

AIR FORCE ASSOCIATION VICTORIA



ATC/AAFC BRANCH

ABN 96 091 342 304

OFFICIAL NEWSLETTER

Issue No 71

August 2018



Hello again everyone and I hope you'll enjoy the fruits, labours and efforts of our hard-pressed Editor in this issue.

Firstly, it's my pleasure to welcome, on behalf of our Committee and members, our newest member, LAC (AAFC) Justin Rogan of 418Sqn, Point Cook. We hope Justin enjoys being another of the increasing "AAFC family" members of the Branch and the Air Force Association

as a whole.

With regards to the Branch's survey concerning the proposed abolition of the only remaining General Meeting which to date has been held in October the result was:- That there were no objections or contrary comments forthcoming by the requested date of the 31st of July and as a result of the nil response, this meeting has been removed from the Branch Calendar. As previously explained in the proposal, this now means that the only meeting will be the Annual General Meeting in April.

The Branch Calendar for the remainder of this year can be found elsewhere in this issue.

First Friday of the month luncheons will be as usual beginning in February through to December and the Christmas Luncheon will be held on the most available / negotiable date we can achieve on a Sunday in December. **(Please note: The set date for the Christmas Luncheon this year is Sunday, December 16th at Box Hill RSL in the Upton Room, Basement Level. Plenty of parking available.)**

Office	Holders
President	Laurie Bell
Vice President	Peter Wilson
Secretary	Hugh Tank
Treasurer	Tony Synhur
Delegate	John MacDonald
Newsletter Editor	Ian Cohn

Please send your contributions to
scsiac@bigpond.com

Or

Box 486, Mt Beauty, VIC, 3699

Deadline for next issue – 23Sep18

Welfare

Branch Welfare Officers
Hugh Tank on 03 9877 3424
and **Peter Wilson**

If you are aware of any member who is unwell please contact Hugh or Peter.

President's Message - continued

Planning for the twilight **WW1 Armistice Commemoration Service at Point Cook Air Base on Sunday, 4th of November, 2018** is well under way and promises to be an historic occasion. This Service will take place in lieu of the combined Air Force Association's Annual Pilgrimage to Point Cook and RAAF National Servicemen's Memorial Day Service. Attendances this year will have to be on an **Invitation Only** basis and **Expressions of Interest** will be called for in due course.

Regards to all and enjoy.

Laurie.

AAFC News

4WG Australian Air Force Cadets – from Facebook

July 14 at 8:41 PM ·

4WG OFFICER COMMANDING ANNOUNCEMENT

Congratulations WGCDR(AAFC) Dee Smith on your appointment as Officer Commanding 4 Wing, Australian Air Force Cadets.

We thank WGCDR(AAFC) Smith for her guidance as temporary OC. We look forward to her continued leadership into the next 3 years on what will be an exciting time for 4 Wing and the Australian Air Force Cadets.

First Cadet to Solo with AAFC Elementary Flying Training School

July 13, 2018



On 12 July 2018, Cadet Under Officer Dylan Grenfell became the first cadet in the Australian Air Force Cadets to complete a Solo Powered Flight with the new Elementary Flying Training School with the Australian Air Force Cadets.

Dylan's total flight time was 8.5 hours – all flying with the AAFC over the last two weeks under the instruction of Pilot Officer (AAFC) Chris Hulley.

From Facebook - 401 Squadron - Australian Air Force Cadets

July 26 at 4:00 PM ·

CADET PROMOTIONS // PERSONAL ACHIEVEMENT

401 Squadron had a busy parade last week, with 3 cadets returning from having completed a 4WG Australian Air Force Cadets Promotion Course.

Leading Cadet Jai Bakhach and Leading Cadet Katherine Gao were promoted to the rank of Cadet Corporal, after their successful completion of the Cadet Junior Non-Commissioned Officer Course.

Cadet Corporal Nikitha Kurian Anna was promoted to the rank of Cadet Sergeant, after her successful completion of the Cadet Senior Non-Commissioned Officer Course.

Congratulations Cadet Corporal Bakhach, Cadet Corporal Gao and Cadet Sergeant Kurian Anna for your well-deserved promotions!



Member Story - BOB EASTGATE

As a youngster growing up post World War 11 Australia, and having two of our family serving in the RAAF, it was only natural that I would be influenced towards aviation. In 1954 I joined the Air Training Corps, and during Christmas 1956 found myself on Senior NCOs Course at Laverton. Prior to this my father had asked for a decision on whether I would join the Air Force or come into the family furniture manufacturing business. I was to let him know after the completion of this course.



