



President's Prerogative

George Hazelrigg

Prudence and Collaboration

On Saturday, May 14, I went to the field with Joe Clark and Introductory Member Saman Khosravi. Joe and Saman wanted to fly, I wanted to fix the tow car. Thanks to Fred Winter, who got the car well prepped, and to Joe Lingeitch, who spent about two hours under the car with me, my task was much easier, and the car is now fully recovered. But the car is not what I am here to talk about. The day began with the winds a bit gusty and out of the south, making landing for students a bit of a challenge. Then, a bit later in the day, the sky began to turn black. Finally, we heard a rumble of thunder. The winds had calmed, and there was an eerie silence. I suggested, and DO Jonathan Kans agreed, that this might be a good time to get the planes into the hangars, before we get some rain. Some of the newer students wondered why we should cut ops and put the equipment away. It didn't look too bad. Why not just wait the storm out?

In perfectly calm weather, with the sky getting lighter to the north, we completed the put-away. The hangar doors closed to complaints of, "Why are we doing this?" But within 5 seconds of the doors closing, we got the first few drops of rain. Ten seconds later, the trees bent over to the ground in violent winds. I jumped in my car and drove up to the terminal building, but couldn't get out of the car. The wind was so violent-it reached about 80 mph-that my car was rocking enough to bounce me in the seat, and the rain was so hard that visibility was near zero-hard to see the ground next to the car. For a time, I wasn't sure that the roof would stay on the terminal building. Then we got hail.

The lesson in this is prudence. Kudo's to Jonathan, who elected not only to get the aircraft safely stored, but who also opted to take down the tent and put all our gear away too. Anything that might have been left out would have been lost in this storm. Certainly, we wouldn't have found it in Warren County. There is absolutely no way gliders or tow plane would have survived outside. This storm was much too violent. And that is the lesson-prudence. Summer is upon us. Thunderstorms will be around for the next few months. Take no chances in their vicinity. Give them wide berth-20 miles minimum is recommended. And, when the sky turns dark, get everything put away pronto. I think we got a few new believers on Saturday.

Now to our favorite topic, airport politics. As you all know, the Warren County Airport Commission commissioners have resigned and the Commission no longer exists. The County Board of Supervisors has taken over management of the airport and assigned Richard Magnifico to get things in order. Dick called a meeting on the evening of May 1st. Fred Winter and I attended, and Supervisors Traczyk and Weinberg were also in attendance. The atmosphere was relatively friendly, although the topic kept coming back to the BAF. Dick noted that they want to involve the airport users in the management of the airport, and he set up several committees to offer advice. Reggie is handling sign-up for these committees, and I suggest you get involved. While a few of us have already signed up for committee work, Skyline Soaring Club is not yet represented on several of the committees. These include Marketing; Revenue Enhancement; Leases, Fees and Assessments; and Other. This would be a good time to get involved. I urge you to pick a committee and sign up for it. We need to be represented on all aspects of airport management, and the job is too big for one or two people.

Enjoy the summer, and fly safely. ✈️

Significant Events:

Frank Banas has a new "baby" in the family. It's a 540-pound, red and white LS-4 in pristine condition, 84HR. Congratulations to Frank! And with nothing better to do on Sunday (May 22), Frank assembled in Hangar 2 and did two hours of "hangar" flying. Frank is soon to know the joys of glass. Eat your hearts out you 1-26 guys.



There are two kinds of soaring pilots: those that have landed out and those that will!

Richard Freytag

The club owes Craig and Caroline Hageman a huge debt of gratitude for allowing onto their airport eleven people crazy enough to consider engine-less flight a normal practice. SSC member Craig Hageman and a few other members made the May 21st High View Farms day a complete success with twelve, flights in frequently excellent lift. Launch from KFRR at 10:45 and a return at 17:20 with Eric Litt towing the entire day. Piet Barber instructed for ten, and George Hazelrigg instructing for two flights respectively. Richard Freytag was DO and Raul Fumigalli was ADO.

Joe Lingeitch with Piet instructing flew the twenty, mile aerotow into High View (61VA), in the ASK-21. As promised, High View did prove a challenge to pick out from what reportedly looked like “better” fields around it. The day clearly showed what a challenge it could be to differentiate from the air unsuitably tall grass from new-mown grass. With a little vectoring from George Hazelrigg on the ground Piet made a first-rate landing to the North and slightly down slope on a 70’ wide strip of grass (the ASK-21 is 55’ wide). Every other landing was instructional and as uneventful. Well done to all especially the instructors, Piet and George.

Craig Hageman, our host and member, didn’t fly but had the pleasure of seeing his spirited granddaughter Brittany nearly get flight of the day at 40 minutes. I wish you could have heard the pure joy in this 9-year-old’s voice as she radioed her grandfather



(top) Trees covered the approach making an unusual perspective acceptable:

Preparing Brittany for her first glider flight (above)

Brittney and Piet off on the big adventure (middle right)

Looks closer than it is—dramatic though (right)

Not so easy to pick out of all that green. (left)



that morning. Somewhere in here a local flying club's J-3 cub paid us a visit. For the record, High View Farms (61VA), uses 122.9 as its field frequency. Radio communications with the Pawnee continue to be unreliable.

