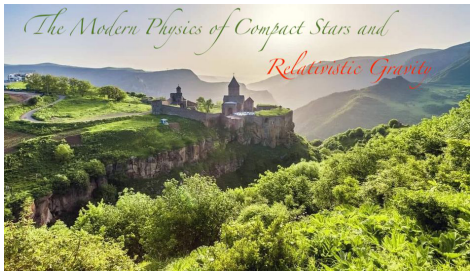

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Ferromagnetic neutron stars in scalar-tensor theories of gravity

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Ferromagnetic spin ordering can take place in neutron stars. This phase transition
alters the neutron star equation of state. Here, applying the scalar-tensor theories of gravity, we investigate the structure of neutron stars which are in the ferromagnetic phase. Considering the equation of state of ferromagnetic neutron matter with Skyrme-type interactions at zero temperature and using the scalar-tensor theories of gravity with sufficiently negative coupling constant, we explore the spontaneous scalarization in ferromagnetic neutron stars.

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