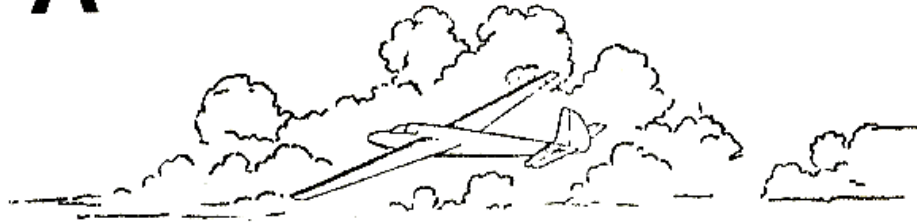


# V A R I O M E T E R



PUBLISHED MONTHLY TO RECORD THE UPS AND DOWNS OF THE  
**KANSAS SOARING ASSOCIATION**

Editor: Tony Condon

Volume LIII

March 2013

Number 3

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The best thermal of **KC Alexander's** career so far. 2000 fpm up over Taos, NM on June 24, 1990

## Notes from the President

2013 promises to be a year of change for KSA. You have already seen some of the changes in the form of increased annual dues and when you pay the dues. You should have received a bill from KSA for your dues, hangar rent and tie down fees. If you haven't already paid your dues, please do so promptly. We have changed our renewal month with the SSA to January, to coincide with our new dues schedule.

Your Board of Directors have embraced change this year too. Each of us has picked a role that is vitally important to the function of the club. Here's what each of us are doing:

**Andrew Peters** – KSA President

**Steve Leonard** – Tow Plane Manager

**Neale Eyster** – Secretary/Treasurer

**KC Alexander** – Grob Manager

**Keith Smith** – Duty Roster (Operations Manager)

**Bob Hinson** – Hangar Policy (Facilities Manager)

**Tony Condon** – Flight Instruction Standardization

**Matt Gonitzke** – Maintain lawn mower, gator, two cycle engines (Equipment Manager)

**Bob Blanton** – 2013 Awards Banquet

**Ray Girardo** - TBD

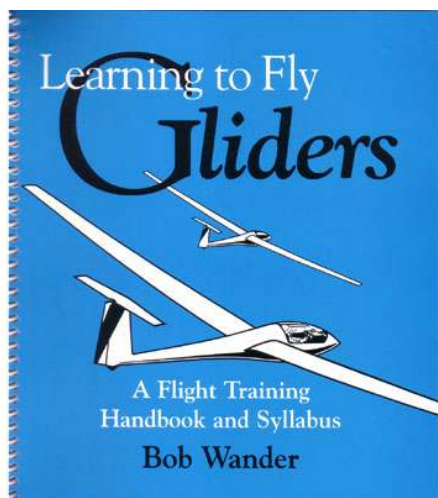
Here are just a few of the things you should be planning for in March and April. At the March meeting, you can sign up for your duty days. The annual safety meeting will be April 13th presented by **Brian Bird**. Our Spring Work day is scheduled for Saturday, April 20th, with the 27th as a rain date. And our first flying weekend will be May 4th and 5th.

Happy Landings,

**Andrew 3T**

## Low Performance Contest

Just in case you haven't heard, the Region 10 Low Performance Contest will be held at Sunflower July 3<sup>rd</sup> - July 7<sup>th</sup>. There has not been much activity organization-wise in the last month so no major update is required. One more pilot, Jack Schaumberg, from the Houston, TX area, has signed up to fly his clubs 1-34, and he plans to fly as a team with club-mate Keith Miller who has flown a few regionals in his ASW-20. The only other announcement is that **Tony Condon** will fill the Competition Director position. Look for more info and requests for help in the next month or two.



## Instruction at Sunflower

KSA Director **Tony Condon** was tasked by President **Andrew** to put some effort into developing a standard curriculum for the instructors at Sunflower. The instructors and students alike have, in the past, sometimes been frustrated when having to jump between different instructors. In an effort to not re-invent the wheel, and with agreement from the other instructors, the decision has been made to keep track of student progress and training using the "Learning to Fly Gliders" syllabus published by Bob Wander. Students - keep an eye out here or on the Yahoo group for information on how to get your syllabi.

## New Gliders

**Don Jones** has purchased a Russia AC-4A in Tuscon, AZ and should be picking it up in early March. Congrats, can't wait to see it at Sunflower!

**Tony Condon** bought the Standard Austria SH-1 from Dan Simpson, stored at Sunflower in the octagon shaped trailer. Looking forward to flying with **Matt Gonitzke** in twin gliders.

