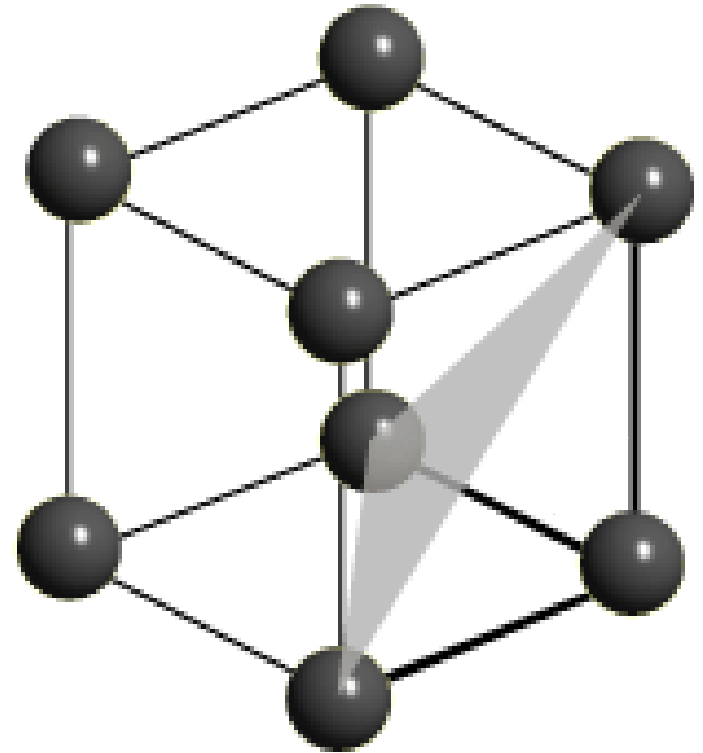
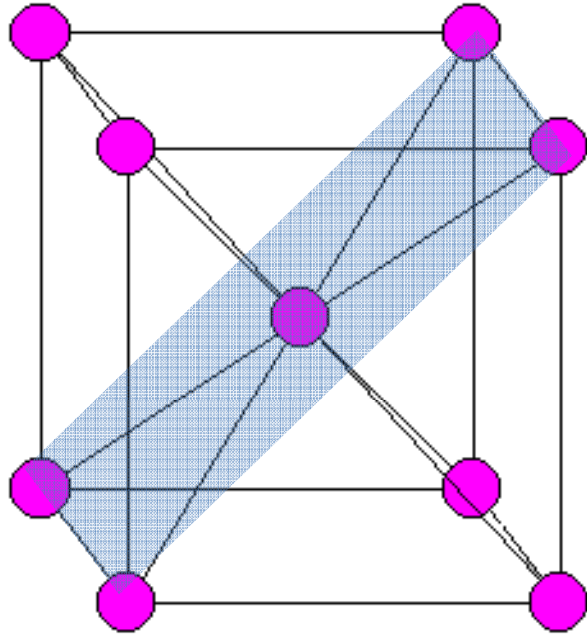
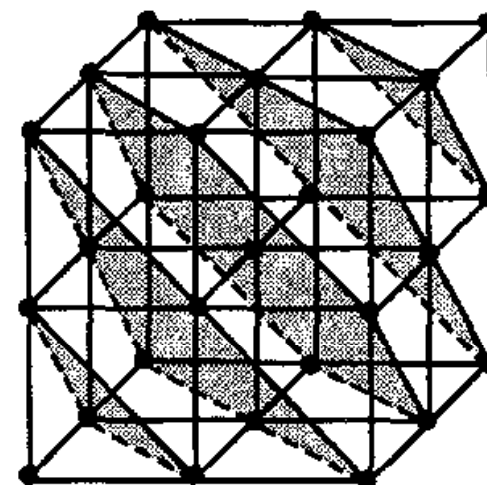
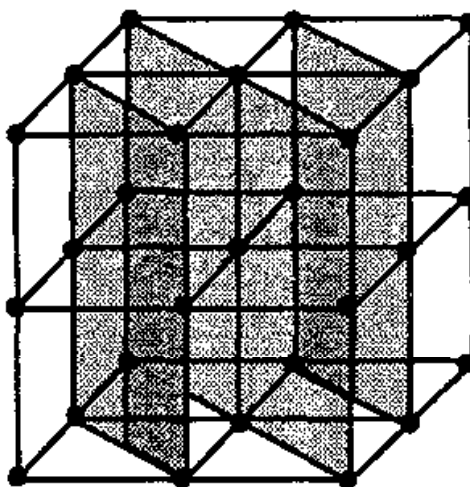
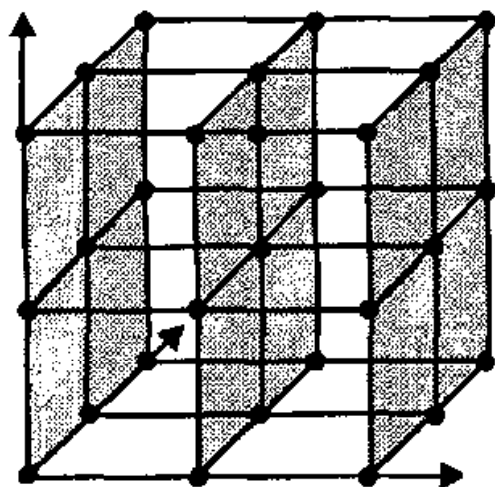