Whilst on course, standing beside a Mustang, this question was going through my mind. I decided there and then that I would join the family business and if I was successful, I would be able to buy one of these aircraft. I stood there fully 30 seconds and unbeknown to me one of my friends snapped this picture which he later gave to me.

I started flying with Royal Victorian Aero Club in 1964. Three years later, whilst landing at Moorabbin, a Mustang roared past my aircraft, coming to a very noisy stop. That re-awakened my dream. I then started looking in earnest for a Mustang to buy.

In 1970, I finally located Mustang A68-104 for sale at a property close to Jerilderie. My wife, Barbara, and I traveled there to inspect the aircraft and finalise the sale. At one stage the aircraft population at this property consisted of 2 Mustangs, 2 Lockheed 12s, 4 STM Ryans and Beechcraft Bonanza - not bad for a Pitt Street farmer.

At this time, the aircraft was undergoing an engine change by the previous owner, and we took over from this point. We assessed that the airframe was basically in sound shape, and that we could bring the aircraft up to an airworthiness state to enable a gear down ferry flight to Melbourne.

This was to take nearly 3 years.

Together with a small band of friends and engineers, that time was spent removing the propeller, engine, radiator, instruments, wheels and brakes and taking them to Melbourne for refurbishment under ForrestAir Workshop approval at Essendon Airport.

The final six months meant that we would drive the 200 miles to Jerilderie nearly every second weekend. We would all arrive in the early hours of Saturday morning, work until 6pm, staying in the town overnight and back to the hangar in the early hours of Sunday morning, working until 5pm and then driving back to Melbourne.

The conditions that we had to endure on site varied from extreme heat to freezing cold temperatures, not to mention mice plagues, red back spiders and snakes as well as dust and dirt. Once we even had to walk in, due to the field being covered with 2 inches of water. Fortunately we found the hangar dry.



The overhauled propeller and engine arriving at the Jerilderie hangar.
(Note – 2 seater Ryan in the background and you can just see the wing and engine bay of the Mustang)

Once all of the items were refitted and the aircraft complete, engine runs were carried out satisfactorily. We decided to pressurize the coolant system to test the integrity of the metal pipes under the cockpit floor area. This was carried out and we discovered pin holes which allowed steam to fill the cockpit. This meant another weeks delay to replace the pipes with hose and more engine runs to prove the coolant system safe. A full power run was carried out to check the throttle settings, and that we were able to obtain full power.

The aircraft was now serviceable.

The following weekend, being 26th March, 1973, Jack Macdonald, a former RAAF Mustang pilot, was flown in to operate the ferry flight back to Melbourne. Quite a large number of town's folk arrived at the field to witness the take-off, as they had been very supportive of us during our many overnights.

During the early years of this project I lost two people I knew to fatal Mustang accidents, both private pilots, one with a young family. This caused me to reflect and I noted that the Mustang's operated by Illawarra Flying Service, who conducted target towing flights for the Navy, were flown by commercial pilots and had a relatively incident free record. They performed this service for many years. The Mustang was developing a pilot killer reputation, rather unfairly I thought. I decided, as I had a young family myself, that I would only allow commercial and RAAF pilots to fly my Mustang. In my opinion this has been successful in restoring its reputation and image and of course the preservation of the aeroplane.

The ferry went off without a hitch taking one hour to complete the journey to Essendon Airport and Jack, arriving in his usual style, with a perfect 3 point landing as if he had done it yesterday.

Over the next 3 years we refurbished the aircraft under ForrestAir's supervision, also installing a rear seat which enabled us to offer joy flights. In February 1976, '104' emerged fully restored and registered as VH-BOB in full military colours. This caused CASA to go into quite a flap over the Air Force markings.

The registration number VH-BOB was facilitated by my friend Dick MacLean. He worked at CASA and advised me that this had become available.

Air Commodore Tony Tonkin, a former RAAF pilot of '104' and Officer Commanding at RAAF Base Point Cook, immediately asked me to bring VH-BOB to fly alongside the newly emerging RAAF Museum. There was a very enthusiastic and dedicated group of Air Force officers and personnel endeavoring to establish the Air Force Museum.

They asked us to stay and operate in support of their cause. We set up an engine overhaul shop in Hangar 211 on the southern tarmac and there we stayed and operated the Mustang for over 35 years.

In the early 1990s the CO of the RAAF Museum, Squadron Leader Geoff Matthews invited me to be involved in the formation of the 'Friends of the RAAF Museum'. This has been accomplished and it is gratifying for me to see the good work that The Friends do in keeping an important part of our Australian military Aviation history alive.

