



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

Name(s) Russell F. Lee	Project Number 35900
Project Title The Effects of Eyeglass Temple Width on Vertical and Lateral Peripheral Vision	
Abstract Objectives/Goals The goal of this experiment was to determine the effects of eyeglass temple (joint part connecting eyeglass arm and supporting frame) width on vertical and lateral peripheral vision. Methods/Materials For this experiment, a 1.5 meter in diameter geodesic dome was constructed. In addition a transilluminator (light source) as well as 4 different pairs of glasses of varying temple widths were required. Eyeglass temple width values were 0.25cm, 0.5cm, 0.75cm, and 1.0cm. Subjects of varying ages and sexes were necessary. Results When tested with no glasses, subjects measured at approximately 93 degrees. Using glasses #2 (1.0cm thick), subjects measured at approximately 80 degrees (0.75cm thick). Using glasses #3 (0.50cm thick), subjects measured at approximately 85 degrees. Using glasses #4, subjects measured at approximately 81 degrees. Using glasses #5 (0.25cm thick), subjects measured at approximately 83 degrees. Conclusions/Discussion Results showed that when no glasses are used subjects maintain the greatest amount of peripheral vision (93 degrees). As temple width on the eyeglasses increased (0.25cm, 0.50cm, 0.75cm, 1.00cm), the overall amount of peripheral vision decreased. While it is true that eyeglass temple width affected subject's peripheral vision, deviation from the original mean (no glasses) was not very large- meaning that eyeglass temple width does not severely hinder performance.	
Summary Statement This project was developed to determine the effects of eyeglass temple width on vertical and lateral peripheral vision.	
Help Received Mr. Antrim provided research help and project improvements; Parents supported construction of geodesic dome and project improvements; Judges of Intel ISEF provided useful insight on project improvements.	