# FAQs – A beam line for schools

**Who is eligible?**
Any team of high-school students aged 16 and older on the first day of their visit to CERN is eligible. Younger students may form part of entering teams, but they will not be able to take part in the experiments at CERN. This competition is not limited to nationals of member states of CERN. Any team of high school students from all over the world can join!

**What is being offered?**
A chance to **win a trip to CERN** to conduct a student-led particle physics experiment at the world's largest particle physics laboratory. Before coming to CERN the winning team will have the opportunity to work together with CERN scientists on their ideas on how to use the beam line and plan out a particle physics experiment.

**Where will it happen?**
At CERN's fixed-target beam facilities, near Geneva, Switzerland.

**When will it happen?**
The competition kicks off on 3 December 2013. Registration must be completed by midnight CET on 31 January 2014, and full submissions must be received by midnight CET on 31 March 2014. The winning team will be notified in May 2014. The visit to CERN will be arranged by mutual agreement between the winners and CERN, and will fall between July and September 2014.

**Why is CERN doing this?**
To celebrate CERN's 60$^{th}$ anniversary. The beam line for schools competition is one of many activities that will mark the anniversary and is an ideal opportunity to expose tomorrow's scientists to today's cutting-edge physics.

**How do we enter?**
Go to the competition webpage and follow the instructions you'll find there. Remember, you must register by midnight CET on 31 January 2014.

**Who qualifies?**
Teams of high-school students aged 16 and older on the first day of their visit to CERN, can enter. Students under 16 on this date may form part of

the team, but will not be able to come to CERN. Entries must be submitted by a teacher acting as a coach.

**Who can make a team?**
Students may come together from a single school or from multiple classes or schools.

**How many people per team?**
Teams may be up to 30 people, of whom a maximum of nine students may come to CERN, with two adults acting as coaches. Data transmission and web link-ups will allow additional students to participate and analyse data remotely.

**How do we take part in the hangouts?**
To watch the live hangouts, go to CERN's YouTube channel: http://www.youtube.com/user/CERNTV. The hangouts will be held in different languages at the following times:

- English: Tuesday 3 December 16.00 CET
- French: Thursday 5 December 16.00 CET
- Italian: Tuesday 10 December 16.00 CET
- Spanish: Thursday 12 December 16.00 CET
- German: Tuesday 17 December 16.00 CET

You can send your questions to beam-line-4-schools@cern.ch or tweet it via Twitter to @CERN with the hashtag #bl4s. There are also Facebook events, where you can post your questions. You can find them on https://www.facebook.com/cern. We will try to answer any questions you may have about the competition during the hangouts.
There will be a further series of hangouts in February 2014. The dates and times will be announced to the teams that registered.

**How do we submit videos?**
Publish your video on vimeo or youtube and send us the link. Upon registration you will receive a link to the form where you can submit your full proposal including the link to your video.

**In what languages can we submit our proposals?**
All submissions may be made in English or French, the official languages of CERN. Please note that we can't consider submissions made in other languages.

**What kind of experiments could we do?**
It's up to you and your team, how you want to use the CERN beam line. The beam line will be fully equipped, with a pre-determined set of detectors you can choose from and design your own experiment. Have a look at the downloads section of the web page to get familiar with the beam line facilities and its possibilities.

**How are the proposals judged?**
The proposals include four parts, all of which are judged equally: why you want to come to CERN; what you hope to take away from the experience; initial thoughts on how you would like to use the particle beam line for your experiment; a **1-minute video** that summarizes your written proposal in a creative, entertaining way. We are not expecting fully developed experimental proposals but will evaluate the proposals for their motivation, creativity and feasibility.

**My students don't know particle physics. Is this a problem?**
All students enthusiastic about learning are encouraged to participate. CERN recognizes that most students have little to no experience with particle physics when they begin the competition, but will learn as they progress in the competition. CERN's website has several resources for introducing particle physics.

**Can we find a Higgs boson?**
No. Higgs bosons were created in the Large Hadron Collider (LHC), CERN's largest accelerator. Students will be using a beam of particles from the "Proton Synchrotron", a smaller accelerator.

**My classmates and I really want to come to CERN, but we don't have an idea for an experiment yet. What should we do?**
You should sign up! You don't need a fully developed experiment to take part in the competition, just tell us why you think you should win and what do you want to find out more about by using the beam line. Anyone eager to get to know the world of particles is encouraged to participate. Proposals will be evaluated according to motivation and creativity as well as feasibility. The winning team will have the opportunity to refine their ideas with CERN scientists.

**Who will evaluate our experiment proposal?**
A small group of CERN physicists and engineers will pre-select the proposals. The shortlisted experiments will then be sent to the SPSC, the committee that validates all proposals for experiments at the laboratory's SPS and PS accelerators, which will pick the winner.