AM-86-299

High-teperature structure and crystal chemistry of hydrous alkali-rich beryl from the Harding pegmatite, Toas County, New Mexico

Brown and Mills

To be deposited: Table 6

American Mineralogist: 71, 3-4, 547-556

TABLE 6.

OBSERVED AND CALCULATED STRUCTURE FACTORS FOR THE HARDING BERYL AT 24°, 500°, 800°, and 24°C (after heating)

Structure Factors for Beryl (24°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
	H = 0				
0	0	4	119	124	5
0	0	6	134	140	6
0	0	8	165	171	6
0	0	10	12	12	0
0	0	12	80	79	1
0	0	14	53	52	1
0	1	0	49	53	4
0	1	4	43	39	4
0	1	6	9	5	4
0	1	8	17	15	1
0	1	10	18	19	1
0	1	12	6	4	2
0	2	0	20	22	2
0	2	2	71	63	8
0	2	4	48	49	2
0	2	6	30	27	2
0	2	8	19	19	0
0	2	10	26	26	0
0	2	12	13	15	2
0	2	14	7	8	1
0	3	0	37	38	1
0	3	2	7	4	2
0	3	4	92	92	0
0	3	6	29	30	1
0	3	8	30	30	0
0	3	12	24	24	0
0	3	14	14	14	0
0	4	0	33	36	2
0	4	2	17	15	2
0	4	6	30	30	0
0	4	8	20	21	0
0	4	10	9	8	1
0	4	12	13	11	1
0	4	14	14	15	1
0	5	0	66	65	1
0	5	2	16	12	4
0	5	4	12	10	2
0	5	6	26	26	0
0	5	8	29	29	0
0	5	12	17	15	2
0	6	0	47	47	0
0	6	2	104	106	2
0	6	4	50	51	1
0	6	6	49	49	0
0	6	8	9	11	1
0	6	10	74	74	0
0	6	12	11	8	3
0	7	2	32	32	1
0	7	4	27	27	1
0	7	6	16	15	1
0	7	8	8	3	5
0	7	10	29	27	2
0	8	0	71	74	3
0	8	2	35	35	0
0	8	4	22	20	2
0	8	6	51	50	1
0	8	8	42	42	0
0	8	10	11	11	1
0	9	0	9	10	0
0	9	2	36	38	1
0	9	4	8	10	2
0	9	6	36	38	2
0	9	10	19	18	1
0	10	2	19	18	1
0	10	4	22	24	2
0	11	0	12	12	0
0	11	2	11	10	1
0	11	4	8	4	4
0	12	0	13	14	1
0	12	2	34	33	1
		H = 1			
1	1	0	4	0	4
1	1	2	116	116	1
1	1	4	17	17	0
1	1	6	71	72	2
1	1	10	47	49	2
1	1	14	25	25	0
1	2	0	48	48	0
1	2	1	89	91	2
1	2	3	17	13	3
1	2	4	17	17	0
1	2	5	31	32	1
1	2	6	39	40	1
1	2	7	65	66	1
1	2	8	20	19	1

Structure Factors for Beryl (24°C) h,k,l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
		H = 1			
1	2	9	23	23	0
1	2	10	22	21	1
1	2	11	11	11	1
1	2	12	10	10	0
1	2	13	30	30	0
1	2	14	18	18	0
1	3	0	44	42	2
1	3	1	40	36	4
1	3	2	16	16	1
1	3	3	50	50	0
1	3	4	18	18	0
1	3	5	16	16	0
1	3	6	25	23	1
1	3	7	16	17	1
1	3	8	19	18	1
1	3	11	24	24	0
1	3	12	9	6	2
1	3	14	9	10	1
1	4	0	82	85	3
1	4	1	55	55	0
1	4	2	31	30	1
1	4	3	77	79	2
1	4	4	30	30	0
1	4	5	56	57	1
1	4	6	9	4	5
1	4	7	35	35	1
1	4	8	38	39	1
1	4	9	39	40	0
1	4	10	20	20	0
1	4	11	35	35	1
1	4	12	22	21	1
1	4	13	19	19	0
1	5	1	14	15	1
1	5	2	34	36	1
1	5	3	9	8	1
1	5	4	26	28	2
1	5	6	18	18	0
1	5	7	14	15	1
1	5	10	27	26	1
1	5	13	9	7	2
1	6	0	39	38	1
1	6	1	8	8	0
1	6	2	7	7	0
1	6	4	14	13	1
1	6	5	7	2	5
1	6	6	14	14	0
1	6	7	10	7	3
1	6	8	26	26	0
1	6	12	13	12	1
1	7	0	28	29	1
1	7	1	29	29	1
1	7	2	12	12	0
1	7	3	35	35	0
1	7	4	36	38	2
1	7	5	29	29	0
1	7	6	17	17	0
1	7	7	18	19	1
1	7	8	23	23	0
1	7	9	21	20	1
1	7	11	20	18	1
1	7	12	11	13	2
1	8	0	29	29	0
1	8	1	6	6	0
1	8	2	9	9	0
1	8	3	18	17	2
1	8	4	16	17	1
1	8	6	10	11	1
1	8	7	9	8	2
1	8	8	21	20	1
1	8	9	8	7	2
1	9	0	1	2	1
1	9	1	16	16	0
1	9	3	35	34	1
1	9	4	19	20	0
1	9	5	23	23	1
1	9	9	17	17	0
1	10	0	39	39	1
1	10	1	45	45	0
1	10	3	24	23	0
1	10	4	18	18	0
1	10	5	31	31	1
1	10	7	39	40	1
1	10	8	22	23	1
1	11	0	20	19	1
1	11	3	11	12	1
1	11	4	15	14	1

