GG 105: Review Sheet
Midterm Exam – October 3, 2017

The midterm exam will be comprehensive and multiple-choice. This review sheet is a guideline only – there may be questions on the exam not specifically addressed here but covered in class, the assigned reading, or the homework.

Things to help you study:
- Class notes
- Homework assignments
- Assigned reading
- Animations posted on the class website
- This Review Sheet

Solar System
- Basics about the planets: names, size, inner/outer planets

General Astronomy Topics
- Where are we in the universe?
- Historical astronomers
- Kepler’s 3 Laws
- Electromagnetic waves (light): sizes of wavelengths
- Optical vs. radio telescopes

The Sun
- Basic characteristics (composition, temperature, size, etc.)
- What makes the sun shine?
- Layers (structure) of the Sun and what they do
- Heat transfer – convection and radiation
- Sun’s magnetic field
- Sun spots, solar flares
- Solar wind and aurora
- Life of the Sun

Earth
- Magnetic field
- Continental Drift – evidence used to propose it
- Additional evidence used to formulate seafloor-spreading/plate tectonics hypotheses
- Variations in seafloor bathymetry
- Plate tectonics – driving mechanisms, motions of plates
- Earthquakes and volcanoes – global distribution
- Seismic waves: what they tell us about Earth’s interior
- Volcano types and structure
- Types of plate boundaries: mid-ocean ridges, subduction zones, transform faults (major examples too)
- Hotspots
- Tsunamis (how they form)
- Seasons

**Moon/Earth System**
- Why we see the same side of the Moon
- Tides
- Phases of the Moon
- Eclipses – how are the 2 types formed?

**The Moon**
- Exploration: orbiters, landers (how many, when, approximate locations)
- Lunar samples: what they can tell us, types
- Internal structure (how we know)
- Rotation and orbit periods
- Geography – highlands, near side/far side differences, basins (Orientale and Imbrium)
- Lunar maria
- Atmosphere (or lack there of)
- Craters - formation, different types (simple, complex, basins, ray craters), using them to establish relative ages of regions
- Moonquakes: characteristics, how they differ from earthquakes
- Formation and evolution of Moon – different hypotheses and arguments for and against