Calculation of pressure and temperature for BMP180

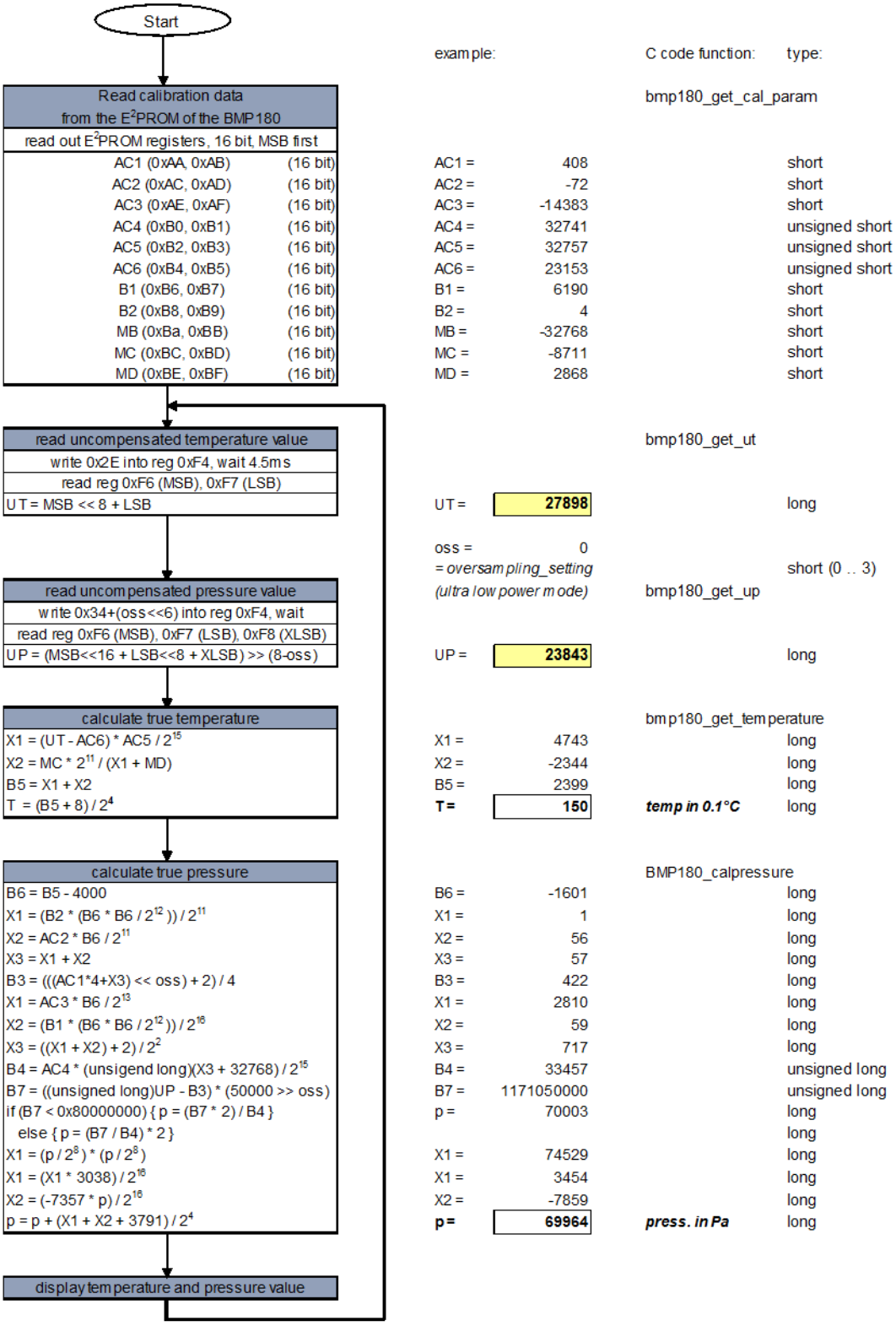

Figure 4: Algorithm for pressure and temperature measurement

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3.6 Calculating absolute altitude

With the measured pressure p and the pressure at sea level p_0 e.g. 1013.25hPa, the altitude in meters can be calculated with the international barometric formula:

$$\text{altitude} = 44330 * \left(1 - \left(\frac{p}{p_0}\right)^{\frac{1}{5.255}}\right)$$

Thus, a pressure change of Δp = 1hPa corresponds to 8.43m at sea level.

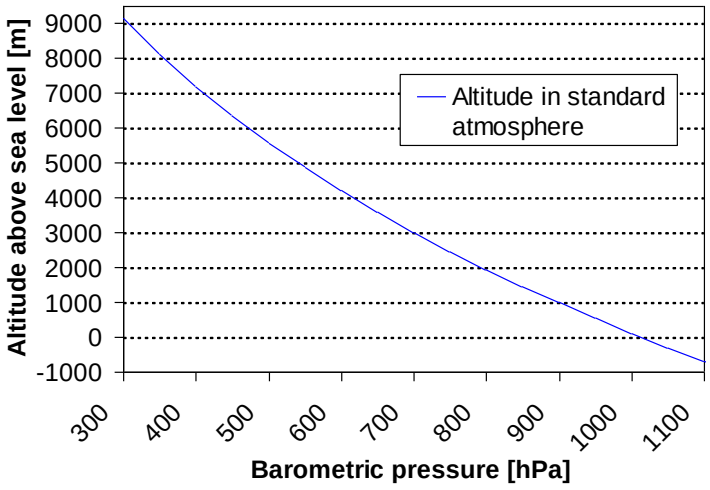

Figure 5**:** Transfer function: Altitude over sea level – Barometric pressure

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