

An Interesting Plane Flight...

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All good things must come to an end, and all true believers must return to their temple. So I did, so I must. So I packed my bags, but I couldn't fit everything in: all my stuff seemed to have gained weight in Australia, like me.

I am a regular over the Pacific now... the Pacific and I go way back. We have usually treated each other pretty well, we have a pretty good bargain. I fly through her airspace, minding my own business, trying to falling asleep but generally in a partially comatose state, and watching bad movies. In return, she lightens up on the whole turbulence thing. It's not really very good for either of us, I suppose. She gets laden with all this pollution, and I get laden with all this disease-ridden demoiaturised aeroplane air. But at least she doesn't have to watch bad movies while partially comatose. I have found very confusing, bits and pieces of different movies seem to run into one another, mixed in with fragments of dreams I just had, and since I am always trying to get things to make sense (it's my job after all!), I struggle in my comatose state to reconcile their plots, themes and characters. It is a futile process, however, so I usually bring a big fat maths book that is sure to send me to sleep.

So humdrum is intercontinental ballistic travel for me now, that it's not even worth mentioning. Flight, ho hum; jetlag, ho hum; everything in the fridge went moldy, ho hum; your car has a flat battery, ho hum; jump start it, ho hum. But this time random chance conspired to make things a little more interesting.

The flight was Melbourne to Sydney, then through to San Francisco. The Melbourne-Sydney leg was uneventful, especially since there is barely time for an event, let alone to reach cruising altitude, during that flight. Arrive at the gate in Sydney, disembark and proceed. For those of you who have traveled on a similar flight, you will know what happens next, and it's one of my favourite examples of bureaucratically-minded overzealous security. You get off the plane and get into a queue for security screening. Now everybody arriving here has been screened before departure, and has been through at least one flight to get there, without being stopped, without having blown anything up, without having been arrested or detained or deported. Yet once they arrive at Sydney they must all be screened again, just in case. Of course, this is to foil those terrorists who plan to fly on TWO consecutive flights, delaying their nefarious activities to the second, using weapons which they smuggled through the FIRST flight, including all its security checks. Grrrr.

Anyway, concerns about idiotic bureaucracy and my own civil liberties were

not to be the main issue. After an astoundingly short wait of 10 minutes in the Sydney international transfer lounge (which I like to think of as a sort of interplanetary nether-region, not really being anywhere), I boarded for the second flight. Another big 747, but different to the first plane.

We had a long taxi. That didn't really bother me: what's a few minutes when you're on a 13 hour flight? I was reading the newspaper, because I am too cool to listen to the safety announcement, and after all the AWB are such bastards, and now the US is going to use them as an excuse to get their grubby hands in, and Bolivia sounds like it's having fun, and there are all those problems with child soldiers in Burundi! We were waiting to take off for a while, maybe 5-10 minutes, I don't know. I think we had to go to the far side of the airport, and a couple of planes were queued up, and some were flying in and it was just generally taking a while. It was really hot, must have been close to 40 in Sydney that day. The air-conditioning kicked in though, it wasn't too bad for us, as aeroplane-climactic conditions go. That is, dry, all too dry! Air blowing in your face, your ears exploding under the pressure, but at least not unbearably hot. Not just ears, as we found out.

Taking off and getting the G-force are always entertaining, getting pressed into your seat by inertial forces - or is it gravity?! (If you don't know what I'm talking about, you are not a general relativity geek. No points for you.) You can pretend that you are an astronaut or something. OK, well you don't really get much G-force on a fully-packed 747 full of Australian and American tourists more of a slow, steady grind to the 200 km/h or so you need to take off. And these 747's often feel like they don't want to take off, they complain as the pilots push them off the ground, shaking and shuddering and generally getting nostalgic about terrestrial life. But that wasn't quite what happened this time.

No, we moved out onto the runway and the engines kicked in. We had a bit of acceleration, seemed to be sort of peacefully climbing our way up the speedometer and then

BANG!

It seemed to come from below the plane. It felt as if there were an abrupt step down in the runway, like a poorly-constructed highway. Hmm, don't remember Sydney's runway having a step down in the middle of it, it's become a bit more bumpy than last time, I thought.

And then the plane started to vibrate.

We seemed to be slowing down for a few seconds but then, we were still progressing across the runway. Oh well, maybe we'll just drive to the other side, I thought peacefully. Perhaps they were feeding me too much oxygen.

And then there was another bang from below. The plane was still vibrating.

