

Exercise

(11) For fixed masses of the four particles on the SUSY backbone, find a function $f(q^\mu, l_{\text{near}}^\mu, l_{\text{far}}^\mu)$ that is zero on the surface of the samosa, and is non-zero elsewhere.

[Hint: I suggest you try to solve for the invisible LSP momentum as a linear combination of the three visible four-momenta q^μ , l_{near}^μ , l_{far}^μ and a fourth four-vector that is a totally antisymmetric combination of them $\Omega_\mu = \epsilon_{\mu\nu\sigma\rho} q^\nu l_{\text{near}}^\sigma l_{\text{far}}^\rho$. Then see under what conditions this solution is meaningful.]