Clouds Second Report

Cumulus - December 1, 2024 from 5:03-6:01pm
- Brooklyn, NY

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MCEN 4151-003

Dec 14, 2024

Figure 1. Initial Frame From Time Lapse Video

Introduction

My timelapse video was taken for the second cloud assignment and shows the clouds moving during sunset in Brooklyn. I wanted to see what clouds formed near me because I live near both water and a bunch of tall buildings. I also wanted to see what effect the wind, cold weather, and setting sun would have on the clouds and the timelapse overall. I struggled a little trying to prevent the sun from creating a starburst effect at the beginning while keeping the clouds visible. I also had to adjust the f-stop and ISO continually throughout the photos to ensure the clouds were visible, but the transitions were not as smooth as I had hoped.

Location Information

The images were taken in Brooklyn, NY, on the roof of my apartment building facing southwest. They were taken between 5:03 and 6:01 PM on December 1st, around sunset. The photos were taken from a height of approximately **95.5 feet above sea level** (approximately **59'4" above the ground**), facing west-southwest, with a camera elevation of approximately **10° upward** from horizontal.

Cloud Description

The images focus on smaller, low-level cumulus clouds that move across the screen from right to left throughout the video. From the Skew-T chart (*Figure 2*), the wind ranged between **20 and 50 knots** at the approximate cloud height, and the atmosphere was stable. Based on the Skew-T chart and my images, I think the clouds were between **100 and 2000 meters above sea level**, with the temperature and dew point being close together around **2000 meters** (and also somewhat close together around **150 meters**). This indication of cloud presence and wind on the chart aligns well with the cumulus clouds visible in my images and their movement across the screen as each image was taken **10 seconds apart**.
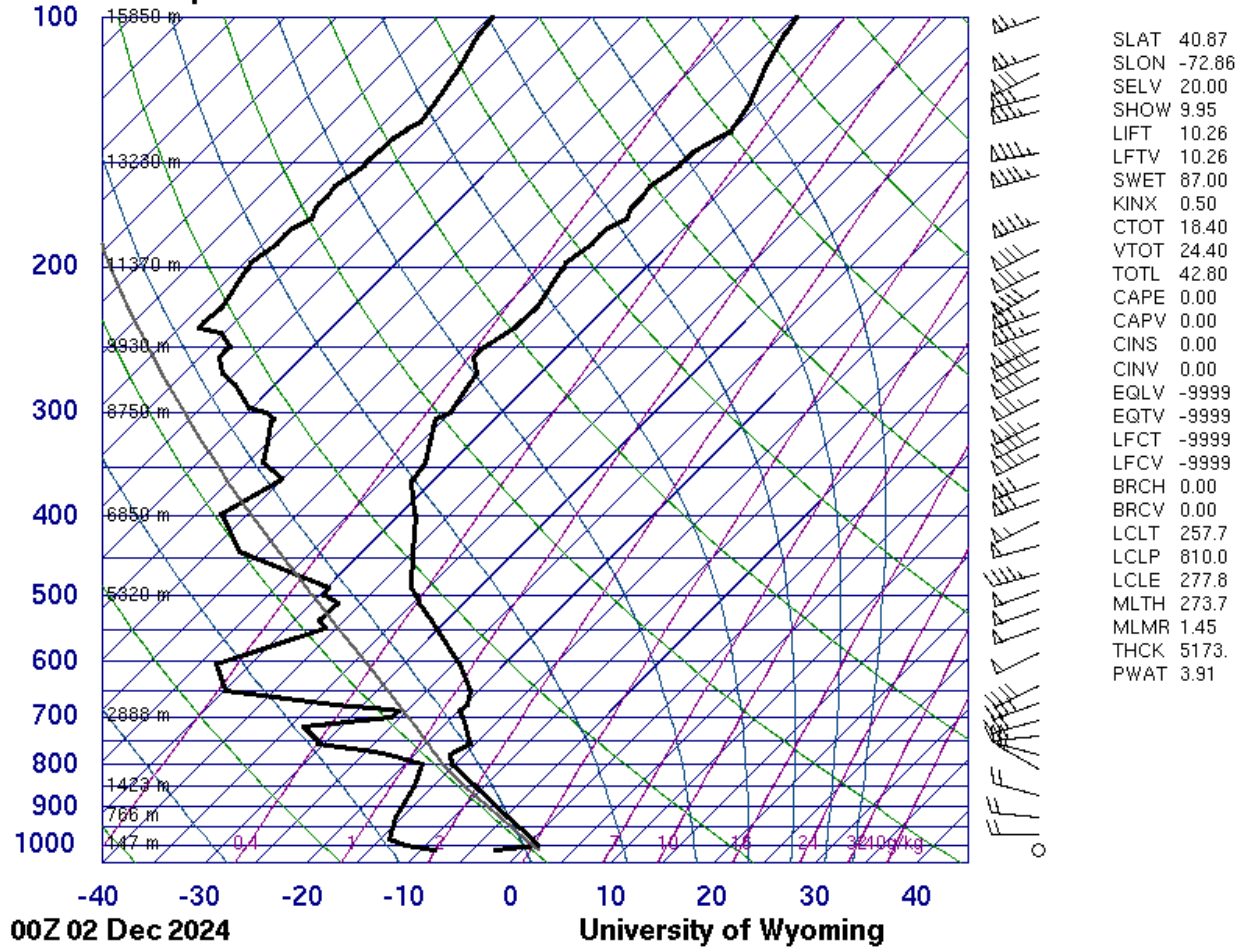
Figure 2. Skew-T Chart Showing Atmospheric Sounding Data Taken about an Hour or Two Before the Images were Captured

Photographic Technique

The camera information for the image is listed in *Table 1* below.

Table 1. Camera Information

Camera Model	Canon EOS 2000D
Lens	EF-S18-55mm ƒ3.5-5.6 III
Focal Length	36 mm
Aperture	ƒ5-8
Exposure	1/3200 - 1/500
ISO	ISO 640-3200
Original Image Size	6000 x 4000
Cropped Image Size	6000 × 3409

The final image (*Figure 1*) was edited from the original (*Figure 3*) by cropping to fit the iMovie frame size. I didn't change the contrast or saturation; the images themselves were unedited.

Figure 3. Original Unedited Image as the Initial Frame From Time Lapse Video

Conclusion

The timelapse captures the transition of sky colors at sunset and their effect on the clouds passing by. The fluffy look of the cumulus clouds contrasts with the silhouettes of the urban skyline, adding some depth to the video. I wish there were more clouds throughout the video, but that wasn't something I could control at the time due to time constraints. Because of the same time constraints and the Apple iMovie software, I wasn't able to capture as many images as I would have liked to achieve a frame rate of 15 FPS, so the timelapse feels a little choppy. Overall, I believe I fulfilled the intent of my project.

References

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