Question #305

An unusual cup, know as the Pythagorean cup, is show in the photograph below. According to Greek folk lore, this cup was designed by Pythagorus to prevent his students from overindulging in beverages that might impair their judgement:

> Invented by the infamous Pythagoras himself, the cup was designed to ascertain his students drink equal amounts of wine, while discouraging indulgence and abuse. Made of clay it holds a certain amount of liquid up to a designated point. Any excess liquid will provoke the loss of the entire contents .....

This is shown in an mpeg video by clicking your mouse on the photograph below.

The question this week is, of course, how is the cup constructed and what is actually happening when the cup is overfilled, leading to possible overindulgence in questionable and possibly sinful drink?

In ascertaining the solution to this problem, you might wish to consider which of the following physics concepts may be applicable (More than one may be selected.):

- (a) Archimedes law.
- (b) Pascal's law.
- (c) Bernoulli's principle.
- (d) The siphon.
- (e) Archimedes screw.
- (f) French's law of partitions.
- (g) The Venturi tube.

Click here for Answer #305 after February 11, 2008.

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.