

Homework #1**Crystallography****due Oct. 2nd**

Exercise 1 The galena crystal was measured using a reflection goniometer. The angular coordinate ϕ and ρ are given in the accompanying table. Draw the stereogram of the pole faces.

Face	ϕ	ρ
1,1'	-	$\pm 0^\circ$
2,2'	0°	$\pm 45^\circ$
3	0°	90°
4,4'	45°	$\pm 54.73^\circ$
5	45°	90°
6,6'	90°	$\pm 45^\circ$
7	90°	90°
8,8'	135°	$\pm 54.73^\circ$
9	135°	90°
10,10'	180°	$\pm 45^\circ$
11	180°	90°
12,12'	225°	$\pm 54.73^\circ$
13	225°	90°
14,14'	270°	$\pm 45^\circ$
15	270°	90°
16,16'	315°	$\pm 54.73^\circ$
17	315°	90°

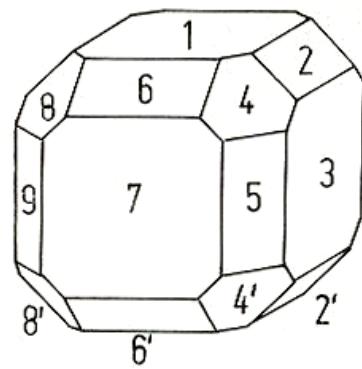
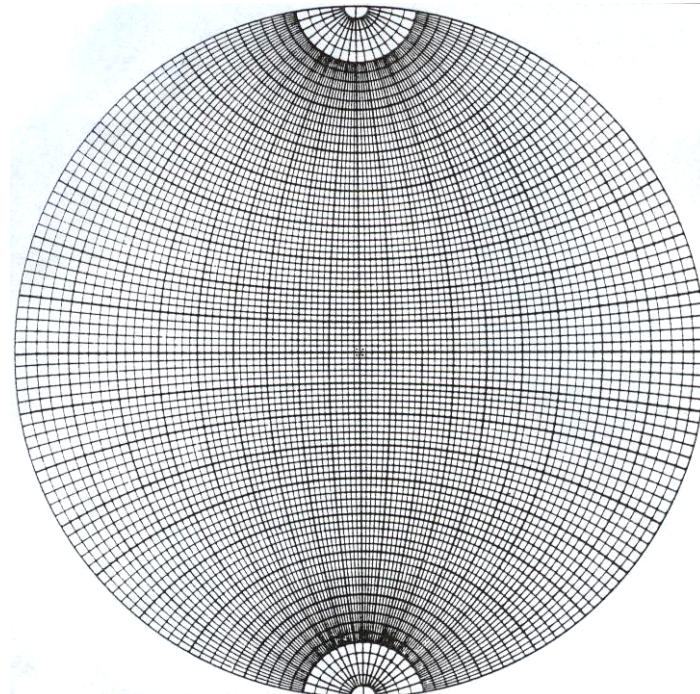


Fig. 4.41. Crystal of galena



Exercise 2 Draw the standard (111) projections of a cubic crystal. Include the {100}, {110}, {111} type planes referring to the galena crystal.