Two more flights and everyone that wanted to fly had their fill. At this point ADO Raul Fumigali (who on top of everything else ferried most of the contents of the club trailer to and from 61VA), saw thick patches of virga reported on his web-phone. George Hazelrigg and Piet launched at about 16:50 as the drops began to fall and it still clear to the South, landing at KFRR at about 17:20.

Thanks due to all who participated for they all helped make this day come off without a hitch: Craig and Caroline Hageman, Piet Barber, Eric Litt, Raul Fumigali, George Hazelrigg, Jr., Joe Lingevitch, Robert Link, Bob Critchlow, Craig Sutherland, Aaron

how much she loved gliding. On the next flight, Robert Link and Piet hit the sweet spot and got 47 minutes, staying airborne the entire time that Eric went to Winchester to refuel. By then Piet reported cloudbases had risen in excess of 6000' from about 3000'

*(top) Brittany and Piet found great lift.
Brittany, new child of the air. (above left)
Richard photographs the glider herd. (bottom left)
Craig Hageman and 6ft. friend. (below right)*



Hoppee, and Richard Freytag.

The weather was spectacular, just enough wind right down the runway to help the Pawnee get off early despite starting the tow upslope. The surface undulated enough to require pilots fly the contour to avoid a sudden arrival. Somehow the narrow field

only seemed to improve the landings. Grass clearly demonstrated its advantages in keeping landing rolls short while the surface gave pilots a good example of what it might be like to land out.

Lastly, this day would not have been possible without the Board's approval; good going!

ELT's In Your Glider

Dave Weaver (Delta Whiskey)

As many of you know, Emergency Locator Transmitters (ELT) are appearing more and more in the gliders that we fly. Although the FAA does not require ELT's to be installed in gliders, many pilots have made a personal decision to install them in the gliders they own.

This is the first contest season where the management staffs of some sanctioned contests have required ELT's be installed in participating sailplanes. This requirement has evolved from past and recent difficulty in recovering downed gliders in remote areas. The most recent example of this problem occurred during the 15M National Contest at Mifflin, PA last year. In this particular incident there was an ELT installed in the glider and although it did not prevent the loss of the pilot's life, it did provide rapid closure for his family. Knowledgeable people at the scene estimate that it could have taken a year to find the glider had the ELT not been installed.

ELT's were required equipment at the Region 2 Contest, held at Mifflin this year and like the rest of the competitors, I had one installed in my sailplane. Like most new pieces of equipment, ELT's have a little learning curve that needs to be followed. In airplanes, ELT's are pretty much an item that is never touched by the pilot and only touched by the mechanic about once every five years to replace the battery. Gliders present some additional issues. Often times, the antenna may be installed in a position where care should be exercised when climbing into the ship or when stowing items in the baggage compartment in order to avoid damage. However, the most important difference between gliders and airplanes is the fact that gliders are often found rolling down the highway inside of a trailer.

In order to prevent accidental activation of the ELT during transport, most units have an arming wire that needs to be installed. Careful reading of the owner's manual reveals that installation of the arming wire will prevent 'g' force activation of the unit but not prevent manual activation via the switch.

Unfortunately, during the course of the Mifflin contest, I had ample opportunity to practice this procedure while trailering my glider. After the last contest day, I packed up and headed down the highway to put the trailer back in the barn at Fairfield. After crossing the river on Route 15 just south of Harrisburg, I was quite relaxed listening to the collected works of Simon & Garfunkel on the CD changer when, as the song goes, "I saw blue, blue, blue in my rear view". I was appalled and somewhat miffed because I was cruising at a mere 5 knots above the posted limit. After regaining my composure, I pulled over onto the shoulder and began digging out my driver's license and registration. As the police officer



C172 photo from www.troopers.state.ny.us

approached the window, three other police vehicles descended on the scene and my composure was dismantled and replaced by stark terror.

The officer at the window saw me nervously trying to extract my license from my wallet and said, "I don't need to see any ID. Your thing is going off". When I give him a blank look he says, "Your thing is going off. Do you see that airplane up there? (Pointing to the sky at a circling C-172) Your thing is going off." Finally, I begin to comprehend the issue. The ELT in my glider has been activated and the Civil Air Patrol has tracked it. When they realized that it was moving down the highway, they scrambled all law enforcement jurisdictions within a 50-mile radius in order to crush this obvious terrorist threat.

After again regaining my composure, I opened up my trailer and rolled the fuselage out onto the shoulder of the road to deactivate the errant switch. Apparently, the switch had been bumped when my crew chief was inserting the arming wire. The unit only emits an aural tone in the self-test mode, not when it's actually activated. Note to self; use a radio to check for transmission from the ELT before putting it in the trailer.

I shook hands with all of the police officers from the various jurisdictions and answered the usual questions about gliders and personal background then I rolled the glider back into the trailer and headed down the road to Fairfield.

