

*Aea2*

$C_{2v}^{17}$

*mm2*

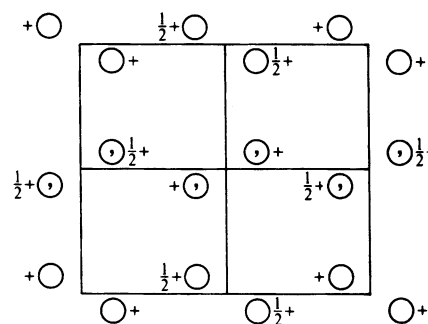
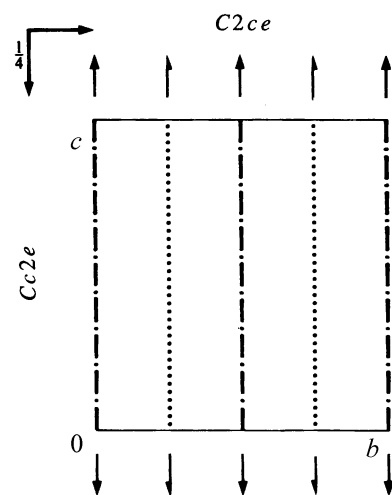
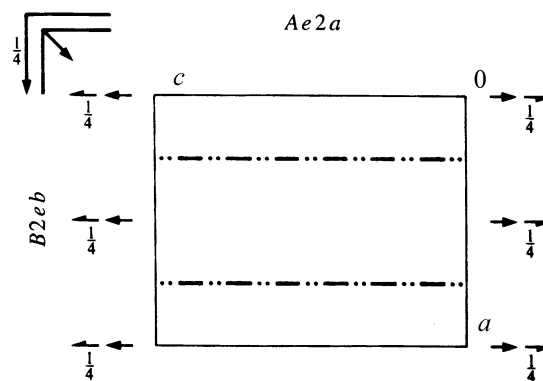
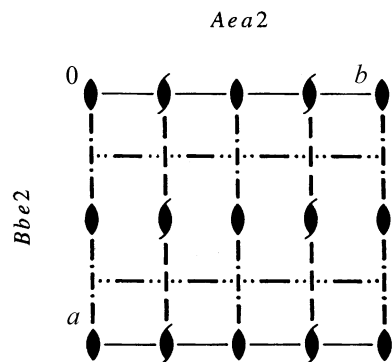
Orthorhombic

No. 41

*Aea2*

Patterson symmetry *Ammm* (*Cmmm*)

Former space-group symbol *Aba2*; cf. Section 2.1.2



**Origin** on *1n2*

**Asymmetric unit**  $0 \leq x \leq \frac{1}{2}; 0 \leq y \leq \frac{1}{2}; 0 \leq z \leq \frac{1}{2}$

**Symmetry operations**

For  $(0,0,0)+$  set

- (1) 1                      (2)  $2 \quad 0,0,z$                       (3)  $a \quad x, \frac{1}{4}, z$                       (4)  $b \quad \frac{1}{4}, y, z$

For  $(0, \frac{1}{2}, \frac{1}{2})+$  set

- (1)  $t(0, \frac{1}{2}, \frac{1}{2})$                       (2)  $2(0,0, \frac{1}{2}) \quad 0, \frac{1}{4}, z$                       (3)  $n(\frac{1}{2}, 0, \frac{1}{2}) \quad x, 0, z$                       (4)  $c \quad \frac{1}{4}, y, z$

**Generators selected** (1);  $t(1,0,0)$ ;  $t(0,1,0)$ ;  $t(0,0,1)$ ;  $t(0, \frac{1}{2}, \frac{1}{2})$ ; (2); (3)

**Positions**

Multiplicity,  
Wyckoff letter,  
Site symmetry

Coordinates

$(0,0,0)+ (0, \frac{1}{2}, \frac{1}{2})+$

Reflection conditions

General:

8 *b* 1 (1)  $x, y, z$  (2)  $\bar{x}, \bar{y}, z$  (3)  $x + \frac{1}{2}, \bar{y} + \frac{1}{2}, z$  (4)  $\bar{x} + \frac{1}{2}, y + \frac{1}{2}, z$

$hkl: k + l = 2n$

$0kl: k, l = 2n$

$h0l: h, l = 2n$

$hk0: k = 2n$

$h00: h = 2n$

$0k0: k = 2n$

$00l: l = 2n$

Special: as above, plus

4 *a* .. 2 0, 0,  $z$   $\frac{1}{2}, \frac{1}{2}, z$

$hkl: h + k = 2n$

**Symmetry of special projections**

Along [001]  $p2mg$

$\mathbf{a}' = \mathbf{a}$   $\mathbf{b}' = \frac{1}{2}\mathbf{b}$

Origin at 0, 0,  $z$

Along [100]  $p1m1$

$\mathbf{a}' = \frac{1}{2}\mathbf{b}$   $\mathbf{b}' = \frac{1}{2}\mathbf{c}$

Origin at  $x, 0, 0$

Along [010]  $p11m$

$\mathbf{a}' = \frac{1}{2}\mathbf{c}$   $\mathbf{b}' = \frac{1}{2}\mathbf{a}$

Origin at 0,  $y, 0$