

# Tetragonal system

Class



Ditetragonal –  
Bipyramid [hkl]

$$\alpha \quad \beta \quad \gamma = 90$$

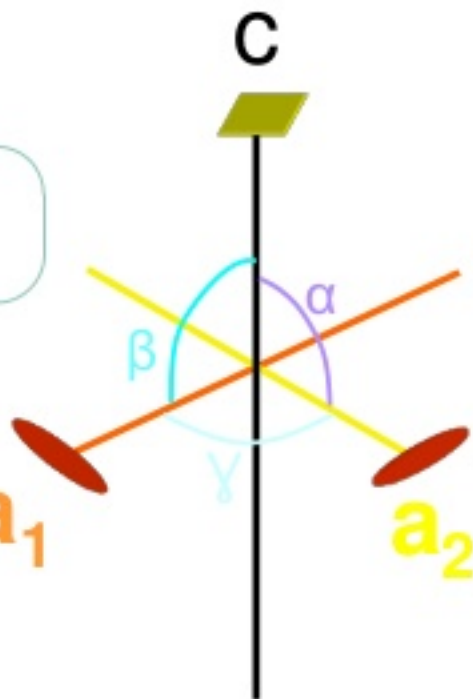
$a_1$

$a_2$

$c$

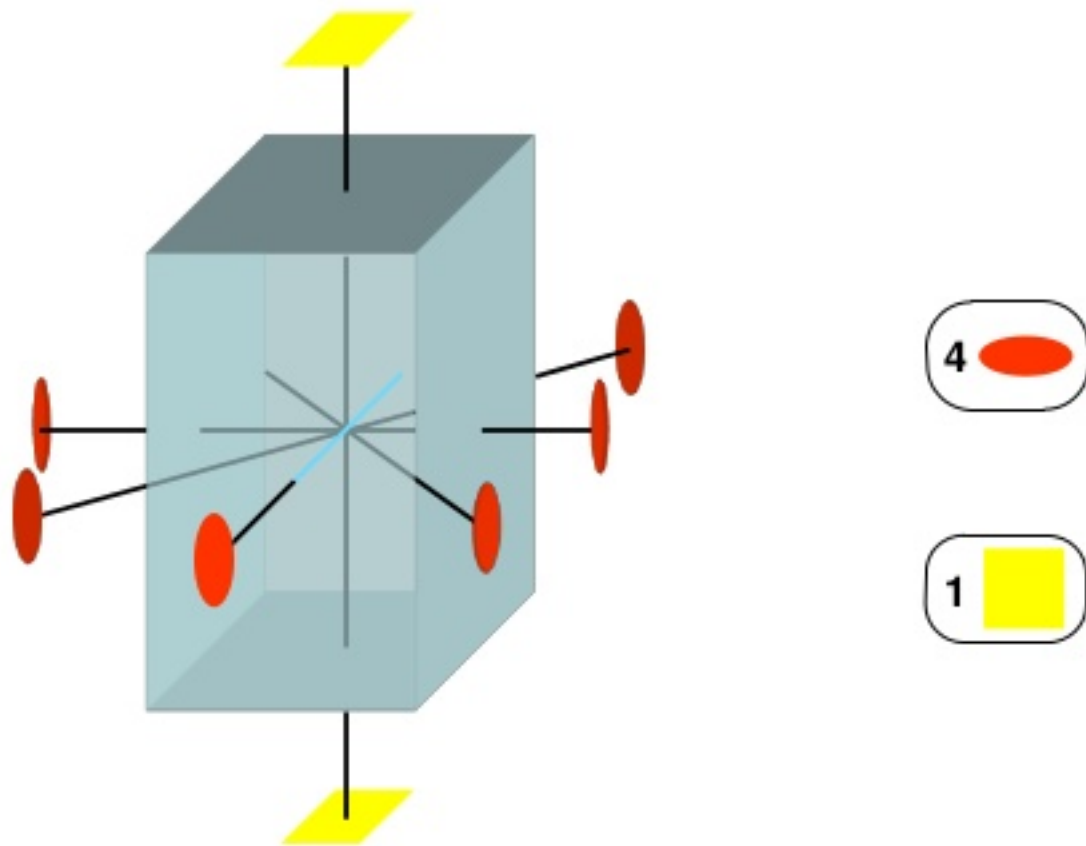
$a_1$

$a_2$



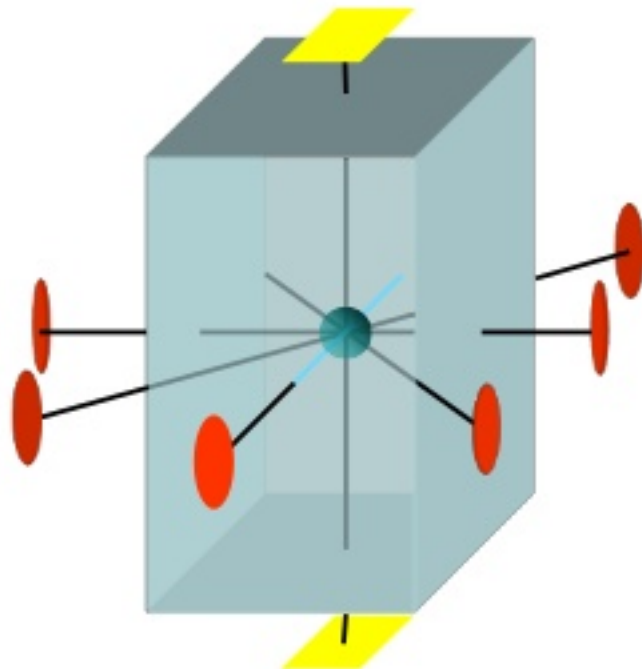
# Tetragonal system

1-Axis of symmetry