Slides
Condensed Matter Physics
Lecture 11

Some Lattice Planes

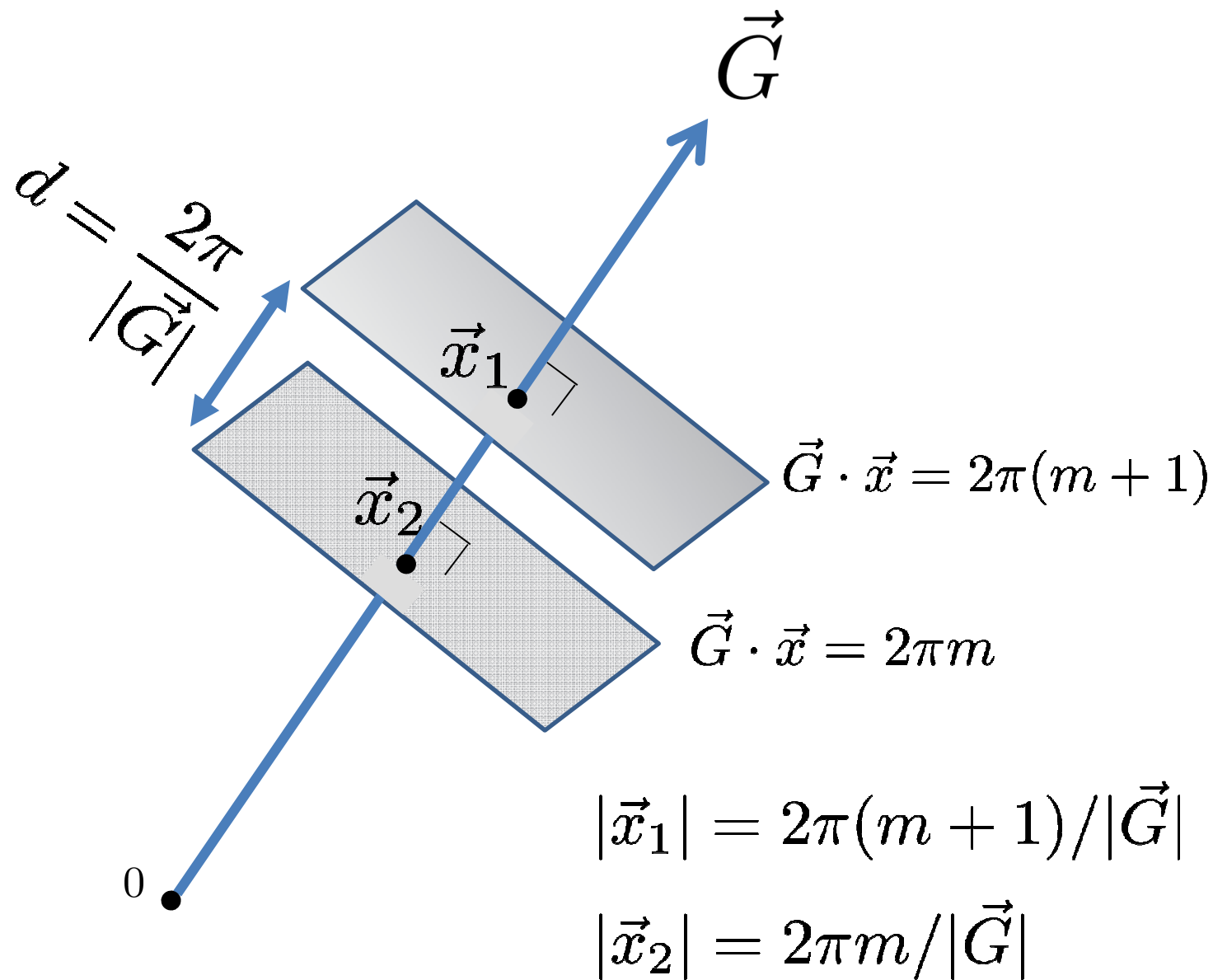


Some Families of Lattice Planes

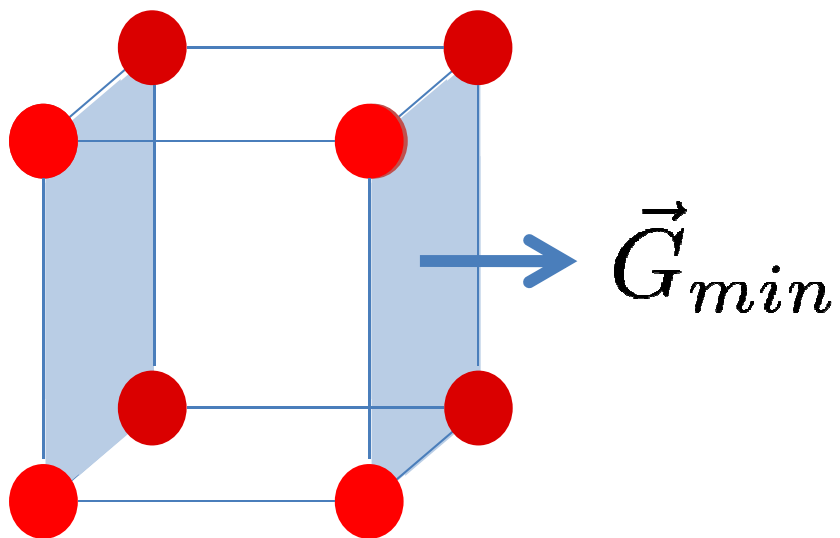