Structure Factors for Beryl (24°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
	H = 1				
1	12	0	13	13	0
1	12	1	11	10	1
1	12	2	19	20	1
	H = 2				
2	2	0	25	24	1
2	2	2	26	22	4
2	2	4	101	102	1
2	2	6	48	49	1
2	2	8	32	31	1
2	2	10	9	4	5
2	2	12	27	27	1
2	2	14	22	22	0
2	3	0	29	29	1
2	3	1	9	10	1
2	3	2	26	25	1
2	3	3	46	45	1
2	3	4	42	42	0
2	3	5	25	25	0
2	3	6	16	14	2
2	3	8	25	25	0
2	3	9	14	14	0
2	3	10	14	15	0
2	3	11	18	18	1
2	4	0	43	43	0
2	4	1	20	21	1
2	4	2	45	47	2
2	4	3	17	17	0
2	4	4	52	54	1
2	4	5	16	17	1
2	4	6	32	32	0
2	4	7	10	13	3
2	4	8	33	31	1
2	4	9	9	7	1
2	4	10	30	30	0
2	4	12	23	22	1
2	5	0	71	74	3
2	5	1	66	67	1
2	5	2	8	4	4
2	5	3	34	34	0
2	5	4	54	55	1
2	5	5	41	41	0
2	5	6	6	3	3
2	5	7	51	51	0
2	5	8	43	43	0
2	5	9	29	30	1
2	5	12	24	23	2
2	5	13	27	24	3
2	6	1	10	12	2
2	6	2	17	17	0
2	6	3	14	15	2
2	6	4	21	21	1
2	6	5	9	8	1
2	6	8	8	5	3
2	6	9	9	11	2
2	6	10	18	18	0
2	7	0	16	14	2
2	7	2	7	6	2
2	7	3	31	31	1
2	7	4	21	20	1
2	7	5	13	13	1
2	7	8	14	13	1
2	7	9	14	15	1
2	7	11	13	17	4
2	8	0	17	17	0
2	8	2	25	25	0
2	8	4	32	33	1
2	8	6	28	28	0
2	8	8	14	14	0
2	9	0	16	16	0
2	9	1	24	25	1
2	9	2	21	21	0
2	9	3	20	19	1
2	9	5	22	22	0
2	9	6	21	21	0
2	9	7	20	21	1
2	9	9	11	12	1
2	10	0	22	22	0
2	10	2	11	10	1
2	10	6	18	17	1
2	11	0	12	12	0
2	11	1	10	8	2
2	11	2	15	14	1
2	11	3	24	24	0
2	11	5	17	16	1

Structure Factors for Beryl (24°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$	h	k	l	F_o	F_c	$\sigma(F)$
		H = 3									
3	3	0	29	26	3	3	9	1	14	13	2
3	3	2	68	68	0	3	9	3	21	19	1
3	3	4	10	12	3	3	9	4	22	23	1
3	3	6	65	67	2	3	9	5	17	14	3
3	3	10	30	29	1	3	9	7	9	8	1
3	4	1	14	12	2	3	9	8	16	16	0
3	4	2	9	11	2	3	10	3	20	20	0
3	4	3	68	71	3	3	10	4	19	19	0
3	4	4	33	34	1	3	10	5	11	10	1
3	4	5	35	36	1	3	11	0	25	24	1
3	4	8	13	11	1	3	11	2	6	6	0
3	4	9	30	29	1						
3	4	10	13	12	1			H = 4			
3	4	12	8	12	4	4	3	7	8	0	8
3	5	0	9	8	1	4	4	0	9	5	4
3	5	1	15	15	0	4	4	2	49	51	2
3	5	2	14	16	1	4	4	4	34	34	0
3	5	3	36	36	1	4	4	6	56	56	0
3	5	5	23	25	1	4	4	10	20	20	0
3	5	6	9	7	1	4	5	1	41	41	0
3	5	9	19	18	1	4	5	2	13	12	1
3	5	10	11	11	1	4	5	3	31	31	0
3	5	11	21	20	1	4	5	4	10	9	1
3	6	0	33	35	2	4	5	5	31	31	0
3	6	1	16	17	0	4	5	6	19	18	1
3	6	4	48	50	2	4	5	7	33	33	0
3	6	7	13	14	1	4	5	9	26	25	1
3	6	8	26	26	0	4	5	11	18	17	1
3	7	0	18	18	0	4	6	0	17	16	1
3	7	1	52	53	1	4	6	1	9	10	1
3	7	2	17	16	1	4	6	3	9	8	1
3	7	3	16	15	1	4	6	4	9	9	0
3	7	5	30	29	0	4	6	5	8	8	0
3	7	6	22	22	1	4	6	6	11	12	0
3	7	7	48	48	0	4	6	7	11	8	3
3	7	9	19	21	1	4	6	8	10	8	2
3	8	1	31	32	1	4	7	2	41	41	0
3	8	2	17	16	1	4	7	3	25	25	0
3	8	3	29	27	1	4	7	4	12	10	2
3	8	5	25	25	0	4	7	5	11	11	0
3	8	6	11	12	1	4	7	6	27	27	0
3	8	9	24	21	3	4	7	9	12	9	3
3	9	0	21	20	0	4	8	0	17	16	0

