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## **Gauged merons**

We construct new class of regular soliton solutions of the gauged planar Skyrme model on the target space  $S^2$  with fractional topological charges in the scalar sector. These field configurations represent Skyrmed vortices, they have finite energy and carry topologically quantized magnetic flux  $\Phi = 2\pi n$  where n is an integer. Using a special version of the product ansatz as guide, we obtain by numerical relaxation various multimeron solutions and investigate the pattern of interaction between the fractionally charged solitons. We show that, unlike the vortices in the Abelian Higgs model, the gauged merons may combine short range repulsion and long range attraction. Considering the strong gauge coupling limit we demonstrate that the topological quantization of the magnetic flux is determined by the Poincar\'{e} index of the planar components  $\phi_{\perp} = \phi_1 + i\phi_2$  of the Skyrme field.

**Primary authors:** SAMOILENKA, Albert (Department of Theoretical Physics and Astrophysics, BSU Minsk); Prof. SHNIR, Yakov (BLTP, JINR)

Presenter: SAMOILENKA, Albert (Department of Theoretical Physics and Astrophysics, BSU Minsk)

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