MASTER

X-RAY FLUORESCENCE TABLES: GYPSUM CRYSTAL

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Y-12 PLANT
Oak Ridge, Tennessee

**UNION
CARBIDE**

UNION CARBIDE CORPORATION
NUCLEAR DIVISION

Operating the

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X-RAY FLUORESCENCE TABLES: GYPSUM CRYSTAL

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ABSTRACT

A critical compilation of standard reference tables of X-ray fluorescence lines has been published in convenient form for experimental use. This section of the report contains tables calculated for a gypsum crystal.

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INTRODUCTION

Standard X-ray fluorescence tables contain rounding errors and a few disjointed entries. Furthermore, their format is not the most convenient one in some experimental situations, leaving to the experimenter the task of hunting and comparing before coming to a definite conclusion about the composition of his sample. For a specific analyzing crystal, the experimenter needs a table that is arranged according to element, order, and line; and an angular tabulation. This section of the report provides these tables for the gypsum crystal.

Wavelength data from three authors: Müller,⁽¹⁾ Powers,⁽²⁾ and Liebhafsky,⁽³⁾ were punched into cards, compared, sorted, and sifted with a computer, and a "best" value determined from the acceptable values. Goniometer angles were generated for specific analyzing crystals and the resulting angles were printed in two tables. One of the tables is arranged by element, order, and line and the other by angle magnitude. Tables may be generated for any crystal with known spacing.

The tables have been compiled for all emissions having 2θ reflections less than 150 degrees. Reflections above $150^\circ 2\theta$ are not considered as practical since the reflection efficiency becomes increasingly poorer with increasing angles. Few instruments are capable of even operating in this range. The logical approach when the desired emission falls at these high angles would be the selection of an analyzing crystal with more appropriate d-spacing. Orders from 1 through 5 for elements from sodium (11) through californium (98) have been included in the tables. Data where available for the more prominent M spectra have also been included.

Relative intensity data have not been included as a part of this report since such data are readily available to those who desire it; however, in some cases there are large variations in the relative values that are assigned to a given energy level. It is felt that the data of Powers⁽²⁾ are satisfactory for most uses so to include such data in this report would only consume unnecessary space.

This report is being published in several sections. Each section contains both tables for a specific analyzing crystal. The first section⁽⁴⁾ lists and explains the operation of the computer programs which have generated the tables. The reader is invited to refer to this section of the report for further information.

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SUMMARY

Tables arranged by element, order, and line, and also angular tabulations for a specific analyzing crystal, were derived from a critical amalgamation of three standard reference tables of X-ray fluorescence lines. The format of these tables was designed to increase the efficiency of the experimenter by decreasing the time spent in table searches. This section of the report contains both tables for a gypsum crystal.

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REFERENCES

- (1) Müller, Dr. Phil. E. A. W., Wellenlängen - und Winkeltafeln zur Röntgenspektralanalyse, Siemens and Halske Aktiengesellschaft, Karlsruhe, West Germany (1960).
- (2) Powers, Maurice C., X-Ray Fluorescent Spectrometer Conversion Tables for Topaz, LiF, NaCl, EDDT, and ADP Crystals, Phillips Electronics, Inc, Instruments Division, Mount Vernon, New York (1957).
- (3) Liebhafsky, H. A., Pfeiffer, H. A., Winslow, E. W., Zeman, P. D., X-Ray Absorption and Emission in Analytical Chemistry, John Wiley and Sons, Inc, New York (1960).
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TABLE 1
GONIOMETER ANGLES ARRANGED BY ELEMENT, LINE, AND ORDER

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11 NA GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	103.26	103.26	99.77							
2										
3										
4										
5										
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
12 MG										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	81.24	81.24	77.99							
2										
3										
4										
5										
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

15 P		GYPSUM CRYSTAL, D# 7.595 ANGSTROMS								
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	47.81	47.81	44.93							
2	108.27	108.27	99.67							
3										
4										
5										
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
16 S										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	41.42	41.45	38.69							
2	90.03	90.10	82.99							
3										
4										
5										
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

17 CL		GYPSUM CRYSTAL, D# 7.595 ANGSTRMS ⁷								
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	36.27	36.29	33.70							
2	77.00	77.04	70.86							
3	138.06	138.19	120.82							
4										
5										
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB1	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
18 A										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	32.04	32.06	29.63							
2	67.00	67.06	61.51							
3	111.77	111.89	100.19							
4										
5										
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB1	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

19 K GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	28.52	28.55	26.29				26.19			
2	59.32	59.69	54.10				53.88			
3	95.27	95.40	86.03				85.62			
4			130.89				129.95			
5										
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB3	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
20 CA										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	25.54	25.57	23.47				23.35			
2	52.48	52.55	48.01				47.75			
3	83.19	83.21	75.22				74.76			
4	124.32	124.58	108.92				108.09			
5										
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB3	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

23	V	GYPSUM CRYSTAL, D# 7.595 ANGSTROMS								
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	18.97	19.00	17.30		17.30		17.18			
2	38.48	33.55	35.00		35.00		34.76			
3	59.25	59.36	53.63		53.63		53.25			
4	82.47	82.63	73.95		73.95		73.38			
5	110.95	111.22	97.49		97.49		96.64			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB2	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
24	CR									
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	17.34	17.37	15.78		15.78		15.67			
2	35.80	35.16	31.87		31.87		31.65			
3	53.78	53.88	48.63		48.63		48.29			
4	74.17	74.33	66.60		66.60		66.10			
5	97.64	98.07	86.68		86.68		85.95			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB2	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

27 CO		GYPSUM CRYSTAL, D# 7.595 ANGSTROMS								
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	13.53	13.56	12.25				12.16			
2	27.25	27.31	24.65				24.46			
3	41.38	41.48	37.34				37.06			
4	56.21	56.35	50.54				50.14			
5	72.15	72.34	64.49				63.96			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB1	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
28 NI										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	12.53	12.56	11.33	11.25			11.25			
2	25.22	25.28	22.78	22.61			22.61			
3	38.23	38.32	34.46	34.20			34.20			
4	51.77	51.91	46.53	46.17			46.17			
5	66.15	66.33	59.17	58.70			58.70			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB1	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

31	GA	GYPSUM CRYSTAL, D# 7.595 ANGSTROMS								
ORDER	KAI	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	10.12	10.15	9.12	9.03	9.12		9.04	96.28		93.29
2	20.32	20.39	18.30	18.12	18.30		18.14			
3	30.69	30.79	27.61	27.33	27.61		27.35			
4	41.33	41.45	37.10	36.71	37.10		36.75			
5	52.35	52.51	46.86	46.37	46.86		46.41			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
32	GE									
ORDER	KAI	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	9.47	9.50	8.52	8.43	8.52		8.45	87.00	87.00	84.30
2	19.01	19.07	17.10	16.91	17.10		16.94			
3	28.68	28.77	25.77	25.49	25.77		25.54			
4	38.56	38.69	34.59	34.21	34.59		34.28			
5	48.76	48.92	43.63	43.14	43.63		43.23			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1					99.67	103.68				
2										
3										
4										
5										
	KB3	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

35 BR		GYPSUM CRYSTAL, D# 7.595 ANGSTROMS								
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	7.85	7.88	7.04	6.95	7.04		6.98	66.92	66.92	64.67
2	15.74	15.80	14.11	13.93	14.11		13.99			
3	23.71	23.80	21.24	20.96	21.24		21.05			
4	31.79	31.91	28.44	28.07	28.44		28.20			
5	40.04	40.20	35.77	35.30	35.77		35.45			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1					75.07	78.23				
2										
3										
4										
5										
	KB5	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
36 KR										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	7.40	7.43	6.63	6.54	6.63	6.54	6.57	61.89	61.89	59.76
2	14.83	14.89	13.28	13.09	13.29	13.09	13.17			
3	22.32	22.41	19.97	19.70	19.99	19.70	19.81			
4	29.91	30.04	26.74	26.35	26.77	26.36	26.52			
5	37.64	37.80	33.60	33.12	33.64	33.12	33.32			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
2										
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB5	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

39 Y GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	6.26	6.29	5.59	5.50	5.59	5.49	5.54	50.25	50.30	48.28
2	12.53	12.59	11.20	11.02	11.20	10.99	11.09	116.23	116.43	109.75
3	18.85	18.94	16.83	16.56	16.83	16.51	16.67			
4	25.22	25.34	22.50	22.14	22.50	22.07	22.29			
5	31.67	31.83	28.23	27.77	28.23	27.69	27.96			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1		46.39	46.68		47.30					40.70
2		103.95	104.81		106.71					88.15
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	40.70		45.51		55.22	57.93				
2	88.15		11.34		135.92					
3										
4										
5										
	KB1	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
40 ZR										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	5.53	5.96	5.30	5.21	5.30		5.25	47.11	47.17	45.19
2	11.88	11.94	10.61	10.42	10.61		10.52	106.11	106.31	100.42
3	17.86	17.95	15.94	15.66	15.94		15.80			
4	23.89	24.01	21.31	20.94	21.31		21.12			
5	29.99	30.14	26.72	26.26	26.72		26.49			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	43.15	43.53	43.82		44.16				41.52	38.06
2	94.70	95.75	96.54		97.49				90.29	81.41
3										
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	38.06		42.43		51.57	54.19				
2	81.41		92.73		120.90	131.25				
3										
4										
5										
	KB1	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

43 TC GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	5.08	5.10	4.54	4.45	4.54	4.45		39.35	39.42	37.51
2	10.17	10.21	9.09	8.91	9.08	8.91		84.65	84.83	80.04
3	15.28	15.34	13.66	13.38	13.63	13.38				149.41
4	20.42	20.51	18.24	17.88	18.21	17.88				
5	25.60	25.71	22.86	22.40	22.82	22.40				
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	35.54								33.99	
2	75.24								71.55	
3	132.58								122.54	
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
44 RU										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	4.85	4.88	4.32	4.24	4.32		4.29	37.21	37.26	35.41
2	9.71	9.77	8.64	8.49	8.65		8.58	79.29	79.43	74.93
3	14.59	14.68	12.97	12.75	13.00		12.88	146.30	146.85	131.69
4	19.53	19.62	17.33	17.02	17.36		17.20			
5	24.44	24.59	21.71	21.32	21.74		21.55			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	33.46	34.36	34.65		34.36				31.96	29.73
2	73.29	72.43	73.10		72.43				66.82	61.74
3	119.42	124.79	126.58		124.79				111.37	100.65
4										
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	29.73		32.79		40.03	42.48				
2	61.74		68.73		86.52	92.86				
3	100.65		115.70							
4										
5										
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

[illegible]

47 AG GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	4.22	4.26	3.75	3.67	3.76		3.72	31.74	31.81	30.02
2	8.44	8.52	7.50	7.35	7.52		7.44	66.31	66.48	62.39
3	12.68	12.79	11.27	11.04	11.29		11.18	110.25	110.61	101.97
4	16.93	17.08	15.04	14.74	15.07		14.92			
5	21.21	21.40	18.83	18.45	18.87		18.68			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	28.22	29.23	29.52		29.04		27.46	27.50	26.82	25.14
2	58.36	60.62	61.27		60.18		56.67	56.78	55.27	51.61
3	94.30	98.43	99.69		97.54		90.79	90.99	88.18	81.53
4							143.36	143.94	136.16	121.05
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	25.14		27.54		33.82	36.10				
2	51.61		56.86		71.14	76.60				
3	81.53		91.15		121.51	136.75				
4	21.05		144.43							
5										
	KB7	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
48 CD										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	4.04	4.07	3.58	3.51	3.59			30.19	30.26	28.49
2	8.08	8.14	7.17	7.02	7.19			62.78	62.94	58.97
3	12.13	12.22	10.77	10.54	10.79			102.76	103.09	95.16
4	16.20	16.32	14.37	14.07	14.40					
5	20.29	20.44	17.99	17.61	18.03					
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	26.75	27.77	28.06		27.53		26.10	26.15	25.37	23.84
2	55.12	57.36	58.00		56.83		53.69	53.81	52.11	48.81
3	87.90	92.09	93.30		91.08		85.28	85.50	82.43	76.60
4	135.44	147.42			144.23		129.17	129.67	122.92	111.45
5										
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	23.84		26.06		32.05	34.31				
2	48.79		53.61		67.02	72.29				
3	76.57		85.13		111.81	124.45				
4	111.39		128.82							
5										
	KB7	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

51	SB	GYPSUM CRYSTAL, D# 7.595 ANGSTROMS								
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.55	3.58	3.15	3.08	3.15		3.12	26.17	26.24	24.52
2	7.15	7.17	6.29	6.16	6.31		6.25	53.85	54.00	50.27
3	10.65	10.77	9.45	9.24	9.47		9.38	85.56	85.84	79.16
4	14.22	14.37	12.61	12.34	12.64		12.52	129.81	130.45	116.32
5	17.80	17.99	15.78	15.44	15.82		15.66			
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	22.96	23.95	24.25		23.67	22.82	22.57	22.62	21.64	20.44
2	46.91	49.04	49.67		48.43	46.61	46.07	46.19	44.10	41.57
3	73.32	77.00	78.10		75.93	72.81	71.88	72.08	68.54	64.32
4	105.51	112.20	114.29		110.22	104.62	103.00	103.34	97.31	90.42
5									139.58	125.02
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	27.44	29.01	22.26		27.48	29.66				
2	41.57	43.66	45.42		56.73	61.58				
3	64.32	62.83	70.77		90.89	100.33				
4	90.42	88.04	101.08		143.65					
5	125.32	120.61	149.64							
	KB1	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
52	TE									
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.40	3.44	3.02	2.95	3.03			25.01	25.08	23.37
2	6.31	6.88	6.04	5.90	6.05			51.32	51.47	47.80
3	10.22	10.33	9.06	8.86	9.08			81.02	81.29	74.85
4	13.54	13.79	12.09	11.82	12.12			120.02	120.56	108.24
5	17.37	17.27	15.13	14.79	15.17					
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	21.87	22.85	23.14		22.56	21.73	21.54	21.61	20.57	19.46
2	44.60	46.68	47.29		46.06	44.29	43.90	44.03	41.84	39.51
3	69.39	72.92	73.97		71.86	68.87	68.21	68.43	64.77	60.93
4	98.74	104.81	106.66		102.95	97.86	96.77	97.13	91.15	85.06
5	143.12					140.92	138.29	139.15	126.43	115.34
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	19.46	19.03	21.17		26.16	28.33				
2	39.51	38.61	43.10		53.83	58.60				
3	60.93	59.46	66.87		85.53	94.46				
4	85.06	82.79	94.56		129.74					
5	115.34	111.49	133.38							
	KB1	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

[illegible]

55	CS	GYPSUM CRYSTAL, D# 7.595 ANGSTROMS									
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1	
1	3.02	3.06	2.67	2.61	2.68			21.95	22.03	20.35	
2	6.04	6.11	5.34	5.22	5.36			44.76	44.93	41.37	
3	9.06	9.18	8.02	7.84	8.04			69.66	69.94	64.00	
4	12.09	12.24	10.70	10.46	10.73			99.20	99.67	89.90	
5	15.13	15.32	13.38	13.08	13.42			144.33	145.58	124.05	
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2	
1	19.03	19.93	20.22		19.66	18.83	18.78	18.88	17.78	16.94	
2	38.61	40.49	41.10		39.93	38.20	38.08	38.31	36.02	34.26	
3	59.46	62.53	63.54		61.61	58.78	58.60	58.97	55.26	52.44	
4	82.70	87.58	89.18		86.13	81.75	81.47	82.02	76.38	72.18	
5	111.49	119.78	122.70		117.19	109.76	109.31	110.23	101.23	94.84	
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY	
1	16.91	16.46	18.31		22.73	24.84					
2	34.23	33.27	37.11		46.42	50.95					
3	52.34	50.85	57.03		72.47	81.37					
4	72.03	69.85	79.06		104.03	118.70					
5	94.62	91.39	105.42								
	KB3	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT	
1											
2											
3											
4											
5											
56	BA										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1	
1	2.50	2.94	2.57	2.51	2.57			21.05	21.13	19.46	
2	5.51	5.89	5.15	5.03	5.15			42.86	43.02	39.51	
3	8.72	8.84	7.72	7.54	7.72			66.47	66.74	60.93	
4	11.64	11.79	10.30	10.06	10.30			93.90	94.34	85.06	
5	14.56	14.75	12.89	12.59	12.89			131.97	132.90	115.34	
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2	
1	18.21	19.07	19.37		18.31		18.00	18.08	16.97	16.18	
2	36.71	38.69	39.32		38.15		36.46	36.64	34.32	32.70	
3	56.59	59.59	60.61		58.71		55.97	56.25	52.54	49.95	
4	78.55	82.99	84.57		81.63		77.46	77.89	72.33	68.53	
5	104.52	111.82	114.49		109.57		102.91	103.57	95.06	89.46	
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY	
1	16.15	15.70	17.48		21.72	23.82					
2	32.64	31.71	35.38		44.27	48.76					
3	49.85	48.39	54.24		68.84	76.51					
4	68.38	66.24	74.86		97.82	111.29					
5	89.25	86.16	98.88		140.80						
	KB3	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT	
1											
2											
3											
4											
5											

57 LA GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KAI	KA2	KBI	KB2	KB3	KB4	KB5	LA1	LA2	LBI
1	2.80	2.83	2.47	2.41	2.48		2.46	20.21	20.28	18.62
2	5.65	5.66	4.95	4.83	4.97		4.92	41.08	41.23	37.77
3	8.40	8.49	7.43	7.25	7.45		7.38	63.52	63.76	58.08
4	11.21	11.33	9.91	9.67	9.94		9.85	89.14	89.52	80.67
5	14.33	14.18	12.40	12.09	12.43		12.32	122.62	123.33	108.01
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	17.44	18.26	18.56		18.02	17.23	17.28	17.34	16.21	15.48
2	35.30	37.00	37.62		36.51	34.86	34.97	35.10	32.76	31.26
3	54.11	56.85	57.85		56.05	53.40	53.58	53.78	50.05	47.67
4	74.67	78.78	80.32		77.58	73.61	73.87	74.17	68.67	65.20
5	98.59	104.99	107.44		103.09	96.98	97.38	97.84	89.67	84.67
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	15.44	15.00	16.69		20.78	22.83				
2	31.18	30.27	33.75		42.29	46.63				
3	47.54	46.11	51.63		65.52	72.84				
4	65.32	62.96	70.99		92.36	104.67				
5	84.42	81.50	93.07		128.82					
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
58 CE										
ORDER	KAI	KA2	KBI	KB2	KB3	KB4	KB5	LA1	LA2	LBI
1	2.69	2.73	2.38	2.32	2.38			19.41	19.48	17.85
2	5.39	5.46	4.77	4.65	4.77			39.41	39.56	36.14
3	8.39	8.20	7.16	6.97	7.16			60.77	61.00	55.46
4	10.79	10.94	9.55	9.30	9.55			84.81	85.18	76.69
5	13.50	13.69	11.94	11.64	11.94			114.91	115.55	101.70
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	16.72	17.50	17.79		17.27	16.50	16.56	16.62	15.50	14.83
2	33.82	35.43	36.03		34.95	33.36	33.49	33.60	31.29	29.91
3	51.73	54.31	55.28		53.55	51.00	51.21	51.38	47.72	45.55
4	71.14	74.97	76.42		73.83	70.07	70.36	70.62	65.27	62.15
5	93.29	99.05	101.29		97.32	91.71	92.14	92.53	84.77	80.36
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	14.79	14.36	15.97		19.86	21.95				
2	29.83	28.96	32.26		40.36	44.76				
3	45.43	44.05	49.26		62.32	69.66				
4	61.97	60.01	67.51		87.25	99.20				
5	80.11	77.38	87.98		119.18	144.33				
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

59 PR GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	2.60	2.63	2.29	2.24	2.30			18.66	18.74	17.10
2	5.19	5.27	4.59	4.48	4.60			37.85	38.00	34.59
3	7.79	7.90	6.88	6.73	6.91			58.21	58.47	52.97
4	10.39	10.55	9.18	8.97	9.21			80.87	81.27	72.97
5	13.00	13.19	11.49	11.22	11.52			108.33	108.98	96.02
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	16.04	16.78	17.07		16.58	15.82	15.89	15.95	14.83	14.21
2	32.40	33.94	34.54		33.52	31.96	32.10	32.21	29.93	28.65
3	49.48	51.93	52.89		51.26	48.78	49.01	49.18	45.57	43.57
4	67.84	71.44	72.86		70.44	66.82	67.15	67.40	62.18	59.31
5	88.45	93.73	95.85		92.25	86.99	87.46	87.82	80.40	76.41
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	14.17	13.76	15.28		19.04	21.12				
2	28.57	27.71	30.85		38.63	43.01				
3	43.45	42.11	47.02		59.49	66.71				
4	59.14	57.24	54.27		82.83	94.30				
5	76.17	73.56	33.35		111.56	132.81				
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
60 ND										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	2.50	2.53	2.21	2.16	2.22			17.95	18.03	16.40
2	5.01	5.07	4.42	4.32	4.44			36.37	36.52	33.16
3	7.52	7.61	6.63	6.48	6.66			55.82	56.07	50.68
4	10.03	10.15	8.85	8.64	8.88			77.23	77.62	69.59
5	12.55	12.70	11.07	10.80	11.11			102.54	103.15	91.01
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	15.41	16.09	16.40		15.92	15.20	15.25	15.31	14.20	13.62
2	31.10	32.51	33.16		32.17	30.68	30.79	30.90	28.63	27.43
3	47.42	49.65	50.68		49.11	46.75	46.93	47.10	43.54	41.67
4	64.84	68.09	69.59		67.29	63.88	64.13	64.38	59.28	56.62
5	84.16	88.82	91.01		87.67	82.80	83.15	83.50	76.37	72.72
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	13.58	13.19	14.64	14.03	18.25	20.29				
2	27.36	26.55	29.52	28.27	36.99	41.26				
3	41.55	40.29	44.94	42.98	56.82	63.81				
4	56.45	54.68	61.27	58.48	78.75	89.61				
5	72.48	70.07	79.13	75.27	104.93	123.49				
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

63 EU GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	2.26	2.29	1.99	1.94	1.99			16.05	16.14	14.52
2	4.51	4.57	3.98	3.88	3.98			32.43	32.61	29.29
3	6.77	6.86	5.98	5.82	5.98			49.53	49.80	44.57
4	9.03	9.15	7.97	7.76	7.97			67.91	68.31	60.74
5	11.30	11.45	9.97	9.71	9.97			88.56	89.14	78.39
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	13.70	14.27	14.57		14.17	13.52	13.55	13.61	12.53	12.07
2	27.61	28.77	29.38		28.57	27.23	27.29	27.42	25.22	24.28
3	41.94	43.76	44.71		43.45	41.36	41.45	41.65	38.23	36.77
4	57.00	59.59	60.95		59.14	56.18	56.31	56.59	51.77	49.74
5	73.23	76.80	78.69		76.17	72.11	72.29	72.67	66.15	63.43
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	12.02	11.67	12.91		16.13	18.14	92.30			
2	24.18	23.46	25.99		32.59	36.76				
3	36.63	35.51	39.43		49.78	56.46				
4	49.54	47.98	53.46		68.27	78.20				
5	63.16	61.09	68.42		89.09	104.06				
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
64 GD										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	2.17	2.21	1.92	1.87	1.92			15.48	15.57	13.96
2	4.35	4.42	3.83	3.74	3.85			31.26	31.43	28.13
3	6.52	6.63	5.75	5.61	5.77			47.67	47.94	42.76
4	8.70	8.85	7.67	7.49	7.70			65.20	65.60	58.17
5	10.88	11.07	9.59	9.36	9.63			84.67	85.23	74.84
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	13.19	13.72	14.01		13.65	13.03	13.03	13.09	12.03	11.59
2	26.57	27.65	28.24		27.53	26.22	26.24	26.35	24.20	23.30
3	40.32	42.01	42.93		41.82	39.79	39.81	39.98	36.65	35.27
4	54.71	57.10	58.41		56.83	53.97	54.00	54.24	49.57	47.65
5	70.11	73.37	75.17		73.00	69.10	69.15	69.47	63.21	60.65
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	11.55	11.22	12.40		15.50	17.51				
2	23.23	22.55	24.96		31.30	35.45				
3	35.15	34.11	37.82		47.74	54.34				
4	47.49	46.04	51.21		65.31	75.01				
5	60.44	58.52	65.39		84.62	99.11				
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

67 HO GYPSUM CRYSTAL, D# 7.595 ANGSTRCMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	1.97	2.31	1.74	1.69				13.95	14.04	12.45
2	3.9-	4.01	3.47	3.38				28.12	28.29	25.05
3	5.91	6.02	5.21	5.07				42.74	43.01	37.97
4	7.83	8.03	6.94	6.76				58.14	58.52	51.41
5	9.85	10.05	8.68	8.46				74.79	75.31	65.66
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	11.84	12.24	12.54		12.26			11.71	10.71	10.35
2	23.81	24.62	25.23		24.65			23.54	21.51	20.78
3	36.16	37.30	38.25		37.37			35.63	32.50	31.40
4	48.74	50.47	51.81		50.57			48.15	43.82	42.29
5	62.12	64.41	66.20		64.54			61.31	55.61	53.61
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	10.35	9.99	11.05		13.81	15.79				
2	20.69	20.45	22.20		27.82	31.88				
3	31.26	30.27	33.57		42.28	48.66				
4	42.10	40.75	45.29		57.48	66.64				
5	53.26	51.59	57.53		73.89	86.73				
	KB1	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
68 ER										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	1.70	1.94	1.68	1.64	1.68			13.49	13.58	11.99
2	3.30	3.88	3.37	3.27	3.37			27.17	27.36	24.12
3	5.71	5.82	5.05	4.91	5.05			41.26	41.55	36.53
4	7.51	7.76	6.73	6.55	6.73			56.04	56.45	49.40
5	9.52	9.71	8.42	8.19	8.42			71.92	72.48	62.98
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	11.44	11.80	12.10		11.84	11.29	11.22	11.29	10.30	9.98
2	23.00	23.72	24.34		23.81	22.69	22.55	22.69	20.69	20.03
3	34.80	35.91	36.87		36.06	34.32	34.11	34.32	31.26	30.25
4	46.99	48.54	49.87		48.74	46.33	46.04	46.33	42.10	40.71
5	59.78	61.84	63.60		62.10	58.91	58.52	58.91	53.36	51.55
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	9.93	9.64	10.62		13.28	15.28				
2	19.94	19.34	21.34		26.74	30.83				
3	30.11	29.19	32.24		40.58	47.00				
4	40.52	39.27	43.46		55.09	64.24				
5	51.30	49.67	55.14		70.62	83.30				
	KB1	LB15	LB17	LBP7	LY8	LY13	LYP4	LYPE	LS	LT
1										
2										
3										
4										
5										

71 LU GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	1.73	1.77	1.52	1.49	1.53			12.24	12.32	10.76
2	3.46	3.53	3.05	2.97	3.06			24.62	24.79	21.61
3	5.18	5.31	4.57	4.46	4.60			37.30	37.55	32.67
4	6.91	7.07	6.10	5.95	6.13			50.47	50.84	44.05
5	8.65	8.84	7.62	7.44	7.66			64.41	64.93	55.90
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	10.35	10.58	10.88	10.14	10.72	10.19	10.09	10.14	9.23	8.95
2	20.78	21.26	21.86	20.35	21.54	20.46	20.26	20.37	18.52	17.95
3	31.40	32.13	33.05	30.74	32.55	30.90	30.60	30.76	27.93	27.07
4	42.29	43.31	44.57	41.39	43.88	41.62	41.20	41.42	37.54	36.37
5	53.61	54.92	56.59	52.43	55.69	52.72	52.18	52.47	47.44	45.92
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	8.90	8.63	9.52	9.05	11.17	13.88	62.15			
2	17.86	17.31	19.10	18.15	22.44	27.98				
3	26.93	26.09	28.82	27.37	33.94	42.52				
4	36.17	35.03	38.76	36.78	45.81	57.83				
5	45.67	44.20	49.01	46.45	58.22	74.36				
	KBJ	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
72 HF										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	1.67	1.71	1.48	1.44	1.48			11.86	11.94	10.38
2	3.35	3.43	2.96	2.88	2.96			23.84	24.01	20.85
3	5.13	5.14	4.44	4.32	4.44			36.10	36.37	31.49
4	6.70	6.85	5.92	5.77	5.92			48.81	49.17	42.42
5	8.38	8.57	7.40	7.21	7.40			62.19	62.63	53.78
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	10.42	10.22	10.52	9.80	10.38	9.86	9.74	9.80	8.90	8.64
2	20.11	20.52	21.12	19.68	20.85	19.80	19.56	19.68	17.86	17.33
3	30.36	31.00	31.91	29.71	31.49	29.89	29.52	29.71	26.93	26.12
4	40.87	41.74	43.01	39.97	42.42	40.23	39.72	39.97	36.17	35.07
5	51.76	52.89	54.54	50.59	53.78	50.92	50.25	50.59	45.67	44.24
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	8.59	8.33	9.18	8.72	11.51	13.47	59.51	59.57		
2	17.23	16.70	18.41	17.49	23.14	27.12				
3	25.98	25.16	27.77	26.37	35.01	41.19				
4	34.88	33.77	37.32	35.41	47.29	55.94				
5	44.00	42.58	47.15	44.69	60.17	71.78				
	KBJ	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

75 RE		GYPSUM CRYSTAL, D# 7.595 ANGSTROMS								
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	1.53	1.57	1.35	1.31	1.35			10.83	10.91	9.36
2	3.06	3.14	2.70	2.63	2.70			21.75	21.92	18.78
3	4.60	4.71	4.05	3.94	4.05			32.88	33.14	28.33
4	6.13	6.28	5.40	5.25	5.40			44.34	44.70	38.08
5	7.66	7.85	6.76	6.57	6.76			56.29	56.76	48.14
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	9.12	9.21	9.51	8.89	9.45	8.96	8.80	8.85	8.01	7.79
2	18.29	18.49	19.08	17.83	18.96	17.97	17.65	17.75	16.06	15.62
3	27.58	27.89	28.80	26.88	28.61	27.09	26.60	26.77	24.19	23.52
4	37.06	37.48	38.72	36.11	38.47	36.40	35.73	35.95	32.45	31.54
5	46.82	47.35	48.97	45.59	48.63	45.96	45.10	45.38	40.88	39.72
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	7.75	7.49	8.26	7.83	10.37	12.32	50.90			
2	15.53	15.01	16.56	15.70	20.83	24.79	118.52			
3	23.38	22.60	24.96	23.64	31.47	37.56				
4	31.35	30.29	33.49	31.69	42.39	50.84				
5	39.48	38.12	42.21	39.92	53.74	64.90				
	KBJ	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
76 OS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	1.49	1.52	1.31	1.27	1.31			10.51	10.59	9.04
2	2.97	3.05	2.63	2.55	2.63			21.11	21.28	18.14
3	4.46	4.57	3.94	3.83	3.94			31.89	32.15	27.35
4	5.95	6.10	5.25	5.10	5.25			42.97	43.33	36.75
5	7.44	7.62	6.57	6.38	6.57			54.50	54.97	46.41
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	8.84	8.91	9.20	8.61	9.16	8.68	8.50	8.56	7.74	7.53
2	17.72	17.88	18.46	17.27	18.38	17.40	17.05	17.16	15.51	15.10
3	26.72	26.95	27.84	26.02	27.72	26.23	25.70	25.86	23.36	22.74
4	35.89	35.21	37.42	34.94	37.26	35.22	34.50	34.72	31.32	30.47
5	45.30	45.71	47.27	44.08	47.07	44.45	43.51	43.79	39.44	38.36
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	7.49	7.24	7.98	7.56	10.33	11.98	50.59	50.59		
2	15.31	14.51	16.00	15.15	20.14	24.09	117.41	117.41		
3	22.60	21.84	24.10	22.80	30.41	36.48				
4	30.29	29.26	32.32	30.57	40.94	49.34				
5	38.12	36.80	40.72	38.48	51.84	62.90				
	KBJ	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

79 AU GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LBI
1	1.36	1.40	1.20	1.17	1.21	1.16	1.19	9.64	9.73	8.18
2	2.72	2.79	2.40	2.34	2.41	2.32	2.38	19.34	19.53	16.41
3	4.07	4.19	3.60	3.51	3.62	3.49	3.58	29.19	29.47	24.72
4	5.43	5.58	4.80	4.68	4.83	4.65	4.77	39.27	39.65	33.17
5	6.79	6.98	5.00	5.85	6.04	5.81	5.96	49.67	50.17	41.81
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	8.08	8.06	8.36	7.85	8.39	7.93	7.71	7.76	7.00	6.82
2	16.20	16.17	16.76	15.74	16.82	15.89	15.45	15.56	14.02	13.67
3	24.40	24.35	25.26	23.71	25.35	23.94	23.27	23.43	21.10	20.57
4	32.73	32.67	33.90	31.79	34.02	32.10	31.19	31.41	28.26	27.54
5	41.24	41.16	42.74	40.04	42.90	40.44	39.28	39.56	35.53	34.62
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	6.78		7.22	6.82	9.08	11.03	45.22	45.34		
2	13.58		14.46	13.66	18.23	22.17	100.52	100.85		
3	20.43		21.77	20.55	27.49	33.52				
4	27.36		29.16	27.51	36.94	45.22				
5	34.39		36.68	34.58	46.65	57.45				
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
80 HG										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LBI
1	1.32	1.36	1.16	1.13	1.17			9.37	9.46	7.92
2	2.64	2.72	2.32	2.26	2.34			18.81	18.99	15.88
3	3.96	4.07	3.49	3.40	3.51			28.37	28.66	23.91
4	5.28	5.43	4.65	4.53	4.68			38.15	38.53	32.07
5	6.60	6.79	5.81	5.66	5.85			48.22	48.72	40.40
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	7.85	7.81	8.09	7.62	8.15	7.69	7.44	7.52	6.77	6.60
2	15.74	15.65	16.23	15.28	16.35	15.42	14.92	15.07	13.57	13.23
3	23.71	23.57	24.45	23.01	24.63	23.22	22.46	22.69	20.41	19.90
4	31.79	31.60	32.79	30.85	33.05	31.13	30.10	30.41	27.33	26.64
5	40.04	39.80	41.33	38.84	41.65	39.20	37.88	38.28	34.35	33.48
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	6.56	6.33	6.97	6.59	8.79	10.74	43.80	43.80		
2	13.14	12.68	13.98	13.20	17.63	21.58	96.49	96.49		
3	19.72	19.08	21.03	19.86	26.58	32.62				
4	26.46	25.53	28.16	26.58	35.70	43.98				
5	33.24	32.66	35.41	33.40	45.06	55.82				
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

83 HI GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KAI	KA2	KBI	KB2	KB3	KB4	KB5	LA1	LA2	LBI
1	1.21	1.25	1.07	1.04	1.08			8.64	8.72	7.19
2	2.43	2.50	2.14	2.08	2.16			17.33	17.49	14.40
3	3.64	3.76	3.21	3.12	3.24			26.12	26.37	21.67
4	4.86	5.01	4.29	4.17	4.32			35.07	35.41	29.04
5	6.08	6.26	5.36	5.21	5.40			44.24	44.69	36.52
	LB2	LB3	LB4	LB5	LB5	LB7	LB9	LB10	LY1	LY2
1	7.21	7.09	7.38	6.99	7.50	7.06	6.78	6.83	6.14	6.01
2	14.45	14.21	14.78	14.01	15.03	14.14	13.58	13.69	12.29	12.03
3	21.74	21.37	22.25	21.08	22.52	21.28	20.43	20.59	18.48	18.09
4	29.13	28.63	29.82	28.23	30.32	28.51	27.36	27.57	24.72	24.20
5	36.64	36.31	37.52	35.49	38.16	35.85	34.39	34.66	31.04	30.38
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	5.95	5.74	6.33	5.96	8.00	9.94	39.38	39.47		
2	11.93	11.53	12.68	11.94	16.03	19.96	84.73	84.96		
3	17.93	17.29	19.08	17.95	24.15	30.13				
4	23.98	23.12	25.53	24.01	32.39	40.55				
5	30.11	29.01	32.06	30.14	40.80	51.34				
	KB2	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
84 PO										
ORDER	KAI	KA2	KBI	KB2	KB3	KB4	KB5	LA1	LA2	LBI
1	1.18	1.21	1.04	1.01				8.41	8.50	6.96
2	2.35	2.43	2.08	2.02				16.87	17.05	13.95
3	3.53	3.64	3.12	3.03				25.42	25.70	20.98
4	4.71	4.86	4.17	4.04				34.12	34.50	28.10
5	5.89	6.08	5.21	5.06				43.02	43.51	35.33
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	7.31	6.86	7.15	6.79	7.30				5.94	
2	14.35	13.75	14.33	13.60	14.63				11.90	
3	21.14	20.68	21.56	20.45	22.02				17.88	
4	28.32	27.70	28.88	27.39	29.50				23.92	
5	35.61	34.82	36.33	34.43	37.12				30.33	
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	5.77			5.77						
2	11.55			11.55						
3	17.36			17.36						
4	23.21			23.21						
5	29.13			29.13						
	KB2	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

87 FR GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	1.39	1.12	0.96	0.94				7.78	7.37	6.34
2	2.17	2.25	1.92	1.87				15.59	15.77	12.70
3	3.26	3.37	2.87	2.81				23.47	23.75	19.10
4	4.35	4.50	3.83	3.74				31.48	31.35	25.56
5	5.43	5.62	4.79	4.68				39.64	40.12	32.10
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	6.48								5.40	
2	12.97								10.32	
3	19.51								16.26	
4	26.12								21.74	
5	32.81								27.26	
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB1	LB15	LB17	LB17	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
88 RA										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	1.35	1.09	0.94	0.91				7.59	7.67	6.14
2	2.11	2.19	1.87	1.81				15.21	15.38	12.31
3	3.17	3.28	2.81	2.72				22.90	23.15	18.50
4	4.23	4.38	3.74	3.62				30.69	31.04	24.75
5	5.23	5.47	4.68	4.53				38.64	39.08	31.08
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	6.37	6.06	6.35	6.08	6.57	6.16	5.80	5.85	5.24	5.15
2	12.62	12.14	12.71	12.18	13.17	12.34	11.62	11.71	10.50	10.30
3	18.93	18.25	19.12	18.32	19.81	18.55	17.47	17.61	15.76	15.48
4	25.40	24.42	25.59	24.51	26.52	24.82	23.37	23.55	21.09	20.69
5	31.91	30.65	32.14	30.77	33.32	31.16	29.33	29.56	26.45	25.95
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	5.39	4.90	5.41	5.08	6.85	8.81				
2	10.20	9.80	10.83	10.17	13.72	17.68				
3	15.32	14.73	16.28	15.28	20.64	26.65				
4	20.48	19.68	21.77	20.42	27.64	35.79				
5	25.67	24.67	27.30	25.60	34.74	45.18				
	KB1	LB15	LB17	LB17	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

[illegible]

91 PA GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	0.97	1.01	0.86	0.84				7.04	7.13	5.60
2	1.95	2.02	1.72	1.67				14.11	14.29	11.21
3	2.92	3.03	2.58	2.51				21.24	21.51	16.85
4	3.89	4.04	3.44	3.35				28.44	28.82	22.54
5	4.87	5.06	4.30	4.19				35.77	36.25	28.27
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	5.84	5.52	5.81	5.62	6.10	5.70	5.29	5.34	4.78	4.71
2	11.70	11.06	11.64	11.26	12.21	11.41	10.59	10.70	9.58	9.43
3	17.59	16.62	17.49	16.92	18.36	17.15	15.92	16.08	14.39	14.16
4	23.52	22.23	23.40	22.63	24.57	22.94	21.28	21.49	19.22	18.92
5	29.52	27.89	29.36	28.39	30.85	28.78	26.68	26.95	24.09	23.71
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	4.66	4.48	4.94	4.63	6.26	8.24	30.71	30.81		
2	9.32	8.97	9.89	9.26	12.53	16.52	63.95	64.18		
3	14.00	13.47	14.87	13.91	18.85	24.89	105.19	105.67		
4	18.70	18.00	19.86	18.58	25.22	33.39				
5	23.44	22.55	24.90	23.28	31.67	42.09				
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
92 U										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	0.95	0.99	0.84	0.82	0.84			6.88	6.96	5.43
2	1.90	1.98	1.67	1.64	1.69			13.78	13.95	10.88
3	2.85	2.97	2.51	2.47	2.53			20.73	20.98	16.35
4	3.80	3.95	3.35	3.29	3.38			27.76	28.10	21.86
5	4.75	4.94	4.19	4.11	4.23			34.90	35.33	27.42
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	5.70	5.36	5.65	5.48	5.95	5.55	5.14	5.18	4.64	4.57
2	11.41	10.73	11.30	10.97	11.91	11.12	10.29	10.38	9.29	9.14
3	17.15	16.12	16.99	16.49	17.91	16.72	15.46	15.60	13.95	13.72
4	22.94	21.55	22.72	22.04	23.95	22.35	20.66	20.85	18.64	18.33
5	28.78	27.03	28.51	27.65	30.07	28.04	25.91	26.14	23.36	22.97
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	4.51		4.79	4.49	6.08	8.06	29.83	29.94		
2	9.33		9.59	8.99	12.17	16.15	61.97	62.22		
3	13.57		14.41	13.50	18.30	24.33	101.11	101.61		
4	18.12		19.25	18.03	24.48	32.64				
5	22.70		24.13	22.59	30.73	41.12				
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

[illegible]

95 AM		GYPSUM CRYSTAL, D# 7.595 ANGSTROMS								
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	0.88	0.92	0.78	0.75				6.40	6.49	4.97
2	1.77	1.84	1.55	1.51				12.82	13.00	9.94
3	2.65	2.76	2.33	2.26				19.28	19.56	14.93
4	3.53	3.68	3.11	3.02				25.81	26.18	19.96
5	4.41	4.63	3.89	3.77				32.42	32.89	25.02
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	5.29								4.24	
2	10.59								8.49	
3	15.92								12.75	
4	21.28								17.02	
5	26.68								21.32	
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										
96 CM										
ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	0.86	0.90	0.76	0.74				6.26	6.35	4.82
2	1.72	1.83	1.52	1.48				12.53	12.71	9.65
3	2.58	2.69	2.29	2.22				18.85	19.12	14.50
4	3.44	3.59	3.05	2.96				25.22	25.59	19.37
5	4.30	4.49	3.81	3.70				31.67	32.14	24.28
	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	5.17								4.12	
2	10.35								8.25	
3	15.55								12.38	
4	20.78								16.53	
5	26.06								20.71	
	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										
	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

TABLE 2
GONIOMETER ANGLES ARRANGED BY ANGLE MAGNITUDE

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GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						0.70 TO 1.03					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
0.70	98 CF	KB2	I	0.093	I	0.88	89 AC	KB2	I	0.117	I
0.72	97 BK	KB2	I	0.095	I	0.88	90 TH	KB1	I	0.117	1,2,3
0.73	98 CF	KB1	I	0.097	I	0.89	90 TH	KB3	I	0.118	1,2
0.74	97 BK	KB1	I	0.098	I	0.90	96 CM	KA2	I	0.119	I
0.74	96 CM	KB2	I	0.098	I	0.90	94 PU	KA1	I	0.120	I
0.75	95 AM	KB2	I	0.100	I	0.90	88 RA	KB2	I	0.120	I
0.76	96 CM	KB1	I	0.101	I	0.91	89 AC	KB1	I	0.121	I
0.78	94 PU	KB2	I	0.103	I	0.92	95 AM	KA2	I	0.122	I
0.78	95 AM	KB1	I	0.103	I	0.93	93 NP	KA1	I	0.123	I
0.79	93 NP	KB2	I	0.105	I	0.93	87 FR	KB2	I	0.124	I
0.80	94 PU	KB1	I	0.106	I	0.93	88 RA	KB1	I	0.124	I
0.81	98 CF	KA1	I	0.108	I	0.94	94 PU	KA2	I	0.125	I
0.82	92 U	KB2	I	0.109	1,2,3	0.95	92 U	KA1	I	0.126	1,2,3
0.82	93 NP	KB1	I	0.109	I	0.96	86 RN	KB2	I	0.127	I
0.84	97 BK	KA1	I	0.111	I	0.96	87 FR	KB1	I	0.127	I
0.84	92 U	KB1	I	0.111	1,2,3	0.97	93 NP	KA2	I	0.128	I
0.84	91 PA	KB2	I	0.111	I	0.97	91 PA	KA1	I	0.129	I
0.84	92 U	KB3	I	0.112	1,2	0.99	86 RN	KB1	I	0.131	I
0.85	98 CF	KA2	I	0.113	I	0.99	85 AT	KB2	I	0.131	I
0.86	90 TH	KB2	I	0.114	1,3	0.99	92 U	KA2	I	0.131	1,2,3
0.86	91 PA	KB1	I	0.114	I	1.00	90 TH	KA1	I	0.133	1,2,3
0.86	96 CM	KA1	I	0.114	I	1.01	84 PC	KB2	I	0.134	I
0.88	90 TH	KB5	I	0.116	1,2	1.01	85 AT	KB1	I	0.134	I
0.88	97 BK	KA2	I	0.116	I	1.01	91 PA	KA2	I	0.134	I
0.88	95 AM	KA1	I	0.117	I	1.03	89 AC	KA1	I,	0.136	I

