Laboratory Report

Phase sensitive experiments and introduction of low temperature physics

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Objectives:

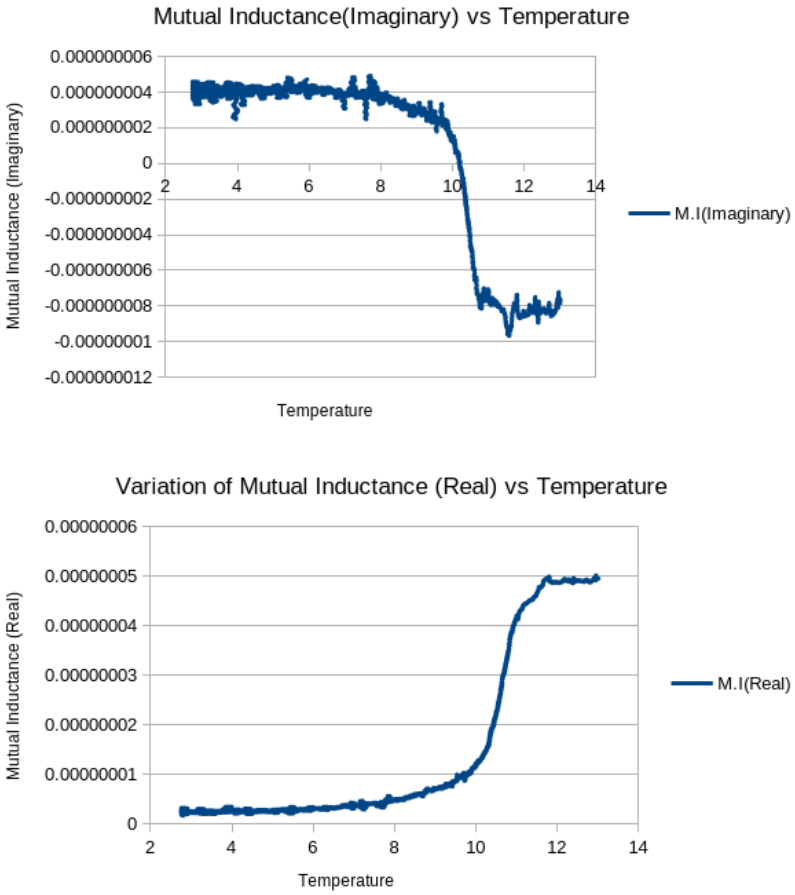
Theory:

Observations:

Finding the Resistance and Inductance of the given coil

Detection of the Critical temperature of the chip

We perform the experiment and get the critical temperature plots as follows



Plot of Mutual Inductance versus the temperature of both parts.

We are getting the critical temperature of 10.213 K in the real part and 10.410K in the imaginary part. But then we were expecting a critical temperature of 11.2 K. What is more surprising is that there is some deviation in the real and imaginary values.