

Newsletter of Newsletter of the Skyline Soaring Club for July, 2020



A Pitch for SSA Webinars

Bob Sallada

A couple of years ago, the SSA began a series of soaring-related real-time webinars which were eventually made available on their web site, under 'Member Resources'. For a while I posted reminders and quick reviews of a few that I thought especially relevant, particularly to beginning glider pilots. Initially I focused on the real-time presentations, but after a while I realized that it was a lot more efficient to wait for the pitch to appear on the SAA web site, two to four weeks later. Most of the real-time versions have too much 'fuzz' at their beginning which can be nicely fast-forwarded. Most of them contain about an hour of substantive information. My remarks here pertain only to those directly related to soaring techniques, such as "Thermaling 101" and "Intermediate-Advanced Thermaling in Gliders". In toto, about four of the listed series are pretty much on the mark in my mind.

I recently viewed the Intermediate-Advanced presentation, which was originally given in webinar format in mid-April. Don't be intimidated by the title; it contains a lot of references to the fundamentals ... and

when streamlined by the art of fast-forwarding, is comparatively short. I'm not implying that a student should start with this one rather than, say, "Thermaling 101; the 1-2-3 Method"; just don't be scared off by the title after you've done a survey of some of the earlier related presentations.

So far, there are about twenty-five presentations listed under 'Member Resources' on the SSA web site on a wide range of glider topics from towing to simulation, with promises of more planned.

If I was a post-solo, pre-rated member of SSC (or even a post-rated member) – and had the time to do it – I would carefully study the 'meat' of the thermaling-rated presentations, develop a plan to diligently practice the various techniques on my solos, and get some real learning done rather than just tooling around using rudimentary 'scratching' during my potentially valuable time alone in the big blue.



STORY TIME

Jim Kellett, Resident Curmudgeon

Many of us have had particularly memorable moments enjoying our wonderful sport, and here's the column to share them. I'll start with another of my many "back in the old timey days" episodes.

Recently there were some stories about landouts that make for interesting stories on the Wings & Wheels website. And glider pilots made a lot more off-airport landings back in the days of 20:1 – 30:1 gliders! So here's one such story.

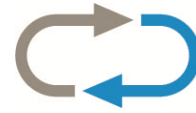
My good friend, Lin Bachtel, owned a grass strip just west of Lexington, VA. He had a Citabria towplane, about a half-dozen gliders called it home, and I often flew my 1-26, N8630R, there when it wasn't at the Warrenton Soaring Center. The 2500' runway wasn't level – the center was about 75' lower than either end! And the southwest end terminated with a several hundred foot drop-off, and was surrounded by trees. We always took off to the southwest and landed to the northeast. Interesting pattern.

April 21, 1970. A very unsuccessful attempt for Gold distance. Made it a grand total of 27 miles before landing in this HUGE, nice grass field which turned out to be the property of the Cold Springs Correctional Center (yep, a prison!).

I was soon met by a prison guard, and assured him that I was not in any way involved in any attempted escape of a prisoner! He allowed me to use the phone (no cell



phones, no VHF radios or other fancy tech!) to call the gliderport, and soon Lin showed up with a tow rope in the Citabria. After briefing the guard on what we were going to do, he actually served as my wing-runner while the inmates, many clinging to the chain link fence next to the field, watched as I made my "escape"! So, no Gold distance, but a good story, nonetheless.



BOARD MEETING HIGHLIGHTS

Keith Hilton, Secretary

Your Board of Directors met twice in June via on-line ZOOM video teleconference. Various Club members have also sat in on the teleconference. The Board values the opinions of Club members and includes these opinions in their deliberations and decisions.

Resumption of full Club operations continues to be the top agenda item for each meeting. It was noted by Chief Instructor, John Noss, that there are a sufficient number of volunteer instructors to effectively conduct training. After much discussion, the Board voted to allow the resumption of dual-pilot / dual-instruction starting on 13 June. As I have noted in my operations reports, all participating members are doing a great job adhering to the mask requirement and are sterilizing the cockpits between pilot swaps. The use of N95 or KN95 masks is mandatory for dual-pilot operations. The Board also affirmed that the Club should not accept any new members or conduct any FAST flights until we resume "normal" operations. This decision will be reconsidered at each meeting. Who knows, the impacts of COVID-19 may become the "new normal."

