

HW # 4—Determining Cloud Top Height from an Enhanced IR Image and a Sounding

The object of this assignment is to download enhanced IR imagery and interpret cloud-top temperature and heights.

1. Find an infrared (IR) image that includes a temperature scale (either black and white or color). Using the following or some other site *as long as it has a temperature scale!*

<http://www.rap.ucar.edu/weather/satellite/>

2. Print out a copy of your image.

3. Find a cloudy location on the image (in the general vicinity of a radiosonde station and fairly near the time of release), MARK IT, and estimate the cloud top temperature at that location by matching the grey shade or color to the temperature scale (note that sometimes it is in Kelvin and sometimes Celsius—you may have to do some conversions). Write your estimated cloud top temperature on the image.

4. Download the nearest sounding you can find from the following site—get both text and a graphical version:

<http://weather.uwyo.edu/upperair/sounding.html>

5. Using the sounding in combination with your estimated cloud top temperature estimate the pressure level (mb) and height (meters) of the cloud top.

6. Turn in your satellite image, sounding and cloud top temperature, pressure, and height estimates.