LISIOUSIII Magazine AIR FORCERESERVE COMMAND **Inside:** Lancaster Restoration Red Star Air to Air Heavy Metal Jet Team **Boeing 747-81** Aero India Sun n' Fun Photo Contest Reports from the Field and more! How YOU can help the Franklins Info inside!



Monthly Photo Cor

If you are a photographer, pick your best shot and enter our monthly photo contest! Just take your photos at an airshow or airport and send them in to RS@AirshowStuff.com!

Photo Contest Rules

- Two entries per person per month.
- All entries must be your own work.
- All photographs must be from the current calendar year.
- Photos must be at least 1000 pixels on their longest side.
- The photographer retains all rights to the entered images.

We will review all of the entries and pick one winner and two runners up to get published. The winner will recieve a free DVD set or 8x10 print of their choice from AirshowStuff.com. If you don't win, try again next month! Good luck!

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Cover Photo

Magazine Airshow fans check out the mammoth C-5 Galaxy at the NASJRB Fort Worth Air Power Expo. Photo by Angelo Aldrighetti. For more, see page 74.

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See yourself here!

If you are an airshow enthusiast, we want your help! Everything you see in this magazine is created and submitted by people like you. All it takes is a simple e-mail each month with photos or articles you would like to submit. We may even be able to help you get a media pass if you cover a show for us! If you would like to join our team, please drop us an e-mail at RS@AirshowStuff.com We'd love to have you!

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Article by Chad Grosvenor

By now many of you have heard about the tragic accident to befall Kyle and Amanda Franklin. It was March 12th in Brownsville. TX and the husband and wife team had started to perform their "Pirated Skies" wingwalking act. A few minutes into their routine, the engine on their Waco UPF-7 Mystery Ship guit while Amanda was on the top wing. She immediately began moving to the cockpit as Kyle slowly climbed to give her as much time as possible. Amanda made it back into the front cockpit of the aircraft just an instant before impact. Kyle thought quickly, and chose to set it down in the only piece of open ground in the middle of the mesquite forest next to the runway.

Luckily, the impact was some-

what controlled. Upon impact, Kyle sustained a couple facial lacerations and Amanda sustained fractures to her face as well as a broken neck and back, but was not paralyzed. Tragically, her safety harness trapped her inside the cockpit as the aircraft caught fire. Amanda was severely burned on nearly 70 percent of her body. Kyle sustained burns on his arms was unable to free her. Only when emergency crews reached the scene with a set of bolt cutters was she able to be rescued. She was airlifted to Brooke Army Medical Center, where she remains today. Kyle, on the other hand, went to a local hospital after the accident and was transferred to BAMC later on. He was discharged on March 28th. Amanda has had numerous surgeries and undergoes

daily bandage changes. Additionally, they have had to remove nearly all of her fingers and she has more surgeries ahead. Kyle and Amanda have a long and expensive road ahead of them, but many people have stepped up to help them.

Here at AirshowStuff we have produced a special benefit DVD with 100% of the profits going trying to pull her to safety, but straight to the Franklins. You can help them out by keeping them in your thoughts, purchasing this special DVD (See the ad for details), or by donating to one of the funds set up in their name either the Moonlight Fund or the International Council of Airshows (ICAS) Foundation Fund: specify Kyle and Amanda Fund.

> www.MoonlightFund.org www.ICASFoundation.org

ON MARCH 13, 2011, RENOWNED AIRSHOW PERFORMERS

Kyle and Amanda Franklin were severely injured after a crash landing during A PERFORMANCE. BOTH WERE RUSHED TO THE HOSPITAL WITH BROKEN BONES AND SEVERE BURNS.

In order to help with their medical bills, Airshowstuff.com HAS PUT TOGETHER A SPECIAL BENEFIT DVD. A FULL 100% OF THE PROFITS WILL BE DONATED TO ONE OF THE FUNDS SET UP FOR KYLE AND AMANDA. THE DVD INCLUDES FOOTAGE OF KYLES AEROBATICS, AMANDA WINGWALKING, AND SPECIAL ONBOARD FOOTAGE DURING PIRATED SKIES.









FOR MORE INFORMATION, PLEASE CLICK THIS IMAGE OR VISIT WWW.AIRSHOWSTUFF.COM EVERY LITTLE BIT HELPS.

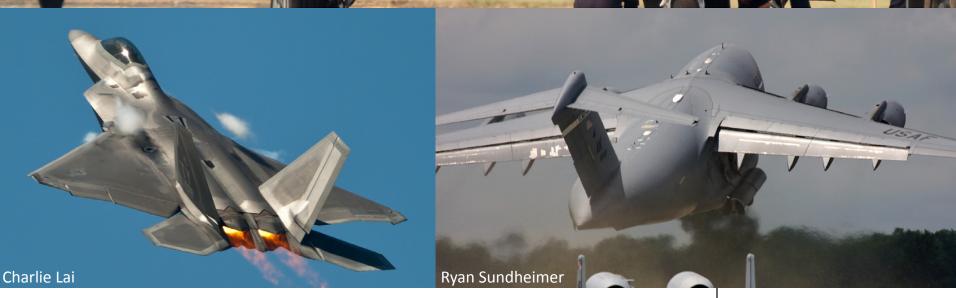


Article by Chad Grosvenor

Due to the tragic loss of an F/A-18F Super Hornet West Coast Demo Team aircrew during a routine demo practice at Naval Air Station Lemoore recently, all demonstrations by the four single-ship F/A-18 teams have been put on hold. Pilot Lt. Matthew Ira Lowe and WSO Lt. Nathan Hollingsworth Williams were practicing a demo at NAS Lemoore on April 6th when their VFA-122 F/A-18F crashed into a field approximately a half mile west of the base. Neither Lowe nor Williams were able to eject, and both died on impact. An investigation is being held to determine the cause of the accident. The demo teams are still permitted to fly US Navy Legacy Flights as scheduled. There is no estimated time when the hiatus will be lifted, but reports from early May shows indicate the teams may begin flying limited performances consisting of several high speed or similar passes.

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This isn't the only demo stoppage of late. Last year, all USAF C-17 Globemaster III demos were cancelled after one crashed while practicing a demo in Alaska. The ban lasted through the end of the 2010 season, but has now been lifted. As recently as May 3rd, the Air Force has decided to ground the entire 165 strong F-22 Raptor fleet after discovering a flaw in the aircrafts oxygen system which may have played a factor in a fatal Raptor crash in Alaska last November. The F-22 team has already had to cancel two of their already rare appearances, including their hometown show at Langley AFB. Similar systems in the A-10, F-15E, F-16, F-35, and T-6 are also being investigated. While no other type has been yet grounded, any further stand downs would severely impact USAF operations, including involvement in airshows. There is no doubt that it will be a guieter airshow circuit until these important safety issues are resolved.





Article and Photos by Ryan Orshinsky

Over the past year much has been accomplished on the restoration of Lancaster FM212. From paint stripping, to beginning the reassembly of the port wingtip, to the removal of the tail plane, a great deal of work has taken place on the Lanc.

Throughout the summer months the crew managed to strip a large portion of the fuselage. Nearly all of the port side of the aircraft has been completed to date. With this paint removed it has given them an opportunity to assess the condition of the aluminium skins; so far everything looks to be in good condition, which is going to save a lot of work and money in the long run. Much of the past year was also spent working on the port wingtip, which is slowly getting closer to completion. New stringers, ribs and skins had to be made and fitted. With only a few pieces left to fabricate, assembly should begin in the coming months.

In early 2011 news was passed along that a grant had been awarded for FM212's restoration. Because of certain rules, specific amounts of the grant money would have to be used for office supplies, tools, materials, etc. The largest portion would go towards restoring a certain section of the plane. It was decided that



this "section" would be the horizontal stabilizers. In order to remove the horizontal stabilizers, however, the rest of the tail plane also had to be removed. The second week of February marked the beginning of this huge undertaking. In the bitter cold of the unheated Quonset hut work began; trim wires and control rods had to be disconnected, and inspection panels removed before any of the major portions of the tail could be separated from the aircraft. Once these smaller tasks were completed, beginning with the rudders, the removal began. Next to come off were the elevators, then the vertical stabilizers. On March 5th, the horizontal stabilizers were finally separated and pulled from the fuselage. Though there were a few minor hitches, everything came off relatively easily.

On Tuesday, March 29, thanks to Wolverine Freight (Windsor, ON), the horizontal stabilizers were moved up to Kitchener, ON to undergo a 26-week restoration by Aero Structural Inc.

As the warmer weather starts to move back in, paint stripping will once again resume on the main portion of the fuselage. The goal is to have most, if not all, of the fuselage stripped by the end of this coming summer. Work will also continue of



the port wingtip, which should be completed sometime this year, or early next year. The plan right now is to start several smaller projects, such as the undercarriage doors and engine cowls as the wingtip nears completion. Now that the tail plane has been removed, the next "big" project can begin as well; the removal of the port and starboard inboard fuel tanks. The removal will allow a more in-depth inspection of the main wing spars to take place, and an opportunity to coat all of the steel components in the fuel tank area with corrosion preventatives.

If you would like to find out more about the project follow the Canadian Historical Aircraft Association page on Facebook or visit:

www.CH2A.ca/lancaster









also has issues, and after spending almost the entire day trying to fix it, the group ended up flying back with only an additional CJ-6 Nanchang. An L-17 Navion from the museum made it over as well. Although the weather was not great, there was time for one flight before sun down. I hopped into the SF.260s cockpit with David. We were the number four of four aircraft in the flight. The Navion was in the lead, followed by the CJ-6 and a blue camouflage Yak-52TW. After taking off in sections and joining over the field, we spent some time transitioning

between various formations. As we cruised, David gave me some insight into what was happening. "I try to keep the tie down hook under the Yak's wing lined up with the tip of the prop spinner." he said. "That keeps me in the proper position."

Eventually the lead called for a tail chase. After forming up into echelon, each aircraft broke to the side in sequence as if coming in to land. Instead of landing though, each aircraft followed the one in front of it through rolls and steep turns.

reality check. Upon getting back to the hotel, we learned that Bill Walker of the Red Thunder airshow team had been killed several hours prior when his Yak-52 crashed during the Red Thunder performance at an airshow in Georgia. This sad news hit especially close to home because "Wild Bill" was a member of the RPA, and a friend of several of the pilots at the fly-in.

Sunday morning was exactly what I had been waiting for. The sun shining brightly through the hotel window got me out of bed extra quickly - I wanted some photos! Later that day I got my chance when they organized a sixship flight.

The group was split into two flights of three. The first flight was lead by John Shuttleworth, the event organize, in the CJ-6. On his wings were John Casper in the blue camo Yak, and the airport director John Layne. Because of the lack of aircraft, John borrowed one of the FBOs Diamond DA40s - one of the least 'Red Star' aircraft around. The second flight was led by Glenn Foy in his Yak-52TW. He was joined by the Navion and David in the SF.260. As a tribute to Bill Walker, each flight used the callsign "Walker Flight". The mission for the flight was to practice joining and splitting the two formations. I tagged along with Glenn in Walker 2-1, and my father snagged a seat with John Layne in the Diamond.

The RedStar Pilots Association is a non-profit organization and Saturday night was a bit of a one of several signatory organiza-



tions approved by the FAA. These for North American trainers and organizations offer formation training and certification for the FAST cards necessary to fly formation at an airshow. Although the majority of the pilots in the group fly Yak-52s and CJ-6s, there also L-29s, L-39s, MiG fighters, and more. David is a bit of a special case. His Italian-made SF.260 doesn't really fit with the Red Stars, or the similar organizations

Mentors. Even so, the RPA welcomed him in.

It was a gorgeous day for flying, and the opening canopy of the Yak afforded me a wonderful chance to shoot the other aircraft. There was just one problem - the cold! Temperatures on the ground were in the 40s, if that. I knew it would be bad with the canopy open, and I came prepared.

Sweatshirt, winter coat, winter hat, two layers of pants. Unfortunately the thing that would have helped the most, gloves, I couldn't use because I needed to work the camera. Luckily Glenn's Yak had a small heater - not all of the aircraft did! After takeoff I sucked it up and popped the canopy open. Not too bad, I thought, though sure to get worse.

The view was incredible. To







Right was Gina the SF.260. I spun side to side, giddy with excitement and eager to get every picture I could. It did get cold fast, esclose to the wind blast and caught a burst. I operated in bursts, pop-

off a flurry of shots, and then low-canopy as we came in. ered the camera and jamming my icy fingers up to the heater vent.

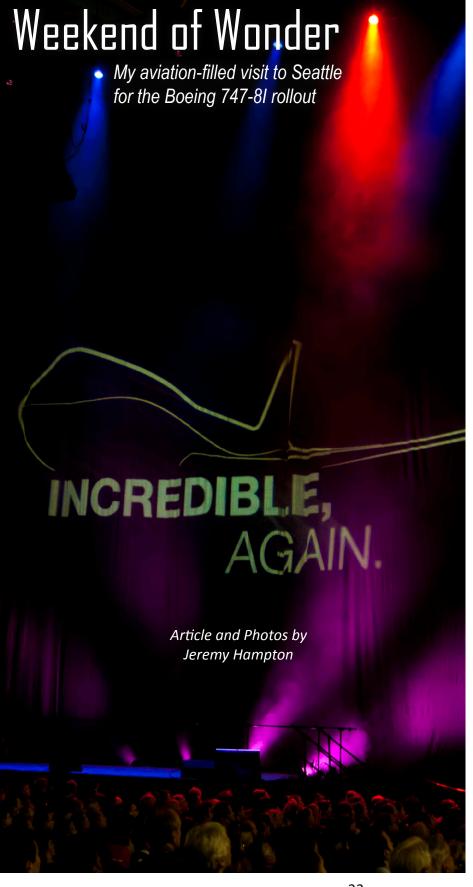
pecially when I nudged a little too the other flight and alternated be- formed up in a five-ship wedge tween joining and leading. It was and made a couple passes over amazing to see the other flight of the airport. A quick break to land

my left was the Navion, and to the there was a good shot, clicking wingmen, or sliding by above the

Towards the end of the flight, the Navion dropped out and Eventually we hooked up with headed back to the airport. We taxied back to a debriefing over lunch.