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							1.04 TO 1.31						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
1.04	83 BI	KB2	I	0.138	1,3		1.17	79 AU	KB2	I	0.155	1,3	
1.04	90 TH	KA2	I	0.138	1,2,3		1.18	84 PO	KA1	I	0.156	I	
1.04	84 PO	KB1	I	0.138	I		1.18	85 AT	KA2	I	0.157	I	
1.06	88 RA	KA1	I	0.140	I		1.19	79 AU	KB5	I	0.158	I	
1.06	82 PB	KB4	I	0.141	1,2		1.20	78 PT	KB2	I	0.159	1,3	
1.06	89 AC	KA2	I	0.141	I		1.20	79 AU	KB1	I	0.159	1,2,3	
1.07	82 PB	KB2	I	0.142	1,3		1.20	78 PT	KB4	I	0.159	1,2	
1.07	83 BI	KB1	I	0.142	1,2,3		1.21	79 AU	KB3	I	0.160	1,2	
1.08	83 BI	KB3	I	0.143	1,2		1.21	84 PC	KA2	I	0.161	I	
1.09	87 FR	KA1	I	0.144	I		1.21	83 BI	KA1	I	0.161	1,2,3	
1.09	82 PB	KB5	I	0.145	I		1.23	78 PT	KB5	I	0.163	I	
1.09	88 RA	KA2	I	0.145	I		1.23	77 IR	KB4	I	0.163	1,2	
1.10	81 TL	KB2	I	0.146	I		1.24	78 PT	KB3	I	0.164	1,2	
1.10	82 PB	KB1	I	0.146	1,2,3		1.24	78 PT	KB1	I	0.164	1,2,3	
1.11	82 PB	KB3	I	0.147	I		1.24	77 IR	KB2	I	0.164	1,3	
1.12	86 RN	KA1	I	0.148	I		1.24	82 PB	KA1	I	0.165	1,2,3	
1.12	87 FR	KA2	I	0.149	I		1.25	83 BI	KA2	I	0.166	1,2,3	
1.13	81 TL	KB1	I	0.150	1,2,3		1.26	77 IR	KB5	I	0.167	I	
1.13	80 HG	KB2	I	0.150	I		1.27	77 IR	KB3	I	0.169	1,2	
1.14	81 TL	KB3	I	0.151	1,2		1.27	77 IR	KB1	I	0.169	1,2,3	
1.15	85 AT	KA1	I	0.152	I		1.27	76 OS	KB2	I	0.169	1,3	
1.15	86 RN	KA2	I	0.153	I		1.28	81 TL	KA1	I	0.170	1,2,3	
1.16	80 HG	KB1	I	0.154	I		1.28	82 PB	KA2	I	0.170	1,2,3	
1.16	79 AU	KB4	I	0.154	1,2		1.31	76 OS	KB3	I	0.174	1,2	
1.17	80 HG	KB3	I	0.155	I		1.31	76 OS	KB1	I	0.174	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							1.31 TO 1.62						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
1.31	75 RE	KB2	1	0.174	1,3		1.48	77 IR	KA2	1	0.196	1,2,3	
1.32	81 FL	KA2	1	0.175	1,2,3		1.48	97 BK	KB1	2	0.098	1	
1.32	80 HG	KA1	1	0.175	1		1.48	72 HF	KB1	1	0.196	1,2,3	
1.35	75 RE	KB3	1	0.179	1,2		1.48	96 CM	KB2	2	0.098	1	
1.35	74 W	KB4	1	0.179	1		1.48	72 HF	KB3	1	0.196	1,2	
1.35	75 RE	KB1	1	0.179	1,2,3		1.49	76 OS	KA1	1	0.197	1,2,3	
1.35	74 W	KB2	1	0.179	1,2,3		1.49	71 LU	KB2	1	0.197	1,2,3	
1.36	80 HG	KA2	1	0.180	1		1.51	95 AM	KB2	2	0.100	1	
1.36	79 AU	KA1	1	0.180	1,2,3		1.52	96 CM	KB1	2	0.101	1	
1.38	74 W	KB5	1	0.183	1		1.52	71 LU	KB1	1	0.202	1,2,3	
1.39	73 TA	KB4	1	0.184	1		1.52	76 OS	KA2	1	0.202	1,2,3	
1.39	74 W	KB1	1	0.184	1,2,3		1.53	75 RE	KA1	1	0.203	1,2,3	
1.40	73 TA	KB2	1	0.185	1,2,3		1.53	71 LU	KB3	1	0.203	1,2	
1.40	79 AU	KA2	1	0.185	1,2,3		1.54	70 YB	KB2	1	0.204	1,2,3	
1.40	74 W	KB3	1	0.185	1,2		1.55	94 PU	KB2	2	0.103	1	
1.40	98 CF	KB2	2	0.093	1		1.55	95 AM	KB1	2	0.103	1	
1.40	78 PT	KA1	1	0.186	1,2,3		1.57	75 RE	KA2	1	0.208	1,2,3	
1.43	73 TA	KB5	1	0.189	1		1.58	70 YB	KB1	1	0.209	1,2,3	
1.43	97 BK	KB2	2	0.095	1		1.58	70 YB	KB3	1	0.209	1,2	
1.43	78 PT	KA2	1	0.190	1,2,3		1.58	74 W	KA1	1	0.209	1,2,3	
1.43	73 TA	KB1	1	0.190	1,2,3		1.58	93 NP	KB2	2	0.105	1	
1.44	77 IR	KA1	1	0.191	1,2,3		1.58	69 TM	KB2	1	0.210	1	
1.44	73 TA	KB3	1	0.191	1,2		1.60	94 PU	KB1	2	0.106	1	
1.44	72 HF	KB2	1	0.191	1,2,3		1.61	74 W	KA2	1	0.214	1,2,3	
1.46	98 CF	KB1	2	0.097	1		1.62	69 TM	KB1	1	0.215	1,2,3	

GYPSUM-CRYSTAL, D# 7.595 ANGSTROMS							1.62 TO 1.90						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
1.62	73 TA	KA1	1	0.215	1,2,3		1.76	95 AM	KA1	2	0.117	1	
1.63	98 CF	KA1	2	0.108	1		1.76	89 AC	KB2	2	0.117	1	
1.63	69 TM	KB3	1	0.216	1,2		1.76	90 TH	KB1	2	0.117	1,2,3	
1.64	68 ER	KB2	1	0.217	1,2,3		1.76	71 LU	KA2	1	0.234	1,2,3	
1.64	92 U	KB2	2	0.109	1,2,3		1.78	90 TH	KB3	2	0.118	1,2	
1.64	93 NP	KB1	2	0.109	1		1.79	70 YB	KA1	1	0.237	1,2,3	
1.66	73 TA	KA2	1	0.220	1,2,3		1.79	66 DY	KB1	1	0.237	1,2,3	
1.67	91 PA	KB2	2	0.111	1		1.80	96 CM	KA2	2	0.119	1	
1.67	92 U	KB1	2	0.111	1,2,3		1.80	66 DY	KB3	1	0.238	1,2	
1.67	97 BK	KA1	2	0.111	1		1.81	94 PU	KA1	2	0.120	1	
1.67	72 HF	KA1	1	0.222	1,2,3		1.81	88 RA	KB2	2	0.120	1	
1.68	68 ER	KB3	1	0.223	1,2		1.81	65 TB	KB2	1	0.240	1,2,3	
1.68	68 ER	KB1	1	0.223	1,2,3		1.82	70 YB	KA2	1	0.241	1,2,3	
1.69	67 HO	KB2	1	0.224	1		1.83	89 AC	KB1	2	0.121	1	
1.69	92 U	KB3	2	0.112	1,2		1.84	69 TM	KA1	1	0.244	1,2,3	
1.70	98 CF	KA2	2	0.113	1		1.84	95 AM	KA2	2	0.122	1	
1.71	72 HF	KA2	1	0.227	1,2,3		1.86	93 NP	KA1	2	0.123	1	
1.72	91 PA	KB1	2	0.114	1		1.86	65 TB	KB3	1	0.246	1,2	
1.72	96 CM	KA1	2	0.114	1		1.86	65 TB	KB1	1	0.246	1,2,3	
1.72	90 TH	KB2	2	0.114	1,3		1.87	87 FR	KB2	2	0.124	1	
1.73	71 LU	KA1	1	0.229	1,2,3		1.87	88 RA	KB1	2	0.124	1	
1.73	67 HO	KB1	1	0.230	1		1.87	64 GD	KB2	1	0.248	1,2,3	
1.75	90 TH	KB5	2	0.116	1,2		1.88	69 TM	KA2	1	0.249	1,2,3	
1.75	66 DY	KB2	1	0.232	1,2,3		1.89	94 PU	KA2	2	0.125	1	
1.75	97 BK	KA2	2	0.116	1		1.90	92 U	KA1	2	0.126	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						1.90 TO 2.20					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
1.90	68 EE	KA1	1	0.252	1,2,3	2.07	66 DY	KA2	1	0.274	1,2,3
1.92	64 GD	KB1	1	0.254	1,2,3	2.08	90 TH	KA2	2	0.138	1,2,3
1.92	86 RW	KB2	2	0.127	1	2.08	84 PO	KB1	2	0.138	1
1.92	87 FR	KB1	2	0.127	1	2.08	83 BI	KB2	2	0.138	1,3
1.92	64 GD	KB3	1	0.255	1,2	2.08	61 PM	KB2	1	0.276	1
1.93	93 NP	KA2	2	0.128	1	2.10	98 CF	KB2	3	0.093	1
1.94	68 EE	KA2	1	0.257	1,2,3	2.10	65 TB	KA1	1	0.279	1,2,3
1.94	63 EJ	KB2	1	0.257	1,2,3	2.11	88 RA	KA1	2	0.140	1
1.95	91 PA	KA1	2	0.129	1	2.13	61 PM	KB1	1	0.282	1,2,3
1.97	67 HD	KA1	1	0.261	1,2,3	2.13	89 AC	KA2	2	0.141	1
1.98	92 U	KA2	2	0.131	1,2,3	2.13	82 PB	KB4	2	0.141	1,2
1.98	86 RW	KB1	2	0.131	1	2.13	61 PM	KB3	1	0.283	2
1.98	85 AT	KB2	2	0.131	1	2.13	65 TB	KA2	1	0.283	1,2,3
1.99	63 EJ	KB1	1	0.264	1,2,3	2.14	83 BI	KB1	2	0.142	1,2,3
1.99	63 EJ	KB3	1	0.264	1,2	2.14	82 PB	KB2	2	0.142	1,3
2.01	62 SM	KB2	1	0.266	1,2,3	2.15	97 BK	KB2	3	0.095	1
2.01	90 TH	KA1	2	0.133	1,2,3	2.16	83 BI	KB3	2	0.143	1,2
2.01	67 HD	KA2	1	0.266	1,2,3	2.16	60 NC	KB2	1	0.286	1,2,3
2.02	85 AT	KB1	2	0.134	1	2.17	64 GD	KA1	1	0.288	1,2,3
2.02	91 PA	KA2	2	0.134	1	2.17	87 FR	KA1	2	0.144	1
2.02	84 PO	KB2	2	0.134	1	2.19	88 RA	KA2	2	0.145	1
2.04	66 DY	KA1	1	0.270	1,2,3	2.19	82 PB	KB5	2	0.145	1
2.05	89 AC	KA1	2	0.136	1	2.19	98 CF	KB1	3	0.097	1
2.06	62 SM	KB1	1	0.273	1,2,3	2.20	82 PB	KB1	2	0.146	1,2,3
2.07	62 SM	KB3	1	0.274	1,2	2.20	81 TL	KB2	2	0.146	1

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						2.21 TO 2.47					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
2.21	64 GD	KA2	1	0.293	1,2,3	2.33	94 PU	KB2	3	0.103	1
2.21	60 ND	KB1	1	0.293	1,2,3	2.34	79 AU	KB2	2	0.155	1,3
2.22	82 PB	KB3	2	0.147	1	2.34	80 HG	KB3	2	0.155	1
2.22	97 BK	KB1	3	0.098	1	2.35	84 PC	KA1	2	0.156	1
2.22	96 CM	KB2	3	0.098	1	2.37	62 SM	KA2	1	0.314	1,2,3
2.22	60 ND	KB3	1	0.294	1,2	2.37	85 AT	KA2	2	0.157	1
2.23	86 RN	KA1	2	0.148	1	2.38	93 NP	KB2	3	0.105	1
2.24	59 PR	KB2	1	0.297	1,2,3	2.38	58 CE	KB1	1	0.316	1,2,3
2.25	87 FR	KA2	2	0.149	1	2.38	58 CE	KB3	1	0.316	1,2
2.26	63 EU	KA1	1	0.299	1,2,3	2.38	79 AU	KB5	2	0.158	1
2.26	80 HG	KB2	2	0.150	1	2.40	79 AU	KB1	2	0.159	1,2,3
2.26	81 TL	KB1	2	0.150	1,2,3	2.40	78 PT	KB2	2	0.159	1,3
2.26	95 AM	KB2	3	0.100	1	2.40	78 PT	KB4	2	0.159	1,2
2.28	81 TL	KB3	2	0.151	1,2	2.40	94 PU	KB1	3	0.106	1
2.29	63 EU	KA2	1	0.303	1,2,3	2.41	79 AU	KB3	2	0.160	1,2
2.29	96 CM	KB1	3	0.101	1	2.41	57 LA	KB2	1	0.320	1,2,3
2.29	85 AT	KA1	2	0.152	1	2.42	61 PM	KA1	1	0.321	1,2,3
2.29	59 PR	KB1	1	0.304	1,2,3	2.43	83 BI	KA1	2	0.161	1,2,3
2.30	59 PR	KB3	1	0.305	1,2	2.43	84 PC	KA2	2	0.161	1
2.31	86 RN	KA2	2	0.153	1	2.44	98 CF	KA1	3	0.108	1
2.32	79 AU	KB4	2	0.154	1,2	2.45	61 PM	KA2	1	0.325	1,2,3
2.32	80 HG	KB1	2	0.154	1	2.46	77 IR	KB4	2	0.163	1,2
2.32	58 CE	KB2	1	0.308	1,2,3	2.46	78 PT	KB5	2	0.163	1
2.33	95 AM	KB1	3	0.103	1	2.46	57 LA	KB5	1	0.326	1
2.33	62 SM	KA1	1	0.309	1,2,3	2.47	93 NP	KB1	3	0.109	1

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						2.47 TO 2.70					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
2.47	92 U	KB2	3	0.109	1,2,3	2.58	91 PA	KB1	3	0.114	1
2.47	78 PT	KB1	2	0.164	1,2,3	2.58	96 CM	KA1	3	0.114	1
2.47	77 IR	KB2	2	0.164	1,3	2.58	90 TH	KB2	3	0.114	1,3
2.47	57 LA	KB1	1	0.328	1,2,3	2.59	59 PR	KA1	1	0.344	1,2,3
2.47	78 PT	KB3	2	0.164	1,2	2.61	55 CS	KB2	1	0.346	1,2,3
2.48	57 LA	KB3	1	0.329	1,2	2.63	76 OS	KB1	2	0.174	1,2,3
2.49	82 PB	KA1	2	0.165	1,2,3	2.63	75 RE	KB2	2	0.174	1,3
2.50	83 BI	KA2	2	0.166	1,2,3	2.63	90 TH	KB5	3	0.116	1,2
2.50	63 ND	KA1	1	0.332	1,2,3	2.63	76 OS	KB3	2	0.174	1,2
2.51	92 U	KB1	3	0.111	1,2,3	2.63	97 BK	KA2	3	0.116	1
2.51	56 BA	KB2	1	0.333	1,2,3	2.63	59 PR	KA2	1	0.349	1,2,3
2.51	97 BK	KA1	3	0.111	1	2.64	80 HG	KA1	2	0.175	1
2.51	91 PA	KB2	3	0.111	1	2.64	81 TL	KA2	2	0.175	1,2,3
2.52	77 IR	KB5	2	0.167	1	2.65	95 AM	KA1	3	0.117	1
2.53	92 U	KB3	3	0.112	1,2	2.65	90 TH	KB1	3	0.117	1,2,3
2.53	60 NC	KA2	1	0.336	1,2,3	2.65	89 AC	KB2	3	0.117	1
2.55	76 OS	KB2	2	0.169	1,3	2.67	55 CS	KB1	1	0.354	1,2,3
2.55	77 IR	KB1	2	0.169	1,2,3	2.67	90 TH	KB3	3	0.118	1,2
2.55	77 IR	KB3	2	0.169	1,2	2.68	55 CS	KB3	1	0.355	1,2
2.55	56 BA	KB5	1	0.338	1	2.69	58 CE	KA1	1	0.357	1,2,3
2.56	98 CF	KA2	3	0.113	1	2.69	96 CM	KA2	3	0.119	1
2.56	81 TL	KA1	2	0.170	1,2,3	2.70	74 W	KB4	2	0.179	1
2.56	82 PB	KA2	2	0.170	1,2,3	2.70	75 RE	KB1	2	0.179	1,2,3
2.57	56 BA	KB1	1	0.341	1,2,3	2.70	75 RE	KB3	2	0.179	1,2
2.57	56 BA	KB3	1	0.341	1,2	2.70	74 W	KB2	2	0.179	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						2.72 TO 2.96					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
2.72	80 HG	KA2	2	0.180	1	2.85	73 TA	KB5	2	0.189	1
2.72	94 PU	KA1	3	0.120	1	2.87	73 TA	KB1	2	0.190	1,2,3
2.72	54 XE	KB2	1	0.360	1,2,3	2.87	78 PT	KA2	2	0.190	1,2,3
2.72	88 RA	KB2	3	0.120	1	2.87	97 BK	KB2	4	0.095	1
2.72	79 AU	KA1	2	0.180	1,2,3	2.88	87 FR	KB1	3	0.127	1
2.73	58 CE	KA2	1	0.362	1,2,3	2.88	86 RN	KB2	3	0.127	1
2.74	89 AC	KB1	3	0.121	1	2.88	72 HF	KB2	2	0.191	1,2,3
2.76	74 W	KB5	2	0.183	1	2.88	77 IR	KA1	2	0.191	1,2,3
2.76	95 AM	KA2	3	0.122	1	2.88	73 TA	KB3	2	0.191	1,2
2.78	54 XE	KB1	1	0.368	1,2,3	2.90	53 I	KB1	1	0.384	1,2,3
2.78	74 W	KB1	2	0.184	1,2,3	2.90	93 NP	KA2	3	0.128	1
2.78	73 TA	KB4	2	0.184	1	2.90	56 BA	KA1	1	0.385	1,2,3
2.78	93 NP	KA1	3	0.123	1	2.90	53 I	KB3	1	0.385	1,2
2.79	74 W	KB3	2	0.185	1,2	2.92	91 PA	KA1	3	0.129	1
2.79	73 TA	KB2	2	0.185	1,2,3	2.93	98 CF	KB1	4	0.097	1
2.79	79 AU	KA2	2	0.185	1,2,3	2.94	56 BA	KA2	1	0.390	1,2,3
2.80	57 LA	KA1	1	0.371	1,2,3	2.95	52 TE	KB2	1	0.391	1,2,3
2.81	87 FR	KB2	3	0.124	1	2.96	77 IR	KA2	2	0.196	1,2,3
2.81	98 CF	KB2	4	0.093	1	2.96	96 CM	KB2	4	0.098	1
2.81	78 PT	KA1	2	0.186	1,2,3	2.96	72 HF	KB3	2	0.196	1,2
2.81	88 RA	KB1	3	0.124	1	2.96	72 HF	KB1	2	0.196	1,2,3
2.83	94 PU	KA2	3	0.125	1	2.96	97 BK	KB1	4	0.098	1
2.83	53 I	KB2	1	0.375	1,2,3	2.96	86 RN	KB1	3	0.131	1
2.83	57 LA	KA2	1	0.375	1,2,3	2.96	92 U	KA2	3	0.131	1,2,3
2.85	92 U	KA1	3	0.126	1,2,3	2.96	85 AT	KB2	3	0.131	1

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						2.97 TO 3.26					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
2.97	76 OS	KA1	2	0.197	1,2,3	3.14	54 XE	KA1	1	0.416	1,2,3
2.97	71 LU	KB2	2	0.197	1,2,3	3.14	75 RE	KA2	2	0.208	1,2,3
3.01	90 TH	KA1	3	0.133	1,2,3	3.15	51 SB	KB1	1	0.417	1,2,3
3.02	52 TE	KB1	1	0.400	1,2,3	3.15	70 YB	KB1	2	0.209	1,2,3
3.02	95 AM	KB2	4	0.100	1	3.15	70 YB	KB3	2	0.209	1,2
3.02	55 CS	KA1	1	0.400	1,2,3	3.15	74 W	KA1	2	0.209	1,2,3
3.02	52 TE	KB3	1	0.401	1,2	3.15	51 SB	KB3	1	0.418	1,2
3.03	91 PA	KA2	3	0.134	1	3.17	88 RA	KA1	3	0.140	1
3.03	85 AT	KB1	3	0.134	1	3.17	69 TM	KB2	2	0.210	1
3.03	84 PO	KB2	3	0.134	1	3.17	93 NP	KB2	4	0.105	1
3.05	96 CM	KB1	4	0.101	1	3.17	54 XE	KA2	1	0.420	1,2,3
3.05	71 LU	KB1	2	0.202	1,2,3	3.19	82 PB	KB4	3	0.141	1,2
3.05	76 OS	KA2	2	0.202	1,2,3	3.19	89 AC	KA2	3	0.141	1
3.06	55 CS	KA2	1	0.405	1,2,3	3.20	94 PU	KB1	4	0.106	1
3.06	71 LU	KB3	2	0.203	1,2	3.21	83 BI	KB1	3	0.142	1,2,3
3.06	75 RE	KA1	2	0.203	1,2,3	3.21	82 PB	KB2	3	0.142	1,3
3.08	70 YB	KB2	2	0.204	1,2,3	3.21	50 SN	KB2	1	0.426	1,2,3
3.08	89 AC	KA1	3	0.136	1	3.23	74 W	KA2	2	0.214	1,2,3
3.08	51 SB	KB2	1	0.408	1,2,3	3.24	83 BI	KB3	3	0.143	1,2
3.11	95 AM	KB1	4	0.103	1	3.24	73 TA	KA1	2	0.215	1,2,3
3.11	94 PU	KB2	4	0.103	1	3.24	69 TM	KB1	2	0.215	1,2,3
3.12	84 PO	KB1	3	0.138	1	3.26	98 CF	KA1	4	0.108	1
3.12	51 SB	KB5	1	0.414	1	3.26	50 SN	KB5	1	0.432	1
3.12	83 BI	KB2	3	0.138	1,3	3.26	87 FR	KA1	3	0.144	1
3.12	90 TH	KA2	3	0.138	1,2,3	3.26	69 TM	KB3	2	0.216	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						3.27 TO 3.51					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
3.27	53 I	KA1	1	0.433	1,2,3	3.39	81 TL	KB1	3	0.150	1,2,3
3.27	68 ER	KB2	2	0.217	1,2,3	3.40	49 IN	KB5	1	0.451	1
3.28	82 PB	KB5	3	0.145	1	3.40	52 TE	KA1	1	0.451	1,2,3
3.28	88 RA	KA2	3	0.145	1	3.41	98 CF	KA2	4	0.113	1
3.28	50 SN	KB1	1	0.435	1,2,3	3.42	81 TL	KB3	3	0.151	1,2
3.29	50 SN	KB3	1	0.436	1,2	3.42	72 HF	KA2	2	0.227	1,2,3
3.29	93 NP	KB1	4	0.109	1	3.43	49 IN	KB1	1	0.455	1,2,3
3.29	92 U	KB2	4	0.109	1,2,3	3.43	49 IN	KB3	1	0.455	1,2
3.30	81 TL	KB2	3	0.146	1	3.44	52 TE	KA2	1	0.456	1,2,3
3.30	82 PB	KB1	3	0.146	1,2,3	3.44	85 AT	KA1	3	0.152	1
3.30	53 I	KA2	1	0.438	1,2,3	3.44	91 PA	KB1	4	0.114	1
3.32	73 TA	KA2	2	0.220	1,2,3	3.44	90 TH	KB2	4	0.114	1,3
3.33	82 PB	KB3	3	0.147	1	3.44	96 CM	KA1	4	0.114	1
3.35	92 U	KB1	4	0.111	1,2,3	3.46	71 LU	KA1	2	0.229	1,2,3
3.35	97 BK	KA1	4	0.111	1	3.46	86 RN	KA2	3	0.153	1
3.35	86 RN	KA1	3	0.148	1	3.47	67 HO	KB1	2	0.230	1
3.35	91 PA	KB2	4	0.111	1	3.49	79 AU	KB4	3	0.154	1,2
3.35	72 HF	KA1	2	0.222	1,2,3	3.49	80 HG	KB1	3	0.154	1
3.36	49 IN	KB2	1	0.445	1,2,3	3.50	66 DY	KB2	2	0.232	1,2,3
3.36	68 ER	KB3	2	0.223	1,2	3.50	97 BK	KA2	4	0.116	1
3.36	68 ER	KB1	2	0.223	1,2,3	3.50	90 TH	KB5	4	0.116	1,2
3.37	87 FR	KA2	3	0.149	1	3.51	98 CF	KB2	5	0.093	1
3.38	92 U	KB3	4	0.112	1,2	3.51	79 AU	KB2	3	0.155	1,3
3.38	67 HO	KB2	2	0.224	1	3.51	80 HG	KB3	3	0.155	1
3.39	80 HG	KB2	3	0.150	1	3.51	48 CD	KB2	1	0.465	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							3.53 TO 3.75						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
3.53	89 AC	KB2	4	0.117	1		3.64	84 PO	KA2	3	0.161	1	
3.53	71 LU	KA2	2	0.234	1,2,3		3.64	83 BI	KA1	3	0.161	1,2,3	
3.53	95 AM	KA1	4	0.117	1		3.65	89 AC	KB1	4	0.121	1	
3.53	84 PO	KA1	3	0.156	1		3.66	98 CF	KB1	5	0.097	1	
3.53	90 TH	KB1	4	0.117	1,2,3		3.67	47 AG	KB2	1	0.487	1,2,3	
3.55	51 SB	KA1	1	0.470	1,2,3		3.68	69 TM	KA1	2	0.244	1,2,3	
3.55	85 AT	KA2	3	0.157	1		3.68	95 AM	KA2	4	0.122	1	
3.56	90 TH	KB3	4	0.118	1,2		3.69	78 PT	KB5	3	0.163	1	
3.58	79 AU	KB5	3	0.158	1		3.69	77 IR	KB4	3	0.163	1,2	
3.58	70 YB	KA1	2	0.237	1,2,3		3.70	97 BK	KB1	5	0.098	1	
3.58	66 DY	KB1	2	0.237	1,2,3		3.70	96 CM	KB2	5	0.098	1	
3.58	48 CD	KB1	1	0.475	1,2,3		3.70	50 SN	KA1	1	0.491	1,2,3	
3.58	97 BK	KB2	5	0.095	1		3.71	78 PT	KB3	3	0.164	1,2	
3.58	51 SB	KA2	1	0.475	1,2,3		3.71	77 IR	KB2	3	0.164	1,3	
3.59	66 DY	KB3	2	0.238	1,2		3.71	65 TB	KB1	2	0.246	1,2,3	
3.59	96 CM	KA2	4	0.119	1		3.71	78 PT	KB1	3	0.154	1,2,3	
3.59	48 CD	KB3	1	0.476	1,2		3.71	65 TB	KB3	2	0.246	1,2	
3.60	79 AU	KB1	3	0.159	1,2,3		3.71	93 NP	KA1	4	0.123	1	
3.60	78 PT	KB4	3	0.159	1,2		3.72	47 AG	KB5	1	0.493	1	
3.60	78 PT	KB2	3	0.159	1,3		3.73	50 SN	KA2	1	0.495	1,2,3	
3.62	65 TB	KB2	2	0.240	1,2,3		3.73	82 PB	KA1	3	0.165	1,2,3	
3.62	79 AU	KB3	3	0.160	1,2		3.74	88 RA	KB1	4	0.124	1	
3.62	94 PU	KA1	4	0.120	1		3.74	87 FR	KB2	4	0.124	1	
3.62	88 RA	KB2	4	0.120	1		3.74	64 GD	KB2	2	0.248	1,2,3	
3.64	70 YB	KA2	2	0.241	1,2,3		3.75	47 AG	KB1	1	0.497	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						3.76 TO 4.04					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
3.76	83 BI	KA2	3	0.166	1,2,3	3.89	94 PU	KB2	5	0.103	1
3.76	69 TM	KA2	2	0.249	1,2,3	3.89	91 PA	KA1	4	0.129	1
3.76	47 AG	KB3	1	0.498	1,2	3.90	46 PD	KB5	1	0.517	1
3.77	94 PU	KA2	4	0.125	1	3.90	49 IN	KA2	1	0.517	1,2,3
3.77	95 AM	KB2	5	0.100	1	3.93	46 PD	KB3	1	0.521	1,2
3.78	77 IR	KB5	3	0.167	1	3.93	46 PD	KB1	1	0.521	1,2,3
3.80	92 U	KA1	4	0.126	1,2,3	3.94	76 OS	KB1	3	0.174	1,2,3
3.80	68 ER	KA1	2	0.252	1,2,3	3.94	76 OS	KB3	3	0.174	1,2
3.81	96 CM	KB1	5	0.101	1	3.94	67 HO	KA1	2	0.261	1,2,3
3.82	76 OS	KB2	3	0.169	1,3	3.94	75 RE	KB2	3	0.174	1,3
3.82	77 IR	KB1	3	0.169	1,2,3	3.95	85 AT	KB2	4	0.131	1
3.82	77 IR	KB3	3	0.169	1,2	3.95	86 RN	KB1	4	0.131	1
3.83	86 RN	KB2	4	0.127	1	3.95	92 U	KA2	4	0.131	1,2,3
3.83	87 FR	KB1	4	0.127	1	3.96	81 TL	KA2	3	0.175	1,2,3
3.83	64 GD	KB1	2	0.254	1,2,3	3.96	93 NP	KB2	5	0.105	1
3.85	81 TL	KA1	3	0.170	1,2,3	3.96	80 HG	KA1	3	0.175	1
3.85	82 PB	KA2	3	0.170	1,2,3	3.98	63 EU	KB1	2	0.264	1,2,3
3.85	64 GD	KB3	2	0.255	1,2	3.98	63 EU	KB3	2	0.264	1,2
3.85	46 PD	KB2	1	0.510	1,2,3	4.00	94 PU	KB1	5	0.106	1
3.86	93 NP	KA2	4	0.128	1	4.00	97 BK	LY1	1	0.530	1
3.86	49 IN	KA1	1	0.512	1,2,3	4.01	62 SM	KB2	2	0.266	1,2,3
3.88	63 EU	KB2	2	0.257	1,2,3	4.01	67 HO	KA2	2	0.266	1,2,3
3.88	68 ER	KA2	2	0.257	1,2,3	4.01	90 TH	KA1	4	0.133	1,2,3
3.89	95 AM	KB1	5	0.103	1	4.04	48 CD	KA1	1	0.535	1,2,3
3.89	98 CF	LY1	1	0.515	1	4.04	45 RH	KB2	1	0.535	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						4.04 TO 4.28					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
4.04	85 AT	KB1	4	0.134	1	4.16	84 PO	KB1	4	0.138	1
4.04	91 PA	KA2	4	0.134	1	4.16	74 W	KB1	3	0.184	1,2,3
4.04	84 PO	KB2	4	0.134	1	4.16	90 TH	KA2	4	0.138	1,2,3
4.05	74 W	KB2	3	0.179	1,2,3	4.16	61 PM	KB2	2	0.276	1
4.05	75 RE	KB3	3	0.179	1,2	4.19	73 TA	KB2	3	0.185	1,2,3
4.05	75 RE	KB1	3	0.179	1,2,3	4.19	97 BK	KA1	5	0.111	1
4.05	74 W	KB4	3	0.179	1	4.19	74 W	KB3	3	0.185	1,2
4.07	48 CD	KA2	1	0.539	1,2,3	4.19	79 AU	KA2	3	0.185	1,2,3
4.07	80 HG	KA2	3	0.180	1	4.19	92 U	KB1	5	0.111	1,2,3
4.07	98 CF	KA1	5	0.108	1	4.19	91 PA	KB2	5	0.111	1
4.07	66 DY	KA1	2	0.270	1,2,3	4.21	78 PT	KA1	3	0.186	1,2,3
4.07	79 AU	KA1	3	0.180	1,2,3	4.21	65 TB	KA1	2	0.279	1,2,3
4.08	45 RH	KB5	1	0.541	1	4.22	47 AG	KA1	1	0.559	1,2,3
4.10	89 AC	KA1	4	0.136	1	4.23	88 RA	KA1	4	0.140	1
4.11	93 NP	KB1	5	0.109	1	4.23	92 U	KB3	5	0.112	1,2
4.11	92 U	KB2	5	0.109	1,2,3	4.24	95 AM	LY1	1	0.562	1,3
4.12	96 CM	LY1	1	0.546	1	4.24	44 RU	KB2	1	0.562	1,2,3
4.12	62 SM	KB1	2	0.273	1,2,3	4.26	47 AG	KA2	1	0.564	1,2,3
4.12	45 RH	KB1	1	0.546	1,2,3	4.26	82 PB	KB4	4	0.141	1,2
4.12	45 RH	KB3	1	0.546	1,2	4.26	61 PM	KB1	2	0.282	1,2,3
4.13	62 SM	KB3	2	0.274	1,2	4.26	89 AC	KA2	4	0.141	1
4.13	66 DY	KA2	2	0.274	1,2,3	4.26	98 CF	KA2	5	0.113	1
4.14	74 W	KB5	3	0.183	1	4.27	61 PM	KB3	2	0.283	2
4.16	83 BI	KB2	4	0.138	1,3	4.27	65 TB	KA2	2	0.283	1,2,3
4.16	73 TA	KB4	3	0.184	1	4.28	73 TA	KB5	3	0.189	1

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS											4.29 TO 4.51
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
4.29	83 BI	KB1	4	0.142	1,2,3	4.41	89 AC	KB2	5	0.117	1
4.29	82 PB	KB2	4	0.142	1,3	4.41	90 TH	KB1	5	0.117	1,2,3
4.29	44 RU	KB5	1	0.568	1	4.41	95 AM	KA1	5	0.117	1
4.30	78 PT	KA2	3	0.190	1,2,3	4.42	60 ND	KB1	2	0.293	1,2,3
4.30	90 TH	KB2	5	0.114	1,3	4.42	64 GD	KA2	2	0.293	1,2,3
4.30	96 CM	KA1	5	0.114	1	4.44	82 PB	KB3	4	0.147	1
4.30	91 PA	KB1	5	0.114	1	4.44	72 HF	KB1	3	0.196	1,2,3
4.30	73 TA	KB1	3	0.190	1,2,3	4.44	77 IR	KA2	3	0.196	1,2,3
4.32	60 ND	KB2	2	0.286	1,2,3	4.44	72 HF	KB3	3	0.196	1,2
4.32	83 BI	KB3	4	0.143	1,2	4.44	60 ND	KB3	2	0.294	1,2
4.32	44 RU	KB1	1	0.572	1,2,3	4.45	46 PD	KA2	1	0.590	1,2,3
4.32	77 IR	KA1	3	0.191	1,2,3	4.45	43 TC	KB4	1	0.590	1
4.32	44 RU	KB3	1	0.573	1,2	4.45	90 TH	KB3	5	0.118	1,2
4.32	72 HF	KB2	3	0.191	1,2,3	4.45	43 TC	KB2	1	0.590	1
4.32	73 TA	KB3	3	0.191	1,2	4.46	71 LU	KB2	3	0.197	1,2,3
4.35	64 GD	KA1	2	0.288	1,2,3	4.46	76 OS	KA1	3	0.197	1,2,3
4.35	87 FR	KA1	4	0.144	1	4.47	86 RN	KA1	4	0.148	1
4.37	94 PU	LY1	1	0.579	1	4.48	59 PR	KB2	2	0.297	1,2,3
4.38	82 PB	KB5	4	0.145	1	4.48	91 PA	LY4	1	0.594	1,2
4.38	88 RA	KA2	4	0.145	1	4.49	92 U	LY6	1	0.595	1,2
4.38	97 BK	KA2	5	0.116	1	4.49	96 CM	KA2	5	0.119	1
4.38	90 TH	KB5	5	0.116	1,2	4.50	87 FR	KA2	4	0.149	1
4.41	81 TL	KB2	4	0.146	1	4.50	93 NP	LY1	1	0.597	1,2,3
4.41	82 PB	KB1	4	0.146	1,2,3	4.51	92 U	LY3	1	0.598	1,2,3
4.41	46 PD	KA1	1	0.585	1,2,3	4.51	63 EU	KA1	2	0.299	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS											4.53 TO 4.75				
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF				
4.53	80 HG	KB2	4	0.150	1	4.64	92 U	LY1	1	0.615	1,2,3				
4.53	88 RA	KB2	5	0.120	1	4.65	58 CE	KB2	2	0.308	1,2,3				
4.53	81 TL	KB1	4	0.150	1,2,3	4.65	79 AU	KB4	4	0.154	1,2				
4.53	94 PU	KA1	5	0.120	1	4.65	80 HG	KB1	4	0.154	1				
4.53	43 TC	KB3	1	0.601	1,2	4.66	91 PA	LY3	1	0.617	1,2,3				
4.54	43 TC	KB1	1	0.602	1,2,3	4.66	62 SM	KA1	2	0.309	1,2,3				
4.55	98 CF	LB1	1	0.603	1	4.66	45 RH	KA2	1	0.618	1,2,3				
4.56	81 TL	KB3	4	0.151	1,2	4.68	80 HG	KB3	4	0.155	1				
4.56	92 U	LY2	1	0.605	1,2,3	4.68	79 AU	KB2	4	0.155	1,3				
4.56	89 AC	KB1	5	0.121	1	4.68	87 FR	KB2	5	0.124	1				
4.57	76 OS	KA2	3	0.202	1,2,3	4.68	88 RA	KB1	5	0.124	1				
4.57	71 LU	KB1	3	0.202	1,2,3	4.68	42 MC	KB4	1	0.620	2				
4.57	63 EU	KA2	2	0.303	1,2,3	4.69	42 MC	KB2	1	0.621	1,2,3				
4.59	59 PR	KB1	2	0.304	1,2,3	4.69	97 BK	LB1	1	0.621	1				
4.59	85 AT	KA1	4	0.152	1	4.71	75 RE	KA2	3	0.208	1,2,3				
4.59	75 RE	KA1	3	0.203	1,2,3	4.71	84 PO	KA1	4	0.156	1				
4.59	71 LU	KB3	3	0.203	1,2	4.71	91 PA	LY2	1	0.624	1,2,3				
4.60	95 AM	KA2	5	0.122	1	4.72	94 PU	KA2	5	0.125	1				
4.60	59 PR	KB3	2	0.305	1,2	4.73	74 W	KA1	3	0.209	1,2,3				
4.61	90 TH	LY4	1	0.611	1,2	4.73	70 YB	KB1	3	0.209	1,2,3				
4.62	70 YB	KB2	3	0.204	1,2,3	4.73	70 YB	KB3	3	0.209	1,2				
4.62	86 RN	KA2	4	0.153	1	4.73	42 MC	KB5	1	0.627	1				
4.63	91 PA	LY6	1	0.613	1,2	4.74	62 SM	KA2	2	0.314	1,2,3				
4.63	45 RH	KA1	1	0.613	1,2,3	4.74	85 AT	KA2	4	0.157	1				
4.64	93 NP	KA1	5	0.123	1	4.75	69 TM	KB2	3	0.210	1				

