JULY KUDOS
By Ralph Vawter

Ava Dunphy – On page 55 of the May edition of Soaring magazine is a picture of Ava after soloing at the Seminole Lake Gliderport in Florida. Congratulations, Ava! Now you need to come back to Skyline and show us what you've learned and give us some insight as to why you went all the way to Florida to get your first solo.

Mia Anderson – Mia has been awarded an SSA Flight Training Scholarship. SSA awards up to $2000 for student pilots. Congratulations! Mia, please share with us what you needed to do to earn this scholarship.

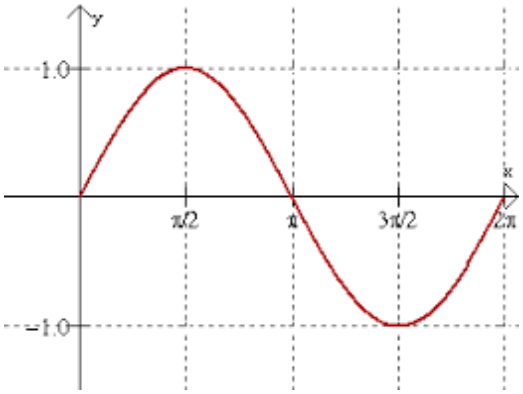
Caleb Smith – If you haven't had the opportunity to meet Caleb, please do so. Caleb took his first SSEF Scholarship flights in May and has soloed already. I think he beat the age plus 20 flights rule of thumb pattern towards the first solo.

Piet Barber – Something bigger than a kudo – maybe a mega-kudo – should go to Piet and all of the folks who put on the Week of Training. We had many student flights during the week, which will certainly speed up their progress towards soloing and earning a glider certificate. Not only was this a success for the student members of SSC, it was a great financial success for the club. Thanks, Piet, Andrew, Stephanie, Erik, Chris, et al.

THE RULE OF SIXTHS FOR CROSSWIND COMPONENT
Ron Wagner

Here's a "rule of thumb" for easily calculating in your head the crosswind component of any wind on any runway. There are two underlying principles behind this rule of thumb.

The first principle is the standard trigonometric sine curve between zero and 90 degrees, which changes approximately linearly for the first half and then changes rapidly over the second half.



The second principle is that the direction of a runway and the reported winds are approximate.

For example, Runway 28 at KFRR is 277 degrees magnetic. The reported winds are similarly rounded off to the nearest 10 degrees. And then one has to wonder about the accuracy of the device that's measuring and reporting that rounded-off directional number. And, of course, the speed itself varies, and is also subject to rounding error.

The bottom line is that you don't want to plan your flying to push the crosswind limits by thinking you can calculate your crosswind component precisely. You do not have data available for a precise calculation.

For the record, here's a sine table of the zero to 90 degrees range in increments of 10 degrees.

10 = 0.174 (about 1/6)
20 = 0.342 (about 2/6)
30 = 0.500 (exactly 3/6)
40 = 0.643 (about 4/6)
50 = 0.766
60 = 0.856
70 = 0.940
80 = 0.985
90 = 1.000

The Rule of Sixths

After 40 degrees, the curve bends faster, but up to that point you can see that each 10 degrees gives you about 1/6 of the total wind as a crosswind component.

At 50 degrees it's about three-quarters.

At 60 degrees, it's 5/6ths.

Above 60 degrees, your crosswind component calculation has hit the limits of the rounding error of the actual runway magnetic bearing and the wind reporting equipment. In other words, from 70 degrees or more, just use all of the reported wind speed as your crosswind component.

In **Summary**

- The crosswind component is 1/6 of the total wind for each of the first 10 degrees reported off the heading of the runway.
- The crosswind component is 3/4 for 50 degrees.

A Suggested Simplification

You could stop calculating the component at 50 degrees (when the crosswind component value has reached three-quarters of the total wind) and use all of the total wind as the component when the wind is from 60 degrees or more off the runway heading.

