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Diamagnetic-like states in self-gravitating fluids in curved spacetimes[1] FELIPE ASENJO, Universidad Adolfo Ibaez — It is shown that a self-gravitating fluid can be casted in a plasma-like formalism when its own gravity is a perturbation of a given spacetime background. In this case, the scalar part of the perturbed metric acts as an electric field, while the vectorial parts behave as an effective magnetic field. This allow us to find equilibrium solutions where the self-gravitating fluid behaves as an effective diamagnetic plasma. Thus, it can be shown that the gravitational field of the fluid can have analoguos properties to a superconducting medium.

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