As a matter of interest, during the early 1980s my Company, A. Jelliffe Pty. Ltd., obtained its CASA Maintenance Approval and then, in the early 1990s, our Company gained an Air Operator's Certificate covering Mustang joy flight operation, which is rather rare and a first in the aviation industry.



Image courtesy of Rob Fox Photography



Image courtesy of Rob Fox Photography

Since then we have completed hundreds of joy flights, meeting people from all around the world who have been thrilled with their back seat flight in our magnificent Mustang.

Unfortunately, on 5th April 2008 the aeroplane suffered a ‘wheels up’ emergency landing at Point Cook with minimum damage. Since then it has undergone an Ageing Aircraft Inspection where all of the magnesium components have been replaced with new aluminium parts. We have taken this opportunity to undertake a full refurbishment and re-build. Our new engine shop is being constructed after its relocation from Point Cook and the engine will be overhauled in-house.

When this is complete the Mustang will be put back into service and be offered for joy flights..

AIRCRAFT HISTORY Mustang

A68-104 VH BOB

“104” was built by CAC at Fisherman’s Bend in September 1947 and was accepted by the RAAF on November 18, 1947. It regularly flew at RAAF Base, East Sale between 1950 and 1955, amassing 551 hours total flying time. From East Sale it was flown to Tocumwal for storage.

In 1960 it was sold to a Sydney scrap metal dealer, then it went to Bankstown and Mascot Airport where it sat grounded until April 1964.

Dr Tony Fisher purchased it and made the aircraft airworthy. Moving it to Jerilderie, NSW in 1964, it was infrequently flown over the next few years with RAAF markings and the call-sign “NA-68”.

In 1970 the Mustang was purchased by its present owner, Bob Eastgate.

Branch Events – 2018

ATC/AAFC Branch dates to remember for year 2018.

- Friday, August 3rd..... Branch Luncheon, Box Hill RSL.*
- Friday, September 7th..... Branch Luncheon, Box Hill RSL.*
- Friday, October 5th..... Branch Luncheon, Box Hill RSL.*
- Sunday, October 7th..... 4 Wing, AAFC Annual Parade, Point Cook,*
- Friday, November 2nd..... Branch Luncheon, Box Hill RSL.*
- Sunday, November 4th..... AFA’s WW1 Commemoration Service @ Point Cook,*
- Sunday, December 16th..... Branch Christmas Luncheon, Upton Room, Box Hill RSL.*

PLEASE NOTE:- above items marked thus *** denote dates to be confirmed in due course.

June 2018 Meeting



July 2018 Meeting



Member Story – John MacDonald

My story on the Wanaka Airshow accident.

PERCEPTION

What is it in a noise that makes the senses sit up and take notice?. "whammm", a metallic ringing sensation that causes the head to turn and look towards the source. An uncertain view of what is being observed, a vague idea that whatever it is, it should be photographed. A gradual understanding forms of what is occurring, right now, right in front of the crowd line. The senses are working, time has expanded, things are happening at a slower rate. Understanding slowly returns.

There we were, three among the crowd seated in the Silver Stand at Wanaka Air Show, 31st March 2018. Graeme GARRETT, Tony SYNHUR and myself. A pair of YAK 3's had taken off 11 minutes earlier, presumably to conduct some last minute practice prior to their show appearance. I managed to get a photo of the second of the pair, Number 12. The lead aircraft, Number 35, was a bit too slippery for my camera. Both aircraft were in overall silver livery with the Russian Red Star insignia and aircraft number, prominently displayed.

Our stand was quite full of spectators. To our right was the Control Tower, then the taxiway between the Silver and the Gold Stand. To our left, parked against the fence immediately in front of the stand, were three fire/ rescue style vehicles and a smaller tender; 100 metres distant perhaps. Ready to act the instant any requirement arose. The bitumen runway was perhaps thirty meters to our immediate front, and was integral with a grass runway on the far side. A grass taxiway passed immediately to our front. We had a box seat and, along with all the other occupants of the stand, we were ready to enjoy the show.

Opening explosions reverberated, bright flames appeared and clouds of black acrid smoke arose. The show was about to start. The Announcer explained that the two Yaks would be returning to land before the first act commenced. The aircraft would land as a pair, one on the bitumen the other on the adjoined grass runway. Once they were clear the first act of the Show would proceed. Yak 3, number 12, was being flown by its' NZ owner and was currently offered for sale at US\$675,000.

"Whammm" there was that noise ringing in my ears, my eyes were following the lead aircraft as it touched down, tail down, passing the stand from right to left. The turn of the head towards the sound, the click of the camera then I saw the source. An aircraft, standing looking directly at me, propeller turning, right wing missing, slowly settling onto the ground as the right wheel folded up and the propeller bit into the discarded wing directly beneath the aircraft. No 12, Yak 3.