The Board affirmed the rule that the Club would only conduct ad hoc operations (volunteer duty crews only) for the foreseeable future. However, at the last meeting they considered a recommendation from your new Chief Duty Officer, Chris Carswell on a route back to "normal." Chris

recommended that the Board poll all Club members to determine how many would volunteer to go back on a “normal” rotational schedule. Again, NO non-volunteers would be scheduled on the Duty Roster. If you haven’t see the request yet, you should see something on this topic soon from Brian Clark.

This month the Board voted to reinstate last year’s most prolific tow pilot, Jason Cober, as a Service Member. You can expect to see Jason again in the cockpit of one of the tow planes. The Board also approved Chris Carswell as the new Chief Duty Officer.

The Board has made the prudent decision not to hold a family day at Burner’s this summer/fall. The Board will reconsider an away day once we are over the CORNA virus crisis.

The Board continues to have its ear to the ground regarding the offer of an additional Club hangar. As I stated last month, with the lack of Club income, the Board is being judicious in spending more money on an additional hangar. There hasn’t been any further update since last month.

I know that many members have been looking forward to conducting spin training with our spin kit equipped ASK-21, N321K. You will be happy to know that the weight and balance measurements have been completed on both ASK-21s and the certified weight and balance POH documentation has been received from Alexander Schleicher for N321K. This week the Board authorized our Chief Instructor, John Noss, to begin “qualifying” the instructor cadre and to begin providing spin training to Club members. Please review paragraph 3.17 of the Skyline Soaring Operations Manual if you are interested in participating in this training.

We have had very little interest by anyone in purchasing the Grob. It is still advertised on Wings and Wheels. The impacts of the COVID-19 virus have not helped. The Board agreed to complete the annual when due by the end of July and complete a weight and balance measurement on the ship. Both actions should be a selling point when we do get some interest.

The next Board meeting is scheduled for 16 July 2020 via ZOOM teleconference. The Board will have the opportunity to review the Club financial report provided

by Treasurer, Steve Rockwood to review the impact of the COVID-19 virus. This will be the first time the Board will have reviewed the report since the resumption of ad hoc operations. Please contact Brian Clark if you are interested in attending the video teleconference. He will provide you with the ZOOM link.



THE REST OF THE STORY

Keith Hilton

If you read my Sunday 21 June 2020 Skyline Soaring Club operations report I teased you with a photo of canoe in front of one of the ASK-21s. I promised I would tell you the rest of the story, so here it is.

While we were waiting for the clouds to clear, a nice couple stopped by to watch our glider operations. When talking to this couple I learned that they were Reverend Gary Heaton and his wife Beth. Reverend Heaton is the Senior Pastor of the First United Methodist Church in Charlottesville, VA. It is one of the largest churches in Charlottesville.



Reverend Heaton explained to me that it has been a challenge for Church leadership to maintain the interest and spiritual needs of his congregation during the COVID-19 crisis. Not being able to seat his congregation in his church, Reverend Heaton has resorted to some unique methods to reach his

members. He explained that he has been using his canoe as a metaphor and has been making videos to show that a building does not have to be the sole place of worship. The clergy and congregation must adapt. He explains that the shape of a canoe and glider are to move them forward on their journey.

As Reverend Heaton explained: "The metaphor is about comparing the church to a canoe and the canoe to a glider. They are all beautiful modes of "transport" hmmm....."

If you are interested in seeing Reverend Heaton's message that includes our gliders, please watch his video at the following link. Not to ruin the story, but the best part is at the very end. Skyline Soaring was the star of the show.

<https://www.facebook.com/cvillefirstumc/videos/195715358422827/>

It was fun assisting Reverend Heaton and his wife filming his message.



READY FOR SPIN TRAINING?

