



CURMUDGEON'S CORNER

(AKA Notes from the President)

2020 portends to be a challenging year although I think we are well positioned to work through it. For example, the prescience of our founders, notably Spencer Annear and the late Bela Gogos, resulted in a strategic financial structure that separates fixed costs (like hangars, insurance, etc.), and variable costs (operating costs such as aircraft maintenance, fuel, etc.), and income is parsed out to each category. So right now, we are, given the circumstances, in good shape despite the loss of income from operations since we're not incurring operational expenses. And we've made a reduction in fixed costs by changing our fleet insurance coverage to storage (we're saving \$736/month there).

Meanwhile, given the restrictions on public gatherings, the Board adopted a process for remote meetings – the first was held on March 31.

Not only does this eliminate the need for travel for the Directors (who are spread out from Annapolis to Harrisonburg), but we think will make meetings more frequent, shorter, and productive. In fact, I'll be surprised if this doesn't continue once the pandemic is past.

Looking to the future, we know now that the prohibition of "non-essential businesses" and gatherings of more than 10 people in Virginia will continue until at least May 8, and the stay-at-home order will run at least through June 10. But at some point these limits will be rescinded or modified, and the Club will face the challenge of getting everyone safely back in the air. The Board and key Club officers are continually working and reworking plans to resume some flight operations and get everyone current and qualified in

anticipation of a logistical rush once we start flying again.

Too Late for Press Time: The Board met the evening of April 30 for an extensive discussion of hammering out a plan to resume operations, too late for the results to meet the deadline for this issue. Stay tuned!

Bottom line: As a club, we'll have to be both prudent and bold as the nation works through the pandemic, but working together I think we'll come out OK in the end - perhaps with some permanent changes that no one's thought of yet, but OK.



SKYLINE CYCLING CLUB

This month we feature Dick Otis, CIF(G), towpilot, professional photographer! And here he is, about to dominate the wilderness on his off-road bike!



COPING WITH COVID

Piet Barber

Skyline Soaring took the appropriate action of shutting down operations because of this nasty virus. Flying is a perishable skill, and the longer you stay away from flying, the more rust you accumulate. To keep my skills sharp, I have been approximating the act of soaring in multiple ways.

Do Something Constructive

With the COVID-19 lockdown you can mope around about not being able to fly. I have been especially disgruntled after noticing some epic wave weather on we had last week (it was everywhere!) Just complaining about the lockdown doesn't do anybody any good. Let's try to be positive about what you CAN do.

I chose to focus on identifying and addressing my weaknesses for competitive soaring. Perhaps your goals are different. A lot of spare time on your hands could be used to study for your [FAA Knowledge written test](#). You could sign up for many [FAA Wings Programs](#). You could read [that book about soaring weather](#). You could read up on [old issues of Soaring Magazine](#). You could look at the [classified ads for used gliders](#). If you don't know much about that glider, go find a back issue of Soaring to read about [Dick Johnson's flight report](#) for that glider! You don't have to have an insanely expensive setup to fly Condor missions. Just a joystick and a reasonably fast computer will do. Keep those flying skills less rusty by doing some Condor missions.

Here's what I have been doing:

Mach 0.1 and Oculus

I have a nice flight simulator cockpit at home, including a Mach 0.1 cockpit and Oculus Rift goggles with the soaring flight simulator Condor 2. Although the time in Condor does not count toward the time in your flight logbook, and the takeoffs and landings can't be counted for your flight currency for 61.57, soaring in a flight simulator is better than nothing at all.

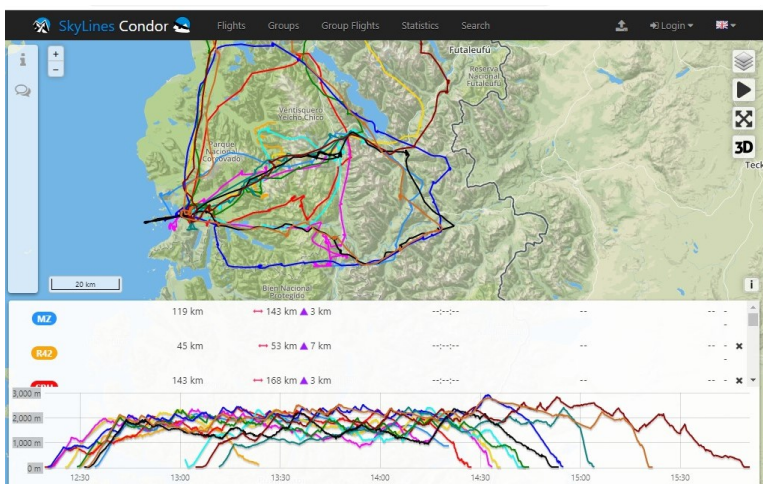
I would even say that it has the potential to sharpen my skills in some areas that I've been lacking for competition soaring.