The reason? A wind that is reported to be 60 degrees off the runway heading could be 70 degrees off due to rounding error, and at 70 degrees you have to count 94 percent of the total wind as a crosswind component. Further, both the direction and speed of the wind tends to fluctuate, so above 50 degrees, what you think is increased accuracy could be an illusion.

But if you have excellent crosswind flying skills and you know very well the ship you're flying and you really, really need to get airborne that day, then you could knock off 1/6 of the total wind speed if the reported winds are pretty steady at 60 degrees off the runway.

In that case, here's the rest of rule.

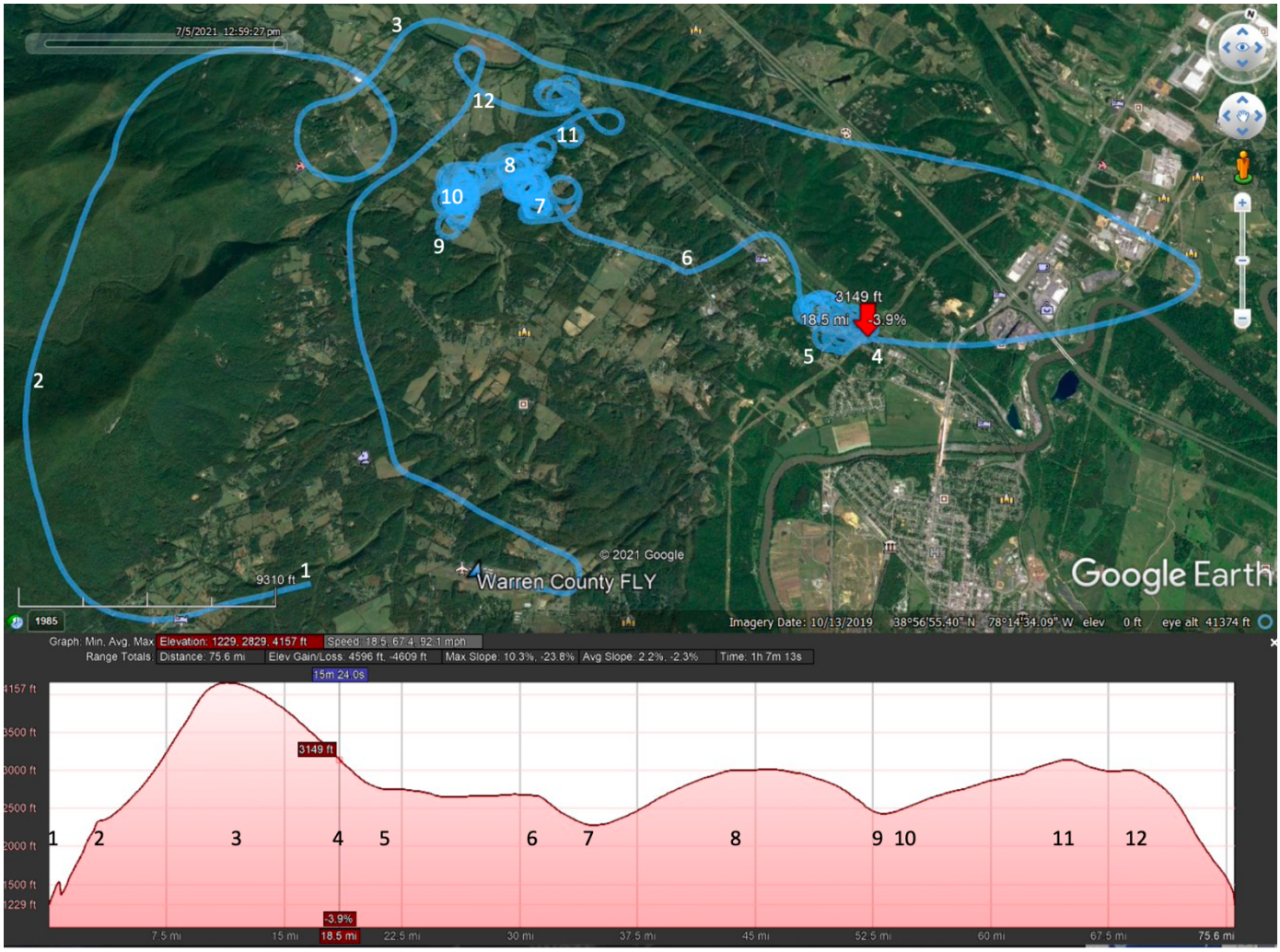
- The crosswind component is 5/6 for 60 degrees
- At 70 degrees or more, count all of the total wind as if it is 90 degrees to the runway.

