VARIOMETER

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THE UPS AND DOWNS

OF THE

KANSAS SOARING ASSOCIATION

Editor: Tony Condon

Volume LVI **December 2016** **Number 12**

Mike Warbington - Solo!

KSA CALENDAR

December 10th - KSA Meeting - Mountain Wave in Oklahoma, SSA Calendars, Banquet Tickets

2017

January 14th - KSA Banquet - Kansas Cosmosphere - 6 PM

January 21st-22nd - SSF Flight Instructor Refresher Clinic - Wallis, TX - Info here

February 11th - KSA Meeting - My evolution at Sports Class Nationals - Andrew Peters

March 11th - KSA Meeting - Badge Flying

March 19th - 25th - FAI Sailplane Grand Prix - Orlando, FL

April 8th - KSA Meeting - Safety Meeting

April 20th-23rd - Wave Camp - Soaring NV, Minden NV

June 5th - 14th - 15 Meter, Open, Standard Nationals - Cordele, GA

June 21st - 30th - Club Class Nationals - Hobbs, NM

July 2nd - 8th - 2nd Annual Junior Nationals - Harris Hill, Elmira, NY

Jun 29th - July 16th - 2nd FAI World 13.5m Class Gliding Championship - Szatymas, Hungary

July 1st - 8th - US Junior Camp & Contest - Elmira, NY

July 3rd - 7th - Women's Seminar - Chilhowee Gliderport - Benton, TN

July 15th - Kansas Kowbell Klassic

August 1st - 10th - 18 Meter Nationals - Uvalde, TX

August 28th - September 2nd - Region 10 Championship - Waller, TX

September 24th - Adventurous Babes Society

October 1st - Adventurous Babes Society Rain Date

October 7th - EAA Fly-In Newton, KS

Nov 26th - Dec 8th - 2nd FAI Pan-American Gliding Championships - Santa Rosa de Conlara, Argentina

Summer Gajewski has graduated from the T-6 to the T-1 Jayhawk, aka Beechjet. Cool!

HP-24 Akaflieg

From Bob Kuykendall, developer of the HP-24: At our Akaflieg events you learn that making high-performance aircraft from high-tech composites is something that pretty much anybody can do. You learn hands-on techniques for making large parts with a variety of materials including carbon fiber, Kevlar, and fiberglass.

We need five committed akafliegers to green-light this event. Then we get a cabin and catering and a guest speaker in the field. We charge $75/day, which includes accommodations, catering, and materials.

Dates: Jan 21 - 27, 2017

Location: Arnold, CA

Contact: HP-24 Sailplane Project Facebook page or bob@hpaircraft.com

How To Fly A 4-Place Cessna Glider

By **Bob Park**

A funny thing happened on my way from Harper County to Reno County about three years ago. The engine in my Cessna 175 lost a couple hundred RPM. I advanced the throttle, but the engine started to run quite rough. I knew that an explanation of why it quit would be more trouble than to explain why I shut it off, so I shut the engine down and slowed to nearly a stall before the prop quit windmilling, at which time a cloud of blue smoke drifted from the cowling and past the windshield. I was only about 8 miles from my home field, and about 7,500. ft AGL, so it was an easy glide back home with a normal traffic pattern and landing. I was able to land and turn off the runway onto the taxiway and coast part way to the hanger.

I had been planning to replace the engine, and wanted to install a Continental 0-470, 130 horsepower engine such as the Cessna 182 has, but that has not yet been approved. Since the airplane had decided I needed to put a different engine in it, I bought the right to use STC SA 122 NW, which is approval for the installation of the engine I wanted. This STC was approved in 1974. I now own the STC.

The airplane was at Harper, Kansas, and I wanted it at Halstead, Kansas, where there was a willing mechanic. This was about 60 miles away.

I went to the FAA in Wichita, the Flight Standards District Office, and asked for a Ferry Permit. When they asked what was wrong with the airplane, I told them the engine doesn't run and I planned to tow the 175 with a 182. That got their attention, and was the start of 15 months of discussion and effort.

At a meeting of myself and several FAA persons, many questions were asked, and only one FAA man said he thought we could do it. The main concern appeared to be that they believed the 182 would not be powerful enough.

A plan for the towing was presented to FAA and another meeting was held. Many items were covered, and it seemed that another FAA person was beginning to think it could work. The regulations provide for towing a glider, but require a waiver to tow anything else. The certification for the 175 describes it as an airplane, therefore that is what it is and it can never be a glider so a waiver will be required. The chief man at FSDO says there will be NO waiver.

FAA opinion is that I could dismantle the airplane and haul it so there is no need to tow it.
Fortunately, some FAA persons understand their purpose and believe one should be allowed to try what they want so long as the public is not at risk - which is what the FAR say. I built a tow hook with which to replace the propellor, and was granted approval for that. I now have an airworthy airplane with a tow release and no propellor.

One day with clear sky and about a 25 mph wind right down the runway the 175 was attached to a Honda Gold Wing motorcycle with a 200 ft rope and the 175 indicated 80 mph, control was good, and an altitude of about 10 feet was maintained for 20 seconds or so then a normal landing.

A call to the FSDO office was made and I told them what we had done with no problems, and this without any engine cowling. They were impressed.

More serious discussions with FAA indicated they still were concerned about the ability of the 182 to tow. I had towed two gliders at once with the 182, and the total weight of those was higher that the 175 would be. An FAA test pilot had made a computer print-out of his analysis and said the performance would not be good. He had used gross weight of both aircraft, and a speed in excess of what would be required. I was told there was no way to predict what the performance would be.

This old Farmer thought he knew better, and having the benefit of some practical experience, set out to see just what the performance might be.

I made some tests and recorded the performance of the 182 to determine what power was required to maintain altitude with various flap settings and airspeeds. I also recorded rate of sink at various airspeeds and flap settings with a no-thrust power. I also recorded rate of climb with various flap settings and airspeeds at full power. Take-off distances were also recorded. Barometric pressure, wind speed, and temperature was recorded, humidity was not recorded. I also knew the weight of the 182 as flown. The handbooks for the 175 and 182 list performance, the two airplanes takeoff distance are the same and the wind correction are the same. From the weight of the 182 and the rate of sink at zero thrust, and the actual power to maintain altitude as shown by the engine power curve using the manifold pressure and rpm, I had an indication of the actual power required to fly the 182. Double that would also fly the 175.