With the weekend over, it was time to head home. Unfortunately, we had to drive! Thanks so much to David Tan, John Layne, Glenn Foy, John Shuttleworth, and the rest of the pilots who





It's late November and I'm sitting in my man cave in Kansas City watching football and looking at Facebook. I've just become a fan of The Boeing Store's Facebook page and I notice a prominently placed photo of the week section. I think to myself that it never hurts to take a chance so I submit a photo in the hopes of maybe seeing my photo on the Facebook page. A week later I receive an email from Boeing, asking me a bit more about the picture and that they may be interested in featuring it at some point. I excitedly reply to them, filling them in on all of the details of the photo. The following week, I check the Facebook page on a Sunday evening and I'm greeted by the site of my photo of a B-1B perched on the ramp of McConnell AFB! Sweet! At this point, I'm getting pretty emboldened so I decide to submit a second photo, this time of a B-2 Spirit taken at Whiteman AFB. One week later I log into Facebook and...BAM! There's my B-2 photo! Two weeks in a row! I'm riding high now! I submit a third photo of a B-29 yoke and a couple of days later I'm contacted by Jim Newcomb, the Director of Brand Management and Advertising at Boeing. He writes to tell me that he has enjoyed the photos. I give him an emphatic thank you and tell him that it really means a lot to me to hear that! I only started getting into photography about a year earlier so it's pretty encouraging to hear that others have enjoyed my photos!

Fast forward to February

2011. I'm sitting in my office in the Emergency Department waiting for a trauma or something else exciting to roll in when my email alert dings. It's from Jim Newcomb. He asks me if I enjoy taking photos of commercial aircraft and if so, give him a call because he's got an idea. Hmm, sounds promising. I call him right away and he drops a Little Boy-sized bomb on me when he asks if I'd be interested in flying to Seattle to pho-

ment of the weekend outweighs any desire to sleep more. We land in Seattle early Saturday morning...thank goodness for gaining an extra two hours due to time zone changes. That means more time to look at airplanes!

We grab our bags and ride up the escalator of SeaTac airport where we're greeted by the smiling face of Mike Wasch, Senior Manager of Boeing Stores, Inc. We shake hands and then head wind tour of aviation. As we approach Paine Field, my excitement level is nearly uncontainable, progressing to the point where I start to dance around and drool on myself, not unlike what a dog looks like when you're about to give it a big chunk of meat (actually, I'm like that when I eat a steak too).

After lunch we drive to The Boeing Store and the attached Future of Flight. Mike takes me upstairs to the roof for a unique view



tograph the rollout of the new Boeing 747-8I on February 13th. I don't remember exactly what happened next or what I said, all I remember is making some kind of squeaking sound. The next thing I know, it's Friday, February 11th and I'm getting packed for a ridiculously early flight to Seattle the next morning.

My wife and I wake up on Saturday morning at 0300 to start getting ready for our 0630 flight. I'm exhausted, but the excite-

to the Seattle Westin hotel where my wife and I will sleep that night. It's an absolutely incredible room on the 34th floor directly overlooking the Puget Sound and the Space Needle. We have exactly enough time to set our bags down and take a quick picture of the view before we have to run back downstairs to meet up with Mike. We load into the car and head towards Everett, WA where we'll grab some lunch and then get started on our dreamlike, whirl-

of the Boeing 747 Dreamlifter along with a few 787 Dreamliners that are about to receive their livery. I'm able to take a few photos, fighting what feels like hurricane force winds. After a few minutes, we decide that the wind has beaten us and we head back inside to view a Boeing promotional video prior to heading off on the tour. We sit through the presentation with a certain smug grin, knowing that in a few short minutes we'll break off from the others in the



group to be taken on a VIP tour. This is a very rare opportunity, as VIP tours, I am told, are typically reserved for foreign dignitaries, visiting heads-of-state, airline presidents who come to visit their "children" prior to being "born", and now me!

We take a private shuttle bus to the main entrance of the 747 production facility and walk through the door to see a massive bare-metal aluminum 747-8I in its final stages of assembly. I've seen 747s at airports before, but I find myself absolutely overwhelmed by the size of this beast as I stand underneath the fuselage. It's one thing to see a 747, Dreamliner, or even a C-5 at an airshow, but it's something completely different

to see an aircraft as massive as this inside. It really gives a more impressive sense of scale. We talk about some of the features of the new 747 including the Kreueger Flaps and fly-by-wire mechanics and then I stop and stare at the beautiful new raked wing tips. Man those things look cool.

We walk a bit further into the factory where I learn that, if a person was motivated and had a really big shovel, they could dig up Disneyland in Anaheim, CA and move the entire park along with 10,000 parking spaces into the confines of the Boeing factory. Wow. I also learn that there are 1,000,000 light bulbs hanging from the ceiling. I think about asking Wes (our tour guide) how

many people it takes to change a light bulb, but then stop myself when I realize that will make me sound like an idiot.

We load up into a VIP golf cart, fire up the engine, and drive towards the next 747 looming in the distance. This 747-8 freighter is nearing the end stages of production and we're allowed to board the plane to watch the Boeing employees installing some of the 130+ miles of wiring into this girl. It's kind of weird to be in the belly of a super jumbo that is completely devoid of seats, overhead compartments, and flight attendants. We are standing directly under the cockpit of the plane and we look towards the aft section. This thing literally looks like it's a mile long. We talk a bit about how odd it must be for pilots to land a plane this big since, as they cross the white line on landing, there's still a couple hundred feet of airplane that hasn't quite made it to the runway yet.

We exit the plane through the side cargo door, get back into the cart and drive a bit further. It's a Saturday afternoon, but everywhere you look there are Boeing employees working feverishly on aircraft assembly and riding their "cargo bikes" around the facility. Yes, the facility is that big that they have to ride bikes to get from one area to the next.

As we drive towards the 787

section of the plant, discussion moves back to the sheer size of the building. I find out that there is no heating or cooling system. Rather, opening the football field sized hangar doors or closing them as needed controls the climate. What really blows my mind is that shortly after the building was constructed, employees played witness to a weird yet amazingly cool phenomenon...the indoor weather system. At first, there was no mechanism to circulate the air and remove the humidity and as a result, water vapor would rise to the ceiling where a small rain cloud would form and a little indoor rain shower would fall. Talk about mind-bending. Since then, mechanisms have been implemented to recirculate and dehumidify the air, eliminating the chance of rain.

The next 30-45 minutes are spent driving through the 787 as-

sembly area. It is a beautiful plane, especially up close. It's amazing how clean it looks, owing to the significant reduction in rivets needed for assembly. It's also an incredibly strong plane secondary to the significant amount of carbon fiber used in its construction. Wes tells us that during wing loading/stress testing, the hydraulic machine used to bend the wings

about how he wished his A320 for Flight 1549 had those behemoth engines installed because they would have chewed right through those rogue birds. Actually, that engine is so big it looks like it could survive a bird strike by a Pterodactyl. Again, that's big.

Back to the golf cart to wrap up the tour. We board the shuttle bus back to the Boeing Store where



actually malfunctioned before the wings failed, leaving a 787 with it's wings raised high, kind of like a referee signaling a touchdown! Wow! We drive by a 777 engine on the factory floor and stop to marvel at the size. The engine is so large, you could actually fit the fuselage of a 737 through the intake. That's big. Our guide tells us that he gave Sully (Chesley Sullenberger) a tour and he mused

we say goodbye to Wes, and then Mike and I drive to the Historic Flight Foundation. Unfortunately, this tour is going to be slightly abbreviated because the museum closes in 30 very short minutes. This fact doesn't dampen my excitement at all because as soon as I walk through the front door I see the distinctive engine nozzles of a MiG-29 Fulcrum. Wow. I look a bit to my left and my excitement

rises as I see an F7F Tigercat and an F8F Bearcat in their distinctively beautiful Grumman blue paint job. Looking a bit further, I see an ultra-rare P-51B Mustang "Impatient Virgin?" with it's uber-cool Malcom hood canopy. Again, wow. I'm filled with a surge of excitement that gives way to a major sense of urgency as I realize I've got a lot of aviation history to absorb in the next 30 minutes. The camera comes out of the bag and the hangar is filled with the clickety-click-click of my camera's shutter. People walking by the windows outside must have thought there was one of those Boeing indoor thunderstorms happening due to the lightning like bursts of my camera's flash. MiG-29...click, click, click. Run to the Bearcat...click, click, click. On to the Tigercat and the Mustang (where I have to stop and give the "Impatient Virgin?" a sloppy kiss on the propeller. To the Spitfire... click, click, click. Five minutes left? By this time I feel like I'm spinning in circles, taking a picture of whatever aircraft enters my sights. I start to wonder if I could crawl up into the afterburner of the MiG and sleep there for the night. Eh, better not. I'd hate to get charred as a result of an impromptu 0200 engine run. The museum workers usher us out the front door, then it's back to the Boeing Store where I'm treated to a massively big surprise.

A Boeing Store shopping spree. I don't think I can write too much about this part of the experience because I basically blacked out as I walked through the front door of the store. All I remember is that the left wall of the store was adorned with what had to be over 100 different hand-carved mahogany airplane models. I have a major weakness for airplane models, so at this point I think I squealed like a 14 year-old girl at a Justin Bieber concert, then... blackness. I regain consciousness

about 30 minutes later to find myself in the car on the way back to the Westin where my wife and I will change clothes and then head to dinner. After that, it's a short night of sleep before I rise bright and early to head back to Everett for the real treat of the weekend... the unveiling of the new 747-8 Intercontinental.

The sun filters in through the window and I wake to see the Seattle Space Needle shimmering in the distance. I'm a bit disoriented at first, thinking I had just woken from what I was sure was a dream. I look to my left and see my new P-51D hand carved model and exhale deeply. It's not a dream. I'm really in Seattle and about to see the curtain drop to reveal the latest in a long line of incredible Boeing aircraft.

I quickly shower and get dressed and then walk around the hotel a couple of times to take some quick shots of the empty Seattle streets. I walk back to the

front of the Hotel and see Mike waiting for me, ready to drive back to Everett. It's an absolutely beautiful Sunday morning and I'm able to enjoy the view of the mountains and evergreen trees on the 45-minute drive back to Paine Field. We drive past the factory and the excitement is almost palpable. Behind that second hangar door a 747-8I in a brand new, top-secret livery waits for the moment that it will be revealed to aviation fanatics worldwide.

We park and walk to the media check-in gate and retrieve our credentials. This is such a weird feeling. A couple of months ago I submitted a couple of pictures to Boeing on a whim. Now here I am, getting media credentials

to work alongside international media members. There are photographers from USA Today, news crews from Japan, and myself, an Emergency Medicine PharmD from Kansas City. About this time, that inevitable feeling of camera envy starts to set in. The guy standing next to me is loaded down with what has to be at least \$30,000 worth of equipment. I just keep telling myself that it's not how big your lens is, it's how you use it.

We board the shuttle bus that tal. will take us inside the hangar to the media stage and the excitement mounts. We unload at the entrance and march what feels like a half of a mile into the building and turn the corner to the

there is an absolutely electric, palpable energy in the air. About 1,000 people have already secured their spots and we're still 1.5 hours away from the curtain drop. We move past the massive video screens looping videos and the schedule of the day's events and we make our way to the media stage. In a short time the massive curtain will drop to reveal what we've all come to see, the new Boeing 747-8 Intercontinental.

We wait patiently as a pair of Boeing employees do some stand-up comedy until finally, the show starts. A series of executives give a cursory statement and then Lufthansa, Boeing's 747-8 launch







stage. The music builds to a creeye the curtain drops to reveal the brand new 747-8 Intercontinen-Boeing blue livery, but rather in unique scheme of white, orange, and red. After a short introduction to the new plane, we're allowed to mill around on the floor

partner, is acknowledged and and see it up close in its spectacuthanked. Suddenly, the factory is lar enormity. We walk around for sicians begin jumping around on the rest of the media group and head out to the ramp to look at scendo and then in the blink of an a massive DreamLifter that had tal adorned not in the traditional A security guard approaches us port. Blargh! to say that in about an hour and a half they'll be swinging the tail ing and walking around in circles section open to remove a section of the 787s fuselage from the cavernous cargo area. I emit some

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kind of inaudible grunting sound, disappointed that I have to be at filled with the sounds of electric a bit and then, after a quick check the airport to catch a flight back violin as two wildly energetic mu- with security, we break off from to Kansas City in three hours, which would have been fine save for the fact that we still had to drive 45 minutes back to Seattle recently arrived from one of the to pick up our bags from the hotel remote 787 production facilities. room before heading to the air-

After a couple minutes of kicklike a dejected Charlie Brown, Mike asks if I'd like to check out the Flying Heritage Collection which happens to be located right have peed a little from excitement had the chance to see in person, down the street. Heck yeah! We (uh, I mean no I didn't!). load up in the car, stomp on the throttle, and pull into the museum parking lot. I was checking this museum out online the night before so I know what's inside waiting for me...a huge collection of ultra-rare warbirds, many of which are the last of their kind still that I'm walking around, doing a a P-40C which happens to be the Fi 103R Reichenberg. I have to weird kind of dance that makes world's only remaining P-40C stop and stare at this one for a

doors leading into the hangar space and I'm instantly transported to aviation heaven. There's an original P-51D that actually saw combat in WWII (Upupa Epops). I drool when I see the P-47D "Tallahassee Lassie" sitting directly the Komet was a manned version flying. At this point I'm so excited across from the Mustang. There's of the V1 "buzz bomb", the Fiesler me look like a 3 year-old that has in flying condition. The Me109 while, wondering how any pilot to go potty. In fact, I think I may and FW190 are the first I've ever could ever have agreed to fly that