(Yeah, I know the pictures are junky, but I couldn't find any better ones)

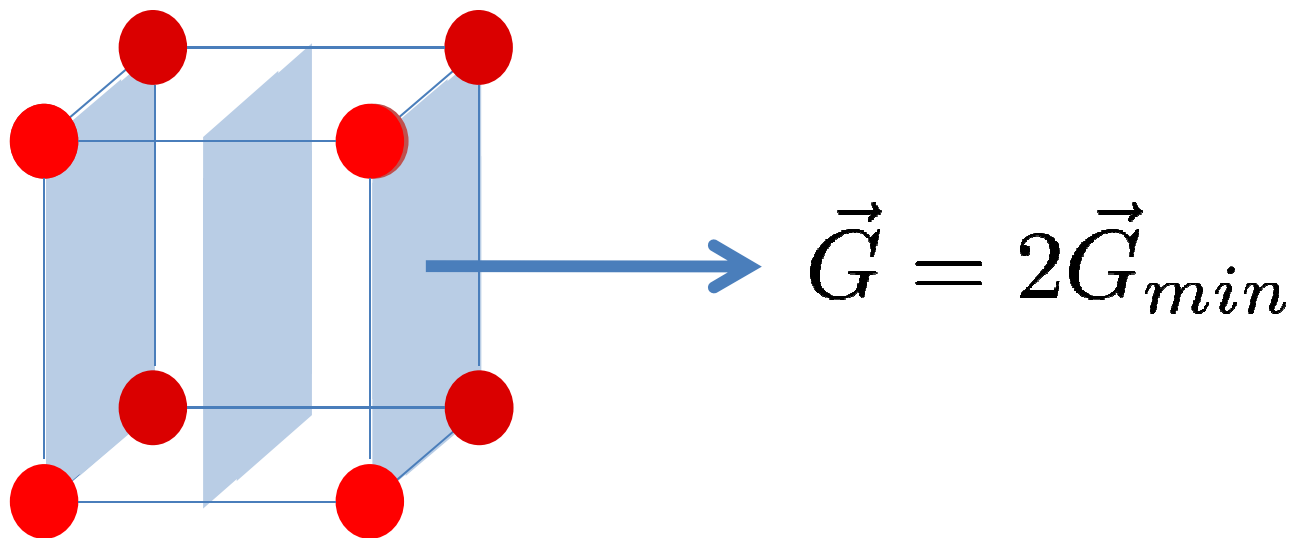
Geometry of $e^{i\vec{G}\cdot\vec{x}} = 1$

