Name 1	Datum:
Name 2	Platz-Nr:

09 - absolute Zero

Calibration of the pressure sensor

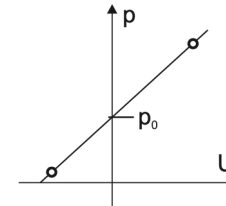Calibration point at ambient pressure

(uncorrected barometer reading)	(temperature at barometer)	(corrected barometer reading)
$p_L=$ mm Hg (t_L)	air temp $t_L=$ °C	$p_L=$ Torr
$p_L=$ Pa	$U_L=$ mV	

Calibration point at low pressure

$p_t=$ mbar	$p_t=$ Pa	$U_t=$ mV

Sensor characteristics: $p = p_0 + CU$:

$p_0=$	$C=$

Determination of the absolute zero

At the temperature of boiling water

$t_K=$ °C	$U_K=$ mV	$p_K=$ mbar

At the temperature of ice water

$t_E=$ °C	$U_E=$ mV	$p_E=$ mbar

Approximation for the temperature of the absolute zero:

$t'_0 =$.....................................

Volume of the empty space / volume of the glass bulb: $V_s/V = \varepsilon = 1 \cdot 10^{-3}$
Cubic expansion coefficient of glass: $\gamma) 1,0 \cdot 10^{-5} °\mathrm{C}^{-1}$
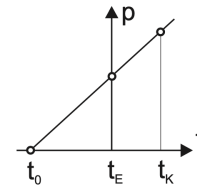
a=	b=	c=

Absolute zero of temperature:

$t_0 =$.....................................

Determination of the temperature of liquid nitrogen

$U_{LN2}=$ mV	$p_{LN2}=$ Pa	$t'_{LN2} =$ °C
corr. coeff A=	$t_{LN2} =$ °C	