The propeller appeared to be 60 percent efficient. This seems an acceptable number to use. Since I knew the rate of climb for the 182 and the weight of the 182, I could figure the horsepower used for that rate of climb. Based on these numbers I told FAA the take-off distance would be less that 1000 feet and the rate of climb would exceed 250 feet per minute with the weather we could expect in May and the wind of about 10 mph which is what I wanted. FAA finally agreed I could try a tow at a long runway. Sunflower Gliderport was acceptable. I bought another 175 for these tests. I really appreciate all the help that was available. We made three test tows at Sunflower with witnesses, still pictures, and video recordings made from inside the 175 and from along the take-off and landing runway. Another day we made two tows, one of them using a 100 ft tow rope. All went very well. The take-off distance was 960 feet and the rate of climb was 260 fpm verified by variometer with route recording capability. The video was presented to FAA properly, and there was no doubt that the proposed tow could be done safely. Another application for waiver was made for the trip to Halstead and was approved - signed by the Chief FAA man at the Wichita FSDO. Within 24 hours of receiving the authorization, the tow was done and the 175 was at Halstead. There were no problems. It took less than 1 hour from start to done. Much better - and safer - than disassembling, hauling, and reassembling.

I appreciate the right to apply for the authority to do this. As the effort progressed, more and more FAA personnel came to accept - and even assist in gaining the approval. I thank them for the help. I was told by a FAA man many years ago that you can do anything if you go about it right.

From the September 1960 *KSA Newsletter*:

HARPER, KANSAS - 20 Aug. 1960 - By Bob Park

The Waco made about 15,000 ft. towing today, i.e. total for the afternoon. Harry Higgins showed up to fly about half of that - after a brief checkout, of course, including a short briefing on the small items one must know about in order to do a reasonable job of being a Waco Driver. Maybe he will tell you of the experience sometime. This gave me my first chance to be towed by the Waco and the first flight I have had in a 1-26, a real Jim Dandy flyin' machine when you have enough cushions to see out. Paul Wilson got here first and was rewarded by being allowed to help get the Waco and the Cinema to the far end of the field. He flew the Cinema to the Harper Airport - after breaking my tow rope, we used his but I really hadn't expected to charge much for the use of mine. (ED.'s note: At the last KSA meeting, Bob Parks announced tows were free at his field, but he did charge for the use of the tow rope!) Bob set up his 1-26 at Harper. We spent the afternoon hauling the gliders up and getting out of the way for them to come down except for Harry who actually gained 400 ft. in the 1-26. Nearly everyone who wanted a ride got it in one vehicle or another, I think. We didn't break very many records but we did have fun, why not do it again?

Monday - just got down with the Luscombe and sure enough conditions are good today, naturally.

(ED.'s note: Bob has an ideal set up - one all soaring pilots would envy. He has his own hangar, tow planes and gliders. His only problem is that he has trouble "operating the equipment on both ends of the tow line at the same time". We're gotta get down there more often and operate one end or the other of that tow rope with him).

From the July 1960 *KSA Newsletter:*

Harper, Kansas

A brief quote from Park's Air Force at Harper (from a misplaced letter)

"Had the TG-1A up for over 1½ hours yesterday - 12 May. Seems to fly O.K.

"Up to 4400 feet.

"Look out next contest".

Well, we've all been warned. Bob's coming to our next meet loaded for bear. Everyone'd better get to practicing.

Notes from the President

Greetings KSA! We had a very busy November with the work day at the beginning of the month resulting in a lot of cleanup at Sunflower, paving the way for progress on the tower building as well as a successful test run on door modifications of the T Hangar, which will make all of our lives easier come spring when all the doors are rolling easy! **KC Alexander** was back to work burning weeds and plenty of other odd jobs were completed.

There was some sporadic flying through the month as we enjoyed above average temperatures through Thanksigiving time. Then we had an incredible turnout for flying on Black Friday. We will have to make that a tradition! At one point someone mentioned it was busier than many Summer weekends, and they were right! Let's keep an eye out for warm days in the forecast and don't be shy about posting on the Soar-Kansas Yahoo! Group if you are interested in flying. Spring soaring is right around the corner and what better way to be ready for it than to stay current through the winter. Anyone thinking about doing some New Years Day flying should get the discussion going. Unfortunately I will be in Minneapolis, where it will certainly be too cold for glider flying.

As you probably know, **Bob Park** passed away this month, and many KSA members were present at his memorial service. **Bob** was involved in glider flying in Kansas for basically as long as people have been flying gliders in Kansas and I think we all enjoyed getting to call him a friend. I know I did. I've included a few articles written by **Bob** from old *Variometer* issues and *Soaring* magazine in this months newsletter for your enjoyment.

At the December KSA meeting I will be talking a little bit about my recent Diamond Altitude flight in Oklahoma. We will also talk about next years plans. You should plan to be there. WSU's Jabara Hall at 6:30 on December 10th. We will have SSA Calendars for you to purchase ($10) and you can also reserve your seat for the KSA Banquet on January 14th ($25). Speaking of the banquet, **Aaron Maurer** still needs your nominations and flight claims for the KSA travelling trophies. Contact him ASAP and no later than the December meeting with the information at aaron9975@gmail.com.

If I don't see you at the KSA meeting, then I wish you a Merry Christmas and hope that we all find new gliders under the tree.

Tony

From May 1981 *Soaring*

2 Factors to consider in off-field landings

by BOB PARK

Since off-field landings have been pinpointed as being responsible for much of the damage done to sailplanes last year, and since I have been flying from unimproved fields for thirty years (I live on a farm in Kansas) and own a 1-34 and a Luscombe, I would like to share this experience in the hope it might be helpful in reducing accidents.

A farmer's objective is to raise profitable crops with no abuse to the soil. Cultivation of the ground is generally done crosswind to maintain a thick boundary soil layer at the surface when the wind blows. Also, cultivation is done across the slope on hilly fields, that is, along (or parallel with) terraces, to minimize water erosion. Cultivation is done with machinery that can leave the ground surface very rough and soft after the first operation following harvest. Later operations leave the ground progressively smoother and more solid.

Wheat ready for harvest is about 3 feet tall, valuable, golden color, and appears deceptively sparse when viewed from above. It waves in the wind. After harvest, the wheat stubble is generally good for landings. Be aware of field boundaries and ditches caused by water erosion. Notice any muddy ruts left by machinery.

