

# Square

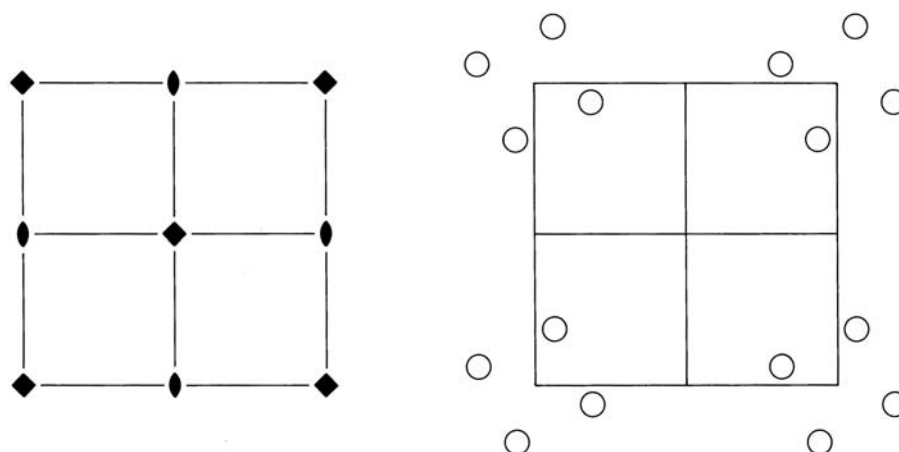
4

*p*4

Patterson symmetry *p*4

*p*4

No. 10



Origin at 4

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

### Symmetry operations

(1) 1 (2) 2 0,0 (3) 4<sup>+</sup> 0,0 (4) 4<sup>-</sup> 0,0

Generators selected (1); *t*(1,0); *t*(0,1); (2); (3)

### Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates	Reflection conditions
4 <i>d</i> 1	(1) <i>x</i> , <i>y</i> (2) $\bar{x}$ , $\bar{y}$ (3) $\bar{y}$ , <i>x</i> (4) <i>y</i> , $\bar{x}$	General: no conditions Special: <i>hk</i> : $h + k = 2n$
2 <i>c</i> 2..	$\frac{1}{2}$ , 0 0, $\frac{1}{2}$	no extra conditions
1 <i>b</i> 4..	$\frac{1}{2}$ , $\frac{1}{2}$	no extra conditions
1 <i>a</i> 4..	0, 0	no extra conditions

### Maximal non-isomorphic subgroups

I [2] *p*2 (2) 1; 2

IIa none

IIb none

### Maximal isomorphic subgroups of lowest index

IIc [2] *c*4 (*a'* = 2*a*, *b'* = 2*b*) (*p*4, 10)

### Minimal non-isomorphic supergroups

I [2] *p*4*mm* (11); [2] *p*4*gm* (12)

II none