

MJ-4

Centripetal Force
Water and Mercury
in Rotating Bowl
M-4 S-2



Adjust rotator for zero speed. Place bowl (which already contains the proper amount of water and mercury) on rotator, being certain that the shaft is securely clamped on its flat section.

Increase speed of rotator very slowly (see **warning**) until the mercury band has risen $\frac{1}{3}$ to $\frac{2}{5}$ the way up the bowl, and clamp the speed control in this position. Note that the mercury has risen in preference to water which still remains at the bottom of the bowl. (Water remains in the bottom as long as the image of the cork, as seen from the side, is separated from the cork itself.) With the speed control clamped as above, it is permissible to turn the motor on and off.

Note: The water and mercury are to be left in the bowl. The water should be from $1\frac{1}{2}$ to 2 inches deep in the center, and there should be only a small amount of mercury.

Warning: Do not let loose of the speed control without clamping in position. Rotational speeds should be quite low, never higher than about 3 revolutions/second.