

Image: Xavier Cortada (with the participation of physicist Pete Markowitz), "In search of the Higgs boson: H -> ZZ", digital art, 2013."

LIFE AFTER THE HIGGS BOSON

In July 2012 physics took centre stage in the world news: scientists at CERN announced they had discovered the Higgs boson. But the search for new physics at the Large Hadron Collider (LHC) is not over yet. In order to develop a much sought after theory of everything physicists are looking for other new particles at the LHC. These may only reveal themselves at very high collision energies, so what we need is a more powerful LHC.

Physicists at Queen Mary University of London (QMUL), are working on an ambitious high-intensity upgrade for the LHC they hope will come into action around 2025. This will pump more particles through the accelerator in tighter bunches and generate ten times more data than the current LHC will during its lifetime.

Whatever new particles physicists may discover at the upgraded version of the LHC, they are sure to shed light on some of the biggest mysteries of nature.

Find out more about current research at Queen Mary University of London on Plus, the free online mathematics magazine:

plus.maths.org/QMUL