

Material for Week 7

Physics 4488/6562: Statistical Mechanics

<https://sethna.lassp.cornell.edu/Teaching/562/>

Exercises due Fri. Mar 11

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NOTE: The prelim will be distributed this Friday, and will be due Monday March 14. The exercises this week are due this Friday, not Monday.

Monday

In-class question: [7.3](#) *Phase-space units and the zero of entropy*

Wednesday

Read: Chapter 7, Sec. 7.6 (Black body radiation and Bose condensation).

Pre-class question: [7.17](#) *Eigenstate thermalization*

In-class question: [7.22](#) *Light baryon superfluids*

Friday

Read: Chapter 7, Sec. (7.7) (Metals and the Fermi gas).

Pre-class question: [7.6](#) *Spin density matrix*

In-class question: [7.2](#) *Phonons and photons are bosons*

Monday

Read: PRELIM DUE.

Exercises for everyone (4488 and 6562)

- [7.1](#) *Ensembles and quantum statistics*. Don't be misled by the multiple choice format. You will likely need to do a complete solution to answer the questions

Exercises for Graduate Course (6562 only)

- [7.25](#) *Quantum measurement and entropy*.