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						4.75 TO 4.98					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
4.75	92 U	KA1	5	0.126	1,2,3	4.87	69 TM	KB1	3	0.215	1,2,3
4.77	90 TH	LY6	1	0.632	1,2	4.87	91 PA	KA1	5	0.129	1
4.77	58 CE	KB1	2	0.316	1,2,3	4.87	73 TA	KA1	3	0.215	1,2,3
4.77	42 MO	KB1	1	0.632	1,2,3	4.88	44 RU	KA2	1	0.647	1,2,3
4.77	58 CE	KB3	2	0.316	1,2	4.89	69 TM	KB3	3	0.216	1,2
4.77	79 AU	KB5	4	0.158	1	4.90	88 RA	LY4	1	0.649	1,2
4.78	42 MO	KB3	1	0.633	1,2	4.90	61 PM	KA2	2	0.325	1,2,3
4.78	91 PA	LY1	1	0.634	1,2,3	4.91	68 ER	KB2	3	0.217	1,2,3
4.79	86 RN	KB2	5	0.127	1	4.92	77 IR	KB4	4	0.163	1,2
4.79	87 FR	KB1	5	0.127	1	4.92	57 LA	KB5	2	0.326	1
4.79	92 U	LY5	1	0.635	1,2	4.92	78 PT	KB5	4	0.163	1
4.80	78 PT	KB2	4	0.159	1,3	4.93	98 CF	LB2	1	0.653	1
4.80	78 PT	KB4	4	0.159	1,2	4.93	90 TH	LY1	1	0.653	1,2,3
4.80	79 AU	KB1	4	0.159	1,2,3	4.93	41 NB	KB2	1	0.654	1,2,3
4.80	90 TH	LY3	1	0.636	1,2,3	4.94	85 AT	KB2	5	0.131	1
4.82	96 CM	LB1	1	0.639	1	4.94	91 PA	LY5	1	0.655	1,2
4.83	57 LA	KB2	2	0.320	1,2,3	4.94	86 RN	KB1	5	0.131	1
4.83	79 AU	KB3	4	0.160	1,2	4.94	92 U	KA2	5	0.131	1,2,3
4.83	93 NP	KA2	5	0.128	1	4.95	77 IR	KB2	4	0.164	1,3
4.84	90 TH	LY2	1	0.642	1,2,3	4.95	57 LA	KB1	2	0.328	1,2,3
4.84	61 PM	KA1	2	0.321	1,2,3	4.95	78 PT	KB1	4	0.164	1,2,3
4.84	74 W	KA2	3	0.214	1,2,3	4.95	78 PT	KB3	4	0.164	1,2
4.85	44 RU	KA1	1	0.643	1,2,3	4.96	57 LA	KB3	2	0.329	1,2
4.86	84 PO	KA2	4	0.161	1	4.96	95 AM	LB1	1	0.658	1,3
4.86	83 BI	KA1	4	0.161	1,2,3	4.98	73 TA	KA2	3	0.220	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						4.98 TO 5.25					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
4.98	41 NB	KB5	1	0.660	1	5.10	76 OS	KB2	4	0.169	1,3
4.98	82 PB	KA1	4	0.165	1,2,3	5.10	77 IR	KB1	4	0.169	1,2,3
5.01	60 NC	KA1	2	0.332	1,2,3	5.10	43 TC	KA2	1	0.676	2,3
5.01	83 BI	KA2	4	0.166	1,2,3	5.12	94 PU	LB1	1	0.678	1
5.02	90 TH	KA1	5	0.133	1,2,3	5.13	81 TL	KA1	4	0.170	1,2,3
5.03	41 NB	KB1	1	0.666	1,2,3	5.13	89 AC	KA1	5	0.136	1
5.03	72 HF	KA1	3	0.222	1,2,3	5.13	82 PB	KA2	4	0.170	1,2,3
5.03	56 BA	KB2	2	0.333	1,2,3	5.14	72 HF	KA2	3	0.227	1,2,3
5.03	41 NB	KB3	1	0.666	1,2	5.14	92 U	LB9	1	0.681	1,2
5.04	77 IR	KB5	4	0.167	1	5.15	56 BA	KB1	2	0.341	1,2,3
5.05	97 BK	LB2	1	0.669	1	5.15	88 RA	LY2	1	0.682	1,2,3
5.05	68 ER	KB3	3	0.223	1,2	5.15	56 BA	KB3	2	0.341	1,2
5.05	68 ER	KB1	3	0.223	1,2,3	5.17	96 CM	LB2	1	0.685	1
5.06	85 AT	KB1	5	0.134	1	5.18	71 LU	KA1	3	0.229	1,2,3
5.06	84 PO	KB2	5	0.134	1	5.18	92 U	LB10	1	0.687	1,2
5.06	91 PA	KA2	5	0.134	1	5.19	59 PR	KA1	2	0.344	1,2,3
5.07	67 HO	KB2	3	0.224	1	5.21	83 BI	KB2	5	0.138	1,3
5.07	60 ND	KA2	2	0.336	1,2,3	5.21	84 PO	KB1	5	0.138	1
5.08	88 RA	LY6	1	0.673	1,2	5.21	90 TH	KA2	5	0.138	1,2,3
5.08	43 TC	KA1	1	0.673	2,3	5.21	40 ZR	KB2	1	0.690	1,2,3
5.09	89 AC	LY1	1	0.674	1	5.21	67 HO	KB1	3	0.230	1
5.09	90 TH	LY5	1	0.675	1,2	5.22	55 CS	KB2	2	0.346	1,2,3
5.09	88 RA	LY3	1	0.675	1,2,3	5.24	88 RA	LY1	1	0.695	1,2,3
5.10	56 BA	KB5	2	0.338	1	5.25	40 ZR	KB5	1	0.696	1
5.10	77 IR	KB3	4	0.169	1,2	5.25	75 RE	KB2	4	0.174	1,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						5.25 TO 5.51					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
5.25	76 OS	KB1	4	0.174	1,2,3	5.39	66 DY	KB3	3	0.238	1,2
5.25	66 DY	KB2	3	0.232	1,2,3	5.39	58 CE	KA1	2	0.357	1,2,3
5.25	76 OS	KB3	4	0.174	1,2	5.40	83 BI	KB3	5	0.143	1,2
5.27	59 PR	KA2	2	0.349	1,2,3	5.40	87 FR	LY1	1	0.716	1,2,3
5.27	93 NP	LB1	1	0.698	1,2,3	5.40	74 W	KB2	4	0.179	1,2,3
5.28	80 HG	KA1	4	0.175	1	5.40	75 RE	KB3	4	0.179	1,2
5.28	81 TL	KA2	4	0.175	1,2,3	5.40	75 RE	KB1	4	0.179	1,2,3
5.28	88 RA	KA1	5	0.140	1	5.40	74 W	KB4	4	0.179	1
5.29	95 AM	LB2	1	0.701	1,3	5.41	88 RA	LY5	1	0.717	1,2
5.29	91 PA	LB9	1	0.701	1,2	5.42	94 PU	LB2	1	0.718	1
5.30	40 ZR	KB1	1	0.702	1,2,3	5.43	65 TB	KB2	3	0.240	1,2,3
5.30	71 LU	KA2	3	0.234	1,2,3	5.43	87 FR	KA1	5	0.144	1
5.30	40 ZR	KB3	1	0.702	1,2	5.43	92 U	LB1	1	0.720	1,2,3
5.32	89 AC	KA2	5	0.141	1	5.43	54 XE	KB2	2	0.360	1,2,3
5.32	82 PB	KB4	5	0.141	1,2	5.43	80 HG	KA2	4	0.180	1
5.34	91 PA	LB10	1	0.708	1,2	5.43	79 AU	KA1	4	0.180	1,2,3
5.34	55 CS	KB1	2	0.354	1,2,3	5.46	90 TH	LB9	1	0.723	1,2
5.35	42 MO	KA1	1	0.709	1,2,3	5.46	70 YB	KA2	3	0.241	1,2,3
5.36	82 PB	KB2	5	0.142	1,3	5.46	58 CE	KA2	2	0.362	1,2,3
5.36	55 CS	KB3	2	0.355	1,2	5.47	82 PB	KB5	5	0.145	1
5.36	83 BI	KB1	5	0.142	1,2,3	5.47	88 RA	KA2	5	0.145	1
5.36	92 U	LB3	1	0.710	1,2,3	5.48	92 U	LB5	1	0.726	1,2
5.37	66 DY	KB1	3	0.237	1,2,3	5.49	39 Y	KB4	1	0.727	2
5.37	70 YB	KA1	3	0.237	1,2,3	5.50	39 Y	KB2	1	0.729	1,2,3
5.38	42 MO	KA2	1	0.713	1,2,3	5.51	82 PB	KB1	5	0.146	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							5.51 TO 5.77						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
5.51	81 TL	KB2	5	0.146	1		5.62	87 FR	KA2	5	0.149	1	
5.51	90 TH	LB10	1	0.730	1,2		5.62	91 PA	LB5	1	0.745	1,2	
5.52	91 PA	LB3	1	0.732	1,2,3		5.63	41 NB	KA1	1	0.746	1,2,3	
5.52	69 TM	KA1	3	0.244	1,2,3		5.64	69 TM	KA2	3	0.249	1,2,3	
5.52	74 W	KB5	4	0.183	1		5.64	92 U	LB4	1	0.748	1,2,3	
5.54	39 Y	KB5	1	0.734	1		5.66	53 I	KB2	2	0.375	1,2,3	
5.55	82 PB	KB3	5	0.147	1		5.66	81 TL	KB1	5	0.150	1,2,3	
5.55	54 XE	KB1	2	0.368	1,2,3		5.66	57 LA	KA2	2	0.375	1,2,3	
5.55	74 W	KB1	4	0.184	1,2,3		5.66	41 NB	KA2	1	0.750	1,2,3	
5.55	92 U	LB7	1	0.736	1,2		5.66	80 HG	KB2	5	0.150	1	
5.55	93 NP	LB2	1	0.736	1,2,3		5.70	90 TH	LB3	1	0.755	1,2,3	
5.55	73 TA	KB4	4	0.184	1		5.70	91 PA	LB7	1	0.755	1,2	
5.57	65 TB	KB1	3	0.246	1,2,3		5.70	92 U	LB2	1	0.755	1,2,3	
5.57	65 TB	KB3	3	0.246	1,2		5.70	81 TL	KB3	5	0.151	1,2	
5.58	86 RN	LY1	1	0.739	1		5.71	68 ER	KA1	3	0.252	1,2,3	
5.58	74 W	KB3	4	0.185	1,2		5.71	73 TA	KB5	4	0.189	1	
5.58	79 AU	KA2	4	0.185	1,2,3		5.74	78 PT	KA2	4	0.190	1,2,3	
5.58	86 RN	KA1	5	0.148	1		5.74	85 AT	KA1	5	0.152	1	
5.58	73 TA	KB2	4	0.185	1,2,3		5.74	73 TA	KB1	4	0.190	1,2,3	
5.59	39 Y	KB3	1	0.741	1,2		5.74	83 BI	LY4	1	0.761	1,2	
5.59	39 Y	KB1	1	0.741	1,2,3		5.75	64 GD	KB1	3	0.254	1,2,3	
5.60	57 LA	KA1	2	0.371	1,2,3		5.76	85 AT	LY1	1	0.763	1	
5.60	91 PA	LB1	1	0.742	1,2,3		5.77	73 TA	KB3	4	0.191	1,2	
5.61	64 GD	KB2	3	0.248	1,2,3		5.77	84 PO	LY6	1	0.764	1,2	
5.61	78 PT	KA1	4	0.186	1,2,3		5.77	84 PO	LY3	1	0.764	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							5.77 TO 6.00					
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF
5.77	72 HF	KB2	4	0.191	1,2,3		5.91	38 SR	KB3	1	0.783	1,2
5.77	77 IR	KA1	4	0.191	1,2,3		5.91	67 HC	KA1	3	0.261	1,2,3
5.77	90 TH	LB5	1	0.765	1,2		5.91	38 SR	KB1	1	0.783	1,2,3
5.77	64 GD	KB3	3	0.255	1,2		5.92	72 HF	KB3	4	0.196	1,2
5.77	90 TH	LB1	1	0.765	1,2,3		5.92	72 HF	KB1	4	0.196	1,2,3
5.77	86 RN	KA2	5	0.153	1		5.92	77 IR	KA2	4	0.196	1,2,3
5.80	53 I	KB1	2	0.384	1,2,3		5.92	85 AT	KA2	5	0.157	1
5.80	88 RA	LB9	1	0.769	1,2		5.93	40 ZR	KA1	1	0.786	1,2,3
5.81	56 BA	KA1	2	0.385	1,2,3		5.93	82 PB	LY4	1	0.786	1
5.81	79 AU	KB4	5	0.154	1,2		5.94	84 PC	LY1	1	0.787	1,2,3
5.81	53 I	KB3	2	0.385	1,2		5.95	76 OS	KA1	4	0.197	1,2,3
5.81	91 PA	LB4	1	0.770	1,2,3		5.95	92 U	LB6	1	0.788	1,2,3
5.81	80 HG	KB1	5	0.154	1		5.95	71 LU	KB2	4	0.197	1,2,3
5.82	68 ER	KA2	3	0.257	1,2,3		5.95	89 AC	LB1	1	0.789	1
5.82	63 EU	KB2	3	0.257	1,2,3		5.95	83 BI	LY3	1	0.789	1,2,3
5.82	38 SR	KB2	1	0.771	1,2,3		5.96	83 BI	LY6	1	0.790	1,2
5.84	90 TH	LB7	1	0.774	1,2		5.96	40 ZR	KA2	1	0.790	1,2,3
5.84	91 PA	LB2	1	0.774	1,2,3		5.96	79 AU	KB5	5	0.158	1
5.85	79 AU	KB2	5	0.155	1,3		5.98	63 EU	KB1	3	0.264	1,2,3
5.85	80 HG	KB3	5	0.155	1		5.98	98 CF	LA1	1	0.792	1
5.85	38 SR	KB5	1	0.775	1		5.98	63 EU	KB3	3	0.264	1,2
5.85	88 RA	LB10	1	0.775	1,2		5.98	90 TH	LB4	1	0.793	1,2,3
5.89	56 BA	KA2	2	0.390	1,2,3		5.99	90 TH	LB2	1	0.794	1,2,3
5.89	84 PO	KA1	5	0.156	1		6.00	79 AU	KB1	5	0.159	1,2,3
5.90	52 TE	KB2	2	0.391	1,2,3		6.00	78 PT	KB4	5	0.159	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						6.00 TO 6.26					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
6.00	78 P1	KB2	5	0.159	1,3	6.14	89 AC	LB2	1	0.814	1
6.01	83 B1	LY2	1	0.796	1,2,3	6.15	78 PT	KB5	5	0.163	1
6.02	67 H0	KA2	3	0.266	1,2,3	6.15	82 PB	LY3	1	0.815	1,2,3
6.02	62 SM	KB2	3	0.266	1,2,3	6.15	77 IR	KB4	5	0.163	1,2
6.04	55 CS	KA1	2	0.400	1,2,3	6.16	70 Y8	KB2	4	0.204	1,2,3
6.04	52 TE	KB1	2	0.400	1,2,3	6.16	37 RB	KB2	1	0.816	1,2,3
6.04	79 AU	KB3	5	0.160	1,2	6.16	88 RA	LB7	1	0.816	1,2
6.05	52 TE	KB3	2	0.401	1,2	6.16	51 SB	KB2	2	0.408	1,2,3
6.06	88 RA	LB3	1	0.803	1,2,3	6.17	82 PB	LY6	1	0.817	1,2
6.07	98 CF	LA2	1	0.804	1	6.18	62 SM	KB1	3	0.273	1,2,3
6.08	83 B1	KA1	5	0.161	1,2,3	6.19	78 PT	KB1	5	0.164	1,2,3
6.08	84 P0	KA2	5	0.161	1	6.19	78 PT	KB3	5	0.164	1,2
6.08	92 U	LN	1	0.805	1,2,3	6.19	77 IR	KB2	5	0.164	1,3
6.08	88 RA	LB5	1	0.806	1,2	6.20	82 PB	LY2	1	0.821	1,2,3
6.10	71 LU	KB1	4	0.202	1,2,3	6.20	37 RB	KB5	1	0.822	1
6.10	76 O5	KA2	4	0.202	1,2,3	6.20	66 DY	KA2	3	0.274	1,2,3
6.10	91 PA	LB6	1	0.808	1,2,3	6.20	62 SM	KB3	3	0.274	1,2
6.11	66 DY	KA1	3	0.270	1,2,3	6.20	97 BK	LA2	1	0.822	1
6.11	55 CS	KA2	2	0.405	1,2,3	6.23	82 PB	KA1	5	0.165	1,2,3
6.11	97 BK	LA1	1	0.810	1	6.25	51 SB	KB5	2	0.414	1
6.13	75 RE	KA1	4	0.203	1,2,3	6.25	90 TH	LB6	1	0.828	1,2,3
6.13	71 LJ	KB3	4	0.203	1,2	6.25	61 PM	KB2	3	0.276	1
6.13	81 TL	LY4	1	0.812	1,2	6.26	37 RB	KB1	1	0.829	1,2,3
6.14	83 B1	LY1	1	0.813	1,2,3	6.26	96 CM	LA1	1	0.829	1
6.14	88 RA	LB1	1	0.814	1,2,3	6.26	91 PA	LN	1	0.829	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						6.26 TO 6.54					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
6.26	39 Y	KA1	1	0.829	1,2,3	6.38	76 OS	KB2	5	0.169	1,3
6.26	37 RB	KB3	1	0.829	1,2	6.38	77 IR	KB1	5	0.169	1,2,3
6.26	83 BI	KA2	5	0.166	1,2,3	6.38	61 PM	KB1	3	0.282	1,2,3
6.28	75 RE	KA2	4	0.208	1,2,3	6.40	81 TL	LY2	1	0.848	1,2,3
6.28	54 XE	KA1	2	0.416	1,2,3	6.40	95 AM	LA1	1	0.848	1,3
6.29	39 Y	KA2	1	0.833	1,2,3	6.41	61 PM	KB3	3	0.283	2
6.29	51 SB	KB1	2	0.417	1,2,3	6.41	65 TB	KA2	3	0.283	1,2,3
6.30	77 IR	KB5	5	0.167	1	6.42	82 PB	KA2	5	0.170	1,2,3
6.30	88 RA	LB2	1	0.835	1,2,3	6.42	81 TL	KA1	5	0.170	1,2,3
6.31	70 YB	KB3	4	0.209	1,2	6.43	50 SN	KB2	2	0.426	1,2,3
6.31	51 SB	KB3	2	0.418	1,2	6.45	90 TH	LN	1	0.854	1,2,3
6.31	70 YB	KB1	4	0.209	1,2,3	6.46	74 W	KA2	4	0.214	1,2,3
6.31	74 W	KA1	4	0.209	1,2,3	6.48	87 FR	LB2	1	0.858	1,2,3
6.32	65 TB	KA1	3	0.279	1,2,3	6.48	60 ND	KB2	3	0.286	1,2,3
6.33	83 BI	LY5	1	0.839	1,2	6.49	73 TA	KA1	4	0.215	1,2,3
6.33	80 HG	LY4	1	0.839	1,2	6.49	69 TM	KB1	4	0.215	1,2,3
6.34	69 TM	KB2	4	0.210	1	6.49	95 AM	LA2	1	0.860	1,3
6.34	54 XE	KA2	2	0.420	1,2,3	6.52	50 SN	KB5	2	0.432	1
6.34	82 PB	LY1	1	0.840	1,2,3	6.52	69 TM	KB3	4	0.216	1,2
6.34	87 FR	LB1	1	0.840	1,2,3	6.52	64 GD	KA1	3	0.288	1,2,3
6.35	96 CM	LA2	1	0.841	1	6.54	86 RN	LB1	1	0.866	1
6.35	81 TL	LY3	1	0.841	1,2,3	6.54	82 PB	LY5	1	0.866	1,2
6.35	88 RA	LB4	1	0.841	1,2,3	6.54	36 KR	KB4	1	0.866	2
6.37	81 TL	LY6	1	0.844	1,2	6.54	36 KR	KB2	1	0.866	1,2,3
6.38	77 IR	KB3	5	0.169	1,2	6.54	53 I	KA1	2	0.433	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						6.55 TO 6.81					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
6.55	94 PD	LA1	1	0.868	1	6.66	60 ND	KB3	3	0.294	1,2
6.55	81 TL	LY1	1	0.868	1,2,3	6.70	72 HF	KA1	4	0.222	1,2,3
6.55	68 ER	KB2	4	0.217	1,2,3	6.71	93 NP	LA1	1	0.889	1,2,3
6.56	80 HG	LY3	1	0.869	1,2,3	6.72	49 IN	KB2	2	0.445	1,2,3
6.57	50 SW	KB1	2	0.435	1,2,3	6.72	59 PR	KB2	3	0.297	1,2,3
6.57	76 OS	KB3	5	0.174	1,2	6.73	68 ER	KB3	4	0.223	1,2
6.57	75 RE	KB2	5	0.174	1,3	6.73	68 ER	KB1	4	0.223	1,2,3
6.57	76 OS	KB1	5	0.174	1,2,3	6.75	85 AT	LB1	1	0.894	1
6.57	36 KR	KB5	1	0.871	1,2	6.76	74 W	KB4	5	0.179	1
6.57	88 RA	LB6	1	0.871	1,2,3	6.76	75 RE	KB3	5	0.179	1,2
6.58	50 SW	KB3	2	0.436	1,2	6.76	81 TL	LY5	1	0.895	1,2
6.59	80 HG	LY6	1	0.873	1,2	6.76	75 RE	KB1	5	0.179	1,2,3
6.60	38 SR	KA1	1	0.875	1,2,3	6.76	74 W	KB2	5	0.179	1,2,3
6.60	80 HG	LY2	1	0.875	1,2,3	6.76	67 HO	KB2	4	0.224	1
6.60	81 TL	KA2	5	0.175	1,2,3	6.77	78 PT	LY4	1	0.897	1,2
6.60	80 HG	KA1	5	0.175	1	6.77	63 EU	KA1	3	0.299	1,2,3
6.61	53 I	KA2	2	0.438	1,2,3	6.77	80 HG	LY1	1	0.897	1,2,3
6.63	36 KR	KB1	1	0.878	1,2,3	6.78	83 BI	LB9	1	0.898	1,2
6.63	60 ND	KB1	3	0.293	1,2,3	6.78	79 AU	LY3	1	0.898	1,2,3
6.63	38 SR	KA2	1	0.879	1,2,3	6.79	84 PC	LB5	1	0.899	1,2
6.63	36 KR	KB3	1	0.879	1,2	6.79	79 AU	KA1	5	0.180	1,2,3
6.63	64 GD	KA2	3	0.293	1,2,3	6.79	80 HG	KA2	5	0.180	1
6.64	94 PD	LA2	1	0.880	1	6.80	93 NP	LA2	1	0.901	1
6.64	73 TA	KA2	4	0.220	1,2,3	6.81	52 TE	KA1	2	0.451	1,2,3
6.65	86 RN	LB2	1	0.881	1	6.81	49 IN	KB5	2	0.451	1

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						6.82 TO 7.10					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
6.82	79 AU	LY6	1	0.903	1,2	6.98	79 AU	KA2	5	0.185	1,2,3
6.82	79 AU	LY2	1	0.904	1,2,3	6.98	74 W	KB3	5	0.185	1,2
6.83	83 BI	LB10	1	0.905	1,2	6.98	35 BR	KB5	1	0.925	1,2
6.83	85 AT	LB2	1	0.905	1	6.99	37 RB	KA1	1	0.926	1,2,3
6.85	88 RA	LN	1	0.907	1,2,3	6.99	83 BI	LB5	1	0.926	1,2
6.85	72 HF	KA2	4	0.227	1,2,3	7.00	77 IR	LY4	1	0.927	1,2
6.86	63 EU	KA2	3	0.303	1,2,3	7.00	62 SM	KA1	3	0.309	1,2,3
6.86	84 PO	LB3	1	0.909	1,2,3	7.00	82 PB	LB9	1	0.927	1,2
6.87	49 IN	KB3	2	0.455	1,2	7.00	79 AU	LY1	1	0.927	1,2,3
6.87	49 IN	KB1	2	0.455	1,2,3	7.00	66 DY	KB2	4	0.232	1,2,3
6.88	92 U	LA1	1	0.911	1,2,3	7.00	78 PT	LY3	1	0.928	1,2,3
6.88	59 PR	KB1	3	0.304	1,2,3	7.01	84 PC	LB2	1	0.929	1,2,3
6.88	52 TE	KA2	2	0.456	1,2,3	7.02	78 PT	KA1	5	0.186	1,2,3
6.91	74 W	KB5	5	0.183	1	7.02	48 CD	KB2	2	0.465	1,2,3
6.91	59 PR	KB3	3	0.305	1,2	7.02	37 RB	KA2	1	0.930	1,2,3
6.91	71 LU	KA1	4	0.229	1,2,3	7.04	35 BR	KB3	1	0.933	1,2
6.94	74 W	KB1	5	0.184	1,2,3	7.04	35 BR	KB1	1	0.933	1,2,3
6.94	73 TA	KB4	5	0.184	1	7.04	91 PA	LA1	1	0.933	1,2,3
6.94	67 HO	KB1	4	0.230	1	7.05	78 PT	LY6	1	0.934	1,2
6.95	35 BR	KB2	1	0.921	1,2,3	7.05	82 PB	LB10	1	0.934	1,2
6.96	92 U	LA2	1	0.922	1,2,3	7.05	78 PT	LY2	1	0.934	1,2,3
6.96	84 PO	LB1	1	0.922	1,2,3	7.06	83 BI	LB7	1	0.935	1,2
6.97	80 HG	LY5	1	0.924	1,2	7.07	71 LU	KA2	4	0.234	1,2,3
6.97	58 CE	KB2	3	0.308	1,2,3	7.09	83 BI	LB3	1	0.939	1,2,3
6.98	73 TA	KB2	5	0.185	1,2,3	7.10	51 SB	KA1	2	0.470	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						7.11 TO 7.41					
ANGLE	ELEM	LINE	V	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
7.11	62 SM	KA2	3	0.314	1,2,3	7.24	76 OS	LY4	1	0.959	1,2
7.13	73 FA	KB5	5	0.189	1	7.25	65 TB	KB2	4	0.240	1,2,3
7.13	91 PA	LA2	1	0.945	1,2,3	7.25	57 LA	KB2	3	0.320	1,2,3
7.15	84 PO	LB4	1	0.947	1,2,3	7.26	82 PB	LB7	1	0.962	1,2
7.16	66 DY	KB1	4	0.237	1,2,3	7.27	61 PM	KA1	3	0.321	1,2,3
7.16	58 CE	KB1	3	0.316	1,2,3	7.28	70 YB	KA2	4	0.241	1,2,3
7.16	70 YB	KA1	4	0.237	1,2,3	7.28	81 TL	LB10	1	0.964	1,2
7.16	58 CE	KB3	3	0.316	1,2	7.28	77 IR	LY2	1	0.965	1,2,3
7.17	73 TA	KB1	5	0.190	1,2,3	7.30	84 PO	LB6	1	0.967	1,2,3
7.17	48 CD	KB1	2	0.475	1,2,3	7.30	77 IR	LY6	1	0.967	1,2
7.17	78 PT	KA2	5	0.190	1,2,3	7.31	90 TH	LA2	1	0.968	1,2,3
7.17	51 SB	KA2	2	0.475	1,2,3	7.31	82 PB	LB3	1	0.969	1,2,3
7.19	83 BI	LB1	1	0.952	1,2,3	7.35	47 AG	KB2	2	0.487	1,2,3
7.19	66 DY	KB3	4	0.238	1,2	7.36	61 PM	KA2	3	0.325	1,2,3
7.19	48 CD	KB3	2	0.476	1,2	7.37	69 TM	KA1	4	0.244	1,2,3
7.19	82 PB	LB5	1	0.953	1,2	7.38	83 BI	LB4	1	0.977	1,2,3
7.21	72 HF	KB2	5	0.191	1,2,3	7.38	57 LA	KB5	3	0.326	1
7.21	83 BI	LB2	1	0.955	1,2,3	7.40	72 HF	KB1	5	0.196	1,2,3
7.21	73 TA	KB3	5	0.191	1,2	7.40	89 AC	LA1	1	0.980	1
7.21	77 IR	KA1	5	0.191	1,2,3	7.40	36 KR	KA1	1	0.980	1,2,3
7.22	79 AU	LY5	1	0.956	1,2	7.40	77 IR	KA2	5	0.196	1,2,3
7.22	90 TH	LA1	1	0.956	1,2,3	7.40	34 SE	KB2	1	0.980	1,2,3
7.22	81 TL	LB9	1	0.957	1,2	7.40	72 HF	KB3	5	0.196	1,2
7.23	78 PT	LY1	1	0.958	1,2,3	7.41	81 TL	LB5	1	0.981	1,2
7.24	77 IR	LY3	1	0.959	1,2,3	7.41	82 PB	LB1	1	0.982	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							7.41 TO 7.70						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
7.41	50 SN	KA1	2	0.491	1,2,3		7.52	47 AG	KB3	2	0.498	1,2	
7.42	82 PB	LB2	1	0.983	1,2,3		7.52	60 ND	KA1	3	0.332	1,2,3	
7.43	65 TB	KB3	4	0.246	1,2		7.52	80 HG	LB10	1	0.996	1,2	
7.43	34 SE	KB5	1	0.984	1,2		7.53	76 OS	LY2	1	0.998	1,2,3	
7.43	65 TB	KB1	4	0.246	1,2,3		7.54	56 BA	KB2	3	0.333	1,2,3	
7.43	57 LA	KB1	3	0.328	1,2,3		7.56	76 OS	LY6	1	1.001	1,2	
7.43	36 KR	KA2	1	0.984	1,2,3		7.56	81 TL	LB3	1	1.001	1,2,3	
7.44	76 OS	KA1	5	0.197	1,2,3		7.59	88 RA	LA1	1	1.005	1,2,3	
7.44	71 LU	KB2	5	0.197	1,2,3		7.60	82 PB	LB4	1	1.007	1,2,3	
7.44	80 HG	LB9	1	0.986	1,2		7.61	60 ND	KA2	3	0.336	1,2,3	
7.44	47 AG	KB5	2	0.493	1		7.61	68 ER	KA1	4	0.252	1,2,3	
7.45	57 LA	KB3	3	0.329	1,2		7.63	71 LU	KB1	5	0.202	1,2,3	
7.46	78 PT	LY5	1	0.988	1,2		7.63	76 OS	KA2	5	0.202	1,2,3	
7.47	81 TL	LB7	1	0.990	1,2		7.63	80 HG	LB5	1	1.010	1,2	
7.47	50 SN	KA2	2	0.495	1,2,3		7.63	81 TL	LB2	1	1.010	1,2,3	
7.48	77 IR	LY1	1	0.991	1,2,3		7.65	56 BA	KB5	3	0.338	1	
7.49	64 GD	KB2	4	0.248	1,2,3		7.66	71 LU	KB3	5	0.203	1,2	
7.49	75 RE	LY4	1	0.992	1,2		7.66	81 TL	LB1	1	1.015	1,2,3	
7.49	34 SE	KB1	1	0.992	1,2,3		7.66	75 RE	KA1	5	0.253	1,2,3	
7.49	89 AC	LA2	1	0.992	1		7.67	64 GD	KB1	4	0.254	1,2,3	
7.49	76 OS	LY3	1	0.992	1,2,3		7.67	88 RA	LA2	1	1.016	1,2,3	
7.50	34 SE	KB3	1	0.993	1,2		7.69	80 HG	LB7	1	1.019	1,2	
7.50	83 BI	LB6	1	0.993	1,2,3		7.70	70 YB	KB2	5	0.204	1,2,3	
7.50	47 AG	KB1	2	0.497	1,2,3		7.70	46 PD	KB2	2	0.510	1,2,3	
7.52	69 TM	KA2	4	0.249	1,2,3		7.70	64 GD	KB3	4	0.255	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						7.71 TO 8.00					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
7.71	79 AU	LB9	1	1.021	1,2	7.85	75 RE	KA2	5	0.208	1,2,3
7.71	82 PB	LB6	1	1.021	1,2,3	7.87	46 PD	KB1	2	0.521	1,2,3
7.72	77 IR	LY5	1	1.022	1,2	7.87	87 FR	LA2	1	1.042	1
7.72	56 BA	KB3	3	0.341	1,2	7.87	46 PD	KB3	2	0.521	1,2
7.72	56 BA	KB1	3	0.341	1,2,3	7.88	67 HC	KA1	4	0.261	1,2,3
7.73	49 IN	KA1	2	0.512	1,2,3	7.88	35 BR	KA2	1	1.044	1,2,3
7.74	76 OS	LY1	1	1.025	1,2,3	7.89	74 W	KA1	5	0.209	1,2,3
7.75	75 RE	LY3	1	1.026	1,2,3	7.89	33 AS	KB2	1	1.045	1,2,3
7.76	63 EU	KB2	4	0.257	1,2,3	7.89	70 YB	KB1	5	0.209	1,2,3
7.76	74 W	LY4	1	1.028	1,2	7.89	70 YB	KB3	5	0.209	1,2
7.76	79 AU	LB10	1	1.028	1,2	7.90	59 PR	KA2	3	0.349	1,2,3
7.76	68 ER	KA2	4	0.257	1,2,3	7.92	33 AS	KB5	1	1.049	1,2
7.78	87 FR	LA1	1	1.030	1,2,3	7.92	80 HG	LB1	1	1.049	1,2,3
7.78	98 CF	LY1	2	0.515	1	7.93	81 TL	LB6	1	1.050	1,2,3
7.79	75 RE	LY2	1	1.032	1,2,3	7.93	69 TM	KB2	5	0.210	1
7.79	59 PR	KA1	3	0.344	1,2,3	7.93	79 AU	LB7	1	1.050	1,2
7.81	80 HG	LB3	1	1.034	1,2,3	7.96	78 PT	LB9	1	1.054	1,2
7.81	49 IN	KA2	2	0.517	1,2,3	7.97	63 EU	KB1	4	0.264	1,2,3
7.81	46 PD	KB5	2	0.517	1	7.97	63 EU	KB3	4	0.264	1,2
7.83	75 RE	LY6	1	1.037	1,2	7.98	76 OS	LY5	1	1.057	1,2
7.84	55 CS	KB2	3	0.346	1,2,3	7.98	86 RN	LA1	1	1.057	1
7.84	81 TL	LB4	1	1.039	1,2,3	7.98	33 AS	KB1	1	1.057	1,2,3
7.85	79 AU	LB5	1	1.040	1,2	7.99	33 AS	KB3	1	1.058	1,2
7.85	35 BR	KA1	1	1.040	1,2,3	7.99	83 BI	LN	1	1.059	1,2,3
7.85	80 HG	LB2	1	1.040	1,2,3	8.00	97 BK	LY1	2	0.530	1