## Member Achievements

**Tony Condon** has been named Chairman of the SSA's Youth Committee

## 2013 KSA CALENDAR

March 9<sup>th</sup> - KSA Meeting at NIAR - 7:30 PM - Buying your first glider - **Matt Gonitzke**  
April 13<sup>th</sup> - KSA Meeting at NIAR - 7:30 PM - Spring Safety Meeting - **Brian Bird**  
April 20<sup>th</sup> - Spring work day at Sunflower (April 27<sup>th</sup> Rain Day)  
May 11<sup>th</sup> - KSA Meeting - Cookout at Sunflower  
June 1<sup>st</sup>-8<sup>th</sup> - Region 9 Contest - Moriarty, NM  
June 8<sup>th</sup> - KSA Meeting - Cookout at Sunflower  
June 15<sup>th</sup> - Strother Field Fly-in  
June 13<sup>th</sup>-16<sup>th</sup> - 17<sup>th</sup> Annual Midwest Vintage Rally - Lawrenceville, IL  
June 23<sup>rd</sup>-July 4<sup>th</sup> - 15 Meter & Open Class Nationals & Region 9 Super Regional - Hobbs, NM  
June 29<sup>th</sup> - 51<sup>st</sup> Annual Kansas Kowbell Klassic  
June 30<sup>th</sup> - Kansas Kowbell Klassic Konsolation Kontest  
July 3<sup>rd</sup> - 7<sup>th</sup> - Region 10 Low Performance Contest - Sunflower  
July 13<sup>th</sup> - KSA Meeting - Cookout at Sunflower  
July 8<sup>th</sup> - 12<sup>th</sup> - Women's Soaring Seminar - Moriarty, NM  
August 3<sup>rd</sup>-9<sup>th</sup> - Region 10 South - Waller, Tx  
August 10<sup>th</sup> - KSA Meeting - Cookout at Sunflower  
August 20<sup>th</sup> - August 30<sup>th</sup> - 1-26 Championships/13.5 Meter Super Regionals - Moriarty, NM  
August 31<sup>st</sup> - September 8<sup>th</sup> - Standard Class Nationals - Benton, TN  
September 7<sup>th</sup>-8<sup>th</sup> - Ace's High Aerobatic Contest - Newton, KS  
September 14<sup>th</sup> - KSA Meeting - Cookout at Sunflower  
September 21<sup>st</sup> - 27<sup>th</sup> - US National Aerobatic Championships  
September 26<sup>th</sup> - 29<sup>th</sup> - Great Plains Vintage/Classic Regatta - Wichita Gliderport  
September 28<sup>th</sup> - 29<sup>th</sup> - Wichita Flight Festival - Jabara Airport, Wichita, KS  
October 12<sup>th</sup> - KSA Meeting - Cookout at Sunflower

# THE THERMAL INDEX

by HARRY C. HIGGINS

The Thermal Index (TI) provides a simple method for predicting the strength of dry thermals and the height to which they will rise. The TI utilizes classical thermal strength prediction techniques, but organizes the data such that two numbers provide the basic prediction for a single day. Because of their simplicity, TI's can be worked out for several stations rapidly, allowing rough maps of "iso-lifts" to guide the soaring pilot. Daily records of the TI indicate trends and provide an early clue to the approach of strong lift. If seasonal records of the TI were maintained, optimum locations for contests and record expeditions could be easily discovered and the planning of ideal routes would be simplified.

The thermal index is analogous to the "stability index" (SI) (described at the end of this article) except that the TI gives data on dry ground thermals which is not done by the SI. The TI is defined as the difference between the potential temperature at a given altitude and the potential temperature of the forecast surface high for the day. 850 and 700 millibar levels have been selected because of the availability of data and their signi-

ficance to the soaring pilot. 850 is very nearly 5000 foot altitude above sea level and 700 is approximately 10,000 feet. The temperature at these and other altitudes is observed by radio balloon soundings (RAOBS) twice a day at stations approximately 300 miles apart in the continental U.S. Observations are made at 0000Z and 1200Z (6:00 P.M. CST and 6:00 A.M. CST) and are transmitted on the weather bureau teletype shortly after 8:00 A.M. CST.

The TI forecast is prepared as follows: Three numbers are taken from the RAOBS report: (1) the temperature at 850 mb, (2) the temperature at 700 mb, and (3) the station pressure in millibars. The prediction of the surface high is obtained from the most recent forecast. Since predicted temperatures usually indicate a band such as "75 to 80" or "the high 70's," a single averaged value is used. The three temperatures are then plotted on a "tephigram" or "pseudo-adiabatic" diagram as shown in figure 1 using station pressure to locate the proper altitude for the surface temperature. The surface forecast is extended to 700 mb along a dry adiabat. The temperature in degrees Centigrade

## About the Author

Harry C. Higgins is an aerodynamicist for the Boeing Airplane Co. and he has been flying sailplanes off and on for 17 years. He earned the Gold altitude leg 10 years ago and made over a dozen more or less serious attempts at Gold distance during the past six years. This article was inspired by the fact that he earned Gold distance one week after organizing available data in the form of the Thermal Index. His hope is that the use of this parameter will enable the average pilot to predict how good a given day will be for serious soaring attempts.

(°C) where the dry adiabat intersects 850 mb is subtracted algebraically from the observed temperature in °C at that altitude and the difference is the 850 mb or 5000-foot Thermal Index.

Similarly, the temperature in °C where the dry adiabat originating at the surface intersects 700 mb is subtracted algebraically from the observed 700 mb temperature in °C to give the 700 mb Thermal Index.

Experience has shown that a TI of -3 or less indicates a very good chance for sailplanes reaching the altitude of the observation. Furthermore, the magnitude of the TI is

