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HOMEWORK ASSIGNMENT #7 Physics 404 Fall 2013

Due date: Tuesday, Nov. 5 **Deadline:** Thursday, Nov. 7

1. (10) 6.5 3-state model and the role of zero-point energy.

2. (5) 6.12 Estimate of temperature of interstellar clouds.

- 3. (15) 6.22 b-e Paramagnet with n states. We did part a in class. Part f is a straightforward grind.
- 4. (10) 6.41 2D Maxwell speed distribution. We did most of this in class. Just find the mean, the mode, and the rms speeds.
- 5. (10) 6.42 Free energy of N SHO's. In part b, comment on the meaning of the two terms.