The following figures have been corrected:

**Balanced Forces on the Meniscus**

- $F_b$ is the buoyancy force and is directed upward with respect to the Earth’s surface.
- $F_t$ is the surface tension force and is directed along the contact angle ($\theta$) at the edge of the meniscus.
- $F_g$ is the gravity force and is directed downward with respect to the Earth’s surface.
- $P_1$ is the pressure in the fluid applied equally and perpendicular to all surfaces including the meniscus and the inner walls of the conduit and cartridge chamber.
- $P_2$ is the pressure in the air applied equally and perpendicular to all surfaces including the meniscus and the inner walls of the conduit.

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**Fig. 2** The bubble, shown (left) in the upright position and (right) on its side, prevents mixing between the two chambers and is stabilized by a balance of pressure, surface tension, gravity and buoyancy forces.

**Fig. 3** Cross section of small channel showing the bubble dimensions: $R$, radius; $h$, length; $H$, half length.