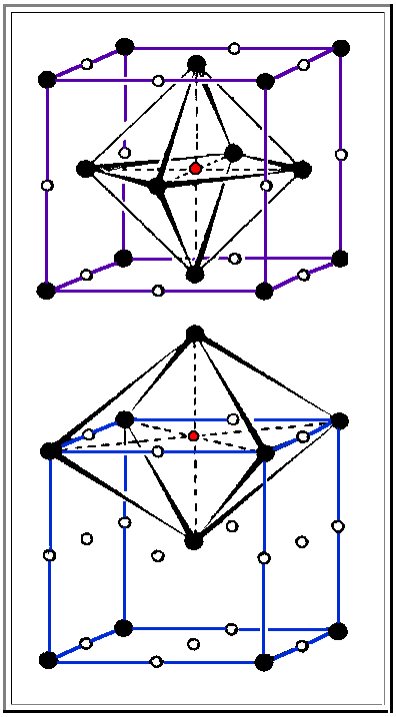
Octahedral Sites

- An octahedral position for an (interstitial) atom is the space in the interstices between **6** regular atoms that form an octahedra.
  - Four regular atoms are positioned in a plane, the other two are in a symmetrical position just above or below. All spheres can be considered to be hard and touching each other.
  - The six spheres define a regular octahedra, in its interior there is a defined space for an interstitial atom, bordered by six spheres.
- Octahedral sites exists in **fcc** and **bcc** crystals. The other prominent geometric environment for interstitials is the tetrahedral site.

Illustration



- This illustration shows the octahedral site in an **fcc** lattice bottom. We have **12/4 +1 = 4** positions per unit cell.
- Here we have octahedral sites in the **bcc** lattice. We have **12/4 + 6/2 = 6** positions per unit cell.