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The “Beamline for Schools” competition at CERN

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In 2014 CERN has started to organize “Beamline for Schools”(BL4S), an annual physics competition for high school students aged 16 and up. In the competition, teams of students from all around the world are invited to propose an experiment to CERN that makes use of a secondary beam of particles with momenta of up to 10 GeV/c from CERN’s Proton Synchrotron (PS). The students have to describe their experiment in a document of up to 1000 words and to complement their application with a 1-minute video. CERN provides a number of various detectors, magnets and other components to the students and allows them to bring their own equipment. In the first three years of the competition, more than 5500 students from all around the world have participated and in total six winning teams have been selected and have been invited to CERN for 12 days each. Every year two CERN scientists, together with the students prepare and operate the winner’s experiments.

We will describe the challenges linked to the Beamline for Schools competition, focussing on the communication with all teams in the preparatory phase of the competition, the technical implementation of the winning experiments, the operation of the experiments as well as on the support for the teams analysing the data and preparing publications of the results. We will also report on the impact of the competition onto the students, the outside world but also onto the CERN laboratory. BL4S receives mayor support from private donators with the help of the CERN and Society Foundation. Experience with the funding scheme will also be reported.

Finally, we will present an outlook for the future of the BL4S competition, taking into account the shutdown of the accelerators at CERN in 2019 and 2020.

Experimental Collaboration

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