For example, if your ship has a max crosswind component of 15 knots and the wind is at 18 knots from 60 degrees off the runway, 5/6s of that is 15. In that case, theoretically, the actual crosswind component is 15 and within the limit.
Be sure you're good enough to handle it if you are calculating crosswind as carefully as that last example.

A CHALLENGING HOUR OF FLYING
July 5, 2021
Joel Hough

This was the second flight of the day with the first flight of the day only being ½ hour. Lift was weak. Suspect the lift was bubbles and not columns, so going back to where a bump was found might not be fruitful. High pressure and hazy with cumulus clouds that were starting to decay (lift was not found underneath the clouds).

1. Garmin D2 Aviator Watch Auto Starts after climbing.
2. Decrease in rate of climb in the part of the mountain where forested ground is less perpendicular to the sun.
3. Release and go to the cloud that was beckoning on the first flight. Flying over the forest with the streams cutting valleys was a poor choice. Going north or south over brown fields would have added more opportunities to find lift. Arrived at cloud



before right hand turn, and no lift was found so decided to fly back towards where lift was found in the previous flight. The path chose possible lift producing areas (housing plans and browner fields) adjacent to sink producing areas (river and forests).

4. Still sinking.
5. Found some 0 lift and searched around for stronger lift with only the success of more 0 lift.
6. More sink that lasted through the browner fields.
7. Climb with using the integral (butt) accelerometer and flatten out or shallower bank immediately when bump is felt.
8. Topped out and looked around some more and went towards the field.
9. Found some lift at the field and used the strategy in 7.
10. Not as strong as the lift from 7 to 8, but on days like this you take what you can get.
11. Topped out.
12. Searched around a little bit, but got hungry and dived braked home.

If doing again, trying to stay over more likely lift sources and avoiding sink sources on the way to promising clouds would have been done more often. On early flights or challenging days, sticking with zero lift is ok.
Perhaps, every month someone can write up their flight of the day.

MEET YOUR FELLOW MEMBER
RICHARD GOOD
Interview by Marcelo Morichi

1. 1. When did you join SSC? How did you learn about the club?

I joined SSC in June 2019 I believe. I used to fly into Front Royal to visit my daughter and saw the operations one weekend in 2018 and got on the waiting list which was about a year long.

2. How long have you been a glider pilot? Where did you learn to fly gliders?

I started flying gliders in the summer of 2019 and I believe I was the first student at SSC to get my rating last year after we started up again during Covid.

3. What ratings do you have?

I have a commercial glider, commercial single and multiengine Instrument ratings and a commercial helicopter rating.


"Flying" Upside Down on a Zipline

4. When did you fly for the first time? What do you remember about that experience?

I flew for the first time as a student in Windsor Ontario in 1982. The lady who owned the flying school and was the instructor was an English professor. She loved flying so much she gave up her job as a professor at the university to teach flying. Sadly, the flying school went out of business during the recession of 82/83 and I really didn't take up flying again until 1998.

5. How long and what is your commute like to the airport (routes you take, time you leave home, any favorite places to stop along the way?)

I live in Winchester, so have an easy commute compared to most members. only about 30 to 40 minutes. If I am in a rush, I use the highway, otherwise I take Middle Road, a 2 lane scenic country road that winds past orchards and vineyards.