As ELT's become more commonplace in gliders we will probably see more incidents involving accidental activation. Make sure that you thoroughly understand how to operate your equipment, particularly with respect to deactivating your ELT once it has been activated.

Stay Safe In Wave

Fred LaSor

Author's note: Some Skyline Soaring Club members have heard the following story, but I thought it might be helpful to pass it on to the entire membership.

I'm flying in Minden, Nevada, now, where the jet stream occasionally dips far enough south to kick up some pretty intense low-altitude winds that, in their turn, flow over the eastern escarpment of the Sierra Nevada mountains and kick off a mighty standing wave. The season for wave is normally about February through April, but it has continued late this year and we've been experiencing good high altitude soaring in mid May, with more predicted for the Memorial Day weekend as I write this.

A new student arrived here in mid-May and was assigned to me for training for an additional rating to his power certificate, but the first day of his 5-day block the wave was working, making training difficult and high altitude flight tempting. I offered him the chance to try his first wave flight, and he jumped at the chance.

Off tow at 8,500' MSL (that's a little less than 4,000' AGL here), we notched the barograph and started up in smooth lift. It wasn't the strongest I've been in, but more importantly for this story, there was a lot of moisture in the air mass that was producing it, and the Foehn wall extended out from the crest of the Sierras, while lenticular clouds had a low, dense rotor cloud below them. This means we had to be pushing into the wind aggressively as we climbed, so as not to get blown back out of the Foehn gap and into the heavy cloud marking the rising air mass.

During the early part of our climb we stayed in the gap easily, doing "S" turns to match our place over the ground with the wind speed. At 15,000' we called the guys manning the desk (equivalent of Skyline Base) and asked them to telephone Oakland Center and request the wave window be opened. They called back in a few minutes, when we were at 17,000', and told us we had to hold for 30 minutes while Oakland Center cleared the window of commercial traffic. We put out the spoilers and "parked" in place at that altitude.

While this delay was winding down the wind speed and the moisture content both increased, forcing us to fly faster and closer to the west side of the gap, which from our altitude, appeared to be getting narrower. It looked to be several miles wide, though, so I elected to continue up when the window opened.

Given clearance to climb above FL180 we started back into our climb, showing mostly 400 FPM on the vario—not fast for this wave. We were just approaching 23,000', hoping for at least 25,000' when our world turned dark. We had been flying at around 70 Kts, directly into the wind, but had gotten into higher speed wind that had blown us back into the cloud so quickly that even pushing the nose down didn't get us back out fast enough for me to feel safe.

Now I have taught several SSC members the benign spiral mode in the Grob and the K-21, and I have taught it to students here, so I knew it would work under normal

circumstances. Would it work in a high speed wind? I really didn't have much choice but to try it: we had gotten blown into the cloud so quickly we had lost ground reference and we were unable to fly back into clear air quickly enough to be safe. I explained to my student what I was doing as I pulled the trim and airbrakes all the way back, then took my hands and feet off the controls.

The next five or so minutes were high-pucker time, but we had no reference beyond the canopy and I knew from FAA and NTSB reports that a pilot without instruments has about zero chance of flying safely out of such a condition, so I went with my training. My internal equilibrium system told me I was in a tight right turn, but I kept telling myself I had to ignore that sensory input and let the plane do what it was designed to do in this configuration.

Readers will have figured out by now that I would not be writing this if the maneuver had been unsuccessful: we broke out of the bottom of the cloud at about 12,000', or approximately 5,000' AGL. Fortunately I recognized features on the ground below me and was able to orient myself, so knew how to find our way back to the airport, which was about 5 miles east. We had been blown over the ground 6 miles while we were in the cloud! We made it back in the worst turbulence I have flown through (bottom of the rotor, I think) and landed safely. When I got home I shared this story with several friends and colleagues, and at the suggestion of two, I filed a NASA Safety Program report within 48 hours.

There are some lessons we can all take from this. First, learn and practice your safety training. Landing out, rope break, SSA signals to the towplane, benign spiral: they are all essential tools of our sport and they could save your life. I am NOT recommending pilots fly into cloud and plan to save their bacon with a benign spiral. But I am recommending we all practice the benign spiral in the glider we fly regularly—it might be the setup suggested for the Grob 103 is not what is recommended for the plane you're flying, and you want to be comfortable with your designer's recommendations BEFORE you need to use them. Finally, while I miss you good folks at Skyline, and I miss the ridge running, this wave is still an amazing and enticing meteorological phenomenon that I hope to do a lot more flying in. Maybe I'll see some of you out here!

Fly safely.



FL180 above Minden, looking south.



One Day in May

Bob Collier "289"

289 had a long flight back on May 1st. It was a strong lift day, but like on all strong days, there was the doubly strong sink too. Fred was out mapping the valley as usual in "FW", I found out later. That guy really knows how to fly that sleek beauty of his.

We were moving down '27' at a little past 2:30. It seemed like the ridge ought to be working and mentioned it to our tug-meister. At about 500 feet or maybe more he began to turn away, and at about 1000' the vario shot up to something over 1000 fpm. Release and part of the right turn happened almost unconsciously, followed by a slow painfully embarrassing unwinding needle back to something a little below zero. Now what? That monster has to be somewhere around here. Let's try an outward spiral to locate it. A half circle found it, 700 to 1000 fpm up to 5K+.

