Solar–Terrestrial Physics I

Counsel: Tuesday & Thursday, 11:30 - 13:00

Office: Room 532 in the Applied Science Bldg.

Homepage: //solardynamicslab.khu.ac.kr/~magara

Goals:

- Understand basic properties & generation mechanisms of solar dynamic phenomena
- Understand interactions between solar dynamic phenomena and the magnetosphere of the Earth
- Understand several basics of plasma physics

Lecture types:

Theory: 60%, Practical Training: 40%

Instruction methods:

Discussion, Audi-visual Education, Presentation

Evaluation methods:

Mid-term Exam... 30%, Final Exam... 30%,
Homework/Report... 30%, Attendance... 10%

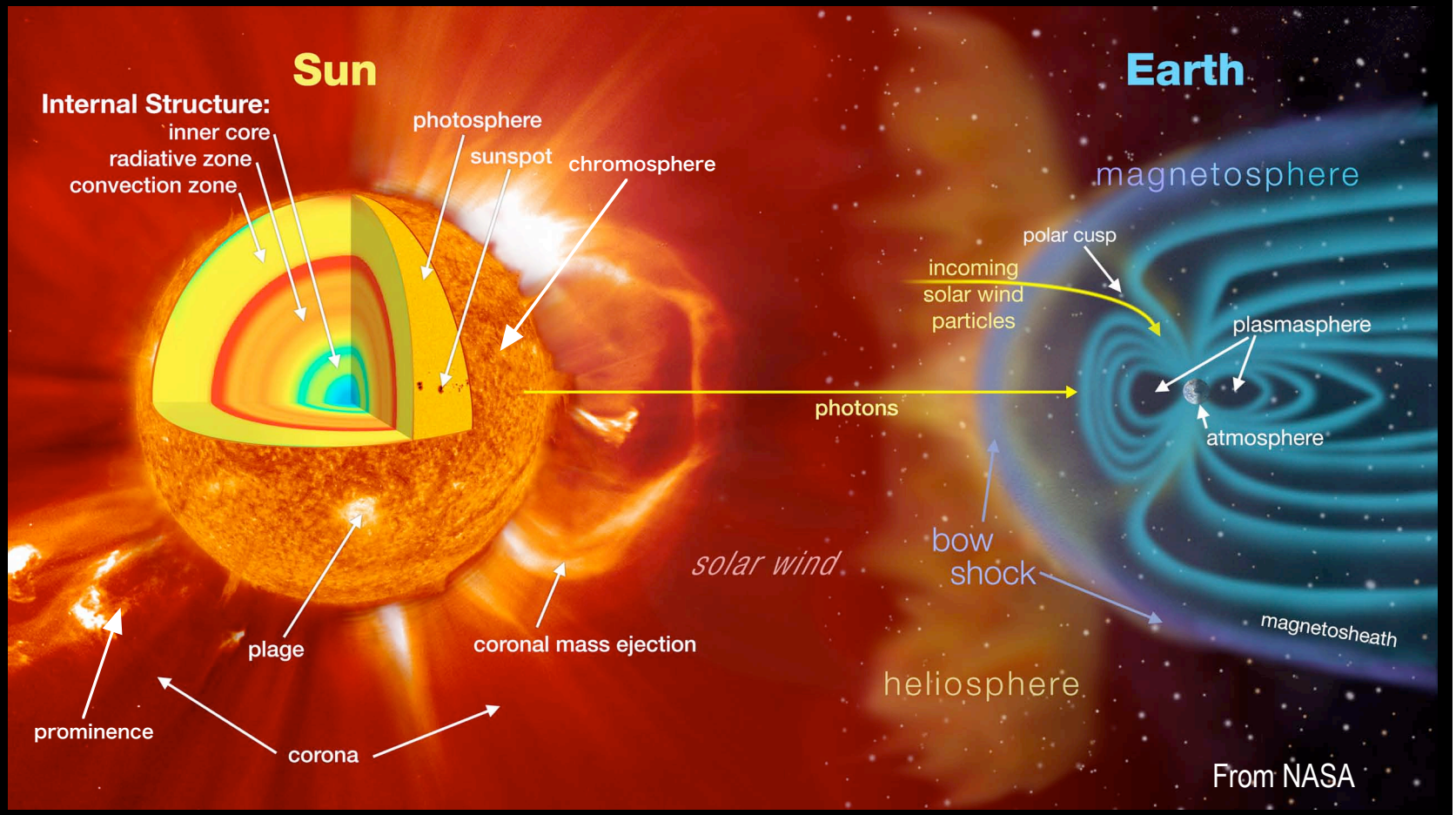
Textbooks:

- Introduction to Space Physics (M.G. Kivelson & C.T. Russell, Cambridge University Press, 1995, 9780521451048)
- The Sun: An Introduction (Michael Stix, Springer, 2004, 9783540207412)
- Solar Magnetohydrodynamics (E.R. Priest, D. Reidel Publishing Company, 1984, 9789027718334)
- Plasma Physics (P.A. Sturrock, Cambridge University Press, 1994, 9780521448109)
- Gas dynamics (F.H. Shu, Univ Science Books, 1992, 9780935702651)

Assignment:

Each student should submit a report, in addition to taking mid-term and fina exams.

Sun–Earth system



When, where, and how do solar dynamic phenomena occur? => **solar physics**

When, where, and how do solar dynamic phenomena affect the Earth? => **space weather**