

STATIC PERFECT FLUID BALLS
WITH GIVEN EQUATION OF STATE
AND WITH COSMOLOGICAL CONSTANT

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S u m m a r y

The solutions of Einstein's field equations with cosmological constant for a static and spherically symmetric perfect fluid are analyzed. After showing the existence and uniqueness of a regular solution at the center, the extension of this solution is discussed. Then the existence of global solutions with a given equation of state and the cosmological constant bounded by $4\pi\rho_b$, where ρ_b is the boundary density (given by the equation of state) of a perfect fluid ball, is proved.