The ridge looked like it might be reachable, depending, of course, on wind and lift/sink encountered on the way. No time to ponder, the wind was opening the distance even during the climb. Nose down, and go for it. There's a possibility of making contact with Dudley's vortex. It seemed as though we were about in the right location to encounter it. Eighty (mph) seemed about right. There were a couple of sun-glinted buildings just above and beyond the ridge that I decided to watch to keep track of the descent angle. If the buildings remained in view, we were going to make it; otherwise, maybe not. There were some bad downs, 2000 fpm, interspersed with some not so bad downs, 2-300 fpm, but the buildings always stayed in view above the ridge, and we arrived in good shape with about 500' to spare, but with no help from the vortex as far as I could tell.

The trip down the ridge was begun at same speed, 80, to get a feel on altitude maintenance. Things went smoothly until the first gap at Mt. Jackson where we slowed to 60 to cross over. The last time across here, sometime last year we crossed too fast and too low and ended up looking for a place to land. As I understand it, there's a stagnation point at a certain height on the ridge below which the air curls under and retreats forward back down the ridge instead of going up and over. Best to stay above this point. Lots of hang gliders around, but all above. We were a little below the ridge in crossing, but soon back above it and back to 80 all the

way down Mt. Jackson and off the end, easing back to the main ridge and Bela's gap at US-211. Just beyond on the way to the ski area the bulges up 2 or 300' so that you approach a way below the summit. It's sort of cool to do the magic carpet ascent as you close in on it. Always a thrill to watch it happen. Neat.

About a mile short of the ridge end a big thermal, like the one on tow, showed up, and we ended up at almost 9000' over the lower end of the Luray valley. Thoughts of Waynesboro and Boomerang glory, but someone said it was already back at New Castle. Besides, we were working without a net (no crew); so, let's just work on getting back home. Everything was swinging along fine and dandy cruising along at about 70 with very mild altitude loss 2 to 300 fpm. Then the sink hit, big time, in 1500 to 2000 ft ballpark. Frantic panic time, altimeter unwinding and eustachian tubes squealing we tried plowing straight ahead hoping to get through it. Four thousand feet gone just like that. There was an isolated cloud that looked to be new, and hopefully growing, into the wind on the left, and besides a low altitude descending retreat into the Blue Ridge on the right seemed foolhardy. There was lift upwind of that cloud, not wonderful, but at least it stopped the downward plunge. It took a few minutes, but finally it began to coalesce, and we were on our way back up to 8000' or so.

Just north of Luray we got into another 'inverted thermal' and immediately scampered, again to the left for the near ridge of the Massanutten. It's a lot punier than it is up by Signal Knob, but should sustain us the rest of the way, except for one obstacle. It was a gap that required a small forward jump, but not much altitude with which to work and no place to land there. Fortunately a supremely glorious thermal came to the rescue, thus obviating the need to jump the gap. Back at 8000 we were now within spitting distance of home. It was about five o'clock.

There was a thought about going to Winchester, but rejected it. Too close to Mill(er) time. So, just hang around and wait for ops to begin wrapping it up. Later someone called to ask if we were still flying and where. "Yeah, out over I-66." "When are you coming in?" "It's easy to stay up, but my feet are freezing; so, I'll be right down." Someone gave a big "Booo." We descended through 4000' where things warmed back into the comfortable range, ran into another thermal, and pretty soon were freezing again. Another call "289, if you're not down in five minutes, you're going to have to put it on the trailer all by yourself." It took ten minutes, but they didn't desert me. It was 7 PM on the dot.

Great day, even for 1-26s. 





FLYING SOUTH

George Hazelrigg, Jr.

Shortly after joining the National Science Foundation in 1982, I found out that NSF runs all U.S. operations in Antarctica. In short, we control the pole, and that's one place on the earth that's hard to get to. So, of course, within weeks, I had set my sights on getting there. Years passed, and I kept trying. I volunteered for anything and everything headed south, and even suggested that I would go if I had to take leave to do it. But it was a closed shop. Either you worked for the Office of Polar Programs or you didn't go to the pole. And not without good reason. It can cost upwards of \$10,000 to send someone to the pole, particularly if it's a round trip. Then, in 1995, the Foundation changed its policy. NSFers from other program areas would be selected to spend time in Antarctica at one of the three permanent bases on a rotating basis. Again I competed. But this time I won. I was selected for the position of Station Science Leader, South Pole Station, for January 1996.

Now let me give you a bit of insight on U.S. operations in Antarctica. NSF maintains three permanent bases on the continent, Mc Murdo, Palmer and Pole. Mc Murdo and Palmer are on the coast. Palmer is even north of the Antarctic Circle (we usually picture it with palm trees) and directly south of Chile. About 30 people are stationed there. Mc Murdo is the southernmost port in the world, at 77 degrees 50 minutes south. It is directly south of New Zealand, about an eight-hour LC-130 flight from Christchurch. It is also the largest "city" on the continent, with a summer population of about 2,500 and a winter population of about 250. Pole Station is, of course, at 90 degrees south. About 140 people are there during the summer, and about 30 in the winter. Antarctica is sovereign territory—no government has jurisdiction there—so the leader of an enclave on the continent is the supreme ruler. Ergo, my unofficial job title (although my duties were entirely that) was Emperor. I was to be in charge of things such as weddings, divorces, executions, affairs of state, and so on—oh yes, science too.

