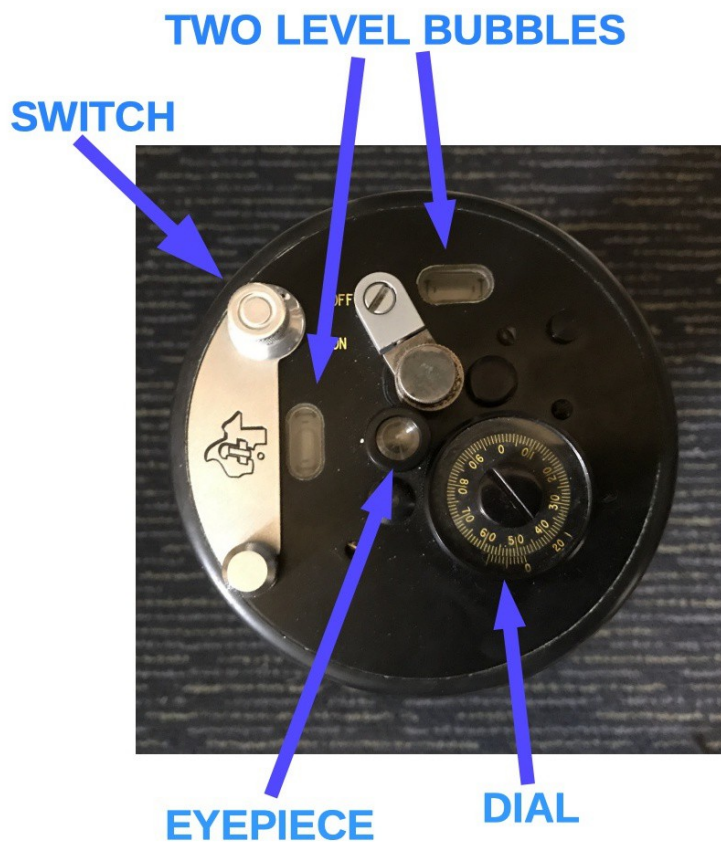


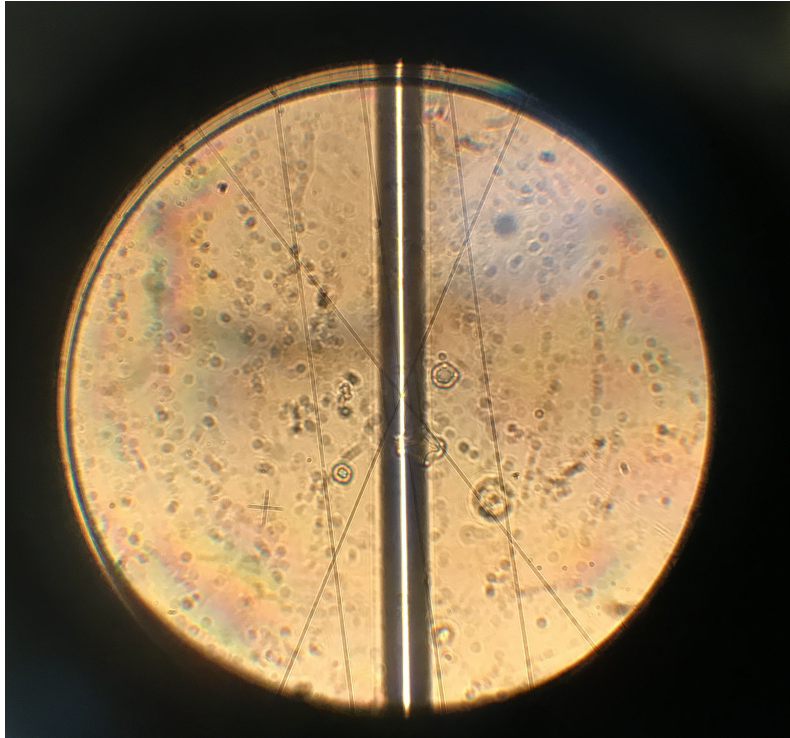
USE OF THE WORDEN GRAVIMETER



1) **LEVEL THE GRAVIMETER:** The gravimeter is placed on its tripod. The tripod must be leveled so that the bullseye level is centered. Center the two levels (longitudinal and transverse) using the knobs on each of the 3 legs. Both level bubbles must be absolutely centered.



2) **TURN ON THE ILLUMINATION:** Place 2 AA batteries (+ end up) in the battery case. Turn on the viewing light. The levels should become illuminated and a lighted line will appear in the eyepiece.



3) **NULL THE DIAL:** Adjust the small dial so that the beam (illuminated line) touches the center of the cross-line. The leading edge of the white beam should just graze the center cross. Always turn the dial such that the illuminated line approaches the center from the same direction. If you over shoot, turn the dial back and approach the center again from the same direction.

4) **READ THE DIAL:** Five significant digits can be read from the dial. The first two (the thousands and hundreds digit) comes a window on the dial. The second two (tens and ones digit) comes from reading the top of the dial. The fifth (tenths) from using the vernier scale at the base of the dial. The number of lines from the reference line to a line matching the vertical line on the dial is the tenths.

5) **RECORD YOUR OBSERVATIONS:** Record the station name, height of the tripod platform, time, and dial reading for each station. The dial reading is in “divisions”.

6) **CONVERT DIAL READINGS (DIVISIONS) INTO MGALS:** multiply the dial reading in “divisions” by the dial constant (labeled on the side of the device) to get a reading in miligals.