As I watched and photographed, the aircraft settled onto the stub of the right wing, the canopy slid back and the pilot pushed himself up and out of the cockpit. He walked to the stub, took a long look, then removed his helmet and parachute. He stood there, looking. There was no smoke, no fire, no anything. No reaction. No fire or rescue vehicles. How odd. It must be five minutes at least since this accident. What if there was a fire? Where are the rescuers? Such is perception. The crowd reaction was muted. Low, soft talk. What is taking the Rescue/fire Service so long to get out there?

My photos show that the pilot alighted and was standing by his aircraft within the first minute. They also show that the first and second fire/rescue vehicles were on scene with two minutes. Later discussion with other observers revealed that the aircraft had hit one of two large cherry picker trailers that were parked in the centre of the grass runway. The Trailers obstructed the use of the full width of the runway. The right wing of the Yak3 had struck one of those trailers, then spun around 270 degrees, before collapsing.

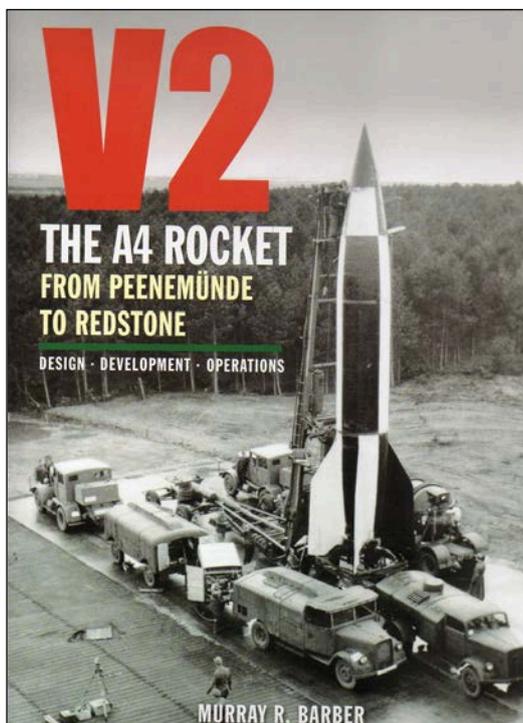
The Yak 3 has two centre section wing fuel tanks, 170 litres each. However, no Fire, all is well. The Air show is suspended, the airfield is closed. Fire people, Rescue people, Aviation people, Police, Vehicles, Trailer, Fork Lift, Crane. The field is getting crowded. Aircraft lifted, slung, set on the trailer and towed. Clear of the runway in just 57 minutes and Airshow resumed. Ah, such is perception. Detailed, accurate, true, but so warped by time.

Speculation is that as the tail of Yak 3 No.12 settled, the pilot would lose sight of the lead aircraft and necessarily turn slightly right to observe forward down the left side. As he then turned slightly left to check out the right side, the right wing hit the trailer.

The twin cherry picker trailers were used the previous day to support balloon busting by light aircraft and were probably to be part of the opening act, hence their presence in the centre of the grass strip. Speculation, but what about the perception?



John MacDonald.



Books

V2 – The A4 Rocket

From Peenemünde to Redstone

Review by John Baxter

Once again, Classic Publications (an imprint of Crecy Publishing Ltd) have produced something special. Mind you with the credentials of Robert Forsythe (Project Editor), Eddie J Creek (emblem artwork), neither author Murray R Barber nor colour artist Mark Alloway could have a had better pair to help produce and oversee this intriguing tale of the V2, number 29 in the Classic Luftwaffe series.

This book of 296 pages contains ten chapters covering early rocket development in Germany through the war years to conclude with both British/American and separate Soviet rocket programs – the space-race! There's also some mention of Werner von Braun's SS connections and

other similar tit bits but these matters were washed over post war to ensure the continuing research and rocket development to continue without ‘witch hunts’. In addition, it has a glossary, eleven appendices, sources and bibliography and an index predominantly of personalities.

The chapters are comprehensive and very well written. I found especially the chapters on the discovery of Peenemünde and the subsequent Bomber Command raid (Operation Hydra) and the Anatomy of the V2 quite intriguing. The former covered the game playing of various British ‘intelligence’ agencies and their members – Duncan Sandys again played a role which, to me, was less than appealing.