John Noss, Chief Flight Instructor

After a long and winding road to get N321K ready for spin training, with painfully accurate weight and balance measurements, and Schleicher factory reissue of the aircraft-specific spin weight table, we are happy to announce that Skyline Soaring is ready to ease into spin training for members who wish to do it. Rules for conducting spin training flights are in the Ops Manual, paragraph 3.17. New cockpit cards will be printed and put in (all) gliders soon, the effective date is 1 July and they are already online under Public Docs > SSC, the cards for N321K include the new official spin weight table. The POH for N321K will be updated soon and published online to include the new spin weight table and the very important TN4b technical notice. Many thanks to Keith Hilton for lots of hard work to get all those docs in order. Our training syllabus item 3h includes procedures and preparation and training objectives for spin training as an optional task for post-solo students as well as glider-rated members. I have updated the spin training slides from the January membership meeting (including video clips), you can find

them on the club website private side under restricted docs, http://members.skylinesoaring.org/RESTRICTED-DOCS/SpinTraining_20200627.pptx, run as a slideshow to see the video clips. I hope everybody takes the time to look these over. I will also work on a pre-spin-flight fill-in-the-blank test, and some spin-flight-specific checklist cards.

Yeah, I know that's a lot of reading to get ready. But understanding spins, and having actually seen them, might just save your life some day. Every glider we (Skyline Soaring) have can spin with only a single pilot, even without the spin kit on an ASK-21. You can easily be flying perfectly coordinated in a thermal, and encounter a gust that pushes you into a spin entry without warning. Most of these situations can be quickly and easily countered by neutralizing controls and unloading a bit, but if you are not quick on the controls and find yourself in a developed spin, some prior spin training would be really valuable. Enough for advertising and advocating.



We have a few instructors already qualified to provide spin training in our ASK-21 (N321K only). We will get more instructors checked out when possible, I hope everybody understands that we are still moving slowly with ad-hoc volunteer-only ops for the time being. If you are interested in spin training, please contact me first, we will try to match you up with a qualified instructor, and coordinate in advance with the duty officer and duty instructor. Please do not just assume you can show up unannounced and do a spin flight, this really does take some thought and planning to do it right.

Serious flying training found here!



Forecasting Mountain Wave

Jim Garrison

Last month we explored using internet resources to forecast great thermal soaring days. This month we will discuss how useful those resources can be to forecast mountain wave in the Allegheny's, the Shenandoah Valley and the Piedmont region of Virginia. I realize that this information is coming to *Skylines* at the wrong time of the year – the summer weather patterns do not usually bring wave to our area. However, our region had some spectacular wave days in late April and early May and I wanted to highlight them before next winter.

Good wave requires three main parameters to be in place, wind, a mountain - or better, a mountain range - to force the wind to go up and over the obstruction, and finally the right wind and temperature profile in the atmosphere. Wave in our area most often follows the passage of a cold front in the Fall, Winter and Spring. When the cold fronts coincide with a dip in the jet stream into the middle of the US, the temperatures and winds in the upper atmosphere align nicely to generate mountain wave. The wave system is set up by the post-frontal winds dropping off the Allegheny plateau, raking the Allegheny Mountains in Pennsylvania, Maryland, West Virginia and Virginia before flowing into the Shenandoah Valley and bouncing over the Blue Ridge Mountains. This remarkable wave system is aligned with the northeasterly / southwesterly direction of the mountain ranges and can be seen on satellite images to range from Pennsylvania to North Carolina and flow all the way to the Atlantic coast.

How Can We Forecast Mountain Wave In Our Area ?? Our old friend, the Skew T - Log P Plot, is essential for displaying the correct strength and direction and of the wind in the upper atmosphere and the temperature profiles needed to generate wave. We will begin with the weather on April 22, 2020 which was a spectacular wave day in Virginia. *Figure 1A* presents the morning surface analysis showing a post frontal day with nicely located Low pressure areas near Quebec and High pressure filling in across the southern US. The isobars are not following a classic NW / SE direction across the area, but the actual winds were clearly from the Northwest as

shown by the wind flags on the Skew T – Log P plot taken from the 8 AM Dulles RAOB sounding shown in *Figure 1B*