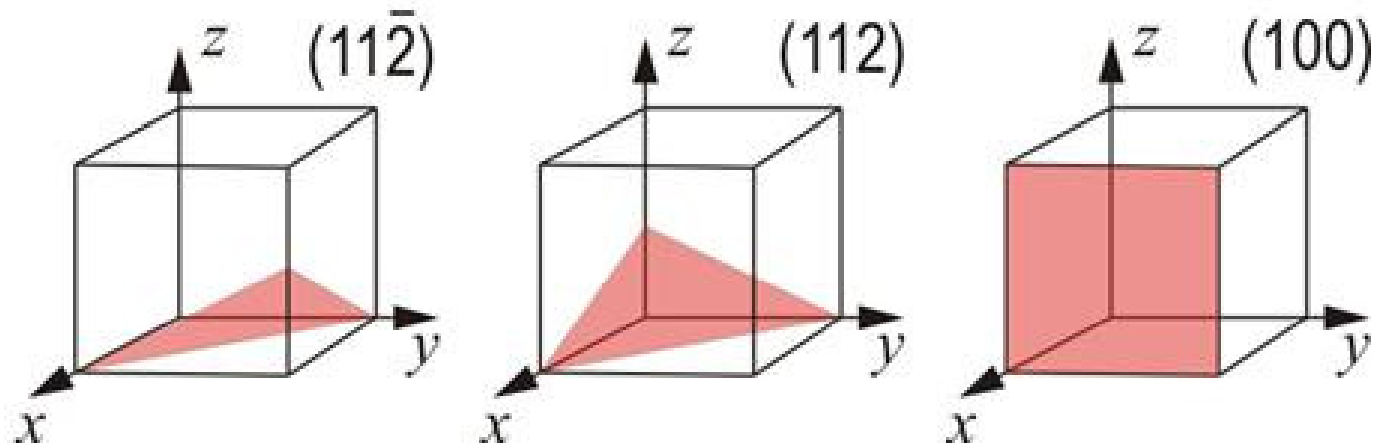


$$d = \frac{2\pi}{|\vec{G}_{min}|}$$

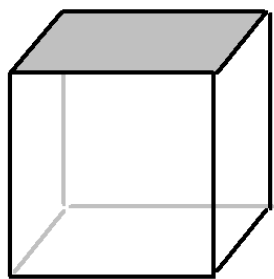


$$d = \frac{2\pi}{2|\vec{G}_{min}|}$$

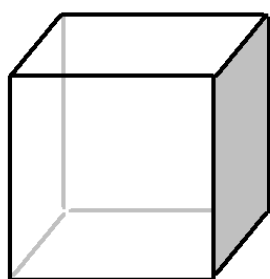




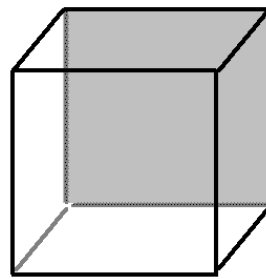
Some Examples of
Miller Indices



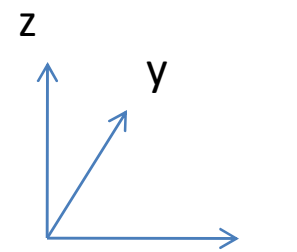
(001)



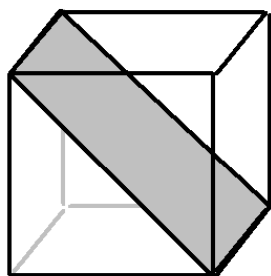
(100)



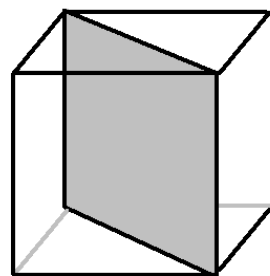
(010)



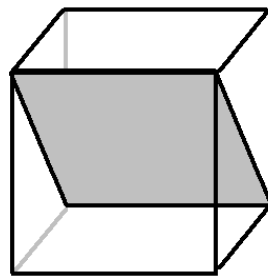
x



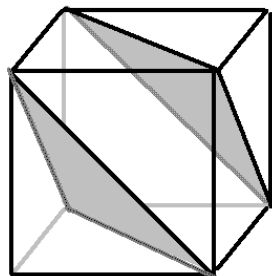
(101)



