 112 people to their families.

And what happened to One-Engined-Zulu?

Following the investigation of the accident and the grounding of Nationwide Airlines as a consequence of regulatory oversights uncovered by the investigation, Nationwide Airlines was eventually liquidated in early 2008. The entire sequence of events in that regard is another, intriguing story worthy of an article of its own.

So, sadly, due to these inter-linked events, ZS-OEZ never left the ground again and was eventually stripped of useful parts and broken up for scrap.

The author wishes to acknowledge the co-operation and assistance of Daniel Perry, Fanie Grobler, the members of Avcom.co.za, Brian Kitchin, Fanie Kleynhans and the investigators at the CAA for their help in making this article possible.

Mark D. Young is an investigative journalist and aviation safety author. He has published a history of SAA accidents and several articles on notable Southern African aircraft accidents.

IMPORTANT DATES TO DIARISE

Event	Date
Pretoria Branch Lunch and AGM for 2018.	9 February 2018
Congress 2018 – Cape Town	25-26 May 2018

MEMORIAL SERVICES

Service	Time	Date
Armed Forces Parade, Kimberley.		21 February 2018
SS Mendi Memorial Service, Gamothakga Recreation Resort, Atteridgeville,	10.00	25 February 2018
RAF Memorial Service, Bays Hill, Pretoria	10.00	1 April 2018
SA Air Force Memorial Service, Bays Hill, Pretoria	10.00	20 May 2018
Smuts Memorial Service, Smuts House, Irene.	15.00	20 May 2018
Heritage Foundation Wreath Laying Ceremony, SADF Wall of Remembrance, Voortrekker Monument	10.00	27 May 2018

TAIL PIECE



“OK HOSTESS, TAKE US TO THE COCKPIT, WE HAVE OUR OWN JOYSTICKS!!!!!!”

Please send any contributions to the Editor:

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