TABLE 3.2

RANGANATHAN'S GENERATING FUNCTION FOR UVW = 1

θ°	Σ	x	y
180	7	0	1
0	1	1	0
150.07	15	1	1
123.75	9	2	1
102.56	23	3	1
86.18	15	4	1
164.78	57	1	2
150.07	15	2	2
136.31	65	3	2
123.75	9	4	2
169.82	127	1	3
159.79	65	2	3
150.07	135	3	3
140.77	71	4	3
172.35	225	1	4
164.78	57	2	4
157.33	233	3	4
150.07	15	4	4

TABLE 3.3

All values of Θ/*UVW* for Σ up to 31

	Σ	Θ		Σ	Θ		Σ	Θ
100	5	36.9	110	3	70.5	111	3	60
	13a	22.6		9	38.9		7	38.2
	17a	28.1		11	50.5		13b	27.8
	25a	16.3		17b	86.6		19b	46.6
	29b	43.6		19a	26.5		21a	21.8
				27b	31.6		31a	17.9

Table 3.3 (*continued*)

210	3	131.8	211	3	180	221	5	143.1
	5	180		5	101.5		9	90
	7	73.4		7	135.6		9	180
	9	96.4		11	63.0		13b	112.2
	15	48.2		15	78.5		17b	61.9
	21b	58.4		21b	44.4		25b	73.7
	23	163.0		25b	156.9		29a	46.4
	27a	35.4		29a	149.6			
	29a	112.3		31b	52.2			
310	5	180	311	3	146.4	320	7	149.0
	7	115.4		5	95.7		11	100.5
	11	144.9		9	67.1		13a	180
	13b	76.7		11	180		17b	122.0
	19a	93.0		15	50.7		19b	71.6
	23	55.6		15	117.8		29a	84.1
				23	40.5		31b	54.5
				25b	168.3			
				27a	79.3			
				31b	126.6			
321	7	180	322	9	152.7	410	9	152.7
	9	123.8		13a	107.9		13b	107.9
	15	86.2		17b	180		17a	180
	15	150.1		21a	128.3		21a	79.0
	23	102.6		21b	79.0		21b	128.3
	25b	63.9						
411	9	180	331	5	154.2	421	11	155.4
	11	129.5		7	110.9		15	113.6
	17a	93.4		11	82.2		21b	180
	19b	153.5		17b	63.8		23	85.0
	27a	109.5		19a	180		25b	132.8
	27b	70.5		23	130.7			
				25b	51.7			
332	11	180	430	13b	157.4	431	13b	180
	13a	133.8		17b	118.1		15	137.2
	19a	99.1		25a	180		21b	103.8
	23	155.9		25b	90		27a	157.8
	29a	76.0		29a	136.4		31b	80.7
	31a	114.8						

Table 3.3 *(continued)*

510	13a	180	511	7	158.2	432	15	159.0
	15	137.2		9	120.0		19a	121.8
	21a	103.8		13a	92.2		27a	94.3
	27b	157.8		19a	73.2		29a	180
	31a	80.7		27a	60			
				27b	180			
				31b	137.9			
520	15	159.0	521	15	180	441	17a	160.3
	19b	121.8		17b	139.9		21b	124.9
	27b	94.3		23	107.7		29a	97.9
	29b	180		31b	159.3			
522	17b	160.3	433	17b	180	530	17a	180
	21b	124.9		19a	142.1		19b	142.1
	29b	97.9		25a	111.1		25b	111.1
610	19a	161.3	532	19b	180	611	19a	180
	23	127.5		21b	144.1		21b	144.1
	31a	101.2		27a	114.0		27b	114.0
443	21b	162.3	540	21a	162.3	621	21b	162.3
	25a	129.8		25b	129.8		25b	129.8
531	9	160.8	533	11	162.7	551	13a	164.1
	11	126.2		13b	130.8		15	134.4
	15	99.6		17a	105.3		19b	110.0
	21b	80.4		23	86.3		25b	91.2
	29a	66.6		31b	72.2			
541	21a	180	542	23	163	631	23	180
	23	145.7		27a	131.8		25b	147.1
	29a	116.6					31b	118.9
632	25b	163.7	543	25b	180	710	25a	180
	29a	133.6		27a	148.4		27a	148.4
711	13b	164.1	553	15	165.2	731	15	165.2
	15	134.4		17a	137.3		17b	137.3
	19a	110.0		21a	113.9		21b	113.9
	25a	91.2		27b	95.3		27a	95.3

Table 3.3 (*continued*)

641	27b	164.4	720	27a	164.4	552	27b	180
	31b	135.2		31b	135.2		29b	149.6
721	27a	180	544	29a	164.9	730	29b	180
	29a	149.6	722	29a	164.9		31b	150.6
733	17b	166.1	751	19a	166.8	753	21b	167.5
	19b	139.7		21b	141.8		23	143.6
	23	117.2		25b	120		27b	122.5
	29b	98.9		31b	102.1			
911	21a	167.5	931	23	168.0	755	25b	168.5
	23	143.6		25b	145.1		27b	146.4
	27a	122.5		29a	124.7		31a	126.6
771	25a	168.5	773	27a	169.0	951	27a	169.0
	27a	146.4		29b	147.7		29a	147.7
	31b	126.6	645	31b	165.4	650	31a	165.4
953	29a	169.4	775	31b	169.7	11,1,1	31a	169.7
	31b	148.7	732	31b	180	651	31a	180

The significance of the letters which occur in Tables 3.1, 3.3 and 3.4 are that more than one misorientation can generate geometrically independent CSLs with a particular Σ-value. For example a $\Sigma = 39$ CSL arises from the disorientation 32.21°/111 ($\Sigma = 39a$) and also 50.13°/123 ($\Sigma = 39b$). A full list of all 24 variants of $\Sigma = 39b$ were given in Table 2.1. The letters which distinguish identical Σ-values are designated according to increasing Θ.

In analogy to equation 2.6 the misorientation matrix for a CSL is given by

$$\mathbf{M}_{CSL} = 1/\Sigma \begin{bmatrix} A_{11} & A_{12} & A_{13} \\ A_{21} & A_{22} & A_{23} \\ A_{31} & A_{32} & A_{33} \end{bmatrix} \tag{3.2}$$

Hence the misorientation matrix in equation 2.7, which refers to a $\Sigma = 3$ CSL, could be rewritten: