

Poisson type conformastat spherically symmetric spacetimes

Static spherically symmetric solutions of the Einstein's field equations in isotropic coordinates from Newtonian potential-density pairs are investigated. The approach is used in the construction of a spherical matter distribution made of a perfect fluid starting with a seed potential-density pair corresponding to a massive spherical dark matter halo model with a logarithm potential. Moreover, the geodesic motion of test particles in stable circular orbits around such structures is studied. The models considered satisfy all the energy conditions.

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