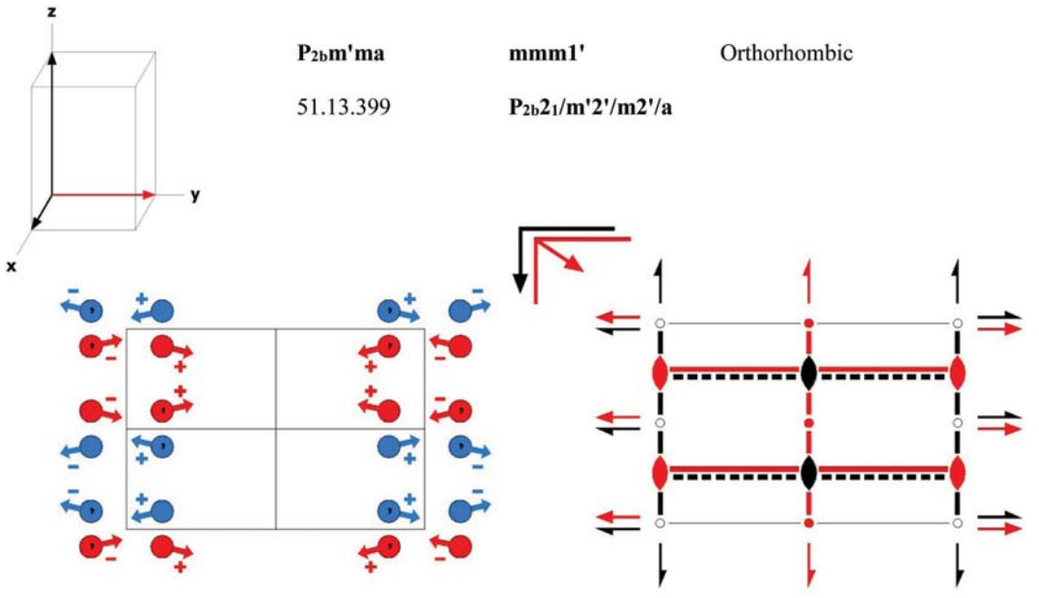

P_{2b}m'ma **mmm1'** Orthorhombic

51.13.399 **$P_{2b}2_1$/m'2'/m2'/a**

Origin at center (2'/m) at $2_12/ma$

Asymmetric unit $0 \le x \le \frac{1}{4}$; $0 \le y \le \frac{1}{2}$; $0 \le z \le 1$

Symmetry Operations

For (0,0,0) + set

(1) 1 {1 | 0}

(2) 2' ¼,0,z {2_{001} | ½,0,0}'

(3) 2' 0,y,0 {2_{010} | 0}'

(4) 2 (½,0,0) x,0,0 {2_{100} | ½,0,0}

(5) $\bar{1}$' {$\bar{1}$ | 0}'

(6) a (½,0,0) x,y,0 {m_{001} | ½,0,0}

(7) m x,0,z {m_{010} | 0}

(8) m' ¼,y,z {m_{100} | ½,0,0}'

For (0,1,0)' + set

(2) t' (0,1,0)' {1 | 0,1,0}'

(2) 2 ¼,½,z {2_{001} | ½,1,0}

(3) 2 (0,1,0) 0,y,0 {2_{010} | 0,1,0}

(4) 2' (½,0,0) x,½,0 {2_{100} | ½,1,0}'

(5) $\bar{1}$ (0, ½,0) {$\bar{1}$ | 0,1,0}

(6) n' (½,1,0) x,y,0 {m_{001} | ½,1,0}'

(7) m' x,½,z {m_{010} | 0,1,0}'

(8) b (0,1,0) ¼,y,z {m_{100} | ½,1,0}

Figure 3.6.3.1
Table of properties of the three-dimensional magnetic space group 51.13.399 $P_{2b}m'ma$.

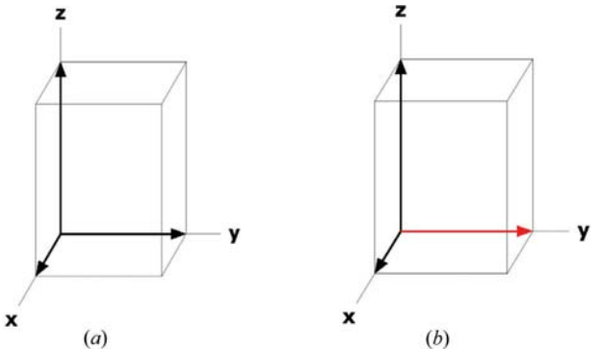

Figure 3.6.3.2
Lattice diagrams of (*a*) the three-dimensional magnetic space group 26.1.168 $\mathcal{F} = Pmc2_1$ and (*b*) the three-dimensional magnetic space group 26.10.177 $\mathcal{M}_R = P_{2b}m'c'2_1 = \mathcal{F}(\mathcal{D}) = Pmc2_1(Pca2_1)$.

type. Given a coordinate system, this group is defined by the list of symmetry operations (see Section 3.6.3.6) given on the page with this Hermann–Mauguin symbol in the heading, or by the given list of general positions and magnetic moments (see Section 3.6.3.9).

(2) The *short international* (Hermann–Mauguin) *point group symbol* for the geometric crystal class to which the magnetic space group belongs.

(3) The crystal system or crystal system/Bravais system classification to which the magnetic space group belongs.

The second line has two additional entries:

(4) The three-part numerical serial index of the magnetic group (see Section 3.6.2.2.1).

(5) The *full international (Hermann–Mauguin) symbol* of the magnetic space group.