It was quite strange, because I normally get nervous about flying at the slightest hint of a worry. But here I just felt like a spectator, looking out the window as I was, just expecting that we would either stop, or else we could go up for a bit and then come down. Maybe because the sound didn't seem to come from the engines, and I was just imagining a bumpy road. Even so the plane shouldn't really have been vibrating. Maybe they put that audible vibrate-y stuff on the runway it that they put in the middle of the road on Australian

country highways. Hmm.

The pilot pulled up, and the plane struggled, but got off the ground, and stopped vibrating. We didn't fall back down to the ground, we didn't turn back for the airport, the engine didn't catch on fire. These were all positive signs, so I was pretty happy. We were left for 30 minutes in which I returned to the child soldiers in Burundi and the plane continued to head away from Australia.

The captain came on the PA and decided it was time to explain what had happened. We had taken off in very hot weather. The plane was very heavy, at 833000 pounds. And the thing is, in such powerful heat, when you are supporting 833000 pounds, and you are a tyre, you start to feel a little weak. So his conjecture was that we had blown a tyre. He continued (in surprisingly scientific fashion), presenting the evidence for this proposition. He had radioed back to the Sydney tower; there was indeed rubber on the runway. I suppose so. We still had 17 tyres left, he assured us, so don't you worry! But the question, of course, was whether the exploding tyre fragments (exploding under 833000 pounds of pressure) had caused any damage. He assured us that he had checked all 140 or so onboard computers and the aircraft was operating normally, and there was no structural damage. I couldn't quite understand how he deduced this last statement; it's not quite the starship Enterprise. Of course, part of the captain's job is to reassure passengers irrespective of the truth.

He then presented our options: returning to Sydney was not an option we were too heavy; we would have to burn off sufficient amount of fuel first. We could stop in the Pacific somewhere. But he thought we might as well continue on to San Francisco, since our problems were not in the air. We'll go with that option, he said.

And so, somewhat gullibly reassured by the captain's soothing words, I settled back into the wild world of 4-manifolds, and some extremely bad movies. Things seemed to be going ok, and after all, we had over 12 hours to go, so the trouble was a long way away. I passed into semi-comatose logic-struggles with mixed movies and dreams and 4-manifolds. At some point I was sure the curvature tensor of the bundle of anti-self-dual connections over my manifold was stealing my vegetables. But that was just one single moment of clarity amidst bouts of inchoate annoyance at something, probably my headrest. Such is intercontinental ballistic travel. I found it difficult to get to sleep, but judging from the fact that I can't account for the time, it must have happened at some point.

Anyway, in the morning/evening/some time (depending on your frame of reference) I came to, was presented with the most disgusting breakfast ever, and discovered that we were not too far from the west coast of the US. Oh well, we hadn't fallen out of the air yet, so the plane was probably OK for flying. For landing, not so sure

It seemed to me that there were several things that could go wrong trying to land a broken plane like this one. First, the landing leg could buckle and the plane would lean onto its side, some engines would hit the ground and catch fire. Second, the plane could career out-of-control down the runway without enough grip, and we would crash into whatever object (probably a lot of objects) came

in our way. Third, the landing gear could be broken by the initial explosion and not work at all. Fourth, other things could be broken as well. Hmm

Breakfasts were collected up, and we started to descend. The captain happily announced that we were not expecting any trouble, but as a standard safety precaution you might see some fire units near the runway. This is just a precaution, no reason for alarm. I don't think all the passengers agreed with him.

The flight attendants started getting especially strict about tray tables and seat positions. They took a survey of all the old/ill/people with special requirements, and checked off their seat numbers, "just in case there has to be any kind of evacuation". I wonder how many different kinds of evacuation they had in mind.

One of the good things about descending into San Francisco in the morning is that you have no idea how low you are. Sure, there are some numbers on the screen, but with all the fog you can't see the ground until you're only about a hundred metres up. The SFO airport is on the bay, so at this point you find yourself above water, and not being able to see any land. So, we thought we were getting close, and then we were right there over water

And then we touched the ground. Nothing seemed to slide, or slip, or break, or lean, or catch fire, which was fairly positive. We even started to slow down. Looking out the window was a sea of red flashing lights of what looked like the entire city fire department. I counted at least 20 trucks, and that was only along one side of the runway. But they were to be disappointed, no work for them today. We coasted along, and surely enough we came to a halt. People started applauding. An all-too-american habit, but I agreed this time.

Turned out we were not fit to taxi back to the gate, we had to be towed. But at least we got there, and in one piece.

Phew!

Because you can't explore the moduli space of anti-self-dual connections on a four-manifold if you're dead in a plane crash.