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and both of them saw combat I walk through the double in WWII as well. There was also an Me163 Komet which I had to laugh at because, looking at it from a head-on perspective, it looks like a dapper 1920s gentleman that's wearing a monocle whilst tipping it's hat. Across from

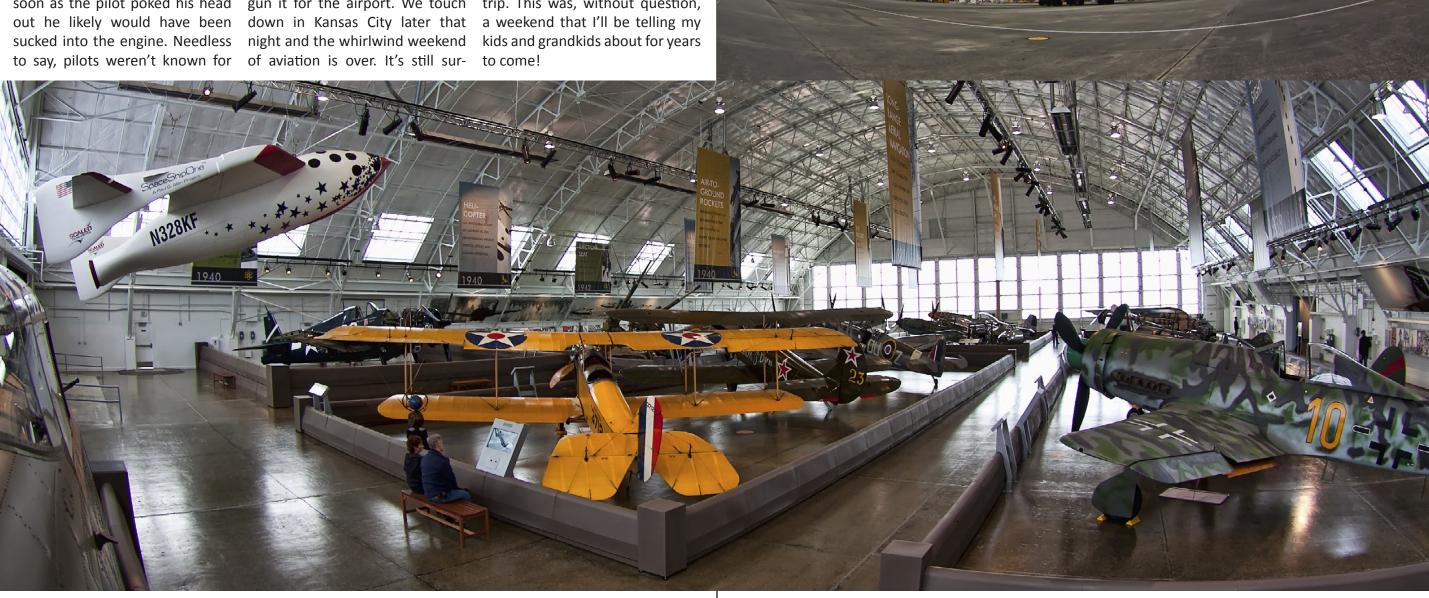
death trap. This "manned missile" was designed to be flown to the target with the expectation that the pilot would bail out once the so I have to execute the run and final heading was set. The problem, however, is that it would have been extremely to open the canopy against the force of the wind, and if the pilot was able to muscle it open, he likely wouldn't have survived anyway because of one massive design flaw. The engine intake was located directly behind the cockpit; meaning as soon as the pilot poked his head

surviving test flights of this sui- real to me that the submission cide machine.

shoot approach to photography. Hey look, a Japanese "Oscar"... click, click, click. Run, run, run. Hey, a Polikarpov I-16! Click, click, click. Run, run, run. Sweet! A Hawker Hurricane and a Spitfire! Click, click, click, crap...time is up.

We load back into the car, firewall the throttle, and head back to Seattle. We grab my bags and then gun it for the airport. We touch

of two photos to Boeing landed Time is flying by at this point, me an absolute dream weekend. I'm still not convinced that the whole thing wasn't a dream, but the mahogany P-51 sitting on my desk at the hospital reminds me that yes, I was the luckiest man on the face of the Earth for a full weekend. I can't thank Jim Newcomb, Mike Wasch, and Kelly Yamamoto enough for the immense hospitality they showed my wife and I on this once in a lifetime trip. This was, without question,





Article and Photos by Anthony Richards

Amid the morning atmosphere of faint wind breezes and crisp, cool air, a rumble echoed down the Boeing ramp at Paine Field in Everett, WA as the first engine ran up and the new 747-8 Intercontinental came to life for its first flight. Standing atop a tall mound on the thin ridgeline with dozens of crammed-together reporters, some local news anchors and others bloggers, we looked on as the giant began to breathe. It was only a few weeks prior that most of us had laid eyes on her for the first time at the extravanorth: it was go time.

as the engines came to life and Boeing workers did a final FOD walk just ahead of the red-orange beauty, but the wait was worth it runway and departing and resumonce we saw the tires roll towards us. With employees out of the clear and ready to host history way, the Intercontinental slowly once again. made its way out of the Boe-

gant rollout ceremony where we ing ramp and onto the taxiway. I greeted her with rowdy applause would like to say all eyes were on and giddy shouts; today we were the aircraft as it came closer and silent as we listened closely to closer to us, but Boeing, ever the hear the most delicate of sounds entertainer, flew in the new 787 thunder from the new airliner. Dreamliner to do touch and goes The skies above were blue and a and missed approaches for the slight wind was coming from the gathered few out on the tarmac. The Dreamliner made one last It felt like an hour had passed pass as the Intercontinental rolled off the ramp; gear down but only hovering briefly over the tarmac before travelling low down the ing a test flight. The runway was

Now I mentioned we were on









tion it was at the entrance to the ramp and the taxiway bordered the west side making it a prime spot to watch the taxi and first flight from. Most of you reading this have seen a 747 of some make or model in your lives and know how large they are, but I mean to tell you the extra 18' impressive. The new composite flight. wing swept silently past our lens-

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a hilltop, but I neglected to men- added to the 747-8I made it just a soon gave way to a rumble as she that much more monstrous as it strolled further down the taxiway. passed by us at what felt like an Not too long after that, Boeing's arms-length away. The sun caught two T-33 chase planes roared the beautiful new launch colors overhead, their engines howling and lit up the aircraft like a fire- to announce their arrival from ball, making the sight all the more Boeing Field to escort the maiden

> As the quiet new jet made its es and the hiss of the GEnx-2Bs way to the southern end of the

ter was played live through a at us. nearby scanner and the voices of the crew gave us cues as to when in silence as the clearance was she would finally lift off and leave us. The wait time on the taxiway was brief and in the time it took and more speed with each pass- peaceful. us photographers to zoom our ing second. Before she was even lenses down the airport and focus to us, her wings spread and she of Shooting Stars in chase climbed on the behemoth it was already leaped into the air. It was remark-

runway for takeoff, cockpit chat- on the runway looking right back able to feel the tension release

given and the aircraft silently marched forward, building more her to this point. It was simply

as she flew by us and ever higher Through the haze we watched into the sapphire abyss with the faint cheers of the workers down on the taxiway that took care of

> While the plane and the pair away, the group of journalists and



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I made our way back to our cars to make the journey down the interstate to Boeing Field forty-five minutes away. The rendezvous point was the Museum of Flight at the southern end of the airport where we would be hosted until the flight was over and the 747-81 landed. The main gallery is set up with multiple floors, with the first at ground level and a mezzanine above with offices on the third floor where we would meet in a conference room for lunch and socializing. I had been to the museum multiple times before but not to this particular part and it was a treat to see a nicely catered buffet awaiting us with access to a balcony overlooking the runway and with enough clearance to view the full length of the airport: paradise.

This was not my first Boeing function, but it was my first maiden flight and in the crowd of reporters covering this there were more veterans than greenhorns

like myself. They all broke into groups and made circles with their laptops together chatting about politics, stories of different things they've covered, aviation, and history. It was interesting to hear so many different things just in the down time, but chatting wasn't all that we did together. A number of us took advantage of the balcony and spent a fair amount of time photographing the interesting and regular visitors to KBFI, including a Navy F/A-18F Super Hornet and the fifth-made 787 sporting the economic Boeing colors. It was nice to relax and chat with fellow enthusiasts and reporters, but the fun and games was to end sooner or later and we were back out to the vans to be shuttled to the viewing risers runway-side. Once there, we put cameras and equipment as close to the runway as we could and waited. The 787 came

back and taxied right past us, and I mean right past us given that we weren't too far off the taxiway. Another Boeing chase plane, this time a T-38, taxied and departed before the big moment arrived.

The weather clouded up a bit but we were able to still make out the silhouette of the large 747 and a chase plane west of us as it turned base for BFI. The landing wasn't as exciting as watching the lift off in regards that it meant it was the end of the day, but it was spectacular to see none the less. The wheels touched down and spoilers were deployed to allow a gentle roll down the runway as the crimson T-33 screamed passed overhead. The Intercontinental turned off the runway and taxied right back at us to finish off the test flight and be wheeled into position for the press conference and Q&A. I enjoyed watch-

ing the flightline crews walk out and inspect her.

I left that day feeling giddy and humbled to have been a part of such an interesting milestone for the 747 program and the Intercontinental. Boeing sent us envelopes of memorabilia with a letter flown on the first flight (a Boeing tradition) and a commemorative coin marking the event. Not only did I walk away from that event as a witness to a little bit of Boeing history, I got some killer swag out of the deal too. The lesson of the story is either something about cherishing being in a historical moment, or having bragging rights for months to come. I'll let you decide.

Thank you to the Boeing Communications Team and Lauren Penning for this wonderful opportunity! Congrats Incredibles! It IS incredible again.





Continued coverage from November

Article by Melanie D. Lee

Originally billed as a four ship L-39 formation with a T-33 solo. each painted in US Air Forcebased Arctic Camo. Heavy Metal fills a void in the East Coast airshow circuit, allowing shows that are unable to accommodate the requirements of military formation teams to finally have their Coast airshow circuit has enjoyed this type of coverage for years with the Patriots Jet Team of Byron, CA. While both teams use the L-39 Albatros, a subsonic modern military jet trainer from Czechoslovakia that is used by many air forces and warbird buffs the world over, each team ferent maneuvers and the experience that fans will see at each venue.

an estimated 50,000 hours of Bank Card in Hampton, NJ and

combined flying experience, including the team's two reserve pilots. They are Mike "Buick" Eberhard LCdr. USN (ret.), who is also with the Geico Skytypers, the Heavy Metal Jet Team now and John "Slick" Baum, who flew features all five pilots in L-39s, #2 Left Wing for the Thunderbirds in 2009/2010 and was also the F-35 Tactics Development Team Lead before then. He currently also flies for Air Combat Ace LLC in Henderson, NV. Like military demonstration teams, Heavy Metal will continue to fly own featured jet team. The West at each show unless their team lead is unable to fly, with the advantage that the two reserve pilots can fill in to maintain a full formation.

The team first came together in August 2010 following EAA AirVenture when self-made millionaire Jared "Rook" Isasscman met with Jerry "Jive" Kerby differentiates itself through dif- and Dale "Snort" Snodgrass of Team MS760 after the convention. They would be located near his home and other assets as The team has more than the founder and CEO of United



co-owner of 26 North Aviation round-the-world record holding co-pilot Doug "H-Dog" Demco. The newly formed team settled on KLNS Lancaster, Pennsylvania as home base for HMJT, having initially considered Allentown with 26 North already there. The team also conducts their winter training in Florida, out of such locations as KTIX Titusville, and KSGJ St Augustine. KLEE Leesburg Regional Airport is also used for maintenance of the fleet. And while the music playlist may not be comprised completely of heavy metal tunes **Diamond Cloverloop:** The dialike the name suggests, fans will recognize some hard rock tracks.

Unfortunately, Heavy Metal and Team MS760 will not be able to fly both team's performances on the same show day. This is due to legal technicalities and as a safety precaution for avoiding pilot fatigue, as the Gforces involved in each set can be demanding for even the most seasoned aviator. However, fans will be able to see Snort and Jive perform other routines, such as warbird aerobatics.

List of Maneuvers

The following is a list of the maneuvers performed by the team as of April 2011, as seen at the Tico Warbird Airshow and their surprise appearance at Sun 'n Fun. As can be expected of a new act, different arrangements have been seen so far as the team optimizes the sequence.

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Diamond Departure: #1 through at KABE Allentown, PA with his #4 take off in a fingertip, with the #4 slot immediately moving in to form the diamond as soon as gear up is initiated. The diamond then turns to set up for the first maneuver, or proceeds to a holding point if departing before their time slot in the airshow begins.

> Solo Departure: The solo will depart with a "treetop" transition to exit stage left and may double back for a banana pass into a full power climb to stage right, exiting to set up for his first maneuver of the routine.

mond enters show center from behind the crowd into a loop, turning 90 degrees after the apex to exit to show left.

High G Spiral: The solo renters the box from the right. Descending to pick up speed. He levels off at just 10 feet above the deck, then pitches up at show center in a hard right knife edge turn pulling 7 Gs into an ascending barrel roll back to initial altitude then reverses course to exit stage left.

Diamond Loop: As the solo exits, the diamond comes from the left, loops, and exits to the right.

Double Roll: Flying from right to left, the solo performs two aileron rolls for a full 720 degrees.

Opposing Banana Pass: After the loop and roll are completed, both groups will then turn back towards each other to perform





opposing banana passes. The Diamond will be high and the solo will be low.

Barrel Roll: Looping back from the right, the solo will descend to accelerate and perform the barrel roll over center point. He will then turn back to do an on the deck sneak pass back out to exit stage right.

