Mineral Physics 101: Equation of State (EoS) - Homework

Deadline: February 2nd, 2012

Goals of this problem set:

Getting familiar with EoSFit 5.2, learn about refinement strategy and how to run a refinement by using a worked example.

Reference:

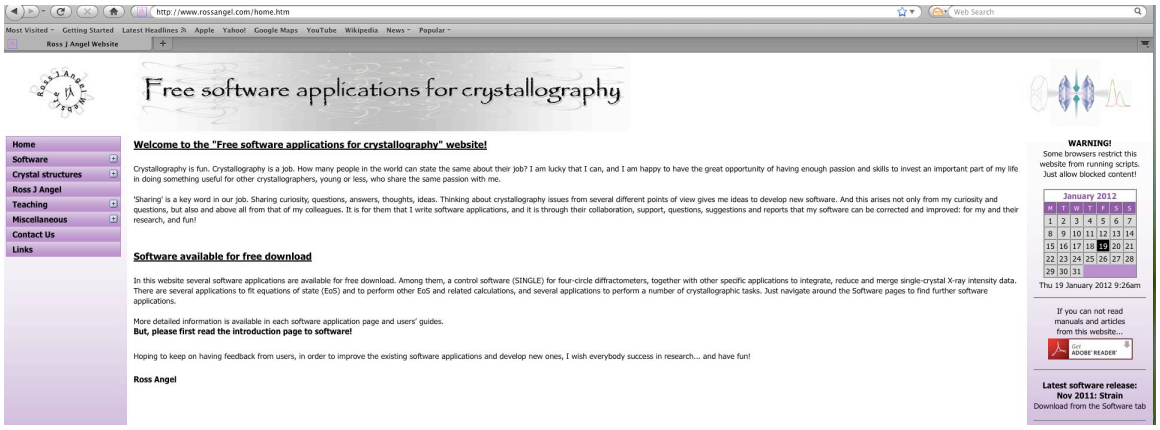
Angel et al. (1997) The use of quartz as internal pressure standard in high-pressure crystallography. J. Appl. Cryst., 30, 461-466.

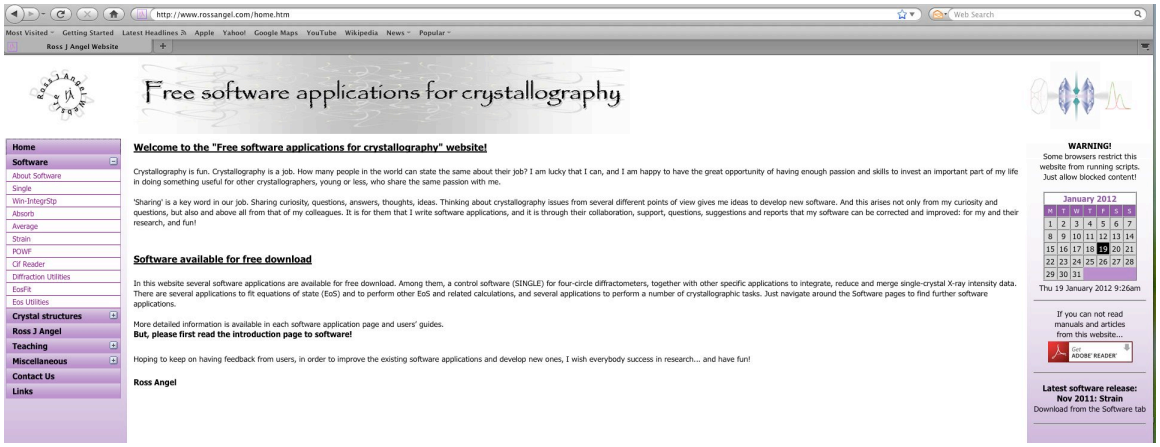
Project:

1. Read the reference paper. The link to a copy of the paper can be found on the course website: http://faculty.unlv.edu/pburnley/TopPage.html .

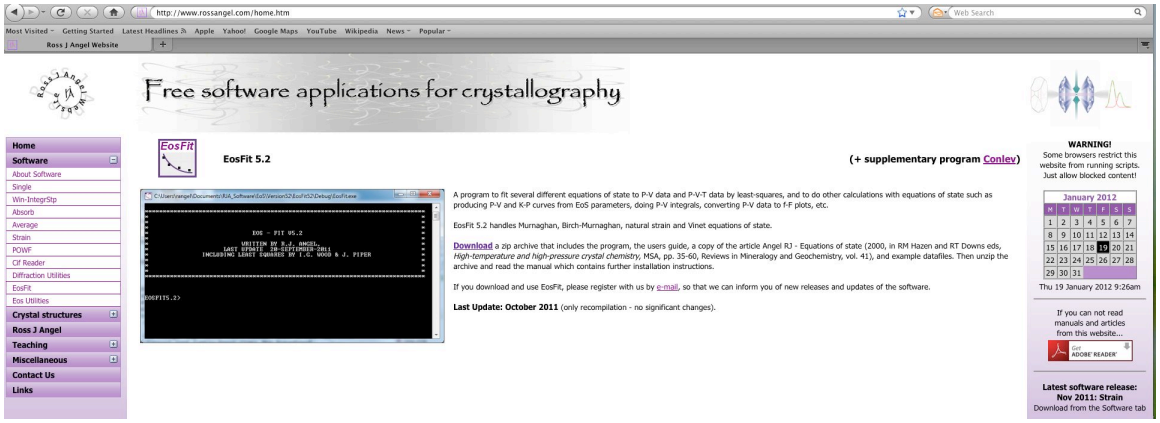
2. Please download the software EoSFit 5.2 from www.rossangel.com .

EoSFit 5.2 is a program to fit several different equations of state to P-V data and P-V-T data by least-squares, and to do other calculations with equations of state such as producing P-V and K-P curves from EoS parameters, doing P-V integrals, converting P-V data to f-F plots, etc..





You can find the link to the download on the left dropdown menu under software.



Read through the user manual's chapter 1 to get some basic information, installation and program start instructions.

Read through chapter 2 to refresh your EoS knowledge.

3. Follow the guided example in chapter 3 of the manual.

4. Send us a screenshot of your results.