FIZIX KORNER

With Peter Lindemann

Albert Einstein was a brilliant man. He turned the scientific world on its ear with his mathematical representations and his theories. $E=MC^2$ is probably the most famous equation in science today and is a perfect illustration of his theorem of equivalence. It states that energy equals mass times the speed of light squared.

The assumptions this is built on must be true at all times for the equation to be a representation of reality. "E" stands for energy and the assumption is that all forms of energy, such as electricity (measured in kilowatt hours), mechanical energy (measured in horsepower hours), and heat (measured in calories) are all equivalent. "C" stands for the speed of light which is assumed to be constant and the absolute maximum velocity. Logically, it's all very brilliant, but does it represent the actual behavior of physical reality? I say it does not.

At the heart of the problem is the equivalence theorem. It brings us conversion factors such as the formula for converting electrical power into mechanical power where 746 watts = 550 foot pounds per second = 1 horsepower. This conversion formula is not a scientific truth, it merely represents the upper limit of the efficiency of the electro-mechanical device upon which the measurements were take.

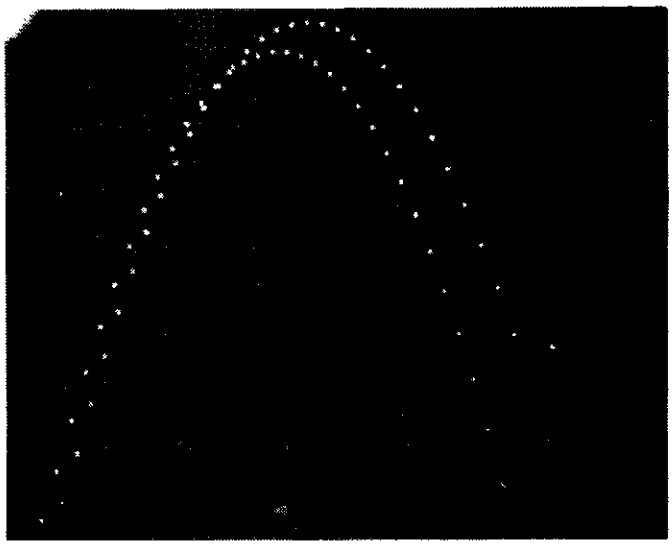
Relativity theory is based on these equivalence assumptions. If we can disprove the assumption the theory is based on, the theory falls. A mountain of flawless logic, if built on a false premise, is just a worthless heap.

One of the cornerstones of relativity theory is that inertial mass is equivalent to gravitational mass. There is a certain logic to this and a fair amount of experimental evidence to support it, so let's look at this assumption very closely so that I may show how it is *not* universally true. Inertial mass is derived from the formula F=MA where "F" is a mechanical force pushing on the "M" or mass of an object causing it to "A" accelerate, that is , move at an ever increasing rate of speed. We can say that the inertial mass of an object is its resistance to a change in motion when a force is applied to it. Gravitational mass is what we usually call the weight of an object and is measured by placing the object on a scale. The value for the inertial mass of an object is discovered in a dynamic framework where the object is in motion, where as the value for the gravitational mass of an object is discovered in a static framework where the object is at rest. The question is, is the weight of an object equal to its resistance to acceleration? Questions like this are at the heart of what science is all about. If an experiment can show that a uniform force applied to two identical objects that weigh the same cause them to accelerate at different rates, the Einsteinian relativity is not true in the universal sense, or at least has some severe public relations problems.

Enter Bruce DePalma. In 1972, Bruce DePalma first ran one of the most remarkable experiments in the history of physics. Its implications are so profound that only a handful of scientists have grasped them fully. And you can see for yourself because this experiment may be run in your back yard for under 100^{00}.

DROPPING THE SPINNING BALL

The photograph is a stroboscopic picture of the trajectory taken by two identical 1" diameter steel balls launched into the air by a uniform force and acted upon by gravity. One of them is rotating at 27,000 RPM in the vertical axis and the other is not rotating. Rotating the ball does not change its weight, but does change its gravitational acceleration suggesting that its inertial mass has changed in the vertical axis. The strobe is flashing at 60 flashes per second and is synchronized with the powerline.



The apparatus for launching the balls is simple and can be made from an electric router that turns at high speed (at least 24,000 RPM). Fashion 2 small cups that hold the balls with a clearance of a few thousandths of an inch. Mount one cup on the shaft of the router motor and mount the other cup clamped on the side of the motor so that the two cups are at equal heights. Place 1 ball in each cup, start the motor and bring it up to speed. Then holding the motor with both hands, thrust the balls into the air. The balls will behave like those in the picture shown here, with the rotating ball rising higher and falling faster than its non-rotating twin.

Build this experiment and take it to the physics department at your local university and ask them what it means. The fact that rotating the ball alters its inertial mass is not predicted by any theory and is not covered by any text book. In fact, it is assumed that rotating the ball will make NO DIFFERENCE AT ALL.

So much for assumptions... and the theories based on them.

Build this experiment and see for yourself. Albert Einstein was a brilliant man, but his theories are wrong.