Diamond Roll: From the left, the diamond holds its heading while

rolling to their right in tight formation, less than three feet apart.

Eight-Point Roll: As the Diamond exits the roll, the solo pops up and performs an eight point hesitation roll, exiting to the left.

Diamond Belly Pass: Returning to the stage from the front and to the right, the diamond goes "smoke on" approaching center point in a right turn, exiting show left with smoke off for the next pass.

Double Loop: Diving in from the left, the solo pulls up into two loops and exits behind the crowd to the right.

Make A Wish Four Point Roll: The diamond spreads out as they turn inbound from the left to perform this maneuver in honor of the Make A Wish Foundation. Simultaneously, each aircraft performs a hesitation roll with three second increments. The team then reforms into a line abreast formation and rolls out of stage right with a wide 180* left turn in front of the crowd into a single file line.

Cuban Eight: The solo enters from behind to the left and proceeds past the crowd into a cuban eight to double back to show center and exits back to the left.

Echelon Tuck Under Rolls: The diamond approaches with all four aircraft stacked on top of each other. Spreading out, the four perform a quick left banking roll to exit right.

Vertical Rolex: Coming from be-

hind the crowd, the solo pulls vertical, rolls twice into a humptybump, and rolls again on the way back down to exit left to join the diamond for the next maneuver.

Heavy Metal Break: Entering from behind, the diamond performs their own Heritage Flight inspired overhead break maneuver, with all four spreading out and performing a full 360 degree roll before turning back to rejoin. It is dedicated in honor of all who serve.

Sneak Pass: Immediately following the Heavy Metal Break, the solo enters in from the left on a treetop approach and turns to join the diamond at center point.

Steel Town Roll: Returning for their signature maneuver, the diamond enters for a straight through left to right pass while the solo rolls around the diamond.

Fan Break: Approaching from the front, the team is in now in a chevron, fanning out behind the crowd in increments of 3 and 4, 1 and 2, with the solo pulling straight up to finish the maneuver before he turns to exit to the right.

Dirty Roll: Back from the right, the solo lowers his gear and pulls into a roll.

Pop-up Break To Land: The final maneuver incorporates Slick and Stroker's days with the Thunderbirds. The diamond returns from the right with the solo in close trail and each aircraft pops up just four seconds apart and turns back to land from the right.

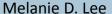


So what happened to the CT-33? It was damaged while practicing at St. Augustine Airport on February 18, 2011. As stated in the FAA Incident Database: "Immediately after aircraft became airborne, pilot raised gear and lowered nose to accelerate for climb. Aircraft settled onto runway and slid for 2000 feet. There were no injuries, damage to aircraft was confined to fuselage keel, speed brakes, landing gear doors, flaps,

Aircraft Inc. of Rockford, IL and painted by "Have Gun Will Travel" of Ottawa, IL as a permanent replacement for the black Albatros. LM "Lunar" Sawyer, the team's Manager and Narrator, was unavailable for comment.

As the team progresses through their first year, there have been indications that the teams development may have some pleasant surprises still to come, such as the consideration of addP-51 demonstration team has recently done.

Clips from the teams fleet of GoPro HD camcorders that are currently being used for postflight analysis may eventually be viewed on the team website, as indicated by the site's YouTube placeholder that currently shows videos tagged with "Heavy Metal Jet Team". There may even be fan merchandise to help raise proceeds for the Make A Wish Foun-





and antennas." WTLV/WJXX First Coast News also reported that the crash had fuel leaks too, and was being inspected for other damage not visible on the exterior.

A substitute L-39, N39WF, was then rented to keep the full performance on schedule and remained with the team until its fourth full show at the Coastal Carolina Air Show of Wilmington, NC. The new L-39, N5846V, was later purchased from Pride ing an opposing solo, as well as new maneuvers to expand the is dedicated to. routine to a full 30 minutes of jaw dropping action. With the acquisition of three A-4 Skyhawks to be restored to airworthiness and a number of other flyable warbirds already in Rook's fleet (who also by the team through JDI Holdings) fans may get to see the L-39s substituted for other aircraft on special occasions like the Horsemen

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dation, which the teams first year

In all, as the first year establishing a new group is always the most challenging, fans can expect this powerhouse of entertainment and mastery of the skies to only get better in the future. owns the aircraft currently in use From the casual attendee to the seasoned vet, the Heavy Metal Jet Team has what it takes to impress fans around the world for years to come.



Alrshow Fans, Make It Your Best Shotl



Article by Charlie Lai

As a long-time aviation enthusiast and avid photographer, am constantly working to create new, unique and compelling images that capture the excitement and energy of each air show. As a kid, I shot air shows using a Kodak disc camera, which didn't help me produce any high-quality images, but it created many great memories and is an excellent example of making the most of what you've got. Today's stable of highly capable digital SLRs and enormous lens variety offers even the newest photographer a short learning

curve and immediate feedback to fuel the creative process. Here is a quick list of lessons I've learned over the years that may help you in your journey to take your best air show shot this year.

Plan ahead

Do a little homework before each show to you maximize your shooting and prevent missed shot opportunities. Review the show layout, including position of the flight line, taxiways or take-off points as well as air show center. If you have an understanding of where the performers' turn-in points are, you'll have the advantage of being ready and can focus

in on these sequences to produce a unique shot. Develop a comfort level with the flight schedule. There may be performers you want to focus on more and knowing when/where they are preparing for flight or taxiing can help you produce an interesting photo. Determine east-west orientation, since the position of the sun will be an important element in your photo. Be careful with high contrast, backlit shots, which will make aircraft appear dark (although at times you may want to produce a silhouette.)

Also plan to check the weather forecast and adjust your shooting accordingly. Don't shy away from

cloudy, overcast or even rainy days which can add a dramatic effect to your photos and will otherwise produce more even, diffuse light. I once photographed the Blue Angels as a thunderstorm moved through and the resulting images had a much different feel against the dark backdrop of rain and flat light. If you can, shoot multiple show days, especially practice days. The crowds are lighter and performers often stay out longer to perfect their turning points. It's a great opportunity to get excellent shots.

Finally, pack carefully and for comfort. On show days, I usually feel like a Sherpa because I carry a lot of gear and I know I'll be standing and moving around much of the day, but I have a plan to maximize my comfort. Wear comfortable shoes/socks and a

Ryan Sundheimer

hat, and bring water and snacks so you're not missing an important shot standing in the concession line. Bring just the gear that you'll need in a comfortable backpack. Be sure to bring extra batteries and memory. Once these

run out, your day is over. I don't bring a camera bag since it's too bulky. Rather, I transfer just the lenses and bodies I plan to use to a well-made hiking pack that I can comfortably wear for hours. Be sure to check if the show has



restrictions on bags. Add a plastic garbage bag and a towel to help protect your camera gear from rain or sweat.

Perspective and Light

These are the secret to getting great shots. Plan to move around during a show to produce different perspectives and tell a story. There is a saying to make your feet act as your zoom. Work to get in close for static displays or when tracking the performers' pre- or post-flight activities. The pilots and ground crews have as much of a story to tell on the ground as they do in the air.

Don't overlook the crowd, as there are many interesting side stories at every air show. I enjoy photographing the fans and the expression of a child experiencing his or her first show, or the startled looks produced from high-speed passes make for very memorable photos. Backing away from the shot sometimes is a great way to capture the enormity of the event by compressing the crowd size into a single image. Look for unique vantage points as well. I often shoot from very high (rooftops, balconies or towers) and very low (lying on the ground) vantage points to produce an interesting perspective.

Capturing interesting light is one of the most important ingredients to a great air show photo. If you can arrive very early or stay very late, a sunrise or sunset silhouette can produce a wide array of captivating images. Depending on where you live, a low-humidity



or low-haze day can produce a vividly brilliant blue sky. A highhumidity day can produce very interesting condensation rings or vapor trails from fast-moving aircraft or props. There are no hard and fast rules for getting this right, just be creative, keep your eyes open to opportunities and keep shooting until you're comfortable that you've captured a shot that appeals to you.

Gear and Technique

It's not necessary to make a huge investment in camera gear to get great air show images, you simply need to understand the capabilities of the gear you own and master a few techniques.

One of the most important skills to learn is the combination of appropriate shutter speeds and proper panning technique. Performance aircraft travel at widely different speeds during each show, from slow Stearmans to near supersonic military jets. Fast shutter speeds on propeller or rotor aircraft will produce an unnatural looking frozen prop, which typically does not convey any sense of motion or energy. Conversely, a too slow shutter speed on very fast moving aircraft is likely to result in soft or too-blurred shots. Here's where good panning technique comes in. Practice your panning swing by having a sense of where you want your pan to begin and where you want it to end. Orient your stance so you are facing the mid-point of the expected pan. Practice tracking the aircraft through its run, carefully



Ryan Sundheimer

timing the release of your shutter. Fire too soon and you may fill your buffer before the aircraft is at the mid-point of its run, resulting in missed shots. The key here is smooth and steady movement.

A good rule of thumb is to use the slowest shutter needed to produce motion blue in either the prop or background, while still keeping the subject aircraft in sharp focus. For me, that's around 1/60th of a second for very slow moving aircraft like helicopters or biplanes, 1/250th of a second for faster moving prop aircraft like the P-51 and 1/1000th of a second for jets. Just practice until you are comfortable and take lots of shots, which is the huge advantage of digital photography. Simply delete what you don't like.

Knowing when to fire the shutter is equally important to produce a compelling photograph. I tend to avoid photographing aircraft that are flying away from me or when the aircraft is so far away as to not produce a crisp photo

I can tightly crop. These are just wasted shots. Instead, I'll focus more on inbound strafing runs, photo passes, and stalls to get usable, crisp images. I also use the pilot as a good measuring stick to the success of the photo. If the pilot is sharply in focus and I can capture some emotion or activity, then I know it's going to be a good

Lastly, consider shooting in RAW as a more advanced tip. This suggestion will likely be debated since RAW files are much larger, reduce buffering capabilities and require careful processing, but by shooting in RAW, I have much more control over adjusting the color temperature, setting white/ black points, controlling sharpness and contrast than I do shooting in any other format. I typically shoot using auto white balance and I often find the color temperature chosen by the camera is not appealing in post-production. With RAW, I have greater options to correct this.

Follow the Golden Rule

Be courteous and considerate of others when shooting. I've had many instances where I've pre-planned a shoot and set up a position, only to be crowded by rude or inconsiderate fans who rush the rope to try to take their own photograph. On one memorable occasion, I had made about two feet of space in front of me to allow for the swing of my 400mm lens and was surprised when a fan took that as an opportunity to stand directly in front of me. I politely asked them to move as I

parent allowed his kids to pretty much run free, which included standing on my backpack which at the time had a D3X and lens-

es in it. Be considerate of others' space. I often place chairs, gear, or friends to give me more shooting room.

Hopefully, these tips provide didn't want to hit them with the food for thought as you prepare to attend your next air show. With On another occasion, a nearby a little preparation, practice and an open mind, your odds of producing that once-in-a-lifetime air show shot increase exponentially. Have fun and happy shooting!







Starting out in 1948 as a simple meeting of savvy and hopeful operators of a fledgling industry in uncertain times, Helicopter Association International's Heli-Expo has since become a mecca for helicopter fans and operators alike to interact directly with incraft. This year was Orlando's turn feet of floor space filled with 625

businesses in the world of rotor- members galas to start and end the event, the convention rose to to host the event, operating from new standards with record setting Friday March 4th to Tuesday the crowds - over 16,000 attendees 8th. With roughly a million square at last count. From parts dealers and servicing centers, to fire buckexhibitors, and a full schedule of ets and even SuperAWOS, an ex-

servation system allowing pilots to jump to the info they want instead of waiting for the message to loop via a set of squawks, attendees came from as far as Asia showed just some of Goliath's and beyond to this one-stop-shop vast array of heavy-lift payload cafor all things rotorcraft. From the pabilities at their exhibit. A whop-

Helicopters, who provide new life on the Orange County Convention to classic Hueys at their Olympia, WA restoration facility. Also from the Northwest, Erickson Air-Crane

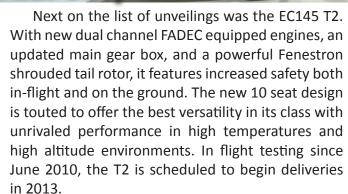
Center's parking lot turned helipad, with 39 flying in from as far as Canada, and 16 being trucked in, plus a few demonstration hulls and scale models arriving as early as Wednesday the 2nd.



Kicking things off at the Expo, Marenco Swisshelicopter went public with its first entry to the world of rotorcraft. Roughly similar in appearance to a 3/5 scaled EC135, the SKYe SH09 will offer amenities that larger helicopters have enjoyed for years while small helicopters of its class sim-

ply haven't had the ergonomics to accommodate. One of the SH09's best attributes is its composite hull that allowed designers trade weight for payload within its roughly 3,000 lb. max weight, while maximizing safety, comfort, and performance. With room for eight passengers, a highly modular cabin allowing for numerous

pax, medical, and utility configurations through its clamshell doors, and the ability to cruise at 145kts for 430nm at a whisper of current small helicopters' acoustic signatures, Marenco is set to be a noteworthy player in the future of economy-sized helicopters.



