## The Solstices – Marking the Extremes

By Dennis Knight

At the summer solstice in Denver on Wednesday, June 20<sup>th</sup>, most of us who are up at the crack of dawn greeted a rising sun at 5:32, and watched it set at 8:31, concluding fifteen hours of official daylight. Conversely, in December at the winter solstice, the sun will only be up for nine hours and twenty one minutes, a decrease of nearly six daylight hours.

If you don't like the early mornings, you should be thankful we're on daylight savings time, or our solstice sunrise would have been at 4:32 a.m. I don't complain about the early arrival of the sun because the dawn is my favorite time of day, but many people keep the shades pulled to block old Sol from creeping into their bedrooms.

In comparison to places north, we don't have it so bad in Colorado at either solstice. Using sunrise and sunset tables on the web, I charted the lengths of days at the summer and winter solstices in cities from the arctic to the equator. In Fairbanks on June 20<sup>th</sup> the sun rose at 2:58 a.m., and didn't set until after midnight at 12:47 a.m., for 21:49 minutes of official daylight. On Christmas day, Fairbanks will have 3:43, or a swing of about eighteen hours from summer to winter, three times Denver's fluctuation.

Billings to our north will see a variance of about seven hours, while Albuquerque to our south marks a difference of less than five hours. Cities near but not on the equator fluctuate about twenty minutes, while those living directly on the line have exactly twelve hours of official daylight, winter or summer.

The summer solstice may be mildly irritating to those who like to sleep in, but the winter solstice and dearth of light can cause some people to experience Seasonal Affective Disorder, a depression that can lead to hopelessness, overeating, oversleeping, loss of energy and irritability.

Alaskans in winter are particularly prone to the disorder. An Associated Press article in 2005 chronicled one man, reporting, "Lloyd Leavitt shrugs off the subzero freeze that blankets the town of Barrow, Alaska, each winter. It is the weeks of endless night that get to him, filling him with insatiable cravings for carbohydrates, sleep and natural light." The article quoted a 1995 study in the American Journal of Psychiatry showing ten percent of Alaskans suffer from seasonal affective disorder.

Alaska's long days of summer, on the other hand, are a source of economic vibrancy in the Matanuska Valley thirty miles north of Anchorage. The agricultural boom in what is better known as the Mat-Su Valley started in 1935 as a New Deal program when 203 families reeling from the Great Depression were relocated to the fertile region with the promise of a better life.

With an average of nineteen hours of summer daylight, Matanuska's growers, many of whom are descendants of the original colonists, are renowned for gigantic cantaloupe, carrots, turnips, and other crops. Heads of cabbage exceeding 100 pounds grow in the valley at Wasilla, a place known to produce outsized heads in other species as well.