It’s very well illustrated with 38 colour photos, 75 colour artworks, 404 black and white photos, 41 black and white line and assorted drawings and 14 maps (colour and b&w) – once again, many of the photos have not been previously published. It also presents several possible diorama scenarios for the modeller with the rocket itself, the Meillerwagen, A-Stoff Betriebsstoffanhänger (Liquid Oxygen Towable Bowser), Fuerlietpanzer, mobile firing table, Hanomag SS 100 Heavy Tractor, launch sites and other paraphernalia. And plenty of photos to aid in building such dioramas.

It concludes with Alan B. Shepherd Junior in the Freedom 7 Mercury capsule’s fifteen and a half minute flight and President Kennedy’s challenge to NASA ‘of landing a man on the moon and returning him safely to the earth’ before the end of the decade. The work that went on after the close of the war is quite nicely presented and illuminating. I found the entire contents so well presented that I often found it hard to put this book down. While there’s plenty of technical information, it’s not overwhelming.

Make no mistake, if you’re interested in the Luftwaffe, V2s or just rocketry and space travel (although to a much lesser extent), then this one has to be on your list. It is a great book for any Luftwaffe enthusiast alone but its appeal should easily go beyond that. Now, it’s not cheap with its recommended retail price at \$125 but it’s an integral part of Classic’s Luftwaffe series and in its own right, an excellent book. It is available from Hyland’s Bookshop in Melbourne hylandsbookshop@gmail.com or 03 9654 7448.

Many thanks to Ms Orietta Colussi of DLS Australia for the review copy. ISBN 9781906537531.

AAFCAIRTC Historical Items

Please send in any of your old ATC/AAFCAIRTC photographs with a small explanation of the circumstances. A picture is worth a thousand words.

Heard of the Air Training Corps/AAFCAIRTC Memorabilia Collection? Located at Benalla Aviation Museum at Benalla Airport in Victoria, this display is highly recommended for a group visit.

See more at www.benallaaviationmuseum.org.au/

Space and Astronomy –

With clear nights it is possible to get wonderful views of the planets. Currently we can get wonderful naked eye views of Venus, Mars (see below) and Jupiter. With powerful binoculars or a small telescope you can even see the moons of Jupiter. The planets visible after sunset currently are as follows:

Mercury: Until around 6:43 pm
Venus: Until around 9:14 pm
Mars: Perfect visibility
Jupiter: Until around 1:18 am
Saturn: Until around 5:12 am
Uranus: From around 12:16 am
Neptune: From around 8:27 pm

For those with “smart” phones the editor would recommend the free application “**Sky Map**” to help locate any planet or star.

Other spectacular astronomical sights are provided by the International Space Station. Data on the visible passes of this quite bright satellite are available from the internet website “Heavens Above”. <https://www.heavens-above.com/>

The visible passes are those from sunset to a couple of hours after sunset, or a couple of hours before sunrise, because the space station is only visible when the sun’s light is reflected from it. And those are the only times when this occurs.

Apart from the position of the International Space Station, the “Heavens Above” website gives you a wonderful array of astronomical information.

ISS - Visible Passes - Melbourne

Search period start: 01 August 2018 00:00

Search period end: 11 August 2018 00:00

Orbit: 402 x 409 km, 51.6° (Epoch: 01 August)

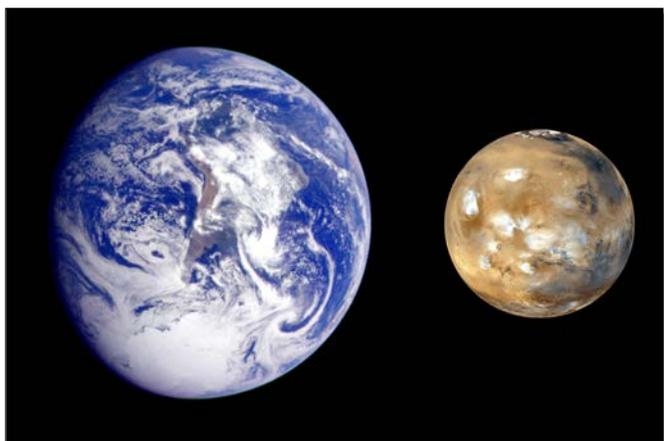
Date	Brightness (mag)	Start			Highest point			End			Pass type
		Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.	
01 Aug	-1.5	05:25:00	18°	SSE	05:25:00	18°	SSE	05:26:09	10°	SE	visible
02 Aug	-1.6	06:08:04	13°	SSW	06:08:09	13°	SSW	06:09:53	10°	S	visible
03 Aug	-0.8	05:18:20	10°	SSE	05:18:20	10°	SSE	05:18:26	10°	SSE	visible
09 Aug	-1.2	06:31:15	10°	SSW	06:33:01	13°	SSE	06:34:47	10°	SE	visible
10 Aug	-1.0	05:40:07	10°	S	05:40:42	10°	SSE	05:41:18	10°	SSE	visible

Note – the more negative the brightness number (magnitude) the brighter the object.