Eurocopter

Next to the T2, were Eurocopter's revised AS-350B3e with upgraded engines, cabin layout, and avionics, and their EC175 mock-up was also back as well. The X3 was represented by a 1/25 scale model as the centerpiece of the manufacturer's interactive









Bell Helicopter also took part in the festivities of officially unveiling their latest and greatest refinements to the product line with not just one but two new members of the family. To stage left was the new Bell 407GX. Responding to global customer demand for integration of the latest in advanced glass cockpit and safety enhancing technologies, Bell took the GX from the drawing board to fully certified on the showroom floor in just 19 months. With a baseline cost of just under \$2.8 million, the GX's most notable feature is the inclusion of the very

first Garmin G1000H flight deck of any rotorcraft. Heralded by Gary Kelly, VP of Marketing at Garmin, as "the most advanced flight deck show. bar none of any part 27 helicopter," it will provide operators such advancements as synthetic vision, full ADS-B compliance, graphical worldwide weather and real-time internet. Flight data can even be stored on an SD card for pinpoint analysis back at base. Although the GX's primary variations from previous models are on the inside, it can be visually identified by its entryways that are more ARH-70 Arapaho. bulged window than door (rough-

ly a 90/10 ratio). Also on display and performing outside was Bell's model 429, unveiled at last year's

To stage right, was another 407 variant that would draw even more wows from future customers - the 407AH. The latest installment in the Bell militarized line, it's the first commercially certified weaponized and armed helicopter of its kind. Taking note of the lessons learned from previous militarized projects, the 407AH can be seen as a rehash of the

Developed for the U.S. Army

to replace the OH-58 Kiowa series (based on the Bell 206), it was canceled in late 2008 by Congress as it fell behind schedule and overran projected costs. But Bell designers returned to the drawing board with lessons learned to renew the idea of a new militarized 407 variant. Just nine months later, the 407AH was airborne. Instead of building the AH specifically for a few military operators, designers aimed for a product that could be used by numerous international customers of the Law Enforcement and Para-Military markets right out of the factory while offering further modifications at the company's Piney Flats, Tennessee facility. The commercial certification allows Bell to bypass the former process of exporting through a long procurement process sanctioned by the Departments of State and Defense.

At just under \$5 million, the 407AH is extremely cost competitive at a fraction of the cost of other aircraft still using the traditional process. It features a Dillon 7.62mm M134T mini-gun, a 2.75" seven-shot M260 rocket-launching system, and a Garmin G500H glass cockpit, while other options include the latest in HUD, FLIR, flare/chaf, and IR countermeasure systems. As Larry Roberts, Bell's Senior VP of Commercial Business, summarized during the unveiling, "I'll tell ya right out of the box, that's one of the beautiful things about this machine, is it shows you what Bell Helicopter can do when we take the gloves off and go to work!"







Without a new aircraft to unveil, things at the Sikorsky exhibit were less crowded than the Eurocopter or Bell Exhibits. However, the revolutionary X2 Technology Demonstrator was back at the Expo, posing as the foundation for "game changing" advancements currently in the works at Sikorsky's Innovations branch. Since

2008's unveiling in Houston, the X2 has claimed the fastest cruise speed of any rotorcraft, clocking in at over 250 knots (287.5 mph, the V-22 Osprey's max speed), shattering all previous records. Itself a continuation of the similarly configured S-69 Advancing Blade Concept of 1973, the experimental compound co-axial helicopter

(300 mph). Innovators have been busy since then creating the next steps in the revolution of 21st century VTOLs. "With the launch of the S-97 Raider, Sikorsky and about 20 industry partners have launched the design and build of two S-97 aircraft. For those of you that are aerospace fans, [the X2] is the X-Plane that validated the physics behind X2, and [the S-97] is the Y-Plane that will demonstrate the mission suitability and value," states Chris Van Buiten, director of Sikorsky Innovations. With two crew and six troops, it will deliver a game-changing solution to military forces with double the speed, hovering altitude, and maneuverability of today's helicopter designs. The Light Tactical Helicopter is expected to be just the first of a number of X2 based derivatives that will include light commercial, UAV, Evac/SAR,

now has a max speed of 260 knots

and "Blackhawk replacement" sized helos. There may even be a stealthy AH-64-sized fast attack version. Also showcased with the X2,

S-92, and S-76, were advance-

ments toward a SMART helicopter system, such as the ability for future rotorcraft to have an adaptively aware health system allowing operators to proactively find and replace failing parts before

they become costly issues with lots of down time in the hangar. Adaptive rotor technology will also allow for rotor performance by actively optimized in flight by actually changing the shape of the rotor several times per revolution in a 600G environment while in flight to maximize performance. ART was recently proven in NASA wind tunnel tests to also lower noise and vibration stress levels by more than 50% by comparison as well. Further vibration reduction will be possible through a hub mounted active vibration absorber also in development. "We are literally on a trajectory to have a zero vibration helicopter with this active technology." Just as impressive will be the ability for helicopters to be optionally piloted and even conduct fully autonomous formation flight. "Remember the Chernobyl nuclear disaster? Helicopters responded. Heros crewed those helicopters and dropped concrete into the reactor. Very few of those flight crews survived. Most perished executing the mission..." cites Chris, just days before the recent disaster in Japan.

Wrapping up the open seminar was Project: Firefly, the electric helicopter. Shedding most of its engine for huge solid state lithium ion batteries, the highly modified S-300 Schweizer can only sustain itself for 15 minutes. It is projected to be tweaked in coming months to sustain over an hour's worth of flying time with an acoustic signature low enough to make headsets optional.







As Bell and Sikorsky were wooing attendees with their new militarized projects, Agusta had flown in their own new entrant to the market: the AW139M. Set up in the back row, it was unveiled only weeks earlier at the AFA Air Warfare Symposium, also in Orlando, and is made at the company's Philadelphia, PA plant. It offers the latest in proven US military hardware and is a leading candidate for the USAF's Common Vertical

role helo has interior mounted machine guns and room for 15 tion. combat-ready troops. It will be able to take the full compliment over 300nm round trip (or up to 675nm one way) doing 165kts for 15,000 feet.

Two civilian AW139s had also flown in for the company's main exhibit. PHI represented the offshore transport configuration with 15 seats, while Ornge made and delivery expected in 2014.

show its Air Ambulance configura-

Other displays included the AW109SX Grand New, AW119Ke Koala, and their latest development, the AW169. It showcased deployment in areas as high as a modular high ceiling cabin in a SAR configuration, with a large flat screen console for EMTs to interact with while on scene. The aircraft's development is reportedly on track, with certification



Following the final day indoors on Tuesday March 8th, attendees were invited outside to watch the mass exodus of most of the helicopters back to the Showalter staging grounds at Orlando Executive Airport (KORL) from 4pm until nightfall. And as the S64F Sky Crane lifted off with the remaining helicopters the next day at noon, with space shuttle Discovery's sonic booms sounding overhead, the record setting convention came to a close. Dozens of new contracts had been signed throughout its halls, and more than 90 demonstration flights were flown with the AS350, EC120, EC135, EC145, 407GX and 429 at the adjacent heliport. The Heli-Expo will return to Texas next year at the Dallas Convention Center on February 11-14, 2012.







A Year Of Celebration

Article by Chad Grosvenor Photo by Alan Radecki - Courtesy of Northrop Grumman Corp.



al of Naval Aviation, it is becoming one of the most talked about and highly anticipated years for avia- craft from the past and present tremendous milestone in aviation tion. It all started in 1911 when Eugene Ely proved to America that it was possible to take off and land on a ship. Here we are 100 years later honoring a century of and recognizing unique aviationrelated achievements through events and special paint schemes on certain naval aircraft.

started in sunny San Diego, CA on February 12, 2011 with the Centennial of Naval Aviation Kick-Off

With 2011 being the Centenni- Celebration. They kept it classy Homecoming Air Show in Novemwith over one hundred Navy, Maber. rine Corps, and Coast Guard airperforming flybys and demonstrations. In addition, the ramp at North Island, referred to by some as "The Birthplace of Naval Aviation", was stacked with naval airmission-ready men and women craft of all shapes and sizes from nearly every period of naval aviation along with modern aircraft and beyond the 5th generation painted in all kinds of schemes F-35, as well as profiles of each of honoring the progression of naval The flying festivities all got aviation. This wonderful year will ports from centennial events. You come to an end in Pensacola, FL, won't want to miss it! also known as "The Cradle of Naval Aviation", with the Blue Angels

You can expect us to cover this history throughout all of our issues in 2011. Be on the lookout for this special CoNA section in each issue, containing articles covering periods of Naval Aviation from Ely's first flight off the deck of a ship all the way up to the special paint schemes and re-

Major Upcoming Centennial of Naval Aviation Events

New York City Fleet Week and Jones Beach Airshow - New York City, NY May 22 - June 2 May 23-29 Philadelphia Navy Week and Millville Airshow - Philadelphia, PA

June 4-5 Rockford AirFest - Rockford, IL

June 11-12 Evansville Freedom Festival - Evansville, IN

June 16-22 Davenport Navy Week and Quad City Airshow - Davenport, IA



San Francisco Bay. However, in of that year. took off and landed on a ship. struction. The very next day, Lieutenant Theodore G. Ellyson began first successful launch of an him the first aviator in the US catapult was accomplished

Aviation in the United aid of lights. On July 6, 1911, States Navy officially started the first naval aviation base when Eugene Ely made the was established on Greensfirst flight off the deck of the bury Point in Annapolis, Marythen-named USS Pennsylvania land, but it wasn't occupied by (ACR-4) on January 18, 1911 in naval aviators until September

November of 1910, Ely took off May 22, 1912 is recognized from the USS Birmingham (CL- today as the birthday of Ma-2) on the other side of Amer- rine Corps aviation. On that ica in Hampton Roads, Vir- date, 1st Lieutenant Alfred A. ginia. Upon take off, the Curtis Cunningham became the first Pusher briefly skimmed the Marine Corps officer assigned water and kicked up enough to flight instruction and was spray to damage the propeller. later designated as Naval Avia-Ely, who didn't swim, realized tor No. 5. He reported to the that a quick landing was nec- Superintendent of the Naval essary and touched down on Academy for "duty in connecthe nearby Willoughby Spit af-tion with aviation" and was ter approximately five minutes then ordered to the Burgess in the air. That flight in 1911 Company in Marblehead, was the first time an airplane Massachusetts, for flight in-

After trial and error, the the flight training that made aircraft from a ship using a Navy: Naval Aviation in the on November 12, 1912 at the Washington Navy Yard. This After several demonstra- extraordinary feat that opened tions of a couple different up many doors for naval aviaaircraft, the US Navy decided tion was piloted by Lieutenant to order their first aircraft, Ellyson in the A-3. He also testwhich would later be dubbed ed the Navy's first flying boat, the A-1 Triad, on May 8, 1911. the C-1, in Hammondsport, This date has been officially New York, on November 30, proclaimed "The Birthday of 1912. Another significant na-Naval Aviation". Lieutenant El-val aviation accomplishment, lyson flew the A-1 from Lake which occurred in 1912, was Keuka in New York to Ham- the construction of the United mondsport, New York on the States Navy Aerodynamical first night flight ever flown by Laboratory at the Washington a naval aviator. He landed suc- Navy Yard. This wind tunnel cessfully on the water on his was constructed under the disecond attempt without the rection of Naval Constructor

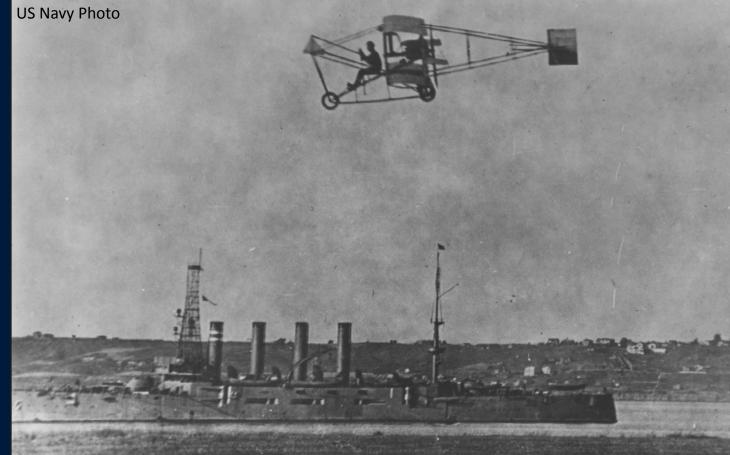
D. W. Taylor with the purpose of providing a means for finding the engineering basis for the design of naval aircraft. It was the first modern wind tunnel to be built in the United States, and was the largest and most powerful in the world for many years afterwards, remaining operational until after the end of World War II.

On October 7, 1913, the Secretary of the Navy selected a board of officers, with Captain Washington I. Chambers as the chairman, to outline "a comprehensive plan for the organization of a Naval Aeronautic Service". After 12 days of deliberation, their report stressed the need for expansion and the incorporation of the first comprehensive program

the most important recommen- as Naval Air Station Pensacola. dations of this board was for the establishment of an aviation sta- employment of naval aviation in tion at Pensacola, Florida, for flight and ground training as well as for the study of advanced aeronautic engineering. This proposal was approved and in January of 1914, the first US Naval Air Sta- under the command of Lieutention was established on the site of ant John H. Towers, set sail from a deserted navy yard near Pensacola. Simultaneously, the aviation forces operating off Tampico in camp in Annapolis was broken up and all of the aviation personnel and equipment were transported same vessel Eugene Ely took off to Pensacola on the USS Mississippi, which was then turned over to naval aviation in order for aviation to keep in touch with ships. of one pilot, three student pilots, aviation with the fleet. This was Lieutenant Commander Mustin and two aircraft, commanded by was assigned to aviation and be- Lieutenant Patrick N. L. Bellinger,

Naval Aviation. Possibly one of cer of what is now known today

April of 1914 marked the first active service. Not even 24 hours after receiving orders to deploy to Mexican waters, an aviation detachment of three pilots, 12 enlisted men and three aircraft, Pensacola to join Atlantic Fleet the Mexican crisis. They were on board the USS Birmingham, the from nearly four years prior. The very next day, a second detachment from Pensacola, consisting for an orderly development of came the first commanding offi- set sail for Mexican waters to as-



sist in military operations at Veracruz, Mexico, on board the USS for flight training, in accordance Mississippi.

