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## Hiperbolicity and Stability in the generalized Proca $SU(2)$ theory

*Thursday 13 November 2025 14:00 (25 minutes)*

We study the well-posed 1+1 evolution of self-interacting  $SU(2)$  vector fields minimally coupled to gravity within the framework of the 't Hooft-Polyakov magnetic monopole configuration in an astrophysical context. We found a counterexample in which self-interacting vector fields retain a well-posed initial value problem formulation. Also the stability of the black hole solution with non abelian charge is addressed.

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