Long multiplets in supersymmetric mechanics

Stepan Sidorov

BLTP JINR
Joliot-Curie, 6
Dubna, Russia

Joint work with: Evgeny Ivanov

The "long" indecomposable N=2, d=1 multiplet (2, 4, 2) defined in [JHEP 1507 (2015) 043] as a deformation of the pair of chiral multiplets (2, 2, 0) and (0, 2, 2) by a number of the mass-dimension parameters is described in the superfield approach. We present its most general superfield and component actions, as well as a generalization to the case with the superfields of the opposite Grassmann parities and dimensionless deformation parameter. A superfield with spin s contains 2s long multiplets and two short multiplets (2, 2, 0) and (0, 2, 2). The N=4, d=1 generalization of the N=2 long multiplet in the superfield approach is also considered.