LAB SESSION NOVEMBER 14

X-ray Fluorescence
Due: November 21

Goal: At the end of this exercise you will be able to calculate chemical formula of a mineral based on weight percent oxides, and evaluate the extent of solid solution between end member compositions.

Read before coming to Lab:
This lab assignment
Read the portion of your textbook that pertains to *XRF,* and *weight percent oxides*

Do before coming to Lab:
Part 1:
a. Calculate the weight% of each oxide component in olivine assuming 88% forsterite and 12% fayalite.
b. Calculate the weight% of each oxide component in garnet assuming grossular garnet.
c. Using your project mineral composition, calculate the weight % of each of the components of your mineral.
Part 2: Use the attached scoring rubric to evaluate a poster displayed in the halls of Mendenhall or Orton.

Bring to Lab:
Your textbook
A pencil or pen
This assignment; paper to write your answers

Write a description of the data collection process, detailing the type of instrument, and any other information needed to repeat the measurements.

Olivine and Garnet
Based on the analysis, what is the chemical formula of the olivine and garnet samples? Compare your results to your x-ray diffraction results. Discuss how your conclusions agree and/or disagree.

If you are collecting data for your project on the XRF, you will need to repeat the above exercise with your own results for your poster. You do not need to hand this in, but you are welcome to discuss your analysis with Dan or me, especially if you do this sooner rather than later.