



universität**bonn**

# Bethe Colloquium

**Gabrijela Zaharijas**

(University of Nova Gorica)

## Dark Matter search with the Fermi Large Area Telescope

High energy gamma-rays are one of the most promising tools to constrain or reveal the nature of dark matter. During the almost eight years of the Fermi satellite mission, the data from its Large Area Telescope (LAT) were used to set constraints on the dark matter cross section to various particle channels which now cut well into the theoretically motivated region of the parameter space. In this talk I will describe methods used to search for evidence of dark matter with the LAT, and review the status of the searches. Special attention will be given to the latest indications of the origin of the unaccounted gamma-ray excess at few GeV in the Fermi-LAT data in the region around the Galactic Center, which steered lots of attention as it was shown to be consistent with putative signals of WIMP dark matter particles. Finally I will discuss projections of the expected sensitivities with continued LAT data taking.

### Lecture Hall 1

Physikalisches Institut - Nussallee 12 - 53115 Bonn

**Thursday, 16<sup>th</sup> June, 2016, at 16 c.t.**

**Bethe Center for  
Theoretical Physics**

Physikalisches Institut  
Universität Bonn  
Nussallee 12  
53115 Bonn

phone (+49) 228 / 73-34 32  
fax (+49) 228 / 73-32 23



For detailed information visit us at: <http://bctp.uni-bonn.de>