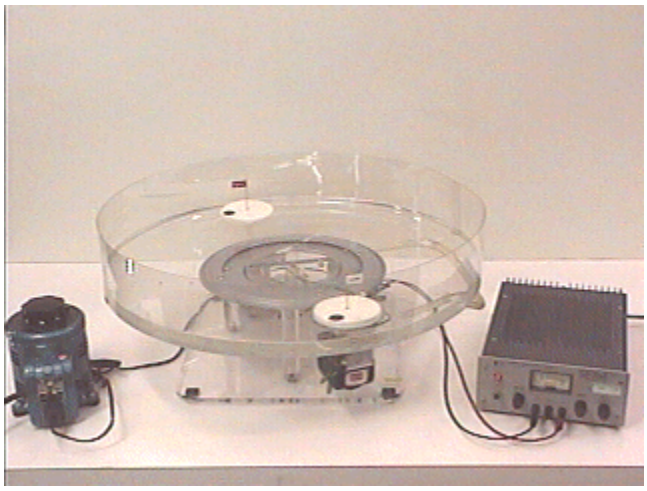
Answer #89

The answer is (b): the flag will rotate counterclockwise in the frame of reference of the rotating water tank. In fact, it will also rotate counterclockwise as viewed in the fixed frame of reference, as seen in an mpeg video by clicking on the photograph below.



This is a model of what happens in the vicinity of a low-pressure area in the Northern Hemisphere of the earth, such as normal weather related "lows" as well as tornadoes and hurricanes. Any "projectile," such as a cannonball or a ballistic missile, or even moving air, curves to the right when it moves in the Northern Hemisphere, according to the Coriolis effect. When air streams curve slightly to the right as they are pulled into a low pressure region counterclockwise motion of the air around the low pressure point results. Conversely, if we were to rotate the tank clockwise, simulating the Southern Hemisphere, as seen in this video, the low would experience a clockwise rotation.

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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.