Antarctica is a big continent—as big as the U.S. and Mexico combined. The Pole Station is a three-hour LC-130 flight from Mc Murdo—about the distance from Front Royal to Miami. And the weather is about equally different. The weather on the coast can be, well, fickle. Winds often howl, storms abound. Conditions are often miserable. But weather at the Pole is quite different. It is governed by the polar vortex. The air above the pole is so cold that it falls straight down—the katabatic wind. Add Coriolis forces, and you set up a vortex that is geometrically centered on the pole. Hence, winds at the pole are generally very light, typically under 4 mph. Add to that, the continent is capped by ice ranging typically 10,000

feet thick, and there is nothing to drive weather at all, let alone thermal development. The geography of 90 percent of the continent is like that of a white billiard table, utterly featureless. Indeed, the runway at Pole is 14,000 feet long, with a 600 mile overrun on each end—literally. But the weather at Pole is delightful. Clear, sunny, dry, desert-like, with dead calm winds dominating. Average summer temp is -30 F. Hey, better than winter's -80 F, with a record low of -117 F. That's cold, even without wind! Indeed, the delightful weather was my biggest surprise.

So, how do you get to the pole? It all starts out with a flight from DC to Auckland, New Zealand. But some of you might remember that the Federal Government was closed in December 1995—an "act" of Congress. I had planned a week vacation in New Zealand prior to my arrival on "The Continent," but I would not depart before we were shut down. So my first challenge was to get my ticket. I demanded my ticket be issued a week in advance (they really didn't want to). I got it. Then the shutdown came. Now I needed to clear my trip somehow. We had been ordered not to work. Only critical personnel were allowed in their offices during the shutdown. We were allowed entry to the building, but only for 10 minutes to get personal items from our offices. I came in. One of our lawyers was on duty. I had to ask about going. But what to ask? (Never ask a question if you don't want to hear the answer.) I knew he would have to tell me I couldn't go. So I carefully phrased the question, "How much trouble can I get in if I do go?" The answer was just what I wanted to hear, "You may have to reimburse NSF for the cost of your ticket." That risk I'll take! Next day (Christmas Eve) I'm on a United flight to Auckland, and for the next week I am incommunicado in New Zealand. On New Year's Eve, I arrive at the NSF office in Christchurch, and I am heartily welcomed. Taking no chance that I might be recalled to DC, they put me on the next southbound LC-130 (which, by the way, had crashed upon landing two days earlier, and was just completing repairs).

Now the LC-130 is just a C-130 with skis. The skis retract for a wheel landing in Christchurch and extend for landing in Antarctica. It's summer in Christchurch, and 90 degrees as we prepare to board. Nonetheless, ECW (extremely cold weather) gear is a must for boarding. On go the long underwear, the jeans, the flannel shirt, the farmer johns, the polar fleece jacket, the cotton socks, the woolen socks, the bunny boots, the parka and the bear-paw mittens. In this gear one can survive indefinitely at -100 F. Ah, but



it's +90 F here in Christchurch. Not to worry. In an hour, we'll be airborne. Being airborne in an LC-130 is not something to write home about, it's not something even polite to talk about. The plane has four canvas benches that face each other in pairs with two isles. You

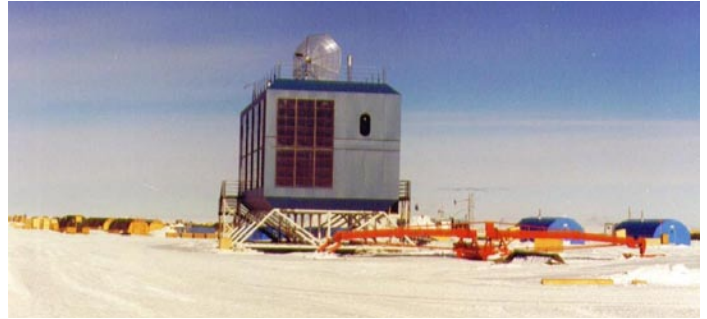
An LC-130 taxis for takeoff past the Ceremonial Pole (flags) in the background. (above)

The author dons ECW gear in 90 degree heat for the trip south. (left)

sit sideways in the plane. Each bench holds about 15 people, sitting packed in with their legs intertwined, and dressed in their ECW gear looking like gorged tics about to pop. There are three windows on each side of the plane, letting in just enough light to see that there are other people facing you. Three lights in the ceiling too, but we can forget them. No reading. It's too dark. The outside skin of the plane is aluminum. You can see it from the inside. That is the sound insulation. They offer earplugs on takeoff—that's so you don't go deaf during the flight. No talking. Then there is a thing called cabin temperature. There is an on/off controller. Heat comes on when the cabin temperature gets down to -40 F. It goes off at +90 F. The flight is spent cycling in this temperature range. One might think that, during an eight-hour flight there would be some physiological needs (the women have a support group for this). Satisfaction of these needs could be the subject of a future article. Suffice it here to say that it can be amusing (and public).

