

NORTHERN ILLINOIS UNIVERSITY

PHYSICS DEPARTMENT

Physics 383 – Modern Physics

Fall 2023

Problem Set #6

Problem Set Due: Thurs., Oct. 19, 2023

Read Krane: Chapter 6.4-6.5, 7.1-7.2

There will be a Quiz #2 on Tuesday, October 24

1. **OpenStax University Physics Vol. 3: Section 1.3:** Problem 39
2. **OpenStax University Physics Vol. 3: Section 1.4:** Problem 47
3. **OpenStax University Physics Vol. 3: Section 1.5:** Problem 55

Chapter 6

4. **Krane: Problem 25** page 204
5. **Krane: Problem 28** page 204
sketch the energy level transition for each case (see Fig. 6.20).

Chapter 7

6. **Krane: Problem 1** page 233 (just show calculation)
7. **Krane: Problem 2** page 233 (sketch the probability density)
8. **Krane: Problem 4** page 233 (draw figure—see Fig. 7.3)