

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Department of Physics

Physics 8.012

Fall Term 2005

PROBLEM SET 4

Due: Friday, October 14 at 4:00pm.

Reading: Kleppner & Kolenkow, Chapter 3. This week's problems primarily cover Sections 3.1–3.4 and Note 3.1 (at end of chapter).

0. **Collaboration and discussion.** Please give a brief statement at the top of your homework telling us the names of all the students with whom you discussed the homework problems.
1. Kleppner & Kolenkow, Problem 3.1 (10 points)
2. Kleppner & Kolenkow, Problem 3.2 (15 points)
3. Kleppner & Kolenkow, Problem 3.3 (10 points)
4. Kleppner & Kolenkow, Problem 3.4 (10 points)
5. Kleppner & Kolenkow, Problem 3.5 (10 points)
6. Kleppner & Kolenkow, Problem 3.6 (15 points)
7. Kleppner & Kolenkow, Problem 3.7 (15 points)
8. Kleppner & Kolenkow, Problem 3.14 (15 points)