6. Who were/are your mentors are SSC?

Skyline soaring club is so lucky to have so many great instructors. Bob Sallada, Ron Wagner, Chris Norris and Piet Barber are the instructors who I had the most lessons with.

7. What do you like the most about flying in the Front Royal area?

I enjoy the scenery and the great soaring conditions though I have yet to do any real cross-country soaring.

8. What is your more memorable glider flight? When did it happen? Why do you remember it?

Last summer soaring in the Sprite over near Skyline Drive and circling in a thermal right over my daughter's house for 20 minutes. And yes, they did see me!

9. Any close calls? If so, please provide a brief description.

None really. On my check ride 3rd flight Piet said he wanted a covered panel emergency no spoiler landing in the grass. He had us towed over to the power station but sadly it was not on, so we had to turn for home. Not only could I not find any lift, all I could find was sink. At one point Piet asked if I could even see the airport, we were so low. Yes I said, I knew exactly where it was. On our return I knew we would not be able to do a normal pattern, so we came in base to final, no spoilers in the grass, that is my closest call and it met all the conditions he had laid down, so I passed. Lucky me the sink wasn't any bigger!

10. What do you do for a living?

Retired! My first career was as a marine engineer. I was Chief Engineer in the Canadian Coast Guard and for United States Gypsum. My second career was in the Solar industry which was really a stroke of fate. When I moved to Thunder Bay to work for the Canadian Coast Guard, I wanted to play squash instead of schussing down the ski slopes. The only squash courts were at Lakehead University. If you wanted to use the athletic facilities you had to be a student, so I signed up to study Solar engineering at night school! When I moved to Virginia, I ended up working as production manager for a Solar system manufacturer in Virginia Beach. After the industry turmoil at the end of 1985 the Solar Industry in the USA almost completely disappeared. I ended up resurrecting the company in 1986. In 2014 I sold the business to the employees after many years of burning the candle at both ends.

11. Where did you grow up?

I was born in England and when I was 12 my parents emigrated to South Africa, so I went through primary school in England, high school and college in South Africa. After high school I was very fortunate to be employed by a company called Safmarine who paid for me to study marine engineering in college and complete an apprenticeship as a millwright. Sadly, apartheid loomed over South Africa and I chose to emigrate to Canada in 1977.

12. What do you like the most about SSC?

The most enjoyable part of SCC is the members. Yes, we all come out with a common goal to go gliding, but the comradery is hard to beat.

13. What's on your gliding bucket list?

I would like to break 2 hours in the Sprite. I haven't really thought much about long term goals. I would like to go gliding on 6 continents. One down, 5 to go!

14. What do other members might not know about you?

I have been to over 60 countries and lived in 4 countries on 3 continents. I love to surf, and I have surfed on 5 continents. I would love to get a balloon rating and Mexico City is the most active ballooning location in the world. The question is if I have enough time to do it.

"Flying" Down the River

15. What would you tell a student pilot who struggles to see the light at the end of the tunnel?

Try and fly as often as you can. Some tasks seem to take forever to master. Eventually the repetition pays off and you get it! After that you may not be perfect, but you at least understand what your errors are and how to improve.

CALEB SMITH MAKES FIRST SOLO FLIGHT!

On July 18, CFI Piet Barber signed off Caleb Smith for his first solo flight, and proud papa watches son leave the earth by himself!

And Caleb successfully brought the glider home intact to earn his "A" badge! Congratulations!

HOW TO LAND OUT – THE RIGHT WAY

A Tutorial by Rob Jacobsen

One of my most enjoyable gliding experiences was sitting in the front seat of QQ while our resident magician took me on a 5½ hour ride, KFRR to the ski resort, across the valley over Harrisonburg, then north along the edge of the Allegheny to the Harpers Ferry area, then back to KFRR. While the last 5 hours were event free, there was a real issue 20 minutes into the flight - a no lift cloud had been selected and QQ was getting low. We did not land out because QQ found its way back to its previous source of lift, which was still working and up we went.

