

Altimeter Setting

From the user, a value for atmospheric pressure (P) and a station elevation (h) are given. To calculate the altimeter setting, the station pressure must be in units of millibars (mb). To see how to convert station pressure to millibars see the link below:

<http://www.srh.noaa.gov/elp/wxcalc/formulas/pressureConversion.pdf>

Also to calculate the altimeter setting, the station elevation must be in units of meters (m). To convert feet to meter, see the equation below:

$$h_m = 0.3048 \times h_{ft}$$

Then, the altimeter setting can be calculated using the formula below:

$$Alt = (P_{mb} - 0.3) \times \left(1 + \left(\left(\frac{1013.25^{0.190284} \times 0.0065}{288} \right) \times \left(\frac{h_m}{(P_{mb} - 0.3)^{0.190284}} \right) \right) \right)^{\frac{1}{0.190284}}$$

The answer will be in units of millibars (mb), and can be converted to different pressure units with the link above.