CWSF 2017 - Regina, Saskatchewan

Daniel Kornylo

High School Voltage

Challenge: Innovation
Category: Junior
Region: Northern Vancouver Island
City: Gold River, BC
School: Gold River Secondary
Abstract: Following the repair and refit of a vintage Van de Graaff generator, a hybrid educational electrostatic generator was constructed. This device uses a Laddertron style of charge transport system within the familiar Van de Graaff framework. As an added educational feature, a remote control allows students to vary the inducing voltage, and its duty cycle, as well as the belt speed.

Biography

My name is Daniel Kornylo. I am a science enthusiast, a figure skater, and a grade 8 student at Gold River Secondary School. I have a younger sister named Heather, and I live in a remote location on Vancouver Island where there is no cellular service. Initially, I wanted to do a project on the repair of my classroom Van de Graaff generator. As I learned more about electrostatic generators, I found out that there had been other types, such as the Pelletron and the Laddertron, which have been used in particle accelerators. This caused me to wonder if it would be possible to build a classroom electrostatic generator using a Laddertron style of belt. My plans after this fair is to test the longevity of my belt and pulleys and to add spark suppressor plates to my machine. My advice to students that are thinking of doing a project like this is to first make sure you are interested in the subject area and that you never give up.

Awards	Value
CAP Physics Prize - Junior Sponsor: Canadian Association of Physicists	$500
Excellence Award - Junior - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - $2000 Entrance Scholarship Sponsor: Western University	$2 000
Total	$2 500

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