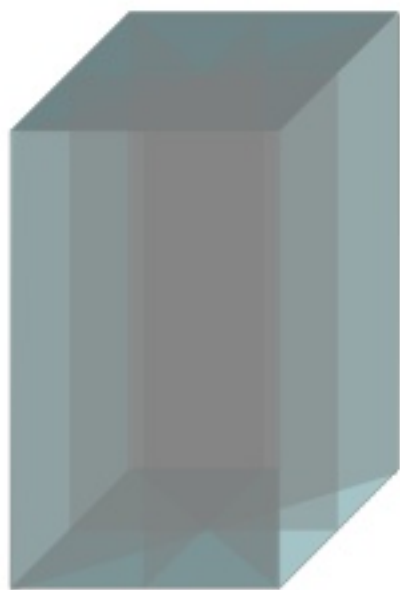
# Tetragonal system

## 2- Center of symmetry

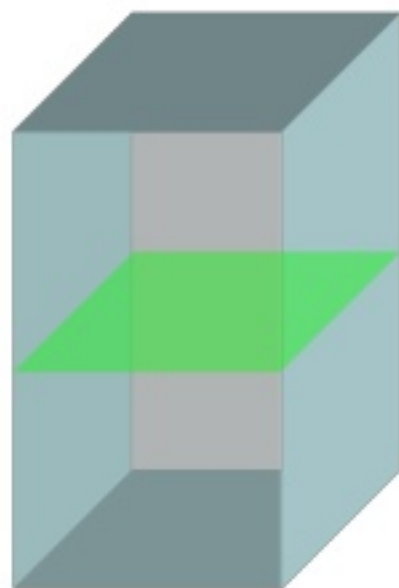


## Tetragonal system

### 3- Plane of symmetry



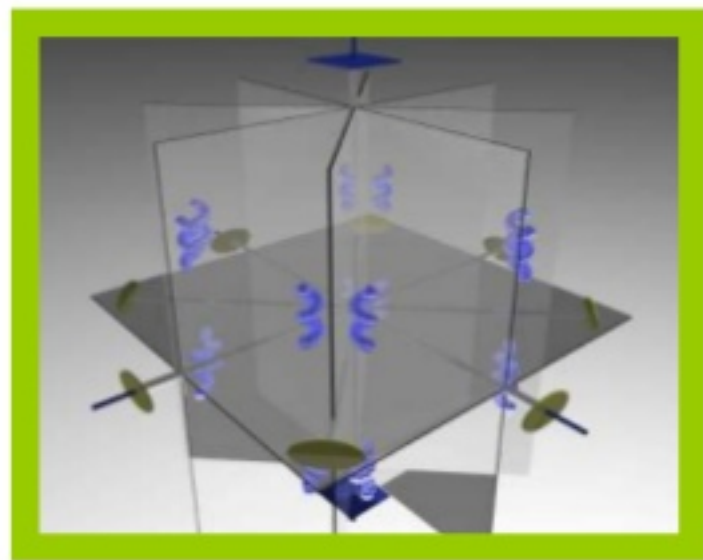
4 vertical plane



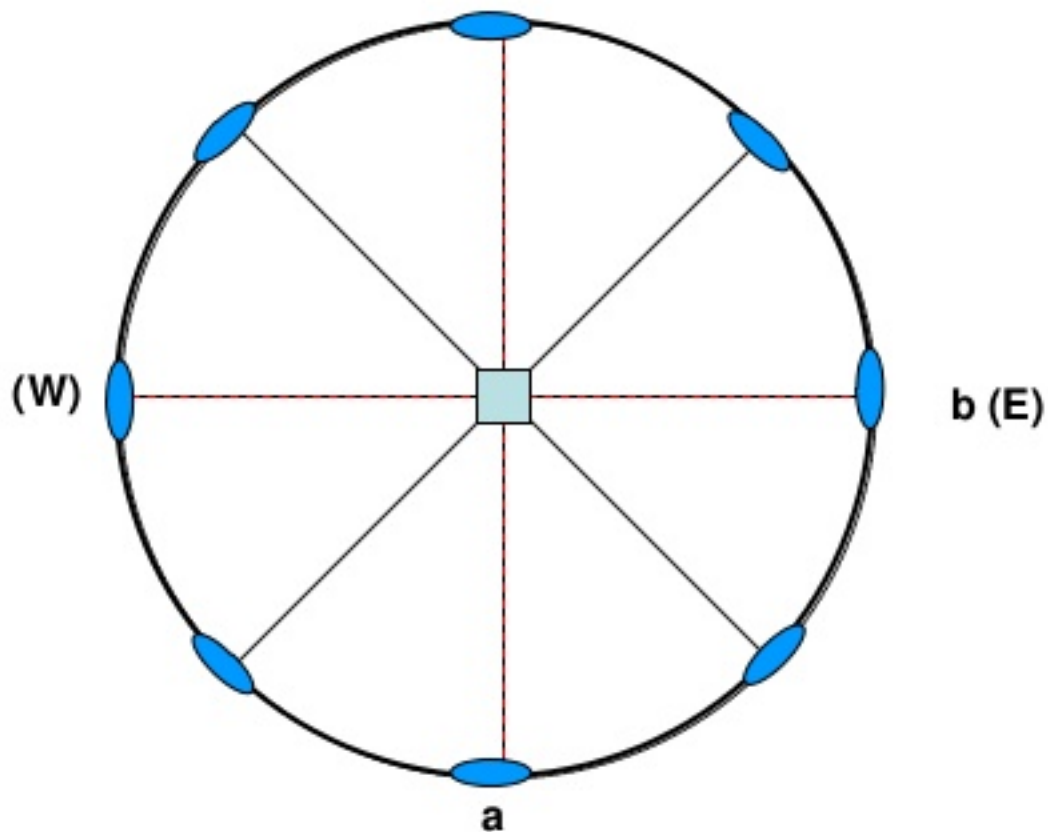
1 horizontal plane

