



HEARD BUT NOT SEEN

Joel Hough

Benaniah's mom heard thunder that did not show up on satellite lightning detectors. So, I googled "do satellites miss lightning?" AI gave the following response. This occurred Saturday July 26. I was debating on taking the PW-5 when the strikes were detected 14 miles away. Just prior the Pw-5 launch the distance decreased to 12 miles. I should have not gone then. On a 2000 foot tow a dark shadow north of the fish ponds convinced me to only take a 1000 foot tow and start putting gliders away. All but the tow plane were in the hangars before the rain started. The tow plane was sprinkled on.

Yes, satellites can miss lightning, and their detection capabilities are subject to limitations

Here's a breakdown:

1. Challenges to satellite lightning detection

- Cloud obstruction: Heavy cloud cover can obscure the optical signature of lightning, especially flashes occurring at lower altitudes within the clouds, making them harder for satellites to detect.
- Background noise: During the daytime, sunlight reflecting off clouds can create a bright background, making it difficult for sensors to distinguish the comparatively faint, transient lightning signal.

- Short and small flashes: Some lightning flashes are brief and spatially constrained, making them harder to detect with current satellite instruments, which may have limitations in spatial and temporal resolution.
- Attenuation: The signal from lightning flashes can be attenuated (weakened) as it travels through the cloud, especially from flashes deep within the cloud, further hindering satellite detection.
- Sensor limitations: While satellites like the Geostationary Lightning Mapper (GLM) are designed for optimal lightning detection, the technology still has limitations in resolving fine-scale details and distinguishing different types of lightning.

2. Detection rates and undercounting

- Variability: The detection efficiency of satellite lightning mappers can vary depending on factors like storm type, flash duration, and location within the satellite's field of view.
- Comparison to ground-based systems: Ground-based lightning detection networks, particularly those using Lightning Mapping Arrays (LMAs), have been found to detect more lightning than satellite-based systems.
- Need for corrections: Satellite lightning measurements often require corrections to account for undercounting before they can be effectively used in models and research, [according to AGU Publications](#).

3. The future of satellite lightning detection

- Continuous coverage: Despite limitations, geostationary lightning mappers like the GLM on [NOAA's GOES-R Series satellites](#) provide continuous monitoring of lightning activity over

large regions, [notes NOAA's GOES-R Series \(.gov\)](#).

- Improved severe weather forecasting: The ability to track lightning trends, especially rapid increases in activity, can provide valuable lead time for severe thunderstorm and tornado warnings.
- Complementary to ground systems: Satellite data complements ground-based networks, offering unique insights, especially over areas with limited ground-based coverage, like oceans and mountainous regions.
- Continued advancements: New instruments and analysis techniques are continuously being developed to improve satellite lightning detection capabilities, like the CubeSat Lightning Imaging and Detection Experiment (CLIDE) and the planned GeoXO Lightning Mapper (LMX).

In conclusion, while satellite lightning detection has advanced significantly, some lightning flashes are inevitably missed due to various factors. Researchers are actively working to address these limitations and refine satellite-based lightning observations for better weather forecasting and scientific understanding.



MARK YOUR CALENDARS!

Saturday, October 25 will be another Woodstock Family Day/Fly-in at Burner Field! Bring family, friends, food, make it a holiday!



MILESTONES

Robb Hohmann and Ralph Vawter

Student member Cliff Storey earned his Private Pilot Glider certificate on 7 August during Week of Training 2025, seen here flanked by recommending CFI Ron Wagner and DPE Piet Barber.



And Student member Paul Brower who completed his first solo on 17 August, complete with ceremonial shirttail cutting by Piet Barber. Paul and his son Alex joined two years ago and Paul seems to have caught the flying fever more than Alex. Alex, you need to get back out to KFRR and catch up with your dad.



Congratulations on Ben Maitre on earning his B Badge. It was noted in the most recent issue of Soaring magazine. Also, Nick Meeder passed his practical test with Piet on the 24th and is now a certified glider pilot. Nick joined Skyline in July of last year and has really applied his passion for aviation to advance to PPL-G in a little over a

year. Nick immediately took his wife Kate on her first glider ride as his first passenger.

SEPTEMBER BIRTHDAYS

Benaiah Lichti 9/12
Karl Schumann 9/28



AUGUST NEW MEMBERS

Tim Moran

In August, four new members joined Skyline from our waitlist. Please welcome them to our club and make sure to get to know them when you meet them at the field.

Jose Aviles Rosa

Jose is 14 years old and is a member of the CAP in Winchester. In CAP they recommended that Jose learn soaring first as an introduction to aviation.

Jonathan Grow

Jonathan is an aerospace engineer and has always wanted to get his pilot's certificate. He visited our operations in July, and now since joining Skyline has had two flight training sessions.

Karl Schumann

Karl is working towards his ASEL rating and expects to complete his power checkride soon. At Skyline he would like to achieve his glider add-on rating.

Rashid Ali

Rashid came to visit our operations last summer and was able to go for a guest flight. He asked to go on our waitlist and is now excited to get started with flight training.

THE WONDERFUL WOT!