After harvest, the first cultivation commonly uses a disk which leaves a generally smooth-appearing surface with most of the straw/stubble visible. This surface is moderately soft, but no great problem for glider or auto. The disk is usually operated round and round starting at the outside edge of the field and worked toward the center.

Another machine, used right after harvest, is a "chisel." This machine leaves a 6 to 10-inch deep, 2-inch wide furrow about every 6 inches. These furrows are visible from above, and the amount of tilled dirt showing through the stubble is greater than with the disk. This machine commonly works back and forth across the field at an angle that is not parallel to any side of the field. The surface in this case should be avoided. Be prepared for a very rough roll-out if going across the furrows, and a short deep track if parallel to the furrows. It is unlikely an auto would make it into, or out of, this field.

If a moldboard plow has been used, the straw/stubble will have been nearly completely buried and covered. The upper 6 to 9 inches of the field will have been turned over, crumbling the soil and burying the straw. This plow is usually operated round and round like the disk. Expect this field to be very soft, but smooth. The pilot should expect a very short landing and difficulty driving an auto into the field.

Fields with green plants neatly aligned in rows 20 to 40 inches apart will probably be suitable if the landing is made parallel to the rows. These plants may be in furrows 4 to 6 inches deep. Such crops can be damaged by glider or auto tracks in the field, since these can start erosion of the soil. Farmers might be unhappy in this case.

Farmers, generally, are (or like to think they are) independent people who have more control over their own business than the average citizen. Remember that you can cause damage if you land out. The farmer may own several machines that cost over $50,000 each (though they probably are mortgaged heavily), so if you mention the value of your glider, he may think that is a high-priced toy and resent it.

If you have damages to pay, be sure you are dealing with a person who actually owns an interest in what you are said to have damaged! Do not leave litter of any kind. Do not risk a fire. If crop damage is claimed, it may be advantageous to offer to mark off two patches of the crop, one where the damage is claimed, and another in the same field where there is no damage. You can offer to pay the difference in yield after harvest.

Once again then, the points to remember are:

- If a field has been worked round and round, land at the edge and avoid a line from any corner toward the middle.
- If it has been worked back and forth at an angle to the sides, and if considerable straw/stubble is visible, avoid it if you can. Rate this one a 2.
- If it was worked back and forth and there is little straw/stubble visible, it is probably okay to use. Land parallel with the furrows. Rate this one a 5.
- The field that has just been disked will have very few visible tracks, will look smooth, and will have a very even texture. It will be somewhat soft but smooth. Rate this one 6.
- If there are terraces, I recommend landing parallel to one of them and just downslope from it far enough to avoid hitting it with a wing. (Right on top of it might be as good.) The water will have washed little ditches downhill and these ditches will be smaller just downslope from a terrace. Landing uphill toward a terrace risks losing sight of the terrace when ready to touch down. Pilot's choice.

What the farmer wants, you see, is to keep the field in such a condition that it will retain any moisture that it has (some loose dirt on top), avoid wind blowing the dirt away (keep ridges and furrows oriented crosswind), keep any more rain that falls from running off the field (no ruts or tracks that would start a ditch washing), and have a firm moist seedbed at planting time.

There is no way to cover all the possibilities, nor will any given information be correct in all cases. What I have written here will be fairly reliable in our part of the country, and will be a good basis for judgment nearly everywhere similar crops are grown.

Oklahoma Diamond

By **Tony Condon**

Steve Michalik of the Oklahoma Soaring Association started the chain of events with a note on the Talihina Facebook Group. He said the wind for Thursday November 17th looked excellent for wave above FL180. Looking at the winds aloft forecasts on aviationweather.gov, I tended to agree. Wind direction was forecast to be SW with speeds about 40 knots and steady direction and speed up to about 30,000 feet. This got my wheels turning…

I have an oxygen bottle in Kate the Cirrus. It would probably need to be filled. I would need a tow though. I started putting out feelers for others interest in flying that day and if we could get a towpilot. There wasn't a lot of interest from others in a mid week flying day and not much commitment from towpilots either. Any tow would end up being REALLY expensive if it was just going to be me anyway.

Monday and Tuesday I was showing the Electro to a potential customer so I was at Sunflower those days. While talking to Leo I mentioned the possibility of wave in Oklahoma and he immediately offered to let me take the Electro down there. Wow! Now I didn't need a towpilot. The glider was ready to fly, all I needed to do was charge the batteries back up. The only snag was that the Electro did not have an Oxygen bottle. It did have mounts, but they were too small for the bottle in Kate. **Dave Pauly** soon came to the rescue, loaning me his Kevlar bottle with Mountain High regulator. All the pieces were in place and I drove to Talihina on Wed. night. The forecast still looked good, and the same.

I had posted in the group that I was taking the Electro down to try the wave. Dooley Rucker, from Dallas, decided he wanted to come see the Electro (he has one on order) and flew up in his 180 hp Cessna 170, which happens to have a towhook! Learning this, Randy Teel decided to drive down on Thursday morning from Tulsa with his HpH 304CZ.

Local member of the Airport Commision board, Deston Shaw, agreed to meet me at the airport to unlock the gate. I slept in the back of the Subaru that night. Deston was back at sunrise to help rig the Electro. He flies airplanes and paragliders and has big plans for modernizing the Talihina Airport. I can only hope that they can get some of the projects going to improve security, build some hangars, and install self serve fuel.

The forecast sounding in the morning and the HRRR Mean Vertical Velocity forecast in the morning were all indicating the wave would be there. The wind was probably about 30 degrees off the ridge line but increasing to 40 knots by 3000 MSL and staying there up to over 30,000 ft. The sky was blue so no clouds to mark the wave and also no concern about getting stuck on top.

As we rigged I would occasionally see a short lived cu-looking rotor cloud south of the airport. It disappeared and re-appeared a few times which was encouraging to me. Real life evidence of wave activity was better than any forecast. My plan was to motor over to Buffalo Mountain, get as high as I could, and then work out across the valley to find the wave. As always, I wanted to minimize the electric power used on the launch to save it for later if needed. I figured it was better to let the ridge lift me up rather than use the battery.

I took off at 8:20 AM. As I turned towards Buffalo, I started to hit some turbulent lift. Plan B quickly was developed and put into action. I started to search around trying to work what I thought was crosswind in what I figured must be some rotor lift. I turned the motor off at 2200 MSL (1500 AGL) right next to the airport. Soon I was up over 3000 and in smooth wave lift. I had launched right into the secondary!