# Tetragonal system

Complete Symmetrical Formula



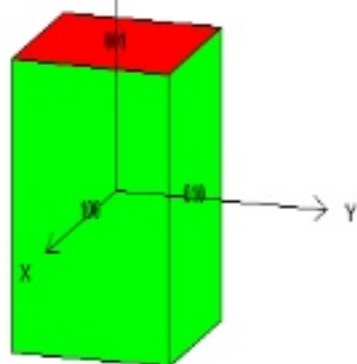
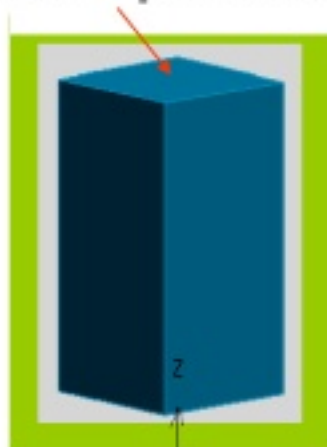
$$\frac{4}{m} \quad \frac{42}{m} \quad n$$



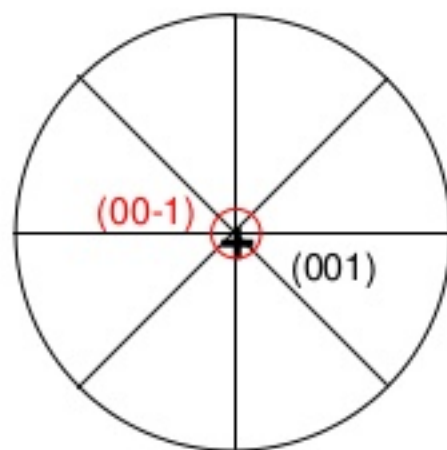
**Stereographic Projection of Symmetry elements of the Tetragonal System**

# Crystal form Tetragonal system

Basal - pinacoid [001]