A little less than a year later on April 16, 1915, the AB-2 flying boat was successfully catapulted from a barge by Lieutenant Patrick N. L. Bellinger at Pensacola, Florida. The catapult used was designed in 1913 by Lieutenant Holden C. Richardson, CC, USN, and constructed at the Washington Navy Yard. The success of this and following launches led to installation of the catapult aboard a to carry and operate aircraft. ship.

retary of the Treasury let the a telegram to aircraft manufac-Secretary of the Navy know that turer Glenn H. Curtiss, asking him Coast Guard officers Second Lieu- to "call at the Bureau [Constructenant Charles E. Sugden and tion and Repair] Monday with a Third Lieutenant Elmer F. Stone proposition to supply at the earli-

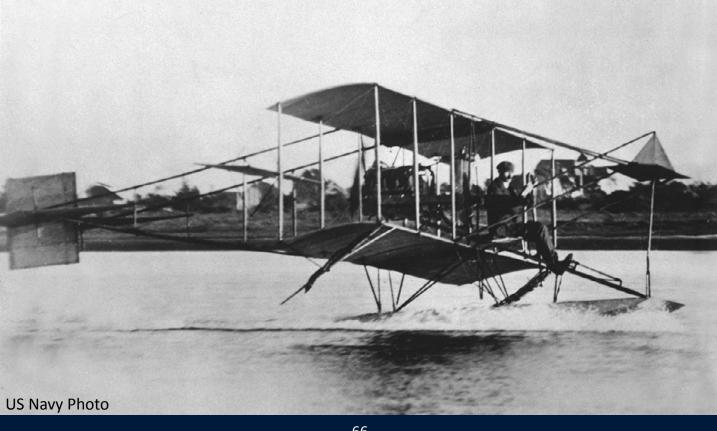
had been sent to NAS Pensacola est date practicable thirty school with an agreement among the tures included: two seats, loading two departments. In July of that same year, the AB-3 flying boat, flown by Lieutenant Godfrey Che- twenty pounds per horsepower. valier, was catapulted from the USS North Carolina in Pensacola Bay, Florida. The launch marked the completion of the calibration of the first catapult intended for shipboard use, and the USS North Carolina became the first vessel of the United States Navy equipped

Discussion for the first aircraft On March 30, 1916, the Sec-production contract started with

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hydro aeroplanes." Particular feaof around four pounds per square foot, and power loading of about The telegram ended with, "Speed, climb, and details of construction to be proposed by you. Rate of delivery is important and must be guaranteed." This telegram resulted in a contract for thirty N-9s, which were delivered between November 1916 and February 1917. This airplane turned out to be the Navy's most popular training aircraft during World War I.

On April 6, 1917, the United States declared war against Germany and entered WWI. Check back next issue for the next segment of naval aviation history!



















Andy Nixon



























Angelo Aldrighetti





Brandon Thetford















Brandon Thetford





Angelo Aldrighetti



Aircraft: MH-60R Seahawk (BuNo 166524)
Unit: HSM-41 "Seahawks"

HSM-41 "Seahawks" NAS North Island

Aircraft Mission: Multimission Shipborne Helicopter

Period: Circa late 1944

Stationed:

Significance: Three tone dark blue, light blue, and white markings represent a TBM Avenger of

Night Air Group 90 aboard USS Enterprise (CV 6)

Painted by: Fleet Readiness Center Southwest, San Diego. CA





Aircraft: T-34C Mentor (BuNo 161841)
Unit: Training Wing Four – VT-27 "Boomers"

Stationed: NAS Corpus Christi

Aircraft Mission: Primary and intermediate pilot training

Period: Circa 1938

Significance: Represents scheme of aircraft assigned to Ranger Air Group. (CV 4)

Painted by: Sabreliner, Perryville, MO







Photo Contest

Congratulations to the winner of the May photo contest - Travis Miller! If you want to see your photos here, be sure to enter next month's contest! The rules are on the inside cover. Thanks to everyone who entered!

Judging: Each judge selects their top five pictures. Their first choice gets five points, their second choice gets four, and so on. The points are added up and the one with the most points is the winner.

Fourth Place - Antonio More' (13 points)

Fifth Place - Eric A. Rosen (12 points)



West Houston Squadron Open House

Article by Sam Bulger Photos Courtesy West Houston Squadron

Early in April every year finds the warbirds of Southeast Texas coming out of winter hibernation to strut their stuff for what is one of the first fly-ins of the season. Houston may not be able to acquire a space shuttle for Johnson Space Center, but the West Houston Squadron of the CAF can sure attract their share of rare and exotic vintage warbirds.

Typical for the greater Houston area, we had great skies all week until the weekend of the flyin. Hazy skies greeted everyone on Saturday and Sunday mornings and made for a late start, however once the sky began to clear up the planes came to greet all who came to see them. First to arrive was a Stearman and a PT-26. Soon there was a roar overhead as the Commemorative Air Force West Texas Wing's Curtis SB2C

(the last one flyable in the world) made a nice overhead break for landing, soon to be followed by the F4U Corsair from Lone Star Flight Museum. Anticipation was Gulf Coast Wing of the CAF was B-17; upon arrival with its deep powerful sound it let everyone know it was coming back to West Houston after a many year hiatus

and the B-17 pilots put it right on the numbers and made a beautiful landing in front of all that were there. The open house also saw many liaison aircraft, a Beech building as it was known that the C-45, T-28, T-6, and two Yak trainers. Howard Pardue brought his bringing their magnificent Boeing timeless F8F Bearcat, and a L-29 was also on display, as well as the West Houston Squadron aircraft which included a Stinson, N3N, BT-13, AT-6 and the soon to be fly-



ing Lockheed C-60.

The great thing about fly-ins like this is that the public (an estimated four to five thousand for the weekend) can come up close to the aircraft. The Stearman and PT-26 were busy selling rides both days and many of the planes were open for the public to get into.

As the planes were flying in and out of the airport for rides or for dawn patrol, the excellent marshalling team did a great job keeping everyone safe as the planes taxied in and out, there again allowing the public to be up close and personal to hear, feel, and even smell these powerful machines crank up. The members of the West Houston Squadron have done a fine job of putting on this event every year and this one was no exception.









by Pieter Stroobach

The Aero India 2011 was a very rare opportunity to see equipment of the Indian Air Force. Basically, the show could be separated in three different parts. First there was the show itself, which is an event that is held every two years. Secondly, there was the MMCRA (Medium Multi-Role Combat Aircraft) competition for 126 jets to replace the elderly MiG-21 in IAF service. The third part was the daily airlift of military personnel into and out of the show, which brought many IAF aircraft to the airport.

If you think airshows are crowded affairs, you haven't seen anything until you've been to Aero India. An immense crowd comes to the show early each morning. Crowds on weekdays were just as large as the weekends! The goal of the show is basically to show achievements of the local aviation industry. The static displays were incredibly interesting, but hard to photograph because of the tape and crowds. During the show, many types of aircraft made by local manufacturer HAL (Hindustan Aircraft Ltd) were displayed, such as the licence-built Chetak, and



the locally developed and built HAL Dhruv helicopter, several versions of which are operated by worldwide.

Undoubtedly, the local stars of the show were the Sarong helicopter team and the Surya Kiran display team. During the show we

learned that this was the last time the Surya Kiran team would be flying. Because of a shortage of HAL Kiran trainer jets, the team will be forced to give up its aircraft. It will be reformed in the coming years with BAE Hawks or the new HAL HJT-36 trainers. There was also a

demo of HALs Tejas light combat aircraft, which will be entering service within several years. The real highlight was the Su-30MKI, which put on a very impressive demonstration. It had been a while since I last saw a Cobra maneuver!

There were other civilian and military demos during the show as well. The Zlins of the Red Bull team were a real crowd pleaser. The departure of an HAL HUL-26 Pushpak brought a sense of Indian aircraft history. This small prop plane was celebrating the silver jubilee of the Army Aviation Corps. It was scheduled for a month-long tour of air observation bases. The flying program was about two hours long and was performed twice a day. All in all a very impressive show.







The MMCRA Contest

In 2006, India made a request for proposals to replace its elderly MiG-21 fighters. Entries for the competition came from all over the world. Lockheed Martin proposed a variation of the tried and true F-16, the F-16IN. French company Dassault submitted the Rafale, EADS the EF2000 Typhoon, Boeing the F/A-18E, and Saab offered the JAS 39 Gripen. The sole Russian entry was MiG with its new MiG-35. The winner will be determined sometime this year. At stake is an order for 126 airframes in the first batch, and the potential for an additional order of a naval variation. It is one of the largest recent competitions for fighter aircraft, and everyone in the industry is paying close attention. All of the MMCRA entrants but one showed up with very crowd-pleasing demonstrations for the spectators. Strangely enough MiG was absent. Given its long relation with India, that didn't bode well for them. A personal favorite was the F/A-18 Super Hornet, which gave by far the most impressive demo. Saab, Boeing, and Lockheed Martin each brought a dual-seat version of their aircraft and offered demonstration rides during the breaks in the show. Various VIPs, from a local soap star to high ranking military officials, were allowed a flight. At the end of April it became clear that the flights didn't help - the contenders had been narrowed to just the Typhoon and the Rafale.





Coming and Going

India has a very long tradition of license-building airplanes. With some minor exceptions, most of them are built to do their service domestically, and will never be

ing and evening, all kinds of staff then during the show. Coming and officials were flown into and early to the show and leaving late out of the show with Avro, Il-76, was not only a way to avoid the Do-228, Mi-8, HAL Chetak and Ancrowds, but also a nice opportuni-32 transports. Happily, this hap-ty to catch some of these planes. pened mainly during times with

out of the country. Each morn- more forgiving light conditions

















Spirits Fly High at the Tico Warbird Airshow

Article by Melanie D. Lee



The Titusville Space Coast Regional Airport, affectionately known by residents as Tico Airport, has come a long way since its days as a small WWI era grass strip. The airshow is organized each year by the Valiant Air Command to help fund their ongoing efforts of preserving our aerial history at the on-site Warbird Museum. Attendees were treated to one of the biggest and best shows the venue has ever seen. With perfect weather and more than 80 aircraft of all types taking to the skies of Florida's Space Coast, the three action-packed days of the 34th annual airshow came complete with record breakers, firsts, and even a real rocket launch.

Each year a special theme is selected, with this year dedicated to the Flying Tigers of the 1940s. Three P-40 Warhawks and some of the few remaining pilots of the unit were present. The A-10 East Demo Team, whose 23rd Fighter Wing continues the Flying Tigers lineage, were on post with the F-15E Strike Eagle Demo Team to perform pyrotechnic-filled demos and a three ship Heritage Flight with the P-51D Glamorous Girl.

This year also marked the completion of the VAC's new Vietnam Era display hangar, which will allow the museum to expand and enhance its artifact and aircraft exhibits of the era. Each year the era is also remembered by a downed-pilot reenactment. O-2s guided the Skysoldiers UH-1 Huey rescue team while T-28s (substituting for A-1 Skyraiders) provided close air support with bombing





and strafing runs. This year also saw the addition of an OV-1 Mohawk to the act.

Tico is also the only airshow where you'll definitely see the F-104 Starfighters Demo team in action, complete with smoking 700 mph transonic passes. At one point operating at airshows nationwide with a three ship demo, the team has since been busy fulfilling its spaceflight















training course for NASA, which is also offered to the general public through Amazing Adventures. They are locally based at the Shuttle Landing Facility (KTTS) just on the other side of the Indian River.

New to the show was Jerry McCart in his "Glory Days" Jet dragster racing Mike Dunkel in his L-39 "Angel 7". The US Army Silver Wings dropped in via the VAC's flagship "Tico Belle" on Friday and

Saturday, but switched to a C-45 Expeditor after the Belle developed an engine leak on a revenue flight. The B-17 "Chuckie" and C-46 "Tinker Belle" were scheduled but unable to attend due to mechanical issues.

Doug Matthews unveiled a special paint scheme on his T-33 Shooting Star supporting the Navy Centennial. Scott "Scooter" Yoak Raiders. also flew down to perform with

"Quicksilver," assembled from parts of many previous Mustangs, and Marathon Key-based History Flight dropped in as part of its national tour with a Stearman, a camo AT-6, and the world's only nose canon B-25H "Barbie III." Perhaps the biggest draws of "oohs" and "ahs" was a fly-by of the Northrop B-2 "Spirit of Pennsylvania" and the world premiere of the much anticipated Heavy Metal Jet Team. On Friday evening, attendees also had a chance to witness a Delta IV Medium+ rocket, launching the classified NROL-27 spy satellite of the US National Reconnaissance Office to a geosynchronous orbit. This was not the first time that TICO has coincided with launches from the Cape Canaveral Air Force Station, nor will it be the last.

Even though the Navy was unable to send an F/A-18 Hornet Demo Team to this year's show for the CONA due to budget constraints, a number of T-28 Trojans and T-34 Mentors were present with the statics of the museum including the F4F, F9F, T-2, F-8U, F-14, A-4, A-6, S-2, and a F-4 Phantom fresh out of reassembly and ready to be painted for next years celebration.

The 2011 show was a resounding success. Scheduled to return on March 9-11, 2012, the 35th anniversary airshow will likely surpass this year's record crowds with a proposed gathering of B-25s joining "Panchito" and "Killer Bee" in honor of the Doolittle





Article by Melanie D. Lee

Sun 'n Fun, the fly-in that kept growing, and growing, and growing. It's now a major event in the world of aviation, attracting aviation professionals and enthusiasts alike from all corners of the globe.

Over it's 37 year history, the show has transitioned from it's catchphrase "Spring break for pilots" to being known as the "AirVenture of the South". Despite the compliwith some aircraft and muddy parking, the festival would end

with a resounding success in the face of potential disaster.

