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Neutralino neutralino annihilation to gamma Z in MSSM

Thursday 27 September 2007 17:00 (30 minutes)

The 1-loop computation of the processes
$tchi_i$
$tchi_j \rightarrow \gamma Z$ has been
performed at an arbitrary c.m. energy for any pair of MSSM neutralinos. As an application suitable for Dark
Matter (DM) searches, the neutralino-neutralino annihilation is studied at the limiting case of vanishing relative velocity, describing the present DM distribution in the galactic
halo; and at a relative velocity of about 0.5, determining the neutralino relic density contributions. Our results are contained in the FORTRAN code PLATONdmgZ, applying to any set
of real MSSM parameters. Numerical results are also presented for a sample of 6 MSSM models,
describing the various possible neutralino properties. A comparison with other existing works is also made.

Primary author: Dr DIAKONIDIS, theodoros (DESY, Zeuthen)

Presenter: Dr DIAKONIDIS, theodoros (DESY, Zeuthen)

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