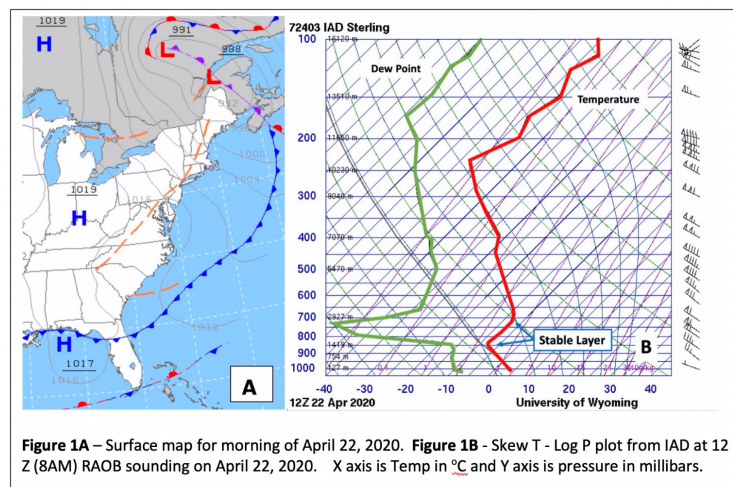


Figure 1A – Surface map for morning of April 22, 2020. Figure 1B - Skew T - Log P plot from IAD at 12 Z (8AM) RAOB sounding on April 22, 2020. X axis is Temp in °C and Y axis is pressure in millibars.

The Skew T – Log P diagram in *Figure 1B* also nicely shows four other important properties of the atmosphere required for a good wave day. *First*, note that all of the wind barbs between the surface and 200 mb show a consistent NW flow. Generating good wave requires that the winds are perpendicular to the mountains; when the winds are from 300 – 310 degrees, the Allegheny and Blue Ridge mountains provide the best obstruction to the wind and the most “bounce” of the air flowing over the tops of the ridges (see below). In addition, there is no shear in the winds in the upper atmosphere – the wind direction between the surface and 200 mb is constant at about 300 degrees. If there was significant shear, it could disrupt formation of the wave. *Second*, the wind increases with altitude; note the wind strength is about 25 kts at 900 mb (~ 3000 feet MSL), increases to about 50 kts at 700 mb (10,000 feet MSL) and continues to increase smoothly to 200 mb (~ 40,000 feet) where the speed is about 100 kts. This increase in wind velocity provides the energy for formation of the wave. *Third*, there is a significant temperature inversion in the atmosphere between 1419 meters (about 4600 feet MSL) to 2927 meters (about 9600 feet MSL). This is shown by the box labeled “stable layer”. This temperature inversion is critical for formation of the wave. Entire book chapters full of equations exist to explain the importance of the stable layer for wave formation. A very intuitive

explanation is shown in *Figure 2* at the right. If you think of the temperature inversion as being a stiff

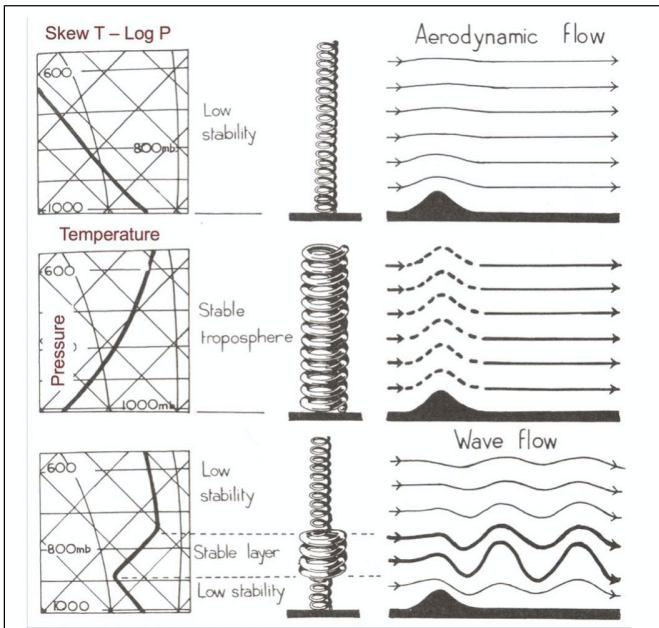


Figure 2 – Importance of a temperature inversion to the formation of wave. From C.E. Wallington, *Meteorology for Glider Pilots*.