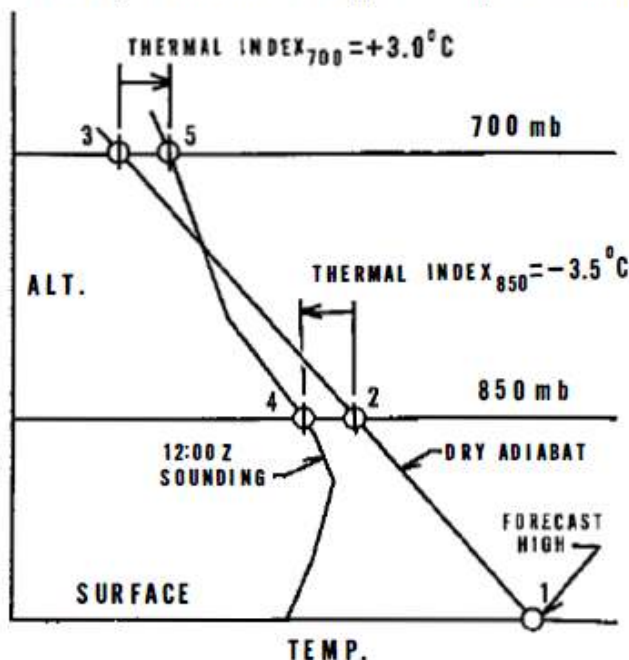


FIGURE 1

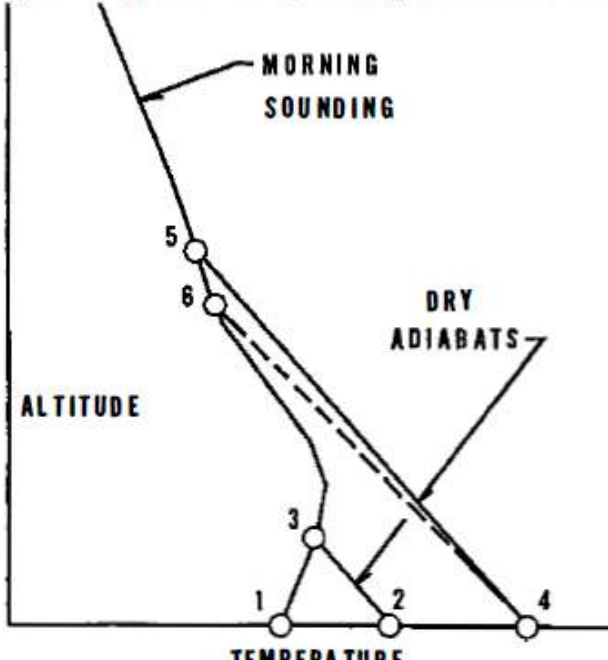


FIGURE 2

inversely proportional to thermal strength and TIs of -8 or -10 predict very good lift, thermals which will be strong enough to hold together in high winds, and a long soaring day.

The following paragraphs discuss the meteorology of the problem and may be disregarded by those uninterested in a review of elementary meteorology. Since the TI is intended to be a predictor of dry thermals, the effect of water vapor and the condensation of clouds are not considered.

Figure 2 shows the usual condition found in the early morning. The air near the surface (point 1) has been cooled by contact with the cold night ground. Above this nocturnal inversion the air tends to cool with altitude with an average approaching the "standard lapse rate" of about 2° C (3.5° F) per thousand feet. At sunrise the surface begins to heat. It must be remembered that the earth's atmosphere is not heated directly by the sun. The transparent atmosphere allows sunlight to heat the surface of the earth which in turn heats the lowest layer of air. As the surface heats from point (1) to point (2) of figure 2, the air at (2) becomes lighter than the air above it and rises to (3) with its temperature dropping as it rises as indicated by the slope of the dry adiabat, about 3° C (5.5° F) per thousand feet.

Nothing of much interest to the soaring pilot occurs until the surface heats to (4) and the thermals can overpower the nocturnal inversion and rise to higher levels as indicated by (5). In the general case, the warm thermal mixes with cool air as it rises and follows the broken line on figure 2 to point (6), something less than the potential indicated by the dry adiabat.

It should be obvious that a good prediction of the maximum surface temperature (4) will allow a reasonably good prediction of how high the thermals will rise as indicated by point (6).

Reference to figure 1 indicates how this complex of information can be boiled down to two useful numbers. Here point (1) is the forecast high for the day. Points (2) and (3) are the intersections of the dry adiabat originating at (1) and passing through 850 and 700 mb. Points (4) and (5) are the 1200Z soundings. The tempera-

**ONE WEEK OF THERMAL INDEX ANALYSIS**  
Upper left figures indicate the TI at 5000 ft. ASL (850 mb.) and lower right figures indicate the TI at 10,000 ft. ASL (700 mb.).

Date	Place	Topeka	Oklahoma City	Dodge City	Peaver	Amarillo	Remarks
4-13-62		+9.5 -0.5	0 +8.0	-5.0 4.5			(Solid cirrus in AM ruined prediction) 20 miles at 3000' ASL at Wichita
4-14-62							No analysis No flights
4-15-62		-2.2 9.0	-3.5 3.0	+7.2 5.5			120 miles at 9000' ASL Wichita towards Dodge City
4-16-62		1.0 12.0	-4.5 7.5	-5.5 6.0			No flights
4-17-62		2.5 11.5	2.5 11.0	+1.0 7.0			Deteriorating conditions No flights
4-18-62		-3.0 2.0	-1.5 3.5	-5.0 1.5	---	-8.5 -2.0	Go West!
4-19-62		-2.5 3.5	-1.0 0.5	-3.0 0	---	-7.0 -1.0	211 miles at 10,000' ASL North from Dodge City

ture at (2) is subtracted algebraically from the value at (4) to give the 850 mb TI of -3.5. Similarly, (3) is subtracted algebraically from (5) to give the 700 mb TI of +3.0.

About -2 or -3° C margin may be required to insure that the thermal will not dissipate due to mixing as it rises. The condition shown on figure 1 predicts soaring to altitudes somewhat above 5000' ASL, but no chance of getting to 10,000' ASL.

The table shows some early 1962 measurements of TI together with notes on soaring conditions during the period. It is seen that a good correlation existed between predicted thermal tops and maximum altitudes gained except for the 13th when a cirrus overcast prevented surface heating from reaching the

predicted high. On the 18th examination of stations farther west revealed much better conditions in that direction. An expedition was mounted immediately and Gold distance was achieved on the 19th.

It is true that better predictions could have been made by plotting the entire soundings, dew points as well as temperature, but the time required for such analysis prevents using the results for making a decision on the day's activities. In contrast, TIs can be worked up and evaluated before 8:30 A.M. CST in plenty of time to get going on a 200 or 300-mile flight that day.

