



# CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

<b>Name(s)</b> <b>Andrew Pool</b>	<b>Project Number</b> <b>J1722</b>
<b>Project Title</b> <b>Space Particles from Space: Altitude's Effect on the Number of Subatomic Particles Viewed in a Wilson Cloud Chamber</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives</b> The objective of this study is to determine if a change in altitude influences how many subatomic particles are observed in a Wilson's Cloud Chamber.</p> <p><b>Methods</b> Utilized a homemade Wilson Cloud Chamber, a device used to visualize subatomic particles, at two different altitudes. Five minute tests were performed three times at each altitude and filmed. Subatomic particle trails were counted while reviewing the film.</p> <p><b>Results</b> More subatomic particles were viewed at a higher elevation (average of 29 per test) than at a lower elevation (average of 15 per test).</p> <p><b>Conclusions</b> Repeated Trials at each altitude level proved that more background radiation can be viewed at a higher altitude. This proves that higher altitudes contain more airborne radiation than at lower altitudes.</p>	
<b>Summary Statement</b> I observed more subatomic particles at an altitude greater than 5000 ft than at an altitude lower than 700 ft, viewed through a Cloud Chamber.	
<b>Help Received</b> I used a blueprint of a Wilson Cloud Chamber via Sciencebuddies.org and a project I did two years ago. I had my mother help me with the recording of the experiment as well as the total count of subatomic particles viewed from this recording	