spring suspended from two much weaker springs, then, when the stable layer is lifted up and over the mountain and is dropped on the downwind side, the system will oscillate down wind of the obstruction. This diagram also shows that the stable layer must be at the height of the mountain to start the oscillation. On April 22, it started at 4600 feet and this is roughly the height of the Alleghany and Blue Ridge mountains. Finally, the dewpoint shown on the Dulles sounding predicts that there should be wave / rotor clouds – and there were – see *Figure 3B*, below.

What Did the Models Predict ? – Briefly, all of the various models (GFS, NAM 12, HRRR) were similar to the Dulles RAOB sounding presented in *Figure 1B*. They predicted an excellent wave day. The SkySight model offers a presentation of the possible wave bands over a large geographical area using a two-dimensional display. A view of this display for April 22 is show in *Figure 3A* on the next page. Note that strong wave is indicated over Petersburg, WV (red is strong) with some intermediary strength wave bands between Petersburg and Front Royal (yellow), then a strong wave band east of the Blue Ridge between the mountains and Culpeper (red) with the wave strength decaying markedly toward Fredericksburg, VA (yellow to light green).

How Accurate Is The SkySght Prediction ? *Figure 3B* shows the satellite view of the state of Virginia on the morning of

April 22. Note that the rotor clouds are obvious over a larger area farther East than predicted by SkySight. Thus, SkySight seems to assume that the wave amplitude will decay over the Piedmont. In fact, the flights made on April 22 show that the wave system extended all the way down to the coast (see *Figure 4* below).

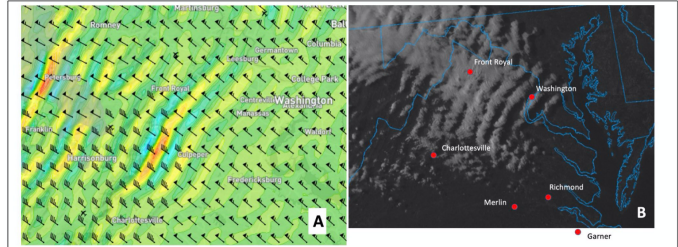


Figure 3A – Wave prediction for April 22, 2020 from SkySight. **Figure 3B** – Geos-16 Satellite image of Virginia on the morning of April 22, 2020. Approximate locations of some sites are indicated by the red dots.

Actual Flights – The Online Contest database contains 10 flights submitted for April 22 in our region. Dave Hart and Rob Cluxton ran the ridges out of Cumberland, MD and apparently, only 3 of the other flights contacted the wave in the Piedmont. *Figure 4*, below, shows that Eric Lambert reached 18,000 feet MSL (5426 meters) at Merlin and William Swanson reached 11,207 feet MSL (3417 meters) at Garner. From the Satellite image in *Figure 3B*, one can see that the atmosphere dried out toward the coast and the rotor clouds dissipate west of Richmond. Even so, the climbs in *Figure 4* show that the wave system continues all the way to the Atlantic Ocean.

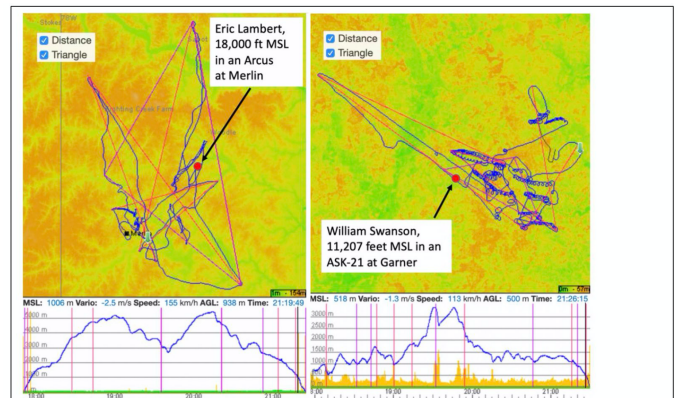


Figure 4. Wave Flights made by Eric Lambert (left) and William Swanson (right) on April 22 at Merlin and Garner gliderports, respectively. Eric reached 18,000 feet MSL and William reached 11,207 feet MSL. The red dots show the location of their maximum altitudes.