The other big advantage of the TI concept is that it reduces a complex problem to simple terms that can be related to experience, thus

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allowing an understanding of the relationship of temperature aloft and thermal lift by the soaring pilot who may have no desire to pursue the thermodynamics of the problem.

In the language of the mathematician, a low value of TI is necessary but not sufficient for strong thermals. It's like the hook on the end of the fish line. Without the hook, no fish can be caught, but adding the hook does not guarantee a catch.

It is probably true that the Thermal Index will be frequently confused with the Stability Index. The Stability Index is computed and reported by the Weather Bureau to indicate the potential for precipitation and thunderstorms. It has occasionally been useful for predicting lift. Its definition is indicated in

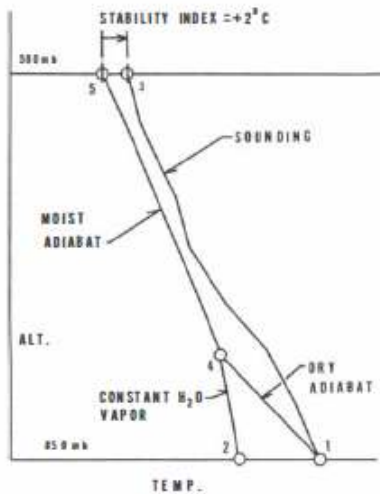


FIGURE 3

Figure 3. Point (1) is the temperature observed at 850 mb, (2) is the dew point at that altitude, and (3) is the temperature observed at 500 mb. (1) is extended along a dry adiabat to point (4) where it intersects the extension of point (2) along a line of constant water vapor content (constant saturation mixing ratio). The temperature at (4) is extended to the 500 mb level along a moist adiabat to point (5). SI is defined as the temperature at (5) subtracted algebraically from the temperature at (3). If the resulting value is less than +4 a chance exists for cumulo-nimbus development.

Since the main problem in soaring is to climb through the first few thousand feet above the surface in dry thermals, the Stability Index is not a practical clue to the quality of soaring to be expected.

A potential for improving the state-of-the-art in soaring appears available here. It is entirely possible that interested Weather Bureau personnel could prepare TI forecasts during the summer weekends. The author urges other soaring pilots to utilize the concept of the "Thermal Index" to test its potential for predicting lift.

#### ADDENDUM

The Thermal Index can be plotted on a pseudo-adiabatic diagram very rapidly and with high precision. If a diagram is not available, however, the TI can be computed using the approximate mathematical formulae shown below.

Given:

$h$ —Surface pressure altitude —1600'  
 $T_s$ —Surface high temperature forecast = 26.7 °C. (Convert 80°F to Centigrade by subtracting 32 and multiplying by 5/9.)

$Tr(850)$ —RAOB temp. at 850 mb = +13.0 °C (taken at 1200 Zulu time).

$Tr(700)$ —RAOB temp. at 700 mb = +4.5 °C (taken at 1200 Zulu time).

1. Estimate 850 mb temp. lapse  
 $TI(850) = .003 (5000-h)$   
 $TI(850) = .003 (5000-1600)$   
 $TI(850) = 10.2$  °C

(Note: For maximum accuracy the temperature lapse should be computed for pressure altitude. If field elevation is used in place of pressure altitude the pressure error will amount to about 1.5 °C on the TI for a barometric change of 1/2-inch of mercury, the error being optimistic if the glass is low and pessimistic

if it is high. Soaring is frequently successful with the barometer 1/2-inch off standard and 1.5 °C appears to be a significant change in TI so it is recommended that the temperature lapse be computed on the day of the observation. If the recommendation is ignored, the standard lapse can be used for all forecasts at the same elevation which would reduce the drudgery at the expense of accuracy.)

2. Estimate 700 mb temp. lapse  
 $TI(700) = .003 (10,000-h)$   
 $TI(700) = .003 (10,000-1600)$   
 $TI(700) = 25.2$  °C
3. Est. 850 mb temp. of surface air  
 $T_s(850) = T_s - TI(850)$   
 $T_s(850) = 26.7 - 10.2$   
 $T_s(850) = +16.5$  °C
4. Est. 700 mb temp. of surface air  
 $T_s(700) = T_s - TI(700)$   
 $T_s(700) = 26.7 - 25.2$   
 $T_s(700) = +1.5$  °C
5. Compute TI at 850 mb  
 $TI(850) = Tr(850) - T_s(850)$   
 $TI(850) = 13.0 - 16.5$   
 $TI(850) = -3.5$  °C
6. Compute TI at 700 mb  
 $TI(700) = Tr(700) - T_s(700)$   
 $TI(700) = 4.5 - 1.5$   
 $TI(700) = +3.0$  °C

#### Bibliography

1. *Glossary of Meteorology*, edited by Ralph E. Huschke, published by the American Meteorological Society, Boston, Mass. (Especially page 508 for definition of "Showalter's Stability Index.")
2. *Natural Aerodynamics*, R. S. Scorer, Pergamon Press, New York, London, Paris. (Includes a definitive discussion of the mechanism of thermal convection.)