The Mach 0.1 simulator is a comfy bucket seat, a bunch of PVC pipe and joints, hooked up to a fancy USB controller. The joystick is between the legs; rudder pedals are on the floor; the spoiler handle is to the left, and the release knob is a yellow ball attached to a small string. (The Mach 0.1 simulator can be purchased from <https://www.gliderbooks.com/mach-0-1>.)

The Oculus Rift S can be purchased by your favorite computer retailer, or online https://www.oculus.com/rift-s/?locale=en_US. The goggles have accelerometers that sense if you are leaning left or right, forward or back, looking up or down, twisting or tilting your head. Every moment you do within the cockpit is faithfully represented on the screen. I got queasy on the first few flights, but have gotten over the airsickness since then.

TeamXC.us Soaring

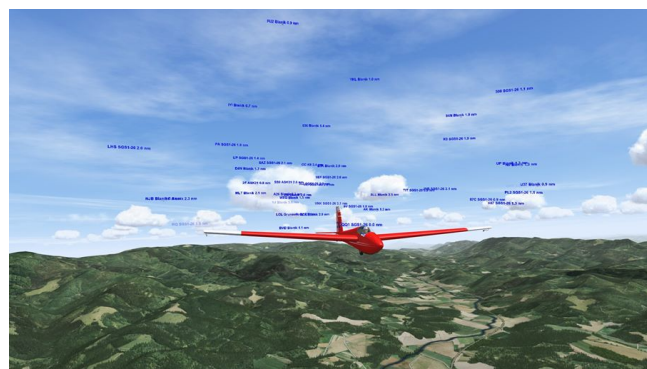
In the spring of 2019, a group of glider pilots started cooperative soaring adventures with Condor 2. The team uses a chat program called Discord that enables all of the participants to talk while flying. The format of TeamXC is to draw a line course, starting from an airport of the organizer's choice. The line goes out about 50 km or so. The object of that flight is to fly any course you would like, any path you would like. The only criteria for scoring is that you make it to a point that is perpendicular to the course line. Fly a triangle, fly an out and return, fly anything you want. After a few weeks, you learn to recognize everyone's voice, know something about what they fly, and what they like to do. After the flight is over, everybody uploads their flights to a lovely site called SkyLinesCondor.com. Learn more about TeamXC by going to teamxc.us. You can often find our club's Bill Bank in the crowd.



[SkyLinesCondor](http://SkyLinesCondor.com) shows the results after a flight in Chile

US Nightly Soaring

The crowd here is more competitive. The people who join US Nightly Soaring (USNS) are trying to race around a triangle or polygon course. There is a very short window for a join time, so you have to show up at 2100 or you won't make the contest. There are penalties for flying into a cloud. The turn points are about a mile in diameter. There are as many as 70 people online in each session. I'd like to think I'm a great pilot, but this competition certainly put me in my place. I have found that I am a mediocre or low quality competition pilot compared to the other pilots here. The highest I have made in the rankings was at spot #13 of a group of 50.



Flying "Sweet Red" a 1-26 with US Nightly Soaring. As many as 50 gliders behind me.

Practice may make perfect, but it should more accurately be something like "Practice with purpose, retrospectives, lessons learned and guidance makes steady improvement."

There are many intangible skills that are hard to describe. Doing these practice runs really make me aware of where I have some weaknesses. Condor has the ability to replay a contest. I can replay the contest, chasing the leaders to see how they did their flight differently. I still have a lot to learn, and doing these contests has presented me with a group of issues that I like to work on.

I hope to see you back at the airfield when this is all over.



RYAN TREXEL, RIP

<http://ssefva.org/>

As you are aware, we have lost a young member, Ryan Trexel, much too soon. For those wishing to make a donation in Ryan's memory - his grandfather, Mr. Ralph Sharpe, has asked that members make contributions to the Skyline Soaring Educational Foundation (SSEF) in Ryan's name.