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						8.01 TO 8.33					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
8.01	75 RE	LY1	1	1.061	1,2,3	8.15	66 DY	KA1	4	0.270	1,2,3
8.02	74 W	LY3	1	1.062	1,2,3	8.15	54 XE	KB2	3	0.360	1,2,3
8.02	55 CS	KB1	3	0.354	1,2,3	8.17	78 PT	LB7	1	1.082	1,2
8.02	78 PT	LB10	1	1.062	1,2	8.17	45 RH	KB5	2	0.541	1
8.03	67 HO	KA2	4	0.266	1,2,3	8.18	79 AU	LB1	1	1.084	1,2,3
8.03	62 SM	KB2	4	0.266	1,2,3	8.19	68 ER	KB2	5	0.217	1,2,3
8.04	55 CS	KB3	3	0.355	1,2	8.19	85 AT	LA1	1	1.085	1
8.04	73 TA	LY4	1	1.065	1,2	8.20	58 CE	KA2	3	0.362	1,2,3
8.06	92 U	LL	1	1.067	2,3	8.23	77 IR	LB9	1	1.090	1,2
8.06	74 W	LY2	1	1.068	1,2,3	8.24	91 PA	LL	1	1.091	1,2,3
8.06	79 AU	LB3	1	1.068	1,2,3	8.24	45 RH	KB3	2	0.546	1,2
8.07	86 RN	LA2	1	1.069	1	8.24	62 SM	KB1	4	0.273	1,2,3
8.08	79 AU	LB2	1	1.070	1,2,3	8.24	45 RH	KB1	2	0.546	1,2,3
8.08	48 CD	KA1	2	0.535	1,2,3	8.24	96 CM	LY1	2	0.546	1
8.08	45 RH	KB2	2	0.535	1,2,3	8.24	82 PB	LN	1	1.092	1,2,3
8.08	74 W	KA2	5	0.214	1,2,3	8.26	75 RE	LY5	1	1.094	1,2
8.09	58 CE	KA1	3	0.357	1,2,3	8.27	62 SM	KB3	4	0.274	1,2
8.09	80 HG	LB4	1	1.072	1,2,3	8.27	66 DY	KA2	4	0.274	1,2,3
8.09	78 PT	LB5	1	1.072	1,2	8.28	77 IR	LB10	1	1.097	1,2
8.11	74 W	LY6	1	1.074	1,2	8.28	85 AT	LA2	1	1.097	1
8.12	73 TA	KA1	5	0.215	1,2,3	8.30	74 W	LY1	1	1.099	1,2,3
8.12	69 TM	KB1	5	0.215	1,2,3	8.30	73 TA	LY3	1	1.099	1,2,3
8.14	48 CD	KA2	2	0.539	1,2,3	8.31	73 TA	KA2	5	0.220	1,2,3
8.15	69 TM	KB3	5	0.216	1,2	8.32	78 PT	LB2	1	1.102	1,2,3
8.15	80 HG	LB6	1	1.080	1,2,3	8.33	72 HF	LY4	1	1.103	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						8.34 TO 8.64					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
8.34	78 P-	LB3	1	1.104	1,2,3	8.49	57 LA	KA2	3	0.375	1,2,3
8.34	61 PM	KB2	4	0.276	1	8.49	53 I	KB2	3	0.375	1,2,3
8.34	54 XE	KB1	3	0.368	1,2,3	8.50	76 OS	LB9	1	1.125	1,2
8.34	34 SE	KA1	1	1.105	1,2,3	8.50	84 PO	LA2	1	1.126	1,2,3
8.34	73 TA	LY2	1	1.105	1,2,3	8.52	47 AG	KA2	2	0.564	1,2,3
8.35	77 IR	LB5	1	1.106	1,2	8.52	61 PM	KB1	4	0.282	1,2,3
8.36	79 AU	LB4	1	1.107	1,2,3	8.52	81 TL	LN	1	1.123	1,2,3
8.37	34 SE	KA2	1	1.109	1,2,3	8.52	32 GE	KB3	1	1.129	1,2
8.38	72 HF	KA1	5	0.222	1,2,3	8.52	32 GE	KB1	1	1.129	1,2,3
8.39	79 AU	LB6	1	1.111	1,2,3	8.55	61 PM	KB3	4	0.283	2
8.40	57 LA	KA1	3	0.371	1,2,3	8.55	74 W	LY5	1	1.132	1,2
8.41	84 PO	LA1	1	1.114	1,2,3	8.55	65 TB	KA2	4	0.283	1,2,3
8.41	73 TA	LY6	1	1.114	1,2	8.55	76 OS	LB10	1	1.133	1,2
8.42	68 ER	KB1	5	0.223	1,2,3	8.57	72 HF	KA2	5	0.227	1,2,3
8.42	77 IR	LB7	1	1.115	1,2	8.57	77 IR	LB2	1	1.135	1,2,3
8.42	90 TH	LL	1	1.115	1,2,3	8.58	44 RU	KB5	2	0.563	1
8.42	68 ER	KB3	5	0.223	1,2	8.59	72 HF	LY3	1	1.138	1,2,3
8.43	65 TB	KA1	4	0.279	1,2,3	8.59	73 TA	LY1	1	1.138	1,2,3
8.43	32 GE	KB2	1	1.117	1,2,3	8.61	76 OS	LB5	1	1.140	1,2
8.44	47 AG	KA1	2	0.559	1,2,3	8.62	77 IR	LB3	1	1.141	1,2,3
8.45	32 GE	KB5	1	1.119	1,2	8.62	78 PT	LB4	1	1.142	1,2,3
8.46	67 HO	KB2	5	0.224	1	8.63	71 LU	LY4	1	1.143	1
8.46	78 P-	LB1	1	1.120	1,2,3	8.64	72 HF	LY2	1	1.144	1,2,3
8.49	44 RU	KB2	2	0.562	1,2,3	8.64	83 BI	LA1	1	1.144	1,2,3
8.49	95 AM	LY1	2	0.562	1,3	8.64	60 ND	KB2	4	0.286	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							8.64 TO 8.99					
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF
8.64	78 PT	LB6	1	1.144	1,2,3		8.86	73 TA	LY5	1	1.173	1,2
8.64	44 RU	KBI	2	0.572	1,2,3		8.86	52 TE	KB2	3	0.391	1,2,3
8.65	71 LU	KA1	5	0.229	1,2,3		8.87	82 PB	LA1	1	1.175	1,2,3
8.65	44 RU	KB3	2	0.573	1,2		8.88	33 AS	KA1	1	1.176	1,2,3
8.68	76 OS	LB7	1	1.149	1,2		8.88	60 ND	KB3	4	0.294	1,2
8.68	67 HO	KBI	5	0.230	1		8.89	75 RE	LB5	1	1.177	1,2
8.70	64 GD	KA1	4	0.288	1,2,3		8.90	77 IR	LB6	1	1.178	1,2,3
8.70	53 I	KBI	3	0.384	1,2,3		8.90	72 HF	LY1	1	1.179	1,2,3
8.72	56 BA	KA1	3	0.385	1,2,3		8.90	71 LU	LY3	1	1.179	1,2,3
8.72	83 BI	LA2	1	1.155	1,2,3		8.91	46 PD	KA2	2	0.590	1,2,3
8.72	72 HF	LY6	1	1.155	1,2		8.91	43 TC	KB4	2	0.590	1
8.72	53 I	KB3	3	0.385	1,2		8.91	77 IR	LB4	1	1.180	1,2,3
8.74	77 IR	LB1	1	1.158	1,2,3		8.91	33 AS	KA2	1	1.180	1,2,3
8.74	94 PU	LY1	2	0.579	1		8.91	76 OS	LB3	1	1.180	1,2,3
8.76	66 DY	KB2	5	0.232	1,2,3		8.91	43 TC	KB2	2	0.593	1
8.79	80 HG	LN	1	1.164	1,2,3		8.95	70 YB	LY4	1	1.185	1,2
8.80	75 RE	LB9	1	1.165	1,2		8.95	66 DY	KBI	5	0.237	1,2,3
8.81	88 RA	LL	1	1.167	1,2,3		8.95	71 LU	LY2	1	1.185	1,2,3
8.83	76 OS	LB2	1	1.170	1,2,3		8.95	70 YB	KA1	5	0.237	1,2,3
8.83	56 BA	KA2	3	0.390	1,2,3		8.96	75 RE	LB7	1	1.186	1,2
8.83	46 PD	KA1	2	0.585	1,2,3		8.96	82 PB	LA2	1	1.186	1,2,3
8.83	71 LU	KA2	5	0.234	1,2,3		8.97	59 PR	KB2	4	0.297	1,2,3
8.85	60 ND	KBI	4	0.293	1,2,3		8.97	91 PA	LY4	2	0.594	1,2
8.85	75 RE	LB10	1	1.172	1,2		8.99	66 DY	KB3	5	0.238	1,2
8.85	64 GD	KA2	4	0.293	1,2,3		8.99	92 U	LY6	2	0.595	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							9.02 TO 9.33					
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF
9.02	93 NP	LY1	2	0.597	1,2,3		9.18	74 W	LB5	1	1.215	1,2
9.03	31 GA	KB2	1	1.196	1,2,3		9.18	55 CS	KA2	3	0.405	1,2,3
9.03	92 U	LY3	2	0.598	1,2,3		9.18	72 HF	LY5	1	1.215	1,2
9.03	63 EU	KA1	4	0.299	1,2,3		9.18	59 PR	KB1	4	0.304	1,2,3
9.04	76 OS	LB1	1	1.197	1,2,3		9.20	76 OS	LB4	1	1.218	1,2,3
9.04	31 GA	KB5	1	1.197	1,2		9.21	81 TL	LA2	1	1.219	1,2,3
9.05	71 LU	LY6	1	1.198	1,2		9.21	75 RE	LB3	1	1.220	1,2,3
9.06	55 CS	KA1	3	0.400	1,2,3		9.21	69 TM	KA1	5	0.244	1,2,3
9.06	65 TB	KB2	5	0.240	1,2,3		9.21	59 PR	KB3	4	0.305	1,2
9.06	52 TE	KB1	3	0.400	1,2,3		9.23	71 LU	LY1	1	1.222	1,2,3
9.08	43 TC	KB3	2	0.601	1,2		9.23	70 YB	LY3	1	1.222	1,2,3
9.08	79 AJ	LN	1	1.203	1,2,3		9.23	90 TH	LY4	2	0.611	1,2
9.08	52 TE	KB3	3	0.401	1,2		9.24	74 W	LB7	1	1.224	1,2
9.09	74 W	LB9	1	1.204	1,2		9.24	51 SB	KB2	3	0.408	1,2,3
9.09	43 TC	KB1	2	0.602	1,2,3		9.26	91 PA	LY6	2	0.613	1,2
9.10	70 YB	KA2	5	0.241	1,2,3		9.26	45 RH	KA1	2	0.613	1,2,3
9.11	98 CF	LB1	2	0.603	1		9.28	69 TM	LY4	1	1.229	1
9.11	75 RE	LB2	1	1.207	1,2,3		9.28	70 YB	LY2	1	1.229	1,2,3
9.11	81 TL	LA1	1	1.207	1,2,3		9.29	65 TB	KB1	5	0.246	1,2,3
9.12	31 GA	KB3	1	1.208	1,2		9.29	65 TB	KB3	5	0.246	1,2
9.12	31 GA	KB1	1	1.208	1,2,3		9.29	92 U	LY1	2	0.615	1,2,3
9.14	92 U	LY2	2	0.605	1,2,3		9.30	58 CE	KB2	4	0.308	1,2,3
9.15	63 EJ	KA2	4	0.303	1,2,3		9.32	91 PA	LY3	2	0.617	1,2,3
9.15	74 W	LB10	1	1.212	1,2		9.33	45 RH	KA2	2	0.618	1,2,3
9.16	76 OS	LB6	1	1.213	1,2,3		9.33	62 SM	KA1	4	0.309	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						9.36 TO 9.70					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
9.36	75 RE	LB1	1	1.239	1,2,3	9.52	71 LU	LY5	1	1.265	1,2
9.36	64 GD	KB2	5	0.248	1,2,3	9.52	68 ER	KA1	5	0.252	1,2,3
9.36	42 MO	KB4	2	0.620	2	9.52	54 XE	KA2	3	0.420	1,2,3
9.37	80 HG	LA1	1	1.241	1,2,3	9.54	74 W	LB3	1	1.263	1,2,3
9.38	97 BK	LB1	2	0.621	1	9.55	58 CE	KB3	4	0.316	1,2
9.38	42 MO	KB2	2	0.621	1,2,3	9.55	58 CE	KB1	4	0.316	1,2,3
9.38	51 SB	KB5	3	0.414	1	9.55	42 MC	KB1	2	0.632	1,2,3
9.39	70 YB	LY6	1	1.243	1,2	9.55	73 TA	LB7	1	1.264	1,2
9.39	78 PT	LN	1	1.243	1,2,3	9.55	90 TH	LY6	2	0.632	1,2
9.40	69 TM	KA2	5	0.249	1,2,3	9.56	42 MC	KB3	2	0.633	1,2
9.40	74 W	LB2	1	1.245	1,2,3	9.58	70 YB	LY1	1	1.268	1,2,3
9.41	73 TA	LB9	1	1.246	1,2	9.58	69 TM	LY3	1	1.268	1,2,3
9.42	91 PA	LY2	2	0.624	1,2,3	9.58	91 PA	LY1	2	0.634	1,2,3
9.42	54 XE	KA1	3	0.416	1,2,3	9.59	64 GD	KB1	5	0.254	1,2,3
9.45	75 RE	LB6	1	1.251	1,2,3	9.59	92 U	LY5	2	0.635	1,2
9.45	51 SB	KB1	3	0.417	1,2,3	9.61	90 TH	LY3	2	0.636	1,2,3
9.46	80 HG	LA2	1	1.253	1,2,3	9.62	69 TM	LY2	1	1.274	1,2,3
9.47	42 MO	KB5	2	0.627	1	9.63	64 GD	KB3	5	0.255	1,2
9.47	32 GE	KA1	1	1.254	1,2,3	9.64	68 ER	LY4	1	1.276	1,2
9.47	73 TA	LB10	1	1.254	1,2	9.64	79 AU	LA1	1	1.276	1,3
9.47	51 SB	KB3	3	0.418	1,2	9.65	50 SN	KB2	3	0.426	1,2,3
9.48	73 TA	LB5	1	1.255	1,2	9.65	96 CM	LB1	2	0.639	1
9.49	62 SM	KA2	4	0.314	1,2,3	9.67	57 LA	KB2	4	0.320	1,2,3
9.50	32 GE	KA2	1	1.258	1,2,3	9.68	74 W	LB1	1	1.282	1,2,3
9.51	75 RE	LB4	1	1.259	1,2,3	9.70	77 IR	LN	1	1.284	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							9.70 TO 10.03						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
9.70	90 TH	LY2	2	0.642	1,2,3		9.86	98 CF	LB2	2	0.653	1	
9.70	61 PM	KA1	4	0.321	1,2,3		9.86	90 TH	LY1	2	0.653	1,2,3	
9.70	73 TA	LB2	1	1.284	1,2,3		9.86	70 YB	LY5	1	1.306	1,2	
9.70	30 ZN	KB2	1	1.284	1,2,3		9.87	73 TA	LB3	1	1.307	1,2,3	
9.70	63 EU	KB2	5	0.257	1,2,3		9.88	41 NB	KB2	2	0.654	1,2,3	
9.70	30 ZN	KB5	1	1.285	1,2		9.88	50 SN	KB3	3	0.436	1,2	
9.70	68 ER	KA2	5	0.257	1,2,3		9.89	91 PA	LY5	2	0.655	1,2	
9.71	44 RU	KA1	2	0.643	1,2,3		9.91	57 LA	KB1	4	0.328	1,2,3	
9.73	79 AU	LA2	1	1.288	1,2,3		9.92	78 PT	LA1	1	1.313	1,2,3	
9.74	72 HF	LB9	1	1.290	1,2		9.92	53 I	KA2	3	0.438	1,2,3	
9.74	69 TM	LY6	1	1.290	1		9.93	69 TM	LY1	1	1.315	1,2,3	
9.74	74 W	LB6	1	1.290	1,2,3		9.93	68 ER	LY3	1	1.315	1,2,3	
9.77	44 RU	KA2	2	0.647	1,2,3		9.94	95 AM	LB1	2	0.658	1,3	
9.78	30 ZN	KB1	1	1.295	1,2,3		9.94	83 BI	LL	1	1.316	1,2,3	
9.79	50 SN	KB5	3	0.432	1		9.94	57 LA	KB3	4	0.329	1,2	
9.80	72 HF	LB5	1	1.298	1,2		9.97	63 EU	KB1	5	0.264	1,2,3	
9.80	88 RA	LY4	2	0.649	1,2		9.97	63 EU	KB3	5	0.264	1,2	
9.80	72 HF	LB10	1	1.298	1,2		9.97	41 NB	KB5	2	0.660	1	
9.81	53 I	KA1	3	0.433	1,2,3		9.98	68 ER	LY2	1	1.321	1,2,3	
9.82	61 PM	KA2	4	0.325	1,2,3		9.99	67 HO	LY4	1	1.322	1,2	
9.83	74 W	LB4	1	1.302	1,2,3		10.00	78 PT	LA2	1	1.324	1,2,3	
9.85	57 LA	KB5	4	0.326	1		10.02	72 HF	LB2	1	1.326	1,2,3	
9.86	50 SN	KB1	3	0.435	1,2,3		10.02	73 TA	LB1	1	1.327	1,2,3	
9.86	67 HO	KA1	5	0.261	1,2,3		10.03	76 OS	LN	1	1.328	1,2,3	
9.86	72 HF	LB7	1	1.306	1,2		10.03	60 ND	KA1	4	0.332	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						10.05 TO 10.38					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
10.05	67 HO	KA2	5	0.266	1,2,3	10.21	43 TC	KA2	2	0.676	2,3
10.05	62 SM	KB2	5	0.266	1,2,3	10.22	52 TE	KA1	3	0.451	1,2,3
10.05	73 TA	LB6	1	1.331	1,2,3	10.22	49 IN	KB5	3	0.451	1
10.06	41 NB	KB3	2	0.666	1,2	10.22	72 HF	LB3	1	1.353	1,2,3
10.06	56 BA	KB2	4	0.333	1,2,3	10.24	69 TM	LY5	1	1.355	1,2
10.06	41 NB	KB1	2	0.666	1,2,3	10.24	94 PU	LB1	2	0.678	1
10.08	49 IN	KB2	3	0.445	1,2,3	10.29	92 U	LB9	2	0.681	1,2
10.09	71 LU	LB9	1	1.336	1,2	10.29	77 IR	LA2	1	1.362	1,2,3
10.11	97 BK	LB2	2	0.669	1	10.30	56 BA	KB1	4	0.341	1,2,3
10.12	31 GA	KA1	1	1.340	1,2,3	10.30	68 ER	LY1	1	1.364	1,2,3
10.14	71 LU	LB5	1	1.342	1,2	10.30	67 HO	LY3	1	1.364	1,2,3
10.14	71 LU	LB10	1	1.343	1,2	10.30	56 BA	KB3	4	0.341	1,2
10.15	31 GA	KA2	1	1.344	1,2,3	10.30	88 RA	LY2	2	0.682	1,2,3
10.15	60 ND	KA2	4	0.336	1,2,3	10.31	62 SM	KB1	5	0.273	1,2,3
10.17	88 RA	LY6	2	0.673	1,2	10.31	49 IN	KB3	3	0.455	1,2
10.17	43 TC	KA1	2	0.673	2,3	10.31	49 IN	KB1	3	0.455	1,2,3
10.17	73 TA	LB4	1	1.346	1,2,3	10.33	52 TE	KA2	3	0.456	1,2,3
10.18	89 AC	LY1	2	0.674	1	10.35	71 LU	LB2	1	1.370	1,2,3
10.19	71 LU	LB7	1	1.349	1,2	10.35	67 HO	LY2	1	1.370	1,2,3
10.20	90 TH	LY5	2	0.675	1,2	10.35	62 SM	KB3	5	0.274	1,2
10.20	66 DY	KA1	5	0.270	1,2,3	10.35	96 CM	LB2	2	0.685	1
10.20	88 RA	LY3	2	0.675	1,2,3	10.35	66 DY	KA2	5	0.274	1,2,3
10.20	82 PB	LL	1	1.350	1,2,3	10.37	75 RE	LN	1	1.373	1,2,3
10.20	77 IR	LA1	1	1.351	1,2,3	10.38	72 HF	LB6	1	1.374	1,2,3
10.21	56 BA	KB5	4	0.338	1	10.38	92 U	LB10	2	0.687	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						10.38 TC 10.77					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
10.38	72 HF	LB1	1	1.374	1,2,3	10.59	95 AM	LB2	2	0.701	1,3
10.38	66 DY	LY4	1	1.374	1,2	10.59	76 OS	LA2	1	1.402	1,2,3
10.39	59 PR	KA1	4	0.344	1,2,3	10.61	40 ZR	KB1	2	0.702	1,2,3
10.42	40 ZR	KB2	2	0.690	1,2,3	10.61	40 ZR	KB3	2	0.702	1,2
10.42	61 PM	KB2	5	0.276	1	10.62	68 ER	LY5	1	1.406	1,2
10.43	29 CU	KB2	1	1.381	2,3	10.65	61 PM	KB1	5	0.282	1,2,3
10.44	29 CU	KB5	1	1.382	2	10.65	51 SB	KA1	3	0.470	1,2,3
10.45	55 CS	KB2	4	0.346	1,2,3	10.69	70 YB	LB2	1	1.415	1,2,3
10.45	70 YB	LB9	1	1.384	1,2	10.69	61 PM	KB3	5	0.283	2
10.46	81 TL	LL	1	1.385	1,2,3	10.69	65 TB	KA2	5	0.283	1,2,3
10.48	70 YB	LB5	1	1.387	1,2	10.70	91 PA	LB10	2	0.708	1,2
10.50	88 RA	LY1	2	0.695	1,2,3	10.70	55 CS	KB1	4	0.354	1,2,3
10.51	76 OS	LA1	1	1.391	1,2,3	10.70	66 DY	LY3	1	1.417	1,2,3
10.51	70 YB	LB10	1	1.391	1,2	10.70	67 HO	LY1	1	1.417	1,2,3
10.52	72 HF	LB4	1	1.392	1,2,3	10.71	42 MC	KA1	2	0.709	1,2,3
10.52	29 CU	KB1	1	1.392	1,2,3	10.72	71 LU	LB6	1	1.419	1,2,3
10.52	40 ZR	KB5	2	0.696	1	10.73	92 U	LB3	2	0.710	1,2,3
10.52	29 CU	KB3	1	1.393	1,2	10.73	55 CS	KB3	4	0.355	1,2
10.54	70 YB	LB7	1	1.395	1,2	10.74	74 W	LN	1	1.421	1,2,3
10.54	48 CD	KB2	3	0.465	1,2,3	10.74	80 HG	LL	1	1.422	1,2,3
10.54	65 TB	KA1	5	0.279	1,2,3	10.75	66 DY	LY2	1	1.423	1,2,3
10.55	93 NP	LB1	2	0.698	1,2,3	10.76	71 LU	LB1	1	1.424	1,2,3
10.55	59 PR	KA2	4	0.349	1,2,3	10.77	51 SB	KA2	3	0.475	1,2,3
10.58	71 LU	LB3	1	1.401	1,2,3	10.77	48 CD	KB1	3	0.475	1,2,3
10.59	91 PA	LB9	2	0.701	1,2	10.77	42 MC	KA2	2	0.713	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							10.78 TO 11.21					
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF
10.78	65 TB	LY4	1	1.427	1,2		11.05	67 HQ	LY5	1	1.462	1,2
10.79	48 CD	KB3	3	0.476	1,2		11.05	69 TM	LB2	1	1.463	1,2,3
10.79	58 CE	KA1	4	0.357	1,2,3		11.06	91 PA	LB3	2	0.732	1,2,3
10.80	60 ND	KB2	5	0.286	1,2,3		11.07	60 ND	KB1	5	0.293	1,2,3
10.82	87 FR	LY1	2	0.716	1,2,3		11.07	64 GD	KA2	5	0.293	1,2,3
10.83	75 RE	LA1	1	1.433	1,2,3		11.08	70 YB	LB6	1	1.466	1,2,3
10.83	88 RA	LY5	2	0.717	1,2		11.09	39 Y	KB5	2	0.734	1
10.84	30 ZN	KA1	1	1.435	1,2,3		11.11	60 ND	KB3	5	0.294	1,2
10.85	94 PU	LB2	2	0.718	1		11.11	65 TB	LY3	1	1.471	1,2,3
10.87	30 ZN	KA2	1	1.439	1,2,3		11.11	73 TA	LN	1	1.471	1,2,3
10.88	54 XE	KB2	4	0.360	1,2,3		11.12	54 XE	KB1	4	0.368	1,2,3
10.88	64 GD	KA1	5	0.288	1,2,3		11.12	92 U	LB7	2	0.736	1,2
10.88	92 U	LB1	2	0.720	1,2,3		11.12	93 NP	LB2	2	0.736	1,2,3
10.88	71 LU	LB4	1	1.440	1,2,3		11.13	66 DY	LY1	1	1.473	1,2,3
10.89	69 TM	LB10	1	1.441	1		11.13	50 SN	KA1	3	0.491	1,2,3
10.91	75 RE	LA2	1	1.444	1,2,3		11.15	74 W	LA1	1	1.476	1,2,3
10.92	90 TH	LB9	2	0.723	1,2		11.15	70 YB	LB1	1	1.476	1,2,3
10.94	58 CE	KA2	4	0.362	1,2,3		11.16	65 TB	LY2	1	1.477	1,2,3
10.97	70 YB	LB3	1	1.452	1,2,3		11.17	86 RN	LY1	2	0.739	1
10.97	92 U	LB5	2	0.726	1,2		11.17	71 LU	LN	1	1.478	1,2
10.99	39 Y	KB4	2	0.727	2		11.17	47 AG	KB5	3	0.493	1
11.02	39 Y	KB2	2	0.729	1,2,3		11.20	39 Y	KB1	2	0.741	1,2,3
11.03	79 AU	LL	1	1.460	1,2,3		11.20	39 Y	KB3	2	0.741	1,2
11.03	90 TH	LB10	2	0.730	1,2		11.21	57 LA	KA1	4	0.371	1,2,3
11.04	47 AG	KB2	3	0.487	1,2,3		11.21	91 PA	LB1	2	0.742	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						11.22 TO 11.64					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
11.22	50 SN	KA2	3	0.495	1,2,3	11.44	68 ER	LB2	1	1.514	1,2,3
11.22	64 GD	LY4	1	1.485	1,2	11.45	63 EU	KA2	5	0.303	1,2,3
11.22	68 ER	LB9	1	1.485	1,2	11.45	69 TM	LB6	1	1.515	1,2,3
11.22	59 PR	KB2	5	0.297	1,2,3	11.47	66 DY	LY5	1	1.518	1,2
11.24	74 W	LA2	1	1.487	1,2,3	11.49	59 PR	KB1	5	0.304	1,2,3
11.25	28 NI	KB2	1	1.489	1,2,3	11.50	73 TA	LA1	1	1.522	1,2,3
11.25	28 NI	KB5	1	1.489	1,2	11.50	83 BI	LY4	2	0.761	1,2
11.26	91 PA	LB5	2	0.745	1,2	11.51	72 HF	LN	1	1.523	1,2,3
11.27	47 AG	KB1	3	0.497	1,2,3	11.52	59 PR	KB3	5	0.305	1,2
11.27	70 YB	LB4	1	1.491	1,2,3	11.53	85 AT	LY1	2	0.763	1
11.27	41 NB	KA1	2	0.746	1,2,3	11.55	84 PO	LY3	2	0.764	1,2,3
11.29	68 ER	LB7	1	1.494	1,2	11.55	84 PO	LY6	2	0.764	1,2
11.29	47 AG	KB3	3	0.498	1,2	11.55	64 GD	LY3	1	1.529	1,2,3
11.29	68 ER	LB10	1	1.494	1,2	11.56	46 PD	KB2	3	0.510	1,2,3
11.30	63 EU	KA1	5	0.299	1,2,3	11.56	90 TH	LB5	2	0.765	1,2
11.30	92 U	LB4	2	0.748	1,2,3	11.56	90 TH	LB1	2	0.765	1,2,3
11.33	78 PT	LL	1	1.499	1,2,3	11.56	65 TB	LY1	1	1.530	1,2,3
11.33	53 I	KB2	4	0.375	1,2,3	11.56	69 TM	LB1	1	1.530	1,2,3
11.33	57 LA	KA2	4	0.375	1,2,3	11.58	73 TA	LA2	1	1.533	1,2,3
11.33	28 NI	KB1	1	1.500	1,2,3	11.59	64 GD	LY2	1	1.534	1,2,3
11.33	41 NB	KA2	2	0.750	1,2,3	11.61	49 IN	KA1	3	0.512	1,2,3
11.37	69 TM	LB3	1	1.505	1,2,3	11.61	53 I	KB1	4	0.384	1,2,3
11.41	91 PA	LB7	2	0.755	1,2	11.62	88 RA	LB9	2	0.769	1,2
11.41	90 TH	LB3	2	0.755	1,2,3	11.64	53 I	KB3	4	0.385	1,2
11.41	92 U	LB2	2	0.755	1,2,3	11.64	56 BA	KA1	4	0.385	1,2,3

- GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						11.64 TO 12.03					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
11.64	91 PA	LB4	2	0.770	1,2,3	11.84	68 ER	LB6	1	1.567	1,2,3
11.64	58 CE	KB2	5	0.308	1,2,3	11.86	72 HF	LA1	1	1.569	1,2,3
11.64	77 IR	LL	1	1.541	1,2,3	11.86	62 SM	KA2	5	0.314	1,2,3
11.64	29 CU	KA1	1	1.541	1,2,3	11.88	40 ZR	KA1	2	0.786	1,2,3
11.65	38 SR	KB2	2	0.771	1,2,3	11.88	82 PB	LY4	2	0.786	1
11.67	69 TM	LB4	1	1.544	1,2,3	11.89	84 PC	LY1	2	0.787	1,2,3
11.67	63 EU	LY4	1	1.544	1,2	11.91	92 U	LB6	2	0.788	1,2,3
11.67	29 CU	KA2	1	1.544	1,2,3	11.92	65 TB	LY5	1	1.577	1
11.67	62 SM	KA1	5	0.309	1,2,3	11.92	65 TB	LB5	1	1.577	2
11.67	98 CF	LY1	3	0.515	1	11.93	89 AC	LB1	2	0.789	1
11.70	90 TH	LB7	2	0.774	1,2	11.93	83 BI	LY3	2	0.789	1,2,3
11.70	91 PA	LB2	2	0.774	1,2,3	11.94	58 CE	KB3	5	0.316	1,2
11.71	67 HO	LB10	1	1.549	1	11.94	58 CE	KB1	5	0.316	1,2,3
11.71	88 RA	LB10	2	0.775	1,2	11.94	40 ZR	KA2	2	0.790	1,2,3
11.71	38 SR	KB5	2	0.775	1	11.94	83 BI	LY6	2	0.790	1,2
11.72	49 IN	KA2	3	0.517	1,2,3	11.94	72 HF	LA2	1	1.580	1,2,3
11.72	46 PD	KB5	3	0.517	1	11.97	98 CF	LA1	2	0.792	1
11.79	56 BA	KA2	4	0.390	1,2,3	11.98	76 OS	LL	1	1.585	1,2,3
11.80	68 ER	LB3	1	1.561	1,2,3	11.99	90 TH	LB4	2	0.793	1,2,3
11.81	46 PD	KB3	3	0.521	1,2	11.99	68 ER	LB1	1	1.587	1,2,3
11.81	46 PD	KB1	3	0.521	1,2,3	12.00	90 TH	LB2	2	0.794	1,2,3
11.82	52 TE	KB2	4	0.391	1,2,3	12.02	97 BK	LY1	3	0.530	1
11.83	38 SR	KB1	2	0.783	1,2,3	12.02	63 EU	LY3	1	1.591	1,2,3
11.83	38 SR	KB3	2	0.783	1,2	12.03	83 BI	LY2	2	0.796	1,2,3
11.84	67 HO	LB2	1	1.567	1,2,3	12.03	64 GD	LY1	1	1.592	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						12.07 TO 12.43					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
12.07	63 EU	LY2	1	1.597	1,2,3	12.26	67 HO	LB6	1	1.622	1,2,3
12.08	66 DY	LB7	1	1.599	1,2	12.27	66 DY	LB2	1	1.623	1,2,3
12.09	52 TE	KB1	4	0.400	1,2,3	12.27	45 RH	KB5	3	0.541	1
12.09	57 LA	KB2	5	0.320	1,2,3	12.27	81 TL	LY4	2	0.812	1,2
12.09	55 CS	KA1	4	0.400	1,2,3	12.28	61 PM	KA2	5	0.325	1,2,3
12.09	66 DY	LB9	1	1.600	1	12.29	83 BI	LY1	2	0.813	1,2,3
12.10	68 ER	LB4	1	1.601	1,2,3	12.30	89 AC	LB2	2	0.814	1
12.12	52 TE	KB3	4	0.401	1,2	12.30	88 RA	LB1	2	0.814	1,2,3
12.13	48 CO	KA1	3	0.535	1,2,3	12.32	82 PB	LY3	2	0.815	1,2,3
12.13	45 RH	KB2	3	0.535	1,2,3	12.32	71 LU	LA2	1	1.630	1,2,3
12.13	61 PM	KA1	5	0.321	1,2,3	12.32	75 RE	LL	1	1.630	1,2,3
12.14	62 SM	LY4	1	1.606	1,2	12.32	57 LA	KB5	5	0.326	1
12.14	88 RA	LB3	2	0.803	1,2,3	12.33	88 RA	LB7	2	0.816	1,2
12.15	66 DY	LB10	1	1.607	1	12.33	37 RB	KB2	2	0.816	1,2,3
12.15	98 CF	LA2	2	0.804	1	12.33	51 SB	KB2	4	0.408	1,2,3
12.16	27 CO	KB5	1	1.609	1,2	12.35	82 PB	LY6	2	0.817	1,2
12.17	92 U	LN	2	0.805	1,2,3	12.37	70 YB	LN	1	1.636	1,2,3
12.18	88 RA	LB5	2	0.806	1,2	12.38	45 RH	KB1	3	0.546	1,2,3
12.21	91 PA	LB6	2	0.808	1,2,3	12.38	45 RH	KB3	3	0.546	1,2
12.22	48 CO	KA2	3	0.539	1,2,3	12.38	96 CM	LY1	3	0.546	1
12.24	67 HO	LB3	1	1.619	1,2,3	12.40	57 LA	KB1	5	0.328	1,2,3
12.24	71 LU	LA1	1	1.619	1,2,3	12.40	64 GD	LY5	1	1.641	1
12.24	55 CS	KA2	4	0.405	1,2,3	12.41	82 PB	LY2	2	0.821	1,2,3
12.24	97 BK	LA1	2	0.810	1	12.43	97 BK	LA2	2	0.822	1
12.25	27 CO	KB1	1	1.621	1,2,3	12.43	37 RB	KB5	2	0.822	1

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						12.43 TO 12.88					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
12.43	57 LA	KB3	5	0.329	1,2	12.68	47 AG	KA1	3	0.559	1,2,3
12.45	67 HO	LB1	1	1.647	1,2,3	12.68	83 BI	LY5	2	0.839	1,2
12.51	62 SM	LY3	1	1.655	1,2,3	12.68	74 W	LL	1	1.678	1,2,3
12.52	51 SB	KB5	4	0.414	1	12.68	80 HG	LY4	2	0.839	1,2
12.52	90 TH	LB6	2	0.828	1,2,3	12.70	54 XE	KA2	4	0.420	1,2,3
12.53	28 NI	KA1	1	1.658	1,2,3	12.70	87 FR	LB1	2	0.840	1,2,3
12.53	39 Y	KA1	2	0.829	1,2,3	12.70	82 PB	LY1	2	0.840	1,2,3
12.53	37 RB	KB1	2	0.829	1,2,3	12.70	60 ND	KA2	5	0.336	1,2,3
12.53	96 CM	LA1	2	0.829	1	12.71	66 DY	LB3	1	1.681	1,2,3
12.53	63 EU	LY1	1	1.658	1,2,3	12.71	66 DY	LB6	1	1.681	1,2,3
12.53	37 RB	KB3	2	0.829	1,2	12.71	81 TL	LY3	2	0.841	1,2,3
12.53	91 PA	LN	2	0.829	1,2,3	12.71	65 TB	LB2	1	1.682	1,2,3
12.54	67 HO	LB4	1	1.659	1,2,3	12.71	88 RA	LB4	2	0.841	1,2,3
12.54	62 SM	LY2	1	1.659	1,2,3	12.71	96 CM	LA2	2	0.841	1
12.54	65 TB	LB7	1	1.659	1,2	12.72	70 YB	LA2	1	1.683	1,2,3
12.55	60 ND	KA1	5	0.332	1,2,3	12.74	95 AM	LY1	3	0.562	1,3
12.56	28 NI	KA2	1	1.662	1,2,3	12.74	44 RU	KB2	3	0.562	1,2,3
12.58	54 XE	KA1	4	0.416	1,2,3	12.76	81 TL	LY6	2	0.844	1,2
12.59	56 BA	KB2	5	0.333	1,2,3	12.78	56 BA	KB5	5	0.338	1
12.59	39 Y	KA2	2	0.833	1,2,3	12.79	47 AG	KA2	3	0.564	1,2,3
12.60	65 TB	LB10	1	1.667	1,2	12.82	81 TL	LY2	2	0.848	1,2,3
12.61	51 SB	KB1	4	0.417	1,2,3	12.82	95 AM	LA1	2	0.848	1,3
12.62	88 RA	LB2	2	0.835	1,2,3	12.82	69 TM	LN	1	1.696	1,2,3
12.64	70 YB	LA1	1	1.672	1,2,3	12.88	44 RU	KB5	3	0.568	1
12.64	51 SB	KB3	4	0.418	1,2	12.88	50 SN	KB2	4	0.426	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						12.89 TO 13.31					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
12.89	56 BA	KB1	5	0.341	1,2,3	13.13	81 TL	LY1	2	0.868	1,2,3
12.89	56 BA	KB3	5	0.341	1,2	13.13	69 TM	LA2	1	1.737	1,2,3
12.91	63 EU	LY5	1	1.708	1,2	13.13	94 PU	LY1	3	0.579	1
12.91	90 TH	LN	2	0.854	1,2,3	13.14	80 HG	LY3	2	0.869	1,2,3
12.93	66 DY	LB1	1	1.710	1,2,3	13.15	50 SN	KB1	4	0.435	1,2,3
12.97	44 RU	KB1	3	0.572	1,2,3	13.16	65 TB	LB6	1	1.741	1,2,3
12.97	87 FR	LB2	2	0.858	1,2,3	13.17	36 KR	KB5	2	0.871	1,2
13.00	44 RU	KB3	3	0.573	1,2	13.17	88 RA	LB6	2	0.871	1,2,3
13.00	59 PR	KA1	5	0.344	1,2,3	13.19	50 SN	KB3	4	0.436	1,2
13.00	95 AM	LA2	2	0.860	1,3	13.19	26 FE	KB5	1	1.744	1,2
13.00	66 DY	LB4	1	1.720	1,2,3	13.19	60 ND	LY4	1	1.744	1,2
13.03	64 GD	LB7	1	1.723	1,2	13.19	59 PR	KA2	5	0.349	1,2,3
13.03	64 GD	LB9	1	1.724	1	13.19	64 GD	LB2	1	1.745	1,2,3
13.05	69 TM	LA1	1	1.726	1,2,3	13.20	65 TB	LB3	1	1.746	1,2,3
13.06	62 SM	LY1	1	1.727	1,2,3	13.20	80 HG	LY6	2	0.873	1,2
13.06	50 SN	KB5	4	0.432	1	13.23	80 HG	LY2	2	0.875	1,2,3
13.06	73 TA	LL	1	1.728	1,2,3	13.23	38 SR	KA1	2	0.875	1,2,3
13.08	55 CS	KB2	5	0.346	1,2,3	13.25	53 I	KA2	4	0.438	1,2,3
13.09	64 GD	LB10	1	1.731	1,2	13.27	46 PD	KA1	3	0.585	1,2,3
13.09	36 KR	KB2	2	0.866	1,2,3	13.28	68 ER	LN	1	1.756	1,2,3
13.09	86 RN	LB1	2	0.866	1	13.28	36 KR	KB1	2	0.878	1,2,3
13.09	53 I	KA1	4	0.433	1,2,3	13.28	26 FE	KB1	1	1.757	1,2,3
13.09	82 PB	LY5	2	0.866	1,2	13.29	36 KR	KB3	2	0.879	1,2
13.09	36 KR	KB4	2	0.866	2	13.29	38 SR	KA2	2	0.879	1,2,3
13.13	94 PU	LA1	2	0.868	1	13.31	94 PU	LA2	2	0.880	1

