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# Attractive and repulsive Yang-Mills--Higgs magnetic monopoles on $S^3$

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## Abstract

An  $SO(3)$ -gauged Higgs model on  $\mathbb{R}^3$  is proposed that, like the Abelian Higgs model on  $\mathbb{R}^2$ , features both attractive and repulsive phases, though unlike the latter its solutions do not saturate the topological lower bound. What distinguishes this model is that its energy is stabilised by the "Higgs analogue of the Chern-Pontryagin" charge, rather than the usual "Higgs-Chern-Pontryagin" charge which is a dimensional descendant of the Chern-Pontryagin charge.