Is It Common For The Wave System To Reach the Coast ?

- I am not sure, but on May 9, 2020 it happened again. The May 9 surface map was very similar to that of April 22; however, the day did not start as a wave day. But, by the afternoon, the system was fully developed. For variety, *Figure 5* shows the Op40 computer model's Skew T – Log P plot for May 9 at 16Z (the real Dulles

RAOB sounding was quite similar). Note the nearly perfect wind direction and speed and a substantial temperature inversion (very thick stable layer). Also, there is a fair amount of moisture in the airmass and thus the temperature and dewpoint converge at a low level (about 5000 feet MSL).

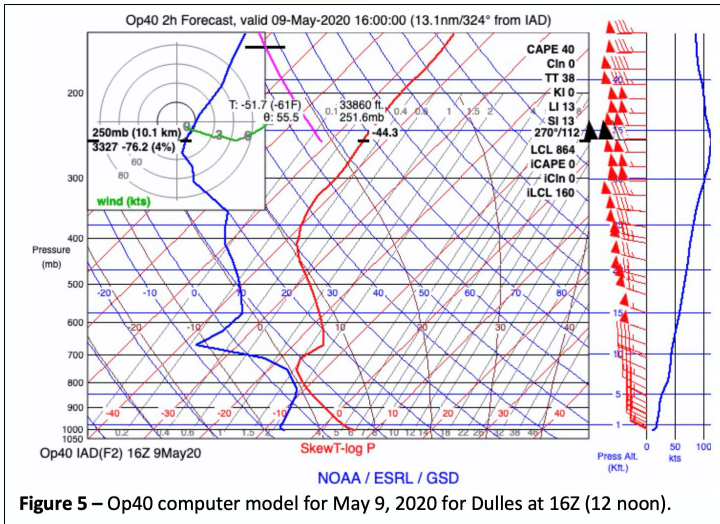


Figure 5 – Op40 computer model for May 9, 2020 for Dulles at 16Z (12 noon).

Figure 6 shows the Geos-16 satellite image for Virginia on May 9 at 1 PM EDT. Apparently, the high moisture content of the air has caused overdevelopment up over the Allegheny Plateau, but is perfect for definition of the wave all the way to the coast. The wave bands are ~ 7 miles apart over the entire state and seem to be a little closer together over the Piedmont region than West of the Blue Ridge Mountains.

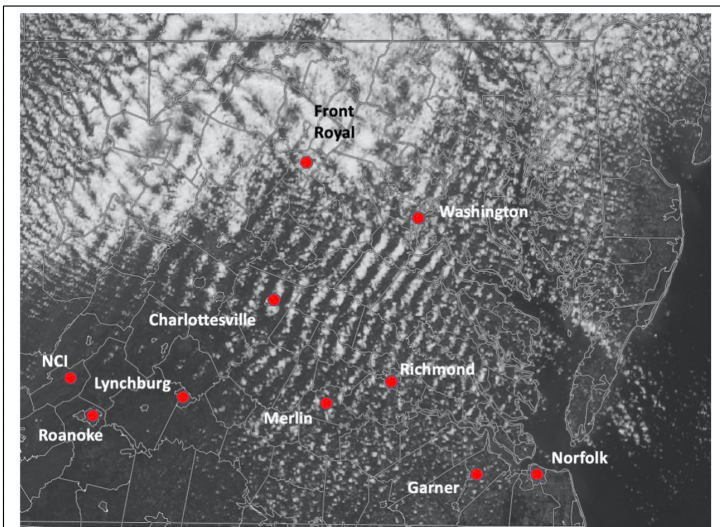


Figure 6 – Real Earth Geos-16 satellite image showing wave bands reaching the coast. Approximate locations of some sites are indicated.

Flights On May 9 – The Online Contest records 3 flights in our region on May 9. JP Stewart scorched the ridges out of New Castle for a 1060 km flight (wow) and flights out of Merlin by Dave Reilly and Pete Appleby climbed to over 8000 feet MSL, but apparently did not contact wave (not shown).