Mars invades our night skies

Extracted from the “Royal Auto” magazine.

Planet Mars is about to get up close and personal with Earth. Astronomer Perry Vlahos tells us where to find it in Victorian skies this winter.



Planet Mars is usually a pretty dull sight and difficult to distinguish from an ordinary star. The reason is it’s small and far away – half the size of Earth (see relative sizes in the image), and on average about 225 million kilometres from us. It can be as distant as 401 million kilometres.

However, every couple of years it gets up close and personal, and every 15 years it gets extra close. That’s what’s happening in 2018. It will get to a distance of only 57.6 million kilometres and brighten considerably. From July through until the end of September will be its moment in the sun.

No, wait a minute... in the dark, its moment in the dark!

In fact, for a time during this period it will be the fourth-brightest thing in our sky after the sun, moon and Venus.

It will not be this close and bright again until 2033, and you’ll be all grown up by then. But how to find it and be sure it’s Mars?

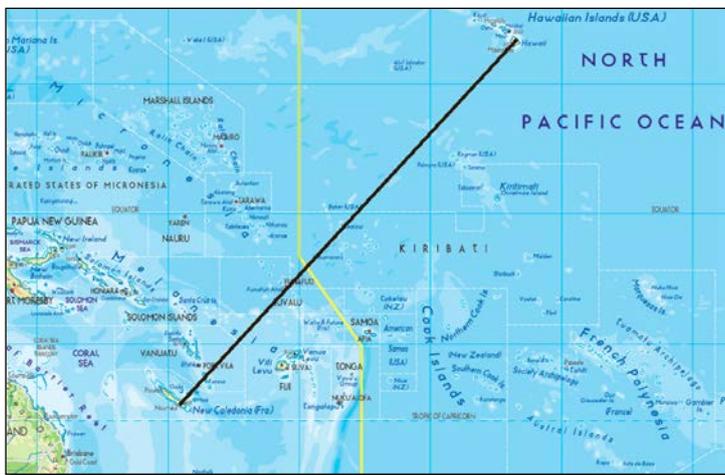
Don’t panic, I’m not going to use a star chart that’s difficult to understand. No need. Mars will be so bright it will come looking for you. Well, not you personally, but your retina. It will stand out remarkably easily as the brightest ‘star-like’ object and have a distinctly orange hue. It is known, after all, as the ‘red planet’, due to the rusty colour of its soil.

Trust me, you'll have no trouble finding it during those months, but if you want a little more info, then look toward the eastern sky soon after sunset. It will be low to the horizon in the early evening and rise higher as the night wears on.

All you'll need to spot Mars is your eyes alone, but should you want to get a better look at it, the Astronomical Society of Victoria (ASV), will be setting up large portable telescopes for the public to view through. Keep an eye on their website (www.asv.org.au) for locations and times, or follow me on Twitter (@Perryastronomy) for more info and latest news.

Member Story – Another World Aviation Record from Ian Cohn

After the Solomon Airlines delivery flights “speed over a recognised course” world records (see the June 2018 newsletter), I kept thinking that a world distance record would be a much more significant achievement. Australian Airlines had a program of new B737-400 deliveries through 1992 which might provide opportunities, so, at home after work, I set about doing the research necessary to come up with a viable distance record attempt.



Airlines are chronically short of funds and don't budget for record attempts, so any record attempt route had to be close to the normal direct delivery route from Seattle to Melbourne. So I set about finding two airfields in the Pacific area that would give the required distance, at least one percent longer than the current record at the time, about 6,100 km. The distance between Hilo on the island of Hawaii and Noumea in New Caledonia was 6,255 km, met the criterion of being at least 1% more than the previous record distance for Class C-1m aircraft, and

was virtually on the best direct route between Seattle and Melbourne. This route also crosses the equator and wind components were likely to be light, possibly slight head or tailwinds. This distance was likely to be at the extreme end of the range capability of the B737-400.

Having established a possible route, I had to set about establishing/finding a B737-400 configuration that was capable of flying that route complying with fuel reserves required, alternate airfield requirements and other criteria required by the airline.

To juggle all these factors I constructed a giant Excel spreadsheet.

