

Rules of the Game

7 questions, each with 4 answers to choose from (A, B, C, D).

Mark your answer on your answer sheet before the timer ends.

We will then reveal the correct answer.

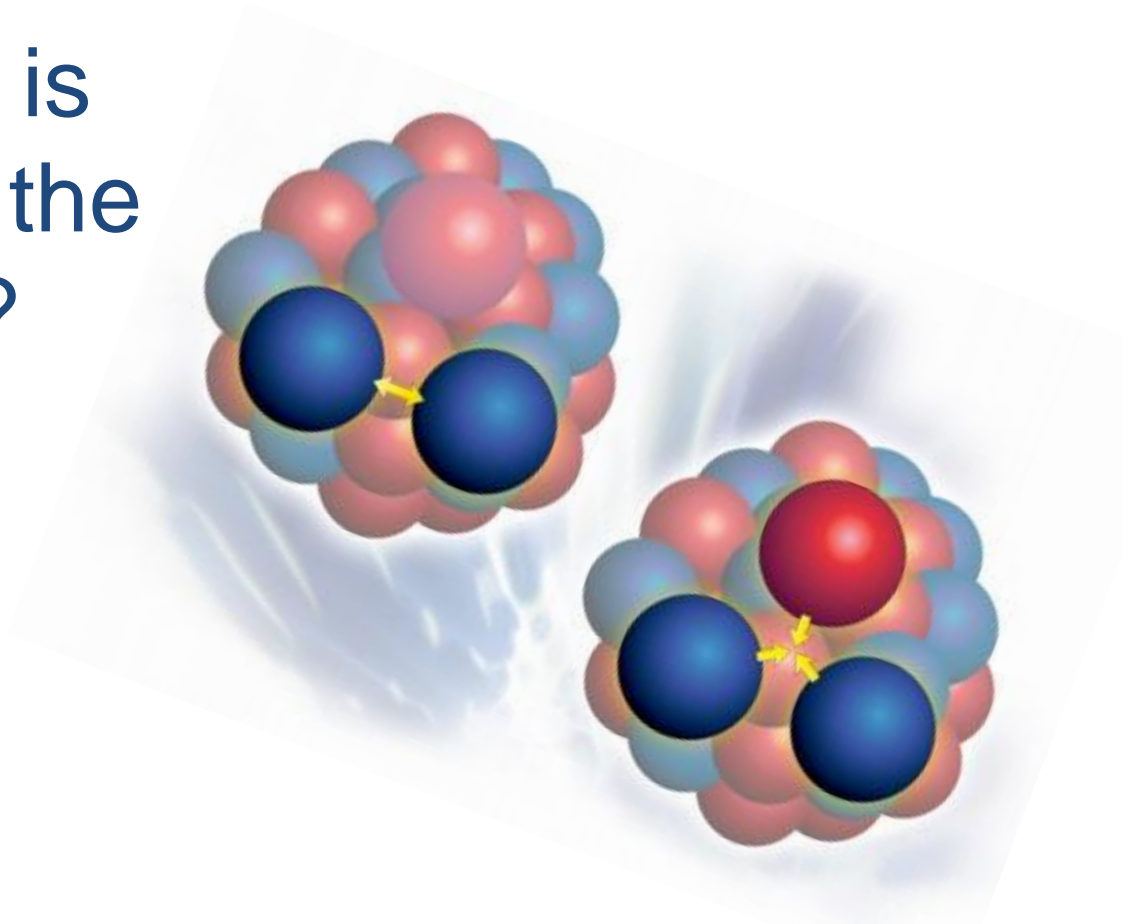
If you have answered correctly you may tick off the next energy level.

Quiz Answersheet

1	A. <input checked="" type="radio"/>	B. <input type="radio"/>	<p>Your score Tick off one energy step for each correctly answered question, starting at the bottom</p> <p><input type="radio"/> 7 TeV Full beam energy of the LHC</p> <p><input type="radio"/> 172.9 GeV Mass of the top quark</p> <p><input type="radio"/> 91.2 GeV Mass of the Z boson</p> <p><input type="radio"/> 938.3 MeV Mass of the proton</p> <p><input type="radio"/> 105.7 MeV Mass of the muon</p> <p><input type="radio"/> 2.5 MeV Mass of the up quark</p> <p><input checked="" type="radio"/> 0.511 MeV Mass of the electron</p>
	C. <input type="radio"/>	D. <input type="radio"/>	
2	A. <input type="radio"/>	B. <input type="radio"/>	
	C. <input type="radio"/>	D. <input type="radio"/>	
3	A. <input type="radio"/>	B. <input type="radio"/>	
	C. <input type="radio"/>	D. <input type="radio"/>	
4	A. <input type="radio"/>	B. <input type="radio"/>	
	C. <input type="radio"/>	D. <input type="radio"/>	
5	A. <input type="radio"/>	B. <input type="radio"/>	
	C. <input type="radio"/>	D. <input type="radio"/>	
6	A. <input type="radio"/>	B. <input type="radio"/>	
	C. <input type="radio"/>	D. <input type="radio"/>	
7	A. <input type="radio"/>	B. <input type="radio"/>	
	C. <input type="radio"/>	D. <input type="radio"/>	

Let's see which energy level you can reach!

