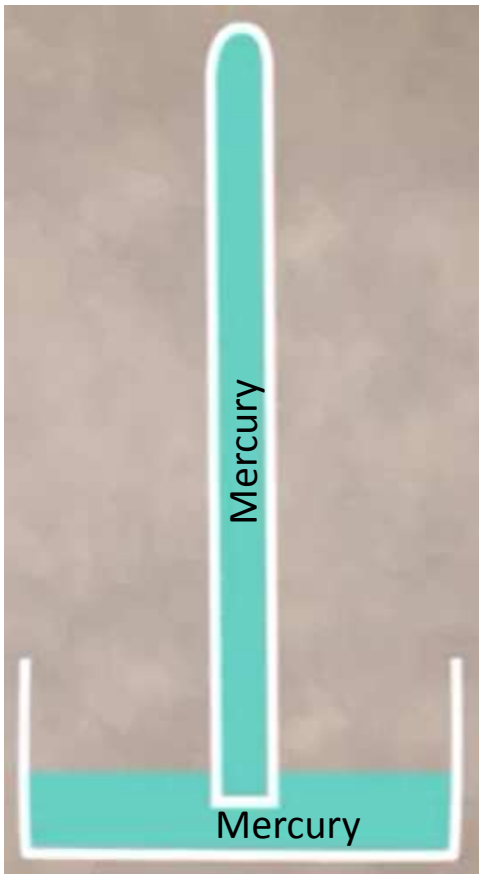
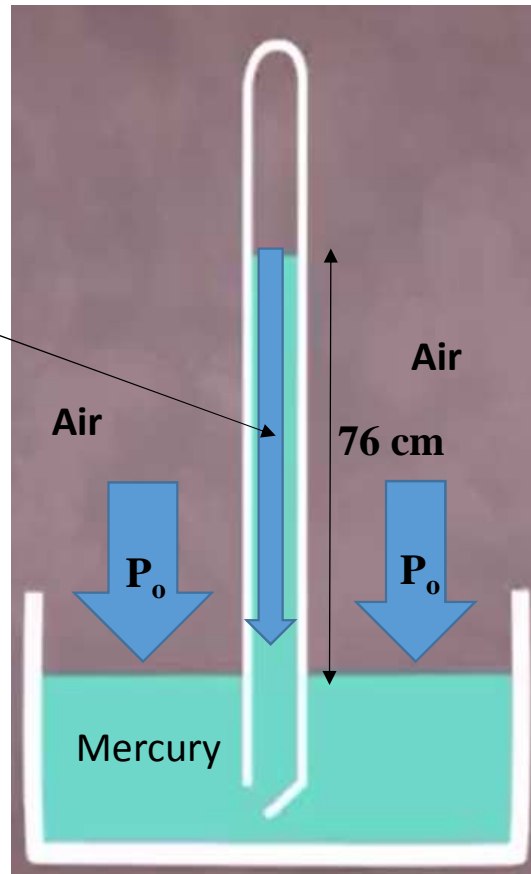


Measuring Pressure

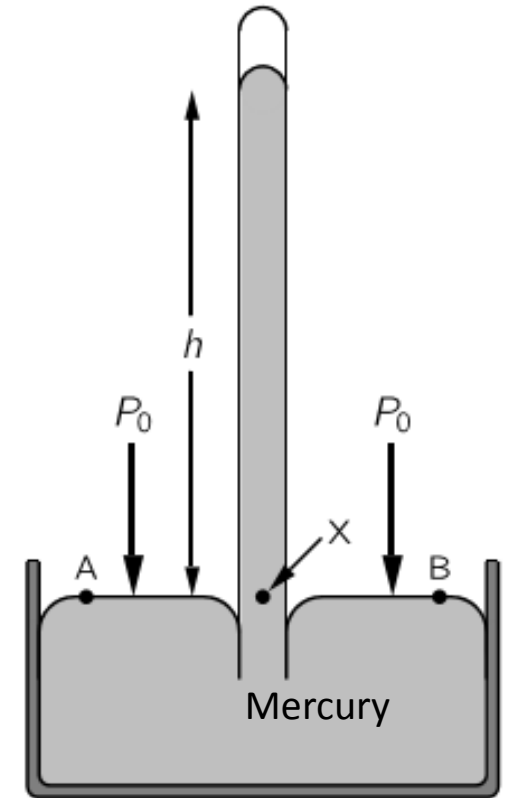
The Simple barometer – Atmospheric Pressure



Pressure due
to mercury



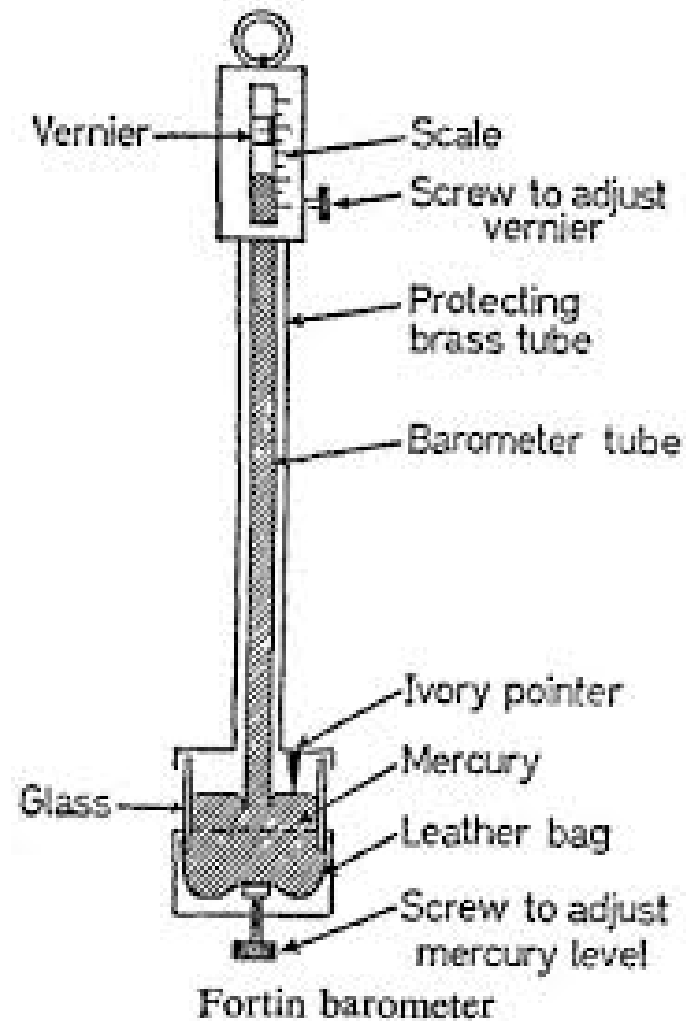
$$P_o = h\rho g$$
$$P_o = 0.76 \times 13600 \times 9.8$$
$$P_o = 1.01 \times 10^5 \text{ N m}^{-2} / \text{Pa}$$