Contributions can be sent to:
SSEF Donations
ATTN: Bryant Smith, Treasurer
11762 Gascony Place
Woodbridge, VA 22192

Ryan was a recipient of the SSEF scholarship in 2017. Our deepest condolences to Ryan's family.



Thank you for your generosity.

Joe Lingeitch, for the Skyline Soaring
Educational Foundation



SOARING AT HOME – ANOTHER OPTION!

Chris Norris

Thirteen Skyliners got together over a video teleconference on Sunday April 26th to discuss collision avoidance in the traffic pattern. In addition to responding to a request for ground instruction, another goal was to provide an informal way to keep members engaged with each other and soaring while operations are suspended. It was a success!

The next session is planned for Sunday May 3, 2020, at 11:30am. The topic will be Airspace and Charts. All members are encouraged to attend. Please contact Chris Norris <chris.norris.esq@gmail.com> for the url/pin or dial-in instructions.

Are you ready to challenge yourself by pursuing your next checkride and rating? Now is the perfect time to study for that written exam and prepare for the ground portion of the checkride. Skyline instructors would love to help you work towards achieving your goals.



Internet Tools for Predicting Soaring Weather

Jim Garrison

Introduction - Many sports can be pursued in almost any type of weather, but one's enjoyment of soaring is markedly dependent on choosing the right weather for the intended flight(s). No matter where you are in your soaring career, correctly predicting the day's weather will increase your enjoyment of the sport. Also, since all of us are busy and soaring steals time from other responsibilities, it is best to go to the airport when the weather will help you accomplish your flying objectives. There are many good introductory texts on meteorology to help pilots understand the air in which we fly; some you may not have seen are listed at the end of the article.

To simplify the meteorology extensively, the global circulation of air begins with the sun heating the air in the tropics, advection of the warm air to the poles, the polar regions cooling the air and the eventual return of large air masses across Canada and the United States behind cold fronts. Southerly winds blowing past the edges of approaching cold fronts can bring different, warmer and moist tropical air masses over our area (See Figure 1, below, which shows the general tracks of Continental and Maritime air masses that usually arrive over the East Coast).

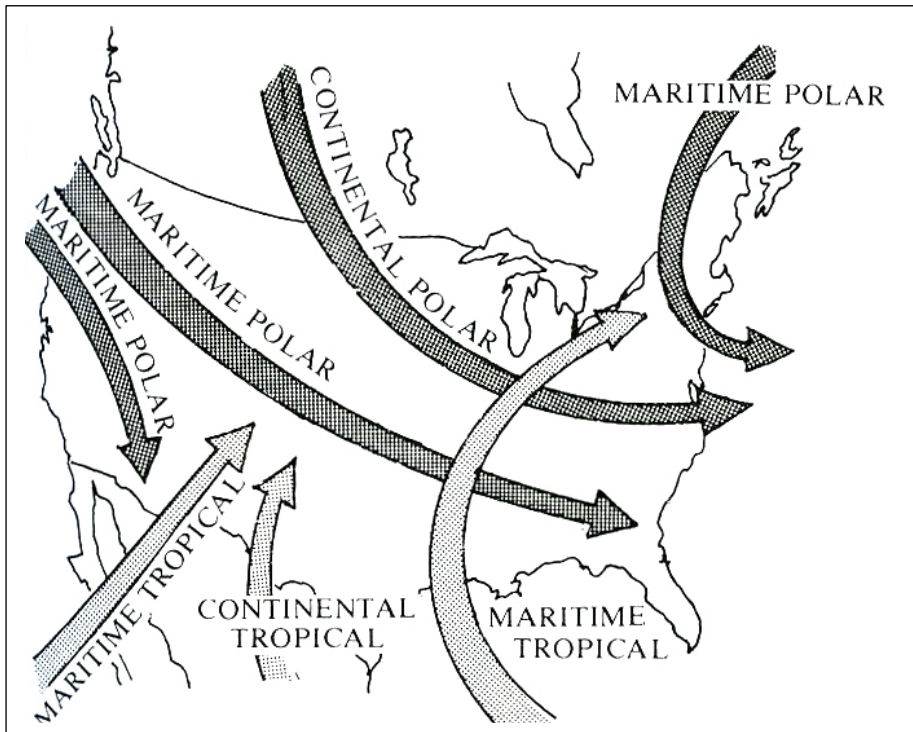


Figure 1. Tracks of the Polar and Maritime air masses arriving over the East Coast. From Dennis Pagen’s “Understanding the Sky” (See references).