It quickly became obvious that the wind was STRONG. Very small heading changes resulted in very large crab angles working east and west, parallel as best I could tell to the Kiamichi Ridge about 9 miles upwind. With no clouds to mark the lift, it was very helpful to use the crumb trail on the GPS screen to see where the lift and sink was and help control my ground track.

In the secondary wave I topped out at about 5000 MSL. This gave me plenty of altitude to push into the wind for the primary. Randy and others who have flown wave in Talihina over the last 7 years or so have often found the primary over the small town of Albion, so that is where I headed. It took 80 knots of airspeed to make 40 knots over the ground, affirming my thoughts that the real wind was about the same as forecast.

I hit the primary right next to Albion at 3500 MSL. Yahoo! Parallel the ridge here was a bit of a SW/NE course. My groundspeed on the SW legs was almost zero. In fact I learned that the LX Zeus does not read any groundspeed below 16 knots. Anything slower than that was reported as 0 knots. I was still making progress but very slow. The trips running NE of course were very quick.

This wave took me to 11,000 feet in 1 hour and 5 minutes. The average rate of climb was 115 feet per minute. Patience was the key here, no time to climb records would be falling today. By 11,000, I either lost the wave or it died. I hypothesized that the wave could be better further east, where the ridge was more perpendicular to the wind. My backup plan to that was to jump downwind of the Winding Stair, which had a much better alignment of the wind, and see what was there.

My Plan A worked out this time and I re-contacted the Primary at 10,300 after running about 15 miles ESE of the Talihina Airport. This would turn out to be The Wave. Climb rates were better, often over 200 feet per minute. I was able to run a more SE/NW line and had no trouble staying in the lift.

By this time I was I was making good use of **Dave**'s oxygen and enjoying the crystal clear and perfectly smooth air. It was not too cold, with the freezing level up at 15,000 feet. With the large canopy and closed vents I stayed very comfortable in my Flannel shirt and blue jeans. I never had to put on my stocking cap and gloves that I took along.

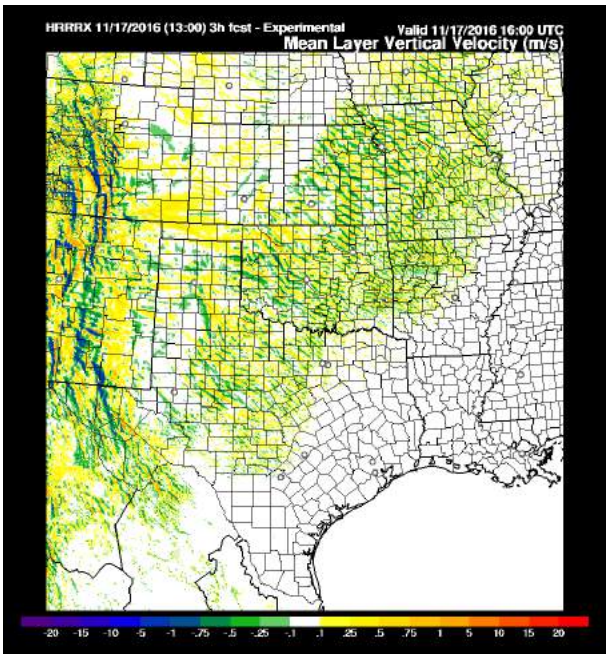
I had arranged flight following with Fort Worth Center while I was over at Albion. I knew that if I wanted to get Diamond Altitude I would have to arrange/beg/plead for permission to fly above 18,000 feet. I knew I would need 19,000 to be sure of having the Diamond. Randy had set the OK state altitude record in the same area at 17,700 in 2009.

As I was going through about 15,000 I started asking Fort Worth about going higher. Initially I was greeted with a hard No. Not VFR, no sir bob, can't do it. However about 30 seconds later the controller comes back with a specific question. "Are you an Instrument Rated Pilot?" Why yes I am. Then he is happy to arrange a clearance to climb higher. I let him know that I would be staying in the same area and had no need to go any higher than 20,000 ft, FL200. That would be plenty to get Diamond Altitude and establish a new state altitude record. Shortly after I climbed through 17,000 I hear "Glider 8MB, you are cleared within a 10 mile radius, climb and maintain block FL180 to FL200. Wahoo!

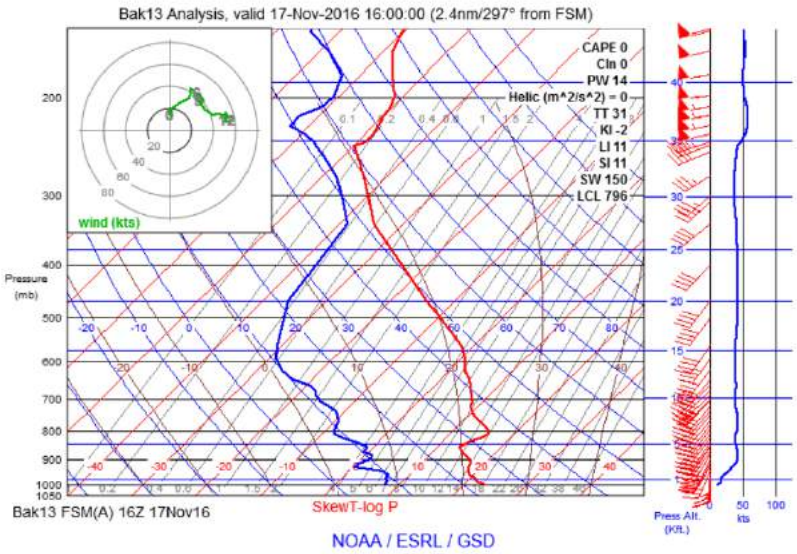
I was still climbing although it was slowing down. Down to about 100 feet per minute I went up to the FL200 limit, snapped a picture, and then turned out of the wave and started down. I had averaged 168 feet per minute for about an hour in this wave. With just a cannula for Oxygen delivery and otherwise not being particularly prepared for a long stay at altitude, I was happy to get down into thicker air.

Mission accomplished! I cancelled IFR shortly after descending below 18,000 and descended back to Talihina, landing about 11:40. Dooley and Randy were waiting. The day had warmed up and a particularly turbulent thermal layer had formed below about 4000 feet.