We are lucky. The weather at Mc Murdo is good and we can land (i.e., we don't have to turn around and fly back to Christchurch). It's a beautiful summer day, calm winds, about 25 F. We land at Williams Field, about 10 miles from Mc Murdo, and board Ivan the Terrabus for the trip into town. Williams Field is on the Ross Ice Shelf, far enough from the open ocean that the ice is solid all the way to the bottom. There is also a clear ice airport at Mc Murdo that is used early in the season. They bring C5s into that field, landing on their wheels. But Willie Field is a ski-landing affair, I'm not sure why. I spend the next three days acclimating to the continent and preparing for the trip south.

Then came my flight to the pole. The day is perfect! Clear sky, visibility 3 parsecs, winds 10-4 kts. Two passengers on this flight, a photographer and me. The photographer will hang out the back and take pictures and, just for him, we will fly at 17,000 MSL down



Home sweet home, pole style. (top)

The South Pole International Passenger Terminal on the right stands in front of the Dome, the major facility at the Pole Station. (above)

Flying south at 17,000 MSL over the Transantarctic Mountains. These mountains rise monotonically 14,000 feet from the Ross Ice Shelf. Note that the snow flows straight out off the back side of the mountains, at 12,000 feet deep. (left)

The Emperor author, stands, scepter, i.e., the axis of the Earth, in hand on the hole from which it came and faces due north. (below)



the Transantarctic Mountains. This is the fourth largest mountain range in the world and it includes the famous Beardmore Glacier. I go up on the flight deck and take the right front seat and, after takeoff, drive us down the mountain range. After a Cessna 182, the LC-130 takes some getting used to. But I keep it under control. An interesting question is, how do you navigate when every direction is north? Flying over Antarctica, pilots use the "grid" system. A quasi-rectangular grid is drawn over the continent, with north defined as the Greenwich meridian, Pole at the center, and a compass rose drawn about the pole, and headings are relative to the grid (try turns to a heading with a mag compass using the grid system). About an hour out from landing, we spot the Pole Station visually—that's at nearly 300 miles. The airport elevation at Pole is 9,300 MSL (300 feet for the ground and 9,000 feet for the ice). A

buried LC-130 carcass reflects radar signals and guides us to the runway, which looks for all the world exactly like the last 600 miles of snow we just flew over. There is just no way to tell how high you are with absolutely no visual clues (imagine trying to land on a very large sheet of white paper). But we arrive safely at the South Pole International terminal building, an 8 by 12 foot plywood shack.

I hop off the LC-130 carrying about 50 pounds of luggage. Huff and puff at altitude. I am assigned to live in a dormitory of about 3,000 square feet, and put on stilts to allow the snow to blow along underneath. This way, it isn't necessary to spend several days each year digging the building out from under drifting snow. The building, about a quarter of a mile from the main facility—the Dome, is a royal blue color, hot to the touch in the brilliant sun, despite the -30 F temperature. Through the entire season, which begins





The author does his Joe Jock picture in T-shirt at the pole, temperature is -30 F. (above)

The Coast Guard ice breaker out on the Ross Ice Shelf (note no open water behind it). The Transantarctic Mountains are in the background, 70 miles away. (below)

November 1 at -60 F, and ends around February 20 at about -55 F, the building requires only 10 gallons of JP-8 to heat (everything at Pole, with the exception of two skimobiles and a Suburban van, runs on JP-8). Laboratory buildings are heated by the computers and electronic equipment in them. Triply redundant diesel generators provide electricity and waste heat to melt ice for water. Water availability limits the population at Pole. 'Scuse me? Antarctica contains 70 percent of the worlds fresh water. Yet it's the driest place on earth—it's all frozen solid. To drink, you need heat.

Pole Station is a busy place. We have about 30 experiments going on there, ranging from clean air studies (cleanest air on earth, you notice the absence of smells) to astronomy. Sounding balloons are launched every 12 hours. Nikolai the mad Russian has a radar experiment that is measuring upper atmospheric winds—at altitudes of 100 miles and up—by tracking ion trails left by meteorites. Laser experiments measure energy transfer vertically in the atmosphere and look at wave motion in the air—we could get interested in that. Radio astronomy is big at Pole. Limited

by atmospheric moisture, the Pole is the best place anywhere to do radio astronomy.

Collecting meteorites can be fun too. Meteorites look like, feel like, smell like, taste like dirt. So they can be really hard to find in your back yard. But one thing that is totally lacking at the pole is dirt. So anything that looks remotely like dirt is probably a meteorite. And we can dig down in the ice, which ranges up to 300,000 years old, and collect meteorites from across the millennia.