What Have We Learned From April 22 and May 9? -- *First*, The wave system in Virginia is far more extensive than previously thought and many of its characteristics are totally unexplored. *Second*, when the conditions are right, the amplitude of the wave bands can be substantial all the way to the coast. Eric Lambert says he was still climbing at 18,000 feet when he descended to stay out of Class A airspace. *Third*, the location of the wave bands are predictable and we are getting to know the location of some of them from other wave flights out of Merlin. *Fourth*, the SkySight model seems to do a credible job of predicting the location of the wave near the Allegheny and Blue Ridge Mountains but assumes the wave decays over the Piedmont area where it actually remains strong. (As an aside, NOAA's HRRR model makes the same assumption). *Fifth*, the extent of the system over the relatively benign terrain of the Piedmont area of Virginia offers the possibility of safely flying long distances in wave. For example, it would be straightforward to fly downwind from Petersburg, West Virginia to Garner gliderport near Windsor, Virginia. This flight would accomplish a linear gold distance run of 174 nm (or about 177 nm if you wanted to divert a bit to avoid flying directly over the Richmond Class C airspace). *Sixth*, long FAI triangles are also possible from a number of starting points with the caveat that one leg could have a difficult upwind component. *Finally*, we know from flights made from MASA by Baude Litt and Mike Higgins that the wave shown in Figure 6 over Virginia is only part of the East Coast wave system. The typical surface map shown in Figure 1A usually results in a NW airflow over a large area of the East Coast. On good days in the East, there is also wave in Pennsylvania, West Virginia, Maryland and sometimes North Carolina. Thus, rather amazing flights are possible. Have Fun thinking about and planning them!



SAFETY CORNER MUSINGS FOR JULY

Erik van Weezendonk

Well, COVID is taking its toll on glider operations and providing a distraction for some, an inconvenience for others, and forced a few to simply stop flying for a spell. Regardless of where you fit, we can still be thinking about soaring. Maybe even dreaming about it.

I'd like to take this opportunity to discuss currency, proficiency, and most of all, training.

Currency: FAR legal is actually pretty lenient, unless you're going to carry a passenger. THEN, you must have THREE take-offs and landings in a GLIDER prior to taking up a friend, loved one, random airport stranger up in a glider. Please don't violate this rule inadvertently by deciding to split the cost of a tow between two pilots at SSC....only one can be PIC....and then the other is legally considered a passenger. With a CFI-G, these rules are slightly different, FYI. It goes without saying that even if you're solo, you must still have had Flight Review within past 2 years (to the date) in order to operate a glider. There are exceptions to this FAR (Wings credit, airline check rides, FAA Practical-check ride for new rating) etc.

Proficiency: SSC takes it up a notch. We require that you've flown a glider in past 90 days. Our "spring checks" are really a proficiency check to make sure you're still operating safely. It's smart practice, any time you've had a lay-off, to get some quality training.

Training: We have awesome CFI-G's in this club. Orville and Wilbur started flying in 1903....they've only got Jim Kellett beat by a decade (ha!!!). Okay, seriously, we collectively have over two centuries (yeah, 200 years) of flying within our instructor ranks. Some have been CFI-G's before that was even legally a rating that required a checkride. So....use our resources! We shouldn't think of our CFI-G cadre as only there for the student pilots. No way Jose, they're there to instruct and get paid handsomely for their time (ha!!! again). Spin training? Stall training? Better job maintaining position in the thermal? Competition soaring? Using avionics and technology? And for those at home, Condor if you're able, or simply reading up on advanced soaring.

We do this for the money, right? (Ha!!! hat trick) Nope, we enjoy soaring and hate COVID, so let's get out there

and maintain our proficiency and keep our minds active. I feel like flying with an instructor, if done right, is like a visit to the dentist. Maybe you don't like it, but your teeth cannot possibly be any cleaner than when you walk out to the office. They've got tools for removing gunk, plaque, etc. (ewww). Fly with a training mindset and walk away from a day at KFRR with fresh teeth, a big smile, and knowing that you just polished your soaring skills in order to make yourself just a little bit better!