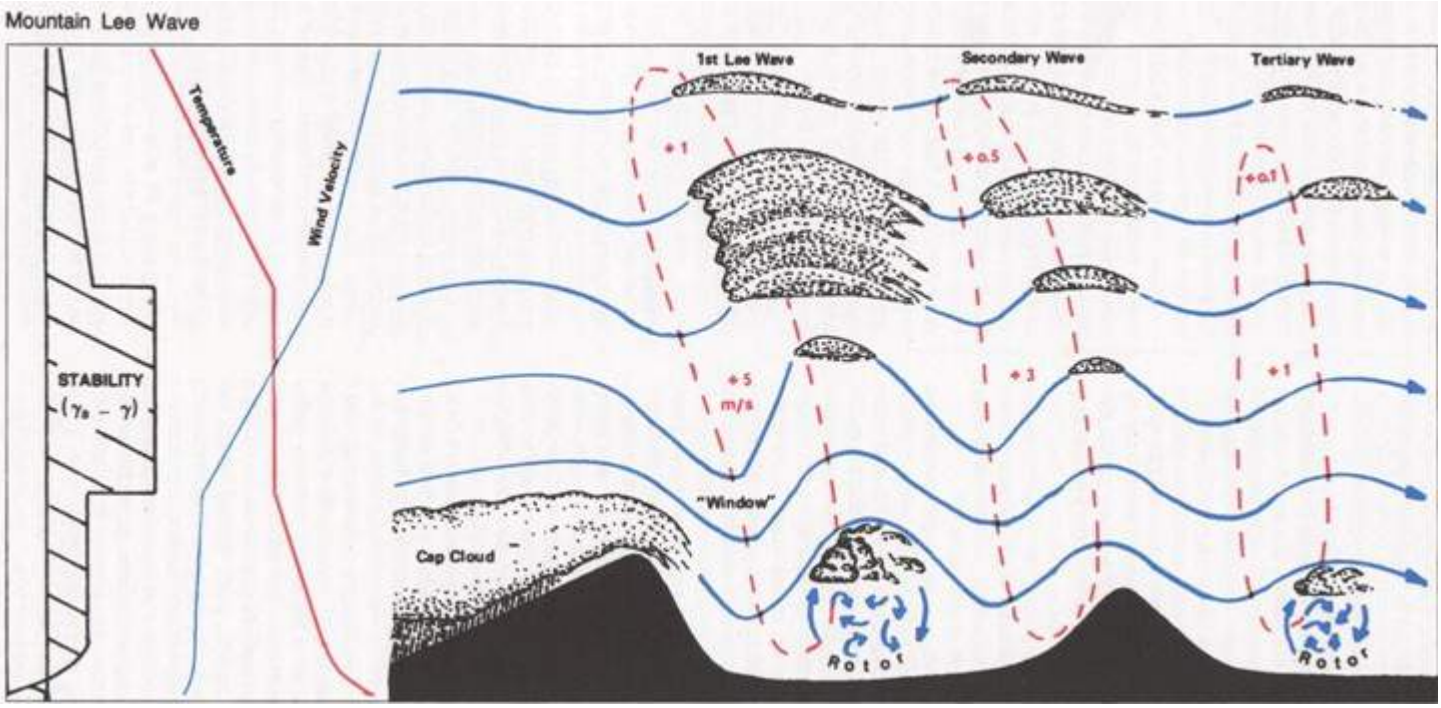
I told Randy what I had done and he launched shortly after. He had a tougher time than me finding the wave but eventually also got a clearance and made it to 21,900 feet! My record had not stood for long and we both went home with Diamond Altitude. Wow!



10 AM HRRR Mean Vertical Velocity showing wave alignment with the ridges in SE Oklahoma



10 AM Forecast Sounding. Steady wind direction and velocity and some stable air down low



“Typical” wave diagram. Atmosphere for my flight was not so stable and wind speed was constant not increasing.

20,000 ft views: Instrument Panel left, Looking south above, Diamond Smile below

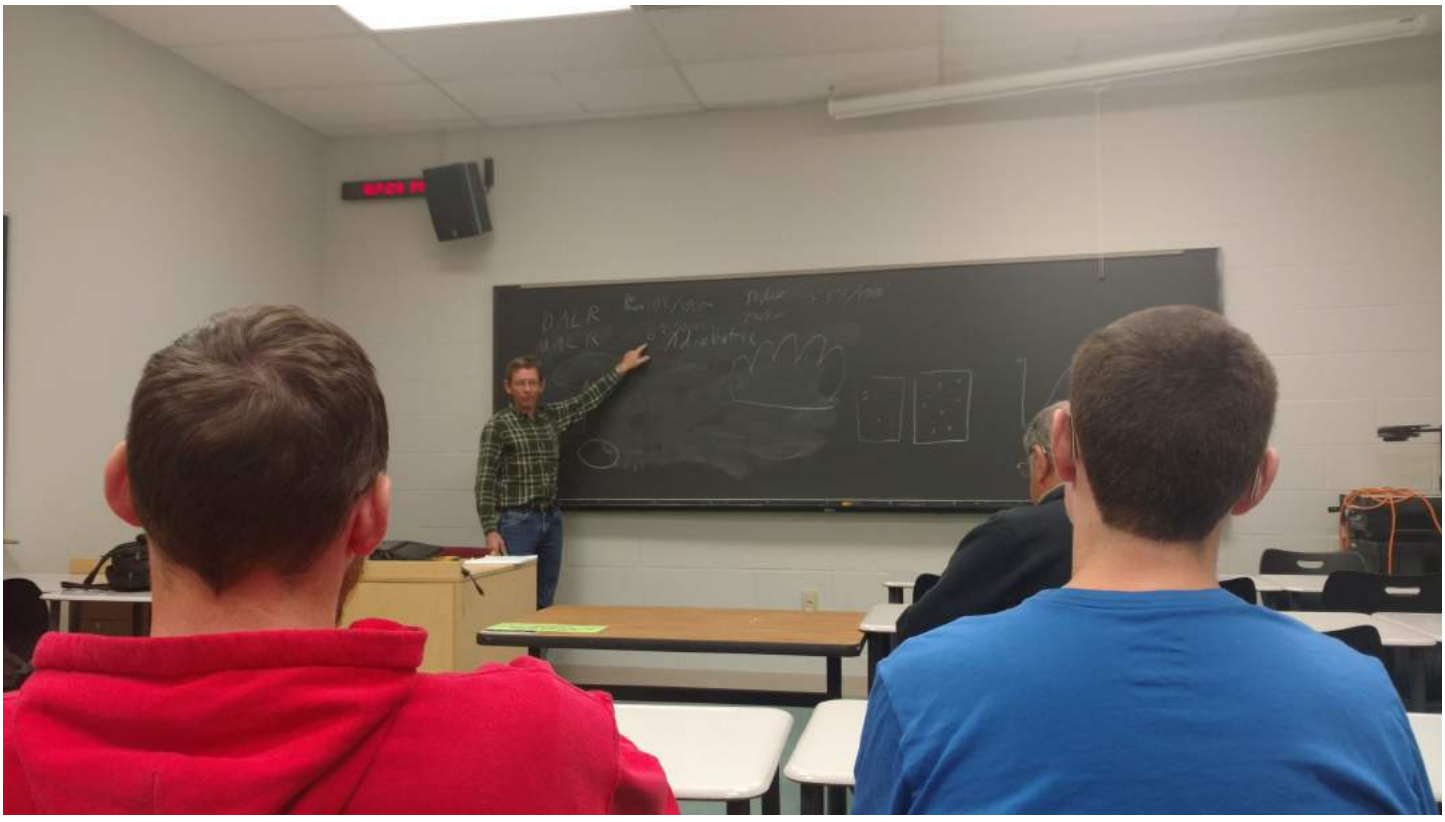
After landing with JEN. Photo by Dooley Rucker

