New Paper: Magnetic Monopoles and Duality Symmetry Breaking in Maxwell's Electrodynamics

Source: http://sci.tech−archive.net/Archive/sci.physics.particle/2005−08/msg00064.html

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- *Date*: Thu, 25 Aug 2005 02:19:03 GMT

Hello to all:

I wanted to let you know about my new paper just posted at http://arxiv.org/abs/hep−ph/0508257, titled Magnetic Monopoles and Duality Symmetry Breaking in Maxwell's Electrodynamics.

This paper summarizes the main direction of my research over these past eight months.

The abstract is as follows:

It is shown how to break the symmetry of a Lagrangian with duality symmetry between electric and magnetic monopoles, so that at low energy, electric monopole interactions continue to be observed but magnetic monopole interactions become very highly suppressed to the point of effectively vanishing. The "zero−charge" problem of source−free electrodynamics is solved by requiring invariance under continuous, local, duality transformations, while local duality symmetry combined with local U(1)_EM gauge symmetry leads naturally and surprisingly to an SU(2)_D duality gauge group.

I would be interested in any feedback, public or private, that you may wish to provide.

Sincerely,

Jay R. Yablon

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    - ◊ *From:* CF Diether

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