- Aircraft weight:- The aircraft weight had to be minimized, so initially I assumed no passenger seats except for one row for essential crew. It was also assumed that there would be no freight except essential spares for the delivery flight.
- Fuel Density:- High density fuel gives better fuel mileage. Aviation Turbine Fuel density depends on the fuel source and temperature. I assumed that the aircraft would leave the Seattle area (actually Port Angeles) with full fuel arriving at Hilo with a significant fuel load. Fuel supplied in the Seattle area had relatively high density. I also assumed that refueling at Hilo would be done around dawn to give the lowest possible fuel temperature and the highest density.
- Fuel capacity:- As much fuel as possible has to be loaded. In addition to filling the fuel tanks to the normal level, the cut-off switch circuit breakers have to be pulled to allow fuel to be pumped into the fuel tank airspace and overflow pipes (very carefully at low rates to prevent spillage).
- Expected Wind Components – depend on the route, latitude, and season. The basic reference was a Boeing publication “Winds on World Air Routes”. For the date of the flight the expected

wind component for Hilo to Noumea was around 10 kt head wind at the best cruising altitude. I could not do anything to change this.

- Aircraft Centre of Gravity – Aft centre of gravity produces less trim drag and lower fuel burn. So the galley supplies and the one row of seats and delivery flight spares had to be loaded at the back of the aircraft.
- Climb Speed –The Climb speed for best range has to be determined. This is usually a relatively high speed. The Climb speed for best range from the Boeing Operations manual was assumed.
- Cruise Altitude and True airspeed – usually the altitude and speed for best cruise range. Since the aeroplane was to be relatively lightly loaded the maximum permitted cruising altitude of FL 370 was assumed for most of the flight, and the cruising speed for maximum range.
- Descent Point and Speed – The descent speed for maximum range is usually relatively low. The optimum start of descent distance is critical. Too early and you burn more fuel at low level and too late you waste potential energy (waste fuel) by descending faster and/or using the air/dive/speed brakes. Engine thrust is usually idle thrust for best descent range. The optimum descent speed for maximum range and the optimum start of descent distance was assumed.
- Take-off direction – You reduce fuel burn by taking off in the direction of your destination. It is also best to have a short taxi out after start-up to minimise taxi fuel. There was a military restricted area close to Hilo on the desired outbound track and a slight increase in distance had to be assumed to go around this. On the actual flight, the take-off direction was optimum, and a clearance was given to pass straight through this area.
- Fuel burn change from “book” values –New aircraft after a short running in period can achieve “book” fuel burn or sometimes better than “book” fuel burn. For record planning purposes you usually assume “book” fuel burn. Fuel burn deviation is influenced by the wear and tear on the engines and to a lesser extent the airframe. The fuel burn versus the Boeing Operations Manual fuel burn data was assumed to be identical and from memory this was the case, as determined on the first leg between Port Angeles and Hilo.
- Fuel Reserve at Landing – For record flight planning purposes, the minimum acceptable fuel reserve at landing is at least one hours flying time. It is unacceptable to airline management, pilots and insurers to risk their brand new aircraft splashing down out of fuel short of a runway on the ex-factory delivery flight. From memory the landing fuel at Noumea was close to the one hour reserve required.
- Contingency landing sites – Towards the end of the flight there have to be available suitable alternate landing runways in case the destination runway is closed for landings by any circumstance, usually bad weather. There were two available. The first was at Port Vila, capital of Vanuatu and the second was Nadi in Fiji. The Captain has to decide early to go to one of these alternates if the runway at Noumea was likely to be unavailable due to weather problems.



Australian Airlines Boeing 737-400 VH-TJO

Having done the research and achieving promising predictions from my Excel spreadsheet, the data was entered into the Australian Airlines computer flight planning program with the help of Navigation Officer, Trevor Aitken, and this gave promising results as well.

Having established that the record flight was feasible, I had to convince Australian Airlines management that the record flight should be attempted, and convince the Flight Operations Department that it was a reasonable project to do and that the flight would meet acceptable safety standards. Having had minor success with the Solomon Airlines record delivery flight this was not all that technically difficult. The year 1992 was difficult because Australia was still in recession economically so funds were scarce. For the record(s) to be certified the Royal Federation of Aero Clubs had to be paid a fee of around \$1,000 and there were other minor additional expenses. However, the management eventually agreed. They balked however, at letting me fly on the delivery flight. This was a great disappointment.

My friends Captain Ian Haigh, B737 flight captain and Training Captain Peter Casey were nominated as the flight crew. There was a last minute hitch in that the aircraft weight was increased because some inspection staff and their families were assigned to return from Seattle to Melbourne on the delivery flight. However, there was a slender fuel reserve margin available and provided the winds were as estimated or better the record flight could proceed. The flight from Port Angeles to Hilo went as planned.

