

$$M_{V_2} = M_{V^\pm} = M_{V_1} + 100 \text{ GeV}$$

$$M_S = 300 \text{ GeV}, \lambda_{HS} = 0.1, \lambda_{VS} = 0.1$$

Relic Density ( $\Omega h_{V_1}^2 + \Omega h_S^2$ )



overabundance  
non physical

—  $\Omega h^2$  PLANCK measurement

$M_{V_1} \text{ (GeV)}$