The next two or three newsletter articles will not explore the science of how these air masses are formed and brought to us, rather they will describe how to use the internet resources available to us to analyze them and plan for your soaring goals. The articles will cover: (1) A brief discussion of the types of weather which bring good soaring conditions to the East coast combined with an annotated list of the internet weather resources available to analyze them. (2) Specific examples of how to use the internet resources to predict good soaring days. These examples will be based on analysis of recent weather that has passed over the East coast.

What Kind of Weather Brings Good Soaring ? – There are many days which are perfectly fine for flying in Virginia, but compared to some parts of the country, our section of the East Coast is not blessed with a large number of great soaring days.

As shown in Figure 1, the domes of cold air descending from the polar areas can take many paths to reach the continental U.S. and they need to pass over large land masses to reach us. The air masses that we desire most for good soaring are the Continental Polar air masses coming out of Canada. These air masses usually arrive after passage of a cold front in the winter, spring and fall. They are less likely to appear in the summer because the jet stream retreats North into Canada and blocks the penetration of the polar air

to the South. Thus, we are left with hot and humid air from the circulation around the “Bermuda high” area of high pressure for much of the summer.

It is estimated that about 80% of successful badge flights in the Eastern U.S. are made in Continental polar airmasses. The cold, dry, high pressure air provides excellent visibility and it is highly unstable with a large thermal index generating thermals which reach 6000 feet MSL or more. Best of all, the instability is large enough to provide long soaring days from roughly 11 AM to 7 PM. On these great soaring days, you can climb at will, fly under tempting cloud streets and cover distances with ease. These days can also provide good ridge and wave flying which will be covered in later articles. What’s not to like ??

To be ready for these days, it is useful to keep track of the constant changes in the weather and learn to predict when good airmasses will cross our area. I find it fun to do my own weather predictions for most soaring flights and all contest flights. The list of internet resources below are ones that I use for analysis of the weather. They are presented in the order which I tend to use to build my own forecasts for any given day.

Resources for Weather Prediction

There is a tremendous amount of weather information available on the internet to help us easily keep track of the movement of the air around us and analyze its suitability for soaring. The next sections provide annotated lists of weather websites organized into categories to help illustrate the process of creating your own forecast. Some of these resources are already on the club’s website and you may be familiar with them. To make your forecast, you need to be aware of the following.

Popular Weather

A good way to get a feel for what the weather is going to be like for the next few days is to follow the popular weather. It is usually fairly accurate for the period up to 3-4 days hence and gives a good idea of the temperatures, winds and amount of sunshine. A nice sunny day always has potential for soaring. Also, if the prediction is rain, you don’t have to look at many other websites to build your forecast. The popular weather sites I like to use are:

Weather Underground – <https://www.wunderground.com/>

The basic information used by all weather sources come from NOAA (see below). However, I like the presentation, the ability to customize your forecast types and the cities you are following on this site. It has very nice high & low temperature / rain / wind / humidity / radar and timeline plots. This graphical plot of all parameters reaches 10 days into the future and makes it easy to tell when it is going to be cloudy and/or rain or when a potentially good soaring day may come to our area. It has other nice features and a pretty fast server, making it pleasant to use.

NOAA Seven Day Forecast – <https://www.weather.gov/lwx/>

The above link gives you a map of the area, clicking somewhere on the map gives a detailed forecast from NOAA itself. Very fast and complete with no advertisements. Gives a seven day forecast with some graphics for any point you choose. On the right side of the page are a host of very useful links to other information, satellite views, radar data and a nice graphical three day forecast of temperature, wind, wind chill, humidity, precipitation, sky cover, rainfall, snow

and the like. Very useful for projections. The bottom of the page has many links to other NOAA sites like surface maps, aviation forecasts and so on. You could spend hours clicking around there. Overall, it is an excellent weather site.

Detailed NOAA Forecast - On the left side of the above NOAA Weather page, there is a link to the detailed forecast discussion for the chosen area written by a meteorologist. Very complete and helpful if you want to know why things are happening and the details of what to expect.