Structure Factors for Beryl (24°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
		H = 4			
4	8	2	14	14	0
4	8	4	9	10	2
4	8	6	12	14	3
4	8	8	13	12	1
4	9	0	24	24	0
4	9	1	34	35	1
4	9	2	24	23	1
4	9	4	9	8	2
4	9	5	25	24	1
4	9	6	27	27	1
4	10	0	20	21	1
		H = 5			
5	1	8	8	5	3
5	4	0	13	13	1
5	5	0	20	20	0
5	5	2	43	43	1
5	5	4	10	8	2
5	5	6	22	22	1
5	5	10	36	34	2
5	6	2	17	16	0
5	6	3	9	7	2
5	6	10	15	14	1
5	7	0	8	7	0
5	7	3	18	19	1
5	7	4	8	6	2
5	7	5	12	10	1
5	8	0	11	4	6
5	8	2	26	25	1
5	8	3	13	14	1
5	8	4	3	3	0
5	8	5	9	9	0
5	8	6	27	27	1
5	9	0	6	3	3
5	9	1	13	12	1
5	9	2	21	21	0
5	9	4	17	15	2
		H = 6			
6	2	0	10	7	2
6	5	7	10	3	7
6	6	0	93	93	1
6	6	2	29	27	2
6	6	4	58	56	2
6	6	6	35	34	0
6	6	8	64	63	1
6	7	0	17	17	0
6	7	3	10	8	2
6	7	5	9	6	3
6	8	2	19	19	0
6	8	4	28	27	1
		H = 7			
7	7	2	16	19	2
7	7	4	9	8	1
		H = 8			
8	3	4	10	7	3
8	3	7	24	25	2
		H = 9			
9	3	2	9	5	3
9	4	3	14	17	3
		H = 10			
10	2	1	10	5	4
10	2	5	3	4	0
		H = 11			
11	1	6	10	7	3
11	2	4	13	8	5

Structure Factors for Beryl (500°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

H = 0

h	k	l	F_o	F_c	$\sigma(F)$
0	0	4	109	117	9
0	0	6	123	127	4
0	0	8	146	152	7
0	0	10	12	10	2
0	0	12	64	59	5
0	0	14	38	37	1

H = 1

h	k	l	F_o	F_c	$\sigma(F)$
1	1	0	6	2	5
1	1	2	115	115	0
1	1	4	19	15	4
1	1	6	65	65	0
1	1	10	39	39	0
1	1	14	20	16	4
1	0	10	20	16	4
1	0	8	16	16	0
1	0	6	8	4	4
1	0	4	39	37	2
1	0	2	33	39	6
1	0	0	49	52	3

H = 2

h	k	l	F_o	F_c	$\sigma(F)$
2	0	0	21	23	2
2	0	2	68	62	7
2	0	4	46	48	2
2	0	6	25	25	0
2	0	8	16	15	0
2	0	10	18	21	3
2	0	12	13	12	2
2	0	14	4	6	2
2	1	14	17	15	2
2	1	13	24	24	0
2	1	12	10	8	1
2	1	10	19	20	1
2	1	9	20	23	3
2	1	8	11	17	6
2	1	7	59	63	4
2	1	6	37	39	2
2	1	5	30	31	1
2	1	4	17	16	1
2	1	3	15	12	3
2	1	2	38	42	4
2	1	1	90	91	2
2	1	0	49	46	3
2	2	0	19	20	1
2	2	2	23	22	1
2	2	4	96	96	0
2	2	6	44	44	0
2	2	8	26	25	0
2	2	12	20	21	1
2	2	14	13	15	2

H = 3

h	k	l	F_o	F_c	$\sigma(F)$
3	3	0	33	30	3
3	3	2	65	66	1
3	3	4	9	12	3
3	3	6	58	61	3
3	3	8	12	8	4
3	3	10	21	22	1
3	3	12	11	2	9
3	2	12	17	16	1
3	2	11	10	12	2
3	2	10	9	12	2
3	2	9	10	11	2
3	2	8	24	24	1
3	2	6	14	12	2
3	2	5	24	22	2
3	2	4	42	43	1
3	2	3	43	41	2
3	2	2	22	25	3
3	2	1	14	11	3
3	2	0	33	30	3
3	1	0	40	38	2
3	1	1	38	36	3
3	1	2	16	15	1
3	1	3	50	49	1
3	1	4	18	18	0
3	1	5	18	18	0
3	1	6	23	19	4
3	1	7	11	11	1
3	1	8	10	2	8
3	1	9	16	18	2
3	1	11	22	23	1
3	1	14	12	6	6
3	0	12	14	16	2
3	0	8	24	23	1

Structure Factors for Beryl (500°C) h, k, l, F_{obs}, F_{calc}, and σ(F)

h	k	l	F_o	F_c	σ(F)	h	k	l	F_o	F_c	σ(F)
		H = 3				4	3	4	32	36	4
3	0	6	26	26	1	4	3	3	65	66	2
3	0	4	85	83	1	4	3	1	10	13	3
3	0	0	34	35	2	4	4	2	47	47	0
		H = 4				4	4	4	27	26	1
4	0	0	35	37	2	4	4	6	47	47	1
4	0	2	17	15	3	4	4	10	15	15	0
4	0	4	7	1	6						
4	0	6	26	28	2			H = 5			
4	0	8	19	21	2	5	5	0	14	17	3
4	0	14	13	12	1	5	5	2	39	42	3
4	1	13	13	16	3	5	5	4	12	10	1
4	1	12	15	15	0	5	5	6	18	21	4
4	1	11	28	29	1	5	5	10	26	28	2
4	1	10	15	14	1	5	4	11	18	14	4
4	1	9	32	33	1	5	4	9	26	20	6
4	1	8	31	34	3	5	4	7	26	29	3
4	1	7	32	31	0	5	4	6	17	17	0
4	1	6	10	2	8	5	4	5	27	28	1
4	1	5	52	55	4	5	4	4	9	10	1
4	1	4	25	25	0	5	4	3	28	28	0
4	1	3	73	77	4	5	4	2	14	14	0
4	1	2	27	26	0	5	4	1	40	38	2
4	1	1	53	54	0	5	3	0	10	7	4
4	1	0	78	81	3	5	3	1	13	13	1
4	2	0	41	39	1	5	3	2	15	12	3
4	2	1	19	20	1	5	3	3	32	33	1
4	2	2	46	45	1	5	3	5	20	22	2
4	2	3	12	15	3	5	3	6	13	5	8
4	2	4	48	49	2	5	3	9	14	16	2
4	2	5	18	15	3	5	3	11	16	16	0
4	2	6	30	31	1	5	2	13	18	16	1
4	2	7	9	11	1	5	2	12	13	14	1
4	2	8	23	27	4	5	2	11	14	14	1
4	2	9	9	5	4	5	2	9	26	26	0
4	2	10	28	25	3	5	2	8	36	31	5
4	2	11	12	5	7	5	2	7	45	44	1
4	2	12	19	19	1	5	2	6	8	4	4
4	3	12	13	11	2	5	2	5	38	37	1
4	3	11	24	24	0	5	2	4	46	46	0
4	3	9	26	23	3	5	2	3	33	33	0
4	3	8	12	10	2	5	2	1	64	64	0
4	3	5	33	34	2	5	2	0	66	63	3

