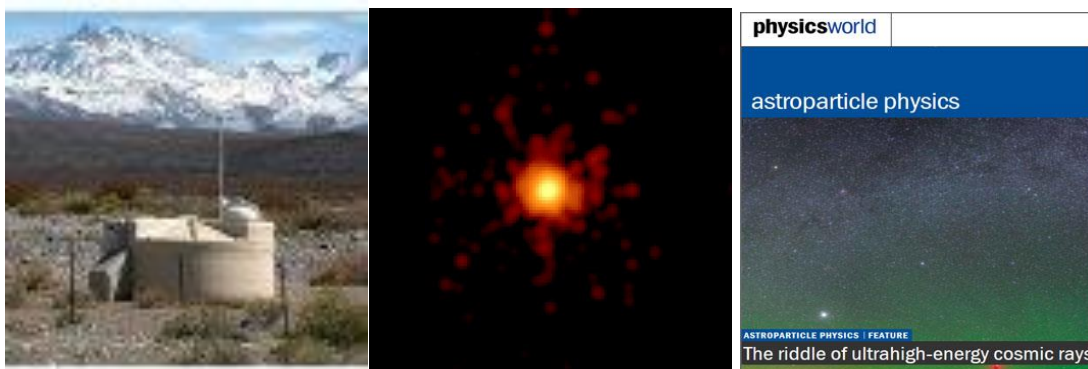


Café Scientifique Headingley

Monday 14th January 2019 at 7:30pm

Speaker: Alan Watson

Title: The Origin of the Highest Energy Cosmic Rays: ...
..... Discovered at last?



Outline:

It is nearly 60 years since cosmic rays, charged particles from outer space, with energies of more than 1 Joule were discovered. How and where such particles are created remains one of the major puzzles of astrophysics. Results reported by the Pierre Auger Observatory in Argentina within the last 18 months and from the IceCube neutrino telescope at the South Pole even more recently are giving us a strong steer to the sources of these enigmatic particles.

I will describe these two massive detectors and the observations made with them and will try to explain what the mechanism that boosts particles to kinetic energies comparable to that of a tennis ball hit by Andy Murray may be.

Biog: Alan Watson is an experimental physicist who has studied cosmic rays for over 50 years at field stations in the UK, Antarctica, Arizona and Argentina, with the goal of discovering the origin of the highest-energy particles. At the South Pole, with an American group, his Leeds team built a detector to search for gamma-rays from SN1987a and worked with scientists from Wisconsin and California who were building the prototype of the IceCube detector. In 1991, with Jim Cronin (University of Chicago), he conceived the idea of the Pierre Auger Observatory, a cosmic ray detector that covers 3000 km² in Western Argentina and which has been operational since 2004. With it, the best data on the highest-energy cosmic-rays have been obtained. He began working at the University of Leeds in 1964 taking up research on cosmic rays. He is an Emeritus Professor of Physics at the University of Leeds (since 2003), Emeritus Spokesperson of the Pierre Auger Observatory (since 2007) and a Fellow of the Royal Society (elected 2000).

Venue: The New Headingley Club 56 St Michael's Rd., Leeds LS6 3BG

Time: Club opens at 7:00pm for drinks & the room at 7:30; talk begins promptly at 7:45pm

Entry: Donation please for room hire and expenses: **£3 at the door**



Café Scientifique Headingley is a programme run under the auspices of the Headingley Development Trust www.headingleydevelopmenttrust.org.uk