

P142 - Fall 2007 - Problem Set 3

- ① The gravitational field \vec{g} is the force per unit mass on a test mass. For a point mass m at the origin, the gravitational field at some position \vec{r} is

$$\vec{g} = -\frac{Gm}{r^2} \hat{r}$$

For a spherical Gaussian surface surrounding mass m , determine the gravitational analog of Gauss' Law.

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