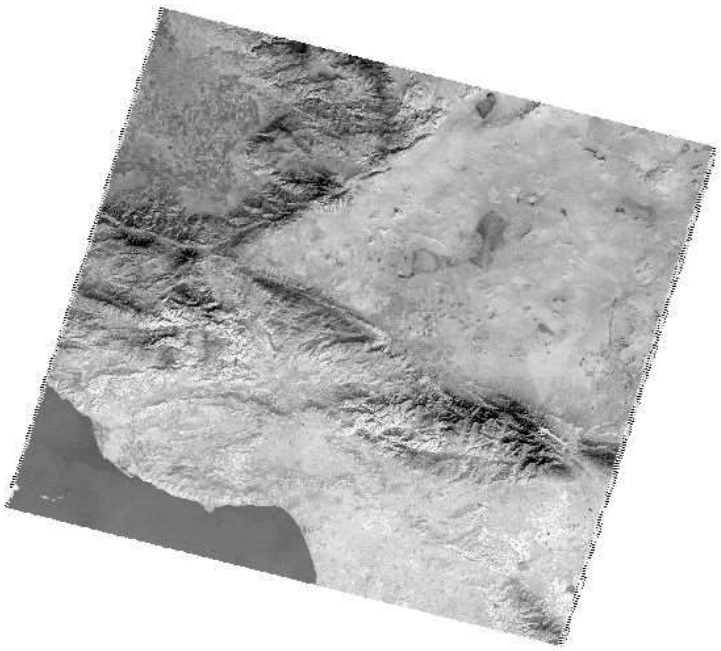
Daytime Dataset:
This dataset is Landsat 4-5 TM C1 Level-1. The location of the data set is Los Angeles, California. While Los Angeles itself is an urban city , the areas and cities surrounding it are suburban and rural. The discernible body of water for this data is the Pacific Ocean. It was captured on November 13th, 2010 at 6:17 pm. Pictured below is the thermal band, 6. The features in order from lightest to darkest are roads -> vegetation -> water features. In this band, In both the daytime and nighttime datasets, a thermal gradient is present showing not as dark colors in non urban (suburban/rural) areas. This phenomenon is what is known as an urban heat island effect. This is caused where there is less vegetation and more high absorbing materials like concrete and asphalt or, in areas where transportation and industrial buildings are highly concentrated causing lots of heat and fast cooling at night. In the daytime, the countryside/mountains range from 30-70 degrees. The ocean is around 70 degrees and the city is around 80 degrees.



Nighttime Dataset:
This dataset is Landsat 4-5 TM C1 Level-1. The location of the data set is Los Angeles, California. While Los Angeles itself is an urban city , the areas and cities surrounding it are suburban and rural. The discernible body of water for this data is the Pacific Ocean. It was captured on February 24th, 1985 at 5:12am. Pictured below is the thermal band, 6. The features in order from lightest to darkest are water features -> vegetation -> roads. In this band, higher DNs mean there is more heat or thermal radiation occurring in those areas, in areas where it is lighter, the DNs will be higher. Above the ocean, the temps are around 50-70 (290 degrees Kelvin) degrees fahrenheit. In the countryside, the ranges are around 60 degrees (280) degrees Kelvin. And in the city, it's around 70 degrees(284 degrees Kelvin).