Structure Factors for Beryl (500°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
		H = 5			
5	1	1	14	16	2
5	1	2	35	33	3
5	1	4	24	27	2
5	1	6	19	16	3
5	1	8	9	5	4
5	1	10	24	22	2
5	0	12	16	11	5
5	0	8	25	26	1
5	0	6	20	20	0
5	0	4	9	10	1
5	0	2	14	9	5
5	0	0	68	66	2
		H = 6			
6	0	0	41	38	3
6	0	2	98	100	2
6	0	4	47	51	4
6	0	6	42	44	2
6	0	8	13	6	7
6	0	10	57	57	0
6	1	12	15	11	3
6	1	8	25	23	2
6	1	6	15	14	1
6	1	4	14	16	1
6	1	2	11	9	2
6	1	1	9	8	0
6	2	2	16	15	1
6	2	3	14	16	2
6	2	4	23	22	0
6	2	5	10	8	2
6	2	6	8	6	2
6	2	8	13	6	7
6	2	10	15	16	1
6	3	9	11	4	7
6	3	8	21	21	1
6	3	7	16	13	3
6	3	4	42	42	0
6	3	1	16	15	1
6	3	0	30	30	0
6	4	0	18	16	1
6	4	1	11	12	1
6	4	4	9	7	2
6	4	6	11	9	1
6	4	8	11	7	4
6	4	9	12	5	8
6	4	10	10	3	7
6	5	10	10	10	0
6	5	9	9	2	7
6	5	3	11	6	5
6	5	2	17	15	1
6	5	0	10	12	1
6	6	0	80	81	1
6	6	2	25	28	2
6	6	4	49	49	0
6	6	6	33	32	0
6	6	8	49	48	1
		H = 7			
7	7	2	16	19	3
7	6	5	10	5	5
7	6	4	10	4	6
7	6	0	14	19	5
7	5	3	16	17	1
7	5	8	0	1	0
7	4	9	11	6	5
7	4	6	19	21	2
7	4	5	10	11	1
7	4	3	22	22	0
7	4	2	36	32	4
7	4	0	9	4	5
7	3	0	15	18	4
7	3	1	48	48	1
7	3	2	16	11	5
7	3	3	18	16	2
7	3	5	28	26	2
7	3	6	21	17	4
7	3	7	42	40	2
7	3	8	11	11	0
7	3	9	16	19	3
7	2	11	15	14	2
7	2	9	4	12	8
7	2	8	15	14	1
7	2	5	16	12	4
7	2	4	21	21	0
7	2	3	27	28	2
7	2	2	9	3	5

Structure Factors for Beryl (500°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
	H = 7				
7	2	0	16	17	1
7	1	0	23	26	3
7	1	1	25	26	1
7	1	2	9	11	2
7	1	3	34	32	1
7	1	4	31	33	2
7	1	5	26	25	1
7	1	6	17	13	4
7	1	7	18	15	3
7	1	8	19	18	1
7	1	9	13	15	2
7	1	11	15	13	2
7	1	12	15	10	4
7	0	10	20	25	5
7	0	6	15	16	1
7	0	4	20	23	4
7	0	2	31	32	1
7	0	0	10	10	1
	H = 8				
8	0	0	64	68	4
8	0	2	36	35	1
8	0	4	20	19	1
8	0	6	48	45	3
8	0	8	35	39	4
8	1	8	18	18	0
8	1	4	19	16	4
8	1	3	16	15	1
8	1	0	28	27	0
8	2	0	13	12	1
8	2	2	21	19	1
8	2	4	26	25	0
8	2	6	24	22	2
8	2	8	12	9	2
8	2	9	4	3	1
8	3	9	17	17	0
8	3	7	19	21	1
8	3	6	11	11	0
8	3	5	21	22	2
8	3	3	26	25	1
8	3	2	16	14	2
8	3	1	28	29	1
8	4	0	15	16	0
8	4	2	10	14	4
8	4	4	17	10	7
8	4	6	11	13	2
8	4	8	14	10	4
8	5	6	22	17	5
8	5	5	12	9	3
8	5	2	21	18	3
8	6	0	9	1	9
8	6	4	24	23	1
	H = 9				
9	5	1	13	9	4
9	5	2	19	12	7
9	5	4	11	16	6
9	4	6	21	23	3
9	4	5	21	21	0
9	4	3	12	15	3
9	4	2	19	22	3
9	4	1	30	31	1
9	4	0	17	17	0
9	3	0	16	16	0
9	3	3	15	16	1
9	3	4	22	21	1
9	3	5	15	12	3
9	3	7	12	6	6
9	3	8	14	12	2
9	2	9	13	12	1
9	2	7	12	18	6
9	2	6	15	22	6
9	2	5	19	17	2
9	2	3	18	16	2
9	2	2	21	22	1
9	2	1	24	23	1
9	2	0	14	14	0
9	1	1	15	15	1
9	1	3	27	31	4
9	1	4	18	15	3
9	1	5	17	19	2
9	1	9	11	13	2
9	0	10	15	14	1
9	0	6	29	28	1
9	0	2	33	31	2