After the flight I was assigned a task - assume that we would have had to land out at the 20 minute point, identify at least 3 suitable fields. (I was sent all the flight computer data - flight path, position, altitudes, wind, etc.) Fortunately for me I took the assignment seriously, spending hours interacting with google earth, calculating gliding range, measuring field lengths, slopes, tree lines, position of power lines, condition of the surface, etc. I planned multiple approaches to every chosen field given the local topology and field layout. A learning exercise that I now realize was a very important in my growth as a glider pilot.

Having now paid dues where dues should be paid, let me tell you about landing the Sprite in a 912 ft field with a tree-line at one end and a power-line

(alongside a raised road and ditch) at the other.) You can inspect the field on google maps, satellite view - type in 8967 Fort Valley Rd.)

June 23, 2021, the Wednesday during the Week of Training, was a good soaring day - four flights by club members exceeding 5 hours aloft. I released from tow at 3,700 ft near Signal Knob, entered the top end of Fort Valley and progressed down the valley. The lift was topping out at 6,200 ft and I was dropping down to 4,500 ft at the lowest, gliding from (suitable) cloud to cloud - the going was slow but relatively easy. I got down to the Luray area (I was close enough to the airport to have reached it from 6,200 ft in a straight glide), at that point I decided to go home. Initially things went as planned, I worked the Sprite north up the valley towards KFRR. I found a good cloud just north of the dam/lake in the valley and went back to 6,200 ft. The next cloud group to the north (which I had used on my way down and at that time was producing strong lift) was now looking a bit overdeveloped - the flat bottoms had become "roundish".

I now made my error in judgment - I convinced myself that there would still be some lift under it and set course. I arrived, now down to 4,500 ft, started searching and found no lift, however, there was sink (and plenty of it). I headed towards the east ridge of the valley and found an area of weak spotty lift, was able to work back to 5,100 ft at which point it petered out and sink crept in. At this point I realized that there was a good chance that I would be landing out. TIME TO LOOK
FOR THE FIELD. I checked out several as I eked out sporadic lift, finding the one I finally used, and then searching for a better one south of it (north was not promising). I kept getting lower, nothing looked better, I headed back north to the chosen field, setting myself up for a left hand pattern, landing towards the south. (Approach over the tree line, touchdown and stop before the power line.)

Decision time, forget miracles - pop the spoilers, lose altitude, enter the down wind, fly the aeroplane, turn base, turn final, coming down to steep, airspeed at 60 mph (close spoilers and raise nose), everything looks good, there is a gap in the tree line - tall trees to the left and right, a couple of short ones in the middle - go for the gap, plan to touch down asap, tree tops pass above you to the left and right, let it fly down now flare, the Sprite has landed in long mature grass.

I never felt the main go on, the Sprite appeared to be surfing along the grass tops - showing no sign of slowing down; elevator down, drive the nose skid into the ground, does not help much, then the grass grabs the airplane it slews to the left and it stops rapidly. (No pilot input taken into account by the airplane, or if it was I did not notice.)

Where am I - on the ground (Microsoft joke), out with the cell - no service, however I have an app which provides you GPS coordinates, I now know where I am. Call Skyline ground on the radio to announce situation, they cannot hear me, however, gliders and tow plane can. George in 9X overhead locates me and relays my status and position to Skyline Ops. I am told cleanup crew is on the way.

I wait, meet the neighbors - all very nice people. Passing motorists stop to take pictures (I have to take a picture - my girlfriend is never going to believe this). Everyone asked, are you OK? Spent a lot of time explaining I never crashed - this is what gliders do occasionally.

The crew arrives, the Sprite is broken down and loaded on its trailer in something like 20 minutes and its on its way back to KFRR. Thank you very much guys, I truly appreciate the fact that you chose not to beat me up!

The lesson to be learned dear fellow glider pilots - prepare yourselves ahead of time, truly understand what you need to do to select a suitable field, how you plan your approach and when the time comes, which it will, fly the airplane - there is no time to think.