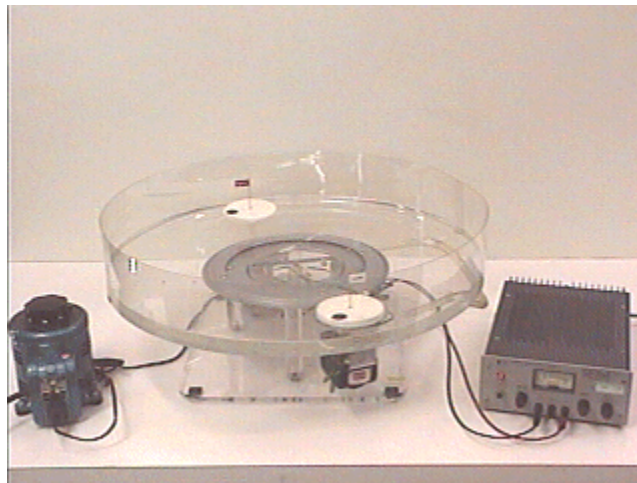


Question #89

A circular tank of water, seen in the photograph below, rotates counterclockwise. While it is rotating, a water pump pumps the water out of one hole in the bottom of the tank, and into another hole on the opposite side of the tank. The holes are located by styrofoam discs that remain directly above the holes and are marked by flags. The hole out of which the water is pumped, marked by the white flag, would be a "low," and the hole where the water re-enters the tank, marked by a red flag, would be a "high."



When the tank is rotating while the water is being pumped, what will the flag at the "low" do? Will it rotate in the frame of reference of the rotating tank? Will it rotate in the fixed frame of reference? If so, in which direction will it rotate? Let us concentrate on one aspect of this question this week.

When the tank is rotating and the pump is pumping, in the fixed frame of reference the styrofoam disc located at the "low" will:

- (a) rotate clockwise.
- (b) rotate counterclockwise.
- (c) remain at rest.

Click here for [Answer #89](#) after November 5, 2001.

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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](#).