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						13.32 TO 13.72					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
13.32	86 RN	LB2	2	0.881	1	13.56	78 PT	LY4	2	0.897	1,2
13.38	43 TC	KB2	3	0.590	1	13.56	80 HG	LY1	2	0.897	1,2,3
13.38	43 TC	KB4	3	0.590	1	13.58	83 BI	LB9	2	0.898	1,2
13.38	55 CS	KB1	5	0.354	1,2,3	13.58	60 ND	LY3	1	1.796	1,2,3
13.38	46 PD	KA2	3	0.590	1,2,3	13.58	68 ER	LA2	1	1.796	1,2,3
13.42	55 CS	KB3	5	0.355	1,2	13.58	79 AU	LY3	2	0.898	1,2,3
13.43	65 TB	LB1	1	1.776	1,2,3	13.60	84 PO	LB5	2	0.899	1,2
13.44	93 NP	LA1	2	0.889	1,2,3	13.61	63 EU	LB10	1	1.800	1,2
13.45	62 SM	LY5	1	1.779	1	13.61	54 XE	KB2	5	0.360	1,2,3
13.45	62 SM	LB5	1	1.779	2	13.62	60 ND	LY2	1	1.801	1,2,3
13.46	49 IN	KB2	4	0.445	1,2,3	13.63	93 NP	LA2	2	0.901	1
13.47	72 HF	LL	1	1.781	1,2,3	13.63	43 TC	KB3	3	0.601	1,2
13.47	91 PA	LY4	3	0.594	1,2	13.64	52 TE	KA1	4	0.451	1,2,3
13.49	68 ER	LA1	1	1.784	1,2,3	13.64	49 IN	KB5	4	0.451	1
13.50	58 CE	KA1	5	0.357	1,2,3	13.66	43 TC	KB1	3	0.602	1,2,3
13.50	65 TB	LB4	1	1.785	1,2,3	13.66	79 AU	LY6	2	0.903	1,2
13.50	92 U	LY6	3	0.595	1,2	13.66	64 GD	LB6	1	1.807	1,2,3
13.52	63 EU	LB7	1	1.788	1,2	13.67	79 AU	LY2	2	0.904	1,2,3
13.52	85 AT	LB1	2	0.894	1	13.68	98 CF	LB1	3	0.603	1
13.53	27 CO	KA1	1	1.789	1,2,3	13.69	58 CE	KA2	5	0.362	1,2,3
13.53	81 TL	LY5	2	0.895	1,2	13.69	85 AT	LB2	2	0.905	1
13.54	93 NP	LY1	3	0.597	1,2,3	13.69	83 BI	LB10	2	0.905	1,2
13.55	63 EU	LB9	1	1.792	1,2	13.70	63 EU	LB2	1	1.812	1,2,3
13.56	27 CO	KA2	1	1.793	1,2,3	13.72	88 RA	LN	2	0.907	1,2,3
13.56	92 U	LY3	3	0.598	1,2,3	13.72	64 GD	LB3	1	1.815	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						13.72 TO 14.14					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
13.72	92 U	LY2	3	0.605	1,2,3	14.01	64 GD	LB4	1	1.853	1,2,3
13.73	61 PM	LY1	1	1.816	1	14.02	82 PB	LB9	2	0.927	1,2
13.75	84 PO	LB3	2	0.909	1,2,3	14.02	45 RH	KA2	3	0.618	1,2,3
13.75	59 PR	LY4	1	1.819	1,2	14.02	79 AU	LY1	2	0.927	1,2,3
13.76	49 IN	KB1	4	0.455	1,2,3	14.02	77 IR	LY4	2	0.927	1,2
13.76	49 IN	KB3	4	0.455	1,2	14.03	57 LA	KA1	5	0.371	1,2,3
13.78	92 U	LA1	2	0.911	1,2,3	14.03	60 ND	LY6	1	1.855	2
13.79	52 FE	KA2	4	0.456	1,2,3	14.04	67 HO	LA2	1	1.856	1,2,3
13.81	67 HO	LN	1	1.826	1,2,3	14.04	62 SM	LB7	1	1.856	1,2
13.86	90 FH	LY4	3	0.611	1,2	14.04	78 PT	LY3	2	0.928	1,2,3
13.88	71 LU	LL	1	1.836	1,2,3	14.05	84 PO	LB2	2	0.929	1,2,3
13.91	91 PA	LY6	3	0.613	1,2	14.07	48 CD	KB2	4	0.465	1,2,3
13.91	45 RH	KA1	3	0.613	1,2,3	14.07	37 RB	KA2	2	0.930	1,2,3
13.91	54 XE	KB1	5	0.368	1,2,3	14.07	42 MO	KB4	3	0.620	2
13.93	35 BR	KB2	2	0.921	1,2,3	14.07	62 SM	LB9	1	1.861	1,2
13.94	92 U	LA2	2	0.922	1,2,3	14.09	97 BK	LB1	3	0.621	1
13.94	84 PO	LB1	2	0.922	1,2,3	14.09	42 MO	KB2	3	0.621	1,2,3
13.95	67 HO	LA1	1	1.845	1,2,3	14.11	35 BR	KB1	2	0.933	1,2,3
13.95	92 U	LY1	3	0.615	1,2,3	14.11	91 PA	LA1	2	0.933	1,2,3
13.96	64 GD	LB1	1	1.846	1,2,3	14.11	35 BR	KB3	2	0.933	1,2
13.98	80 HG	LY5	2	0.924	1,2	14.13	78 PT	LY6	2	0.934	1,2
13.99	35 BR	KB5	2	0.925	1,2	14.13	78 PT	LY2	2	0.934	1,2,3
14.00	91 PA	LY3	3	0.617	1,2,3	14.13	82 PB	LB10	2	0.934	1,2
14.01	37 RB	KA1	2	0.926	1,2,3	14.13	62 SM	LB10	1	1.869	1,2
14.01	83 BI	LB5	2	0.926	1,2	14.14	83 BI	LB7	2	0.935	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							14.16 TO 14.60						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
14.16	91 PA	LY2	3	0.624	1,2,3		14.40	48 CD	KB3	4	0.476	1,2	
14.17	59 PR	LY3	1	1.874	1,2,3		14.41	92 U	LY5	3	0.635	1,2	
14.17	63 EU	LB6	1	1.874	1,2,3		14.42	82 PB	LB5	2	0.953	1,2	
14.18	57 LA	KA2	5	0.375	1,2,3		14.43	90 TH	LY3	3	0.636	1,2,3	
14.18	53 I	KB2	5	0.375	1,2,3		14.44	66 DY	LA1	1	1.959	1,2,3	
14.20	60 ND	LY1	1	1.878	1,2,3		14.45	83 BI	LB2	2	0.955	1,2,3	
14.20	83 BI	LB3	2	0.939	1,2,3		14.45	25 MN	KB1	1	1.910	1,2,3	
14.21	59 PR	LY2	1	1.879	1,2,3		14.46	90 TH	LA1	2	0.956	1,2,3	
14.22	51 SB	KA1	4	0.470	1,2,3		14.46	79 AU	LY5	2	0.956	1,2	
14.23	42 MO	KB5	3	0.627	1		14.48	81 TL	LB9	2	0.957	1,2	
14.23	62 SM	LB2	1	1.882	1,2,3		14.49	78 PT	LY1	2	0.958	1,2,3	
14.27	63 EU	LB3	1	1.887	1,2,3		14.50	96 CM	LB1	3	0.639	1	
14.29	91 PA	LA2	2	0.945	1,2,3		14.51	77 IR	LY3	2	0.959	1,2,3	
14.32	70 YB	LL	1	1.894	1,2,3		14.51	76 OS	LY4	2	0.959	1,2	
14.32	84 PO	LB4	2	0.947	1,2,3		14.52	63 EU	LB1	1	1.920	1,2,3	
14.34	42 MO	KB1	3	0.632	1,2,3		14.52	53 I	KB1	5	0.384	1,2,3	
14.34	90 TH	LY6	3	0.632	1,2		14.52	66 DY	LA2	1	1.920	1,2,3	
14.35	25 MN	KB5	1	1.897	1,2		14.55	82 PB	LB7	2	0.962	1,2	
14.35	66 DY	LN	1	1.897	1,2,3		14.56	53 I	KB3	5	0.385	1,2	
14.36	58 CE	LY4	1	1.899	1,2		14.56	56 BA	KA1	5	0.385	1,2,3	
14.36	42 MO	KB3	3	0.633	1,2		14.57	90 TH	LY2	3	0.642	1,2,3	
14.37	51 SB	KA2	4	0.475	1,2,3		14.57	63 EU	LB4	1	1.926	1,2,3	
14.37	48 CD	KB1	4	0.475	1,2,3		14.58	81 TL	LB10	2	0.964	1,2	
14.39	91 PA	LY1	3	0.634	1,2,3		14.59	44 RU	KA1	3	0.643	1,2,3	
14.40	83 BI	LB1	2	0.952	1,2,3		14.60	77 IR	LY2	2	0.965	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						14.63 TO 15.02					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
14.63	84 PC	LB6	2	0.967	1,2,3	14.84	81 TL	LB5	2	0.981	1,2
14.63	77 IF	LY6	2	0.967	1,2	14.84	62 SM	LB3	1	1.962	1,2,3
14.64	60 NC	LY5	1	1.935	1,2	14.86	50 SN	KA1	4	0.491	1,2,3
14.64	26 FE	KA1	1	1.936	1,2,3	14.86	82 PB	LB1	2	0.982	1,2,3
14.64	90 TH	LA2	2	0.968	1,2,3	14.86	91 PA	LY5	3	0.655	1,2
14.66	82 PB	LB3	2	0.969	1,2,3	14.87	82 PB	LB2	2	0.983	1,2,3
14.67	26 FE	KA2	1	1.940	1,2,3	14.89	36 KR	KA2	2	0.984	1,2,3
14.68	44 RU	KA2	3	0.647	1,2,3	14.89	34 SE	KB5	2	0.984	1,2
14.72	62 SM	LB6	1	1.946	1,2,3	14.92	47 AG	KB5	4	0.493	1
14.73	88 RA	LY4	3	0.649	1,2	14.92	80 HG	LB9	2	0.986	1,2
14.74	47 AG	KB2	4	0.487	1,2,3	14.93	65 TB	LN	1	1.973	1
14.75	56 BA	KA2	5	0.390	1,2,3	14.93	95 AM	LB1	3	0.656	1,3
14.78	83 BA	LB4	2	0.977	1,2,3	14.94	65 TB	LA1	1	1.975	1,2,3
14.79	69 TH	LL	1	1.955	1,2,3	14.95	78 PT	LY5	2	0.988	1,2
14.79	58 CE	LY3	1	1.955	1,2,3	14.98	81 TL	LB7	2	0.990	1,2
14.79	52 TE	KB2	5	0.391	1,2,3	14.98	41 NB	KB5	3	0.660	1
14.80	61 PB	LB2	1	1.957	1	14.98	50 SN	KA2	4	0.495	1,2,3
14.82	90 TH	LY1	3	0.653	1,2,3	14.99	77 IR	LY1	2	0.991	1,2,3
14.82	98 CF	LB2	3	0.653	1	15.00	57 LA	LY4	1	1.983	1,2
14.83	89 AC	LA1	2	0.980	1	15.01	75 RE	LY4	2	0.992	1,2
14.83	58 CE	LY2	1	1.960	1,2,3	15.01	76 OS	LY3	2	0.992	1,2,3
14.83	34 SE	KB2	2	0.980	1,2,3	15.01	89 AC	LA2	2	0.992	1
14.83	36 KA	KA1	2	0.980	1,2,3	15.01	34 SE	KB1	2	0.992	1,2,3
14.83	59 PF	LY1	1	1.961	1,2,3	15.02	65 TB	LA2	1	1.986	1,2,3
14.84	41 NB	KB2	3	0.654	1,2,3	15.02	83 BI	LB6	2	0.993	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						15.02 TO 15.51					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
15.02	34 SE	K83	2	0.993	1,2	15.30	89 AC	LY1	3	0.674	1
15.04	47 AG	K81	4	0.497	1,2,3	15.31	60 ND	LB10	1	2.023	1,2
15.07	80 HG	LB10	2	0.996	1,2	15.32	90 TH	LY5	3	0.675	1,2
15.07	47 AG	K83	4	0.498	1,2	15.32	88 RA	LY3	3	0.675	1,2,3
15.10	76 OS	LY2	2	0.998	1,2,3	15.32	55 CS	KA2	5	0.405	1,2,3
15.12	41 NB	K83	3	0.666	1,2	15.34	43 TC	KA2	3	0.676	2,3
15.12	62 SM	LB1	1	1.998	1,2,3	15.36	81 TL	LB1	2	1.015	1,2,3
15.12	41 NB	K81	3	0.666	1,2,3	15.38	88 RA	LA2	2	1.016	1,2,3
15.13	55 CS	KA1	5	0.400	1,2,3	15.39	94 PU	LB1	3	0.678	1
15.13	52 TE	K81	5	0.400	1,2,3	15.41	60 ND	LB2	1	2.036	1,2,3
15.13	62 SM	LB4	1	2.000	1,2,3	15.42	80 HG	LB7	2	1.019	1,2
15.15	76 OS	LY6	2	1.001	1,2	15.44	51 SB	K82	5	0.408	1,2,3
15.15	81 TL	LB3	2	1.001	1,2,3	15.44	46 PD	K82	4	0.510	1,2,3
15.17	52 TE	K83	5	0.401	1,2	15.44	57 LA	LY3	1	2.041	1,2,3
15.18	97 BK	LB2	3	0.669	1	15.45	82 PB	LB6	2	1.021	1,2,3
15.20	60 ND	LB7	1	2.009	1,2	15.45	79 AU	LB9	2	1.021	1,2
15.21	88 RA	LA1	2	1.005	1,2,3	15.46	92 U	LB9	3	0.681	1,2
15.24	82 PB	LB4	2	1.007	1,2,3	15.47	77 IR	LY5	2	1.022	1,2
15.25	60 ND	LB9	1	2.016	1,2	15.48	88 RA	LY2	3	0.682	1,2,3
15.28	88 RA	LY6	3	0.673	1,2	15.48	57 LA	LY2	1	2.046	1,2,3
15.28	43 TC	KA1	3	0.673	2,3	15.48	64 GD	LA1	1	2.046	1,2,3
15.28	68 ER	LL	1	2.019	1,2,3	15.50	49 IN	KA1	4	0.512	1,2,3
15.28	81 TL	LB2	2	1.010	1,2,3	15.50	58 CE	LY1	1	2.048	1,2,3
15.28	59 PR	LY5	1	2.020	1,2	15.50	64 GD	LN	1	2.049	1,2,3
15.28	80 HG	LB5	2	1.010	1,2	15.51	76 OS	LY1	2	1.025	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						15.53 TO 15.94					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
15.53	75 RE	LY3	2	1.026	1,2,3	15.77	46 PD	KB1	4	0.521	1,2,3
15.55	96 CM	LB2	3	0.685	1	15.78	24 CR	KB1	1	2.085	1,2,3
15.56	74 W	LY4	2	1.028	1,2	15.78	24 CR	KB3	1	2.085	1,2
15.56	79 AU	LB10	2	1.028	1,2	15.78	88 RA	LY1	3	0.695	1,2,3
15.57	64 GD	LA2	1	2.057	1,2,3	15.78	51 SB	KB1	5	0.417	1,2,3
15.59	87 FR	LA1	2	1.030	1,2,3	15.79	67 HO	LL	1	2.086	1,2,3
15.59	98 CF	LY1	4	0.515	1	15.80	40 ZR	KB5	3	0.696	1
15.60	92 U	LB10	3	0.687	1,2	15.80	35 BR	KA2	2	1.044	1,2,3
15.62	75 RE	LY2	2	1.032	1,2,3	15.82	33 AS	KB2	2	1.045	1,2,3
15.65	46 PD	KB5	4	0.517	1	15.82	51 SB	KB3	5	0.418	1,2
15.65	49 IN	KA2	4	0.517	1,2,3	15.82	59 PR	LB7	1	2.091	1,2
15.65	80 HG	LB3	2	1.034	1,2,3	15.85	93 NP	LB1	3	0.698	1,2,3
15.66	51 SB	KB5	5	0.414	1	15.88	33 AS	KB5	2	1.049	1,2
15.66	40 ZR	KB2	3	0.690	1,2,3	15.88	80 HG	LB1	2	1.049	1,2,3
15.67	24 CR	KB5	1	2.071	1,2	15.89	81 TL	LB6	2	1.050	1,2,3
15.69	75 RE	LY6	2	1.037	1,2	15.89	59 PR	LB9	1	2.100	1,2
15.70	56 BA	LY4	1	2.075	1,2	15.89	54 XE	KA2	5	0.420	1,2,3
15.73	81 TL	LB4	2	1.039	1,2,3	15.89	79 AU	LB7	2	1.050	1,2
15.74	35 BR	KA1	2	1.040	1,2,3	15.91	25 MN	KA1	1	2.102	1,2,3
15.74	80 HG	LB2	2	1.040	1,2,3	15.92	91 PA	LB9	3	0.701	1,2
15.74	79 AU	LB5	2	1.040	1,2	15.92	95 AM	LB2	3	0.701	1,3
15.74	54 XE	KA1	5	0.416	1,2,3	15.92	60 ND	LB6	1	2.104	1,2,3
15.75	61 PM	LB1	1	2.081	1,2,3	15.94	40 ZR	KB3	3	0.702	1,2
15.77	46 PD	KB3	4	0.521	1,2	15.94	40 ZR	KB1	3	0.702	1,2,3
15.77	87 FR	LA2	2	1.042	1	15.94	25 MN	KA2	1	2.106	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						15.95 TO 16.41					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
15.95	59 PR	LB10	1	2.107	1,2	16.17	74 W	LY2	2	1.068	1,2,3
15.95	78 PT	LB9	2	1.054	1,2	16.18	56 BA	LY2	1	2.138	1,2,3
15.97	58 CE	LY5	1	2.110	1,2	16.18	86 RN	LA2	2	1.069	1
16.00	76 OS	LY5	2	1.057	1,2	16.19	42 MC	KA2	3	0.713	1,2,3
16.00	86 RN	LA1	2	1.057	1	16.20	79 AU	LB2	2	1.070	1,2,3
16.00	33 AS	KB1	2	1.057	1,2,3	16.20	45 RH	KB2	4	0.535	1,2,3
16.01	33 AS	KB3	2	1.058	1,2	16.20	48 CD	KA1	4	0.535	1,2,3
16.03	83 BI	LN	2	1.059	1,2,3	16.21	57 LA	LY1	1	2.142	1,2,3
16.04	59 PR	LB2	1	2.119	1,2,3	16.23	80 HG	LB4	2	1.072	1,2,3
16.04	97 BK	LY1	4	0.530	1	16.23	78 PT	LB5	2	1.072	1,2
16.05	63 EU	LA1	1	2.121	1,2,3	16.26	87 FR	LY1	3	0.716	1,2,3
16.06	75 RE	LY1	2	1.061	1,2,3	16.26	74 W	LY6	2	1.074	1,2
16.08	91 PA	LB10	3	0.708	1,2	16.28	88 RA	LY5	3	0.717	1,2
16.08	78 PT	LB10	2	1.062	1,2	16.30	94 PU	LB2	3	0.718	1
16.08	74 W	LY3	2	1.062	1,2,3	16.32	48 CD	KA2	4	0.539	1,2,3
16.09	60 ND	LB3	1	2.126	1,2,3	16.33	66 DY	LL	1	2.158	1,2,3
16.10	42 MO	KA1	3	0.709	1,2,3	16.35	92 U	LB1	3	0.720	1,2,3
16.12	92 U	LB3	3	0.710	1,2,3	16.35	50 SN	KB5	5	0.432	1
16.12	50 SN	KB2	5	0.426	1,2,3	16.35	80 HG	LB6	2	1.080	1,2,3
16.12	73 TA	LY4	2	1.065	1,2	16.38	45 RH	KB5	4	0.541	1
16.13	63 EU	LN	1	2.131	1	16.38	78 PT	LB7	2	1.082	1,2
16.14	63 EU	LA2	1	2.132	1,2,3	16.39	53 I	KA1	5	0.433	1,2,3
16.15	92 U	LL	2	1.067	2,3	16.40	60 ND	LB4	1	2.167	1,2,3
16.15	56 BA	LY3	1	2.134	1,2,3	16.40	60 ND	LB1	1	2.167	1,2,3
16.17	79 AU	LB3	2	1.068	1,2,3	16.41	79 AU	LB1	2	1.084	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						16.42 TO 16.87					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
16.42	90 TH	LB9	3	0.723	1,2	16.64	73 TA	LY3	2	1.099	1,2,3
16.43	85 AT	LA1	2	1.085	1	16.65	62 SM	LA1	1	2.199	1,2,3
16.46	55 CS	LY4	1	2.174	1,2	16.67	39 Y	KB5	3	0.734	1
16.46	50 SN	KB1	5	0.435	1,2,3	16.69	78 PT	LB2	2	1.102	1,2,3
16.49	92 U	LB5	3	0.726	1,2	16.69	57 LA	LY5	1	2.205	1,2
16.50	50 SN	KB3	5	0.436	1,2	16.70	72 HF	LY4	2	1.103	1,2
16.50	58 CE	LB7	1	2.180	1,2	16.72	93 NP	LB2	3	0.736	1,2,3
16.50	77 IR	LB9	2	1.090	1,2	16.72	92 U	LB7	3	0.736	1,2
16.51	39 Y	KB4	3	0.727	2	16.72	78 PT	LB3	2	1.104	1,2,3
16.52	91 PA	LL	2	1.091	1,2,3	16.72	58 CE	LB2	1	2.209	1,2,3
16.53	82 PB	LN	2	1.092	1,2,3	16.73	62 SM	LA2	1	2.210	1,2,3
16.53	45 RH	KB1	4	0.546	1,2,3	16.73	73 TA	LY2	2	1.105	1,2,3
16.53	45 RH	KB3	4	0.546	1,2	16.73	34 SE	KA1	2	1.105	1,2,3
16.53	96 CM	LY1	4	0.546	1	16.75	77 IR	LB5	2	1.106	1,2
16.56	39 Y	KB2	3	0.729	1,2,3	16.76	79 AU	LB4	2	1.107	1,2,3
16.56	75 RE	LY5	2	1.094	1,2	16.78	59 PR	LB3	1	2.217	1,2,3
16.56	58 CE	LB9	1	2.188	1,2	16.78	86 RN	LY1	3	0.739	1
16.58	53 I	KA2	5	0.438	1,2,3	16.79	62 SM	LN	1	2.218	1,2,3
16.58	59 PR	LB6	1	2.190	1,2,3	16.79	34 SE	KA2	2	1.109	1,2,3
16.58	90 TH	LB10	3	0.730	1,2	16.82	79 AU	LB6	2	1.111	1,2,3
16.61	85 AT	LA2	2	1.097	1	16.83	39 Y	KB3	3	0.741	1,2
16.61	77 IR	LB10	2	1.097	1,2	16.83	39 Y	KB1	3	0.741	1,2,3
16.62	58 CE	LB10	1	2.195	1,2	16.85	49 IN	KB2	5	0.445	1,2,3
16.63	91 PA	LB3	3	0.732	1,2,3	16.85	91 PA	LB1	3	0.742	1,2,3
16.64	74 W	LY1	2	1.099	1,2,3	16.87	73 TA	LY6	2	1.114	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							16.87 TO 17.30						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
16.87	84 PO	LA1	2	1.114	1,2,3		17.10	59 PR	LB1	1	2.258	1,2,3	
16.88	77 IR	LB7	2	1.115	1,2		17.10	32 GE	KB1	2	1.129	1,2,3	
16.88	90 TH	LL	2	1.115	1,2,3		17.14	74 W	LY5	2	1.132	1,2	
16.91	55 CS	LY3	1	2.233	1,2,3		17.15	92 U	LB2	3	0.755	1,2,3	
16.91	32 GE	KB2	2	1.117	1,2,3		17.15	91 PA	LB7	3	0.755	1,2	
16.91	65 TB	LL	1	2.234	1,2,3		17.15	90 TH	LB3	3	0.755	1,2,3	
16.92	91 PA	LB5	3	0.745	1,2		17.16	76 OS	LB10	2	1.133	1,2	
16.93	47 AG	KA1	4	0.559	1,2,3		17.18	23 V	KB5	1	2.269	1,2	
16.94	55 CS	LY2	1	2.237	1,2,3		17.19	77 IR	LB2	2	1.135	1,2,3	
16.94	41 NB	KA1	3	0.746	1,2,3		17.20	44 RU	KB5	4	0.568	1	
16.94	32 GE	KB5	2	1.119	1,2		17.23	49 IN	KB3	5	0.455	1,2	
16.96	78 PT	LB1	2	1.120	1,2,3		17.23	49 IN	KB1	5	0.455	1,2,3	
16.97	56 BA	LY1	1	2.241	1,2,3		17.23	57 LA	LB7	1	2.275	1,2	
16.99	92 U	LB4	3	0.748	1,2,3		17.23	73 TA	LY1	2	1.138	1,2,3	
17.02	95 AM	LY1	4	0.562	1,3		17.23	72 HF	LY3	2	1.138	1,2,3	
17.02	44 RU	KB2	4	0.562	1,2,3		17.26	76 OS	LB5	2	1.140	1,2	
17.04	41 NB	KA2	3	0.750	1,2,3		17.26	52 TE	KA2	5	0.456	1,2,3	
17.05	76 OS	LB9	2	1.126	1,2		17.27	58 CE	LB6	1	2.281	1,2,3	
17.05	84 PO	LA2	2	1.126	1,2,3		17.28	57 LA	LB9	1	2.282	1,2	
17.07	59 PR	LB4	1	2.255	1,2,3		17.28	77 IR	LB3	2	1.141	1,2,3	
17.07	49 IN	KB5	5	0.451	1		17.29	83 BI	LY4	3	0.761	1,2	
17.07	52 TE	KA1	5	0.451	1,2,3		17.29	61 PM	LA1	1	2.283	1,2,3	
17.08	47 AG	KA2	4	0.564	1,2,3		17.30	78 PT	LB4	2	1.142	1,2,3	
17.08	81 TL	LN	2	1.128	1,2,3		17.30	23 V	KB3	1	2.284	1,2	
17.10	32 GE	KB3	2	1.129	1,2		17.30	23 V	KB1	1	2.284	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							17.31 TO 17.86						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
17.31	71 LU	LY4	2	1.143	1		17.54	94 PU	LY1	4	0.579	1	
17.33	72 HF	LY2	2	1.144	1,2,3		17.54	77 IR	LB1	2	1.158	1,2,3	
17.33	78 PT	LB6	2	1.144	1,2,3		17.59	90 TH	LB7	3	0.774	1,2	
17.33	44 RU	KB1	4	0.572	1,2,3		17.59	91 PA	LB2	3	0.774	1,2,3	
17.33	83 BI	LA1	2	1.144	1,2,3		17.61	38 SR	KB5	3	0.775	1	
17.33	85 AT	LY1	3	0.763	1		17.61	48 CD	KB2	5	0.455	1,2,3	
17.34	57 LA	LB10	1	2.290	1,2		17.61	88 RA	LB10	3	0.775	1,2	
17.34	24 CR	KA1	1	2.290	1,2,3		17.63	80 HG	LN	2	1.154	1,2,3	
17.36	61 PM	LA2	1	2.292	1		17.65	75 RE	LB9	2	1.155	1,2	
17.36	84 PO	LY6	3	0.764	1,2		17.68	88 RA	LL	2	1.157	1,2,3	
17.36	84 PO	LY3	3	0.764	1,2,3		17.72	76 OS	LB2	2	1.170	1,2,3	
17.36	44 RU	KB3	4	0.573	1,2		17.72	46 PD	KA1	4	0.535	1,2,3	
17.37	24 CR	KA2	1	2.294	1,2,3		17.75	75 RE	LB10	2	1.172	1,2	
17.38	90 TH	LB1	3	0.765	1,2,3		17.77	73 TA	LY5	2	1.173	1,2	
17.38	90 TH	LB5	3	0.765	1,2		17.78	55 CS	LY1	1	2.348	1,2,3	
17.40	76 OS	LB7	2	1.149	1,2		17.79	38 SR	KB3	3	0.783	1,2	
17.44	57 LA	LB2	1	2.303	1,2,3		17.79	58 CE	LB4	1	2.349	1,2,3	
17.47	88 RA	LB9	3	0.769	1,2		17.79	38 SR	KB1	3	0.783	1,2,3	
17.48	56 BA	LY5	1	2.308	1,2		17.80	51 SB	KA1	5	0.470	1,2,3	
17.49	91 PA	LB4	3	0.770	1,2,3		17.80	82 PB	LA1	2	1.175	1,2,3	
17.49	83 BI	LA2	2	1.155	1,2,3		17.81	33 AS	KA1	2	1.176	1,2,3	
17.49	72 HF	LY6	2	1.155	1,2		17.83	75 RE	LB5	2	1.177	1,2	
17.50	58 CE	LB3	1	2.311	1,2,3		17.84	77 IR	LB6	2	1.178	1,2,3	
17.51	64 GD	LL	1	2.312	1,2,3		17.84	58 CE	LB1	1	2.356	1,2,3	
17.52	38 SR	KB2	3	0.771	1,2,3		17.86	40 ZR	KA1	3	0.786	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							17.86 TO 18.27						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
17.86	71 LU	LY3	2	1.179	1,2,3		18.02	57 LA	LB6	1	2.379	1,2,3	
17.86	82 PB	LY4	3	0.786	1		18.02	90 TH	LB4	3	0.793	1,2,3	
17.86	72 HF	LY1	2	1.179	1,2,3		18.03	60 ND	LA2	1	2.380	1,3	
17.88	77 IR	LB4	2	1.180	1,2,3		18.03	48 CD	KB3	5	0.476	1,2	
17.88	46 PD	KA2	4	0.590	1,2,3		18.03	92 U	LY6	4	0.595	1,2	
17.88	43 TC	KB4	4	0.590	1		18.04	90 TH	LB2	3	0.794	1,2,3	
17.88	43 TC	KB2	4	0.590	1		18.08	56 BA	LB10	1	2.387	1,2	
17.88	33 AS	KA2	2	1.180	1,2,3		18.09	93 NP	LY1	4	0.597	1,2,3	
17.88	76 OS	LB3	2	1.180	1,2,3		18.09	83 BI	LY2	3	0.796	1,2,3	
17.88	84 PO	LY1	3	0.787	1,2,3		18.11	53 I	LY4	1	2.391	1,2	
17.91	92 U	LB6	3	0.788	1,2,3		18.12	31 GA	KB2	2	1.196	1,2,3	
17.93	89 AC	LB1	3	0.789	1		18.12	92 U	LY3	4	0.598	1,2,3	
17.93	83 BI	LY3	3	0.789	1,2,3		18.14	31 GA	KB5	2	1.197	1,2	
17.95	60 ND	LA1	1	2.370	1,2,3		18.14	76 OS	LB1	2	1.197	1,2,3	
17.95	70 YB	LY4	2	1.185	1,2		18.14	63 EU	LL	1	2.395	1,2,3	
17.95	40 ZR	KA2	5	0.790	1,2,3		18.15	71 LU	LY6	2	1.198	1,2	
17.95	83 BI	LY6	3	0.790	1,2		18.21	56 BA	LB2	1	2.404	1,2,3	
17.95	71 LU	LY2	2	1.185	1,2,3		18.21	43 TC	KB3	4	0.601	1,2	
17.97	82 PB	LA2	2	1.186	1,2,3		18.23	79 AU	LN	2	1.203	1,2,3	
17.97	75 RE	LB7	2	1.186	1,2		18.24	43 TC	KB1	4	0.602	1,2,3	
17.99	51 SR	KA2	5	0.475	1,2,3		18.24	74 W	LB9	2	1.204	1,2	
17.99	48 CD	KB1	5	0.475	1,2,3		18.25	88 RA	LB3	3	0.803	1,2,3	
18.00	91 PA	LY4	4	0.594	1,2		18.25	60 ND	LN	1	2.409	1,2,3	
18.00	98 CF	LA1	3	0.792	1		18.26	57 LA	LB3	1	2.410	1,2,3	
18.00	56 BA	LB9	1	2.376	1,2		18.27	98 CF	LA2	3	0.804	1	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						18.27 TO 18.74					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
18.27	98 CF	LB1	4	0.603	1	18.52	70 YB	LY3	2	1.222	1,2,3
18.29	75 RE	LB2	2	1.207	1,2,3	18.52	82 PB	LY3	3	0.815	1,2,3
18.29	81 TL	LA1	2	1.207	1,2,3	18.54	53 I	LY3	1	2.447	1,2
18.30	92 U	LN	3	0.805	1,2,3	18.54	53 I	LY2	1	2.447	1,2,3
18.30	31 GA	KB1	2	1.208	1,2,3	18.55	37 RB	KB2	3	0.816	1,2,3
18.30	31 GA	KB3	2	1.208	1,2	18.55	88 RA	LB7	3	0.816	1,2
18.31	55 CS	LY5	1	2.417	1,2	18.55	74 W	LB7	2	1.224	1,2
18.32	88 RA	LB5	3	0.806	1,2	18.56	57 LA	LB4	1	2.449	1,2,3
18.33	92 U	LY2	4	0.605	1,2,3	18.57	82 PB	LY6	3	0.817	1,2
18.36	91 PA	LB6	3	0.808	1,2,3	18.58	45 RH	KA1	4	0.613	1,2,3
18.36	74 W	LB10	2	1.212	1,2	18.58	91 PA	LY6	4	0.613	1,2
18.38	76 OS	LB6	2	1.213	1,2,3	18.60	50 SN	KA1	5	0.491	1,2,3
18.41	72 HF	LY5	2	1.215	1,2	18.63	70 YB	LY2	2	1.229	1,2,3
18.41	97 BK	LA1	3	0.810	1	18.63	57 LA	LB1	1	2.458	1,2,3
18.41	74 W	LB5	2	1.215	1,2	18.63	69 TM	LY4	2	1.229	1
18.45	47 AG	KB2	5	0.487	1,2,3	18.64	92 U	LY1	4	0.615	1,2,3
18.46	76 OS	LB4	2	1.218	1,2,3	18.65	54 XE	LY1	1	2.462	1
18.46	81 TL	LY4	3	0.812	1,2	18.66	59 PR	LA1	1	2.463	1,2,3
18.47	81 TL	LA2	2	1.219	1,2,3	18.66	82 PB	LY2	3	0.821	1,2,3
18.48	83 BI	LY1	3	0.813	1,2,3	18.68	47 AG	KB5	5	0.493	1
18.49	75 RE	LB3	2	1.220	1,2,3	18.69	37 RB	KB5	3	0.822	1
18.50	88 RA	LB1	3	0.814	1,2,3	18.69	97 BK	LA2	3	0.822	1
18.50	89 AC	LB2	3	0.814	1	18.70	91 PA	LY3	4	0.617	1,2,3
18.52	71 LU	LY1	2	1.222	1,2,3	18.73	45 RH	KA2	4	0.618	1,2,3
18.52	90 TH	LY4	4	0.611	1,2	18.74	59 PR	LA2	1	2.473	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						18.75 TO 19.12					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
18.75	50 SN	KA2	5	0.495	1,2,3	18.94	39 Y	KA2	3	0.833	1,2,3
18.78	55 CS	LB9	1	2.478	1,2	18.96	75 RE	LB6	2	1.251	1,2,3
18.78	75 RE	LB1	2	1.239	1,2,3	18.97	23 V	KA1	1	2.503	1,2,3
18.79	42 MO	KB4	4	0.620	2	18.98	88 RA	LB2	3	0.835	1,2,3
18.81	62 SM	LL	1	2.482	1,2,3	18.99	80 HG	LA2	2	1.253	1,2,3
18.81	80 HG	LA1	2	1.241	1,2,3	19.00	23 V	KA2	1	2.507	1,2,3
18.81	56 BA	LB6	1	2.482	1,2,3	19.01	42 MO	KB5	4	0.627	1
18.82	90 TH	LB6	3	0.828	1,2,3	19.01	73 TA	LB10	2	1.254	1,2
18.82	97 BK	LB1	4	0.621	1	19.01	32 GE	KA1	2	1.254	1,2,3
18.82	42 MO	KB2	4	0.621	1,2,3	19.02	73 TA	LB5	2	1.255	1,2
18.83	47 AG	KB1	5	0.497	1,2,3	19.03	55 CS	LB2	1	2.511	1,2,3
18.83	55 CS	LB7	1	2.485	1,2	19.03	52 TE	LY4	1	2.511	1,2
18.84	78 PT	LN	2	1.243	1,2,3	19.04	59 PR	LN	1	2.512	1,2,3
18.84	70 YB	LY6	2	1.243	1,2	19.05	22 TI	KB3	1	2.514	1,2
18.85	96 CM	LA1	3	0.829	1	19.05	22 TI	KB1	1	2.514	1,2,3
18.85	39 Y	KA1	3	0.829	1,2,3	19.07	32 GE	KA2	2	1.258	1,2,3
18.85	37 RB	KB1	3	0.829	1,2,3	19.07	56 BA	LB3	1	2.516	1,2,3
18.85	91 PA	LN	3	0.829	1,2,3	19.08	83 B1	LY5	3	0.839	1,2
18.85	37 RB	KB3	3	0.829	1,2	19.08	80 HG	LY4	3	0.839	1,2
18.87	74 W	LB2	2	1.245	1,2,3	19.08	75 RE	LB4	2	1.259	1,2,3
18.87	47 AG	KB3	5	0.498	1,2	19.10	71 LU	LY5	2	1.260	1,2
18.88	73 TA	LB9	2	1.246	1,2	19.10	87 FR	LB1	3	0.840	1,2,3
18.88	55 CS	LB10	1	2.492	1,2	19.10	82 PB	LY1	3	0.840	1,2,3
18.91	91 PA	LY2	4	0.624	1,2,3	19.12	81 TL	LY3	3	0.841	1,2,3
18.93	22 TI	KB5	1	2.498	1,2	19.12	96 CM	LA2	3	0.841	1

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							19.12 TO 19.68						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
19.12	88 RA	LB4	3	0.841	1,2,3		19.46	52 TE	LY3	1	2.567	1,2	
19.14	74 W	LB3	2	1.263	1,2,3		19.46	52 TE	LY2	1	2.567	1,3	
19.16	90 TH	LY6	4	0.632	1,2		19.47	30 ZN	KB2	2	1.284	1,2,3	
19.16	42 MO	KB1	4	0.632	1,2,3		19.47	90 TH	LY2	4	0.642	1,2,3	
19.16	73 TA	LB7	2	1.264	1,2		19.47	73 TA	LB2	2	1.284	1,2,3	
19.19	81 TL	LY6	3	0.844	1,2		19.47	77 IR	LN	2	1.284	1,2,3	
19.19	42 MO	KB3	4	0.633	1,2		19.48	30 ZN	KB5	2	1.285	1,2	
19.22	70 YB	LY1	2	1.268	1,2,3		19.48	58 CE	LA2	1	2.573	1,2,3	
19.22	69 TM	LY3	2	1.268	1,2,3		19.50	44 RU	KA1	4	0.643	1,2,3	
19.22	91 PA	LY1	4	0.634	1,2,3		19.51	87 FR	LB2	3	0.858	1,2,3	
19.25	92 U	LY5	4	0.635	1,2		19.52	98 CF	LY1	5	0.515	1	
19.28	81 TL	LY2	3	0.848	1,2,3		19.53	79 AU	LA2	2	1.288	1,2,3	
19.28	95 AM	LA1	3	0.848	1,3		19.56	69 TM	LY6	2	1.290	1	
19.28	90 TH	LY3	4	0.636	1,2,3		19.56	95 AM	LA2	3	0.860	1,3	
19.31	69 TM	LY2	2	1.274	1,2,3		19.56	74 W	LB6	2	1.290	1,2,3	
19.33	46 PD	KB2	5	0.510	1,2,3		19.56	72 HF	LB9	2	1.290	1,2	
19.34	79 AU	LA1	2	1.276	1,3		19.57	53 I	LY1	1	2.582	1,2,3	
19.34	68 ER	LY4	2	1.276	1,2		19.60	46 PD	KB5	5	0.517	1	
19.37	56 BA	LB4	1	2.555	1,2,3		19.60	49 IN	KA2	5	0.517	1,2,3	
19.37	96 CM	LB1	4	0.639	1		19.62	44 RU	KA2	4	0.647	1,2,3	
19.40	49 IN	KA1	5	0.512	1,2,3		19.63	30 ZN	KB1	2	1.295	1,2,3	
19.41	58 CE	LA1	1	2.561	1,2,3		19.66	55 CS	LB6	1	2.593	1,2,3	
19.42	90 TH	LN	3	0.854	1,2,3		19.68	88 RA	LY4	4	0.649	1,2	
19.44	74 W	LB1	2	1.282	1,2,3		19.68	72 HF	LB5	2	1.298	1,2	
19.46	56 BA	LB1	1	2.567	1,2,3		19.68	72 HF	LB10	2	1.298	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							19.70 TO 19.99					
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF
19.70	86 RN	LB1	3	0.866	1		19.93	55 CS	LB3	1	2.628	1,2,3
19.70	82 PB	LY5	3	0.866	1,2		19.94	68 ER	LY3	2	1.315	1,2,3
19.70	36 KR	KB2	3	0.866	1,2,3		19.94	69 TM	LY1	2	1.315	1,2,3
19.70	36 KR	KB4	3	0.866	2		19.96	83 BI	LL	2	1.316	1,2,3
19.74	81 TL	LY1	3	0.868	1,2,3		19.96	95 AM	LB1	4	0.658	1,3
19.74	94 PU	LA1	3	0.868	1		19.97	36 KR	KB1	3	0.878	1,2,3
19.74	74 W	LB4	2	1.302	1,2,3		19.99	36 KR	KB3	3	0.879	1,2
19.75	46 PD	KB3	5	0.521	1,2		19.99	38 SR	KA2	3	0.879	1,2,3
19.75	46 PD	KB1	5	0.521	1,2,3							
19.76	80 HG	LY3	3	0.869	1,2,3							
19.80	90 TH	LY1	4	0.653	1,2,3							
19.80	98 CF	LB2	4	0.653	1							
19.80	72 HF	LB7	2	1.306	1,2							
19.80	70 YB	LY5	2	1.306	1,2							
19.81	88 RA	LB6	3	0.871	1,2,3							
19.81	36 KR	KB5	3	0.871	1,2							
19.82	73 TA	LB3	2	1.307	1,2,3							
19.83	41 NB	KB2	4	0.654	1,2,3							
19.86	80 HG	LY6	3	0.873	1,2							
19.86	91 PA	LY5	4	0.655	1,2							
19.86	58 CE	LN	1	2.620	1,2,3							
19.90	80 HG	LY2	3	0.875	1,2,3							
19.90	38 SR	KA1	3	0.875	1,2,3							
19.91	78 PT	LA1	2	1.313	1,2,3							
19.91	54 XE	LB2	1	2.626	1							