As the Fly-in kicked off on Tuesday, attendance levels were well within standard numbers cations from inclement weather, in the mostly cloudy conditions. and a couple technical challenges The Florida Air Museum had a new \$7.5 million addition to it's grounds, officially opening the

Central Florida Aerospace Academy for business to educate up to 500 high schoolers in coming seasons. The convention area was filling up at a steady pace, and the airshow went on as scheduled. Such acts as Aeroshell, Jackie B., Skip Stewart, Dan McClung, and the Iron Eagles were in the

air, with Jason Newburg flying in N7SF, a Lancair 4, while his Viper Pitts was upgraded with a new high thrust prop and a NOS future episodes. booster system. Demonstration flights were also scheduled each day, showcasing such aircraft as Kathy Hertz's WolfPitts, the Helio Courier, and the Tecnam P2006T,

an Italian high-winged light twin. Film crews for the Aviators PBS series were also on hand shooting

Ominously dark clouds loomed on the northern horizon, far enough away to not be an influence "in the box". With the regional forecast calling for no less







thunderstorms through the week until Friday, many of us were hoping, and some even praying, that this would be the extent of our weather worries. Wednesday's conditions were no better: mostly cloudy, the occasional patch of sun, and winds that were starting to pick up. As the day progressed, things remained stable for the most part. The airshow was planned to continue, with more performers joining the lineup and Matt Younkin scheduled for the finale of the day. At 2:17pm, "Jazzy 96," (the Missouri Air Guard C-130H 90-1796 of the 180th AS of St. Joseph) took off to test the winds at altitude for the flag drop. Just a moment later, bad news: winds aloft in the 30s (with some



gusting to the 50s), and tornado watches being issued throughout the area as the squall line moved closer. For the sake of safety, there would be no airshow today.

With some performers having Sun n' Fun as their only stop in Florida, and/or performing only one or two days during the working week, not to mention the days of dedication by volunteers getting things ready behind the scenes, the most heartbreaking words an attendee can hear is a cancellation due to the weather. Ground events such as "Desert Storm: A 20-Year Retrospective," with Brigadier Generals Kory and Rhonda Cornum of the USAF and US Army respectively, and workshops continued on. But by morning, things had come to a head. Shortly after 11:30, the word was issued to announcers to "stand by to stand by", as was reported on Rob Reider's Facebook page. Many attendees were still at their domiciles at the time, myself included, but many more were already at the show grounds. By 12:10, Sun 'n Fun was ground zero as all hell broke loose. Hurricane force winds flipped planes, broke trees, blew away tents and trailers, and knocked out power and communications in the area. Lakeland Linder Regional Airport remained shut down the rest of the day. But even though more than 65 aircraft were damaged or destroyed, and dozens of flyers took shelter in the exhibit buildings, all attendees were safe and accounted for, with not a single serious injury.







Tornado Damage at Sun 'n Fun





Prompting such headlines as "rain and pain" in the days following, analysis by the National Weather Service later confirmed that the area had indeed been hit by a tornadic cell in the EF1-2 range. T-shirts were quickly made to satire the incident, with the words "I survived Sun 'n Fun 2011" overlaid on a comical twister, which just like the movie, even had cows. But even as volunteer crews continued the arduous clean-up process through the night, the decision was made to continue on and reopen at 8 am.

Most of the parking at Sun 'n Fun is on a vast field to the south of the show grounds. With all the rain of previous days, the ground had turned to mud, creating a whole new set of challenges, and a good day to be in a tow truck. But in droves they came, with some waiting up to three hours just to park to see the show, now through the weather and into sunny blue skies. The headlining Blue Angels soon arrived, flying two more times on Friday to identify the visual cues for their practice demonstration later that day. The Navy didn't have a F/A-18 demo scheduled, but they did have a presence on the ground with the CONA Blue E/A-18G Growler, two Goshawks, King Airs, Seahawks, an F-5 and Turbo Mentors. Later that evening as the sun set and the twilight airshow took off, complete with fireworks and pyro, one thing was certain: the volunteers had earned this nights celebration.

The F-22 Raptor Demo Team

Melanie D. Lee

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Charlie Lai

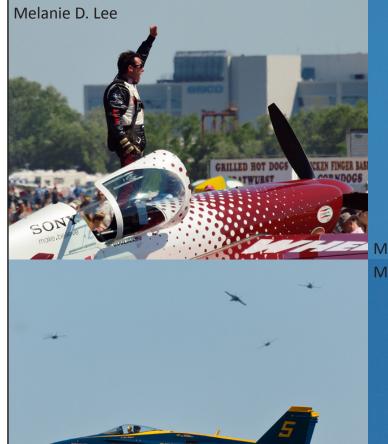






was back since their debut as the first military demo team at the event in 2009. "Schadow" would fly all three days, but had to cut the Saturday demo short due to a hydraulic pressure warning that sounded midway through the routine. The right side main gear of Raptor 018 failed to deploy, but luckily the emergency blow got it locked down for a smooth landing after Lee Lauderback in "Crazy Horse" scrambled back from the HF hold point to visually confirm three green. Sunday saw an improvised routine with Raptor 038 (their spare F-22) on a spare UHFonly radio, and Lee flying "Little Witch".

For two more days, the crowds returned for fun in the Florida sun once more with the full lineup of performers back in the air doing what they do best. Fresh out of the FIAS to the south, Snort and Jive were scheduled with MS760 for a display demo. But to the delight of fans, the slot was swapped for a full Heavy Metal Jet Team Demo. Rob Holland and Mike Goulian both had new sponsor paint schemes as well. Three B-25s were back on the ramp along with numerous Trojans and Texans, including one modified for racing with a rounded nose and bubble canopy. Even from my vantage point with colleagues atop the FAA Technical Center, anywhere you looked it was clear that if it wasn't for the weather, this could have easily been the biggest year in attendance so far. Sun n' Fun returns from March 27 to April 1, 2012.





Melanie D. Lee

Charlie Lai



BEPORTS FROM THE FLET

We have some of the best airshow photographers helping us bring you amazing photographs and informative reviews from airshows all over North America and even the world. The following pages are stuffed with this outstanding coverage of recent airshows and aviation events.

If you would like to see your own photos and reviews here, just contact us and ask how to contribute. The only requirement is a passion for aviation!

NAF El Centro Airshow - NAF El Centro, CA

Review by Eric A. Rosen and Hang Tran

A gentle breeze, a comfortable, sunny day, and a good parking spot portended a wonderful time at the 2011 NAF El Centro Air Show, the official kickoff show for the 2011 United States Navy Blue Angels. While the Blue Angels were THE reason we came to El Centro, the scheduled acts that preceded the main event were

we got to join in the fun. An EA-

6B Prowler, E/A-18G Growler, and T-45 Goshawk were all on display in their fancy paint jobs.

Navy uses in different missions were also on hand, such as AH-1 Cobras, UH-1 Hueys, CH-46 Sea by the United States Army Special Knights, and SH-60 Seahawks. Some helicopters flew in the Parachute Demonstration Team, show, e.g. the Fallon Search and The Black Daggers. The first aerial Rescue (SAR) who were awesome act to smoke up the friendly skies by allowing a bunch of photographers to direct them in an im-

The schedule that NAF El Centro put on this year was jampacked with great performances Several helicopters that the all around. This year's air show began with the traditional National Anthem and the flag jump Operations Command (USASOC) was a parade of trainer planes, such as the T-34 Mentor, T-6 Tex-



history as they ripped through the

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mission.

Eric A. Rosen

skies with a terrific display of formation and solo aerobatics. All of the amazing aerobatic maneuvers by the pilots of these aircraft demonstrate the great maneuverability they have.

The ever-cool demonstration by the VFA-122 Tactical Demonstration Team in the F/A-18F Super Hornet raced through next. Their performance wowed the audience as they pushed that fighter jet faster than seemed safe in suburbia. The Super Hornet demo ended with a real crowd-pleaser: the Wall of Fire. Thanks to the Fallon EOD team, the Wall of Fire set of three different pyrotechnic displays was pretty phenomenal. The last blast shook the entire crowd by surprise with a huge explosion that rocked the premises, knocked out your fillings, and quite literally had my heart skipping a few beats. The shock wave was followed by the intense heat, felt even in the desert. With a blast like that, you really appreciate what the brave men and women in our military face every day to defend people's freedoms in the wars in Iraq and Afghanistan. After the Super Hornet demo came the Navy Legacy Flight consisting of both F/A-18F Super Hornets and the Commemorative Air Force (Camarillo Wing) F7F Bearcat and F6F Hellcat.

There were a few breaks in between some of the high flying acts. The Metal Mulisha, a motocross demonstration team, provided the lunchtime crowd with freestyle motocross acrobatic feats a little closer to the ground. While not using any wings to get





airborne, this demo team soared adrenaline, high speed, and low altitude motocross antics. They managed some amazing flying maneuvers on motorcycles that involved hand stands on handlebars, back stands, and no hands that had the crowds mesmerized and cheering.

the skies above El Centro, it was to find the Aerobatic Racing Challenge series with Bill Cornick racing his Pitts S-2B against Spencer Suderman's Pitts S-2C. To see a

couple of aerobatic maneuvers in a race course overhead was a fun treat! While you normally see high-performance aerobatic aircraft like the Pitts S-2 at an air show performing some cuban eights and barrel rolls, you don't normally see two of them challenging each other through the same maneuvers at the same When the show returned to time at high speed. These guys set up a complicated series of loops and rolls and turns that had you feeling all the positive and negative Gs they experienced in a race to see which souped up Pitts S-2

flyer finished the course first and reigned supreme.

John Collver performed his aerobatic ballet next in his T-6 Texan "War Dog". Rich Perkins' performance in the Marchetti was pure delight. I think that guy had so much fun flying that you could tell he did not want to land. After watching Perkins' performance, you'd think that Matt Chapman couldn't possibly bring something new to an aerial performance, but you'd be wrong. His aerobatic demonstration was just as breathtaking. The second to last high fly-



er before the main event was the F-16 Viper West Demonstration Team. As smooth and fast as the VFA-122 guys were, Viper West demonstrated the sheer power of over El Centro with super speed and handling showcasing the awesome "fly-by-wire" technology that makes the F-16 Viper so versatile. The main portion of the show concluded with the USAF Heritage Flight by the P-51 Mustang and the F-16. It's hard to describe how much the accompanying song and verbal history of the

nounced to fly, you could tell doubt an absolute crowd pleaser. that everyone was ready for the main attraction. We sat next to Air Show was a great way to ensome people who had not seen the Blue Angels demonstration nia weather and attend a good for a couple of decades, and the excitement they exuded was contagious. I still miss the spectacle of Fat Albert's jet-assisted take off (JATO) but just seeing that big beast in blue and gold climb to tro, it is also a good time to say the skies was a sheer delight. The Blues have a couple new tricks up Their demonstration in the fast, sleek, and powerful F/A-18 Hornets keeps the Blue Angels' mantel as one of the best demo teams

Once Fat Albert was an- in the world. They were without a

All in all, the NAF El Centro joy nice, warm Southern Califorin the general public to see this year's Blue Angels demo team. For the Naval Air Facility at El Cencommunity and to celebrate the wonderful relationship they have with the people working and livjob, guys!





Eric A. Rosen















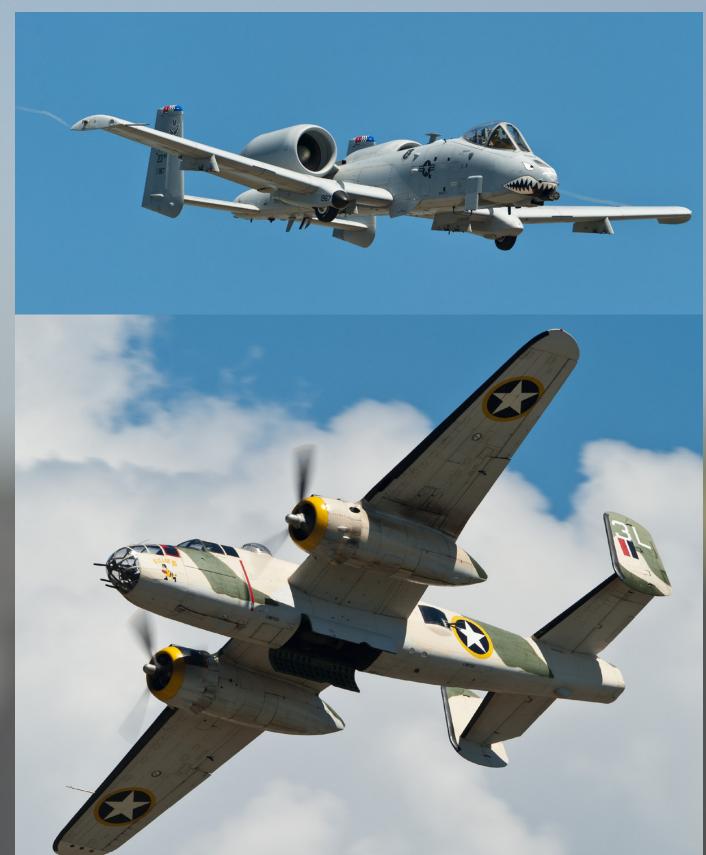
Florida International Airshow Punta Gorda, FL

Photos by Charlie Lai









MCAS Yuma Airshow and Open House MCAS Yuma, AZ

Review by Jerome Dawson and Eric A. Rosen

An estimated 40,000 people Corps Air Station (MCAS) Yuma 49th Annual Airshow and Open House on March 26th 2011. The weather was quite nice with clear skies and temperatures in the low 80s. This was the first Marine Corps aviation event for 2011 and it celebrated the Centennial of Naval Aviation. This year's show included Marine, Navy, and Air Force aircraft and World War II vintage warbirds.

The event started off with local high school bands strutting their stuff and US Army Free Fal School providing the opening US flag delivery from high overhead.

The first flying act of the show was the USAF A-10 West Demonstration Team, flown by CapShetterly gave a spirited performance, displaying the agility and support ground troops in action. Captain Shetterly and the eightmember enlisted support team of the A-10 West Demonstration Team are from the 354th Fighter Squadron, 355th Wing, Air Combat Command, Davis-Monthan AFB, in Tucson, Arizona.

