ASTR2013: Foundations of Astrophysics
Week 12
Turbulence and Magnetic Fields in Galaxies
Tutorial

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21st Oct 2019

Sedov-Taylor Phase of Supernova Explosion

Question:

Using dimensional arguments and assuming spherically symmetric three-dimensional explosion, find the Sedov-Taylor solution for the radius of an expanding supernova remnant as a function of time, given that energy released during explosion is E (assume conserved) and the density of the surrounding medium is ρ_0.