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Supersymmetric dark matter with low reheating temperature

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I will examine the relic abundance of supersymmetric dark matter in a scenario where the reheating temperature T_R of the Universe after inflation is low, in the range of tens or of hundreds of GeV. To this end I will solve the Boltzmann equation during and after the period of reheating, taking into account cosmological as well as collider constraints, in particular the recent Higgs boson discovery. I will consider several candidates for the lightest supersymmetric particle (LSP) as a dark matter candidate. In the case of the neutralino LSP, large new regions of parameter space open up, depending on the value of reheating temperature. Heavy wino LSP, which has been ruled out in a standard high T_R scenario by indirect detection limits, becomes again viable. Gravitino and axino as dark matter will be also presented.

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