

Equivalence Principle is not Correct

Abstract: It is found that mass and time are absolute quantities. If the psuedo force is acting, then the mass of the body is constant at all instants of time. We can distinguish the type of force acting on the body. Therefore equivalence principle is not correct.

Rest and motion are relative. It is proved that mass and time are absolute quantities.

The variation of mass of the body in the gravitational field is given by

$$m = m_0 / (1 - (1/2)(v/c)^2)$$

This is the equation for gravitational mass.

The expression for inertial mass of the body due to inertial force is given by

$$m = m_0 / \sqrt{1 - (v/c)^2}$$

Both equations indicates that gravitational mass is not equal to inertial mass. Therefore inertial acceleration is not equal to gravitational acceleration.

In special relativity, rest and motion are relative. Also mass and time are relative quantities. The gravitational force experienced by a body is same as psuedo force experienced by an observer in an accelerated frame of reference.

But it is proved that mass and time are absolute quantities. Therefore it is possible to detect the motion of the body by measuring its mass. If the psuedo force is acting then the mass of the body is constant at all instants of time. If the gravitational force is acting then the mass of the body increases with time. Therefore we can distinguish the type of force acting on the body. This reveals that the equivalence principle is not correct.

References:

1. Wikipedia
2. viXra:1802:0279
- 3: viXra:1112:0061