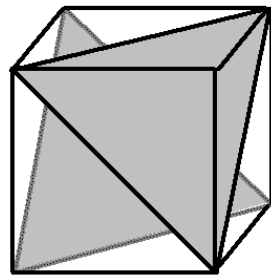
(110)



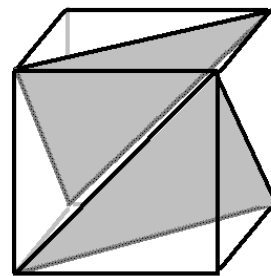
(011)



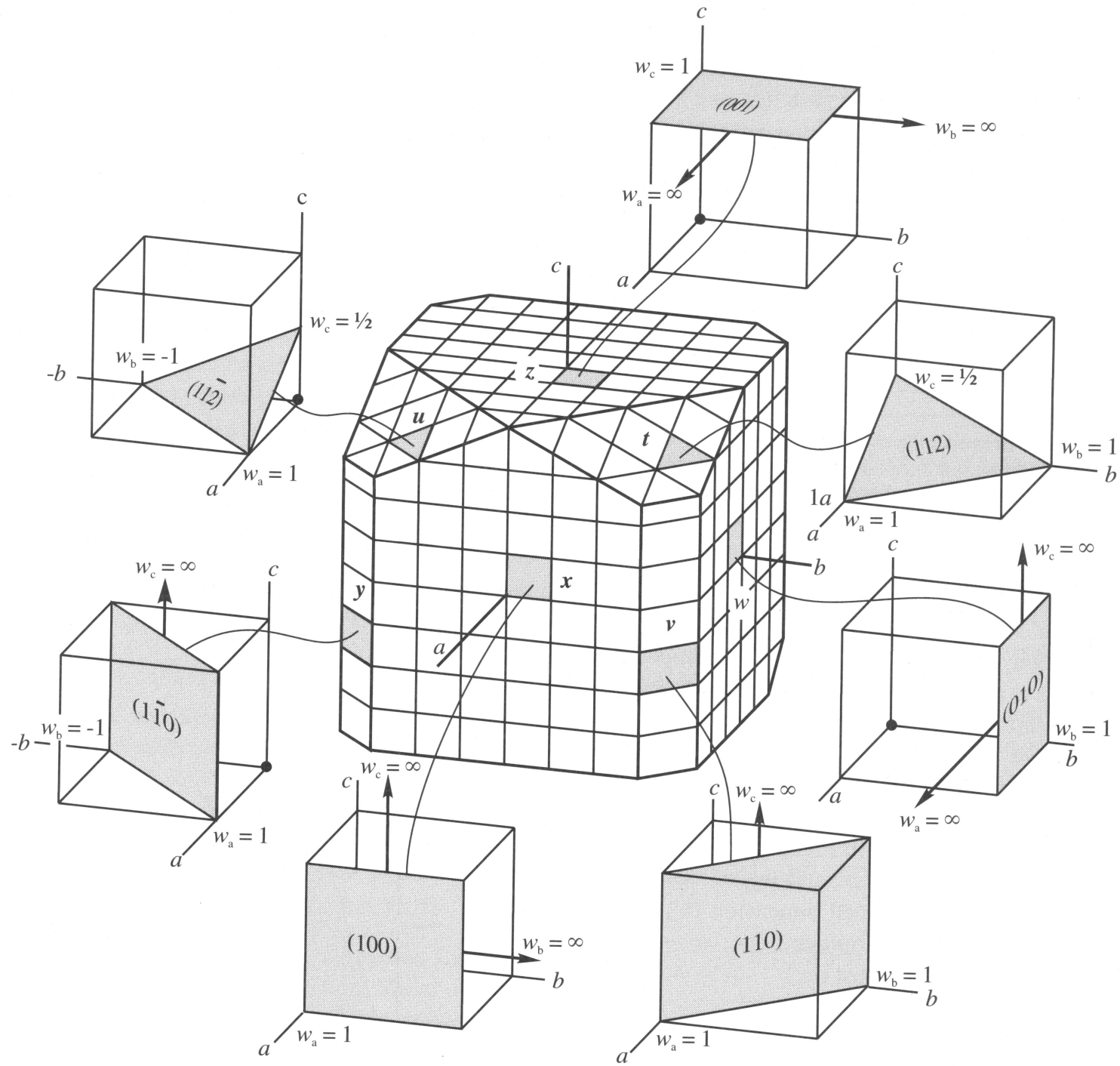
(111)



