Topic	**Coincidence method of detecting cosmic ray muons. Design and building a low-cost detector prototype.**
Topic is suitable for	• practical works of bachelor students • graduation thesis of bachelor students • practical works of master students • graduation thesis of master students
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Annotation	Our Earth is constantly bombarded by high energy particles. 90% of these particles are protons and about 9% are helium nuclei (alpha particles). Cosmic ray muons are secondary particles produced in the upper atmosphere where primary particles interact with atmospheric nuclei creating air showers. A muon flux at sea level is about 1 muon per square centimeter per minute. German physicists Walther Bothe and Werner Kolhörster and Italian physicist Bruno Rossi were the pioneers of developing coincidence method to detect cosmic ray particles. The main goal of this project is to create an inexpensive coincidence detector which can be used in many educational experiments in physics teaching process.
Expectation for candidate	• Interest in experimental particle physics • Has some experience in designing and building electronic apparatus