Contribution ID: **20**   Type: **not specified**

Parameterspace scans considering VHE gamma observations

Thursday 16 June 2011 14:45 (12 minutes)

One possible indirect messenger for dark matter are VHE photons, which are produced secondary or rarely primary in dark matter self annihilation or decay processes. Since the spectrum of this radiation in general is strongly dependent on the dark matter model, generic assumptions generic DM spectra, though often used, are not optimal in assessing the question what the nature of dark matter is. Examples of often neglected features include internal bremsstrahlung and final state radiation which may produce larger photon fluxes for models with lower annihilation cross section. For this reason scans in the parameter space are very useful. In addition, statistical analysis ("fitting") of data from different experiments will be necessary due to the complexity of the signal (and background) parameter space. We present results of model scanning and global fitting using the program SuperBayes and considering H.E.S.S. observations on the galactic center, dwarf spherodial galaxies, and the galactic halo.

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