



# CALIFORNIA STATE SCIENCE FAIR 2005 PROJECT SUMMARY

<b>Name(s)</b> <b>Erin R. Lacour</b>	<b>Project Number</b> <b>J0624</b>
<b>Project Title</b> <b>What Are the Effects of Weather on Star Visibility?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of this experiment is to see if temperature, humidity, wind, and dew point affect how well you can see the stars at night. My hypothesis is that when temperature, dew point, humidity, and wind are low, star visibility is better than when these weather elements are high. <b>Methods/Materials</b> Every night at 7:00 pm, during the month of December, 2004, I viewed seven faint stars surrounding the Pleiades star cluster and recorded the temperature, humidity, dew point, and wind for that particular night. I viewed the stars at the same spot in my backyard every night, and recorded how many of the seven faint stars I could see, and how well I could see them. Each night, I entered this information on a star chart, and graph, so that I could see if there was any pattern. The materials that I used are writing utensils, a clock, a clipboard, a computer, an Astro flashlight, a weather station, computer software, and my eyes. <b>Results</b> The results that I am looking for are low temperature, dew point, humidity, and wind readings, which will result in good star visibility. After I entered all the data on my graphs, I examined it, and I did not find any pattern that showed what I was looking for. There were only six nights where I could see all seven faint stars on my star chart. On these nights, the readings were both high and low on one night and the opposite on the other nights. <b>Conclusions/Discussion</b> I conclude that temperature, dew point, humidity, and wind do not affect star visibility very much, if at all. The reason for this is because there was not any pattern that showed that when the data for these weather elements were low, it made star visibility any better than when the data was high. This study raises further questions. Will my results be different if I did it at a different time during the night, a different location, or even a different time of year? Will my results be different by doing it in a month with barely any clouds, and an area with less light pollution? Also, will doing the experiment for a longer period of time, or even choosing different faint stars to look at change my results?	
<b>Summary Statement</b> My project is about finding out if stars are more visible when the weather elements of temperature, humidity, dew point, and wind are low, as compared to when these elements are high.	
<b>Help Received</b> My dad helped me to learn how to use Microsoft Word and Excel software programs so that I can type my report and create the graphs for my data. He also showed me how to use the Starry Night Pro 4 software program to create my star charts.	