Contribution ID: **1299** Type: **Tools**

Training a new generation of Scientists via Outreach and Prototype Building.

Monday 24 May 2021 15:00 (15 minutes)

An incipient program in Cosmic Ray and Radiation Detection is based at the International Elementary Particle Laboratory. Such efforts include an integral program to seek young talents, motivate them to pursue a STEAM oriented career and professionally train them in novel detection techniques by means of a hands-on approach that involves building innovative prototypes.

During the pandemic, over 30 prototypes meant to be used for radiation detection with novel materials, including metals, ionic liquids, and such, were planned, designed, and built remotely. They are now being tested, assembled, and placed on operation jointly with students who participate in the program. These novel detectors seek to detect cosmic rays and other forms of radiation with efficient, compact, and safe detectors.

In the Outreach phase, a series of online seminars were established to reach young talented kids with the aim to interest them in STEAM-oriented Careers. Those seminars have reached to date, over 530,000 people from all over Latin America primarily in the ages of 13-24 years old. Speaker include Julián Félix, Juan Maldacena, Juan Estrada, Gastón Gutiérrez, Fernando Quevedo, Gabriela González, Matias Zaldarriaga, Alberto Rojo and José Manuel Sánchez Ron amongst others.

Summary

An innovative education and research program based on a prototype build on a hands-on approach. Results from the program and the preliminary detection results are presented. Students participate on all stages and motivate the next generation of students to continue the work. An outreach strategy has been outlined to seek talents all over Latin America and starts to provide results.

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Session Classification: Tools I