

PHY 4210-01 Senior Lab
Lab P5: Hall Effect in Semiconductors and
Metals

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Abstract

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1 Theory of the Experiment

2 Hall Effect in P-Germanium

2.1 Task 1

2.1.1 Data Analysis and Results

2.1.2 Conclusion

2.2 Task 2

2.2.1 Data Analysis and Results

2.2.2 Conclusion

2.3 Task 3

2.3.1 Data Analysis and Results

2.3.2 Conclusion

2.4 Task 4

2.4.1 Data Analysis and Results

2.4.2 Conclusion

2.5 Task 5

2.5.1 Data Analysis and Results

2.5.2 Conclusion

3 Hall Effect in N-Germanium

3.1 Task 1

3.1.1 Data Analysis and Results

3.1.2 Conclusion

3.2 Task 2

3.2.1 Data Analysis and Results

3.2.2 Conclusion

3.3 Task 3

3.3.1 Data Analysis and Results

3.3.2 Conclusion

3.4 Task 4

3.4.1 Data Analysis and Results

3.4.2 Conclusion

3.5 Task 5

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3.5.1 Data Analysis and Results

3.5.2 Conclusion

4 Hall Effect in Pure Germanium

4.1 Determining Band Gap in Pure Ge