Windy.Com - <https://www.windy.com>

This site presents a large amount of weather information in a pleasant graphical format. It overlays the data on a map of the continental US and the view can be greatly expanded. It shows the wind with streamlines and colors for the velocity. The data can be forecast into the future for a number of days. You can choose 3 different computer models to generate the data, the GFS, European or NAM12 models. There are many other layers of weather information that can be superimposed on the wind streams. The colored satellite images are quite striking. This website provides a quick way to visualize the expected changes in a lot of data over the course of a day or two.

USAirNet - <http://www.usairnet.com/cgi-bin/launch/code.cgi?Submit=Go&sta=KSHD&state=VA>

This graphical weather site was developed by hang glider and paraglider pilots. The above link gives a 3 day, pictorial forecast for Staunton (FRR is not in their drop down menu, but Winchester is there), but you can modify it for any state and many cities. A nice graphical presentation of the upcoming weather. It provides the temperature and dewpoint spread graphically which I use to help decide about the likely quality of a thermal day. If the temperature dewpoint spread is above 20° F, thermal heights are likely to be good. Most other information is also provided by the NOAA and Weather Underground sites above. Links to some specific State of Virginia weather information are provided. A good, ancillary site.

General Aviation Weather and Movement of Airmasses

After using one or two of the above websites to get a general idea of which upcoming day(s) might be good for soaring, the next issue is to find out what the surface maps for the upcoming day(s) look like. Basically, you would like to know where the airmasses are coming from, where the areas of high and low pressure are and where the fronts are located. As most really good soaring happens in the 1-2 days after a cold front crosses the area, you especially want to know where the cold and warm fronts are located – and when a cold front will pass over the East coast. Sites useful for predicting the movement of the airmasses and fronts are:

NOAA Aviation WX - <https://www.aviationweather.gov/>

As expected, this site has a host of information about aviation weather - Advisories (i.e. airmets and sigmets), Forecasts, Observations, Metars, Terminal Area Forecasts and the like. As I am always flying in good airmasses, I most commonly use the Prog chart forecasts and the Terminal Area Forecasts. The Prog chart forecasts of the positions of the fronts and areas of High/Low pressure for the continental US are provided for a few times during each day for 7 days into the future. Accuracy falls off after about 3 days. The likelihood of rain, snow and thunderstorms is provided as well. The isobars around the highs and lows are shown. Hint – if you are looking at a High pressure area filling in behind a front and there are 3-4 isobars over the State of Virginia, it will be pretty windy. The helpful possibility that it will remain wet after a frontal passage is also presented.

Terminal Area Forecasts – These are presented in METAR code off the same drop down menu used for the surface maps. Gives terminal observations and forecasts and one point in time and then over the next day's time – quite useful for what the forecasters think will happen to the weather over the course of the day. Fortunately, it will decode the METAR for you.

Flight Service 1800 WXbrief - <https://www.1800wxbrief.com/Website/login#!/>

You need to obtain a free account to use this service. Provides all of the information on the NOAA site in a somewhat more colorful and pleasing format. Wide area coverage. It has a pilot dashboard that gives airport information about your selected airports. Very nice. It also has a great deal more information well organized in menus – like the position of the jet stream over the next 24 hours or the Skew T-Log P diagrams from the actual radiosonde observations (not the model runs). Very fast server and great graphics make for very useful, serious weather prediction site. I use it frequently.

Satellites

Even if you have a great airmass for a soaring, the day can be ruined when overrun by high cirrus clouds or, even worse, a thicker, intermediate cloud layer. Satellite images will help you make a guess when / if this might happen. The images from the GEOS-16 satellite are very high resolution and will show individual cumulus clouds (though they are pixelated). They are also very useful for predicting wave in our area. Since they are real time images, you need to look at them on your phone or get to the airport in a hurry after viewing if they show good flying. Three satellite websites that I like are:

NOAA's GOES Image Viewer - <https://www.star.nesdis.noaa.gov/GOES/conus.php?sat=G16>

The GEOS satellite has many different wave lengths (bands) to measure multiple atmospheric phenomenon (like water vapor and more). This site shows them all and can be very helpful in guessing when some good or bad weather will pass the area. The pictures are colorized and quite spectacular. For visible images, use the red wavelength. Images are available in different graphic resolutions to suit your needs.