($\bar{1}\bar{1}1$)

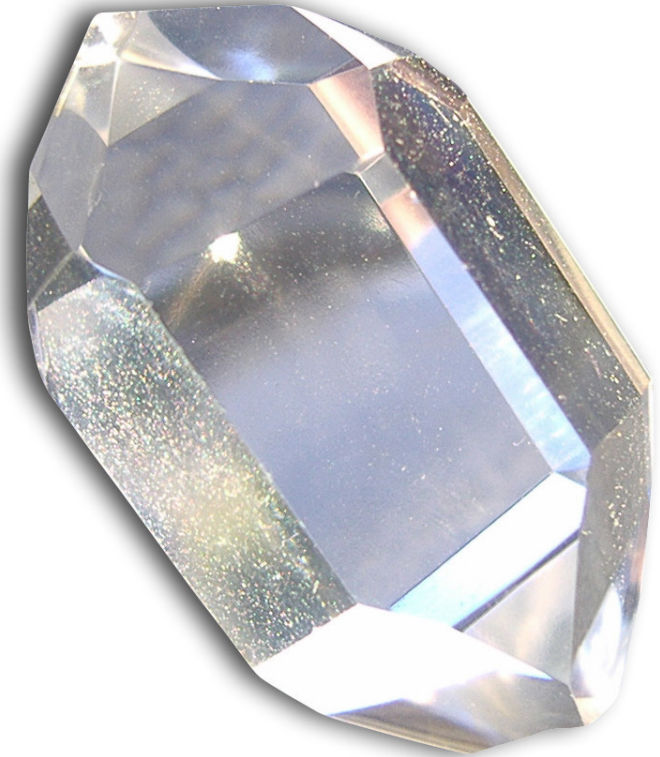


($\bar{1}11$)



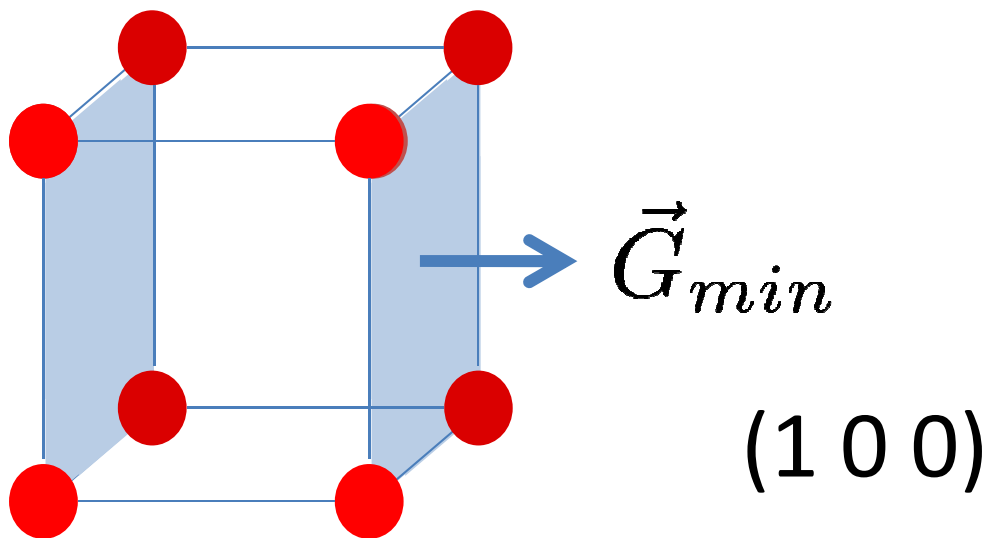


NaCl (FCC with basis)

