



The expected value of 0 K being $-273.15 ^\circ\text{C}$ [1]. This lies well outside of the graphically deduced uncertainty. This is an error of about 30%. This is probably due to a number of unquantified systematic errors.

One factor could be the fact that temperature throughout the air sample wasn't constant, so our reading of temperature may not reflect the actual average value.

Another contributing factor might be a pressure leak - this makes sense as it would decrease the gradient, which, at this level of extrapolation can have significant effects on the x -intercept.

References

- [1] BIPM [2006], *Unit of thermodynamic temperature (kelvin)*, 8 edn. Retrieved 20/6/2018.
URL: <https://www.bipm.org/en/publications/si-brochure/kelvin.html>