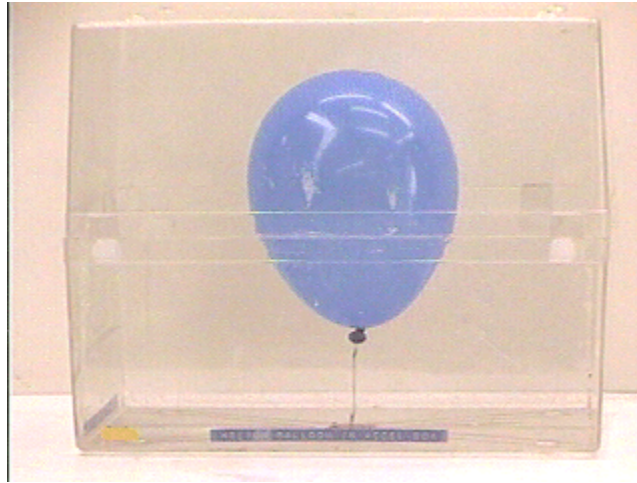


Question #71

A helium balloon is tethered to the bottom of a plastic container, as seen in the photograph below.



Whenever anything accelerates there may be inertial or other forces that cause relative motion. For example, the inertia of the balloon may influence it to remain at rest when the container is moved. Or perhaps air currents may blow the balloon around, especially because it contains helium and is therefore lighter than the surrounding air. So here is the question.

When the container is given a sharp push to the right, what will the helium balloon do as the container is accelerating? In fact, the container will then slow down due to friction with the table top, so what will the balloon do as the container is decelerating?

When the container is accelerating to the right, the balloon will:

- (a) move to the front of the container.
- (b) move to the rear of the container.
- (c) remain in the center of the container.

When the container decelerates to a stop, the balloon will:

- (a) move to the front of the container.
- (b) move to the rear of the container.
- (c) remain in the center of the container.

Click here for [Answer #71](#) after July 2, 2001.

[Question of the Week](#)

[Outreach Index Page](#)

[Lecture-Demonstration Home Page](#)



For questions and comments regarding the *Question of the Week* contact [Dr. Richard E. Berg](#) by e-mail or using phone number or regular mail address given on the [Lecture-Demonstration Home Page](#).