SPIRIT OF CAMARADERIE “WOT” 2025

Fritz Treyz



I decided to join the Skyline Soaring Club to return to flying after decades of absence. I wanted to re-experience the challenges and the spirit of adventure. I quickly realized learning to fly again after decades can push one out of one's comfort zone. All the new technologies for glider pilots such as improved variometers, See You Navigator software, using your PDA, weather overlays, and moving maps, all created a new mindset of learning. Key, however, is the actual flying and control of the glider. It requires discipline and a personal state of mind.

Previously, I had only flown the Schweizer 1-26 glider. Transitioning into the ASK-21, I was over controlling and needed to find the light and gentle touch. I was missing that “seat-of-the-

pants” feeling. The 30 minutes of glider instruction in the club setting was not enough time for me. Some of the flights were sled rides of only 15 to 20 minutes. To make progress, I needed to repeat certain tasks with multiple flights in various conditions to build muscle memory and instinct. The short flights did not allow for the necessary repetition.

As a new member, all the members of Skyline Soaring have been helpful. Multiple members told me that I must attend the annual Week of Training (WOT) in Petersburg, West Virginia. They said it is a fun and relaxed training event with the goal of training and improving flying performance. This annual event is targeted for all members wishing to improve their flying skills in a relaxed environment.

I looked up the town and airport at Petersburg. The airport's location is adjacent to Cave Mountain which provides optimal “lift” conditions that make it conducive to glider flying. There was also an airport-maintained campground that includes restroom and shower amenities. I signed up. Not for the camping, but for the training!

The first day of training started with a roll call in front of a hangar at 9.00 am sharp. Piet Barber assigned the students a number and a dedicated flight instructor. He reviewed the goals of WOT and coordinating instructions. Stephanie Zilora then briefed the weather and operations flow. I was assigned Chris Zaboji as my instructor. First flights began at approximately 10:30 am daily, after getting the gliders ready for flight and moving them to the launch point. It was definitely not a solo effort. It involved collaborative activities with many other individuals, instructors, wing walkers, duty officers, tug pilots and more.

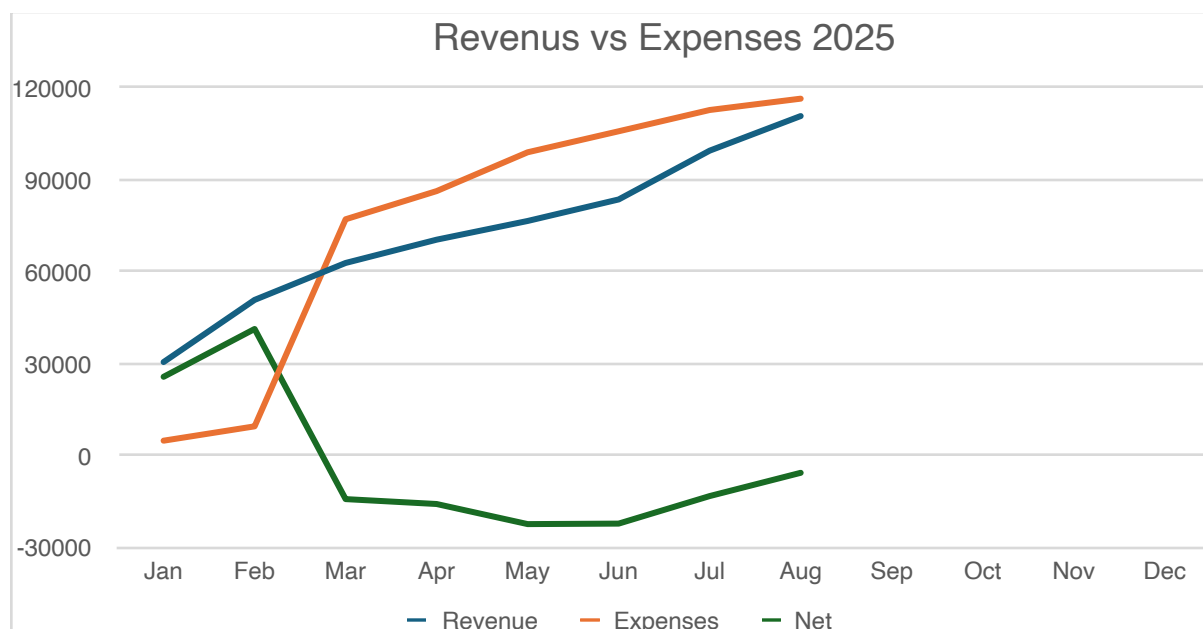
I quickly learned that Week of Training 2025 embraced the spirit of camaraderie that defines our gliding community. I learned that our club is not merely a collection of individuals. It is a tight knit family bound by a shared love for the sport. The week was a great way to meet other members and to get to know how the club

operates. It showed that everyone is a volunteer and successful gliding depends on the club's teamwork.

The training experience was an environment where members shared knowledge and experiences and fostered an environment of mentoring and support.

On behalf of all the students and participants, I would like to thank Piet Barber, Stephania Zilora, and ALL the members of the club that made the "Week of Training 2025" successful.

I'm already looking forward to Week of Training 2026!



Great work Skyliners, July and August have been great flying months which have brought us closer to having a positive revenue for the year to date (as of 8/24). Thanks to all for making Skyline Soaring a safe club to fly with.

Ralph Vawter