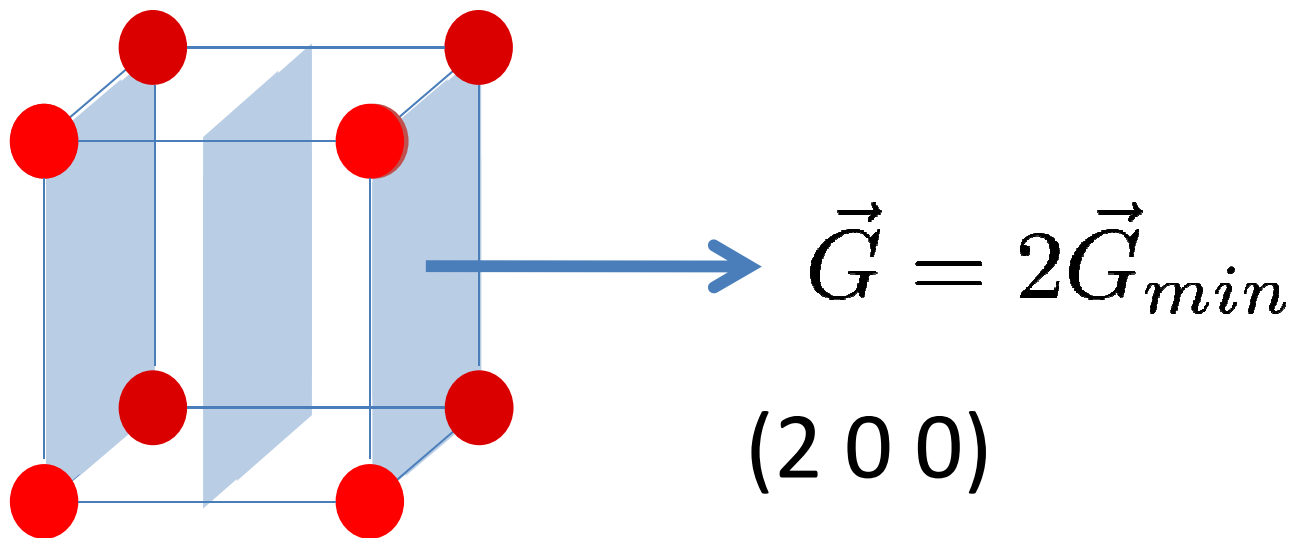


Quartz (Trigonal SiO_2)

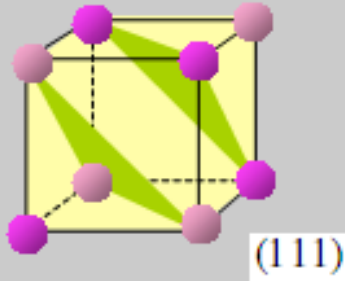
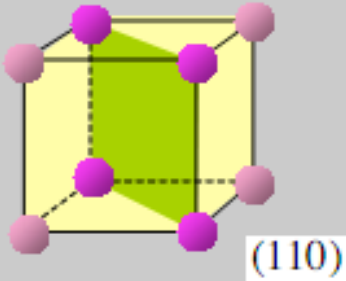
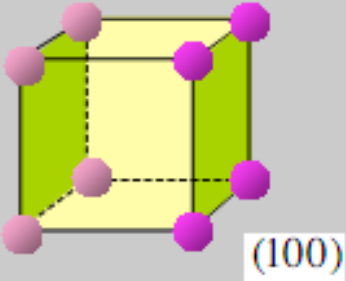
$$d = \frac{2\pi}{|\vec{G}_{min}|}$$



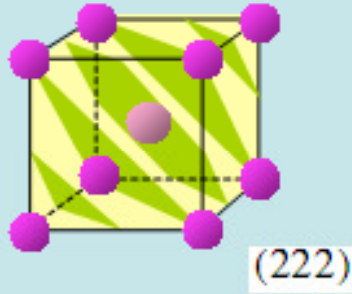
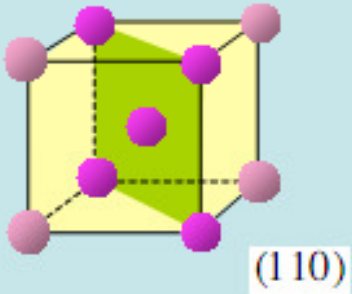
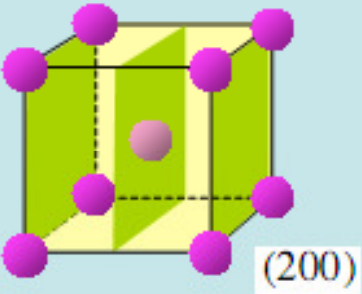
$$d = \frac{2\pi}{2|\vec{G}_{min}|}$$



sc



bcc



fcc