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						20.01 TO 20.51					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
20.01	51 SB	LY4	1	2.639	1,2	20.34	85 AT	LB1	3	0.894	1
20.02	41 NB	KB5	4	0.660	1	20.35	55 CS	LB1	1	2.683	1,2,3
20.02	94 PU	LA2	3	0.880	1	20.35	71 LU	LB5	2	1.342	1,2
20.03	68 ER	LY2	2	1.321	1,2,3	20.36	81 TL	LY5	3	0.895	1,2
20.04	86 RN	LB2	3	0.881	1	20.37	71 LU	LB10	2	1.343	1,2
20.05	67 HO	LY4	2	1.322	1,2	20.38	31 GA	KA2	2	1.344	1,2,3
20.08	78 PT	LA2	2	1.324	1,2,3	20.41	80 HG	LY1	3	0.897	1,2,3
20.09	97 BK	LY1	5	0.530	1	20.41	78 PT	LY4	3	0.897	1,2
20.11	72 HF	LB2	2	1.326	1,2,3	20.42	43 TC	KA1	4	0.673	2,3
20.13	73 TA	LB1	2	1.327	1,2,3	20.42	73 TA	LB4	2	1.346	1,2,3
20.14	76 OS	LN	2	1.328	1,2,3	20.42	88 RA	LY6	4	0.673	1,2
20.15	53 I	LY5	1	2.657	1,2	20.43	83 BI	LB9	3	0.898	1,2
20.19	73 TA	LB6	2	1.331	1,2,3	20.43	79 AU	LY3	3	0.898	1,2,3
20.20	41 NB	KB1	4	0.666	1,2,3	20.44	48 CD	KA2	5	0.539	1,2,3
20.20	41 NB	KB3	4	0.666	1,2	20.44	51 SB	LY2	1	2.695	1,2,3
20.21	57 LA	LA1	1	2.665	1,2,3	20.44	51 SB	LY3	1	2.695	1,2
20.22	55 CS	LB4	1	2.666	1,2,3	20.45	89 AC	LY1	4	0.674	1
20.22	93 NP	LA1	3	0.889	1,2,3	20.45	84 PO	LB5	3	0.899	1,2
20.26	71 LU	LB9	2	1.336	1,2	20.46	71 LU	LB7	2	1.349	1,2
20.28	57 LA	LA2	1	2.674	1,2,3	20.48	90 TH	LY5	4	0.675	1,2
20.29	45 RH	KB2	5	0.535	1,2,3	20.48	82 PB	LL	2	1.350	1,2,3
20.29	48 CD	KA1	5	0.535	1,2,3	20.48	88 RA	LY3	4	0.675	1,2,3
20.29	60 ND	LL	1	2.676	1,2,3	20.49	77 IR	LA1	2	1.351	1,2,3
20.29	97 BK	LB2	4	0.669	1	20.50	93 NP	LA2	3	0.901	1
20.32	31 GA	KA1	2	1.340	1,2,3	20.51	43 TC	KA2	4	0.676	2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						20.52 TO 21.08					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
20.52	45 RH	KB5	5	0.541	1	20.78	67 HO	LY2	2	1.370	1,2,3
20.52	72 HF	LB3	2	1.353	1,2,3	20.78	71 LU	LB2	2	1.370	1,2,3
20.55	79 AU	LY6	3	0.903	1,2	20.83	75 RE	LN	2	1.373	1,2,3
20.55	69 TM	LY5	2	1.355	1,2	20.84	72 HF	LB6	2	1.374	1,2,3
20.57	79 AU	LY2	3	0.904	1,2,3	20.84	72 HF	LB1	2	1.374	1,2,3
20.57	94 PU	LB1	4	0.678	1	20.84	66 DY	LY4	2	1.374	1,2
20.57	52 TE	LY1	1	2.712	1,2,3	20.84	22 TI	KA1	1	2.748	1,2,3
20.58	53 I	LB9	1	2.713	1,2	20.84	92 U	LB10	4	0.687	1,2
20.59	83 BI	LB10	3	0.905	1,2	20.86	53 I	LB2	1	2.750	1,2,3
20.59	85 AT	LB2	3	0.905	1	20.88	22 TI	KA2	1	2.752	1,2,3
20.63	53 I	LB10	1	2.720	1,2	20.94	40 ZR	KB2	4	0.690	1,2,3
20.64	88 RA	LN	3	0.907	1,2,3	20.95	29 CU	KB2	2	1.381	2,3
20.66	92 U	LB9	4	0.681	1,2	20.96	35 BR	KB2	3	0.921	1,2,3
20.66	77 IR	LA2	2	1.362	1,2,3	20.97	29 CU	KB5	2	1.382	2
20.68	84 PO	LB3	3	0.909	1,2,3	20.97	21 SC	KB5	1	2.764	1,2
20.69	68 ER	LY1	2	1.364	1,2,3	20.98	84 PO	LB1	3	0.922	1,2,3
20.69	67 HO	LY3	2	1.364	1,2,3	20.98	92 U	LA2	3	0.922	1,2,3
20.69	88 RA	LY2	4	0.682	1,2,3	21.00	70 YB	LB9	2	1.384	1,2
20.71	45 RH	KB1	5	0.546	1,2,3	21.01	81 TL	LL	2	1.385	1,2,3
20.71	53 I	LB7	1	2.730	1,2	21.03	80 HG	LY5	3	0.924	1,2
20.71	96 CM	LY1	5	0.546	1	21.04	70 YB	LB5	2	1.387	1,2
20.71	45 RH	KB3	5	0.546	1,2	21.05	35 BR	KB5	3	0.925	1,2
20.73	92 U	LA1	3	0.911	1,2,3	21.05	56 BA	LA1	1	2.775	1,2,3
20.78	57 LA	LN	1	2.740	1,2,3	21.07	50 SN	LY4	1	2.777	1,2
20.78	96 CM	LB2	4	0.685	1	21.08	37 RB	KA1	3	0.926	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							21.08 TO 21.54						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
21.08	83 BI	LB5	3	0.926	1,2		21.26	78 PT	LY6	3	0.934	1,2	
21.09	88 RA	LY1	4	0.695	1,2,3		21.26	71 LU	LB3	2	1.401	1,2,3	
21.09	21 SC	KB1	1	2.780	1,2,3		21.26	78 PT	LY2	3	0.934	1,2,3	
21.10	77 IR	LY4	3	0.927	1,2		21.27	54 XE	LB1	1	2.803	1	
21.10	82 PB	LB9	3	0.927	1,2		21.27	95 AM	LB2	4	0.701	1,3	
21.10	79 AU	LY1	3	0.927	1,2,3		21.27	91 PA	LB9	4	0.701	1,2	
21.11	70 YB	LB10	2	1.391	1,2		21.27	76 OS	LA2	2	1.402	1,2,3	
21.11	76 OS	LA1	2	1.391	1,2,3		21.28	83 BI	LB7	3	0.935	1,2	
21.12	72 HF	LB4	2	1.392	1,2,3		21.31	40 ZR	KB3	4	0.702	1,2	
21.12	78 PT	LY3	3	0.928	1,2,3		21.31	40 ZR	KB1	4	0.702	1,2,3	
21.12	29 CU	KB1	2	1.392	1,2,3		21.32	44 RU	KB2	5	0.562	1,2,3	
21.12	59 PR	LL	1	2.784	1,2,3		21.32	95 AM	LY1	5	0.562	1,3	
21.12	40 ZR	KB5	4	0.696	1		21.34	68 ER	LY5	2	1.406	1,2	
21.13	56 BA	LA2	1	2.785	1,2,3		21.38	83 BI	LB3	3	0.939	1,2,3	
21.14	29 CU	KB3	2	1.393	1,2		21.40	47 AG	KA2	5	0.564	1,2,3	
21.14	84 PO	LB2	3	0.929	1,2,3		21.47	70 YB	LB2	2	1.415	1,2,3	
21.17	70 YB	LB7	2	1.395	1,2		21.49	91 PA	LB10	4	0.708	1,2	
21.17	52 TE	LY5	1	2.790	1,2		21.50	50 SN	LY2	1	2.833	1,3	
21.17	37 RB	KA2	3	0.930	1,2,3		21.50	67 HO	LY1	2	1.417	1,2,3	
21.18	93 NP	LB1	4	0.698	1,2,3		21.50	66 DY	LY3	2	1.417	1,2,3	
21.21	47 AG	KA1	5	0.559	1,2,3		21.51	91 PA	LA2	3	0.945	1,2,3	
21.24	35 BR	KB3	3	0.933	1,2		21.52	42 MO	KA1	4	0.709	1,2,3	
21.24	91 PA	LA1	3	0.933	1,2,3		21.53	53 I	LB6	1	2.837	1,2,3	
21.24	35 BR	KB1	3	0.933	1,2,3		21.54	71 LU	LB6	2	1.419	1,2,3	
21.26	82 PB	LB10	3	0.934	1,2		21.54	52 TE	LB9	1	2.839	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						21.55 TO 22.07					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
21.55	44 RU	KB5	5	0.568	1	21.80	94 PU	LB2	4	0.718	1
21.55	92 U	LB3	4	0.710	1,2,3	21.81	53 I	LB3	1	2.874	1,2,3
21.56	84 PO	LB4	3	0.947	1,2,3	21.81	78 PT	LY1	3	0.958	1,2,3
21.57	74 W	LN	2	1.421	1,2,3	21.84	76 OS	LY4	3	0.959	1,2
21.58	80 HG	LL	2	1.422	1,2,3	21.84	77 IR	LY3	3	0.959	1,2,3
21.60	66 DY	LY2	2	1.423	1,2,3	21.84	30 ZN	KA2	2	1.439	1,2,3
21.60	52 TE	LB10	1	2.847	1,2	21.86	71 LU	LB4	2	1.440	1,2,3
21.61	71 LU	LB1	2	1.424	1,2,3	21.86	92 U	LB1	4	0.720	1,2,3
21.64	51 SB	LY1	1	2.851	1,2,3	21.87	52 TC	LB2	1	2.882	1,2,3
21.64	42 MO	KA2	4	0.713	1,2,3	21.87	69 TM	LB10	2	1.441	1
21.66	65 TB	LY4	2	1.427	1,2	21.90	82 PB	LB7	3	0.962	1,2
21.67	83 BI	LB1	3	0.952	1,2,3	21.92	75 RE	LA2	2	1.444	1,2,3
21.70	82 PB	LB5	3	0.953	1,2	21.95	81 TL	LB10	3	0.964	1,2
21.70	44 RU	KB1	5	0.572	1,2,3	21.95	55 CS	LA1	1	2.892	1,2,3
21.72	56 BA	LN	1	2.862	1,2,3	21.95	90 TH	LB9	4	0.723	1,2
21.73	52 TE	LB7	1	2.863	1,2	21.95	58 CE	LL	1	2.892	1,2,3
21.74	87 FR	LY1	4	0.716	1,2,3	21.97	77 IR	LY2	3	0.965	1,2,3
21.74	83 BI	LB2	3	0.955	1,2,3	21.97	94 PU	LY1	5	0.579	1
21.74	44 RU	KB3	5	0.573	1,2	22.02	84 PO	LB6	3	0.967	1,2,3
21.75	75 RE	LA1	2	1.433	1,2,3	22.02	77 IR	LY6	3	0.967	1,2
21.77	90 TH	LA1	3	0.956	1,2,3	22.03	55 CS	LA2	1	2.902	1,2,3
21.77	79 AU	LY5	3	0.956	1,2	22.04	90 TH	LA2	3	0.968	1,2,3
21.77	88 RA	LY5	4	0.717	1,2	22.04	92 U	LB5	4	0.726	1,2
21.78	30 ZN	KA1	2	1.435	1,2,3	22.04	70 YB	LB3	2	1.452	1,2,3
21.79	81 TL	LB9	3	0.957	1,2	22.07	82 PB	LB3	3	0.969	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						22.07 TO 22.59					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
22.07	39 Y	KB4	4	0.727	2	22.39	82 PB	LB2	3	0.983	1,2,3
22.10	53 I	LB4	1	2.912	1,2,3	22.40	46 PD	KA2	5	0.590	1,2,3
22.13	39 Y	KB2	4	0.729	1,2,3	22.40	43 TC	KB2	5	0.590	1
22.17	79 AU	LL	2	1.460	1,2,3	22.40	43 TC	KB4	5	0.590	1
22.17	90 TH	LB10	4	0.730	1,2	22.41	74 W	LA1	2	1.475	1,2,3
22.20	67 HO	LY5	2	1.462	1,2	22.41	70 YB	LB1	2	1.476	1,2,3
22.20	46 PD	KA1	5	0.585	1,2,3	22.41	34 SE	KB5	3	0.984	1,2
22.21	69 TM	LB2	2	1.463	1,2,3	22.41	36 KR	KA2	3	0.984	1,2,3
22.21	49 IN	LY4	1	2.926	1,2	22.43	65 TB	LY2	2	1.477	1,2,3
22.23	91 PA	LB3	4	0.732	1,2,3	22.44	86 RN	LY1	4	0.739	1
22.25	83 BI	LB4	3	0.977	1,2,3	22.44	71 LU	LN	2	1.478	1,2
22.26	70 Y3	LB6	2	1.466	1,2,3	22.46	80 HG	LB9	3	0.986	1,2
22.26	51 S3	LY5	1	2.932	1,2	22.50	78 PT	LY5	3	0.988	1,2
22.29	39 Y	KB5	4	0.734	1	22.50	39 Y	KB3	4	0.741	1,2
22.30	53 I	LB1	1	2.937	1,2,3	22.50	39 Y	KB1	4	0.741	1,2,3
22.32	89 AC	LA1	3	0.980	1	22.53	91 PA	LB1	4	0.742	1,2,3
22.32	36 KR	KA1	3	0.980	1,2,3	22.55	81 TL	LB7	3	0.990	1,2
22.32	34 SE	KB2	3	0.980	1,2,3	22.55	64 GD	LY4	2	1.485	1,2
22.33	65 T3	LY3	2	1.471	1,2,3	22.55	91 PA	LY4	5	0.594	1,2
22.33	73 TA	LN	2	1.471	1,2,3	22.55	68 ER	LB9	2	1.485	1,2
22.34	81 TL	LB5	3	0.981	1,2	22.56	52 TE	LB6	1	2.971	1,2,3
22.35	92 U	LB7	4	0.736	1,2	22.57	51 SB	LB9	1	2.972	1,2
22.35	93 NP	LB2	4	0.736	1,2,3	22.57	77 IR	LY1	3	0.991	1,2,3
22.37	82 PB	LB1	3	0.982	1,2,3	22.58	74 W	LA2	2	1.487	1,2,3
22.37	66 DY	LY1	2	1.473	1,2,3	22.59	92 U	LY6	5	0.595	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						22.60 TO 23.05					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
22.60	76 OS	LY3	3	0.992	1,2,3	22.79	50 SN	LY1	1	3.001	1,2,3
22.60	89 AC	LA2	3	0.992	1	22.80	76 OS	LY6	3	1.001	1,2
22.60	75 RE	LY4	3	0.992	1,2	22.80	81 TL	LB3	3	1.001	1,2,3
22.60	34 SE	KB1	3	0.992	1,2,3	22.82	51 SB	LB7	1	3.005	1
22.61	28 NI	KB5	2	1.489	1,2	22.82	43 TC	KB3	5	0.601	1,2
22.61	28 NI	KB2	2	1.489	1,2,3	22.83	57 LA	LL	1	3.006	1,2,3
22.62	83 BI	LB6	3	0.993	1,2,3	22.85	52 TE	LB3	1	3.009	1,2,3
22.62	34 SE	KB3	3	0.993	1,2	22.86	43 TC	KB1	5	0.602	1,2,3
22.62	51 SB	LB10	1	2.979	1,2	22.86	69 TM	LB3	2	1.525	1,2,3
22.63	49 IN	LY2	1	2.980	1,2,3	22.90	98 CF	LB1	5	0.603	1
22.63	49 IN	LY3	1	2.980	1,2	22.90	88 RA	LA1	3	1.005	1,2,3
22.63	91 PA	LB5	4	0.745	1,2	22.90	54 XE	LA1	1	3.015	1
22.64	70 YB	LB4	2	1.491	1,2,3	22.93	90 TH	LB3	4	0.755	1,2,3
22.66	41 NB	KA1	4	0.746	1,2,3	22.93	92 U	LB2	4	0.755	1,2,3
22.67	93 NP	LY1	5	0.597	1,2,3	22.93	91 PA	LB7	4	0.755	1,2
22.69	68 ER	LB7	2	1.494	1,2	22.94	82 PB	LB4	3	1.007	1,2,3
22.69	80 HG	LB10	3	0.996	1,2	22.96	51 SB	LB2	1	3.023	1,2,3
22.69	68 ER	LB10	2	1.494	1,2	22.97	54 XE	LA2	1	3.025	1
22.70	92 U	LY3	5	0.598	1,2,3	22.97	92 U	LY2	5	0.605	1,2,3
22.72	92 U	LB4	4	0.748	1,2,3	23.00	68 ER	LB2	2	1.514	1,2,3
22.73	55 CS	LN	1	2.993	1,2,3	23.01	80 HG	LB5	3	1.010	1,2
22.73	76 OS	LY2	3	0.998	1,2,3	23.01	69 TM	LB6	2	1.515	1,2,3
22.77	78 PT	LL	2	1.499	1,2,3	23.01	81 TL	LB2	3	1.010	1,2,3
22.78	41 NB	KA2	4	0.750	1,2,3	23.02	21 SC	KA1	1	3.031	1,2,3
22.78	28 NI	KB1	2	1.500	1,2,3	23.05	21 SC	KA2	1	3.035	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						23.06 TO 23.55					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
23.06	66 DY	LY5	2	1.518	1,2	23.36	92 U	LY1	5	0.615	1,2,3
23.12	83 B	LY4	4	0.761	1,2	23.36	76 OS	LY1	3	1.025	1,2,3
23.12	73 TA	LA1	2	1.522	1,2,3	23.37	88 RA	LB9	4	0.769	1,2
23.13	81 TL	LB1	3	1.015	1,2,3	23.37	52 TE	LB1	1	3.077	1,2,3
23.14	52 TE	LB4	1	3.046	1,2,3	23.38	75 RE	LY3	3	1.026	1,2,3
23.14	72 HF	LN	2	1.523	1,2,3	23.40	91 PA	LB4	4	0.770	1,2,3
23.15	88 RA	LA2	3	1.016	1,2,3	23.41	29 CU	KA1	2	1.541	1,2,3
23.18	85 AT	LY1	4	0.763	1	23.41	77 IR	LL	2	1.541	1,2,3
23.20	90 TH	LY4	5	0.611	1,2	23.43	74 W	LY4	3	1.028	1,2
23.21	84 PJ	LY3	4	0.764	1,2,3	23.43	79 AU	LB10	3	1.028	1,2
23.21	84 PJ	LY6	4	0.764	1,2	23.43	38 SR	KB2	4	0.771	1,2,3
23.22	80 H3	LB7	3	1.019	1,2	23.44	91 PA	LY3	5	0.617	1,2,3
23.23	64 GJ	LY3	2	1.529	1,2,3	23.44	50 SN	LY5	1	3.085	1,2
23.24	90 TH	LB1	4	0.765	1,2,3	23.46	29 CU	KA2	2	1.544	1,2,3
23.24	65 TB	LY1	2	1.530	1,2,3	23.46	69 TM	LB4	2	1.544	1,2,3
23.24	90 TH	LB5	4	0.765	1,2	23.46	63 EU	LY4	2	1.544	1,2
23.24	69 TM	LB1	2	1.530	1,2,3	23.47	87 FR	LA1	3	1.030	1,2,3
23.27	79 AU	LB9	3	1.021	1,2	23.47	45 RH	KA2	5	0.618	1,2,3
23.27	82 PB	LB6	3	1.021	1,2,3	23.47	20 CA	KB1	1	3.090	1,2,3
23.28	91 FA	LY6	5	0.613	1,2	23.52	90 TH	LB7	4	0.774	1,2
23.28	45 RH	KA1	5	0.613	1,2,3	23.52	75 RE	LY2	3	1.032	1,2,3
23.29	77 IR	LY5	3	1.022	1,2	23.52	91 PA	LB2	4	0.774	1,2,3
23.29	73 TA	LA2	2	1.533	1,2,3	23.54	67 HO	LB10	2	1.549	1
23.30	64 GJ	LY2	2	1.534	1,2,3	23.55	38 SR	KB5	4	0.775	1
23.35	20 CA	KB5	1	3.074	1,2	23.55	88 RA	LB10	4	0.775	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						23.55 TO 24.05					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
23.55	42 MO	KB4	5	0.620	2	23.84	72 HF	LA1	2	1.569	1,2,3
23.57	80 HG	LB3	3	1.034	1,2,3	23.89	40 ZR	KA1	4	0.786	1,2,3
23.59	42 MO	KB2	5	0.621	1,2,3	23.89	82 PB	LY4	4	0.786	1
23.59	97 BK	LB1	5	0.621	1	23.91	33 AS	KB5	3	1.049	1,2
23.64	75 RE	LY6	3	1.037	1,2	23.91	80 HG	LB1	3	1.049	1,2,3
23.67	50 SN	LB9	1	3.115	1,2	23.92	53 I	LA1	1	3.148	1,2,3
23.67	51 SB	LB6	1	3.115	1,2,3	23.92	84 PO	LY1	4	0.787	1,2,3
23.68	81 TL	LB4	3	1.039	1,2,3	23.94	81 TL	LB6	3	1.050	1,2,3
23.71	79 AU	LB5	3	1.040	1,2	23.94	79 AU	LB7	3	1.050	1,2
23.71	91 PA	LY2	5	0.624	1,2,3	23.95	92 U	LB6	4	0.788	1,2,3
23.71	35 BR	KA1	3	1.040	1,2,3	23.95	51 SB	LB3	1	3.152	1,2,3
23.71	80 HG	LB2	3	1.040	1,2,3	23.97	65 TB	LB5	2	1.577	2
23.71	50 SN	LB10	1	3.121	1,2	23.97	65 TB	LY5	2	1.577	1
23.72	68 ER	LB3	2	1.561	1,2,3	23.97	50 SN	LB7	1	3.155	1,2
23.75	87 FR	LA2	3	1.042	1	23.98	89 AC	LB1	4	0.789	1
23.80	38 SR	KB1	4	0.783	1,2,3	23.98	83 BI	LY3	4	0.789	1,2,3
23.80	38 SR	KB3	4	0.783	1,2	24.00	53 I	LA2	1	3.158	1,2,3
23.80	35 BR	KA2	3	1.044	1,2,3	24.01	42 MC	KB1	5	0.632	1,2,3
23.81	67 MO	LB2	2	1.567	1,2,3	24.01	40 ZR	KA2	4	0.790	1,2,3
23.81	68 ER	LB6	2	1.567	1,2,3	24.01	90 TH	LY6	5	0.632	1,2
23.82	33 AS	KB2	3	1.045	1,2,3	24.01	72 HF	LA2	2	1.580	1,2,3
23.82	42 MO	KB5	5	0.627	1	24.01	83 BI	LY6	4	0.790	1,2
23.82	56 BA	LL	1	3.135	1,2,3	24.03	49 IN	LY1	1	3.162	1,2,3
23.84	48 CD	LY3	1	3.137	1,2	24.03	78 PT	LB9	3	1.054	1,2
23.84	48 CD	LY2	1	3.138	1,2,3	24.05	42 MO	KB3	5	0.633	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						24.08 TO 24.63					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
24.08	98 CF	LA1	4	0.792	1	24.32	66 DY	LB9	2	1.600	1
24.09	91 PA	LY1	5	0.634	1,2,3	24.33	92 U	LL	3	1.067	2,3
24.09	76 DS	LL	2	1.585	1,2,3	24.34	68 ER	LB4	2	1.601	1,2,3
24.10	86 RN	LA1	3	1.057	1	24.35	79 AU	LB3	3	1.068	1,2,3
24.10	76 DS	LY5	3	1.057	1,2	24.35	74 W	LY2	3	1.068	1,2,3
24.10	33 AS	KB1	3	1.057	1,2,3	24.38	86 RN	LA2	3	1.059	1
24.11	90 TH	LB4	4	0.793	1,2,3	24.40	90 TH	LY2	5	0.642	1,2,3
24.12	68 ER	LB1	2	1.587	1,2,3	24.40	79 AU	LB2	3	1.070	1,2,3
24.12	33 AS	KB3	3	1.058	1,2	24.41	62 SM	LY4	2	1.606	1,2
24.13	50 BN	LB2	1	3.175	1,2,3	24.41	88 RA	LB3	4	0.803	1,2,3
24.13	92 J	LY5	5	0.635	1,2	24.43	66 DY	LB10	2	1.607	1
24.14	90 TH	LB2	4	0.794	1,2,3	24.44	44 RU	KA1	5	0.643	1,2,3
24.14	83 BI	LN	3	1.059	1,2,3	24.45	80 HG	LB4	3	1.072	1,2,3
24.17	90 TH	LY3	5	0.636	1,2,3	24.45	98 CF	LA2	4	0.804	1
24.18	63 EU	LY3	2	1.591	1,2,3	24.45	78 PT	LB5	3	1.072	1,2
24.19	75 RE	LY1	3	1.061	1,2,3	24.46	27 CC	KB5	2	1.609	1,2
24.20	64 SD	LY1	2	1.592	1,2,3	24.48	92 U	LN	4	0.805	1,2,3
24.20	83 BI	LY2	4	0.796	1,2,3	24.49	74 W	LY6	3	1.074	1,2
24.21	74 W	LY3	3	1.062	1,2,3	24.51	88 RA	LB5	4	0.806	1,2
24.21	78 PT	LB10	3	1.062	1,2	24.52	51 SB	LB1	1	3.226	1,2,3
24.24	51 SB	LB4	1	3.190	1,2,3	24.57	91 PA	LB6	4	0.808	1,2,3
24.28	63 EU	LY2	2	1.597	1,2,3	24.59	44 RU	KA2	5	0.647	1,2,3
24.28	73 TA	LY4	3	1.065	1,2	24.62	71 LU	LA1	2	1.619	1,2,3
24.28	96 CM	LB1	5	0.639	1	24.62	67 HO	LB3	2	1.619	1,2,3
24.31	66 DY	LB7	2	1.599	1,2	24.63	80 HG	LB6	3	1.080	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						24.63 TO 25.14					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
24.63	97 BK	LA1	4	0.810	1	24.86	41 NB	KB2	5	0.654	1,2,3
24.65	27 CO	KB1	2	1.621	1,2,3	24.88	70 YB	LN	2	1.636	1,2,3
24.66	67 HO	LB6	2	1.622	1,2,3	24.89	91 PA	LL	3	1.091	1,2,3
24.67	88 RA	LY4	5	0.649	1,2	24.89	49 IN	LB10	1	3.274	1,2
24.68	66 DY	LB2	2	1.623	1,2,3	24.90	91 PA	LY5	5	0.655	1,2
24.68	78 PT	LB7	3	1.082	1,2	24.91	82 PB	LN	3	1.092	1,2,3
24.69	81 TL	LY4	4	0.812	1,2	24.94	53 I	LN	1	3.280	1,2,3
24.70	49 IN	LY5	1	3.249	1,2	24.96	64 GD	LY5	2	1.641	1
24.72	79 AU	LB1	3	1.084	1,2,3	24.96	75 RE	LY5	3	1.094	1,2
24.72	83 BI	LY1	4	0.813	1,2,3	24.97	82 PB	LY2	4	0.821	1,2,3
24.75	85 AT	LA1	3	1.085	1	25.00	97 BK	LA2	4	0.822	1
24.75	89 AC	LB2	4	0.814	1	25.00	37 RB	KB5	4	0.822	1
24.75	88 RA	LB1	4	0.814	1,2,3	25.01	52 TE	LA1	1	3.289	1,2,3
24.79	71 LU	LA2	2	1.630	1,2,3	25.02	95 AM	LB1	5	0.658	1,3
24.79	82 PB	LY3	4	0.815	1,2,3	25.02	77 IR	LB10	3	1.097	1,2
24.79	75 RE	LL	2	1.630	1,2,3	25.02	85 AT	LA2	3	1.097	1
24.82	37 RB	KB2	4	0.816	1,2,3	25.05	67 HO	LB1	2	1.647	1,2,3
24.82	88 RA	LB7	4	0.816	1,2	25.07	74 W	LY1	3	1.099	1,2,3
24.82	90 TH	LY1	5	0.653	1,2,3	25.07	73 TA	LY3	3	1.099	1,2,3
24.82	98 CF	LB2	5	0.653	1	25.08	52 TE	LA2	1	3.298	1,2,3
24.84	55 CS	LL	1	3.267	1,2,3	25.09	41 NB	KB5	5	0.660	1
24.85	49 IN	LB9	1	3.268	1,2	25.14	78 PT	LB2	3	1.102	1,2,3
24.85	82 PB	LY6	4	0.817	1,2	25.14	50 SN	LB3	1	3.306	1,2,3
24.85	50 SN	LB6	1	3.269	1,2,3	25.14	47 AG	LY3	1	3.306	1,2
24.86	77 IR	LB9	3	1.090	1,2	25.14	47 AG	LY2	1	3.306	1,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						25.16 TO 25.59					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
25.16	72 HF	LY4	3	1.103	1,2	25.37	48 CD	LY1	1	3.336	1,2,3
25.17	62 SM	LY3	2	1.655	1,2,3	25.39	49 IN	LB2	1	3.338	1,2,3
25.19	78 PT	LB3	3	1.104	1,2,3	25.40	88 RA	LB2	4	0.835	1,2,3
25.19	90 TH	LB6	4	0.828	1,2,3	25.42	84 PO	LA1	3	1.114	1,2,3
25.21	34 SE	KA1	3	1.105	1,2,3	25.42	73 TA	LY6	3	1.114	1,2
25.21	73 TA	LY2	3	1.105	1,2,3	25.43	50 SN	LB4	1	3.343	1,2,3
25.22	28 MI	KA1	2	1.658	1,2,3	25.43	70 YB	LA1	2	1.672	1,2,3
25.22	63 EU	LY1	2	1.658	1,2,3	25.44	77 IR	LB7	3	1.115	1,2
25.22	37 RB	KB1	4	0.829	1,2,3	25.44	90 TH	LL	3	1.115	1,2,3
25.22	96 CM	LA1	4	0.829	1	25.44	97 BK	LB2	5	0.669	1
25.22	37 RB	KB3	4	0.829	1,2	25.49	32 GE	KB2	3	1.117	1,2,3
25.22	39 Y	KA1	4	0.829	1,2,3	25.53	83 BI	LY5	4	0.839	1,2
25.22	91 PA	LN	4	0.829	1,2,3	25.53	80 HG	LY4	4	0.839	1,2
25.23	62 SM	LY2	2	1.659	1,2,3	25.53	74 W	LL	2	1.678	1,2,3
25.23	77 IR	LB5	3	1.106	1,2	25.54	32 GE	KB5	3	1.119	1,2
25.23	67 HO	LB4	2	1.659	1,2,3	25.54	20 CA	KA1	1	3.358	1,2,3
25.23	65 TB	LB7	2	1.659	1,2	25.56	82 PB	LY1	4	0.840	1,2,3
25.26	79 AU	LB4	3	1.107	1,2,3	25.56	87 FR	LB1	4	0.840	1,2,3
25.28	28 NI	KA2	2	1.662	1,2,3	25.56	78 PT	LB1	3	1.120	1,2,3
25.30	34 SE	KA2	3	1.109	1,2,3	25.57	20 CA	KA2	1	3.362	1,2,3
25.33	41 NB	KB3	5	0.666	1,2	25.57	66 DY	LB6	2	1.631	1,2,3
25.33	41 NB	KB1	5	0.666	1,2,3	25.57	66 DY	LB3	2	1.631	1,2,3
25.34	39 Y	KA2	4	0.832	1,2,3	25.59	96 CM	LA2	4	0.841	1
25.35	79 AU	LB6	3	1.111	1,2,3	25.59	81 TL	LY3	4	0.841	1,2,3
25.36	65 TB	LB10	2	1.667	1,2	25.59	65 TB	LB2	2	1.682	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							25.59 TO 26.23						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
25.59	88 RA	LB4	4	0.841	1,2,3		25.98	72 HF	LY3	3	1.138	1,2,3	
25.60	43 TC	KA1	5	0.673	2,3		25.99	90 TH	LN	4	0.854	1,2,3	
25.60	88 RA	LY6	5	0.673	1,2		25.99	63 EU	LY5	2	1.708	1,2	
25.60	70 YB	LA2	2	1.683	1,2,3		26.02	76 OS	LB5	3	1.140	1,2	
25.64	89 AC	LY1	5	0.674	1		26.02	66 DY	LB1	2	1.710	1,2,3	
25.67	88 RA	LY3	5	0.675	1,2,3		26.05	77 IR	LB3	3	1.141	1,2,3	
25.67	90 TH	LY5	5	0.675	1,2		26.06	96 CM	LB2	5	0.685	1	
25.68	81 TL	LY6	4	0.844	1,2		26.06	48 CD	LY5	1	3.425	1,2	
25.70	84 PO	LA2	3	1.126	1,2,3		26.07	78 PT	LB4	3	1.142	1,2,3	
25.70	76 OS	LB9	3	1.126	1,2		26.09	71 LU	LY4	3	1.143	1	
25.71	43 TC	KA2	5	0.676	2,3		26.10	48 CD	LB9	1	3.430	1,2	
25.74	81 TL	LN	3	1.128	1,2,3		26.12	78 PT	LB6	3	1.144	1,2,3	
25.75	50 SN	LB1	1	3.385	1,2,3		26.12	72 HF	LY2	3	1.144	1,2,3	
25.77	32 GE	KB3	3	1.129	1,2		26.12	87 FR	LB2	4	0.858	1,2,3	
25.77	32 GE	KB1	3	1.129	1,2,3		26.12	83 BI	LA1	3	1.144	1,2,3	
25.79	94 PU	LB1	5	0.678	1		26.14	92 U	LB10	5	0.687	1,2	
25.81	95 AM	LA1	4	0.848	1,3		26.15	49 IN	LB6	1	3.436	1,2,3	
25.81	69 TM	LN	2	1.696	1,2,3		26.15	48 CD	LB10	1	3.437	1,2	
25.81	81 TL	LY2	4	0.848	1,2,3		26.16	52 TE	LN	1	3.438	1,2,3	
25.84	74 W	LY5	3	1.132	1,2		26.17	51 SB	LA1	1	3.439	1,2,3	
25.86	76 OS	LB10	3	1.133	1,2		26.18	95 AM	LA2	4	0.860	1,3	
25.91	77 IR	LB2	3	1.135	1,2,3		26.18	66 DY	LB4	2	1.720	1,2,3	
25.91	92 U	LB9	5	0.681	1,2		26.19	19 K	KB5	1	3.441	1,2	
25.95	88 RA	LY2	5	0.682	1,2,3		26.22	64 GD	LB7	2	1.723	1,2	
25.98	73 TA	LY1	3	1.138	1,2,3		26.23	76 OS	LB7	3	1.149	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						26.24 TO 26.77					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
26.24	64 GD	LB9	2	1.724	1	26.55	63 ND	LY4	2	1.744	1,2
26.24	51 SB	LA2	1	3.448	1,2,3	26.55	26 FE	KB5	2	1.744	1,2
26.26	40 ZR	KB2	5	0.690	1,2,3	26.56	46 PD	LY2	1	3.489	1,2,3
26.27	69 TM	LA1	2	1.726	1,2,3	26.56	46 PD	LY3	1	3.489	1,2
26.29	19 K	KB1	1	3.454	1,2,3	26.56	93 NP	LB1	5	0.696	1,2,3
26.29	62 SM	LY1	2	1.727	1,2,3	26.56	64 GD	LB2	2	1.745	1,2,3
26.30	73 TA	LL	2	1.728	1,2,3	26.58	80 HG	LN	3	1.164	1,2,3
26.35	64 GD	LB10	2	1.731	1,2	26.58	80 HG	LY6	4	0.873	1,2
26.36	86 RN	LB1	4	0.866	1	26.58	65 TB	LB3	2	1.746	1,2,3
26.36	36 KR	KB4	4	0.866	2	26.60	75 RE	LB9	3	1.165	1,2
26.36	36 KR	KB2	4	0.866	1,2,3	26.64	80 HG	LY2	4	0.875	1,2,3
26.36	82 PB	LY5	4	0.866	1,2	26.64	38 SR	KA1	4	0.875	1,2,3
26.37	83 BI	LA2	3	1.155	1,2,3	26.65	88 RA	LL	3	1.167	1,2,3
26.37	72 HF	LY6	3	1.155	1,2	26.68	95 AM	LB2	5	0.701	1,3
26.41	49 IN	LB3	1	3.470	1,2,3	26.68	91 PA	LB9	5	0.701	1,2
26.43	81 TL	LY1	4	0.868	1,2,3	26.70	49 IN	LB4	1	3.507	1,2,3
26.43	94 PU	LA1	4	0.868	1	26.72	40 ZR	KB1	5	0.702	1,2,3
26.44	69 TM	LA2	2	1.737	1,2,3	26.72	76 OS	LB2	3	1.170	1,2,3
26.44	77 IR	LB1	3	1.158	1,2,3	26.72	40 ZR	KB3	5	0.702	1,2
26.45	88 RA	LY1	5	0.695	1,2,3	26.74	36 KR	KB1	4	0.873	1,2,3
26.46	80 HG	LY3	4	0.869	1,2,3	26.74	68 ER	LN	2	1.755	1,2,3
26.49	40 ZR	KB5	5	0.696	1	26.75	48 CD	LB2	1	3.514	1,2,3
26.50	65 TB	LB6	2	1.741	1,2,3	26.75	26 FE	KB1	2	1.757	1,2,3
26.52	88 RA	LB6	4	0.871	1,2,3	26.77	75 RE	LB10	3	1.172	1,2
26.52	36 KR	KB5	4	0.871	1,2	26.77	36 KR	KB3	4	0.879	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS										26.77 TO 27.37				
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF			
26.77	38 SR	KA2	4	0.879	1,2,3	27.09	82 PB	LA2	3	1.186	1,2,3			
26.79	73 TA	LY5	3	1.173	1,2	27.09	62 SM	LB5	2	1.779	2			
26.80	94 PU	LA2	4	0.880	1	27.12	72 HF	LL	2	1.781	1,2,3			
26.82	47 AG	LY1	1	3.523	1,2,3	27.15	42 MO	KA2	5	0.713	1,2,3			
26.83	86 RN	LB2	4	0.881	1	27.17	68 ER	LA1	2	1.784	1,2,3			
26.84	82 PB	LA1	3	1.175	1,2,3	27.19	65 TB	LB4	2	1.785	1,2,3			
26.86	33 AS	KA1	3	1.176	1,2,3	27.23	85 AT	LB1	4	0.894	1			
26.88	75 RE	LB5	3	1.177	1,2	27.23	63 EU	LB7	2	1.788	1,2			
26.91	77 IR	LB6	3	1.178	1,2,3	27.25	27 CO	KA1	2	1.789	1,2,3			
26.93	71 LU	LY3	3	1.179	1,2,3	27.26	87 FR	LY1	5	0.716	1,2,3			
26.93	72 HF	LY1	3	1.179	1,2,3	27.26	81 TL	LY5	4	0.895	1,2			
26.95	91 PA	LB10	5	0.708	1,2	27.29	63 EU	LB9	2	1.792	1,2			
26.95	77 IR	LB4	3	1.180	1,2,3	27.30	88 RA	LY5	5	0.717	1,2			
26.95	33 AS	KA2	3	1.180	1,2,3	27.31	27 CO	KA2	2	1.793	1,2,3			
26.95	76 OS	LB3	3	1.180	1,2,3	27.33	31 GA	KB2	3	1.196	1,2,3			
26.99	42 MO	KA1	5	0.709	1,2,3	27.33	78 PT	LY4	4	0.897	1,2			
27.03	92 U	LB3	5	0.710	1,2,3	27.33	80 HG	LY1	4	0.897	1,2,3			
27.05	65 TB	LB1	2	1.776	1,2,3	27.34	94 PU	LB2	5	0.718	1			
27.07	71 LU	LY2	3	1.185	1,2,3	27.35	76 OS	LB1	3	1.197	1,2,3			
27.07	49 IN	LB1	1	3.555	1,2,3	27.35	31 GA	KB5	3	1.197	1,2			
27.07	70 YB	LY4	3	1.185	1,2	27.36	79 AU	LY3	4	0.898	1,2,3			
27.08	93 NP	LA1	4	0.889	1,2,3	27.36	83 BI	LB9	4	0.898	1,2			
27.08	53 I	LL	1	3.557	1,2,3	27.36	60 ND	LY3	2	1.796	1,2,3			
27.09	62 SM	LY5	2	1.779	1	27.36	68 ER	LA2	2	1.796	1,2,3			
27.09	75 RE	LB7	3	1.186	1,2	27.37	71 LU	LY6	3	1.198	1,2			

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						27.39 TO 27.98					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
27.39	84 PO	LB5	4	0.899	1,2	27.64	88 RA	LN	4	0.907	1,2,3
27.42	63 EU	LB10	2	1.800	1,2	27.65	64 GD	LB3	2	1.815	1,2,3
27.42	92 U	LB1	5	0.720	1,2,3	27.65	92 U	LB5	5	0.726	1,2
27.42	50 SN	LA1	1	3.500	1,2,3	27.67	61 PM	LY1	2	1.816	1
27.43	60 ND	LY2	2	1.801	1,2,3	27.69	39 Y	KB4	5	0.727	2
27.45	93 NP	LA2	4	0.901	1	27.70	84 PO	LB3	4	0.909	1,2,3
27.46	47 AG	LB9	1	3.605	1,2	27.70	74 W	LB10	3	1.212	1,2
27.48	51 SB	LN	1	3.608	1,2,3	27.71	59 PR	LY4	2	1.819	1,2
27.49	50 SN	LA2	1	3.609	1,2,3	27.72	76 OS	LB6	3	1.213	1,2,3
27.49	79 AU	LN	3	1.203	1,2,3	27.76	92 U	LA1	4	0.911	1,2,3
27.50	47 AG	LB10	1	3.611	1,2	27.77	72 HF	LY5	3	1.215	1,2
27.51	74 W	LB9	3	1.204	1,2	27.77	39 Y	KB2	5	0.729	1,2,3
27.51	79 AU	LY6	4	0.903	1,2	27.77	48 CD	LB3	1	3.645	1,2,3
27.53	64 GD	LB6	2	1.807	1,2,3	27.77	74 W	LB5	3	1.215	1,2
27.53	48 CD	LB6	1	3.614	1,2,3	27.81	90 TH	LB10	5	0.730	1,2
27.53	90 TH	LB9	5	0.723	1,2	27.82	67 HO	LN	2	1.826	1,2,3
27.54	47 AG	LY5	1	3.616	1,2	27.84	76 OS	LB4	3	1.218	1,2,3
27.54	79 AU	LY2	4	0.904	1,2,3	27.86	81 TL	LA2	3	1.219	1,2,3
27.57	83 BI	LB10	4	0.905	1,2	27.88	91 PA	LB3	5	0.732	1,2,3
27.57	85 AT	LB2	4	0.905	1	27.88	75 RE	LB3	3	1.220	1,2,3
27.58	81 TL	LA1	3	1.207	1,2,3	27.93	71 LU	LY1	3	1.222	1,2,3
27.58	75 RE	LB2	3	1.207	1,2,3	27.93	70 YB	LY3	3	1.222	1,2,3
27.60	31 GA	KB3	3	1.208	1,2	27.96	39 Y	KB5	5	0.734	1
27.60	31 GA	KB1	3	1.208	1,2,3	27.98	71 LU	LL	2	1.836	1,2,3
27.60	63 EU	LB2	2	1.812	1,2,3	27.98	74 W	LB7	3	1.224	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						28.04 TO 28.49					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
28.04	93 NP	LB2	5	0.736	1,2,3	28.27	91 PA	LB1	5	0.742	1,2,3
28.04	92 U	LB7	5	0.736	1,2	28.29	62 SM	LB7	2	1.856	1,2
28.06	48 CD	LB4	1	3.682	1,2,3	28.29	67 HO	LA2	2	1.856	1,2,3
28.07	35 BR	KB2	4	0.921	1,2,3	28.29	78 PT	LY3	4	0.928	1,2,3
28.08	45 RH	LY2	1	3.685	1,2,3	28.32	84 PO	LB2	4	0.929	1,2,3
28.08	45 RH	LY3	1	3.685	1,2	28.33	52 TE	LL	1	3.717	1,2,3
28.09	69 TM	LY4	3	1.229	1	28.33	75 RE	LB1	3	1.239	1,2,3
28.09	70 YB	LY2	3	1.229	1,2,3	28.35	37 RB	KA2	4	0.930	1,2,3
28.10	84 PO	LB1	4	0.922	1,2,3	28.37	62 SM	LB9	2	1.861	1,2
28.10	92 U	LA2	4	0.922	1,2,3	28.38	80 HG	LA1	3	1.241	1,2,3
28.12	67 HO	LA1	2	1.845	1,2,3	28.38	46 PC	LY1	1	3.724	1,2,3
28.13	64 GD	LB1	2	1.846	1,2,3	28.39	91 PA	LB5	5	0.745	1,2
28.16	86 RN	LY1	5	0.739	1	28.42	78 PT	LN	3	1.243	1,2,3
28.16	80 HG	LY5	4	0.924	1,2	28.42	70 YB	LY6	3	1.243	1,2
28.20	35 BR	KB5	4	0.925	1,2	28.43	41 NB	KA1	5	0.746	1,2,3
28.22	47 AG	LB2	1	3.703	1,2,3	28.44	35 BR	KB3	4	0.933	1,2
28.23	83 BI	LB5	4	0.926	1,2	28.44	91 PA	LA1	4	0.933	1,2,3
28.23	37 RB	KA1	4	0.926	1,2,3	28.44	35 BR	KB1	4	0.933	1,2,3
28.23	39 Y	KB1	5	0.741	1,2,3	28.47	74 W	LB2	3	1.245	1,2,3
28.23	39 Y	KB3	5	0.741	1,2	28.48	78 PT	LY6	4	0.934	1,2
28.24	64 GD	LB4	2	1.853	1,2,3	28.48	82 PB	LB10	4	0.934	1,2
28.26	79 AU	LY1	4	0.927	1,2,3	28.48	78 PT	LY2	4	0.934	1,2,3
28.26	82 PB	LB9	4	0.927	1,2	28.49	73 TA	LB9	3	1.246	1,2
28.26	77 IR	LY4	4	0.927	1,2	28.49	48 CD	LB1	1	3.738	1,2,3
28.27	60 ND	LY6	2	1.855	2	28.49	62 SM	LB10	2	1.869	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						28.51 TO 29.15					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
28.51	92 U	LB4	5	3.748	1,2,3	28.83	49 IN	LA2	1	3.781	1,2,3
28.51	83 BI	LB7	4	3.935	1,2	28.88	70 YB	LL	2	1.894	1,2,3
28.51	19 K	KA1	1	3.741	1,2,3	28.88	84 PO	LB4	4	0.947	1,2,3
28.55	19 K	KA2	1	3.745	1,2,3	28.89	50 SN	LN	1	3.789	1,2,3
28.57	63 EU	LB6	2	1.874	1,2,3	28.89	74 W	LB3	3	1.263	1,2,3
28.57	59 PR	LY3	2	1.874	1,2,3	28.91	46 PD	LB9	1	3.792	1,2
28.58	41 NB	KA2	5	3.750	1,2,3	28.91	73 TA	LB7	3	1.264	1,2
28.61	75 RE	LB6	3	1.251	1,2,3	28.93	66 DY	LN	2	1.897	1,2,3
28.63	60 ND	LY1	2	1.878	1,2,3	28.93	25 MN	KB5	2	1.897	1,2
28.63	83 BI	LB3	4	3.939	1,2,3	28.96	58 CE	LY4	2	1.899	1,2
28.65	59 PR	LY2	2	1.879	1,2,3	28.97	46 PD	LB10	1	3.799	1,2
28.65	80 HG	LA2	3	1.253	1,2,3	29.01	70 YB	LY1	3	1.268	1,2,3
28.68	73 TA	LB10	3	1.254	1,2	29.01	69 TM	LY3	3	1.268	1,2,3
28.68	32 GE	KA1	3	1.254	1,2,3	29.01	83 BI	LY4	5	0.761	1,2
28.69	62 SM	LB2	2	1.882	1,2,3	29.04	83 BI	LB1	4	0.952	1,2,3
28.70	73 TA	LB5	3	1.255	1,2	29.04	47 AG	LB6	1	3.808	1,2,3
28.76	49 IN	LA1	1	3.772	1,3	29.07	82 PB	LB5	4	0.953	1,2
28.77	32 GE	KA2	3	1.258	1,2,3	29.09	85 AT	LY1	5	0.763	1
28.77	63 EU	LB3	2	1.887	1,2,3	29.11	66 DY	LA1	2	1.909	1,2,3
28.78	91 PA	LB7	5	3.755	1,2	29.13	25 MN	KB1	2	1.910	1,2,3
28.78	92 U	LB2	5	3.755	1,2,3	29.13	84 PO	LY3	5	0.764	1,2,3
28.78	90 TH	LB3	5	3.755	1,2,3	29.13	84 PO	LY6	5	0.764	1,2
28.79	75 RE	LB4	3	1.259	1,2,3	29.13	83 BI	LB2	4	0.955	1,2,3
28.82	91 PA	LA2	4	0.945	1,2,3	29.15	69 TM	LY2	3	1.274	1,2,3
28.82	71 LU	LY5	3	1.260	1,2	29.15	46 PD	LY5	1	3.822	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						29.16 TO 29.80					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
29.16	9U TH	LA1	4	0.956	1,2,3	29.47	79 AU	LA2	3	1.288	1,2,3
29.16	79 AU	LY5	4	0.956	1,2	29.50	77 IR	LY6	4	0.967	1,2
29.17	9U TH	LB1	5	0.765	1,2,3	29.50	84 PC	LB6	4	0.967	1,2,3
29.17	9U TH	LB5	5	0.765	1,2	29.52	74 W	LB6	3	1.290	1,2,3
29.19	81 TL	LB9	4	0.957	1,2	29.52	47 AG	LB4	1	3.870	1,2,3
29.19	68 ER	LY4	3	1.276	1,2	29.52	91 PA	LB2	5	0.774	1,2,3
29.19	79 AU	LA1	3	1.276	1,3	29.52	69 TM	LY6	3	1.290	1
29.22	78 PT	LY1	4	0.958	1,2,3	29.52	60 ND	LY5	2	1.935	1,2
29.23	47 AG	LB3	1	3.833	1,2,3	29.52	72 HF	LB9	3	1.290	1,2
29.25	77 IR	LY3	4	0.959	1,2,3	29.52	90 TH	LB7	5	0.774	1,2
29.25	76 OS	LY4	4	0.959	1,2	29.54	26 FE	KA1	2	1.936	1,2,3
29.29	63 EU	LB1	2	1.920	1,2,3	29.54	9U TH	LA2	4	0.968	1,2,3
29.29	66 DY	LA2	2	1.920	1,2,3	29.56	88 RA	LB10	5	0.775	1,2
29.32	88 RA	LB9	5	0.769	1,2	29.56	38 SR	KB5	5	0.775	1
29.33	74 W	LB1	3	1.282	1,2,3	29.57	82 PB	LB3	4	0.969	1,2,3
29.35	82 PB	LB7	4	0.962	1,2	29.60	26 FE	KA2	2	1.940	1,2,3
29.36	91 PA	LB4	5	0.770	1,2,3	29.63	18 A	KB1	1	3.884	1
29.38	73 TA	LB2	3	1.284	1,2,3	29.64	30 ZN	KB1	3	1.295	1,2,3
29.38	30 ZN	KB2	3	1.284	1,2,3	29.66	51 SB	LL	1	3.888	1,2,3
29.38	77 IR	LN	3	1.284	1,2,3	29.69	62 SM	LB6	2	1.946	1,2,3
29.38	63 EU	LB4	2	1.926	1,2,3	29.71	72 HF	LB10	3	1.298	1,2
29.40	38 SR	KB2	5	0.771	1,2,3	29.71	72 HF	LB5	3	1.298	1,2
29.40	30 ZN	KB5	3	1.285	1,2	29.73	44 RU	LY3	1	3.897	1,2
29.41	81 TL	LB10	4	0.964	1,2	29.73	44 RU	LY2	1	3.897	1,2,3
29.44	77 IR	LY2	4	0.965	1,2,3	29.80	74 W	LB4	3	1.302	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						29.82 TO 30.27					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
29.82	83 BI	LB4	4	0.977	1,2,3	30.03	34 SE	KB5	4	0.984	1,2
29.82	46 PD	LB2	1	3.909	1,2,3	30.03	36 KR	KA2	4	0.984	1,2,3
29.83	92 U	MA1	1	3.910	1,2	30.06	78 PT	LA1	3	1.313	1,2,3
29.83	69 TM	LL	2	1.955	1,2,3	30.07	92 U	LB6	5	0.788	1,2,3
29.83	58 CE	LY3	2	1.955	1,2,3	30.09	45 RH	LY1	1	3.943	1,2,3
29.86	61 PM	LB2	2	1.957	1	30.10	80 HG	LB9	4	0.986	1,2
29.87	38 SR	KB1	5	0.783	1,2,3	30.11	68 ER	LY3	3	1.315	1,2,3
29.87	38 SR	KB3	5	0.783	1,2	30.11	83 BI	LY3	5	0.789	1,2,3
29.89	72 HF	LB7	3	1.306	1,2	30.11	89 AC	LB1	5	0.789	1
29.89	70 YB	LY5	3	1.306	1,2	30.11	69 TM	LY1	3	1.315	1,2,3
29.91	36 KR	KA1	4	0.980	1,2,3	30.11	65 TB	LN	2	1.973	1
29.91	34 SE	KB2	4	0.980	1,2,3	30.13	83 BI	LL	3	1.316	1,2,3
29.91	89 AC	LA1	4	0.980	1	30.14	83 BI	LY6	5	0.790	1,2
29.91	58 CE	LY2	2	1.960	1,2,3	30.14	40 ZR	KA2	5	0.790	1,2,3
29.92	73 TA	LB3	3	1.307	1,2,3	30.14	65 TB	LA1	2	1.975	1,2,3
29.93	59 PR	LY1	2	1.961	1,2,3	30.16	78 PT	LY5	4	0.988	1,2
29.94	81 TL	LB5	4	0.981	1,2	30.19	48 CD	LA1	1	3.956	1,2,3
29.94	62 SM	LB3	2	1.962	1,2,3	30.22	98 CF	LA1	5	0.792	1
29.94	92 U	MA2	1	3.924	1,2	30.22	81 TL	LB7	4	0.990	1,2
29.97	82 PB	LB1	4	0.982	1,2,3	30.25	68 ER	LY2	3	1.321	1,2,3
29.99	40 ZR	KA1	5	0.786	1,2,3	30.25	77 IR	LY1	4	0.991	1,2,3
29.99	82 PB	LY4	5	0.786	1	30.26	90 TH	LB4	5	0.793	1,2,3
30.00	82 PB	LB2	4	0.983	1,2,3	30.26	48 CD	LA2	1	3.965	1,2,3
30.02	47 AG	LB1	1	3.934	1,2,3	30.27	57 LA	LY4	2	1.983	1,2
30.03	84 PO	LY1	5	0.787	1,2,3	30.27	67 HO	LY4	3	1.322	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							30.28 TO 30.95						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
30.28	75 RE	LY4	4	0.992	1,2		30.69	98 CF	LA2	5	0.804	1	
30.28	89 AC	LA2	4	0.992	1		30.69	31 GA	KA1	3	1.340	1,2,3	
30.28	76 OS	LY3	4	0.992	1,2,3		30.69	88 RA	LA1	4	1.005	1,2,3	
30.28	34 SE	KB1	4	0.992	1,2,3		30.71	91 PA	MA1	1	4.022	1,2	
30.30	90 TH	LB2	5	0.794	1,2,3		30.73	92 U	LN	5	0.805	1,2,3	
30.32	83 BI	LB6	4	0.993	1,2,3		30.74	71 LU	LB5	3	1.342	1,2	
30.32	34 SE	KB3	4	0.993	1,2		30.75	82 PB	LB4	4	1.007	1,2,3	
30.32	78 PT	LA2	3	1.324	1,2,3		30.76	71 LU	LB10	3	1.343	1,2	
30.32	65 TB	LA2	2	1.986	1,2,3		30.77	88 RA	LB5	5	0.806	1,2	
30.36	72 HF	LB2	3	1.326	1,2,3		30.79	31 GA	KA2	3	1.344	1,2,3	
30.38	83 BI	LY2	5	0.796	1,2,3		30.79	60 ND	LB9	2	2.016	1,2	
30.39	73 TA	LB1	3	1.327	1,2,3		30.80	46 PD	LB3	1	4.034	1,2,3	
30.40	49 IN	LN	1	3.983	1,2,3		30.81	91 PA	MA2	1	4.035	1,2	
30.41	80 HG	LB10	4	0.996	1,2		30.83	73 TA	LB4	3	1.346	1,2,3	
30.41	76 OS	LN	3	1.328	1,2,3		30.83	68 ER	LL	2	2.019	1,2,3	
30.47	76 OS	LY2	4	0.998	1,2,3		30.85	91 PA	LB6	5	0.808	1,2,3	
30.48	73 TA	LB6	3	1.331	1,2,3		30.85	81 TL	LB2	4	1.010	1,2,3	
30.50	62 SM	LB1	2	1.998	1,2,3		30.85	59 PR	LY5	2	2.020	1,2	
30.54	62 SM	LB4	2	2.000	1,2,3		30.85	80 HG	LB5	4	1.010	1,2	
30.57	81 TL	LB3	4	1.001	1,2,3		30.89	45 RH	LY5	1	4.045	1,2	
30.57	76 OS	LY6	4	1.001	1,2		30.90	60 ND	LB10	2	2.023	1,2	
30.60	71 LU	LB9	3	1.336	1,2		30.90	71 LU	LB7	3	1.349	1,2	
30.65	88 RA	LB3	5	0.803	1,2,3		30.93	97 BK	LA1	5	0.810	1	
30.66	46 PD	LB6	1	4.016	1,2,3		30.93	82 PB	LL	3	1.350	1,2,3	
30.68	60 ND	LB7	2	2.009	1,2		30.95	77 IR	LA1	3	1.351	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						31.00 TO 31.67					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
31.00	72 HF	LB3	3	1.353	1,2,3	31.29	58 CE	LY1	2	2.048	1,2,3
31.00	81 TL	LY4	5	0.812	1,2	31.30	64 GD	LN	2	2.049	1,2,3
31.00	81 TL	LB1	4	1.015	1,2,3	31.32	76 OS	LY1	4	1.025	1,2,3
31.04	88 RA	LA2	4	1.016	1,2,3	31.35	75 RE	LY3	4	1.026	1,2,3
31.04	83 BI	LY1	5	0.813	1,2,3	31.36	82 PB	LY2	5	0.821	1,2,3
31.04	69 T4	LY5	3	1.355	1,2	31.40	37 RB	KB5	5	0.822	1
31.08	89 AC	LB2	5	0.814	1	31.40	97 BK	LA2	5	0.822	1
31.08	88 RA	LB1	5	0.814	1,2,3	31.40	67 HG	LY2	3	1.370	1,2,3
31.09	50 S4	LL	1	4.071	1,2,3	31.40	71 LU	LB2	3	1.370	1,2,3
31.09	46 PD	LB4	1	4.071	1,2,3	31.41	74 W	LY4	4	1.028	1,2
31.10	60 ND	LB2	2	2.036	1,2,3	31.41	79 AU	LB10	4	1.028	1,2
31.12	82 PB	LY3	5	0.815	1,2,3	31.43	64 GD	LA2	2	2.057	1,2,3
31.13	80 HG	LB7	4	1.019	1,2	31.47	75 RE	LN	3	1.373	1,2,3
31.16	88 RA	LB7	5	0.816	1,2	31.47	87 FR	LA1	4	1.030	1,2,3
31.16	37 RB	KB2	5	0.816	1,2,3	31.49	72 HF	LB1	3	1.374	1,2,3
31.18	57 LA	LY3	2	2.041	1,2,3	31.49	72 HF	LB6	3	1.374	1,2,3
31.19	82 PB	LB6	4	1.021	1,2,3	31.49	66 DY	LY4	3	1.374	1,2
31.19	79 AU	LB9	4	1.021	1,2	31.54	75 RE	LY2	4	1.032	1,2,3
31.20	82 PB	LY6	5	0.817	1,2	31.56	45 RH	LB2	1	4.131	1,2,3
31.21	77 IR	LA2	3	1.362	1,2,3	31.60	80 HG	LB3	4	1.034	1,2,3
31.22	77 IR	LY5	4	1.022	1,2	31.62	90 TH	MA1	1	4.138	1,2
31.26	67 HD	LY3	3	1.364	1,2,3	31.63	90 TH	LB6	5	0.828	1,2,3
31.26	68 ER	LY1	3	1.364	1,2,3	31.65	24 CR	KB5	2	2.071	1,2
31.26	57 LA	LY2	2	2.046	1,2,3	31.65	29 CU	KB2	3	1.381	2,3
31.26	64 GD	LA1	2	2.046	1,2,3	31.67	91 PA	LN	5	0.829	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						31.67 TO 32.14					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
31.67	39 Y	KA1	5	0.829	1,2,3	31.89	70 YB	LB10	3	1.391	1,2
31.67	96 CM	LA1	5	0.829	1	31.91	88 RA	LB2	5	0.835	1,2,3
31.67	37 RB	KB1	5	0.829	1,2,3	31.91	29 CU	KB1	3	1.392	1,2,3
31.67	37 RB	KB3	5	0.829	1,2	31.91	35 BR	KA2	4	1.044	1,2,3
31.68	29 CU	KB5	3	1.382	2	31.91	72 HF	LB4	3	1.392	1,2,3
31.68	46 PD	LB1	1	4.146	1,2,3	31.94	29 CU	KB3	3	1.393	1,2
31.69	75 RE	LY6	4	1.037	1,2	31.95	33 AS	KB2	4	1.045	1,2,3
31.71	56 BA	LY4	2	2.075	1,2	31.96	59 PR	LB7	2	2.091	1,2
31.72	90 TH	MA2	1	4.151	1,2	31.96	44 RU	LY1	1	4.182	1,2,3
31.73	70 YB	LB9	3	1.384	1,2	31.98	70 YB	LB7	3	1.395	1,2
31.74	47 AG	LA1	1	4.154	1,2,3	32.04	18 A	KA1	1	4.192	1,2,3
31.75	81 TL	LL	3	1.385	1,2,3	32.05	48 CD	LN	1	4.193	1,3
31.76	81 TL	LB4	4	1.039	1,2,3	32.06	18 A	KA2	1	4.195	1,2,3
31.79	79 AU	LB5	4	1.040	1,2	32.06	80 HG	LY4	5	0.839	1,2
31.79	80 HG	LB2	4	1.040	1,2,3	32.06	83 BI	LY5	5	0.839	1,2
31.79	35 BR	KA1	4	1.040	1,2,3	32.07	33 AS	KB5	4	1.049	1,2
31.80	70 YB	LB5	3	1.387	1,2	32.07	80 HG	LB1	4	1.049	1,2,3
31.80	61 PM	LB1	2	2.081	1,2,3	32.10	81 TL	LB6	4	1.050	1,2,3
31.81	47 AG	LA2	1	4.163	1,2,3	32.10	59 PR	LB9	2	2.100	1,2
31.83	39 Y	KA2	5	0.833	1,2,3	32.10	87 FR	LB1	5	0.840	1,2,3
31.85	87 FR	LA2	4	1.042	1	32.10	82 PB	LY1	5	0.840	1,2,3
31.87	24 CR	KB3	2	2.085	1,2	32.10	79 AU	LB7	4	1.050	1,2
31.87	24 CR	KB1	2	2.085	1,2,3	32.13	71 LU	LB3	3	1.401	1,2,3
31.88	67 HO	LL	2	2.086	1,2,3	32.13	25 MN	KA1	2	2.102	1,2,3
31.89	76 OS	LA1	3	1.391	1,2,3	32.14	81 TL	LY3	5	0.841	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							32.14 TO 32.79						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
32.14	96 CM	LA2	5	0.841	1		32.50	66 DY	LY3	3	1.417	1,2,3	
32.14	88 RA	LB4	5	0.841	1,2,3		32.51	60 ND	LB3	2	2.126	1,2,3	
32.15	76 OS	LA2	3	1.402	1,2,3		32.51	45 RH	LB3	1	4.252	1,2,3	
32.16	63 ND	LB6	2	2.104	1,2,3		32.55	71 LU	LB6	3	1.419	1,2,3	
32.20	25 MN	KA2	2	2.106	1,2,3		32.57	73 TA	LY4	4	1.065	1,2	
32.21	59 PR	LB10	2	2.107	1,2		32.59	63 EU	LN	2	2.131	1	
32.23	78 PF	LB9	4	1.054	1,2		32.60	74 W	LN	3	1.421	1,2,3	
32.24	68 ER	LY5	3	1.406	1,2		32.60	63 EU	LA2	2	2.132	1,2,3	
32.26	58 CE	LY5	2	2.110	1,2		32.62	80 HG	LL	3	1.422	1,2,3	
32.26	81 TL	LY6	5	0.844	1,2		32.64	56 BA	LY3	2	2.134	1,2,3	
32.32	33 AS	KB1	4	1.057	1,2,3		32.64	92 U	LL	4	1.067	2,3	
32.32	86 RN	LA1	4	1.057	1		32.64	66 DY	LY2	3	1.423	1,2,3	
32.32	76 OS	LY5	4	1.057	1,2		32.64	49 IN	LL	1	4.269	1,2,3	
32.35	33 AS	KB3	4	1.058	1,2		32.65	90 TH	LN	5	0.854	1,2,3	
32.38	83 BI	LN	4	1.059	1,2,3		32.67	79 AU	LB3	4	1.068	1,2,3	
32.40	59 PR	LB2	2	2.119	1,2,3		32.67	71 LU	LB1	3	1.424	1,2,3	
32.42	81 TL	LY2	5	0.848	1,2,3		32.67	74 W	LY2	4	1.068	1,2,3	
32.42	95 AM	LA1	5	0.848	1,3		32.70	86 RN	LA2	4	1.069	1	
32.43	45 RH	LB6	1	4.242	1,2,3		32.70	56 BA	LY2	2	2.138	1,2,3	
32.43	63 EU	LA1	2	2.121	1,2,3		32.73	79 AU	LB2	4	1.070	1,2,3	
32.45	75 RE	LY1	4	1.061	1,2,3		32.74	65 TB	LY4	3	1.427	1,2	
32.46	70 YB	LB2	3	1.415	1,2,3		32.76	57 LA	LY1	2	2.142	1,2,3	
32.48	74 W	LY3	4	1.062	1,2,3		32.79	44 RU	LY5	1	4.287	1,2	
32.48	78 PT	LB10	4	1.062	1,2		32.79	80 HG	LB4	4	1.072	1,2,3	
32.50	67 HO	LY1	3	1.417	1,2,3		32.79	78 PT	LB5	4	1.072	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						32.80 TO 33.60					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
32.80	45 RH	LB4	1	4.289	1,2,3	33.32	88 RA	LB6	5	0.871	1,2,3
32.81	87 FR	LB2	5	0.858	1,2,3	33.32	36 KR	KB5	5	0.871	1,2
32.86	74 W	LY6	4	1.074	1,2	33.33	70 YB	LB3	3	1.452	1,2,3
32.88	75 RE	LA1	3	1.433	1,2,3	33.36	58 CE	LB7	2	2.180	1,2
32.89	95 AM	LA2	5	0.860	1,3	33.36	77 IR	LB9	4	1.090	1,2
32.93	30 ZN	KA1	3	1.435	1,2,3	33.39	91 PA-LL	4	1.091	1,2,3	
33.01	66 DY	LL	2	2.158	1,2,3	33.40	80 HG	LY6	5	0.873	1,2
33.02	30 ZN	KA2	3	1.439	1,2,3	33.42	82 PB	LN	4	1.092	1,2,3
33.05	80 HG	LB6	4	1.080	1,2,3	33.42	46 PD	LA1	1	4.368	1,2,3
33.05	71 LU	LB4	3	1.440	1,2,3	33.45	44 RU	LB2	1	4.372	1,2,3
33.07	69 TM	LB10	3	1.441	1	33.47	45 RH	LB1	1	4.374	1,2,3
33.11	78 PT	LB7	4	1.082	1,2	33.48	80 HG	LY2	5	0.875	1,2,3
33.12	82 PB	LY5	5	0.866	1,2	33.48	38 SR	KA1	5	0.875	1,2,3
33.12	86 RN	LB1	5	0.866	1	33.49	46 PD	LA2	1	4.376	1,2,3
33.12	36 KR	KB4	5	0.866	2	33.49	75 RE	LY5	4	1.094	1,2
33.12	36 KR	KB2	5	0.866	1,2,3	33.49	58 CE	LB9	2	2.188	1,2
33.14	75 RE	LA2	3	1.444	1,2,3	33.52	42 MC	LY2	1	4.380	1,2,3
33.16	60 ND	LB4	2	2.167	1,2,3	33.52	42 MC	LY3	1	4.380	1,2
33.16	60 ND	LB1	2	2.167	1,2,3	33.52	59 PR	LB6	2	2.190	1,2,3
33.17	79 AU	LB1	4	1.084	1,2,3	33.52	79 AU	LL	3	1.460	1,2,3
33.20	85 AT	LA1	4	1.085	1	33.56	67 HO	LY5	3	1.462	1,2
33.20	94 PU	LA1	5	0.868	1	33.58	77 IR	LB10	4	1.097	1,2
33.20	81 TL	LY1	5	0.868	1,2,3	33.58	85 AT	LA2	4	1.097	1
33.24	80 HG	LY3	5	0.869	1,2,3	33.59	69 TM	LB2	3	1.463	1,2,3
33.27	55 CS	LY4	2	2.174	1,2	33.60	36 KR	KB1	5	0.878	1,2,3