Next up were the warbirds of the show, a mix of both fighters and heavy bombers all from the Commemorative Air Force (CAF). The B-17 Flying Fortress "Sentimental Journey" and B-25 Mitchell "Made in The Shade" represented the Arizona Wing based at Falcon Field in Mesa, Arizona.

The vintage fighter planes included the F6F Hellcat and F8F Bearcat, a Mk-XIV Spitfire, P-51D "Man O' War", and the Mitsubishi

tain Joe "Rifle" Shetterly. Captain A6M3 Zero, all from the Camarillo Wing based at Camarillo, CA. They all flew a series of passes in tactics that the A-10 employs to different formations followed by a mock dogfight of the F8F, F6F and Zero. Each of these historic aircraft is the "real deal" - not a replica among them - and it was a delight to see and hear them in the sky over Yuma.

> In the air next was the MCAS Yuma Search and Rescue (SAR) demo using Randy the Dummy. The crew flew in their brilliant orange and white UH-1N Huey demonstrating how they can retrieve someone on the ground using a basket litter and rescue cable. While the body in the litter may have been a dummy, the crewman hanging on the cable with it was very much alive. One wonders if his family truly knows how their child spends his time! Later, this crew made a slow pass down the flightline, one crewman hanging near the end of the cable with the American flag billowing below. The sound of clicking camera shutters almost drowned out the sound of the Huey overhead.

Next up was something that you don't see at every airshow, the F-5N Tiger IIs from Marine Fighter Training Squadron 401 (VMFT-401) who took off in pairs and performed a four-ship flyby. VMFT-401 (known as the Snipers) is the only aggressor squadron in the Marine Corps. The squadron's





and tactics to give new fighter pilots a realistic training experience, allowing them to make mistakes before they meet a true hostile adversary. The F-5Ns of VMFT-401 take part in the training of Marine the United States.

The next act was also jetpowered, but remained at zero altitude. USAF veteran Bill Braack drives the USO "Smoke-n-Thunthe crowd with big clouds of white smoke, booming shots of flame from his afterburner, and amazing acceleration down the runway. With 6,000 pounds of push from his afterburning jet engine (equal to 10,000 horsepower) Bill can hit 400 mph in 8 seconds! Bill typically makes two runs at each show - one just for speed and the other a race against an aircraft. The morning run was the speed run, saving the race for the afternoon. Needless to say, his morning blast down the runway left everyone looking forward to the afternoon race.

Just before the lunchtime intermission an AV-8B Harrier II of Marine Attack Squadron 311







(VMA-311) "Tomcats" provided a demonstration of the Harrier's unique ability to take-off and land vertically, no runway required! The Marines are proud to point out that they have no dedicated aerial demonstration team equipped with specially prepared aircraft. All their demos are done with a regular squadron airplane right off of the flightline, maintained by its usual crew and flown by a regular squadron pilot.

As always, the loud AV-8B der Patrol helicopter. demo wowed the crowd as it hovered, pirouetted, and even flew

backwards. No doubt about it, the

good time to check out the numerous food, drink, and souvenir booths scattered around the public information efforts. flightline and to visit the many static displays out on the ramp. Among the visiting aircraft were a USAF F-22 Raptor, a KC-135R tanker, many warbirds (both jet and propeller-driven) and a Bor-

USMC equipment like the M109 Paladin self-propelled how-

itzer, MRAP (Mine Resistant Ambush Protection) vehicle, and the Bradley fighting vehicle, were also The lunchtime break was a on display. Numerous community and government organizations also had booths set up for their

> After lunch the action picked right back up with Greg Colver in the Lockheed T-33 "Acemaker" making a number of passes before the crowd, showing off the classic lines of the historic training jet.

Before Greg had finished his routine, Bill Braack was back at



it in the USO jet car, sending up clouds of white smoke and booming the flightline with his afterburner. Overhead, Greg took the challenge and the jet airplane versus jet car race was on! As the T-33 zoomed low down alongside the runway, the USO jet car went to full afterburner and zipped into a blur as it attempted to catch and pass the airborne T-33. Who won? It probably depends on where you think the finish line was. But there was no time to argue the point as the next act roared into the air. The US Navy was being represented by the F/A-18 Tactical Demonstration Team from VFA-122 "Flying Eagles" visiting from NAS Lemoore in California. The team brought two F/A-18E Super Hornets with them. One performed the demo, then was joined by the other for the Tailhook Legacy Flight. The Legacy Flight had the modern F/A-18Es joined by an F6F Hellcat and a F8F Bearcat representing US naval aviation from years past.

The final event of the airshow was something that you don't get



at any airshow except an airshow at a Marine air base – a MAGTF demo! A MAGTF is a Marine Air-Ground Task Force, and the demonstration puts the airshow audience front and center of a USMC combined-arms assault on the approached to deliver several airfield.

with one of the Marines' new UH-1Y "Yankee" Hueys bringing in an advance team of Marines. They rappelled to the ground from the hovering helicopter and scouted the area, calling in gunfire and air support as needed. They then fire and a coordinated assault by were picked up by a second Huey while KC-130s flew overhead, re-

fueling AV-8 Harriers and CH-53 Super Stallion helicopters.

Shortly thereafter the Harriers started their close air support runs as CH-46 transport helicopters and MV-22 Ospreys squads of Marines. Their objec-The MAGTF demo started tive was rescuing two "hostages" being held captive by several bad guys who had the poor judgment to drive their white pickup truck, with their prisoners, out onto the ramp of MCAS Yuma. Needless to say, after some intense small arms the Marines, the bad guys were neutralized and the hostages freed.

> The only snag in the whole MAGTF demo was a glitch in the pyrotechnic display that meant most of the explosives didn't go off until after the display was pretty much over. It was their first MAGTF at Yuma in a while and no doubt they'll get it right for the next time.

Special thanks goes to Captain Staci Reidinger, Director of Public Affairs at MCAS Yuma and her team for their great hospitality.



Eric A. Rosen

Riverside Airshow - Riverside, CA

Photos by Matt Shinavar







Gulf Coast Salute - Tyndall AFB, FL

Review by Brandon Marchek

Thousands of people flock to Panama City this time each year. After all, with the Emerald Coast boasting some of the whitest

away, however, were in for a spe- humidity at a vapor-perfect 99%, cial treat.

across the globe, a handful from as far as Ireland and Belgium, gathered at the "Home of Air opened up and the planes took to Dominance", Tyndall Air Force the sky. Base, to witness some of the most impressive flying machines this country has to offer. With tem-

those in attendance could not be Aviation enthusiasts from disappointed. Although IFR conditions forced Saturday to get off to a rough start, the skies eventually

> Two Tyndall F-22 Raptors opened up the Gulf Coast Salute shortly before the stunning aerobatics of Tim Weber, Greg Poe and Mike Wiskus ventured heavenward, to cut through the sky, leaving only a trail of smoke in their wake. Later, the aviation skill of Kent Pietsch in his 1942 Interstate Cadet became all too evident as strong wind gusts tossed his light aircraft from side to side. It took three passes, but eventually Kent was able to land his aircraft on the "Jelly Belly" motor home traveling down the runway.

Tora! Tora! Tora! and the Commemorative Air Force started with a bang and easily held the attention of the crowd as they reenacted the explosive events of Pearl Harbor. Seamlessly, the P-40 chase plane used in the reenactment joined with the B-25 for a beautiful pass and later the USAF Thunderbirds tore through the sky with a spectacular early season performance.

Whether you are a fan of beautiful weather, pristine beaches or impressive flying the Gulf Coast Salute 2011 at Tyndall Air Force Base had a little something for everyone, setting the bar for shows to follow later in the season.



















New Smyrna Beach Balloon & Sky Fest New Smyrna Beach, FL

Report and Photos by Melanie D. Lee

A long time ago, in a place far away, two brothers would set out on a quest to make history. With invitations sent out to select VIPs and numerous tests conducted in secrecy, the two brothers efforts would pay off and allow them to claim the title of "First in Flight." But this was not on a cold December's day In 1903 Kitty Hawk, North Carolina, nor were their names Orvil or Wilbur Wright. This was on October 19, 1783, and their names were Joseph-Michel

and Jacques-Etienne Montgolfier of Annonay, France. This feat was followed a month later with the first untethered flight on November 21st in Paris. Even before the Montgolfier brothers feats conducting the first indisputable, mans, the history of our world is filled with numerous accounts of Imperial Chinese Emperors using them as signaling lanterns on battle fields, to being part of Maestro

Leonardo Da Vinci's collection of various flying concepts, the idea of aerostats (craft that are lighterthan-air) has even been traced back to the ancient Egyptians and is possibly how the Nazcan people were able to etch huge geoglyphic figures in the Peruvian Desert that can still be seen clearly from space to this day. Long story made short, we've come a long way in our pursuit of flight, and the New Smyrna Beach Balloon & Sky Fest helps showcase that history.



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First conceived in September 2008 by the city's Mayor as a way to boost community interaction with the \$17 million dollar airport, the three days of educational fun is quickly making paces with other aerial events of the region. This was only its third full year in operation, having begun on January 9, 2009 as the Seaside Balloon Fest. The event's second season was scrubbed due to unfavorable weather, but bounced back in May of the same year, adding a fixed-wing airshow to the lineup to help bring in fans previously not aware of the event.

Twenty six balloons were in attendance this year, lifting off from several locations shortly after day break each day, with the winds just right for teams to race each other to the airport. Highly sensitive to weather conditions, there was just enough of a breeze to make each flight move along without breaking the 8 mph safety cap. Among the balloons were some special shapes and styles, such as Oggy (a dinosaur tall enough to scale a thirteen floor building), Sunny Boy (N71325, a sun with wide eyes on one side and shades on the other), The Purple People Eater (N5031D, possibly what a Langolear would look like if it was one of Jim Hansen's Muppets instead of a Stephen King monster), a yellow happy face (N14US), and a patriotic themed balloon with the US Declaration of Independence emblazoned on both sides (N90549). At sundown each day,





loon glow.

fun family outing of a country fair, the Fest also comes complete for local businesses both on and

lowing families to learn about Keeping with the wholesome weather, wildlife, and aeronautics in between acts on the flight line. There was a stage set up for with vendors selling sweet potato local talents to show their stuff, fries, funnel cakes, and chicken and with drill team performances on a stick, as well as aircraft rides, from the "Stirrup Some Dust" Roa tilt-a-whirl, and even a petting deo Horses and Daytona Harley zoo. It also serves as a showcase Davidson Motorcycle Demonstration Teams, there was something the balloons would inflate once off the airport. Embry-Riddle to do for from 6am to 11pm. This more for the crowd favorite bal- even had an Education Zone, al- year's airshow featured perfor-





DR.1 Triplane, John Black, Patty Wagstaff, Don "Beetle" Bailey, and Team Aeroshell. Fred and Barbara Telling also brought over their P-51 "Lady B". There was a short warbird trainer demo with a T-34 and the T-28 "Sherry Berry". Even some boys from Alabama dropped in with a winning ticket "redeemable on demand" for a

flight narrowly averting disaster the official program dedicated to by proving that they can put anything on a pickup truck.

fellow team member, Michael in New York on a ferry flight, Team Red Alert valiantly continued on schedule with Andy narrating while Jerry demonstrated MH-60G Pavehawk of the 920th the capabilities of Viper 29. Notably, there was also a page in had by all.

the recovery of Kyle and Amanda Franklin, whom would have been Despite the recent loss of a one of the show's primary feature acts. And even though the only current military aircraft on the ramp were a CAP Cessna, a Navy T-39N Sabreliner of VT-86 Sabrehawks (165519) and an USAFRC RW (91-26357), good times were











Bluebonnet Airshow (CAF Highland Lakes) Burnet, TX

Photos by Andy Nixon









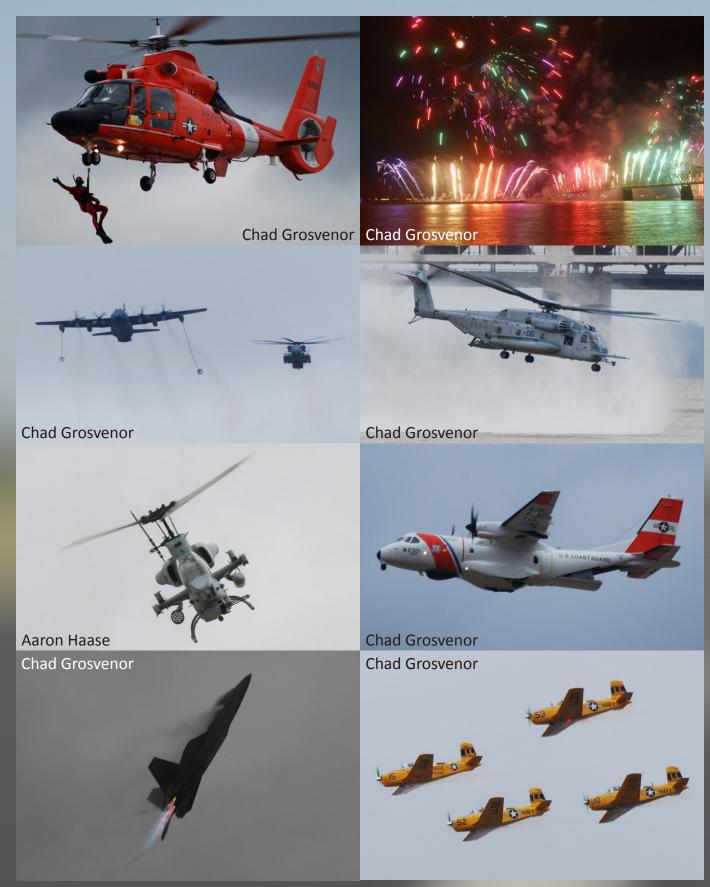


Thunder Over Louisville - Louisville, KY











Tora! Tora! Spring Practice Conroe, TX

Photos by Andy Nixon