My favorite project is Amanda. This was a project to build a telescope that looks due north from the south pole—it looks straight down, through the earth to see neutrinos emitted by stars above the north pole. The energetic neutrinos pass right through the earth. A few of them interact with the ice cap producing muons that are traveling faster than the speed of light in the ice. This causes them to emit Cherenkov radiation that is picked up by photomultiplier tubes buried 5,000 feet down in the deep ice. At that depth, the ice is compressed into an optically pure crystalline structure, with atmospheric gasses forced into the interstices between the water molecules. The visibility in the deep ice exceeds one kilometer. And so, we can look from the south pole right into the core of stars floating light years above the north pole.

The U.S. Navy first came to the pole in the early 1950s to set up a seismometer station. Because of the geography of the earth, the pole is the best place in the world to monitor seismic waves, which are focused at the poles, collected by the continental land mass and transmitted through the ice cap to the seismometers. Why? To monitor Russian nuclear tests. The seismometers at Pole easily picked up the Oklahoma bombing and the building in Korea that fell down. A Richter 1 quake anywhere in the world will be seen on instruments at the pole, and certainly no A-test would ever be missed. Under the Eisenhower administration, control of polar operations was transferred to NSF, and we have maintained the operations ever since.

Pole is also a Mecca for tourism. I hosted about 100 guests while I was there. These included the Director of NIH and other dignitaries, a team of Russian women who skied their way to the pole, and others who just fly in for the day (well, for two hours). We offer them a drink of juice and send them on their way. There is an airline that has round trip flights to the pole, Adventure Network



International. They fly from Punta Arenas, Chile, south to Patriot Hills on Antarctica in an LC-130, and from there to the Pole in Twin Otters and a Cessna 180. They have a fuel stash about two-thirds of the way to Pole where they land to refuel. Round-trip air fare, if you're interested, from Punta Arenas, was \$30,000 U.S. in 1995 (one-way was considerably more!). One of the visitors who flew in on ANI was an 88-year-old woman who had visited the north pole the year before, and who was completing her tour of the world. She hopped off the plane and trotted around the place just fine. Others didn't fare as well. A teacher came to do Pole-for-the-kids. She decided that she wasn't thirsty (our rule was that if you voluntarily walked past the rest room you were dehydrated) and refused to drink. Two hours later, under the care of the Pole doctor and the Director of NIH, she was on the LC-130 headed back to Mc Murdo. So much for the kids.

The energy level at Pole is incredibly high, and people either love the place or hate it. Those who love it are bouncing off the walls, those who hate it are out in three days. Being 800 miles from the next town and without telephone, radio or television, the feeling of isolation is really strong, even in summer. I thought this would be a great place for studies of people living in isolation, as they might do, for example, on a Mars mission. I asked about such studies. None had ever been done. Why? Because physicists relish isolation—who would care even to study it?—and psychologists, who would care to study it are real people-people. A number of studies have been proposed, and the Principle Investigators arrived at Pole in November to acclimate for the long winter stay. Alas, none of them made it through a week at Pole. All freaked out over the feeling of isolation and had to be taken back to the big city—Mc Murdo. So, no such study has been done. And for fun, there were all sorts of activities. "Evenings" (that's a bit of a misnomer as there is no such thing) were often spent imbibing and story telling at the Club 90 South. A favorite subject of the story telling was, of course, the LC-130 trip to The Continent, and the little matter of physiological needs. There were also VHS tapes, parties and the like. The south pole band, The Pole Cats, played at some of the parties, and the energy level got so high we often had to open the door to cool off (remember that beer had to stay in the refrigerator so as not to freeze—it's 65 degrees warmer inside the refrigerator than outside). I went cross-country skiing for the first time in my life, and I skied



Hopping off the LC-130 at Mc Murdo, that little mound of snow behind the airplane is Mt. Erebus, 13,000 ft high and 25 miles away.

around the world (across every line of longitude). Healthwise, you might think that frostbite is a big problem at Pole. But the doctor, a Georgetown grad, assured me that she had seen more cases of frostbite in DC than at Pole. The biggest health problems at Pole were exhaustion—from those 40-hour work days, it never gets dark—and, of all things, sunburn. Exhaustion clearly heads the list as experimenters have limited time to get results, they are on a huge high, and they just plain forget to sleep. Time on The Continent goes much too fast, and my time was up long before I was ready to leave. But I arrived back at Mc Murdo to some fantastic weather. Sea level altitude and +30 F temperatures felt like the middle of summer—well it was the middle of summer! As I stepped off the LC-130, I looked back at it and saw a mound of snow behind the airplane. No, that isn't a mound of snow behind the airplane. It's Mt. Erebus, a 13,000-foot high volcanic cone 25 miles away. How clear the sky is here! And what an amazing place!

Unlike the flight before us, on our flight, all four engines run all the way back to New Zealand. I again ask for the right front seat and spend several hours driving the LC-130 due north and back home. Would I ever consider going back? Do I have time to pack? No matter, I'll go as I am.

This is what this sport is all about...