Which particle is the mediator of the strong force?



1

A. Neutralino

B. Z boson

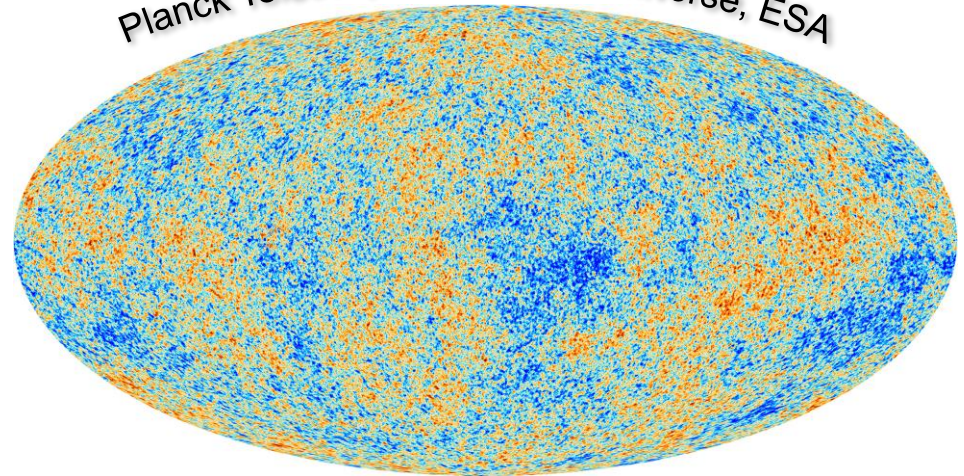
C. Gluon

D. Quark

How much of our universe is matter or energy of which we know nothing about?



Planck Telescope map of the universe, ESA



2

A. 95.1 %

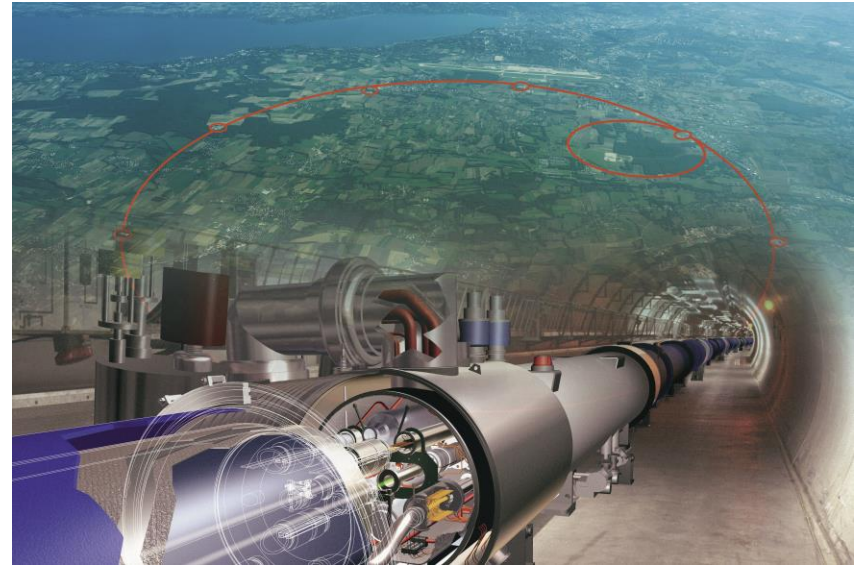
B. 75 %

C. 32.8 %

D. 13 %

What is the power consumption of the LHC?

The same as...



3

A.

A small village
(5000 people)

B.

