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Dark Matter Direct Detection and Collider Search Complementarity

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We analyze the preferred SUSY parameter space that is in agreement with the Dark Matter (DM) relic density, the direct detection (DD) bounds, the LHC searches as well as $(g-2)_\mu$. Seven different scenarios are identified. For each scenario we analyze the complementarity between future DD experiments and direct searches at the (HL-)LHC and future e^+e^- colliders. It is demonstrated that only a combined analysis can conclusively test this model.

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