**Fred Hefty pilots the German-built Scheibe L-Spatz-55 sailplane he owns with Elmer Katinszky near Tehachapi, Calif. Increasing numbers of these ships are being imported as the design becomes more popular. It has an approved type certificate in the U.S. so is easy to get licensed. Wings and empennage are of wood construction, fabric covered, and it has a welded steel tube fuselage. Basic specifications are as follows: span, 49.3 ft.; wing area, 126 ft.; aspect ratio, 19.0; empty weight, 337 lb.; gross weight, 583 lb.; wing loading, 4.6 lb./sq. ft.; glide ratio, 29 at 45 mph; sinking speed, 2.1 ft./sec. at 40 mph.**

Photo by Eugene G. Bartos



# In Pursuit of a Passion

By **Bernie Mohr**

Passions are great motivators. Sort of like incentives, only more so. Incentives lead us to certain activities, then depart whilst we occupy ourselves, whereas passions drive us to act, then color, shape, flavor and form our efforts, lurking ever in the background to assure the goal that got it all started is being attended. If soaring is our passion and we see a better position opening in a different locale, we immediately ask, "Is there a soaring site near there?" "Is housing available near it?" "Is there a club?" "Wonder what dues would be, how much are tows?" "Is soaring as good or better there than where I am now?" If shopping for a car, "What kind of a tow car would it be?" "Will it be a good crew vehicle?" etc. Put thusly, the title of this story is misleading in that we don't so much pursue the passion as it pursues us, but the way it's stated sounds better.

In that light, the twosome of **Neale** and **Bernie** set out on what would become much more an adventure than either could foresee. The plan was to drive to Fallon, Nevada, pick up a glider and return home. Sounds simple. Was so 'til halfway across Nevada. I had, on an earlier trip, been impressed by the beauty of the Utah section of Interstate 70 while returning from the west, and looked forward to enjoying the sights from the other direction. Of course we arrived in that area well after dark, but the headlights did give us a wonderful view of the right side of the highway.

Sometime around midnight (**Neale** likes to drive straight through) we made it to U.S. 50 and a hundred plus more miles, were finally in Nevada. The topography is in an almost continuous rise westward from Wichita, which means, along with the loss of sunshine, a continuous drop in temperature. It being by now the 28<sup>th</sup> of May, the outlook for Wichita highs was in the 80's but **Neale's** car had outside temp sensing which showed near freezing.

U.S. 50 in Nevada is a very lonesome road. That time of morning brings about a car an hour to your attention. There are long, straight stretches with occasional tight, almost hairpin turns. Not an area to be driving under the influence of drowsiness. **Neale** did the right thing, pulled into the entrance to a field and took a nap. I know he slept because he snored. Don't know just how long he was out, but guess it was about 20 or 25 minutes. I reclined my seat, but lay there awake. If I did sleep any I dreamed I was lying there awake, so don't know how much good it did.

Revived, **Neale** again headed west. By this time light snow flurries were occurring, but there didn't seem to be any buildup. The outside temp read in the mid 20's and a car an hour would have suggested we were actually on an active road. We passed through Eureka and rolled on. ("Rolled on"--prophetic.) More snow flurries but still no collection on the surface. I had the seat fully reclined, which in the little BMW is, luckily, really reclined, and had the seat belt doing its thing, luckily. It was past 4:00. We were somewhere between Eureka and Austin. There was not one of the occasional sharp turns involved. If the roadway was icing up, it hadn't been apparent.

Did **Neale**, in spite of resting nearly half an hour some ways back, drowse momentarily? Was there a blow-out? Seeing the car the next day at the yard to which it had been towed, all four tires were flat, so that's inconclusive. Was there a sudden strong gust combined with a wet road surface? The wind was light. Did the devil have his fun with us? We are both religious and try to be as antagonistic to his evil as possible, but we both believe he has bigger fish to fry. (Fry? Well, isn't that his job?) We'll probably never know the cause, but we surely know the effect.

I had been dozing, and if not fully asleep, at least nearly so. I awoke to strange sounds being emitted by **Neale**, and strange gyrations happening to the car. The first thing I saw was a small sign, meant to mark the boundary of the roadway, coming straight at us, then a sharp steering correction, and the other side of the road menacing. Another swerve or two and we departed the right side of the road into a three or four foot ditch. Less a ditch than that the highway was three or four feet raised from the surrounding fields.

The official report stated that there had been a 60 mph rollover accident. **Neale** is a stickler for obeying traffic law and had had the car's cruise control set exactly on 60. How much that momentum had been degraded by sudden braking and fishtailing is moot. There was plenty enough left to carry us well into the field. Whereas we had been westbound, the car came to rest upside-down and headed northeast. **Neale** later recalled that we underwent three and a half rolls. Isn't that like an engineer, counting revolutions?

He probably also timed the event and maybe could tell you our rate of roll. While I'm contemplating having to explain my life to next world dignitaries, he's gathering data.

I really wasn't contemplating much at all. Having been so suddenly aroused, I was unable to grasp much meaning. It was similar to the experience of the anesthetized hospital patient coming to in the recovery room. Things are seen and things are heard, but meaning is altered, or absent. It's as if the world were suddenly mixed into a kaleidoscope, a dreamy vision of things confused. Yes, I saw the road sign and was aware of **Neale's** moves to avoid it, but when the horizon began to spin, all significance was lost. Time was slowed. Sound was altered and came through as if an adult were speaking in the background of a Charlie Brown Peanuts skit.

Leaving the road to the right means that the passenger side is the first non-tire portion of the car to make contact, and I should have at least some recollection of that, but I have none. As the car went upside-down most of the glass departed. I should have heard loud impacts and crumpling sounds, but don't recall any. We were now in a field of loose dirt and should have been choked with the stuff, but no memory of that either. My recall may have been altered by contacting a wrinkled portion of the car's roof, which struck me at the hairline above the right eye. Scalp wounds can bleed profusely, and this did, but not for long. Maybe some of the loose dirt we encountered helped stanch the bleeding. Why was I not covered with blood? Well, being upside-down when the car came to rest means that the headliner probably caught most of it.

