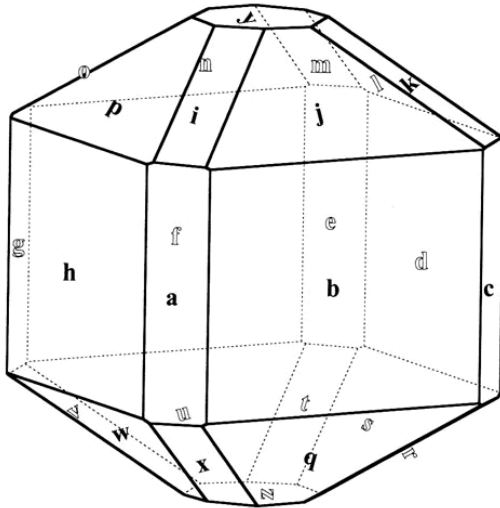


Mineralogy Homework Assignment #6 – Using Stereonets

Due Friday, March 28, 2003

Use the stereonet attached to this homework exercise to plot the poles of all of the faces of the crystal below using all of the interfacial angle information given. You will need a thumbtack, a pencil and tracing paper to do this properly. For assistance on using stereonet, see the instructions below.



Interfacial Angles

- a \wedge b = 45° y \wedge k = 29.98°
- b \wedge c = 45° k \wedge c = 60.02°
- c \wedge d = 45° c \wedge r = 60.02°
- d \wedge e = 45° r \wedge z = 29.98°
- e \wedge f = 45° z \wedge v = 29.98°
- f \wedge g = 45° v \wedge g = 60.02°
- g \wedge h = 45° g \wedge o = 60.02°
- h \wedge a = 45° o \wedge y = 29.98°

- y \wedge j = 39.21° y \wedge p = 39.21° y \wedge i = 29.98°
- j \wedge b = 50.79° p \wedge h = 50.79° i \wedge a = 60.02°
- b \wedge q = 50.79° h \wedge w = 50.79° a \wedge x = 60.02°
- q \wedge z = 39.21° w \wedge z = 39.21° x \wedge z = 29.98°
- z \wedge u = 39.21° z \wedge s = 39.21° z \wedge t = 29.98°
- u \wedge f = 50.79° s \wedge d = 50.79° t \wedge e = 60.02°
- f \wedge n = 50.79° d \wedge l = 50.79° e \wedge m = 60.02°
- n \wedge y = 39.21° l \wedge y = 39.21° m \wedge y = 29.98°

Steps to Using a Stereonet

See Illustrations below for visual aids.

- a. Trace the outer circle of the net on the tracing paper.
- b. Make a reference mark at the positive end of the y direction (b axis) on the overlay. This point is the F = 0 position. You may also wish to mark the south (F = 90°) and north poles (F = -90°) of the net on the overlay as well. NOTE: F is the angle a line makes with the positive b axis, and ϕ is the angle a line makes with the positive c axis.
- c. Now you may begin plotting faces based on the angles given. First, measure the F angle from 0 and make a tick mark on the outer circle corresponding to that angle.
- d. Next, rotate your overlay until that tick mark overlies the east-west line. Then measure ϕ from the center of the stereonet outward toward the edge.
- e. To plot the pole of the next face, return to the F = 0 position, and repeat steps c and d. Soon enough, you will have a completed stereonet!