Structure Factors for Beryl (500°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
		H = 10			
10	0	2	15	14	1
10	0	4	15	20	4
10	1	8	18	17	1
10	1	7	31	35	4
10	1	6	11	7	5
10	1	5	27	27	0
10	1	4	13	14	1
10	1	3	25	22	3
10	1	1	39	43	4
10	1	0	32	32	0
10	2	0	20	19	1
10	2	1	12	5	8
10	2	6	16	14	2
10	3	6	13	4	9
10	3	4	18	19	1
10	3	3	17	14	3
10	4	0	19	17	2
		H = 11			
11	3	0	22	18	4
11	2	5	13	14	1
11	2	3	20	20	0
11	1	0	16	16	0
11	1	3	13	9	4
11	1	4	17	10	7
11	0	0	10	11	1
		H = 12			
12	0	2	26	26	0
12	0	4	10	7	4
12	1	2	14	16	2

Structure Factors for Beryl (800°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
		H = 0			
0	0	4	113	117	4
0	0	6	127	127	0
0	0	8	146	149	3
0	0	10	11	12	1
0	0	12	59	58	1
0	0	14	36	36	0
		H = 1			
1	1	0	5	2	3
1	1	2	116	113	2
1	1	4	21	18	2
1	1	6	65	67	2
1	1	10	38	39	1
1	1	14	16	17	1
1	0	10	16	16	1
1	0	8	16	17	1
1	0	6	8	3	5
1	0	4	37	35	1
1	0	2	35	38	3
1	0	0	49	52	2
		H = 2			
2	0	0	24	24	0
2	0	2	66	60	6
2	0	4	48	50	2
2	0	6	24	25	1
2	0	8	19	18	1
2	0	10	19	18	0
2	0	12	14	14	0
2	1	14	11	14	3
2	1	13	24	23	1
2	1	11	12	11	1
2	1	10	18	19	1
2	1	9	20	21	2
2	1	8	12	14	2
2	1	7	61	61	0
2	1	6	40	40	0
2	1	5	32	32	0
2	1	4	14	13	1
2	1	3	17	12	4
2	1	2	38	41	2
2	1	1	88	89	2
2	1	0	44	45	0
2	2	0	18	20	2
2	2	2	22	21	1
2	2	4	94	92	2
2	2	6	43	43	0
2	2	8	25	24	1
2	2	12	19	19	0
2	2	14	14	14	0
		H = 3			
3	3	0	31	31	0
3	3	2	60	61	1
3	3	4	10	4	6
3	3	6	56	57	1
3	3	8	13	9	4
3	3	10	19	21	2
3	3	12	10	5	5
3	2	12	17	15	1
3	2	11	16	13	2
3	2	10	12	11	1
3	2	9	9	10	1
3	2	8	25	25	0
3	2	6	12	11	1
3	2	5	24	24	1
3	2	3	41	41	1
3	2	2	21	23	3
3	2	1	12	11	2
3	2	0	33	32	0
3	1	0	37	36	1
3	1	1	37	34	3
3	1	2	19	19	0
3	1	3	49	47	1
3	1	4	21	22	1
3	1	5	18	17	0
3	1	6	20	20	0
3	1	7	9	11	2
3	1	9	19	16	3
3	1	11	20	21	1
3	1	13	12	3	9
3	0	12	19	17	2
3	0	8	24	22	2
3	0	6	26	26	0
3	0	4	82	83	1
3	0	0	30	34	4

Structure Factors for Beryl (800°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
	H = 4				
4	0	0	35	37	2
4	0	2	16	14	2
4	0	6	24	26	1
4	0	8	22	23	0
4	0	10	9	7	2
4	0	12	10	11	1
4	1	13	11	15	4
4	1	12	12	16	4
4	1	11	26	28	1
4	1	10	15	15	1
4	1	9	31	30	0
4	1	8	29	29	0
4	1	7	32	31	1
4	1	5	51	54	2
4	1	4	24	24	0
4	1	3	71	71	1
4	1	2	25	26	1
4	1	1	52	53	1
4	1	0	74	76	2
4	2	0	39	38	1
4	2	1	18	18	1
4	2	2	46	44	2
4	2	3	16	11	4
4	2	4	43	45	2
4	2	5	13	15	2
4	2	6	33	32	1
4	2	7	12	10	3
4	2	8	25	24	1
4	2	10	25	25	1
4	2	12	12	16	4
4	3	12	10	10	0
4	3	11	24	22	2
4	3	10	12	8	4
4	3	9	22	22	0
4	3	8	15	12	3
4	3	5	31	31	0
4	3	4	34	34	0
4	3	3	62	63	1
4	3	1	11	11	0
4	4	0	10	7	3
4	4	2	42	43	1
4	4	4	23	25	2
4	4	6	44	44	0
4	4	10	16	13	2
		H = 5			
5	5	0	13	9	4
5	5	2	33	34	0
5	5	4	13	13	0
5	5	10	23	24	1
5	4	11	14	13	1
5	4	9	22	19	3
5	4	7	27	26	1
5	4	6	16	15	1
5	4	5	26	26	0
5	4	3	27	27	1
5	4	2	15	14	1
5	4	1	36	35	1
5	3	0	8	11	3
5	3	1	14	13	1
5	3	2	13	16	3
5	3	3	30	30	0
5	3	5	21	20	1
5	3	7	13	8	5
5	3	9	11	14	4
5	3	10	12	8	4
5	3	11	12	15	3
5	3	12	3	2	2
5	2	13	13	14	1
5	2	12	14	14	1
5	2	11	11	12	1
5	2	9	23	27	3
5	2	8	33	33	1
5	2	7	42	42	0
5	2	5	34	34	0
5	2	4	44	44	0
5	2	3	33	32	1
5	2	1	59	62	2
5	2	0	62	62	1
5	1	0	8	6	2
5	1	1	14	14	1
5	1	2	37	37	0
5	1	4	20	22	1
5	1	5	1	2	1