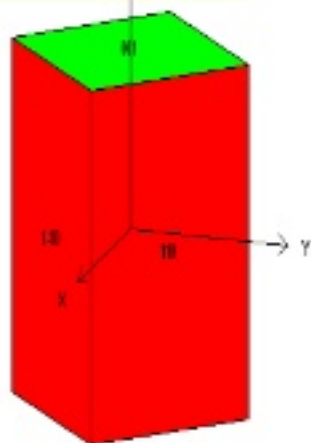
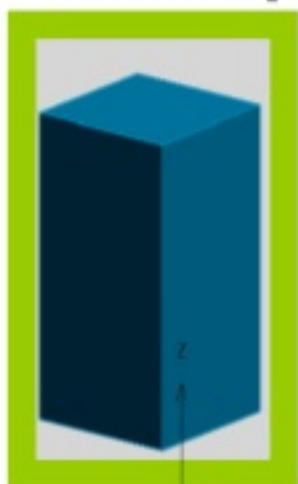
Stereographic Projection



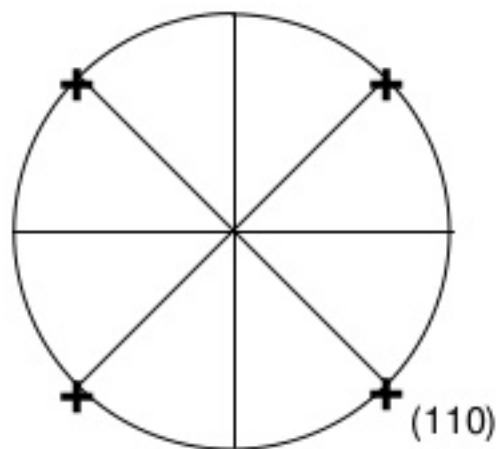
1- Basal Pinacoid

# Tetragonal system

Tetragonal prism of  
first order [110]



Stereographic Projection



2- Tetragonal prism of 1<sup>st</sup> order