1968 OPEN CIRRUS (8AN) FOR SALE \$16,500 w/trailer

If you've ever thought about buying a glider for yourself, or with a partner, FIRST read this article <http://www.glidersource.com/buyingyourfirst-glider.shtml> It's the article that made me decide to buy the Cirrus when SSC decided to sell it. BTW, if you're not remotely interested in owning your own glider, you can stop reading now and go study some glider material.

Cirrus 8AN is a former SSC-owned, single-seat, fiberglass, retractable-gear glider—resurrected and looking good. Honest flyer, no bad habits or gotchas, and a great transition from our two-seat club gliders, but with better performance! Even the decrepit trailer has been remarkably improved (still gets 1st Place in the UGLY contest, but she's functional and tows behind any car much better than most other glider trailers, thanks to the wheelbase).

Awesome history (and complete logbooks) to share. Came out of Schempp-Hirth factory in May, 1968, had three flights prior to customer delivery, and then first owner took her to the World Glider Championship (WGC) in Poland. I think it took 9th or 10th (don't quote me on that). Eventually exported to Canada where it resided and flew a lot until coming to VA in early 2000's.

She's got a 44:1 glide ratio when brand new, so take a bit away for age and she's still 40:1 and an amazing minimum sink speed of 98 ft/min....therefore you can stay up all day long and get FOTD quite impressively. Trying to get from your present position to a target....if you can see it, you can make it!

Guido and I spent \$4,400 at Gerhlein (wing waxing/reconditioning and getting the tail bushings replaced), replaced the main gear door bungees, and

a BRAND NEW CANOPY (\$7,400) has been professionally installed (completed in May). She/s back in the hangar, so check her out! Please be gentle if you decide to take a peak.

Benefits of owning a glider include: no time limits so you stay up as long as you can or want to, no scheduling conflicts, and you only pay for the tow. Downside includes assembling your ship (pretty easy with this glider) and if you're trying to save money, well... you cover insurance, registration (minimal \$) and maybe hangar fees. Luckily, right now Cirrus 8AN has a spot in the hangar. You could save money by storing her in the trailer, but I advise keeping her in the hangar for ease of assembly. It would be your choice, of course.

We prefer to see her stay within our club. Partner-up and split a glider or buy it for yourself!

So far I've had three folks tell me they're interested. Call me if YOU are interested and I can tell you who else is...maybe there is a partnership in the making. I'll give it til end of July for members to get the discount, then it will show up on Wings and Wheels. Same glider is up for sale on W&W for \$20,000 (don't confuse this Open Cirrus with smaller wingspan Standard Cirrus).

For Guido and I, 8AN has been great, but he's moved to FL and I'm going to concentrate on flying SF-9 in the future. That's why we're selling her.

Contact Erik van Weezendonk at 703-786-0552 or erikvw@verizon.net



Skyline Soaring Club, Inc.

is a private, 501(c7) non-profit organization, dedicated to the enjoyment and promotion of the sport of soaring. SSC is based at the Front Royal-Warren County, Va. Airport and is an affiliate club of the Soaring Society of America.

For information about the club go to

www.skylinesoaring.org

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Directors

Brian Clark

Bill Burner

Evan Dosik

Jim Perlmutter

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Shane Neitzey - *Chief Tow Pilot*

Chris Carswell - *Chief Duty Officer*

Erik van Weezendonk - *Safety Officer*

Tim Moran - *Membership Officer*

Ken Ring - *Hangar Meister*

Ertan Tete - *Field Computer Meister*

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Brian Clark - *Assistant Webmaster*

Jim Kellett - *Newsletter Editor*

David Collier - *Tow Vehicle Meister*

Andrew Neilson - *Tow Plane Chief of Maintenance*

Peter Melenson - *Club A&P*

Keith Hilton - *ASK-21 (N321K & N341KS) Meister*

Evan Dosik - *ASK-21 (N321K) & Grob Meister*

Guido Kramp / Rob Jacobson - *Discus Meister*

Peter Ross - *Sprite Meister*

Matt Vosika - *Organizations*

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