College of DuPage Weather Department: - <https://weather.cod.edu/satrad/>

The College of DuPage in Illinois has a nice weather site for their Meteorology Department. This site gives a very fast transfer of the GEOS-16 data, can also expand the images and offers composite radar images. Other overlays can be placed on an outline of the continental US. The site will show you the past 24 hours of data, giving an idea of where the cloud formations are going next. I tend to use it daily to get a big picture of movement of the weather in the area.

Real Earth Viewer - <https://realearth.ssec.wisc.edu/>

The University of Wisconsin Meteorology Department's GEOS-16 viewer. It overlays the GEOS-16 information on Google Maps and allows expansion of the image to the level of counties and even cities. Very useful for visualizing wave bands and cloud streets right over where you want to fly. More complicated than the DuPage weather site, but very useful.

Soaring Forecasts

Next, we will want to know how good the soaring will be on a particular day - say April 25 - so we need to get some very specific soaring forecasts. Hint - If you do not want to spend a lot of time thinking about the general weather – these sites are a pretty good place to start your analysis.

There are multiple websites that provide soaring specific forecasts that reach a number of days into the future. All use computer models of the atmosphere; the most sophisticated ones are proprietary and require a paid subscription for access. NOAA also has a site that provides Skew T – Log P plots from their computer models that is free for all users, but one needs to know a bit about Skew T – Log P plots and the various models before it becomes more obvious in its use. The other sites listed below have been developed by soaring enthusiasts and are designed to be as user friendly as possible. Thus, their web interfaces are much more graphical than NOAA's.

NOAA Skew T- Log P site:

https://rucsoundings.noaa.gov/gwt/?data_source=Op40&latest=latest&start_year=2019&start_month_name=Dec&start_mday=5&start_hour=13&start_min=0&n_hrs=1.0&fcst_len=shortest&airport=&gwt=Interactive%20plot&hydrometeors=false&start=latest.

The Skew T – Log P graph is a plot made of air temperature vs altitude. The plot is almost as complicated as the link above. The data collected is a primary tool for all weather prediction and is also the core information for prediction of the properties of thermals. This data is obtained manually every day at multiple sites around the world from radiosondes sent aloft on weather balloons. It is also generated by many computer models. We will cover radiosonde information, the Skew T – Log P plot itself and computer models in more detail in a later article. For now, it is useful to know this data exists, as the programs listed below use computer models generating Skew T- Log P information (among other parameters) for prediction of soaring weather.

Dr. Jack's BLIPMAPS - <http://www.drjack.info/BLIP/index.html>

The BLIPMAP is the original sophisticated soaring forecast developed by Dr. Jack Glendening about 20 years ago. He was elected to the Soaring Hall of Fame based on this work. His site is free to all users, but you need to register at the site to access it. It is still working, but in most all respects, it has been superseded by the next two sites, XC Skies and SkySight.

XC Skies – <https://www.xcskies.com/>

XC Skies was developed by group of hang glider pilots led by a meteorologist named Chris Galli from the University of Utah. This program overlays predictions of soaring weather on Google Maps and provides a crisp, easy to use interface with excellent graphics. This is a widely used, very good program that gives accurate soaring forecasts on thermal strength, thermal height, variations in thermal strength, cloud bases, wind and more over a wide area. All forecasts are

presented as a function of time every hour. The forecasts are based on computer models of the atmosphere. One can choose a forecast from one of 6 computer models (GFS, ICON, NAM3, NAM12, RAP and the HRRR model – more on these models in a later article). It has many useful ancillary plots (for example – Skew T- Log P plots for any given point in the country, the thermal strength and height along a chosen route of flight, information from previous days, relative humidity and so on). More on this later, but the GFS model is useful for long range forecasts and the NAM12 and HRRR models are probably the

most accurate models for our area. Unfortunately, the developer is not overly attentive to questions and/or comments.

A subscription costs \$39 / year.

