

CHAPTER OVERVIEW

6: Perturbative Approaches

This chapter discusses several perturbative approaches to problems of quantum mechanics, and their simplest but important applications including the fine structure of atomic energy levels, and the effects of external dc and ac electric and magnetic fields on these levels. It continues with a discussion of the perturbation theory of transitions to continuous spectrum and the Golden Rule of quantum mechanics, which naturally brings us to the issue of open quantum systems-to be discussed in the next chapter.

[6.1: Time-independent Perturbations](#)

[6.2: The linear Stark Effect](#)

[6.3: Fine Structure of atomic Levels](#)

[6.4: The Zeeman Effect](#)

[6.5: Time-dependent Perturbations](#)

[6.6: Quantum-mechanical Golden Rule](#)

[6.7: Golden Rule for Step-like Perturbations](#)

[6.8: Exercise Problems](#)

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