Time was still on a slow course as we rested against the roof and the belt restraints for what seemed a long while, trying to gauge the seriousness of the event. Although **Neale** said that I had emitted undefined, loud vocalizations (I screamed) during the rolling, when the car came to rest he was the first to speak, querying me as to my condition. I reported that I thought I was generally okay, but that I had a bleeding cut to the scalp and anyway, shouldn't we be getting out of here before this thing lights up? That thought was undoubtedly influenced by the Hollywood version of these things in which there are explosions and huge fireballs. He said his door was still operable; mine was so crushed it wouldn't budge. He unbelted and worked his way out, then helped me exit and get upright. It was then that I felt a fairly serious soreness in the neck, and also penetrating cold. The last time I consulted the outside temp while still proceeding westward, it read twenty four degrees. We hadn't anticipated this. I had an unlined windbreaker bicycle jacket in a small suitcase in the trunk, but feared that with the car upside-down the trunk would be inaccessible, but **Neale** found a way to extricate it and a few other valuables and I felt some better protected with the thin covering over the light shirt I was wearing.

We assessed the damage. That was easy--totaled. Funny thing, when we went inverted the windows and windshield cracked out, but not the headlights. That gave us enough light to retrieve a few things that were spilled around. I found, just inside the passenger side diminished sized window opening, a small flashlight which I had, back up the road, placed on the dash. It turned out to be a very important find.

A car an hour. We hadn't seen a car in well over an hour and a half, and the prospect of withstanding the freezing breeze until one might come along was daunting. The breeze wasn't strong, but in the cold it didn't have to be to make things absolutely miserable. We tried to keep busy looking for things that had spilled from the wreck. **Neale** had the flashlight and was re-searching the trunk when to our delight we saw headlights approaching from the west. He was fairly close by the time we saw him, and with lonely Nevada speeds, was approaching much too quickly for us to get to the road and wave him down. We yelled and waved arms, jumped up and down, (the guy whose neck wasn't sore did) and finally, as he was about to pass us by, **Neale** waved the flashlight. Miracle of miracles, he saw it, braked and backed up, to our almost tearful joy.

We explained our situation. He was a deputy sheriff from the next county east of Eureka, was returning from a law enforcement conference in Reno, and would be glad to help us. We gathered what items we had "rescued" from the wreck and hurried to his warm pickup. It was an extended version and fairly new. **Neale** took the front seat and I the back. As I opened the door to the rear area I noticed a very clean, beige interior. Rather than soil it, I removed my jacked and spread it over the rear seat.

The deputy called ahead to Eureka where a 24 hour emergency facility, staffed by a physician assistant, was available. He looked me over and was worried about the bump to the head I had experienced. His recommendation was kind of funny. He said I needed to get to the nearest hospital for more thorough evaluation and observation. Where's the nearest hospital? 104 miles up the road at Elko. Now I'm doing the engineer thing. A big diesel ambulance, driver and one or two attendants, 104 miles each way--\$ thousands.



He said no, that Eureka had the lowest cost ambulance service in Nevada and the top charge would be only \$300. Knowing that the service could not be done for that, I asked how it was possible. He said Eureka county had silver mining interests and that in addition to the subsidized ambulance service, had the largest fire department outside of Reno and Vegas. I declined, and he had me sign a waiver.

Before resuming his trip home, the deputy took us to a local motel, which was a fairly quality place for being so remote. One of the calls he made while approaching Eureka was to the highway patrol. While still registering at the motel, one of their number, who had already sized up the wreck, interviewed us. He asked if we had been using our seat belts. We thought that should have been obvious since we were still alive. I told him without the belt in use I'd have been hamburger. Also that if I hadn't had the seat fully reclined my injuries could have been greatly increased. He said that to survive a 60 mph rollover with so little injury (**Neale** had none) was rare and that we were very lucky.

We rested a while and when again awake evaluated our situation. It occurred to us that we were basically stranded and not sure what to do next. **Neale** called home to inform his family and ask if maybe his daughter could come rescue us. She was reluctant and couldn't we find a bus or whatever to get back home? In that sparsely populated area there aren't enough potential passengers and distances are too long to make bus routes pay. Besides, it was Sunday and things shut down there on Sunday. There were car rentals listed in the phone book, but none close, and, yes, they would rent us a car to get back home, but we'd have to bring the car back. Thanks. U-hauls rent one way, but they weren't close either, and they didn't answer the phone on Sunday.

It occurred to me, and I told **Neale**, that most any town of any size has, if not a dealership, at least someone who deals used cars. Maybe we could purchase a clunker that would get us home, then sell it for somewhat close to what we had in it. Sounded good to him, and we consulted the motel desk. Sure enough, there was such a person and **Neale** soon had him on the line and made a deal for a used pickup that could return us to familiar surroundings. "Used" didn't quite cover it--"Used up" would have been a better description. But it had a large engine (gas hog) and conveniently came with a tow bar, two inch ball, and trailer wiring, all of which brought the purpose of our venture back to possibility. And the heater worked.

We spent the rest of the day resting up, looking for a place to eat, and watching the snow melt--Eureka had about an inch by dawn. We were across the street from the fire department, and if size of building and number of overhead doors is an indication, it was indeed a very large department. I asked at the desk what justified such and they said large range fires were common. My neck had stiffened considerably and when the late shift desk crew took over I asked about using the spa tub they had in a room adjoining the lobby. The lady said that would be fine and did I want her to heat it up? I was pulling her chain and told her I hadn't brought swim trunks and could I maybe just shut the door and enjoy a soothing, therapeutic soak as I had a very sore and stiff neck. She was aghast, appalled, horrified. "CERTAINLY NOT!" Then reasons why not, none of which applied if the door was shut. Her response implied that there would be others present who would be aghast, appalled, and horrified. For the sake of courtesy and my sore neck I kept my laughter internal.

