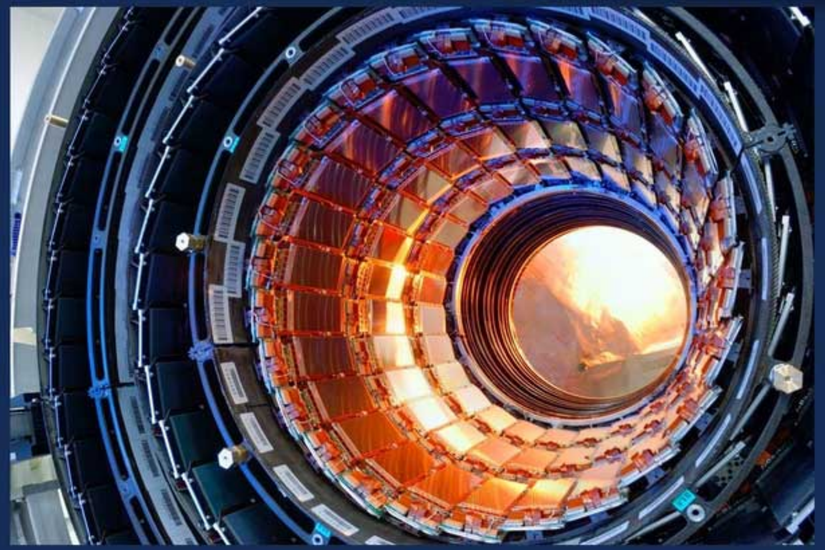
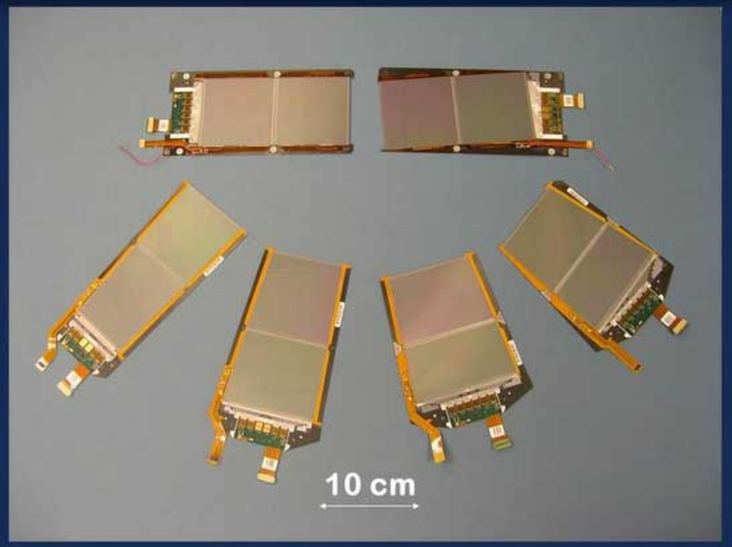
The CMS Silicon Strip Tracker at the LHC



The **CMS silicon tracker** is designed to measure the trajectories of charged particles from LHC collisions with extreme accuracy. This allows CMS to precisely reconstruct and identify the collision products and identify interesting events for further analysis



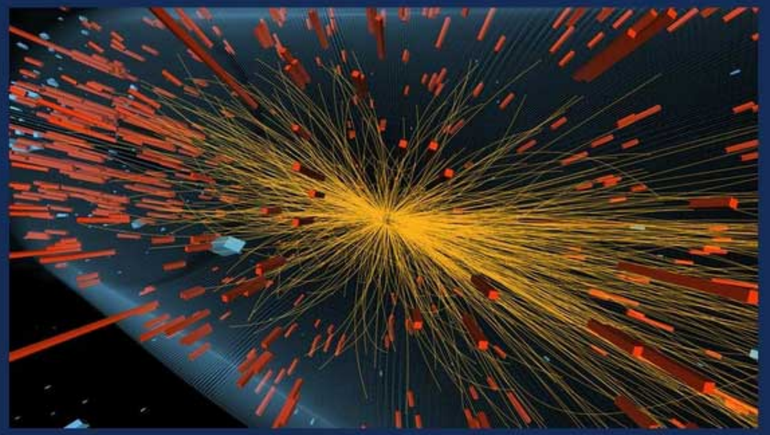
The tracker is composed of over 15000 highly sensitive **silicon strip sensor modules** that detect the charged particles**.** It contains approximately **10 million** individual sensor elements.

RAL designed **large and complex electronics board** that read out and process the information from the silicon sensor modules. Approximately 500 boards we produced by UK industry and were tested at RAL.

A proton-Lead collision in CMS

The yellow lines represent individual charged particles seen by the tracker.

RAL scientists have helped to develop complex algorithms to accurately reconstruct these particle trajectories.



This dramatic event contains about 420 charged particles that are measured by the CMS tracker

The study of such events helps us obtain a clearer picture of the earliest moments of the existence of our Universe