First Solo

By **Robert Estagin**

It was October 27th and I just got into the glider and was about to takeoff for my first solo in any kind of aircraft and I was so scared but I also felt ready to do this. When I closed the canopy and finished my pre-takeoff checklist and connected to the tow plane I gave the thumbs up and prepared for takeoff. Once the slack started to untangle I could feel the butterflies in my stomach go away and I felt more focused on controlling the aircraft and landing it safely. Suddenly on takeoff I hear the skid is scrapping on the ground and thinking I messed up but I decided that I had enough airspeed to rotate and get off the skid and we could attempt to figure out what happened to the skid. After lifting off I felt less stressed and I used all my effort to focus on the tow. After a smooth tow I disconnected and the first thing I noticed was how easy moving the rudder was and how slow I was. After thinking what was the reason I realized that **Tony** wasn't in the aircraft and it was just me and since the glider was lighter I need to push down the stick more in order to maintain the same airspeed. After doing some medium bank turns I was right next to the airport and close to the pattern so I decided to enter the pattern and land. I was about 1,200 feet above the airport so decide to open the airbrakes to get down quicker and not be too high in the pattern. Once I'm on downwind leg I complete my landing checklist and turn base leg and continue my turn into final and I see I'm too high so I go full airbrake trying to decrease my altitude so I can stop at my stopping point I have selected during downwind leg. After I touch down I start slowing down and come to a complete stop within 10 feet of my stopping point and I would like to consider that a success. Overall it was a great experience and I can't wait to go flying again.

John Bird's research into automated soaring earned an article in Popular Science:
http://www.popsci.com/new-software-lets-drones-surf-winds-for-hours



Brian Bird discusses weather at the November KSA meeting. Hope to see you December 10th!

Black Friday at Sunflower

REI, the outdoor outfitter, has recently promoted an advertising campaign challenging people to “Opt Outside” on Black Friday instead of rushing to shopping malls and Wal Mart for the first deals of the Christmas shopping season. A few KSA members decided that their preferred method of outdoor activity was to fly gliders and a good day was had by all at Sunflower.

Attendees included **Tony** & **Leah Condon**, **Bob Hinson**, **Mike Warbington**, **Robert** & **Eddie Estagin**, **Brian Silcott** and son Holden, **David Kennedy**, **Paul Sodamann**, **Dave Pauly** along with his wife and brother in law, **Mike Orindgreff**, **Brian Bird**, and **Kevin** & **J Riedl**.

First we see a semi truck pull into the gliderport. Oh great someone who is lost I think. Nope. Turns out that **Kevin** and **J** have an old semi truck converted into an RV/Toy Hauler. **Kevin** says “I hear the bathroom is turned off, so I brought my portapotty!” COOL.

Day started off with student training flights in the 2-22 with **Tony** instructing **J** and **Robert**. **Bob Hinson** towed in the 182. Then **David** did a few flights to maintain his currency and proficiency. There was barely a breath of wind. **Brian** then started flying with **Mike W**. After three dual flights **Mike W** was deemed fit to solo, which he did! Congrats **Mike**! In between this activity, **Dave Pauly** took off in the Pipistrel to give his brother in law a ride and experience soaring flight. **Mike O** also self launched in F8 and soared for almost 2 hours! Never very high though but there were consistent, weak thermals. Nothing was ever encountered that would support the 2-22 however.

After **Mike** finished his solo we rearranged the operation for auto towing. **Tony** had assembled Kate and we moved it and the 2-22 to the north end of the runway while laying out the rope. Ron Colbert was visiting and took two quick auto tows with **Brian** in the 2-22 before deciding then and there to join the club! Ron had seen us at the EAA Fly In in Newton and lives in Hesston. Welcome Ron!

Other auto towing activity in the 2-22 was with **Brian** flying and giving a ride to **Dave**’s brother in law as well as an instructional flight with **J** just before sunset. **Tony** enjoyed two auto tows in Kate, achieving 1300 and 1400 AGL in the no-wind conditions. The 2-22 was getting to about 1000 AGL, both respectable altitudes. **Leah** did the driving while switching out passengers in the car to see the action from that end of the rope.

