Table 1.2.14.2. *Projection of three-dimensional symmetry elements (layer and rod groups)*

Symmetry element in three dimensions		Symmetry element in projection	
Arbitrary orientation			
Symmetry centre $\bar{1}$		Rotation point 2 at projection of centre	
Parallel to projection direction			
Rotation axis	2, 3, 4, 6	Rotation point	2, 3, 4, 6
Screw axis	2_1	Rotation point	2
	3_1, 3_2		3
	4_1, 4_2, 4_3		4
	6_1, 6_2, 6_3, 6_4, 6_5		6
Rotoinversion axis	$\bar{4}$	Rotation point	4
	$\bar{6} \equiv 3/m$		3 (with overlap of atoms)
	$\bar{3} \equiv 3 \times \bar{1}$		6
Reflection plane m		Reflection line m	
Glide plane with $\perp$ component†		Glide line g	
Glide plane without $\perp$ component†		Reflection line m	
Normal to projection direction			
Rotation axis	2, 4, 6	Reflection line m	
	3	None	
Screw axis	4_2, 6_2, 6_4	Reflection line m	
	2_1, 4_1, 4_3, 6_1, 6_3, 6_5	Glide line g	
	3_1, 3_2	None	
Rotoinversion axis	$\bar{4}$	Reflection line m parallel to axis	
	$\bar{6} \equiv 3/m$	Reflection line m perpendicular to axis	
	$\bar{3} \equiv 3 \times \bar{1}$	Rotation point 2 (at projection of centre)	
Reflection plane m		None, but overlap of atoms	
Glide plane with glide component **t**		Translation **t**	

† The term 'with $\perp$ component' refers to the component of the glide vector normal to the projection direction.

Table 1.2.14.3. *Projection of two-dimensional symmetry elements (frieze groups)*

Symmetry element in two dimensions	Symmetry element in projection
Rotation point 2	Reflection point m
Parallel to projection direction	
Reflection line m	Reflection point m
Glide line g	Reflection point m
Normal to projection direction	
Reflection line m	None (with overlap of atoms)
Glide line g with glide component **t**	Translation **t**

I *translationengleiche* or *t* subgroups and
II *klassengleiche* or *k* subgroups.

Type **II** is subdivided again into two blocks:
IIa: the conventional cells of **G** and **S** are the same, and
IIb: the conventional cell of **S** is larger than that of **G**.

Block **IIa** has no entries for subperiodic groups with a primitive cell. Only in the case of the nine centred layer groups are there entries, when it contains those maximal subgroups **S** which have lost all the centring translations of **G** but none of the integral translations.

1.2.15.1.1. *Blocks **I** and **IIa***

In blocks **I** and **IIa**, *every* maximal subgroup **S** of a subperiodic group **G** is listed with the following information:

[*i*] HMS1 (HMS2) Sequence of numbers

The symbols have the following meaning:
[*i*]: index of **S** in **G**.
HMS1: short Hermann–Mauguin symbol of **S**, referred to the coordinate system and setting of **G**; this symbol may be unconventional.
(HMS2): conventional short Hermann–Mauguin symbol of **S**, given only if HMS1 is not in conventional short form.
Sequence of numbers: coordinate triplets of **G** retained in **S**. The numbers refer to the numbering scheme of the coordinate triplets of the general position. For the centred layer groups the following abbreviations are used:
Block **I** (all translations retained). *Number* +: coordinate triplet given by *Number*, plus that obtained by adding the centring translation (1/2, 1/2, 0) of **G**. (*Numbers*) +: the same as above, but applied to all *Numbers* between parentheses.
Block **IIa** (not all translations retained). *Number* + (1/2, 1/2, 0): coordinate triplet obtained by adding the translation (1/2, 1/2, 0) to the triplet given by *Number*. (*Numbers*) + (1/2, 1/2, 0): the same as above, but applied to all *Numbers* between parentheses.

Examples
(1) **G**: Layer group *c*211 (L10)

I	[2]	*c*1 (*p*1)	1+
IIa	[2]	$p2_111$	1; 2 + (1/2, 1/2, 0)
	[2]	*p*211	1; 2

where the numbers have the following meaning:

1+	x, y, z	$x + 1/2, y + 1/2, z$
1; 2	x, y, z	$x, \bar{y}, \bar{z}$
1; 2+	x, y, z	$x + 1/2, \bar{y} + 1/2, \bar{z}$

(2) **G**: Rod group $\not p422$ (R30)

I	[2]	$\not p411$ ($\not p4$)	1; 2; 3; 4
	[2]	$\not p221$ ($\not p222$)	1; 2; 5; 6
	[2]	$\not p212$ ($\not p222$)	1; 2; 7; 8

The HMS1 symbol in each of the three subgroups **S** is given in the tetragonal coordinate system of the group **G**. In the first case,