

## Revival of supersymmetric dark matter

*Tuesday, 16 July 2019 09:30 (30 minutes)*

The lightest supersymmetric particles (LSPs) are natural candidates for the constituents of dark matter. However, the constraints obtained at LHC exclude such particles with masses below roughly 1TeV. In conventional cosmology heavier LSPs would have too high energy density and overclose the Universe. In modified gravity the expansion regime is different and the density of LSPs can be considerably smaller. We have shown that in  $R + R^2$  theory particle kinetics is noticeably modified and the frozen density of heavy LSPs would be strongly diminished. They become viable candidates for dark matter if their mass is about 1000 TeV.

**Primary author:** Dr ARBUZOVA, Elena (Dubna State University and Novosibirsk State University)

**Presenter:** Dr ARBUZOVA, Elena (Dubna State University and Novosibirsk State University)

**Session Classification:** Modern problems in nuclear and elementary particle physics