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Clouds 2  
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Altostratus and Cirrostratus Clouds, Palo Alto, CA, 11/29/2020, 4:49 PM



The purpose of this image was to capture the clouds over the Baylands at sunset. It was intended to photograph the colors seen from the sunset, clouds, and sky. The structure of the altostratus and cirrostratus clouds can also be seen.

This image was taken at 4:49 PM on November 29, 2020 at the Baylands in Palo Alto, CA. The camera was facing west in this image as seen by the sunset with a slight upward angle to view the clouds.

This image shows two types of clouds: altostratus and cirrostratus. The altostratus clouds sit lower above the hills in the image, while the cirrostratus clouds are higher and whispier at the top of the image. The rest of the sky was partly cloudy and blue. There was no significant weather before or after this image. The atmosphere is very stable with a CAPE of 0. There is an apparent long pinch in the Skew-T diagram, which is why both altostratus and cirrostratus appear

in this image. Based on this Skew-T, clouds can be expected at altitudes between 7,000 and 10,000 m, which is consistent with altostratus and cirrostratus clouds.

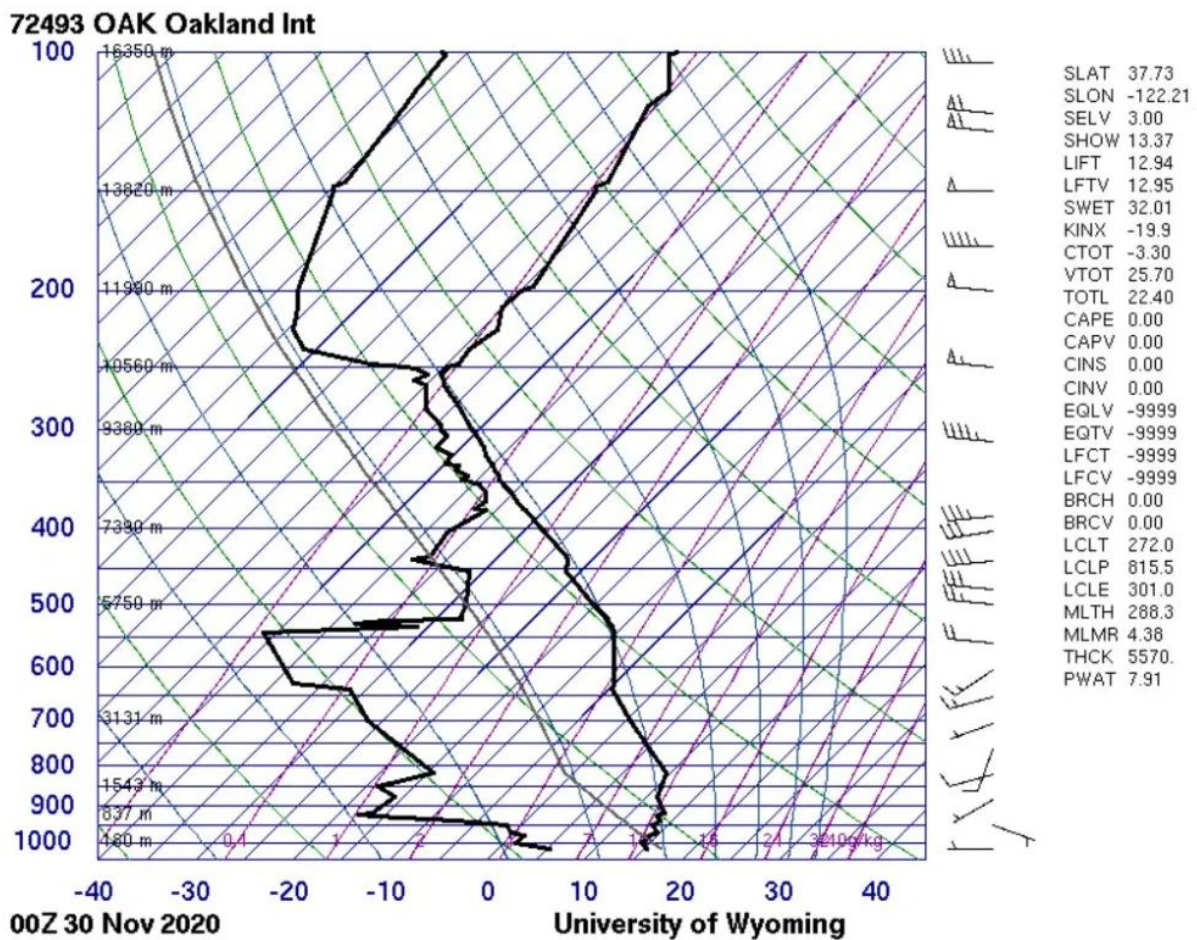


Figure 1: Skew-T diagram<sup>[2]</sup>

The field of view is very large in this image and can be estimated as several miles. In addition, the distance from the clouds to the lens would also be several miles. The lens focal length is 18 mm and was taken with a Nikon D70 DSLR camera. The original image was 3008 x 2000 pixels and is shown below and the final image is 1300 x 865 pixels. The f stop is f/13 and exposure time is 1/640 seconds. The image was post-processed using Darktable by increasing the contrast and saturation to make the clouds and blue sky stand out more.



*Figure 2: Original image*

This image reveals two different types of clouds over the scenic sunset at the Baylands in Palo Alto, CA. The contrast between the clouds, sunset, and background makes for an artistic photograph. The physics and structure of the clouds are also shown nicely in this image. The image could be improved by having the clouds at the top of the image being more in focus.

### **References**

1. *Atmospheric Soundings*, [weather.uwyo.edu/upperair/sounding.html](http://weather.uwyo.edu/upperair/sounding.html).