Structure Factors for Beryl (800°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
		H = 5			
5	1	6	20	19	2
5	1	7	13	13	0
5	1	10	21	23	2
5	1	13	11	4	7
5	0	12	10	13	2
5	0	8	25	25	0
5	0	6	19	22	3
5	0	4	15	13	2
5	0	2	10	8	2
5	0	0	65	64	1
		H = 6			
6	0	0	35	35	0
6	0	2	93	95	2
6	0	4	47	49	2
6	0	6	42	42	1
6	0	10	54	55	1
6	1	12	11	10	1
6	1	8	24	25	1
6	1	4	15	16	1
6	1	1	9	6	3
6	1	0	37	40	3
6	2	2	13	13	0
6	2	3	13	13	1
6	2	4	23	22	1
6	2	8	10	7	3
6	2	10	15	13	2
6	2	12	10	9	1
6	3	8	20	18	2
6	3	7	9	10	1
6	3	4	38	37	1
6	3	1	13	13	0
6	3	0	28	25	2
6	4	0	15	16	1
6	4	8	9	7	2
6	5	4	8	2	6
6	5	2	12	13	1
6	5	0	8	9	1
6	6	0	69	71	2
6	6	2	26	24	2
6	6	4	45	44	1
6	6	6	30	27	2
6	6	8	41	43	2
		H = 7			
7	7	0	13	9	4
7	6	4	10	3	7
7	5	0	10	10	1
7	5	3	15	13	2
7	5	4	9	8	1
7	5	5	11	8	2
7	4	6	19	20	2
7	4	5	12	10	2
7	4	3	16	17	2
7	4	2	32	31	1
7	3	0	10	10	0
7	3	1	42	43	1
7	3	2	17	17	0
7	3	3	17	15	2
7	3	5	25	23	1
7	3	6	19	19	1
7	3	9	14	17	3
7	2	9	10	13	3
7	2	8	11	12	1
7	2	5	10	9	1
7	2	4	20	19	1
7	2	4	24	26	2
7	2	0	16	14	2
7	1	0	23	19	4
7	1	1	25	26	1
7	1	3	28	31	3
7	1	4	29	27	2
7	1	5	25	25	0
7	1	6	15	11	4
7	1	7	18	16	2
7	1	8	15	15	0
7	1	9	11	14	3
7	1	11	11	13	2
7	1	12	12	7	5
7	0	10	19	20	0
7	0	6	16	15	1
7	0	4	17	18	1
7	0	2	28	26	1
		H = 8			
8	0	0	57	60	3
8	0	2	36	34	2

Structure Factors for Beryl (800°C) h, k, l, F_{obs}, F_{calc}, and σ (F)

h	k	l	F_o	F_c	σ (F)
H = 8					
8	0	4	20	18	2
8	0	6	44	40	3
8	0	8	31	34	3
8	0	10	13	13	1
8	1	10	9	2	7
8	1	9	12	7	4
8	1	8	17	18	1
8	1	4	16	18	1
8	1	3	15	15	0
8	1	2	8	5	3
8	1	0	26	27	1
8	2	0	11	11	0
8	2	2	18	19	1
8	2	4	20	23	3
8	2	6	22	21	0
8	2	10	9	7	2
8	3	9	15	16	1
8	3	7	20	18	2
8	3	5	17	19	2
8	3	3	21	24	2
8	3	2	17	15	2
8	3	1	23	25	2
8	4	0	14	13	1
8	4	2	11	13	2
8	4	6	9	10	1
8	5	6	18	18	1
8	5	5	9	7	2
8	5	4	9	3	6
8	5	3	9	9	0
8	5	2	17	18	1
8	6	2	12	15	3
8	6	4	19	18	1
H = 9					
9	5	2	13	16	4
9	4	6	17	17	0
9	4	5	19	18	1
9	4	2	11	16	5
9	4	1	27	26	0
9	4	0	14	15	1
9	3	0	14	12	2
9	3	1	13	10	3
9	3	3	10	13	3
9	3	4	12	12	0
9	3	5	11	10	1
9	2	9	11	8	3
9	2	7	16	15	1
9	2	6	15	15	0
9	2	5	15	16	1
9	2	3	11	14	3
9	2	2	18	16	2
9	2	1	22	19	3
9	2	0	10	10	0
9	1	1	15	14	1
9	1	3	24	25	1
9	1	4	21	21	0
9	1	5	21	17	4
9	0	10	10	13	4
9	0	6	27	26	1
9	0	2	31	30	1
H = 10					
10	0	2	14	14	0
10	0	4	14	18	4
10	1	8	16	12	4
10	1	7	28	28	0
10	1	5	24	23	1
10	1	4	9	10	0
10	1	3	22	21	2
10	1	1	34	35	1
10	1	0	28	26	2
10	2	0	19	15	4
10	2	4	2	2	1
10	2	6	9	11	2
10	3	5	11	7	3
10	3	4	11	14	3
10	3	3	12	14	3
10	4	0	17	16	1
H = 11					
11	3	0	14	18	4
11	2	5	13	13	0
11	2	3	17	17	0
11	2	0	9	7	3
11	1	0	13	17	4
11	1	2	2	2	0

