

Critical solutions of the Einstein-Yang-Mills system

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Abstract

Many of the hitherto studied static, spherically symmetric solutions of the EYM (+Higgs etc.) system depend on parameters like mass ratios, cosmological constant etc. The parametric families of solutions exist usually only in certain limited intervals of the parameters. It is an interesting problem to determine the boundary points of the existence region and the nature of the corresponding solutions. While no general theory is available some empirically found mechanisms will be discussed.