GYPSLM CRYSTAL, D# 7.595 ANGSTROMS							33.60 TO 34.27						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
33.60	58 CE	LB10	2	2.195	1,2		33.90	79 AU	LB4	4	1.107	1,2,3	
33.64	38 SR	KA2	5	0.879	1,2,3		33.92	65 TB	LY2	3	1.477	1,2,3	
33.64	36 SR	KB3	5	0.879	1,2		33.94	59 PR	LB3	2	2.217	1,2,3	
33.64	73 TA	LY3	4	1.099	1,2,3		33.94	71 LU	LN	3	1.478	1,2	
33.64	74 W	LY1	4	1.099	1,2,3		33.96	34 SE	KA2	4	1.109	1,2,3	
33.66	70 YB	LB6	3	1.466	1,2,3		33.96	62 SM	LN	2	2.218	1,2,3	
33.66	62 SM	LA1	2	2.199	1,2,3		33.99	43 TC	LY1	1	4.440	1	
33.68	94 PU	LA2	5	0.880	1		34.02	79 AU	LB6	4	1.111	1,2,3	
33.70	17 CL	KB1	1	4.403	1,2,3		34.03	93 NP	LA1	5	0.899	1,2,3	
33.71	86 RN	LB2	5	0.881	1		34.11	68 ER	LB9	3	1.485	1,2	
33.74	78 PT	LB2	4	1.102	1,2,3		34.11	64 GD	LY4	3	1.485	1,2	
33.75	57 LA	LY5	2	2.205	1,2		34.12	73 TA	LY6	4	1.114	1,2	
33.77	72 HF	LY4	4	1.103	1,2		34.12	84 PO	LA1	4	1.114	1,2,3	
33.78	73 HA	LN	3	1.471	1,2,3		34.15	90 TH	LL	4	1.115	1,2,3	
33.78	65 TB	LY3	3	1.471	1,2,3		34.15	77 IR	LB7	4	1.115	1,2	
33.80	78 PT	LB3	4	1.104	1,2,3		34.16	74 W	LA2	3	1.487	1,2,3	
33.82	47 AG	LN	1	4.418	1,2,3		34.20	55 CS	LY3	2	2.233	1,2,3	
33.82	58 CE	LB2	2	2.209	1,2,3		34.20	28 NI	KB5	3	1.489	1,2	
33.83	66 DY	LY1	3	1.473	1,2,3		34.20	28 NI	KB2	3	1.489	1,2,3	
33.83	62 SM	LA2	2	2.210	1,2,3		34.21	65 TB	LL	2	2.234	1,2,3	
33.83	73 TA	LY2	4	1.105	1,2,3		34.21	32 GE	KB2	4	1.117	1,2,3	
33.83	34 SE	KA1	4	1.105	1,2,3		34.23	85 AT	LB1	5	0.894	1	
33.86	77 IR	LB5	4	1.106	1,2		34.25	70 YB	LB4	3	1.491	1,2,3	
33.90	70 YB	LB1	3	1.476	1,2,3		34.26	55 CS	LY2	2	2.237	1,2,3	
33.90	74 W	LA1	3	1.476	1,2,3		34.27	81 TL	LY5	5	0.895	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						34.27 TO 35.00					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
34.27	32 GE	KB5	4	1.119	1,2	34.62	79 AU	LY2	5	0.904	1,2,3
34.31	48 CD	LL	1	4.480	1,2,3	34.65	44 RU	LB4	1	4.523	1,2,3
34.31	78 PT	LB1	4	1.120	1,2,3	34.66	83 BI	LB10	5	0.905	1,2
34.32	68 ER	LB7	3	1.494	1,2	34.66	85 AT	LB2	5	0.905	1
34.32	68 ER	LB10	3	1.494	1,2	34.69	74 W	LY5	4	1.132	1,2
34.32	56 BA	LY1	2	2.241	1,2,3	34.72	76 OS	LB10	4	1.133	1,2
34.35	78 PT	LY4	5	0.897	1,2	34.74	88 RA	LN	5	0.907	1,2,3
34.35	80 HG	LY1	5	0.897	1,2,3	34.76	23 V	KB5	2	2.269	1,2
34.36	44 RU	LB3	1	4.487	1,2,3	34.78	77 IR	LB2	4	1.135	1,2,3
34.36	44 RU	LB6	1	4.487	1,2,3	34.80	68 ER	LB2	3	1.514	1,2,3
34.39	79 AU	LY3	5	0.898	1,2,3	34.82	84 PO	LB3	5	0.909	1,2,3
34.39	83 BI	LB9	5	0.898	1,2	34.82	69 TM	LB6	3	1.515	1,2,3
34.42	84 PO	LB5	5	0.899	1,2	34.86	57 LA	LB7	2	2.275	1,2
34.44	78 PT	LL	3	1.499	1,2,3	34.88	73 TA	LY1	4	1.138	1,2,3
34.46	28 NI	KB1	3	1.500	1,2,3	34.88	72 HF	LY3	4	1.138	1,2,3
34.50	76 OS	LB9	4	1.126	1,2	34.89	66 DY	LY5	3	1.518	1,2
34.50	84 PO	LA2	4	1.126	1,2,3	34.90	92 U	LA1	5	0.911	1,2,3
34.50	93 NP	LA2	5	0.901	1	34.94	76 OS	LB5	4	1.140	1,2
34.54	59 PR	LB4	2	2.255	1,2,3	34.95	58 CE	LB6	2	2.281	1,2,3
34.56	81 TL	LN	4	1.128	1,2,3	34.97	77 IR	LB3	4	1.141	1,2,3
34.58	69 TM	LB3	3	1.505	1,2,3	34.97	57 LA	LB9	2	2.282	1,2
34.58	79 AU	LY6	5	0.903	1,2	34.99	61 PM	LA1	2	2.283	1,2,3
34.59	32 GE	KB3	4	1.129	1,2	34.99	73 TA	LA1	3	1.522	1,2,3
34.59	59 PR	LB1	2	2.258	1,2,3	35.00	78 PT	LB4	4	1.142	1,2,3
34.59	32 GE	KB1	4	1.129	1,2,3	35.00	23 V	KB3	2	2.284	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							35.00 TO 35.73						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
35.00	23 V	K81	2	2.284	1,2,3		35.41	80 HG	LY5	5	0.924	1,2	
35.01	72 HF	LN	3	1.523	1,2,3		35.41	44 RU	L81	1	4.620	1,2,3	
35.03	71 LU	LY4	4	1.143	1		35.43	58 CE	L83	2	2.311	1,2,3	
35.07	72 HF	LY2	4	1.144	1,2,3		35.44	29 CU	KA1	3	1.541	1,2,3	
35.07	78 PT	LB6	4	1.144	1,2,3		35.44	77 IR	LL	3	1.541	1,2,3	
35.07	83 BI	LA1	4	1.144	1,2,3		35.44	64 GD	LL	2	2.312	1,2,3	
35.10	57 LA	L810	2	2.290	1,2		35.45	35 BR	K85	5	0.925	1,2	
35.10	24 CR	KA1	2	2.290	1,2,3		35.49	37 RB	KA1	5	0.926	1,2,3	
35.13	61 PM	LA2	2	2.292	1		35.49	83 BI	L85	5	0.926	1,2	
35.15	64 GD	LY3	3	1.529	1,2,3		35.51	63 EU	LY4	3	1.544	1,2	
35.16	24 CR	KA2	2	2.294	1,2,3		35.51	77 IR	L81	4	1.158	1,2,3	
35.18	69 TM	L81	3	1.530	1,2,3		35.51	69 TM	L84	3	1.544	1,2,3	
35.18	65 TB	LY1	3	1.530	1,2,3		35.51	29 CU	KA2	3	1.544	1,2,3	
35.22	76 OS	L87	4	1.149	1,2		35.53	82 PB	L89	5	0.927	1,2	
35.23	45 RH	LA1	1	4.597	1,2,3		35.53	79 AU	LY1	5	0.927	1,2,3	
35.25	73 TA	LA2	3	1.533	1,2,3		35.53	77 IR	LY4	5	0.927	1,2	
35.27	64 GD	LY2	3	1.534	1,2,3		35.54	43 TC	L82	1	4.636	1	
35.29	35 BR	K82	5	0.921	1,2,3		35.57	78 PT	LY3	5	0.928	1,2,3	
35.29	45 RH	LA2	1	4.605	1,2,3		35.61	84 PO	L82	5	0.929	1,2,3	
35.30	57 LA	L82	2	2.303	1,2,3		35.63	67 HC	L810	3	1.549	1	
35.33	92 U	LA2	5	0.922	1,2,3		35.65	37 RB	KA2	5	0.930	1,2,3	
35.33	84 PO	L81	5	0.922	1,2,3		35.68	41 NB	LY2	1	4.654	1,2,3	
35.38	56 BA	LY5	2	2.33E	1,2		35.68	41 NB	LY3	1	4.654	1,2	
35.41	72 HF	LY6	4	1.15E	1,2		35.70	80 HG	LN	4	1.164	1,2,3	
35.41	83 BI	LA2	4	1.15E	1,2,3		35.73	46 PD	LN	1	4.660	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							35.73 TO 36.56						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
35.73	75 RE	LB9	4	1.165	1,2		36.17	72 HF	LY1	4	1.179	1,2,3	
35.77	35 BR	KB1	5	0.933	1,2,3		36.17	71 LU	LY3	4	1.179	1,2,3	
35.77	91 PA	LA1	5	0.933	1,2,3		36.21	76 OS	LB3	4	1.180	1,2,3	
35.77	35 BR	KB3	5	0.933	1,2		36.21	33 AS	KA2	4	1.180	1,2,3	
35.79	88 RA	LL	4	1.167	1,2,3		36.21	77 IR	LB4	4	1.180	1,2,3	
35.81	82 PB	LB10	5	0.934	1,2		36.25	91 PA	LA2	5	0.945	1,2,3	
35.81	78 PT	LY6	5	0.934	1,2		36.25	42 MG	LY1	1	4.726	1,2,3	
35.81	78 PT	LY2	5	0.934	1,2,3		36.27	17 CL	KA1	1	4.728	1,2,3	
35.85	83 BI	LB7	5	0.935	1,2		36.29	17 CL	KA2	1	4.730	1,2,3	
35.89	76 OS	LB2	4	1.170	1,2,3		36.29	65 TB	LB5	3	1.577	2	
35.91	68 ER	LB3	3	1.561	1,2,3		36.29	65 TB	LY5	3	1.577	1	
35.95	75 RE	LB10	4	1.172	1,2		36.33	84 PO	LB4	5	0.947	1,2,3	
35.98	73 TA	LY5	4	1.173	1,2		36.36	72 HF	LA2	3	1.580	1,2,3	
36.01	83 BI	LB3	5	0.939	1,2,3		36.36	60 ND	LA1	2	2.370	1,2,3	
36.02	55 CS	LY1	2	2.348	1,2,3		36.36	70 YB	LY4	4	1.185	1,2	
36.03	58 CE	LB4	2	2.349	1,2,3		36.36	71 LU	LY2	4	1.185	1,2,3	
36.05	82 PB	LA1	4	1.175	1,2,3		36.40	82 PB	LA2	4	1.186	1,2,3	
36.06	68 ER	LB6	3	1.567	1,2,3		36.40	75 RE	LB7	4	1.186	1,2	
36.06	67 HO	LB2	3	1.567	1,2,3		36.46	56 BA	LB9	2	2.376	1,2	
36.08	33 AS	KA1	4	1.176	1,2,3		36.48	76 OS	LL	3	1.585	1,2,3	
36.10	47 AG	LL	1	4.707	1,2,3		36.51	57 LA	LB6	2	2.379	1,2,3	
36.10	72 HF	LA1	3	1.569	1,2,3		36.52	83 BI	LB1	5	0.952	1,2,3	
36.11	75 RE	LB5	4	1.177	1,2		36.52	60 ND	LA2	2	2.380	1,3	
36.14	58 CE	LB1	2	2.356	1,2,3		36.53	68 ER	LB1	3	1.587	1,2,3	
36.14	77 IR	LB6	4	1.178	1,2,3		36.56	82 PB	LB5	5	0.953	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						36.63 TO 37.34					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
36.63	63 EU	LY3	3	1.591	1,2,3	36.98	60 ND	LN	2	2.409	1,2,3
36.63	56 BA	LB10	2	2.387	1,2	37.00	57 LA	LB3	2	2.410	1,2,3
36.64	83 BI	LB2	5	0.955	1,2,3	37.00	81 TL	LB10	5	0.964	1,2
36.65	64 GD	LY1	3	1.592	1,2,3	37.01	66 DY	LB10	3	1.657	1
36.68	79 AU	LY5	5	0.956	1,2	37.04	77 IR	LY2	5	0.965	1,2,3
36.68	90 TH	LA1	5	0.956	1,2,3	37.06	27 CO	KB5	3	1.609	1,2
36.70	53 I	LY4	2	2.391	1,2	37.06	81 TL	LA1	4	1.207	1,2,3
36.71	31 GA	KB2	4	1.196	1,2,3	37.06	75 RE	LB2	4	1.207	1,2,3
36.72	81 T	LB9	5	0.957	1,2	37.10	31 GA	KB1	4	1.208	1,2,3
36.75	76 OS	LB1	4	1.197	1,2,3	37.10	31 GA	KB3	4	1.208	1,2
36.75	31 GA	KB5	4	1.197	1,2	37.11	55 CS	LY5	2	2.417	1,2
36.76	78 PT	LY1	5	0.958	1,2,3	37.12	84 PO	LB6	5	0.967	1,2,3
36.76	63 EJ	LL	2	2.395	1,2,3	37.12	77 IR	LY6	5	0.967	1,2
36.77	63 EJ	LY2	3	1.597	1,2,3	37.14	42 MC	LY5	1	4.837	1,2
36.78	71 LU	LY6	4	1.198	1,2	37.16	90 TH	LA2	5	0.966	1,2,3
36.80	76 OS	LY4	5	0.959	1,2	37.20	82 PB	LB3	5	0.969	1,2,3
36.80	77 IR	LY3	5	0.959	1,2,3	37.21	44 RU	LA1	1	4.846	1,2,3
36.82	66 DY	LB7	3	1.599	1,2	37.22	74 W	LB10	4	1.212	1,2
36.84	66 DY	LB9	3	1.600	1	37.26	76 OS	LB6	4	1.213	1,2,3
36.87	68 ER	LB4	3	1.601	1,2,3	37.26	44 RU	LA2	1	4.853	1,2,3
36.91	56 BA	LB2	2	2.404	1,2,3	37.30	71 LU	LA1	3	1.619	1,2,3
36.92	82 PB	LB7	5	0.962	1,2	37.30	67 HC	LB3	3	1.619	1,2,3
36.94	79 AU	LN	4	1.203	1,2,3	37.32	74 W	LB5	4	1.215	1,2
36.97	74 W	LB9	4	1.204	1,2	37.32	72 HF	LY5	4	1.215	1,2
36.98	62 SM	LY4	3	1.606	1,2	37.34	27 CO	KB1	3	1.621	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						37.37 TO 38.15					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
37.37	67 HO	LB6	3	1.622	1,2,3	37.80	36 KR	KA2	5	0.984	1,2,3
37.39	66 DY	LB2	3	1.623	1,2,3	37.80	34 SE	KB5	5	0.984	1,2
37.41	76 OS	LB4	4	1.218	1,2,3	37.81	45 RH	LN	1	4.922	1,2,3
37.45	81 TL	LA2	4	1.219	1,2,3	37.82	64 GD	LY5	3	1.641	1
37.48	75 RE	LB3	4	1.220	1,2,3	37.82	42 MO	LB2	1	4.923	1,2,3
37.51	43 TC	LB1	1	4.884	1	37.83	54 XE	LY1	2	2.462	1
37.52	83 BI	LB4	5	0.977	1,2,3	37.84	59 PR	LA1	2	2.463	1,2,3
37.54	71 LU	LY1	4	1.222	1,2,3	37.88	80 HG	LB9	5	0.986	1,2
37.54	70 YB	LY3	4	1.222	1,2,3	37.96	78 PT	LY5	5	0.988	1,2
37.56	75 RE	LL	3	1.630	1,2,3	37.96	67 HC	LB1	3	1.647	1,2,3
37.56	71 LU	LA2	3	1.630	1,2,3	38.00	59 PR	LA2	2	2.473	1,2,3
37.59	53 I	LY2	2	2.447	1,2,3	38.04	81 TL	LB7	5	0.990	1,2
37.59	53 I	LY3	2	2.447	1,2	38.05	46 PD	LL	1	4.952	1,2,3
37.61	74 W	LB7	4	1.224	1,2	38.06	40 ZR	LY2	1	4.953	1,2,3
37.62	57 LA	LB4	2	2.449	1,2,3	38.06	40 ZR	LY3	1	4.953	1,2
37.64	36 KR	KA1	5	0.980	1,2,3	38.08	77 IR	LY1	5	0.991	1,2,3
37.64	89 AC	LA1	5	0.980	1	38.08	55 CS	LB9	2	2.478	1,2
37.64	34 SE	KB2	5	0.980	1,2,3	38.08	75 RE	LB1	4	1.239	1,2,3
37.68	81 TL	LB5	5	0.981	1,2	38.12	75 RE	LY4	5	0.992	1,2
37.70	70 YB	LN	3	1.636	1,2,3	38.12	89 AC	LA2	5	0.992	1
37.72	82 PB	LB1	5	0.982	1,2,3	38.12	34 SE	KB1	5	0.992	1,2,3
37.76	82 PB	LB2	5	0.983	1,2,3	38.12	76 OS	LY3	5	0.992	1,2,3
37.77	57 LA	LB1	2	2.458	1,2,3	38.15	80 HG	LA1	4	1.241	1,2,3
37.77	69 TM	LY4	4	1.229	1	38.15	62 SM	LL	2	2.482	1,2,3
37.77	70 YB	LY2	4	1.229	1,2,3	38.15	56 BA	LB6	2	2.482	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						38.16 TO 38.83					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
38.16	62 SM	LY3	3	1.655	1,2,3	38.55	23 V	KA2	2	2.507	1,2,3
38.16	34 SE	KB3	5	0.993	1,2	38.56	70 YB	LA1	3	1.672	1,2,3
38.16	83 BI	LB6	5	0.993	1,2,3	38.56	73 TA	LB10	4	1.254	1,2
38.20	55 CS	LB7	2	2.485	1,2	38.56	32 GE	KA1	4	1.254	1,2,3
38.21	78 PT	LN	4	1.243	1,2,3	38.60	73 TA	LB5	4	1.255	1,2
38.21	70 YB	LY6	4	1.243	1,2	38.61	55 CS	LB2	2	2.511	1,2,3
38.23	28 NI	KA1	3	1.658	1,2,3	38.61	52 TE	LY4	2	2.511	1,2
38.23	63 EU	LY1	3	1.658	1,2,3	38.63	59 PR	LN	2	2.512	1,2,3
38.25	65 TB	LB7	3	1.659	1,2	38.64	88 RA	LA1	5	1.005	1,2,3
38.25	67 HO	LB4	3	1.659	1,2,3	38.66	22 TI	KB3	2	2.514	1,2
38.25	62 SM	LY2	3	1.659	1,2,3	38.66	22 TI	KB1	2	2.514	1,2,3
38.28	80 HG	LB10	5	0.996	1,2	38.69	16 S	KB1	1	5.032	1,2,3
38.28	74 W	LB2	4	1.245	1,2,3	38.69	32 GE	KA2	4	1.258	1,2,3
38.31	73 TA	LB9	4	1.246	1,2	38.69	56 BA	LB3	2	2.516	1,2,3
38.31	55 CS	LB10	2	2.492	1,2	38.71	74 W	LL	3	1.678	1,2,3
38.32	28 NI	KA2	3	1.662	1,2,3	38.72	82 PB	LB4	5	1.007	1,2,3
38.36	76 OS	LY2	5	0.998	1,2,3	38.72	75 RE	LB4	4	1.259	1,2,3
38.40	22 TI	KB5	2	2.498	1,2	38.72	41 NB	LY1	1	5.036	1,2,3
38.44	65 TB	LB10	3	1.667	1,2	38.76	71 LU	LY5	4	1.260	1,2
38.47	75 RE	LB6	4	1.251	1,2,3	38.78	66 DY	LB6	3	1.681	1,2,3
38.48	76 OS	LY6	5	1.001	1,2	38.78	66 DY	LB3	3	1.681	1,2,3
38.48	81 TL	LB3	5	1.001	1,2,3	38.80	65 TB	LB2	3	1.682	1,2,3
38.48	23 V	KA1	2	2.503	1,2,3	38.83	42 MC	LB6	1	5.049	1,2,3
38.53	80 HG	LA2	4	1.253	1,2,3	38.83	70 YB	LA2	3	1.683	1,2,3
38.54	42 MO	LB3	1	5.013	1,2,3	38.83	42 MO	LB4	1	5.049	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						38.84 TO 39.85					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
38.84	81 TL	LB2	5	1.010	1,2,3	39.48	75 RE	LY3	5	1.026	1,2,3
38.84	80 HG	LB5	5	1.010	1,2	39.48	66 DY	LB1	3	1.715	1,2,3
38.85	74 W	LB3	4	1.263	1,2,3	39.51	52 TE	LY2	2	2.567	1,3
38.88	73 TA	LB7	4	1.264	1,2	39.51	52 TE	LY3	2	2.567	1,2
39.01	70 YB	LY1	4	1.268	1,2,3	39.51	56 BA	LB1	2	2.567	1,2,3
39.01	69 TM	LY3	4	1.268	1,2,3	39.52	30 ZN	KB2	4	1.284	1,2,3
39.04	81 TL	LB1	5	1.015	1,2,3	39.52	77 IR	LN	4	1.284	1,2,3
39.08	88 RA	LA2	5	1.016	1,2,3	39.52	73 TA	LB2	4	1.284	1,2,3
39.14	69 TM	LN	3	1.696	1,2,3	39.56	30 ZN	KB5	4	1.285	1,2
39.20	80 HG	LB7	5	1.019	1,2	39.56	79 AU	LB10	5	1.028	1,2
39.20	69 TM	LY2	4	1.274	1,2,3	39.56	74 W	LY4	5	1.028	1,2
39.27	79 AU	LA1	4	1.276	1,3	39.56	58 CE	LA2	2	2.570	1,2,3
39.27	68 ER	LY4	4	1.276	1,2	39.64	87 FR	LA1	5	1.030	1,2,3
39.28	82 PB	LB6	5	1.021	1,2,3	39.64	41 NB	LY5	1	5.151	1,2
39.28	79 AU	LB9	5	1.021	1,2	39.65	79 AU	LA2	4	1.288	1,2,3
39.32	77 IR	LY5	5	1.022	1,2	39.72	66 DY	LB4	3	1.720	1,2,3
39.32	56 BA	LB4	2	2.555	1,2,3	39.72	72 HF	LB9	4	1.290	1,2
39.35	43 TC	LA1	1	5.114	1	39.72	69 TM	LY6	4	1.290	1
39.38	83 BI	MA1	1	5.118	1,2	39.72	75 RE	LY2	5	1.032	1,2,3
39.41	58 CE	LA1	2	2.561	1,2,3	39.72	74 W	LB6	4	1.290	1,2,3
39.42	43 TC	LA2	1	5.123	1	39.75	53 I	LY1	2	2.582	1,2,3
39.43	63 EU	LY5	3	1.708	1,2	39.79	64 GD	LB7	3	1.723	1,2
39.44	76 OS	LY1	5	1.025	1,2,3	39.80	80 HG	LB3	5	1.034	1,2,3
39.46	74 W	LB1	4	1.282	1,2,3	39.81	64 GD	LB9	3	1.724	1
39.47	83 BI	MA2	1	5.129	1,2	39.85	42 MO	LB1	1	5.177	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						39.86 TO 40.72					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
39.86	69 TM	LA1	3	1.726	1,2,3	40.29	60 ND	LY4	3	1.744	1,2
39.88	30 ZN	KB1	4	1.295	1,2,3	40.32	64 GD	LB2	3	1.745	1,2,3
39.88	62 SM	LY1	3	1.727	1,2,3	40.34	65 TB	LB3	3	1.746	1,2,3
39.91	73 TA	LL	3	1.728	1,2,3	40.34	41 NB	LB2	1	5.238	1,2,3
39.92	75 RE	LY6	5	1.037	1,2	40.36	58 CE	LN	2	2.620	1,2,3
39.92	55 CS	LB6	2	2.593	1,2,3	40.40	33 AS	KB5	5	1.049	1,2
39.97	72 HF	LB10	4	1.298	1,2	40.40	80 HG	LB1	5	1.049	1,2,3
39.97	72 HF	LB5	4	1.298	1,2	40.44	81 TL	LB6	5	1.050	1,2,3
39.98	64 GD	LB10	3	1.731	1,2	40.44	79 AU	LB7	5	1.050	1,2
40.00	81 TL	LB4	5	1.039	1,2,3	40.46	78 PT	LA1	4	1.313	1,2,3
40.04	79 AU	LB5	5	1.040	1,2	40.46	54 XE	LB2	2	2.626	1
40.04	80 HG	LB2	5	1.040	1,2,3	40.49	55 CS	LB3	2	2.628	1,2,3
40.04	35 BR	KA1	5	1.040	1,2,3	40.52	68 ER	LY3	4	1.315	1,2,3
40.08	44 RU	LN	1	5.205	1,2,3	40.52	69 TM	LY1	4	1.315	1,2,3
40.10	74 W	LB4	4	1.302	1,2,3	40.55	83 BI	LL	4	1.316	1,2,3
40.12	87 FR	LA2	5	1.042	1	40.58	68 ER	LN	3	1.756	1,2,3
40.13	69 TM	LA2	3	1.737	1,2,3	40.60	78 PT	LB9	5	1.054	1,2
40.17	45 RH	LL	1	5.217	1,2,3	40.61	26 FE	KB1	3	1.757	1,2,3
40.20	35 BR	KA2	5	1.044	1,2,3	40.66	51 SB	LY4	2	2.539	1,2
40.22	65 TB	LB6	3	1.741	1,2,3	40.70	39 Y	LY2	1	5.283	1,2,3
40.23	73 YB	LY5	4	1.306	1,2	40.70	39 Y	LY3	1	5.283	2
40.23	72 HF	LB7	4	1.306	1,2	40.71	68 ER	LY2	4	1.321	1,2,3
40.24	33 AS	KB2	5	1.045	1,2,3	40.72	86 RN	LA1	5	1.057	1
40.26	73 TA	LB3	4	1.307	1,2,3	40.72	33 AS	KB1	5	1.057	1,2,3
40.29	26 FE	KB5	3	1.744	1,2	40.72	82 PB	MA1	1	5.285	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						40.72 TO 41.52					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
40.72	76 OS	LY5	5	1.057	1,2	41.20	71 LU	LB9	4	1.336	1,2
40.74	67 HO	LY4	4	1.322	1,2	41.20	86 RN	LA2	5	1.069	1
40.76	33 AS	KB3	5	1.058	1,2	41.20	41 NB	LB4	1	5.345	1,2,3
40.80	83 BI	LN	5	1.059	1,2,3	41.23	57 LA	LA2	2	2.674	1,2,3
40.81	78 PT	LA2	4	1.324	1,2,3	41.24	79 AU	LB2	5	1.070	1,2,3
40.83	82 PB	MA2	1	5.299	1,2	41.26	68 ER	LA1	3	1.784	1,2,3
40.87	72 HF	LB2	4	1.326	1,2,3	41.26	60 ND	LL	2	2.676	1,2,3
40.88	75 RE	LY1	5	1.061	1,2,3	41.28	65 TB	LB4	3	1.785	1,2,3
40.91	73 TA	LB1	4	1.327	1,2,3	41.32	80 HG	LB4	5	1.072	1,2,3
40.92	78 PT	LB10	5	1.062	1,2	41.32	78 PT	LB5	5	1.072	1,2
40.92	41 NB	LB3	1	5.310	1,2,3	41.32	31 GA	KA1	4	1.340	1,2,3
40.92	74 W	LY3	5	1.062	1,2,3	41.33	41 NB	LB6	1	5.361	1,2,3
40.94	76 OS	LN	4	1.328	1,2,3	41.36	63 EU	LB7	3	1.788	1,2
40.95	53 I	LY5	2	2.657	1,2	41.37	55 CS	LB1	2	2.683	1,2,3
41.03	73 TA	LB6	4	1.331	1,2,3	41.38	27 CO	KA1	3	1.789	1,2,3
41.04	73 TA	LY4	5	1.065	1,2	41.39	71 LU	LB5	4	1.342	1,2
41.07	65 TB	LB1	3	1.776	1,2,3	41.41	74 W	LY6	5	1.074	1,2
41.08	57 LA	LA1	2	2.665	1,2,3	41.42	71 LU	LB10	4	1.343	1,2
41.10	55 CS	LB4	2	2.666	1,2,3	41.42	16 S	KA1	1	5.372	1,2,3
41.12	92 U	LL	5	1.067	2,3	41.45	16 S	KA2	1	5.375	1,2,3
41.14	62 SM	LB5	3	1.779	2	41.45	63 EU	LB9	3	1.792	1,2
41.14	62 SM	LY5	3	1.779	1	41.45	31 GA	KA2	4	1.344	1,2,3
41.16	79 AU	LB3	5	1.068	1,2,3	41.48	27 CO	KA2	3	1.793	1,2,3
41.16	74 W	LY2	5	1.068	1,2,3	41.52	40 ZR	LY1	1	5.384	1,2,3
41.19	72 HF	LL	3	1.781	1,2,3	41.52	73 TA	LB4	4	1.346	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							41.55 TO 42.43						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
41.55	60 ND	LY3	3	1.796	1,2,3		42.05	77 IR	LB9	5	1.090	1,2	
41.55	68 ER	LA2	3	1.796	1,2,3		42.09	91 PA	LL	5	1.091	1,2,3	
41.57	51 SB	LY2	2	2.695	1,2,3		42.10	67 HO	LY3	4	1.364	1,2,3	
41.57	51 SB	LY3	2	2.695	1,2		42.10	68 ER	LY1	4	1.364	1,2,3	
41.62	71 LU	LB7	4	1.349	1,2		42.11	59 PR	LY4	3	1.819	1,2	
41.65	80 HG	LB6	5	1.030	1,2,3		42.13	82 PB	LN	5	1.092	1,2,3	
41.65	63 EU	LB10	3	1.800	1,2		42.13	53 I	LB7	2	2.730	1,2	
41.65	82 PB	LL	4	1.350	1,2,3		42.14	81 TL	MA1	1	5.451	1,2	
41.67	60 ND	LY2	3	1.801	1,2,3		42.21	75 RE	LY5	5	1.094	1,2	
41.68	77 IR	LA1	4	1.351	1,2,3		42.23	81 TL	MA2	1	5.472	1,2	
41.70	42 MO	LA1	1	5.406	1,2,3		42.28	67 HO	LN	3	1.826	1,2,3	
41.73	78 PT	LB7	5	1.032	1,2		42.29	67 HO	LY2	4	1.370	1,2,3	
41.74	72 HF	LB3	4	1.353	1,2,3		42.29	57 LA	LN	2	2.740	1,2,3	
41.76	42 MO	LA2	1	5.414	1,2,3		42.29	71 LU	LB2	4	1.370	1,2,3	
41.81	69 TM	LY5	4	1.355	1,2		42.33	77 IR	LB10	5	1.097	1,2	
41.81	79 AU	LB1	5	1.034	1,2,3		42.33	85 AT	LA2	5	1.097	1	
41.82	64 GD	LB5	3	1.837	1,2,3		42.39	75 RE	LN	4	1.373	1,2,3	
41.84	52 TE	LY1	2	2.712	1,2,3		42.39	41 NB	LB1	1	5.492	1,2,3	
41.85	85 AT	LA1	5	1.085	1		42.42	74 W	LY1	5	1.099	1,2,3	
41.85	53 I	LB9	2	2.713	1,2		42.42	73 TA	LY3	5	1.099	1,2,3	
41.94	63 EU	LB2	3	1.812	1,2,3		42.42	72 HF	LB6	4	1.374	1,2,3	
41.97	53 I	LB10	2	2.720	1,2		42.42	66 DY	LY4	4	1.374	1,2	
42.01	64 GD	LB3	3	1.815	1,2,3		42.42	22 TI	KA1	2	2.748	1,2,3	
42.03	77 IR	LA2	4	1.362	1,2,3		42.42	72 HF	LB1	4	1.374	1,2,3	
42.03	61 PM	LY1	3	1.816	1		42.43	40 ZR	LY5	1	5.497	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						42.46 TO 43.33					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
42.46	53 I	LB2	2	2.750	1,2,3	42.97	76 OS	LA1	4	1.391	1,2,3
42.48	44 RU	LL	1	5.503	1,2,3	42.97	70 YB	LB10	4	1.391	1,2
42.49	22 TI	KA2	2	2.752	1,2,3	42.98	60 ND	LY6	3	1.855	2
42.52	71 LU	LL	3	1.836	1,2,3	43.01	62 SM	LB7	3	1.856	1,2
42.54	78 PT	LB2	5	1.102	1,2,3	43.01	59 PR	LL	2	2.784	1,2,3
42.58	72 HF	LY4	5	1.103	1,2	43.01	72 HF	LB4	4	1.392	1,2,3
42.62	78 PT	LB3	5	1.104	1,2,3	43.01	29 CU	KB1	4	1.392	1,2,3
42.65	29 CU	KB2	4	1.381	2,3	43.01	67 HO	LA2	3	1.856	1,2,3
42.66	34 SE	KA1	5	1.105	1,2,3	43.02	73 TA	LY6	5	1.114	1,2
42.66	73 TA	LY2	5	1.105	1,2,3	43.02	84 PO	LA1	5	1.114	1,2,3
42.68	21 SC	KB5	2	2.764	1,2	43.02	56 BA	LA2	2	2.785	1,2,3
42.68	29 CU	KB5	4	1.382	2	43.04	29 CU	KB3	4	1.393	1,2
42.70	77 IR	LB5	5	1.106	1,2	43.06	77 IR	LB7	5	1.115	1,2
42.74	79 AU	LB4	5	1.107	1,2,3	43.06	90 TH	LL	5	1.115	1,2,3
42.74	67 HO	LA1	3	1.845	1,2,3	43.10	70 YB	LB7	4	1.395	1,2
42.75	70 YB	LB9	4	1.384	1,2	43.10	52 TE	LY5	2	2.790	1,2
42.76	64 GD	LB1	3	1.846	1,2,3	43.13	62 SM	LB9	3	1.861	1,2
42.78	81 TL	LL	4	1.385	1,2,3	43.14	32 GE	KB2	5	1.117	1,2,3
42.82	34 SE	KA2	5	1.109	1,2,3	43.15	40 ZR	LB2	1	5.586	2,3
42.84	70 YB	LB5	4	1.387	1,2	43.23	32 GE	KB5	5	1.119	1,2
42.86	56 BA	LA1	2	2.775	1,2,3	43.27	78 PT	LB1	5	1.120	1,2,3
42.89	50 SN	LY4	2	2.777	1,2	43.30	71 LU	LB3	4	1.401	1,2,3
42.90	79 AU	LB6	5	1.111	1,2,3	43.31	54 XE	LB1	2	2.803	1
42.93	64 GD	LB4	3	1.853	1,2,3	43.32	62 SM	LB10	3	1.869	1,2
42.94	21 SC	KB1	2	2.780	1,2,3	43.33	76 OS	LA2	4	1.402	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						43.44 TO 44.27					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
43.44	59 FR	LY3	3	1.874	1,2,3	43.88	77 IR	LB2	5	1.135	1,2,3
43.44	63 EU	LB6	3	1.874	1,2,3	43.88	71 LU	LB6	4	1.419	1,2,3
43.46	68 ER	LY5	4	1.406	1,2	43.90	52 TE	LB9	2	2.839	1,2
43.51	84 FO	LA2	5	1.126	1,2,3	43.93	70 YB	LL	3	1.894	1,2,3
43.51	76 GS	LB9	5	1.126	1,2	43.95	74 W	LN	4	1.421	1,2,3
43.53	40 ZR	LB3	1	5.633	1,2,3	43.98	80 HG	LL	4	1.422	1,2,3
43.54	60 MD	LY1	3	1.878	1,2,3	44.00	72 HF	LY3	5	1.138	1,2,3
43.57	59 PR	LY2	3	1.879	1,2,3	44.00	73 TA	LY1	5	1.138	1,2,3
43.59	81 FL	LN	5	1.128	1,2,3	44.01	25 MN	KB5	3	1.897	1,2
43.62	38 SR	LY2	1	5.644	1,2,3	44.01	66 DY	LN	3	1.897	1,2,3
43.62	38 SR	LY3	1	5.644	1,2	44.01	66 DY	LY2	4	1.423	1,2,3
43.63	32 GE	KB1	5	1.129	1,2,3	44.03	52 TE	LB10	2	2.847	1,2
43.63	32 GE	KB3	5	1.129	1,2	44.05	71 LU	LB1	4	1.424	1,2,3
43.64	62 SM	LB2	3	1.882	1,2,3	44.05	58 CE	LY4	3	1.899	1,2
43.75	74 W	LY5	5	1.132	1,2	44.08	76 OS	LB5	5	1.140	1,2
43.75	70 YB	LB2	4	1.415	1,2,3	44.09	51 SB	LY1	2	2.851	1,2,3
43.76	63 EU	LB3	3	1.887	1,2,3	44.12	77 IR	LB3	5	1.141	1,2,3
43.79	76 GS	LB10	5	1.133	1,2	44.14	65 TB	LY4	4	1.427	1,2
43.80	50 SN	LY2	2	2.833	1,3	44.16	40 ZR	LB6	1	5.710	1,2,3
43.80	80 HG	MA1	1	5.666	1,2	44.16	78 PT	LB4	5	1.142	1,2,3
43.80	80 HG	MA2	1	5.666	1,2	44.20	71 LU	LY4	5	1.143	1
43.82	40 ZR	LB4	1	5.668	1,2,3	44.24	83 BI	LA1	5	1.144	1,2,3
43.82	66 DY	LY3	4	1.417	1,2,3	44.24	72 HF	LY2	5	1.144	1,2,3
43.82	67 HO	LY1	4	1.417	1,2,3	44.24	78 PT	LB6	5	1.144	1,2,3
43.87	53 I	LB6	2	2.837	1,2,3	44.27	41 NB	LA1	1	5.724	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						44.27 TO 44.96					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
44.27	56 BA	LN	2	2.862	1,2,3	44.96	26 FE	KA1	3	1.936	1,2,3
44.29	52 TE	LB7	2	2.863	1,2	44.96	70 YB	LB3	4	1.452	1,2,3
44.30	66 DY	LA1	3	1.909	1,2,3						
44.32	25 MN	KB1	3	1.910	1,2,3						
44.34	75 RE	LA1	4	1.433	1,2,3						
44.34	41 NB	LA2	1	5.732	2,3						
44.40	30 ZN	KA1	4	1.435	1,2,3						
44.45	76 OS	LB7	5	1.149	1,2						
44.47	53 I	LB3	2	2.874	1,2,3						
44.53	30 ZN	KA2	4	1.439	1,2,3						
44.57	71 LU	LB4	4	1.440	1,2,3						
44.57	63 EU	LB1	3	1.920	1,2,3						
44.57	66 DY	LA2	3	1.920	1,2,3						
44.60	52 TE	LB2	2	2.882	1,2,3						
44.60	69 TM	LB10	4	1.441	1						
44.69	72 HF	LY6	5	1.155	1,2						
44.69	83 BI	LA2	5	1.155	1,2,3						
44.70	75 RE	LA2	4	1.444	1,2,3						
44.71	63 EU	LB4	3	1.926	1,2,3						
44.76	58 CE	LL	2	2.892	1,2,3						
44.76	55 CS	LA1	2	2.892	1,2,3						
44.81	77 IR	LB1	5	1.158	1,2,3						
44.93	55 CS	LA2	2	2.902	1,2,3						
44.93	15 P	KB1	1	5.804	1,2,3						
44.93	60 ND	LY5	3	1.935	1,2						