Structure Factors for Beryl (800°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
	H = 11				
11	1	4	14	14	1
11	0	2	12	8	4
11	0	0	3	8	5
	H = 12				
12	0	2	23	24	1
12	1	2	12	16	4

Structure Factors for Beryl (24°C after heating to 800°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
		H = 0			
0	0	4	114	124	10
0	0	6	131	140	9
0	0	8	162	170	8
0	0	10	9	11	2
0	0	12	78	78	0
0	0	14	52	51	1
		H = 1			
1	1	0	5	1	4
1	1	2	119	116	2
1	1	4	18	17	1
1	1	6	69	71	2
1	1	10	47	47	0
1	1	12	9	5	4
1	1	14	20	22	3
1	0	10	18	19	1
1	0	8	13	15	2
1	0	6	7	4	2
1	0	4	40	39	1
1	0	0	50	53	2
		H = 2			
2	0	0	19	22	3
2	0	2	70	63	7
2	0	4	46	48	2
2	0	6	28	27	1
2	0	8	16	17	1
2	0	10	26	26	0
2	0	12	14	13	1
2	0	14	10	9	1
2	1	14	18	18	0
2	1	13	31	30	1
2	1	11	11	11	0
2	1	10	20	22	2
2	1	9	23	23	0
2	1	8	18	19	2
2	1	7	65	67	2
2	1	6	39	41	2
2	1	5	32	33	1
2	1	4	17	17	0
2	1	3	16	13	3
2	1	2	37	42	5

h	k	l	F_o	F_c	$\sigma(F)$
2	1	1	91	91	0
2	1	0	49	47	2
2	2	0	23	23	0
2	2	2	25	23	3
2	2	4	104	102	2
2	2	6	48	49	1
2	2	8	31	31	0
2	2	12	28	27	1
2	2	14	21	22	1
		H = 3			
3	3	0	30	28	2
3	3	2	70	69	0
3	3	4	11	11	0
3	3	6	65	67	2
3	3	8	9	9	0
3	3	10	26	28	2
3	3	12	8	4	4
3	2	12	18	18	0
3	2	11	16	17	1
3	2	10	9	14	5
3	2	9	13	13	0
3	2	8	27	25	2
3	2	6	13	14	0
3	2	5	24	25	1
3	2	4	43	42	1
3	2	3	46	45	1
3	2	2	27	26	1
3	2	1	11	10	1
3	2	0	30	30	1
3	1	0	44	41	3
3	1	1	41	36	5
3	1	2	15	16	1
3	1	3	50	50	0
3	1	4	17	17	0
3	1	5	13	16	3
3	1	6	24	24	1
3	1	7	15	16	0
3	1	9	20	18	1
3	1	11	24	24	0
3	1	12	11	6	4
3	1	14	12	10	2

Structure Factors forBeryl(24°C after heating to 800°C) h, k, l, F_{obs}, F_{calc}, and σ(F)

h	k	l	F_o	F_c	σ(F)	h	k	l	F_o	F_c	σ(F)
		H = 3									
3	0	14	11	12	1	4	3	9	27	28	1
3	0	12	25	23	2	4	3	8	11	11	0
3	0	8	30	29	1	4	3	6	7	4	3
3	0	6	28	29	0	4	3	5	35	36	1
3	0	4	91	91	0	4	3	4	33	34	1
3	0	2	4	4	0	4	3	3	69	71	2
3	0	0	36	38	2	4	3	2	10	12	2
						4	3	1	11	12	1
		H = 4				4	4	2	51	52	1
4	0	0	34	36	2	4	4	4	34	34	0
4	0	2	18	15	3	4	4	6	55	56	1
4	0	4	6	2	4	4	4	10	18	19	1
4	0	6	30	30	0	4	4	12	11	10	2
4	0	8	19	20	1						
4	0	14	15	15	1			H = 5			
4	1	13	20	19	2	5	5	0	20	19	1
4	1	12	23	21	2	5	5	2	42	44	2
4	1	11	34	34	0	5	5	4	12	9	3
4	1	10	19	19	0	5	5	6	22	22	0
4	1	9	39	39	0	5	5	10	34	33	1
4	1	8	37	38	1	5	4	11	18	17	1
4	1	7	35	34	1	5	4	9	26	26	1
4	1	5	55	56	2	5	4	8	8	6	2
4	1	4	29	29	0	5	4	7	33	33	0
4	1	3	77	78	1	5	4	6	18	17	0
4	1	2	30	30	0	5	4	5	31	31	0
4	1	1	56	55	1	5	4	4	12	10	2
4	1	0	83	83	0	5	4	3	31	31	0
4	2	0	44	42	2	5	4	2	10	11	1
4	2	1	21	21	0	5	4	1	42	42	0
4	2	2	45	46	1	5	4	0	13	11	1
4	2	3	16	16	0	5	3	1	13	15	2
4	2	4	52	53	1	5	3	2	15	15	0
4	2	5	16	17	1	5	3	3	36	36	0
4	2	6	31	32	0	5	3	5	26	24	1
4	2	7	13	13	0	5	3	6	10	7	3
4	2	8	32	32	0	5	3	7	8	9	1
4	2	10	29	29	1	5	3	8	9	5	4
4	2	11	11	8	3	5	3	9	20	18	2
4	2	12	23	22	1	5	3	10	13	10	3
4	3	12	13	12	2	5	3	11	22	20	2
4	3	11	31	31	1	5	2	13	25	24	2
4	3	10	11	12	1	5	2	12	24	21	3