On the next day, the wind turned into a slight tailwind component and the computer flight plan gave the go ahead. The flight was then straight forward. As it turned out, the alternate airport of Port Vila was out of contention due to heavy rain as the aircraft passed overhead, but Noumea was clear.

I recall experiencing some tension as I waited in my office at Melbourne airport to get news of the safe arrival of the aeroplane, VH-TJO, at Noumea. Eventually I called the control tower at Noumea and was advised that TJO was in circuit. So all that remained was to claim the record.

The aircraft flew from Noumea to Melbourne the next day and I greeted the crew at the Melbourne Maintenance base as per the picture. I had no trouble this time obtaining Air Traffic Controller take-off and landing certifications and submitted the required documentation to the Royal Federation of Aero Clubs acting for the FAI, and in due course the distance record and the three “speed over a recognised course” records were ratified.



The distance record certificate.



Peter Casey and Ian Haigh.

These days, the later models of B737, including the -700, -800, and BBJ models have far more efficient fuel burns and longer range capability due to better engines, lower airframe drag, and probably more fuel capacity. So I am surprised that the record still stands. Having higher fuel capacity would probably tip most of the modern B737s into a higher weight category which may partly explain this. There are reports on the internet of B737 flights of around 8,500 km across the Pacific, for example Maui to Auckland taking over 10 hours but none of these seem to have been claimed as record flights. The Port Angeles to Hilo and Hilo to Noumea speed records could stand for a very long time because these routes are very rarely travelled. Anyway that is the saga of the World Distance record.

The news item below is an extract from

www.thefreelibrary.com/AUSTRALIAN+AIRLINES+CLAIMS+DISTANCE+RECORD+WITH+BOEING+737-a012381432

AUSTRALIAN AIRLINES CLAIMS DISTANCE RECORD WITH BOEING 737

SEATTLE, July 23 /PRNewswire/ -- A Boeing 737-400, newest airplane in the Australian Airlines fleet, today broke a world distance record for aircraft in its size while on a delivery flight from the United States to Australia, Boeing Commercial Airplane Group said today.

Named "Lorikeet," the twinjet covered a great circle distance of 3,891 miles (6,262 kilometers) with a non-stop flight from Hilo, Hawaii, to Noumea, in New Caledonia.

In doing so, it exceeded by 72.7 miles (117 kilometers) the previous great circle record of 3,818 miles (6,145 kilometers), set in 1981 by a Russian YAK-42 aircraft on a flight between Moscow and Khabarovsk.

The flight was planned with the expectation of a seven-knot average headwind between Hilo and Noumea. It took eight hours and 15 minutes to complete the sector.

Australian will claim the new record in class C1-m, Group III, jet aircraft in the 45,000-60,000 kg actual take-off weight class. Today's result is subject to official confirmation by the Paris-based Federation Aeronautique Internationale (FAI), and the Royal Federation of Aero Clubs of Australia, whose executive director, Harry Walton, monitored the flight on behalf of the FAI.

"Lorikeet" was crewed by Australian's Operations Services Manager Capt. Ian Haigh, Senior B-737 Check Capt. Peter Casey and License Aircraft Maintenance Engineer David Mottram.

Also on board were Australian Airlines inspectors Barry Twigg and Reinhard Goschiniak, who were returning to Australia with their families after a six-month posting to Boeing in Seattle.

The planning and management of the flight was coordinated by Ian Cohn, senior engineer - operations engineering, with assistance from Boeing Commercial Airplane Group.

"Lorikeet," Australian's 11th 737-400, is scheduled to arrive in Melbourne tomorrow and will enter commercial service on July 28. Australian has firm orders for another four of the twinjets, which are replacing older Boeing 727 aircraft.

-0- 7/23/92

/CONTACT: David Jensen of Boeing Commercial Airplane Group, 206-237-8051; or Tony Harrington of Australian Airlines, 61-3-285-3677/

(BA) CO: Boeing Commercial Airplane Group; Australian Airlines ST: Washington IN: AIR SU: JH -- SE012 -- 2800 07/23/92 17:29 [EDT](#)

Internet Links of Interest

RAAFA ATC/AAFC Branch page
raafavic.org.au/content/758/branch-atc-aafc

National Servicemen's Association -
www.nashos.org.au/

Air Force News
www.defence.gov.au/Publications/NewsPapers/RAAF/Default.asp

Mother of all drones
www.vintagewings.ca/VintageNews/Stories/tabid/116/articleType/ArticleView/articleId/484/The-Mother-of-All-Drones.aspx

AIR FORCE ASSOCIATION VICTORIA



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