SkySight - <https://skysight.io/>

SkySight is a newer program that was developed by Matthew Scutter, an Australian who worked for Google. Matthew is an internationally known soaring pilot who won the Junior world soaring championships in 2015. He developed a soaring prediction program that is based on a proprietary model but the user can also select the HRRR model in the site for predictions. The program presents all the required soaring information in a very graphical, colorful format layered over Google Maps with multiple enhancements. For example, if the models predict that the day will provide strong thermals, but will overdevelop by 2 PM, there are little thundercloud icons that appear in the area likely to overdevelop at when you move the time slider to the 2 PM point. My own experience shows this feature to be quite accurate. This program presents some features that XC Skies does not provide. It will provide a predicted map of wave activity (in 2D or 3D) and also gives linear map of wave strength over a user selected route of flight. It can also predict lift due to the convergence of different airmasses. The program allows the user to add layers of other information, like airspace limits, or satellite views on top of the graphical forecast. All very nice and useful. The program works perfectly on multiple platforms like your smart phone and/or iPad. Importantly, Matthew Scutter is fully engaged in the development of his website and new features are added often. This program has become very popular; a subscription to SkySight costs \$78 / year.

Summary

To get the most out of the above websites you will need to explore them and use them over a few days or weeks to get comfortable with the information provided. It takes only a few minutes to go through the sequence listed above once you get to know what you are looking for. In the next few month's newsletters we will make some forecasts for some nice soaring days and compare them to some actual flights made on those days. This process should bring home how useful doing your own forecasts can be.

Books and References

In addition to the FAA publications about weather (AC-006 on Weather itself, AC 0045H-change2 on aviation weather products and services and the Glider Flying Handbook-FAA-H-8083-13), you may find the texts below useful in understanding weather for soaring.

Understanding the Sky: A sport pilot's guide to flying conditions - by Dennis Pagen (1992).

Dennis Pagen is a noted hang glider pilot. The book is available from many places – Amazon (\$41) or the US Hang Gliding store (\$24). This is *not* a real meteorology text, rather, it is a book that explains many soaring phenomena in simple terms with easily understood diagrams.

It is a great resource for developing your plans for soaring flights around the area.

Meteorology and Flight: A Pilot's Guide to Weather – by Tom Bradbury (2004).

This is a real meteorology text. Tom Bradbury served in the British Meteorology Office for over 40 years on many RAF airfields overseas. He has acted as a Meteorology forecaster at gliding and microlight contests and has accompanied the British Gliding Team to international contests

in Finland, France and Germany. For more information - See - <https://www.abebooks.com/servlet/SearchResults?isbn=9780713668315> (About \$44)

Meteorology for Glider Pilots – by C.E. Wallington. (1982).

Another real meteorology text and written specifically about soaring weather. It is older, but the weather phenomena have not changed, it is still available as a used book from Amazon and other re-sellers. Quite good for all aspects of soaring weather. (About \$23 used)

Walt's Roger's SSA Convention Talk (2016) -

See - http://rucsoundings.noaa.gov/Greenville2016_SSA_Presentation.pdf

Walt Rogers is a retired professional meteorologist and accomplished sailplane pilot from California. I got to know him at the 2012 Uvalde World Championships where he was the head meteorologist. He provides soaring forecasts for many national level contests. If you want to get into weather forecasting more seriously, see his presentation about Soaring forecasts using computer models and high level software tools. His talk was presented at the Greenville, SC SSA convention in 2016. Hint – this presentation is gets deeply into weather forecasting.

GROWING UP WITH GLIDERS

Alan Bikle

(Adapted from the June,
1967 SOARING Magazine)

Backstory: Alan, Hugh, and John are the sons of Paul Bikle, former president of the Soaring Society of America, and onetime holder of the world record for absolute altitude and altitude gained (in a SGS 1-23) and a world record distance flight (in a Prue Standard).

Alan has been around sailplanes for about as long as he can remember as a teenager. His activity as a kid was in crewing or in the shop where he had plenty of experience in bucking rivets, finishing parts, and smoothing wings. As he looked through some of the pictures around his house, he realized that there has been more to it than just work. It has almost been a way of growing up.



One of his earliest memories is of his brother Hugh flying a 'windjammer' trainer when Alan was about three years old. Hugh soloed on his fourteenth birthday two years later, and had his Gold badge and one Diamond by the time he was sixteen. His brother John also soloed on his fourteenth birthday, and we have a picture of him pulling up a tow rope to the Antelope Valley TG-3 for that flight!

A few years later, Alan had a three and a half hour flight in a 1-23, tucked in the space behind his dad, Paul Bikle's, head! It was sure cold, and they landed in the moonlight at El Mirage.





Finally, here's a picture of Alan after Ross Briegleb checked him out in a TG-3 on his fourteenth birthday. Four days later, his brother John soloed at Pensacola as part of his training as a Marine aviator.



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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