Structure Factors for Beryl (24°C after heating to 800°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
	H = 5				
5	2	11	17	17	0
5	2	10	7	0	7
5	2	9	29	29	0
5	2	8	43	42	1
5	2	7	51	51	0
5	2	5	42	41	1
5	2	4	54	54	0
5	2	3	34	34	0
5	2	1	67	68	1
5	2	0	72	83	1
5	1	1	14	14	0
5	1	2	35	35	1
5	1	3	8	8	1
5	1	4	26	28	2
5	1	6	20	18	2
5	1	7	14	14	0
5	1	8	8	5	3
5	1	10	25	26	1
5	1	12	9	7	2
5	0	12	16	15	0
5	0	8	27	29	2
5	0	6	24	27	3
5	0	4	12	12	0
5	0	2	14	13	1
5	0	0	68	67	1
	H = 6				
6	0	0	48	45	3
6	0	2	105	107	2
6	0	4	50	51	1
6	0	6	48	49	1
6	0	8	12	11	1
6	0	10	72	73	1
6	0	12	10	8	2
6	1	12	13	12	2
6	1	8	24	26	1
6	1	7	10	7	3
6	1	6	14	14	0
6	1	4	13	13	0
6	1	1	8	8	0
6	1	0	39	38	0
6	2	0	7	7	1
6	2	1	11	12	1
6	2	2	16	17	2
6	2	3	15	15	0
6	2	4	21	21	1
6	2	6	8	6	2
6	2	7	10	7	3
6	2	8	9	5	4
6	2	9	12	10	2
6	2	10	19	19	0
6	2	12	9	8	1
6	3	10	8	5	3
6	3	9	7	4	3
6	3	8	23	25	2
6	3	7	12	14	1
6	3	4	48	48	0
6	3	3	8	4	4
6	3	2	7	2	5
6	3	1	16	16	0
6	3	0	33	33	0
6	4	0	14	17	3
6	4	1	11	10	1
6	4	3	7	8	1
6	4	4	9	9	0
6	4	5	9	8	1
6	4	6	14	13	1
6	4	7	9	7	2
6	4	9	8	5	3
6	5	10	15	14	1
6	5	4	10	9	2
6	5	3	9	7	2
6	5	2	18	17	1
6	5	0	9	7	2
6	6	0	92	94	2
6	6	2	29	27	2
6	6	4	58	57	1
6	6	6	37	34	2
6	6	8	62	63	1
	H = 7				
7	7	2	19	19	1
7	7	4	9	7	1
7	6	4	7	5	2

Structure Factors for Beryl (24°C after heating to 800°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
		H = 7			
7	6	3	8	8	1
7	6	1	9	7	2
7	6	0	18	18	0
7	5	0	8	8	0
7	5	3	17	18	1
7	5	4	8	7	1
7	5	5	11	10	1
7	5	8	9	8	1
7	4	9	10	9	1
7	4	6	25	27	2
7	4	5	12	11	1
7	4	4	9	11	2
7	4	3	25	25	0
7	4	2	42	41	1
7	4	0	9	5	4
7	3	0	18	17	1
7	3	1	52	53	1
7	3	2	14	15	1
7	3	3	17	16	1
7	3	4	7	5	2
7	3	5	31	30	1
7	3	6	21	21	0
7	3	7	46	48	2
7	3	8	9	10	0
7	3	9	20	21	1
7	2	11	17	17	0
7	2	10	8	5	2
7	2	9	13	15	2
7	2	8	15	13	1
7	2	5	14	13	1
7	2	4	20	21	1
7	2	3	32	31	1
7	2	2	9	7	2
7	2	0	17	15	2
7	1	0	29	28	1
7	1	1	30	30	0
7	1	2	13	13	0
7	1	3	34	37	3
7	1	4	35	37	1
7	1	5	28	30	1
7	1	6	16	17	1
7	1	7	18	20	2
7	1	8	23	22	1
7	1	9	22	20	1
7	1	11	20	19	1
7	0	12	7	8	0
7	0	10	26	27	1
7	0	8	7	3	4
7	0	6	14	15	1
7	0	4	25	26	1
7	0	2	32	31	1
7	0	0	7	6	1
		H = 8			
8	0	0	71	72	1
8	0	2	34	34	1
8	0	4	22	21	0
8	0	6	49	49	0
8	0	8	41	42	1
8	0	10	12	11	1
8	1	11	11	10	2
8	1	9	8	7	1
8	1	8	17	20	4
8	1	6	9	11	2
8	1	4	19	18	1
8	1	3	17	17	0
8	1	2	10	10	1
8	1	0	31	29	1
8	2	0	17	16	1
8	2	2	26	26	0
8	2	4	33	33	0
8	2	5	7	0	7
8	2	6	27	29	1
8	2	8	11	13	2
8	2	10	12	11	1
8	3	9	21	21	0
8	3	7	25	25	0
8	3	6	14	12	2
8	3	5	22	24	3
8	3	4	8	7	1
8	3	3	27	28	1
8	3	2	15	16	1
8	3	1	32	31	0
8	4	0	15	17	1
8	4	2	15	16	1
8	4	3	8	4	4

Structure Factors for Beryl (24°C after heating to 800°C) h, k, l, F_{obs}, F_{calc}, and $\sigma(F)$

h	k	l	F_o	F_c	$\sigma(F)$
		H = 11			
11	2	1	9	8	1
11	2	0	11	11	0
11	1	0	19	20	1
11	1	3	12	11	1
11	1	4	15	15	0
11	1	6	7	7	0
11	0	2	12	9	3
11	0	0	10	13	4
		H = 12			
12	0	0	13	13	0
12	0	2	33	34	1
12	1	2	19	20	1
12	1	1	10	10	0
12	1	0	13	13	0