Laboratoire LEPRINCE-RINGUET
École polytechniqne IN2P3/CNRS

Séminaire LLR

The Galactic Centre as a powerful cosmic PeVatron

The Galactic Centre region has been observed by the High Energy Stereoscopic System (H.E.S.S.) I array of ground-based Cherenkov telescopes since 2004 leading to the detection of the very-high-energy (VHE, E > 100 GeV) gamma-ray source HESS J1745−290 spatially coincident with the supermassive black hole Sgr A*. Diffuse TeV gamma-ray emission has been detected along the Galactic ridge, most likely due to cosmic-ray interactions with the dense gas of the Central Molecular Zone. I will present the results of a detailed spectral and morphological study of the inner 200 pc of the Galactic Centre region based on the full data set of 2004-2013 observations. The new results allow us to make a strong statement regarding the location and origin of the accelerator of the parent ultrarelativistic particles. I will discuss possible implications of the observed emission, in particular, in the context of the origin of Galactic cosmic rays and large-scale emissions (Fermi bubbles, extraterrestrial neutrinos and others).

Aion VIANA
MPIK
Heidelberg, Germany

Salle conférence du LLR
pièce 05-2021

Lundi 11 janvier 2016
14h00

Le café et les madeleines seront servis à partir de 13h50

Responsables Séminaires : François Arléo 01 69 33 55 94
Roberto Salerno 01 69 33 55 56

seminaires@llr.in2p3.fr