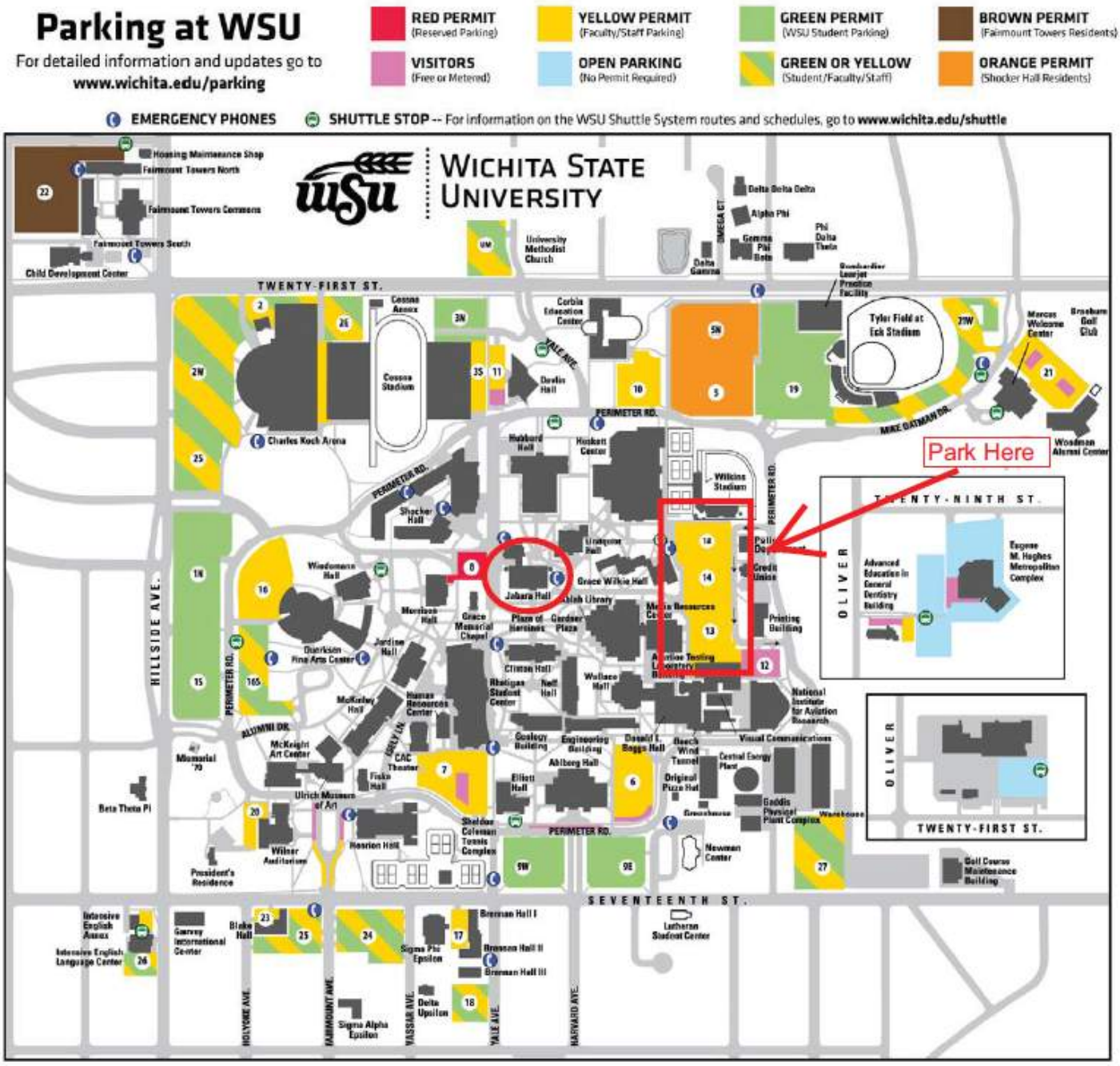
It was a fun day, and hopefully we can get a few more in like it this winter when we have a nice day!

Brian and Ron

Brian and **Mike**

December KSA Meeting

We will be meeting at Jabara Hall on WSU's campus, Room 127. Thank you to **Aaron Maurer** for arranging this for us. The room is located on the first floor of the building adjoining the main lobby. The map below shows where to park and where to find the building. See you there. December 10th at 6:30 PM



RULES FOR KSA FLYING AWARDS, 2016

Unless otherwise noted, the following applies to all awards:

Awards are to be made for flights with departure points in Kansas.

All distance and speed flights must start at an altitude of 1000 meters (3281 feet) or less AGL, except the Kowbell Klassic.

No altitude gate is required.

Handicaps, when they are used to evaluate competing pilot accomplishments while flying different sailplanes, will be the current handicaps used by SSA. For sailplanes without a SSA handicap, a handicap will be established by the KSA Board of Directors. For the 2014 season, the SSA 2014 Handicap list, as amended/added to below, will be used (the 2014 list is available on the SSA web page, www.ssa.org):

Schreder HP-18 - 1.02

When handicaps are used, an additional factor will be applied to any flight if the aircraft is carrying inflight disposable ballast (water) at takeoff. The additional factor will be multiplying the original handicap by .92

Turnpoints will be photographed

The camera does not need to be mounted. Handheld is OK.

No specific film type or processing is required.

Only photographs pertinent to the flight need be submitted. An uncut film strip is not required.

Contest style turnpoint photos can be used for any turnpoint in the KSA turnpoint book.

FAI style photos can be used for any turnpoint.

GPS ground tracks may be submitted in lieu of photographs for any task. The track must have the date and pertinent times displayed on it. It is preferred that the track be submitted in the IGC format. On declared tasks, the ground track must show that the flight path went around the outside of the turnpoint. On pilot selected tasks, the ground track must show that the glider passed within ¼ mile of the turnpoint, in the location for a proper turnpoint photo.

Speed tasks- Allowed methods for time recording:

Start/Finish gate (ground timed)

Data back photos of start/finish

Pilot timed task

Wooden Wings Award

Awarded for the longest flight in a wooden winged sailplane. The task may be free distance, or if turnpoints are to be used, they must be declared in advance of the flight and in the sequence to be used. The task declaration may be written or verbal. The turnpoints need not form a closed course. A remote finish point can be used.

If the course is abandoned before all turnpoints are made, the flight will be scored as the distance for the achieved turnpoints, plus the distance to the next declared turnpoint, minus the distance from the landing point to the next attempted turnpoint, but not less than the distance to the last achieved turnpoint.

Mamie Cup

Awarded for the greatest distance flown from a Kansas departure. The task may be free distance, or if turnpoint are to be used, they must be declared in advance of the flight and in the sequence to be used. The task declaration may be written or verbal. The turnpoints need not form a closed course. A remote finish point can be used.

If the course is abandoned before all turnpoints are made, the flight will be scored as the distance for the achieved turnpoints, plus the distance to the next declared turnpoint, minus the distance from the landing point to the next attempted turnpoint, but not less than the distance to the last achieved turnpoint.

KSA Flying Horse (Silver)

Awarded for the best speed achieved around a 100 KM pre-declared closed course with a maximum of two turnpoints.

Dennis Brown Memorial

Awarded for the best speed achieved around a 200 KM pre-declared closed course with a maximum of two turnpoints.

