

**Instructions for using the portable aneroid barometer**  
AOS 330  
Prof. Petty

Aneroid barometers come in many flavors. Some are wall-mounted. Others are portable. The aneroid barometer we will use in this class is portable, and the following instructions apply to this particular instrument only.

1. In order to read accurately, the barometer must be placed on a flat, level surface. The bubble window indicates whether it is level. If necessary, level the barometer by placing some kind of padding (e.g. paper towels) under the low side.
2. Locate the small window marked with a plus and minus sign. There is a fine needle in this window, and there is a mirror behind the needle. Your job will be to center the needle (see further directions below first). In order to read the position of the needle accurately you need to avoid look at it at an angle. This is why the mirror is there: when the needle is exactly lined up with its own reflection, you know you are looking at it dead-center.
3. Turn the large metal knob in the center of the barometer face slowly counterclockwise until the needle is on the 'plus' end of the window. Do not disturb the smaller metal knob on top of the large knob, because it is used for calibration only.
4. Gradually turn the large knob clockwise until the needle is exactly centered. You should close one eye, and use the mirror reflection to make sure you are looking at it dead-center.
5. When the needle is centered, you can read the local pressure off the circular scale using the large needle. It is possible for the needle to go around more than once in order to cover a large range of pressure. Since we are near sea level, you will always read the pressure from the same scale on a given barometer:
  - a) If you are using the smaller barometer 'A' that reads in millibars, you will use the inner scale and attempt to read to the nearest 0.1 mb.
  - b) If you are using one of the two larger barometers ('B' or 'C') that read in inches of mercury, you will use the SECOND scale from the inside, and you should attempt to read to the nearest 0.001".