Next morning we completed the legalities re: the pickup, then drove to Battle Mountain, NV, and along the way found that the pickup was, indeed, a gas hog. Why Battle Mountain? The highway patrol informed us that that's where the wreckage had been taken. As nothing is necessarily close in Nevada, we were not surprised to learn that Battle Mountain was about 145 miles and a large tow fee away, but had the tow service nearest the wreck site. We retrieved a few more items and, seeing the wreck in daylight, were somewhat amazed that we had survived. I found my glasses, slightly scratched but useable, but never located my prescription sunglasses.

On to Fallon! Aptly called, "The Oasis of Nevada," you see why when you encounter water filled ditches and canals within the city. I dimly recall a sign indicating that there are three rivers servicing the area. Anyway, there's lots of water. Alfalfa hay is the main agricultural product and the surrounding fields support grazing cattle. There are what are called mud flats east of town. Fallon has about 8,500 residents, a few casinos, and about 40 billion mosquitoes. It is the home of Naval Air Station Fallon, the site of the famous Top Gun fighter combat school, which has been moved there from Miramar, in California. Wouldn't you like to be thermalling in Nevada's super conditions and have a couple of dog fighting trainees flash by, oblivious to your presence? Yes, they have their restricted areas, but they are students, and that says they haven't yet mastered all aspects of their training

Shortly we were at the home of the other half of the glider deal. As the Duster had an open trailer, **Neale** had brought, and had recovered from the wreck, a huge tarp and various kinds of tie down paraphernalia, including some twine. Twine is simply no good for the job. The fibers slip on each other and in short order the lines sag, things loosen, and the wind unwraps your work. Nevertheless, we were hooked up and on our way by dark. About a mile out of town **Neale** noticed that the turn signals weren't working, pulled off and parked on a side road. Out of the pickup we were immediately swarmed by a large share of the 40 billion. We weren't long at the task when a Fallon cop car parked at our rear. We mentioned the onslaught and he calmly replied, "Welcome to Fallon." Satisfied that we weren't transporting a trailer load of dope, he departed. We found no solution to the wiring problem and returned to Fallon, where our new acquaintance put us up for the night.

Bright and early next day we were at a fixit place. Bright and early or not, we had to wait in line. The fixit guy found the problem and we were once again on our way. Stopped down the road and found a lot of loose tarp. Weren't onto the twine problem yet, so tightened things and proceeded. Next stop, same story. And the next. Soon had a lot of beat up tarp. We had no way of knowing, but the whole thing was unnecessary as we didn't encounter a drop of precip all the way home. We came close

Just east of Denver we stopped for gas and saw, back to the west a huge, rapidly developing and moving storm chasing us. We got rid of what twine remained and took our chances with the rest of the tie down equipment. It meant lots of loose, flapping blue tarp material, but we were tired of the whole thing by then. Out of the station and down the road the mirrors were filled with fluttering blue. Thereafter we only stopped to reposition it when we saw it dragging. I mentioned that **Neale** had left Wichita with the largest tarp available short of special order, and we gave up trying to contain it on the trailer. Good thing the homestretch part of the journey was late night, as toward the end, after midnight, large portions were dragging and the number of drivers passing us, honking and pointing greatly diminished.

It was about 2:00 a.m. when the adventure ended. We were weary, but grateful for not having suffered great injury. The soreness in the neck completely departed in a couple of weeks. It had made entrance to and egress from cars difficult. You hardly ever consider the little duck of your head required for getting in and out of a car until your body is in some part too hurting to accommodate. The scalp wound left no scar, the belts no bruises. Regarding them--ask me sometime if I believe in their use.

## March 2012 KSA Calendar



**Steve Leonard** climbs to 10,200 feet over Sunflower on March 3<sup>rd</sup>, 2012 in the FJ-1



**Summer Gajewski** has graduated from Tech School and is back in Kansas

# Thermal, Ridge, and Wave

By **Tony Condon**

The toll booth operators in Oklahoma are getting smart. They wanted to know if I was headed to a glider convention. **Jeff Beam** had gotten out of work a few hours earlier on Friday and was ahead of me on the turnpikes on our way to Talihina, OK for the weekend. **Jeff** has had the Apis down there several times this winter and I had been there in December with Kate the Cirrus and was returning for a second try. Forecasts were encouraging with a cold but unstable thermal day for Saturday and stable air but strong south winds on Sunday.

Saturday's forecast lived up to expectations. High temperature for the day was a chilly 43°F but there were thermals to over 4000 ft. Talihina is at 680 ft. The day started off alright for **Jeff** and I who launched first but some high cirrus quickly moved in. Andre de Baghy had launched in his HpH 304 Shark with jet engine sustainer but no one else was brave enough to take a tow with the newfound shadow over the valley. However **Jeff** and I were able to mark thermals for each other and stay aloft comfortably. We found a little lift off the Kiamichi Ridge to the south and some more over the Potato Hills to the west of the airport. Andre had flown east along the Kiamichi, reasoning that the light northwest wind would push the thermals to the ridge. He got about half way to Mena before turning back. We all joked that we would've been that brave if we'd had a jet engine on board too but when he did get low he tried to start the jet only to find that his battery was too low! So he was back to being a pure sailplane and managed to soar his way home. **Jeff** and I stayed local to the airport. Later in the day after the sun came back out the rest of the gliders started launching and I found a good thermal to over 5000 feet off the slope of Buffalo Mountain, now absorbing direct sunlight. I landed about the time the last guy launched and within an hour or so everyone was back on the ground.

