

Universidad del País Vasco Euskal Herriko Unibertsitatea The University of the Basque Country

Seminarios de Física Teórica Fisika Teorikoa: Hitzaldiak

On BPS vortex bound states.

Alberto Alonso Izquierdo

Universidad de Salamanca

Abstract Bound states, where scalar and vector bosons are trapped by BPS vortices are investigated in the Abelian Higgs model with a critical ratio of the couplings. A class of internal modes of fluctuation around cylindrically symmetric BPS vortices is characterized mathematically, analysing the spectrum of the second-order fluctuation operator when the Higgs and vector boson masses are equal. A few of these bound states with low values of quantized magnetic flux are described fully, and their main properties are discussed.

Seminar Room, Dept. of Theoretical Physics, Corridor 4.-2. Wednesday, Nov. 11th, 2015 Time:11:40 am