KSA Flying Horse (Gold)

Awarded for the best speed achieved around a 300 KM pre-declared closed course with a maximum of two turnpoints.

Curt McNay Pilot of the Year

Awarded for the best combined score in four tasks - Duration (not handicapped, but 6 hours max scored), Altitude Gain (not handicapped), Distance, and Speed. Distance and speed are handicapped per SSA Handicaps or the KSA amended/added handicap. Departure point for all flights must be in Kansas. Data must be taken from four flights (i.e., one flight per task).

The distance task may be free distance, or if turnpoint are to be used, they must be declared in advance of the flight and in the sequence to be used. The task declaration may be written or verbal. The turnpoints need not form a closed course. A remote finish point can be used.

If the course is abandoned before all turnpoints are made, the flight will be scored as the distance for the achieved turnpoints, plus the distance to the next declared turnpoint, minus the distance from the landing point to the next attempted turnpoint, but not less than the distance to the last achieved turnpoint.

The speed task must be a closed course of at least 100 KM. However, a predeclared 200 KM (minimum) non-closed course may be used if you are flying a sailplane with a handicap factor of 1.36 or greater (Examples: 2-22, 1-26, 2-33, Swallow, etc.) In this case, a wind correction factor of 15 MPH will be subtracted from the achieved speed prior to scoring.

A score of 1000 points will be awarded the best performance in each task. Each contestant's performance will be ratioed according to the best performance in the task being evaluated. The sum of each contestant's scores will be compared, the highest being the winner.

Charles Henning Award

The intent of this trophy is to encourage more people to fly cross country. All a person needs to compete is a sailplane, a databack camera or a recording GPS, a KSA turnpoint book, and a tow.

1) The cross country task will be a Pilot Selected Task, or PST with a minimum time of 2 Hours.

2) Speed will be determined by the time on course as indicated by the databack camera or recording GPS, or 2 Hours, whichever is greater.

3) Scoring for the trophy will use the SSA handicap or the KSA amended/added handicap.

4) There is no limit on start or finish altitude.

5) The task can consist of any turnpoints in the KSA turnpoint book. Contest style photographs will be used. Turnpoints can be flown in any order. However, if a turnpoint is used more than once, two other turnpoints must be photographed in between. If a GPS Flight log is used for documentation, the flight log must show the glider passed within ¼ mile of the turnpoint, in the location for a proper turnpoint photo.

6) The first picture for the task must include the date. Note: More than one task can be on the same roll of film. Only one task per flight.

7) The second picture for the task will be the start point. This picture determines the Start Time.

8) To finish a task, the pilot must take a picture of the finish point, or take a picture when the glider comes to a stop after landing. If a landing photo is used, the next photo on the film must show the glider and an easily recognizable landmark. No more than 30 minutes should elapse between the landing photo and the glider ID photo. Note: The Start Point and the Finish Point Must be the same point.

9) The winner will be determined by averaging the two best tasks of the year for each pilot. The averaging will be accomplished by adding the two speeds and dividing by 2.

Lead C

Awarded to the pilot or soaring supporter who makes the most noteworthy non-achievement during the calendar year.

Praying Mantis

Awarded to the pilot who makes the most significant advance in his or her soaring ability during the calendar year. To be eligible for this award, the pilot must not yet have his or her Silver Badge at the beginning of the calendar year.

Submit claims to Aaron Maurer, aaron9975@gmail.com, by December 10th at the KSA Meeting!

2016 KSA AWARDS
INFORMATION SHEET

Pilot's Name_____ Date_____

AWARD	DATE OF FLIGHT	SAILPLANE	SPECIFICS
Praying Mantis (Nominate Someone)			
Towing Operations (Nominate Someone)			
Club Maintenance (Nominate Someone)			
Wooden Wings			Distance Flown
Flying Horse Silver (100 KM Speed Task)			Speed in MPH
Flying Horse Crystal (200 KM Speed Task)			Speed in MPH
Flying Horse Gold (300 KM Speed Task)			Speed in MPH
Charles Henning Memorial Award (two flights required)	Flight 1 Date Flight 2 Date	Flight 1 Sailplane Flight 2 Sailplane	Flight 1 Speed (and time) Flight 2 Speed (and time)
Kansas Kowbell Klassic	Landing Location		Distance
Kansas Kowbell Klassic Konsolation	Pre-declared Task (must have been completed to count!)		Distance
Mamie Cup			Distance
Pilot of the Year by Handicap Score	Altitude Duration Speed* Distance*		(feet) (hours:minutes) (MPH) (Statute miles)
Rex Hamilton Memorial Award			(Nominate Someone)
Other Significant Accomplishments (First Solo, First soaring flight, FAI Badge Leg, completion of an FAI Badge, 100th flight, 1000th tow, etc.			

Documentation required for all flights, per rules published in the *Variometer*.

*If you had disposable ballast on board at takeoff of the Speed or Distance flight for consideration, you must put a "B" next to your claimed speed or distance. This affects the handicap number used for evaluating you performance.

"I certify that all flight claims made above were launched in Kansas and are properly documented (does not apply to "Other Significant Accomplishments" category).

Signed_____

KSA VARIOMETER

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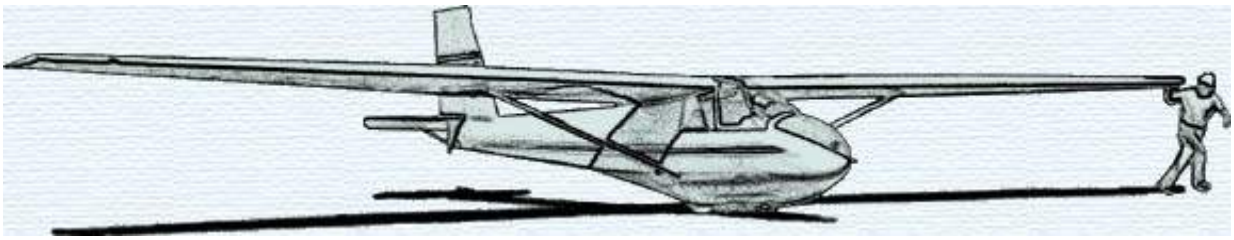

KSA Meeting

20,000 ft in the Oklahoma Wave

Tony Condon

December 10th 6:30

Room 127 Jabara Hall, WSU

SSA Calendars & Banquet Tickets!