

2. RECIPROCAL SPACE IN CRYSTAL-STRUCTURE DETERMINATION

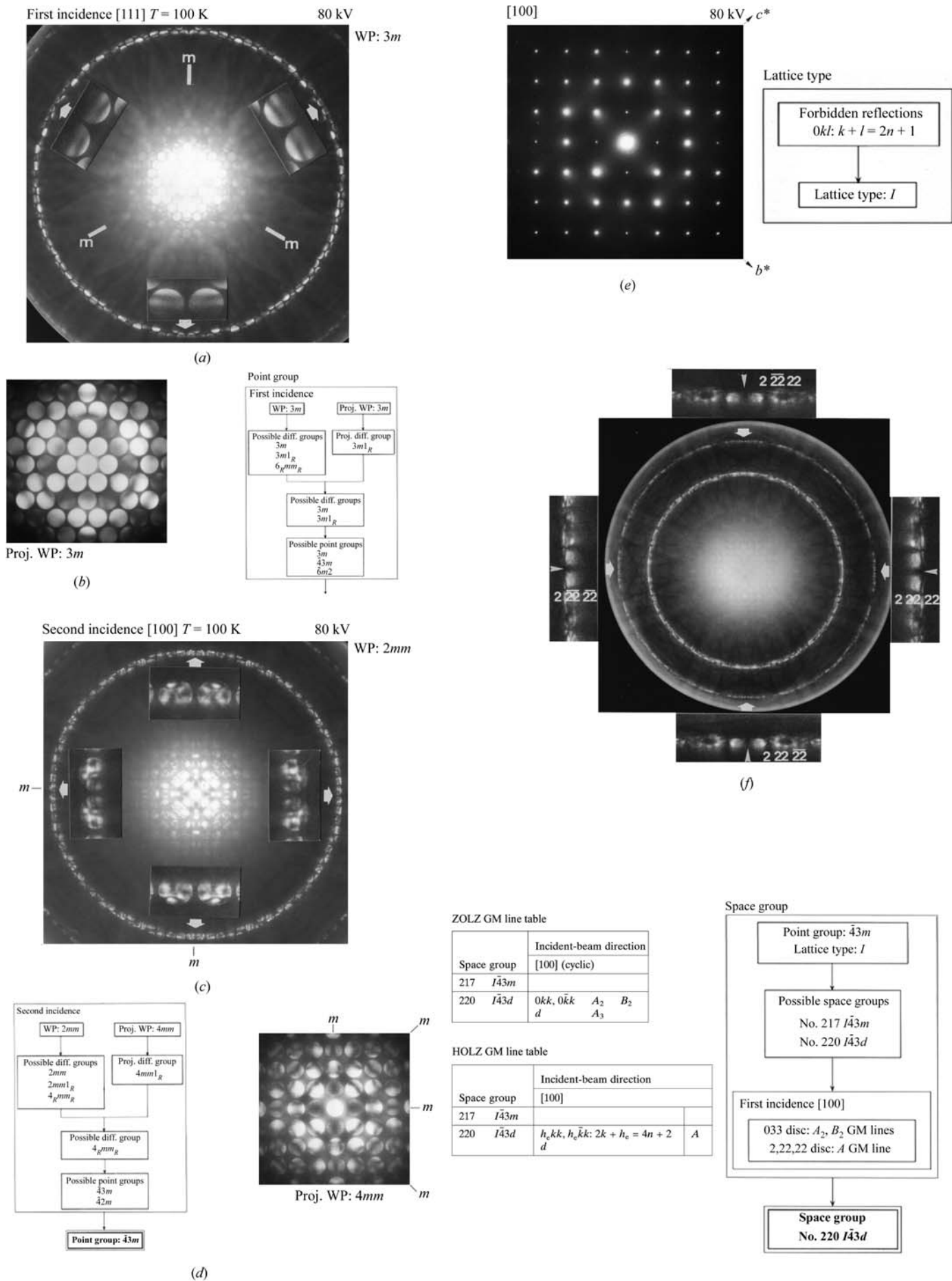


Fig. 2.5.3.16. CBED patterns of  $Sm_3Se_4$ . The procedures for identifying the symmetry are also shown. (a, b) [111] incidence at 80 kV: the WP symmetry is  $3m$  (a) and the projection (proj.) WP symmetry is  $3m$  (b). (c, d) [100] incidence at 80 kV: the WP symmetry is  $2mm$  (c) and the projection WP symmetry is  $4mm$  (d). Dynamical extinction lines  $A_2$  and  $A_3$  are seen (d). The point group is determined to be  $43m$ . (e) Spot diffraction pattern taken with the [100] incidence at 80 kV shows the absence of  $0kl$  reflections. The lattice type is determined to be  $I$ . (f) [100] incidence at 100 kV: dynamical extinction lines  $A$  in HOLZ reflections confirm the existence of a glide plane. The space group is determined to be  $I43d$ .