CWSF 2017 - Regina, Saskatchewan

Atanas Kolev

Orbital Eccentricity and Solar Energy

Challenge: Discovery
Category: Intermediate
Region: Regina
City: Regina, SK
School: Campbell Collegiate
Abstract: I created a program to simulate a planet orbiting around its star, and by using different eccentricities and keeping either the time average distance or the angular momentum constant I can learn how eccentricity can affect the amount of solar energy a planet receives.

Biography

I attend Campbell Collegiate and am in grade ten. I used to go to E?cole Massey School and I have been in a French immersion program since kindergarten. I'm also in several extracurricular activities. I'm in band, choir, chamber choir, and the improvisation club. I was also on the school soccer team and played competitive soccer in Regina. For several years I have wanted to do investigation or experiment in astronomy. I find it very interesting and cool that we can discover planets and look cosmic phenomenon light years away and know so much about them. I was doing a biology unit in school when it came time to make a science fair project and I decided to tie it into my experiment. The solar energy our planet receives is essential for life on Earth, without it we wouldn't be alive today, and when I found the definition of orbital eccentricity, I immediately asked myself ?how would that change our world?'. I wanted to know more about how the eccentricity of our planet solar energy and in turn affects life on Earth, and that's how my project started.

Awards	Value
Excellence in Astronomy Award - Intermediate Sponsor: Royal Astronomical Society of Canada	$750
Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: Western University	$1 000
Total	$1 750

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