Very High Energy Gamma Ray Astronomy with MAGIC telescopes

MAGIC is a system of two Imaging Atmospheric Cherenkov Telescopes (IACTs) observing high energy gamma rays from violent sources in the Universe. MAGIC-I started scientific operation after commissioning in 2004. The construction of MAGIC-II has been completed in early 2009, and the telescope will be in full operation this summer. The system comprised of two telescopes with a 17m diameter each forms the largest IACT array in the world and gives us a unique opportunity to explore the high energy Universe with a low threshold energy above a few 10s of GeV. Many scientific results have been achieved with MAGIC-I on galactic and extra-galactic sources. Among them, the first detection of the pulsed gamma ray emission from the Crab pulsar at 25GeV, and the detection of gamma ray emissions from very distant Active Galactic Nuclei demonstrate the strong advantage and unique feature of MAGIC with its low threshold energy setting. The new discoveries and scientific results obtained by MAGIC, the extension to a stereoscopic system with the second telescope, and the future prospects will be discussed.