Perturbation Theory
Stark Effect

Quantum Mechanics Research Group

November 24, 2025

Abstract

Approximate methods in quantum mechanics.

1 Introduction

This report presents computational analysis of perturbation theory.

2 Mathematical Framework

perturbation_theory_plot1.pdf

Figure 1: Primary analysis results.

3   Secondary Analysis

perturbation_theory_plot2.pdf

Figure 2: Secondary analysis comparison.

4 Parameter Study

perturbation_theory_plot3.pdf

Figure 3: Parameter sensitivity analysis.

5 2D Visualization

perturbation_theory_plot4.pdf

Figure 4: Two-dimensional field visualization.

6 Distribution Analysis

perturbation_theory_plot5.pdf

Figure 5: Statistical distribution analysis.

7   Time Series

`perturbation_theory_plot6.pdf`

Figure 6: Time series visualization.

8   Results Summary

9   Conclusions

This analysis demonstrates the computational approach to perturbation theory.