We enjoyed a good supper at the Mexican place in town and all looked forward to a good ridge day with strong south winds forecast for Sunday. However it looked like the winds above the inversion would be more westerly and the inversion would rise as the day went on. This would cap potential wave action but we were still hopeful for a long day running Buffalo Mountain. **Jeff** was first to launch with Omri next in his HpH 304CZ. **Jeff** wasn't having much luck staying up on the ridge and Omri radioed that he was returning immediately. I was next in line to launch but decided it might be a good idea to wait. The wind was just too light and Omri said it was pretty westerly at ridge top. **Jeff** had scoped out the hang glider field on his way home in December and decided the ridge was either going to work or he was going to land there. Land he did and got to meet Ron the paraglider guy who gave him a ride back to the airport.



**Jeff's Apis** in the Hang Glider LZ

Launch resumed around noon with Gerry Keiffer going first in the Duo Discus then me in Kate and everyone else after that. The ridge was working good and we had a good time flying along in a loose conga line. Everyone got along well and we shared the skies with some turkey vultures and bald eagles as well as a hang glider. There were a few thermals on the ridge but they didn't go very high. We definitely weren't getting high enough to make a run into the valley to try to contact wave. However, I started to get the very strong urge to go. The urge kept getting stronger and I had a good chance to test the new airbrake panels on Kate with a quick dive into the airport for a landing which brought much relief. Gerry had landed earlier and on his second ride flight requested a tow upwind to try to find wave and they found it just south of the Indian Highway Bridge. I quickly rustled up more money for the towpilot and lined up with a request to take me where he had taken Gerry.



Soaring Buffalo Ridge on Sunday – Photo Bruce Mahoney

We towed straight out to the South. The air was a little turbulent but definitely not strong rotor turbulence. As we got to the bridge at about 3700 feet we started climbing well. "This is it" from the towpilot and away I was. I initially ran a bit west and turned on the tracking mode on my Oudie which left a crumb trail of where I had been climbing, color coded for climb strength. There were no clouds marking the wave so this would be my only hope of staying in it.

After a few miles west I turned back east and noticed my groundspeed east was much higher. **Jeff** took a second tow to the wave and soon was in it. Andre, in the meantime, had motored across the valley but was having difficulty connecting. I ran east along the Kiamichi Ridge until I was over to about where the Rich Mountain ridge begins and then turned back west. I was averaging about 7500 ft and usually was averaging zero sink or weak lift or sink. Only a few times was I able to find sustained strong climbs for any extended period of time and I maxed out at 8500. I went west off the end of the Kiamichi and found some wave over Sardis Lake which has a short ridge on its southern border. Then I turned back east for another trip across the valley. This time I extended a little further east but as I got over Rich Mountain the wave started to elude me. It was 4:15 PM and I was still up around 8000 feet. I figured it would be nice to land by 5:00 so that I might be home by midnight. I left the wave and started a fast glide towards Buffalo Mountain for a lap or two on the ridge before landing. The ridge was still working but everyone had landed and so did I, just a few minutes before 5. The flight was an amazing experience, my first flight in wave, and covered 240 km on the OLC for the longest flight of the day in the USA.

Needless to say after such a great flight and a satisfying weekend I had no problems staying wide awake reliving the magic on the drive home and pulled in the driveway right at midnight. I can't wait to go back!

## KSA Dues

By now, if you haven't paid your dues, you should've gotten a bill from **Neale Eyer**. If you have and paid, thanks! If not, now is the time! \$100 for KSA & SSA membership, \$76 for Family and Student memberships. \$50 for KSA if you are keeping your SSA membership separately.

Checks made out to KSA, mailed to:

Neale Eyer

2114 N. Shefford St.

Wichita, KS 67212



## Talihina Seeds

Feb. 16<sup>th</sup> - 17<sup>th</sup>: **Jeff Beam** (F1) and **Tony Condon** (K) spent the weekend in Talihina. Omri from TSA organized the outing with a towplane from a banner tow operation in Dallas. Attending were several TSA members, a few from Fault Line Flyers in Austin, one from North Dallas Gliders and one from the Tulsa Skyhawks. There were about 10 gliders in all. Saturday featured thermals over the valley and light winds. Sunday had a good south wind with ridge soaring on Buffalo Mountain and wave off the Kiamichi ridge.

## Pfeiffer - Travelling Woodworker

**Neal Pfeiffer** spent some time with the guys in Lawrenceville, IL helping them work on putting the Olympia 2b back together. It suffered from a rough landing at IVSM last summer. At the rate they're going hopefully we'll see it at the Vintage Rally next fall!



# HP- 14T FOR SALE



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6:00pm Cash Bar and Silent Auction

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Tickets Required—\$50.00 per person or \$500.00 per table of 10

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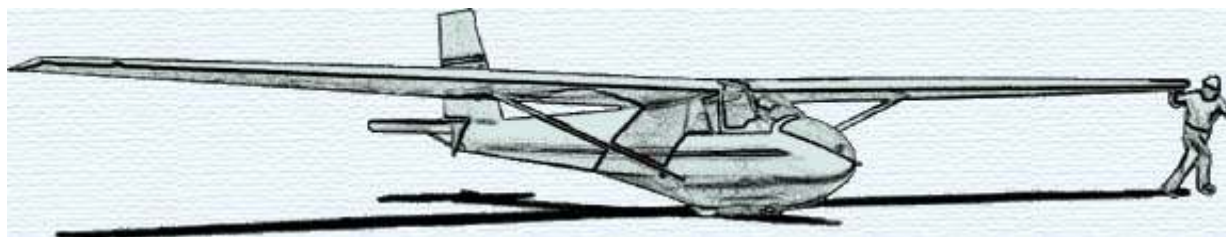
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KSA VARIOMETER

911 N Gilman

Wichita, KS 67203

abcondon@gmail.com



## **MONTHLY KSA MEETING**

**Buying your first glider**

**Matt Gonitzke**

**Saturday March 9<sup>th</sup>, 2013**

**7:30 PM**

**Room 307**

**NIAR Bldg at WSU**