



LOW-ENERGY DESCRIPTION OF DARK SP(4) THEORIES

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#170



- INVESTIGATE VIABILITY OF STRONGLY INTERACTING MASSIVE PARTICLES (SIMPS)
 - SELF-INTERACTING DARK MATTER ($2 \rightarrow 2, 3 \rightarrow 2$)
 - STRONG COUPLING AND MASS $\sim O(\text{MEV})$
- DM ABUNDANCE REGULATED BY NUMBER CHANGING PROCESS $3 \rightarrow 2$ IN DM SECTOR ONLY
- DM COUPLES TO SM
 - U(1) MASSIVE GAUGE FIELD (KINETIC MIXING)
- SIMPS PRODUCED BY CHIRAL SYMMETRY BREAKING
 - DEGENERATE AND NON-DEGENERATE FERMIONS
 - SIMPS=GOLDSTONE BOSONS=DM COMPOSITE STATES