$$1 \text{ Nm}^{-2} = 1 \text{ Pa}$$
$$1 \text{ bar} = 10^5 \text{ Pa}$$

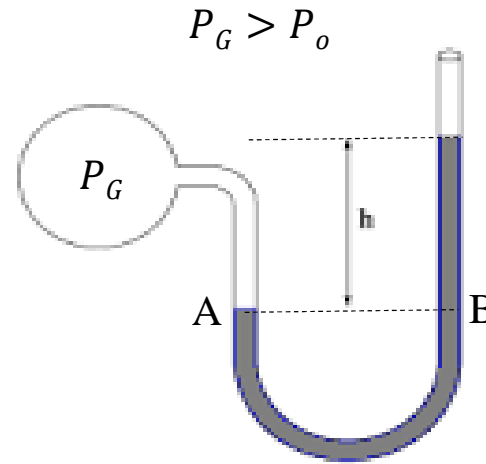
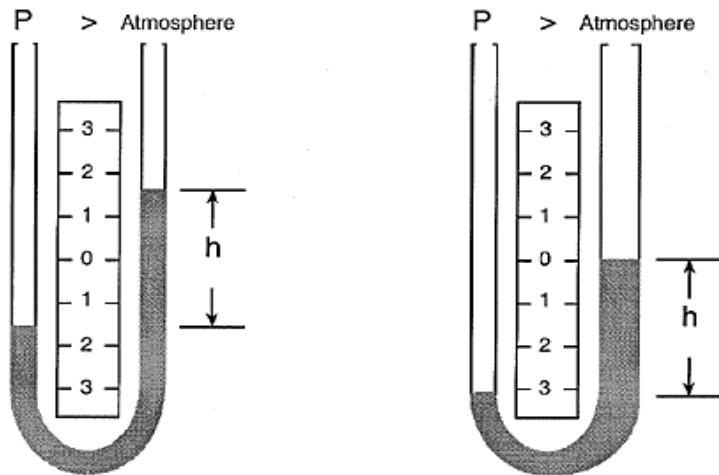
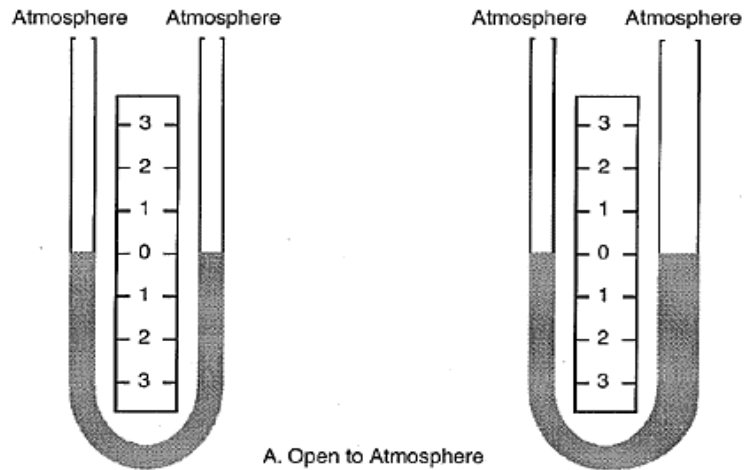
Measuring Pressure

The Fortin barometer – Atmospheric Pressure



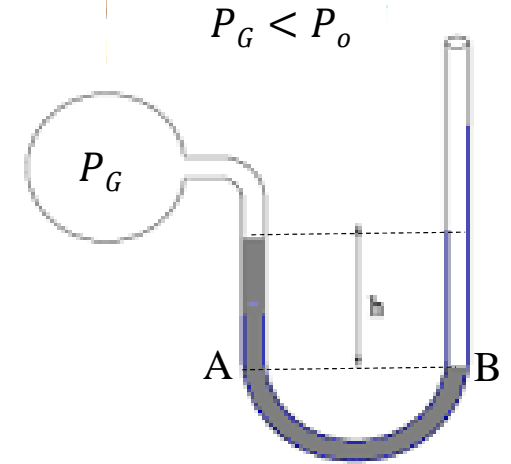
Measuring Pressure

The monometer– Gas Pressure



Pressure at A = Pressure at B
 Pressure at A = P_G
 Pressure at B = $h\rho g + P_o$

$$\therefore P_G = P_o + h\rho g.$$



Pressure at A = Pressure at B
 Pressure at B = P_o
 Pressure at A = $h\rho g + P_G$
 $\therefore h\rho g + P_G = P_o$

$$P_G = P_o - h\rho g$$