Syllabus for Planetary Geochemistry **Spring Term 2009** **Professor Bruce Fegley, Jr.**
My office is Earth and Planetary Sciences Building room 144 and you can contact me in person, by phone at 935-4852 or by e-mail at bfegley@wustl.edu. My office hours are 1:00 - 5:00 p.m. M-F. You can also get assistance from Laura Schaefer whose office is EPSc 141. You can contact her in person, by phone at 935-6310 or by e-mail at laura_s@wustl.edu. The text for the course is *Chemistry of the Solar System* by Katharina Lodders and Bruce Fegley, Jr., copies of scientific papers, and supplemental material found in books on reserve in the Earth and Planetary Sciences Library. The course emphasizes the applications of physical chemistry to planetary science problems.
Grading will be based on six problem sets (95%) and class participation (5%). There will be no exams. Ninety % and above of the total points = A^-, A, A^+; 80-90% = B^-, B, B^+, 70-80% = C grades; etc. All grades on all problem sets will be counted.
Because of the small enrollment, class will meet once a week at a time to be arranged by Randel and Bruce, in my conference room EPSc 142. This syllabus can be found on my web site at solarsystem.wustl.edu.
Week
1 & 2. (1/12 & 1/19) Solar system elemental abundances and cosmochemistry. HW #1 handed out in week 2, due 1 week later.
3 & 4. (1/26 & 2/2) Meteorites and their implications for nebular chemistry and planetary formation. HW #2 handed out in week 4, due 1 week later.
5 & 6. (2/9 & 2/16) Geochemical modeling of bulk compositions of rocky planets, satellites, and asteroids. HW #3 handed out in week 6, due 1 week later.
7 . (2/23) Atmospheric chemistry of Venus, Earth, and Mars. HW #4 handed out, due in week 10.
8. (3/2) Bruce is away.
9. (3/9) Spring Break.
10. (3/16) Atmospheric chemistry of Venus, Earth, and Mars, and biogeochemical cycles on Earth.
11 & 12. (3/23 & 3/30) Chemistry of the gas giant planets (Jupiter, Saturn, Uranus, and Neptune). HW #5 handed out in week 12, due 1 week later.
13 & 14. (4/6 & 4/13) Chemistry of icy planets, KBOs, satellites, and comets.
15. (4/20) Chemistry of Io. Extrasolar objects including extrasolar planets and L and T dwarfs. HW#6 handed out, due 1 week later.

I have read and understood the grading policy.

Name (print): _____

Signature: _____ Date: _____