Clouds Second Report

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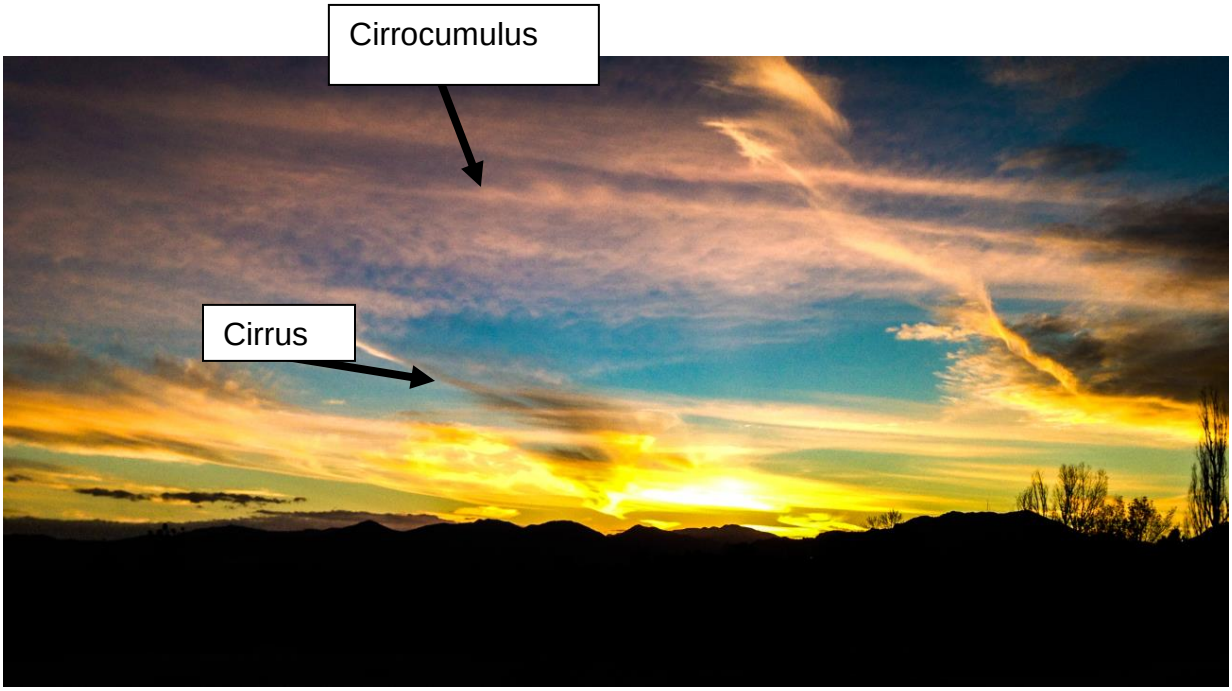
I. Introduction

This photograph captures the beauty of cirrus and cirrocumulus cloud formations around a beautiful sunset in Louisville, CO. It was taken around 5:00 after a pretty calm weather day. The sunset gives the clouds a gorgeous yellow tint and the dark mountains give great contrast to these bright colors.

II. Cloud Visualization

The clouds in this image seem to be the detached layer of cirrus clouds and the slightly more broken up and whispier cirrocumulus which were settling as the sun set over the mountains. Cirrus clouds are made up of ice crystals and do not diminish the sun's brightness when in front of it. Cirrocumulus clouds are also ice crystal clouds and are just a degraded state of cirrus clouds. They are fairly transparent and have a ripple like characteristic on a sheet-like cloud.



To fully identify these clouds, we must estimate their altitude. Being that these clouds are quite higher than the mountains in the background and are still lit up even as the sun is setting, they can be estimated to be above 7,000 m or 23,000 ft. Both cirrus and cirrocumulus clouds dwell above this threshold. The Skew-T for the day and time of the photograph, November 11th at noon, was 0 which means that it was a stable atmosphere which makes sense because cirrus and cirrocumulus clouds are both stable atmosphere clouds as seen in the picture below.

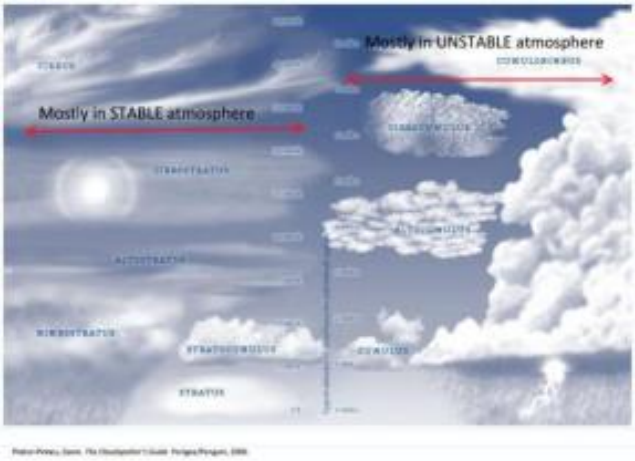


Figure 3: Cloud Regions from Lecture (Pretor-Pinney, 2006)

III. Photographic Technique

For the photo, I used my friends iPhone 5c camera which is an 8 MP iSight camera model. This image was captured using an exposure time of 1/250 sec and an F-stop of f/2.4 with an ISO of 50. A small focal length of 4.12mm was used in order to get the whole beauty of the mountain and clouds in the picture. The edited version is 3264x1678 pixels while the original was 3264x2448 pixels. The photo was edited using Adobe Photoshop Express through which I was able to mess around with the contrast and clarity to make the image more colorful and crisp. I also decided to black out the foreground to mix it in with the mountains and create a better contrast with the bright colors of the sunset off of the clouds. Below is a side by side of the original and edited versions.

Original

Edited

IV. Conclusion

The beauty of this cloud formation is brought out by the lovely yellows and pinks of the setting sun. Based off of my analysis, these clouds are most likely cirrus and cirrocumulus due to their elevation and the stable atmosphere at the time. I believe that I fully satisfied my intent of taking a great cloud photo during such a great time of day to take photos. I really like the contrast between the dark foreground with mountain tops and the bright colors on the clouds. The focus seems to be spot on for such a wide angled shot and the added saturation from photoshop really brought out some color. I wish I had had my camera with me to take a better-quality photo and didn't have to use my friend's phone camera to take this shot. Ultimately, I am quite happy with the beautiful sunset shot I got but wished the overall quality of the clouds was a bit higher.

References

Pretor-Pinney, G. (2006). *The Cloudspotter's Guide.* Penguin