Dianne Black-Nixon, Region 2 Director

Landing near Orovada, NV, north of Winnemucca, Minden Soaring Club member Gordon Boettger last week completed a Declared 3 Turn Point Distance wave flight estimated at 2056 km (1277 SM). Taking off from Minden at 07:46, he flew south to his first turn point near Little Lake, CA, then north to the second turn point near Chilcott, CA, then again south to a third turn point near Little Lake and finally north to his landing on a duster strip about 20 minutes before sunset.

A monster mountain wave system with stacked lenticulars and roiling rotor clouds was visible from Minden and Reno throughout the day. Gleaned from Oakland Center and Joshua Approach, Met Man Doug Armstrong issued periodic email flight status reports accompanied with visible satellite images showing wave clouds running the full length of the Sierra and in some areas many cycles down wind. All day and through the night Carson

Valley experienced strong gusty winds and blowing dust.

This flight was planned nearly a week earlier, triggered by a forecast of an unseasonably strong approaching jet stream. The questions were, what would be the arrival day of the system and would there be too much moisture? The early estimate of Tuesday was deferred a day. Early Wednesday, heavy moisture threatened, but the window up-wind of the rotor cleared and remained broad all day.

With this flight, Gordon lays claim to the three longest soaring flights ever made in North America, all three flown from Minden within a span of 53 days. We await more details from Gordon and another set of spectacular photos.

Kudos are also due his support team. In addition to Doug Armstrong, the essential wave forecaster, the ever-enthusiastic Jim Cooper was the early-rising tow pilot and, especially Gordon's crew chief and wife, Mellisa. Congratulations to all.

Bob Semans—Minden Soaring Club, Inc.

from Soaring Society of America e-Newsletter



All of the Carson valley was treated to a huge lenticular display this afternoon, including this one right over the house I'm living in. In other news from Minden, **Joe Clark passed his check ride** yesterday and now has his private glider certificate. Best regards to all in SSC—Fred LaSor

For Sale: 1-26 A, serial # 235, with sport canopy. Basic panel, no trailer. 2,400 hrs, fair to good condition. Currently being hangared and flown at Lovettsville, Va. **Bill Burner 703-906-6455**

June 4, 2005, 0900–1100 hours FAA Safety Seminar, "Operations at Mixed-Use Uncontrolled Airports", by Jim Kellett and Reginald Cassagnol. Bring your own chair. Seminar qualifies for FAA "Wings" program. Contact Jim Kellett at Jim@Kellett.com or Reginald Cassagnol at 540 635-3570 for more information.

Following this meeting, Skyline Soaring Club will host a cookout (Chef Glen Marumoto cooking). Please plan to attend and be sure to invite our power pilot friends.

We are moving, and Verizon informed me that my e-mail will be down until June 15. Please don't send large files – especially pictures until I'm back on line.

I will be available by phone:
H – 703-978-4217 W – 202-663-1224

Old Address:
5111 Kings Grove Ct
Burke, VA 22015

New Address:
9105 Wax Myrtle Ct
Burke, VA 22015

Thanks – Miriam & Greg Ellis

Pete Bryce, the creator/manager of Sky Bryce resort and the frustrated entrepreneur for the aviation community "Eagles Nest" in Waynesboro passed away May 16, age 77, of a heart attack.

Paul B. Bryce was a USNR pilot in the 40s and had logged 17,000 hours flying until a week before his death. He was a commissioner of the Virginia Department of Aviation (1981-83) and was a founder of the Virginia Aeronautical Historical Society.

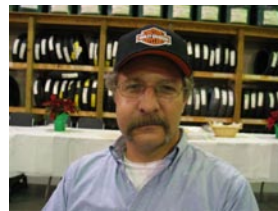
There will be a private family service, but his son Tom said there would also be a memorial in October for the Sky Bryce resort's 40th anniversary. In lieu of flowers, donations should be sent to the Orkney-Basye Rescue Squad or to the Pete Bryce Memorial Fund, 3204 Red Orchid Way, Kensington, MD 20895 to go toward the airport's preservation.

There's a new love in my life. It all began with a drive to Atlanta to inspect her. She was clean and ready to fly. 11:30 later she was at her new home. The next day my partner came over and we took him to the high school parking lot and put her together. High School students were wondering what was coming out of the box. She's a glider! It took two more weekends before we could give her the first flight in 12 years. Chief test pilot, Dave Weaver took her up for her maiden flight. All reports were positive, and after some ground



instruction on how to handle her it was my turn. Naturally I did everything Dave told me not to do. I kited up on take off, recovery wasn't too bad, but the landing was terrible. I was high and slow and jammed it down to the runway from about 3 feet. The second takeoff and landing was better, but still not perfect. Steve Landers, my partner, then took off perfectly and spend: 39 minutes flying around. So off I went the next day for a second go at pleasing her. The takeoff was great and the landing was the best I have had this year. She is so responsive to our every touch that she pleases you with positive encouragement. She is all any man could want. I want to thank everyone for all the help, especially Fred Winter, Dave Weaver, and so many other to numerous to mention.—**Frank Banas**

WHAT? ME WORRY?



June 2005

Phil Jordan, Editor

Skyline Soaring Club, LLC

<http://www.skylinesoaring.org>

pjordan@skylinesoaring.org