All households in Geneva
canton (500,000 people)

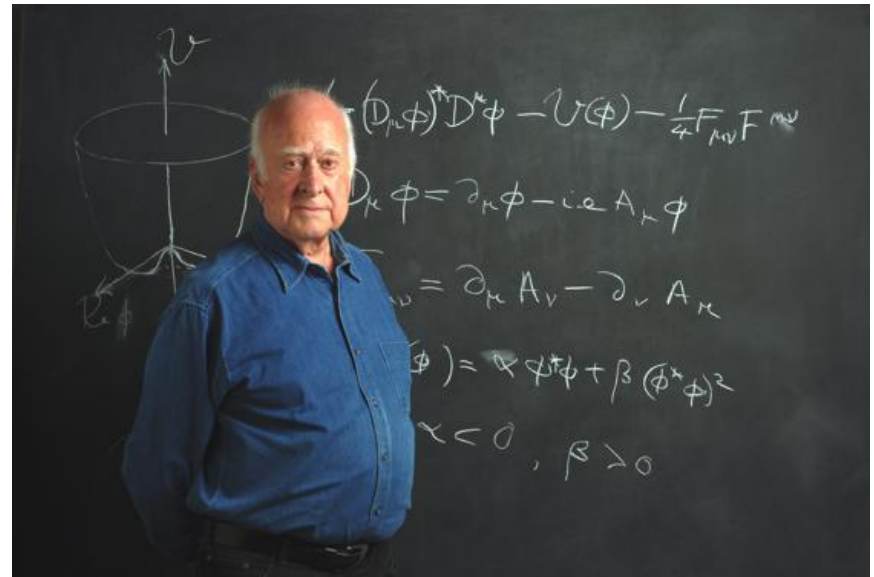
C.

Switzerland
(8M people)

D.

France
(66M people)

What does the Higgs field do?



4

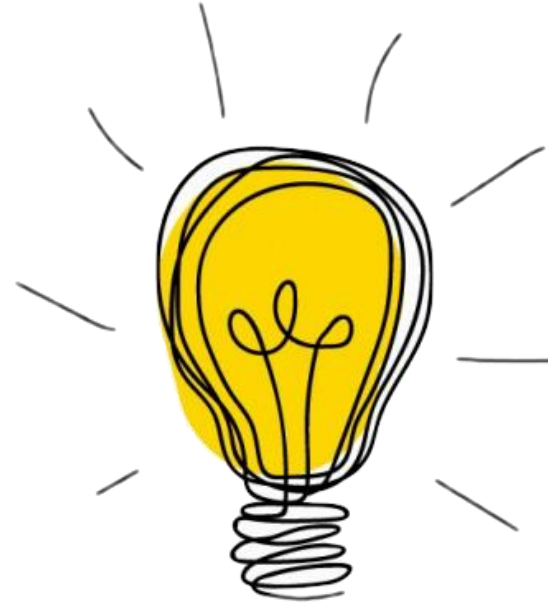
A. Explain gravitational waves

B. Solve the origin of dark matter

C. Solve the origin of the Big Bang

D. Solve the origin of mass

Which of the following inventions was driven by particle physics research at CERN?



5

A. Touch screens

B. The World Wide Web

C. PET scanners

D. All of the above

During a long run, where the proton beams might circulate for up to 10 hours, how far will these protons have travelled (assuming they have not interacted)?



6

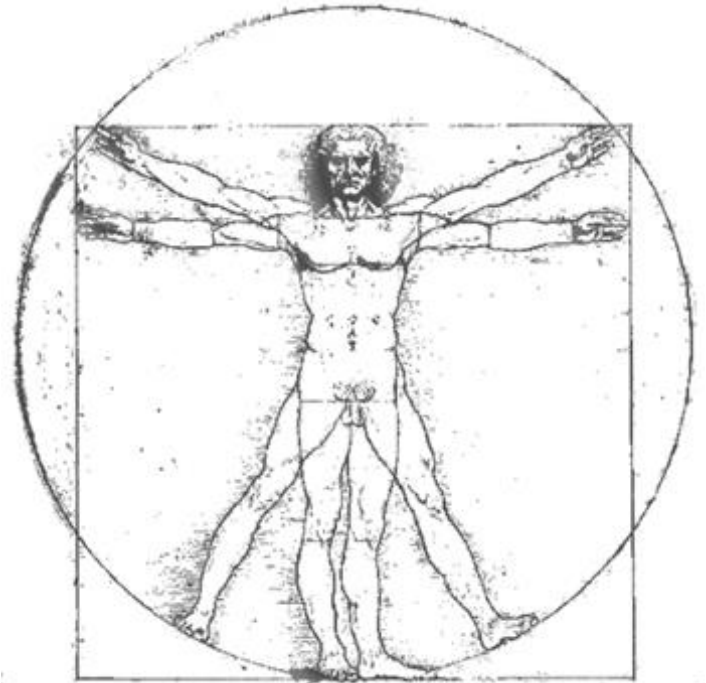
A. The distance from CERN to the sun and back

B. The distance from CERN to Neptune and back

C. The distance from CERN to the centre of Geneva

D. The distance around the circumference of the Earth

Which is the most common elementary particle in your body?



7

A. Up quark

B. Down quark

C. Electron

D. Bottom quark