

## Mechanics and Special Relativity, Spring 2006

### Homework Assignment # 4.5

#### Lectures and Reading Assignments:

Readings are from “*An Introduction to Mechanics*” by Kleppner and Kolenkow.

- Lec 15, 2/24 (Fri): Conservation of Momentum. Center of Mass Coordinates. **Sec. 3.3 (pp. 122–130)**.
- Lec 16, 2/27 (Mon): Impulse. Momentum and the Flow of Mass. **Sec. 3.4, 3.5 (pp. 130–135)**.
- Lec 17, 3/1 (Wed): Rocket Motion **Sec. 3.5 (pp. 135–139)**.

#### Problems:

There is no mandatory problem assignment this week. To get ready for the prelin (Thu 3/2), you are advised to practice solving problems from Chapters 1 and 2 of Kleppner and Kolenkow. Here are some good ones: 2.6, 2.17, 2.18, 2.25, 2.32. Also, working through the examples discussed in the book is generally very useful. I especially recommend examples 1.13, 1.16, 2.4, 2.7, 2.8, 2.14, and 2.15. Finally, practice prelin will be posted on the web, and will be discussed by Sarah in the review session, time and location TBA.