

GY 302: Crystallography and Mineralogy

Assignment 4: Stereonet projections

Your Task: One last session with crystallography and then we are done. I would like you to plot the faces of three model crystals (183ink, 46, 78) on three separate stereonet (Wulff nets). One of the models is an isometric crystal, one is tetragonal and one is orthorhombic. Here are the rules for plotting the crystals:

To find the points

- 1) position the crystal with the c-axis up above the Wulff net. For tetragonal crystals, this is the longest axis. For orthorhombic crystals it is the shortest axis. For isometric crystals, all axes are the same length so it doesn't matter which is up.
- 2) Any face that lies exactly 90° to the plane of the Wulff net (e.g., (100), (001)) will have its pole plot on the great circle that delineates the stereonet. Any face exactly parallel to the plane of the paper (e.g., (001)) will have its pole plot at the exact center of the Wulff net.
- 3) Use a contact goniometer to measure the angles between crystal faces*. These values will be used to determine where on the stereonet each pole plots.

To plot the points

- 4) Poles that project downward into the Wulff net are shown with an open circle. Poles that project upward are shown with closed lines. Overlapping upper and lower pole intersections are shown with a solid dot inside of an open dot.,

You will be given an example on how to do this during a lecture slot. You will need a first make a contact goniometer and a stereonet base. Tracing paper will be provided.

Due Date: See the calendar or website for due dates.
