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A new look at Dirac's model for magnetic charge

Abstract

In this I review Dirac approach to magnetic charge which involves the singular Dirac string potential. I show how this gives rise to the Dirac quantization condition and how the system of a magnetic charge plus electric charge (a Thomson dipole) carries a field angular momentum despite having no moving parts. I then show that there are some long overlooked features of the Dirac string potential which strongly call into question the existence of magnetic charge.

3:00 p.m. – 4:30 pm, Friday, February 10th, In-Person: McLane 162