

Lab 7: The Standard Model Through History

Watch the documentary The Standard Model Through History and answer the following questions.

1. Which particle was the first subatomic particle discovered by J.J. Thompson in 1896?
2. What did Rutherford used to produce beams of particles in 1911?
3. When was discovered that the atomic nuclei was composed of neutrons and protons? Who made that discovery?
4. What made scientist conclude that there had to be other elementary particles than just the electron, proton and neutron?
5. In which particle accelerator where the quarks discovered?
6. Who showed for the first time that the Electric and Magnetic forces were related to each other?
7. How did Maxwell unified Electricity and Magnetism (EM), and what else did he connected to EM in such unification?
8. How did Einstein described Maxwells revelations?
9. What is the force responsible for converting nucleons to protons and protons to nucleons?
10. What other force has been unified to EM?
11. What is the force responsible for holding together the particles in the atomic nuclei?
12. What was the most expected discovery from the Large Hadron Collider?
13. Where and when was the Higgs Boson discovered? **(Extra Credit. Not in the documentary.)**