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						45.06 TO 46.04					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
45.06	26 FE	KA2	3	1.940	1,2,3	45.55	33 AS	KA1	5	1.176	1,2,3
45.06	80 HG	LN	5	1.164	1,2,3	45.55	58 CE	LY2	3	1.960	1,2,3
45.09	53 I	LB4	2	2.912	1,2,3	45.57	59 PR	LY1	3	1.961	1,2,3
45.10	75 RE	LB9	5	1.165	1,2	45.58	73 TA	LN	4	1.471	1,2,3
45.18	88 RA	LL	5	1.167	1,2,3	45.58	65 TB	LY3	4	1.471	1,2,3
45.19	40 ZR	LB1	1	5.836	1,2,3	45.59	75 RE	LB5	5	1.177	1,2
45.20	62 SM	LB6	3	1.946	1,2,3	45.60	62 SM	LB3	3	1.962	1,2,3
45.22	79 MJ	LL	4	1.460	1,2,3	45.63	77 IR	LB6	5	1.178	1,2,3
45.22	79 MJ	MA1	1	5.840	1,2	45.65	66 DY	LY1	4	1.473	1,2,3
45.28	42 MO	LN	1	5.847	1,2,3	45.67	71 LU	LY3	5	1.179	1,2,3
45.29	67 FO	LY5	4	1.462	1,2	45.67	72 HF	LY1	5	1.179	1,2,3
45.30	76 CS	LB2	5	1.170	1,2,3	45.71	33 AS	KA2	5	1.180	1,2,3
45.32	49 IN	LY4	2	2.926	1,2	45.71	76 OS	LB3	5	1.180	1,2,3
45.32	69 TM	LB2	4	1.463	1,2,3	45.71	77 IR	LB4	5	1.180	1,2,3
45.33	79 AU	MA2	1	5.854	1,2	45.74	70 YB	LB1	4	1.476	1,2,3
45.38	75 RE	LB10	5	1.172	1,2	45.74	74 W	LA1	4	1.476	1,2,3
45.42	51 SB	LY5	2	2.932	1,2	45.78	65 TB	LY2	4	1.477	1,2,3
45.42	70 TB	LB6	4	1.466	1,2,3	45.81	71 LU	LN	4	1.478	1,2
45.42	69 TM	LL	3	1.955	1,2,3	45.87	65 TB	LN	3	1.973	1
45.42	58 CE	LY3	3	1.955	1,2,3	45.92	70 YB	LY4	5	1.185	1,2
45.42	73 TA	LY5	5	1.173	1,2	45.92	71 LU	LY2	5	1.185	1,2,3
45.47	61 PM	LB2	3	1.957	1	45.92	65 TB	LA1	3	1.975	1,2,3
45.50	53 I	LB1	2	2.937	1,2,3	45.96	75 RE	LB7	5	1.185	1,2
45.51	39 R	LY5	1	5.875	1,2	45.96	82 PB	LA2	5	1.186	1,2,3
45.51	82 PB	LA1	5	1.175	1,2,3	46.04	64 GD	LY4	4	1.485	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						46.04 TO 47.02					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
46.04	68 ER	LB9	4	1.485	1,2	46.61	51 SB	LB7	2	3.005	1
46.06	52 TE	LB6	2	2.971	1,2,3	46.63	57 LA	LL	2	3.006	1,2,3
46.07	51 SB	LB9	2	2.972	1,2	46.65	79 AU	LN	5	1.203	1,2,3
46.10	74 W	LA2	4	1.487	1,2,3	46.68	39 Y	LB4	1	6.018	1,2,3
46.11	57 LA	LY4	3	1.983	1,2	46.68	52 TE	LB3	2	3.009	1,2,3
46.17	28 NI	KB2	4	1.489	1,2,3	46.70	74 W	LB9	5	1.204	1,2
46.17	28 NI	KB5	4	1.489	1,2	46.70	69 TM	LB3	4	1.505	1,2,3
46.19	51 SB	LB10	2	2.979	1,2	46.75	60 ND	LB7	3	2.009	1,2
46.19	65 TB	LA2	3	1.986	1,2,3	46.78	54 XE	LA1	2	3.015	1
46.20	49 IN	LY2	2	2.980	1,2,3	46.82	75 RE	LB2	5	1.207	1,2,3
46.20	49 IN	LY3	2	2.980	1,2	46.82	81 TL	LA1	5	1.207	1,2,3
46.24	70 YB	LB4	4	1.491	1,2,3	46.86	31 GA	KB3	5	1.208	1,2
46.33	68 ER	LB7	4	1.494	1,2	46.86	31 GA	KB1	5	1.208	1,2,3
46.33	68 ER	LB10	4	1.494	1,2	46.90	37 RB	LY3	1	6.045	1,2
46.37	31 GA	KB2	5	1.196	1,2,3	46.91	51 SB	LB2	2	3.023	1,2,3
46.39	39 Y	LB3	1	5.983	1,2,3	46.91	37 RB	LY2	1	6.046	1,2,3
46.41	31 GA	KB5	5	1.197	1,2	46.91	78 PT	MA1	1	6.046	1,2
46.41	76 OS	LB1	5	1.197	1,2,3	46.93	60 ND	LB9	3	2.016	1,2
46.42	55 CS	LN	2	2.993	1,2,3	46.94	54 XE	LA2	2	3.025	1
46.45	71 LU	LY6	5	1.198	1,2	46.99	68 ER	LB2	4	1.514	1,2,3
46.48	62 SM	LB1	3	1.998	1,2,3	47.00	78 PT	MA2	1	6.057	1,2
46.50	78 PT	LL	4	1.499	1,2,3	47.00	68 ER	LL	3	2.019	1,2,3
46.53	28 NI	KB1	4	1.500	1,2,3	47.02	69 TM	LB6	4	1.515	1,2,3
46.53	62 SM	LB4	3	2.000	1,2,3	47.02	59 PR	LY5	3	2.020	1,2
46.55	50 SN	LY1	2	3.001	1,2,3	47.02	74 W	LB10	5	1.212	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						47.04 TO 48.28					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
47.04	21 SC	KA1	2	3.031	1,2,3	47.65	64 GD	LY2	4	1.534	1,2,3
47.07	76 OS	LB6	5	1.213	1,2,3	47.67	57 LA	LY2	3	2.046	1,2,3
47.10	60 ND	LB10	3	2.023	1,2	47.67	64 GD	LA1	3	2.046	1,2,3
47.11	21 SC	KA2	2	3.035	1,2,3	47.72	58 CE	LY1	3	2.048	1,2,3
47.11	40 IR	LA1	1	6.070	1,2,3	47.72	69 TM	LY4	5	1.229	1
47.12	66 DY	LY5	4	1.518	1,2	47.72	70 YB	LY2	5	1.229	1,2,3
47.15	74 W	LB5	5	1.215	1,2	47.74	64 GD	LN	3	2.049	1,2,3
47.15	72 HF	LY5	5	1.215	1,2	47.75	20 CA	KB5	2	3.074	1,2
47.17	40 IR	LA2	1	6.078	1,2,3	47.77	42 MC	LL	1	6.150	1,2,3
47.25	73 TA	LA1	4	1.522	1,2,3	47.80	52 TE	LB1	2	3.077	1,2,3
47.27	76 OS	LB4	5	1.218	1,2,3	47.81	15 P	KA1	1	6.155	1,2,3
47.29	52 TE	LB4	2	3.046	1,2,3	47.81	15 P	KA2	1	6.155	1,2,3
47.29	72 HF	LN	4	1.523	1,2,3	47.88	77 IR	LL	4	1.541	1,2,3
47.30	39 Y	LB6	1	6.094	1,2,3	47.88	29 CU	KA1	4	1.541	1,2,3
47.31	81 TL	LA2	5	1.219	1,2,3	47.93	50 SN	LY5	2	3.085	1,2
47.35	75 RE	LB3	5	1.225	1,2,3	47.94	64 GD	LA2	3	2.057	1,2,3
47.42	60 ND	LB2	3	2.036	1,2,3	47.98	69 TM	LB4	4	1.544	1,2,3
47.44	70 YB	LY3	5	1.222	1,2,3	47.98	63 EU	LY4	4	1.544	1,2
47.44	71 LU	LY1	5	1.222	1,2,3	47.98	29 CU	KA2	4	1.544	1,2,3
47.49	64 GD	LY3	4	1.529	1,2,3	48.01	20 CA	KB1	2	3.090	1,2,3
47.52	74 W	LB7	5	1.224	1,2	48.14	75 RE	LB1	5	1.239	1,2,3
47.52	69 TM	LB1	4	1.530	1,2,3	48.15	67 HO	LB10	4	1.549	1
47.52	65 TB	LY1	4	1.530	1,2,3	48.22	80 HG	LA1	5	1.241	1,2,3
47.54	57 LA	LY3	3	2.041	1,2,3	48.27	41 NB	LN	1	6.211	1,2,3
47.62	73 TA	LA2	4	1.533	1,2,3	48.28	39 Y	LB1	1	6.212	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							48.29 TO 49.34						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
48.29	24 CR	KB5	3	2.071	1,2		48.80	73 TA	LB5	5	1.255	1,2	
48.30	78 PT	LN	5	1.243	1,2,3		48.81	72 HF	LA1	4	1.569	1,2,3	
48.30	73 YB	LY6	5	1.243	1,2		48.81	48 CD	LY2	2	3.138	1,2,3	
48.39	56 BA	LY4	3	2.075	1,2		48.92	32 GE	KA2	5	1.258	1,2,3	
48.39	74 W	LB2	5	1.245	1,2,3		48.96	75 RE	LB4	5	1.259	1,2,3	
48.43	73 TA	LB9	5	1.246	1,2		48.97	53 I	LA1	2	3.148	1,2,3	
48.43	50 SN	LB9	2	3.115	1,2		48.97	38 SR	LY5	1	6.296	1,2	
48.43	51 SB	LB6	2	3.115	1,2,3		49.01	59 PR	LB9	3	2.100	1,2	
48.53	50 SN	LB10	2	3.121	1,2		49.01	71 LU	LY5	5	1.260	1,2	
48.53	61 PM	LB1	3	2.081	1,2,3		49.04	51 SB	LB3	2	3.152	1,2,3	
48.54	68 ER	LB3	4	1.561	1,2,3		49.06	25 MN	KA1	3	2.102	1,2,3	
48.63	24 CR	KB3	3	2.085	1,2		49.07	65 TB	LB5	4	1.577	2	
48.63	24 CR	KB1	3	2.085	1,2,3		49.07	65 TB	LY5	4	1.577	1	
48.63	75 RE	LB6	5	1.251	1,2,3		49.09	50 SN	LB7	2	3.155	1,2	
48.66	67 HO	LL	3	2.086	1,2,3		49.11	60 ND	LB6	3	2.104	1,2,3	
48.68	77 IR	MA1	1	6.261	1,2		49.13	74 W	LB3	5	1.263	1,2,3	
48.72	80 HG	LA2	5	1.253	1,2,3		49.14	53 I	LA2	2	3.158	1,2,3	
48.74	68 ER	LB6	4	1.567	1,2,3		49.16	25 MN	KA2	3	2.106	1,2,3	
48.74	67 HO	LB2	4	1.567	1,2,3		49.17	73 TA	LB7	5	1.264	1,2	
48.76	73 TA	LB10	5	1.254	1,2		49.17	72 HF	LA2	4	1.580	1,2,3	
48.76	32 GE	KA1	5	1.254	1,2,3		49.18	59 PR	LB10	3	2.107	1,2	
48.76	56 BA	LL	2	3.135	1,2,3		49.21	49 IN	LY1	2	3.162	1,2,3	
48.78	59 PR	LB7	3	2.091	1,2		49.26	58 CE	LY5	3	2.110	1,2	
48.79	48 CD	LY3	2	3.137	1,2		49.34	76 OS	LL	4	1.585	1,2,3	
48.80	77 IR	MA2	1	6.275	1,2		49.34	69 TM	LY3	5	1.268	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							49.34 TO 50.65						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
49.34	70 YB	LY1	5	1.268	1,2,3		50.00	30 ZN	KB2	5	1.284	1,2,3	
49.40	68 ER	LB1	4	1.587	1,2,3		50.04	62 SM	LY4	4	1.606	1,2	
49.42	50 SN	LB2	2	3.175	1,2,3		50.04	30 ZN	KB5	5	1.285	1,2	
49.48	59 PR	LB2	3	2.119	1,2,3		50.05	57 LA	LY1	3	2.142	1,2,3	
49.53	63 EU	LA1	3	2.121	1,2,3		50.07	66 DY	LB10	4	1.607	1	
49.54	63 EU	LY3	4	1.591	1,2,3		50.14	27 CO	KB5	4	1.609	1,2	
49.56	38 SR	LB3	1	6.367	1,2,3		50.17	79 AU	LA2	5	1.288	1,2,3	
49.57	64 SD	LY1	4	1.592	1,2,3		50.24	39 Y	LA1	1	6.449	1,2,3	
49.59	69 TM	LY2	5	1.274	1,2,3		50.25	74 W	LB6	5	1.290	1,2,3	
49.65	60 ND	LB3	3	2.126	1,2,3		50.25	72 HF	LB9	5	1.290	1,2	
49.67	51 SB	LB4	2	3.190	1,2,3		50.25	69 TM	LY6	5	1.290	1	
49.67	79 AU	LA1	5	1.276	1,3		50.27	51 SB	LB1	2	3.226	1,2,3	
49.67	68 ER	LY4	5	1.276	1,2		50.30	39 Y	LA2	1	6.456	1,2,3	
49.74	63 EU	LY2	4	1.597	1,2,3		50.45	66 DY	LL	3	2.158	1,2,3	
49.78	63 EU	LN	3	2.131	1		50.46	30 ZN	KB1	5	1.295	1,2,3	
49.80	63 EU	LA2	3	2.132	1,2,3		50.47	67 HC	LB3	4	1.619	1,2,3	
49.80	66 DY	LB7	4	1.599	1,2		50.47	71 LU	LA1	4	1.619	1,2,3	
49.84	66 DY	LB9	4	1.600	1		50.54	27 CO	KB1	4	1.621	1,2,3	
49.85	56 BA	LY3	3	2.134	1,2,3		50.57	67 HC	LB6	4	1.622	1,2,3	
49.86	38 SR	LB4	1	6.403	1,2,3		50.59	76 OS	MA1	1	6.490	1,2	
49.87	68 ER	LB4	4	1.601	1,2,3		50.59	72 HF	LB10	5	1.298	1,2	
49.92	74 W	LB1	5	1.282	1,2,3		50.59	72 HF	LB5	5	1.298	1,2	
49.95	56 BA	LY2	3	2.135	1,2,3		50.59	76 OS	MA2	1	6.490	1,2	
50.00	77 IR	LN	5	1.284	1,2,3		50.60	66 DY	LB2	4	1.623	1,2,3	
50.00	73 TA	LB2	5	1.284	1,2,3		50.65	49 IN	LY5	2	3.249	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							50.68 TO 51.81						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
50.68	60 ND	LB4	3	2.167	1,2,3		51.32	52 TE	LA1	2	3.289	1,2,3	
50.68	60 ND	LB1	3	2.167	1,2,3		51.34	83 BI	LL	5	1.316	1,2,3	
50.75	74 W	LB4	5	1.302	1,2,3		51.38	58 CE	LB10	3	2.195	1,2	
50.81	41 NB	LL	1	6.517	1,2,3		51.41	67 HC	LB1	4	1.647	1,2,3	
50.83	38 SR	LB6	1	6.519	1,2,3		51.47	52 TE	LA2	2	3.298	1,2,3	
50.84	75 RE	LL	4	1.630	1,2,3		51.48	62 SM	LA1	3	2.199	1,2,3	
50.84	71 LU	LA2	4	1.630	1,2,3		51.55	68 ER	LY2	5	1.321	1,2,3	
50.85	55 CS	LY4	3	2.174	1,2		51.56	40 ZR	LN	1	6.607	1,2,3	
50.90	75 RE	MA1	1	6.528	1,2		51.59	67 HC	LY4	5	1.322	1,2	
50.92	70 YB	LY5	5	1.306	1,2		51.61	47 AG	LY3	2	3.306	1,2	
50.92	72 HF	LB7	5	1.306	1,2		51.61	47 AG	LY2	2	3.306	1,3	
50.95	55 CS	LL	2	3.267	1,2,3		51.61	50 SN	LB3	2	3.306	1,2,3	
50.96	73 TA	LB3	5	1.307	1,2,3		51.63	57 LA	LY5	3	2.205	1,2	
50.97	49 IN	LB9	2	3.268	1,2		51.67	62 SM	LY3	4	1.655	1,2,3	
50.99	50 SN	LB6	2	3.269	1,2,3		51.67	78 PT	LA2	5	1.324	1,2,3	
51.00	58 CE	LB7	3	2.180	1,2		51.71	38 SR	LB1	1	6.624	1,2,3	
51.04	70 YB	LN	4	1.636	1,2,3		51.73	58 CE	LB2	3	2.209	1,2,3	
51.07	49 IN	LB10	2	3.274	1,2		51.76	62 SM	LA2	3	2.210	1,2,3	
51.17	53 I	LN	2	3.280	1,2,3		51.76	72 HF	LB2	5	1.326	1,2,3	
51.20	64 GD	LY5	4	1.641	1		51.77	28 NI	KA1	4	1.658	1,2,3	
51.20	58 CE	LB9	3	2.188	1,2		51.77	63 EU	LY1	4	1.658	1,2,3	
51.21	78 PT	LA1	5	1.313	1,2,3		51.80	73 TA	LB1	5	1.327	1,2,3	
51.25	59 PR	LB6	3	2.190	1,2,3		51.81	62 SM	LY2	4	1.659	1,2,3	
51.30	68 ER	LY3	5	1.315	1,2,3		51.81	65 TB	LB7	4	1.659	1,2	
51.30	69 TM	LY1	5	1.315	1,2,3		51.81	67 HC	LB4	4	1.659	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						51.84 TO 53.60					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
51.84	76 OS	LN	5	1.328	1,2,3	52.60	73 TA	LB4	5	1.346	1,2,3
51.91	28 NI	KA2	4	1.662	1,2,3	52.61	70 YB	LA2	4	1.683	1,2,3
51.93	59 PR	LB3	3	2.217	1,2,3	52.72	71 LU	LB7	5	1.349	1,2
51.96	62 SM	LN	3	2.218	1,2,3	52.77	82 PB	LL	5	1.350	1,2,3
51.97	73 TA	LB6	5	1.331	1,2,3	52.80	37 RB	LY5	1	6.754	1,2
52.08	65 TB	LB10	4	1.667	1,2	52.81	77 IR	LA1	5	1.351	1,2,3
52.11	48 CD	LY1	2	3.336	1,2,3	52.89	72 HF	LB3	5	1.353	1,2,3
52.14	49 IN	LB2	2	3.338	1,2,3	52.89	59 PR	LB4	3	2.255	1,2,3
52.18	71 LU	LB9	5	1.336	1,2	52.92	14 SI	KB1	1	6.768	1,2,3
52.23	50 SN	LB4	2	3.343	1,2,3	52.93	50 SN	LB1	2	3.385	1,2,3
52.24	70 YB	LA1	4	1.672	1,2,3	52.97	59 PR	LB1	3	2.258	1,2,3
52.34	55 CS	LY3	3	2.233	1,2,3	52.98	69 TM	LY5	5	1.355	1,2
52.35	31 GA	KA1	5	1.340	1,2,3	53.05	69 TM	LN	4	1.696	1,2,3
52.36	65 TB	LL	3	2.234	1,2,3	53.08	37 RB	LB3	1	6.787	1,2,3
52.43	71 LU	LB5	5	1.342	1,2	53.25	23 V	KB5	3	2.269	1,2
52.44	55 CS	LY2	3	2.237	1,2,3	53.27	77 IR	LA2	5	1.362	1,2,3
52.45	74 W	LL	4	1.678	1,2,3	53.36	68 ER	LY1	5	1.364	1,2,3
52.47	71 LU	LB10	5	1.343	1,2	53.36	37 RB	LB4	1	6.820	1,2,3
52.48	20 CA	KA1	2	3.358	1,2,3	53.36	67 HQ	LY3	5	1.364	1,2,3
52.51	31 GA	KA2	5	1.344	1,2,3	53.40	57 LA	LB7	3	2.275	1,2
52.54	56 BA	LY1	3	2.241	1,2,3	53.46	63 EU	LY5	4	1.708	1,2
52.55	66 DY	LB6	4	1.681	1,2,3	53.52	66 DY	LB1	4	1.710	1,2,3
52.55	20 CA	KA2	2	3.362	1,2,3	53.55	58 CE	LB6	3	2.281	1,2,3
52.55	66 DY	LB3	4	1.681	1,2,3	53.58	57 LA	LB9	3	2.282	1,2
52.58	65 TB	LB2	4	1.682	1,2,3	53.60	61 PM	LA1	3	2.283	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						53.61 TO 54.68					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
53.61	67 HO	LY2	5	1.370	1,2,3	54.07	69 TM	LA1	4	1.726	1,2,3
53.61	71 LU	LB2	5	1.370	1,2,3	54.07	29 CU	KB2	5	1.381	2,3
53.61	48 CD	LY5	2	3.425	1,2	54.10	62 SM	LY1	4	1.727	1,2,3
53.63	23 V	KB1	3	2.284	1,2,3	54.10	19 K	KB1	2	3.454	1,2,3
53.63	23 V	KB3	3	2.284	1,2	54.11	57 LA	LB2	3	2.303	1,2,3
53.69	48 CD	LB9	2	3.430	1,2	54.12	29 CU	KB5	5	1.382	2
53.72	38 SR	LA1	1	6.863	1,2,3	54.13	73 TA	LL	4	1.728	1,2,3
53.74	75 RE	LN	5	1.373	1,2,3	54.18	40 ZR	LL	1	6.918	1,2,3
53.77	38 SR	LA2	1	6.869	1,2,3	54.20	70 YB	LB9	5	1.384	1,2
53.78	72 HF	LB1	5	1.374	1,2,3	54.24	56 BA	LY5	3	2.308	1,2
53.78	24 CR	KA1	3	2.290	1,2,3	54.24	64 GD	LB10	4	1.731	1,2
53.78	66 DY	LY4	5	1.374	1,2	54.24	81 TL	LL	5	1.385	1,2,3
53.78	72 HF	LB6	5	1.374	1,2,3	54.31	58 CE	LB3	3	2.311	1,2,3
53.78	57 LA	LB10	3	2.290	1,2	54.33	70 YB	LB5	5	1.387	1,2
53.80	49 IN	LB6	2	3.436	1,2,3	54.34	64 GD	LL	3	2.312	1,2,3
53.81	48 CD	LB10	2	3.437	1,2	54.37	49 IN	LB3	2	3.470	1,2,3
53.83	52 TE	LN	2	3.438	1,2,3	54.44	69 TM	LA2	4	1.737	1,2,3
53.83	61 PM	LA2	3	2.292	1	54.50	76 OS	LA1	5	1.391	1,2,3
53.85	51 SB	LA1	2	3.439	1,2,3	54.50	70 YB	LB10	5	1.391	1,2
53.86	66 DY	LB4	4	1.720	1,2,3	54.54	72 HF	LB4	5	1.392	1,2,3
53.88	24 CR	KA2	3	2.294	1,2,3	54.54	29 CU	KB1	5	1.392	1,2,3
53.88	19 K	KB5	2	3.441	1,2	54.58	65 TB	LB6	4	1.741	1,2,3
53.96	64 GD	LB7	4	1.723	1,2	54.58	29 CU	KB3	5	1.393	1,2
54.00	64 GD	LB9	4	1.724	1	54.67	70 YB	LB7	5	1.395	1,2
54.00	51 SB	LA2	2	3.448	1,2,3	54.68	60 ND	LY4	4	1.744	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							54.68 TO 56.35						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
54.68	26 FE	KB5	4	1.744	1,2		55.77	65 TB	LB1	4	1.776	1,2,3	
54.69	46 PD	LY3	2	3.489	1,2		55.78	74 W	LN	5	1.421	1,2,3	
54.69	46 PD	LY2	2	3.489	1,2,3		55.82	49 IN	LB1	2	3.555	1,2,3	
54.71	64 GD	LB2	4	1.745	1,2,3		55.82	60 ND	LA1	3	2.370	1,2,3	
54.74	74 W	MA1	1	6.983	1,2		55.82	80 HG	LL	5	1.422	1,2,3	
54.74	37 RB	LB6	1	6.984	1,2,3		55.85	53 I	LL	2	3.557	1,2,3	
54.74	65 TB	LB3	4	1.746	1,2,3		55.86	66 DY	LY2	5	1.423	1,2,3	
54.80	74 W	MA2	1	6.990	1,2		55.87	62 SM	LY5	4	1.779	1	
54.92	71 LU	LB3	5	1.401	1,2,3		55.87	62 SM	LB5	4	1.779	2	
54.97	76 OS	LA2	5	1.402	1,2,3		55.90	71 LU	LB1	5	1.424	1,2,3	
55.00	49 IN	LB4	2	3.507	1,2,3		55.94	72 HF	LL	4	1.781	1,2,3	
55.08	68 ER	LN	4	1.756	1,2,3		55.95	14 SI	KA1	1	7.125	1,2,3	
55.12	48 CD	LB2	2	3.514	1,2,3		55.97	56 BA	LB9	3	2.376	1,2	
55.12	26 FE	KB1	4	1.757	1,2,3		55.97	14 SI	KA2	1	7.128	1,2,3	
55.14	68 ER	LY5	5	1.406	1,2		56.03	65 TB	LY4	5	1.427	1,2	
55.22	39 Y	LN	1	7.040	1,2,3		56.04	68 ER	LA1	4	1.784	1,2,3	
55.26	55 CS	LY1	3	2.348	1,2,3		56.05	57 LA	LB6	3	2.379	1,2,3	
55.27	47 AG	LY1	2	3.523	1,2,3		56.07	60 ND	LA2	3	2.380	1,3	
55.28	58 CE	LB4	3	2.349	1,2,3		56.07	65 TB	LB4	4	1.785	1,2,3	
55.46	58 CE	LB1	3	2.356	1,2,3		56.18	63 EU	LB7	4	1.788	1,2	
55.52	70 YB	LB2	5	1.415	1,2,3		56.21	27 CO	KA1	4	1.789	1,2,3	
55.53	37 RB	LB1	1	7.076	1,2,3		56.25	56 BA	LB10	3	2.387	1,2	
55.60	66 DY	LY3	5	1.417	1,2,3		56.29	75 RE	LA1	5	1.433	1,2,3	
55.60	67 HO	LY1	5	1.417	1,2,3		56.31	63 EU	LB9	4	1.792	1,2	
55.69	71 LU	LB6	5	1.419	1,2,3		56.35	27 CO	KA2	4	1.793	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							56.36 TO 58.08					
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF
56.36	53 I	LY4	3	2.391	1,2		57.09	73 TA	MA2	1	7.258	1,2
56.37	30 ZN	KA1	5	1.435	1,2,3		57.10	70 Y8	LB3	5	1.452	1,2,3
56.45	68 ER	LA2	4	1.796	1,2,3		57.10	64 GD	LB3	4	1.815	1,2,3
56.45	60 NO	LY3	4	1.796	1,2,3		57.14	61 PM	LY1	4	1.816	1
56.46	63 EU	LL	3	2.395	1,2,3		57.24	59 PR	LY4	4	1.819	1,2
56.54	30 ZN	KA2	5	1.439	1,2,3		57.36	48 CD	LB3	2	3.645	1,2,3
56.59	71 LU	LB4	5	1.440	1,2,3		57.45	79 AU	LL	5	1.460	1,2,3
56.59	50 SN	LA1	2	3.600	1,2,3		57.48	67 HO	LN	4	1.826	1,2,3
56.59	63 EU	LB10	4	1.800	1,2		57.53	67 HO	LY5	5	1.462	1,2
56.62	60 NO	LY2	4	1.801	1,2,3		57.58	69 TM	LB2	5	1.463	1,2,3
56.63	69 TM	LB10	5	1.441	1		57.60	37 RB	LA1	1	7.318	1,2,3
56.67	47 AG	LB9	2	3.605	1,2		57.66	37 RB	LA2	1	7.325	1,2,3
56.69	56 BA	LB2	3	2.404	1,2,3		57.70	70 Y8	LB6	5	1.466	1,2,3
56.72	51 SB	LN	2	3.608	1,2,3		57.80	53 I	LY2	3	2.447	1,2,3
56.74	50 SN	LA2	2	3.609	1,2,3		57.80	53 I	LY3	3	2.447	1,2
56.76	75 RE	LA2	5	1.444	1,2,3		57.82	71 LU	LL	4	1.836	1,2,3
56.78	47 AG	LB10	2	3.611	1,2		57.85	57 LA	LB4	3	2.449	1,2,3
56.82	60 NO	LN	3	2.409	1,2,3		57.92	65 TB	LY3	5	1.471	1,2,3
56.83	64 GD	LB6	4	1.807	1,2,3		57.92	73 TA	LN	5	1.471	1,2,3
56.83	48 CD	LB6	2	3.614	1,2,3		57.93	39 Y	LL	1	7.356	1,2,3
56.84	57 LA	LB3	3	2.410	1,2,3		58.00	48 CD	LB4	2	3.682	1,2,3
56.86	47 AG	LY5	2	3.616	1,2		58.01	66 DY	LY1	5	1.473	1,2,3
57.00	63 EU	LB2	4	1.812	1,2,3		58.05	45 RH	LY2	2	3.685	1,2,3
57.02	73 TA	MA1	1	7.251	1,2		58.05	45 RH	LY3	2	3.685	1,2
57.02	55 CS	LY5	3	2.417	1,2		58.08	57 LA	LB1	3	2.458	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							58.14 10 59.51						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
58.14	70 YB	LB1	5	1.476	1,2,3		58.78	70 YB	LB4	5	1.491	1,2,3	
58.14	74 W	LA1	5	1.476	1,2,3		58.78	55 CS	LB7	3	2.485	1,2	
58.14	67 HO	LA1	4	1.845	1,2,3		58.91	68 ER	LB10	5	1.494	1,2	
58.17	64 GD	LB1	4	1.846	1,2,3		58.91	68 ER	LB7	5	1.494	1,2	
58.18	65 TB	LY2	5	1.477	1,2,3		58.97	48 CD	LB1	2	3.736	1,2,3	
58.19	54 XE	LY1	3	2.462	1		58.97	55 CS	LB10	3	2.492	1,2	
58.21	59 PR	LA1	3	2.463	1,2,3		58.97	62 SM	LB10	4	1.869	1,2	
58.22	71 LU	LN	5	1.478	1,2		59.02	19 K	KA1	2	3.741	1,2,3	
58.36	47 AG	LB2	2	3.713	1,2,3		59.09	19 K	KA2	2	3.745	1,2,3	
58.41	64 GD	LB4	4	1.853	1,2,3		59.12	22 TI	KB5	3	2.498	1,2	
58.47	59 PR	LA2	3	2.473	1,2,3		59.13	78 PT	LL	5	1.499	1,2,3	
58.48	60 ND	LY6	4	1.855	2		59.14	59 PR	LY3	4	1.874	1,2,3	
58.52	67 HO	LA2	4	1.856	1,2,3		59.14	63 EU	LB6	4	1.874	1,2,3	
58.52	62 SM	LB7	4	1.856	1,2		59.17	28 NI	KB1	5	1.500	1,2,3	
58.52	64 GD	LY4	5	1.485	1,2		59.25	23 V	KA1	3	2.503	1,2,3	
58.52	68 ER	LB9	5	1.485	1,2		59.28	60 ND	LY1	4	1.878	1,2,3	
58.60	52 TE	LL	2	3.717	1,2,3		59.31	59 PR	LY2	4	1.879	1,2,3	
58.60	55 CS	LB9	3	2.478	1,2		59.32	38 SR	LN	1	7.517	1,2,3	
58.61	74 W	LA2	5	1.487	1,2,3		59.36	23 V	KA2	3	2.507	1,2,3	
58.69	62 SM	LB9	4	1.861	1,2		59.39	69 TM	LB3	5	1.505	1,2,3	
58.70	28 NI	KB5	5	1.489	1,2		59.42	62 SM	LB2	4	1.882	1,2,3	
58.70	28 NI	KB2	5	1.489	1,2,3		59.46	55 CS	LB2	3	2.511	1,2,3	
58.71	56 BA	LB6	3	2.482	1,2,3		59.46	52 TE	LY4	3	2.511	1,2	
58.71	62 SM	LL	3	2.482	1,2,3		59.49	59 PR	LN	3	2.512	1,2,3	
58.72	46 PD	LY1	2	3.724	1,2,3		59.51	72 HF	MA1	1	7.539	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						59.54 TO 61.44					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
59.54	22 TI	K81	3	2.514	1,2,3	60.48	65 TB	LY1	5	1.530	1,2,3
59.54	22 TI	K83	3	2.514	1,2	60.48	69 TM	LB1	5	1.530	1,2,3
59.56	49 IN	LA1	2	3.772	1,3	60.61	73 TA	LA2	5	1.533	1,2,3
59.57	72 HF	MA2	1	7.546	1,2	60.61	56 BA	LB4	3	2.555	1,2,3
59.59	56 BA	LB3	3	2.516	1,2,3	60.62	47 AG	LB3	2	3.833	1,2,3
59.59	63 EU	LB3	4	1.887	1,2,3	60.65	64 GD	LY2	5	1.534	1,2,3
59.71	49 IN	LA2	2	3.781	1,2,3	60.74	63 EU	LB1	4	1.920	1,2,3
59.76	36 KR	LB1	1	7.568	1	60.74	66 DY	LA2	4	1.920	1,2,3
59.78	68 ER	LB2	5	1.514	1,2,3	60.77	58 CE	LA1	3	2.561	1,2,3
59.83	69 TM	LB6	5	1.515	1,2,3	60.93	52 TE	LY2	3	2.567	1,3
59.83	70 YB	LL	4	1.894	1,2,3	60.93	52 TE	LY3	3	2.567	1,2
59.85	53 SN	LN	2	3.789	1,2,3	60.93	56 BA	LB1	3	2.567	1,2,3
59.90	46 PD	LB9	2	3.792	1,2	60.95	63 EU	LB4	4	1.926	1,2,3
59.94	66 DY	LN	4	1.897	1,2,3	60.96	29 CU	KA1	5	1.541	1,2,3
59.94	25 MN	K85	4	1.897	1,2	60.96	77 IR	LL	5	1.541	1,2,3
59.96	66 DY	LY5	5	1.518	1,2	61.00	58 CE	LA2	3	2.570	1,2,3
60.01	58 CE	LY4	4	1.899	1,2	61.09	63 EU	LY4	5	1.544	1,2
60.03	46 PD	LB10	2	3.799	1,2	61.09	29 CU	KA2	5	1.544	1,2,3
60.13	73 TA	LA1	5	1.522	1,2,3	61.09	69 TM	LB4	5	1.544	1,2,3
60.17	72 HF	LN	5	1.523	1,2,3	61.27	60 ND	LY5	4	1.935	1,2
60.18	47 AG	LB6	2	3.808	1,2,3	61.27	47 AG	LB4	2	3.870	1,2,3
60.36	66 DY	LA1	4	1.909	1,2,3	61.30	26 FE	KA1	4	1.936	1,2,3
60.39	25 MN	K81	4	1.910	1,2,3	61.31	67 HO	LB10	5	1.549	1
60.43	46 PD	LY5	2	3.822	1,2	61.32	53 I	LY1	3	2.582	1,2,3
60.44	64 GD	LY3	5	1.529	1,2,3	61.44	26 FE	KA2	4	1.940	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							61.51 TO 63.54						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
61.51	18 A	KBI	2	3.884	1		62.48	54 XE	LB2	3	2.626	1	
61.58	51 SB	LL	2	3.888	1,2,3		62.53	55 CS	LB3	3	2.628	1,2,3	
61.61	55 CS	LB6	3	2.593	1,2,3		62.54	65 TB	LB5	5	1.577	2	
61.65	62 SM	LB6	4	1.946	1,2,3		62.54	65 TB	LY5	5	1.577	1	
61.74	44 RU	LY3	2	3.897	1,2		62.55	45 RH	LY1	2	3.943	1,2,3	
61.74	44 RU	LY2	2	3.897	1,2,3		62.60	65 TB	LN	4	1.973	1	
61.84	68 ER	LB3	5	1.561	1,2,3		62.67	65 TB	LA1	4	1.975	1,2,3	
61.89	36 KR	LA2	1	7.811	1		62.67	72 HF	LA2	5	1.580	1,2,3	
61.89	36 KR	LA1	1	7.811	1		62.78	48 CD	LA1	2	3.956	1,2,3	
61.95	46 PD	LB2	2	3.949	1,2,3		62.82	51 SB	LY4	3	2.639	1,2	
61.97	69 TM	LL	4	1.955	1,2,3		62.90	76 OS	LL	5	1.585	1,2,3	
61.97	58 CE	LY3	4	1.955	1,2,3		62.94	48 CD	LA2	2	3.965	1,2,3	
61.97	92 U	MA1	2	3.910	1,2		62.96	57 LA	LY4	4	1.983	1,2	
62.04	61 PM	LB2	4	1.957	1		62.98	68 ER	LB1	5	1.537	1,2,3	
62.10	68 ER	LB6	5	1.567	1,2,3		63.06	65 TB	LA2	4	1.986	1,2,3	
62.10	67 HO	LB2	5	1.567	1,2,3		63.16	63 EU	LY3	5	1.591	1,2,3	
62.11	38 SR	LL	1	7.836	1,2,3		63.21	64 GD	LY1	5	1.592	1,2,3	
62.15	71 LU	MA1	1	7.844	1,2		63.26	49 IN	LN	2	3.983	1,2,3	
62.15	58 CE	LY2	4	1.960	1,2,3		63.30	53 I	LY5	3	2.657	1,2	
62.18	59 PR	LY1	4	1.961	1,2,3		63.39	13 AL	KBI	1	7.981	1,2,3	
62.19	72 HF	LA1	5	1.569	1,2,3		63.43	63 EU	LY2	5	1.597	1,2,3	
62.22	92 U	MA2	2	3.924	1,2		63.49	62 SM	LB1	4	1.998	1,2,3	
62.22	62 SM	LB3	4	1.962	1,2,3		63.52	66 DY	LB7	5	1.599	1,2	
62.32	58 CE	LN	3	2.620	1,2,3		63.52	57 LA	LA1	3	2.665	1,2,3	
62.39	47 AG	LB1	2	3.934	1,2,3		63.54	55 CS	LB4	3	2.665	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						63.56 TO 65.74					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
63.56	66 DY	LB9	5	1.650	1	64.54	67 HC	LB6	5	1.622	1,2,3
63.56	62 SM	LB4	4	2.000	1,2,3	64.58	66 DY	LB2	5	1.623	1,2,3
63.60	68 ER	LB4	5	1.601	1,2,3	64.67	35 BR	LB1	1	8.125	2,3
63.76	57 LA	LA2	3	2.674	1,2,3	64.77	52 TE	LY1	3	2.712	1,2,3
63.81	63 ND	LL	3	2.676	1,2,3	64.79	70 YB	MA1	1	8.138	1,2
63.83	62 SM	LY4	5	1.606	1,2	64.80	53 I	LB9	3	2.713	1,2
63.84	46 PD	LB6	2	4.016	1,2,3	64.82	46 PD	LB4	2	4.071	1,2,3
63.87	66 DY	LB10	5	1.607	1	64.82	50 SN	LL	2	4.071	1,2,3
63.88	63 ND	LB7	4	2.009	1,2	64.84	60 ND	LB2	4	2.036	1,2,3
63.92	37 RB	LN	1	8.041	1,2,3	64.90	71 LU	LA2	5	1.630	1,2,3
63.95	91 PA	MA1	2	4.022	1,2	64.90	75 RE	LL	5	1.630	1,2,3
63.96	27 CO	KB5	5	1.609	1,2	64.93	70 YB	MA2	1	8.154	1,2
64.00	55 CS	LB1	3	2.683	1,2,3	64.99	53 I	LB10	3	2.720	1,2
64.13	60 ND	LB9	4	2.016	1,2	65.02	57 LA	LY3	4	2.041	1,2,3
64.16	46 PD	LB3	2	4.034	1,2,3	65.16	70 YB	LN	5	1.636	1,2,3
64.18	91 PA	MA2	2	4.035	1,2	65.20	64 GD	LA1	4	2.046	1,2,3
64.24	68 ER	LL	4	2.019	1,2,3	65.20	57 LA	LY2	4	2.046	1,2,3
64.27	59 PR	LY5	4	2.020	1,2	65.25	53 I	LB7	3	2.730	1,2
64.32	51 SB	LY3	3	2.695	1,2	65.27	58 CE	LY1	4	2.048	1,2,3
64.32	51 SB	LY2	3	2.695	1,2,3	65.31	64 GD	LN	4	2.049	1,2,3
64.36	45 RH	LY5	2	4.045	1,2	65.39	64 GD	LY5	5	1.641	1
64.38	60 ND	LB10	4	2.023	1,2	65.52	57 LA	LN	3	2.740	1,2,3
64.40	71 LU	LA1	5	1.619	1,2,3	65.59	64 GD	LA2	4	2.057	1,2,3
64.40	67 HO	LB3	5	1.619	1,2,3	65.66	67 HO	LB1	5	1.647	1,2,3
64.49	27 CO	KB1	5	1.621	1,2,3	65.74	22 TI	KA1	3	2.748	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						65.79 TO 67.36					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
65.79	53 I	LB2	3	2.750	1,2,3	66.60	21 SC	KB1	3	2.780	1,2,3
65.85	22 TI	KA2	3	2.752	1,2,3	66.60	13 AL	KA2	1	8.340	1,2,3
65.90	45 RH	LB2	2	4.131	1,2,3	66.64	67 HC	LL	4	2.086	1,2,3
66.02	62 SM	LY3	5	1.655	1,2,3	66.71	59 PR	LL	3	2.784	1,2,3
66.03	90 TH	MA1	2	4.138	1,2	66.74	56 BA	LA2	3	2.785	1,2,3
66.10	24 CR	KB5	4	2.071	1,2	66.78	70 YB	LA1	5	1.672	1,2,3
66.15	28 NI	KA1	5	1.658	1,2,3	66.81	37 RB	LL	1	8.363	1,2,3
66.15	63 EU	LY1	5	1.658	1,2,3	66.82	59 PR	LB7	4	2.091	1,2
66.17	21 SC	KB5	3	2.764	1,2	66.82	44 RU	LY1	2	4.182	1,2,3
66.17	46 PD	LB1	2	4.146	1,2,3	66.87	52 TE	LY5	3	2.790	1,2
66.20	65 TB	LB7	5	1.659	1,2	66.92	35 BR	LA1	1	8.375	1,2,3
66.20	67 HO	LB4	5	1.659	1,2,3	66.92	35 BR	LA2	1	8.375	1,2
66.20	62 SM	LY2	5	1.659	1,2,3	67.00	18 A	KA1	2	4.192	1,2,3
66.24	56 BA	LY4	4	2.075	1,2	67.02	48 CD	LN	2	4.193	1,3
66.26	90 TH	MA2	2	4.151	1,2	67.05	18 A	KA2	2	4.195	1,2,3
66.31	47 AG	LA1	2	4.154	1,2,3	67.05	74 W	LL	5	1.678	1,2,3
66.33	28 NI	KA2	5	1.662	1,2,3	67.15	59 PR	LB9	4	2.100	1,2
66.46	61 PM	LB1	4	2.081	1,2,3	67.19	66 DY	LB6	5	1.681	1,2,3
66.47	56 BA	LA1	3	2.775	1,2,3	67.19	66 DY	LB3	5	1.681	1,2,3
66.48	47 AG	LA2	2	4.163	1,2,3	67.22	25 MN	KA1	4	2.102	1,2,3
66.52	50 SN	LY4	3	2.777	1,2	67.23	54 XE	LB1	3	2.803	1
66.56	65 TB	LB10	5	1.667	1,2	67.24	65 TB	LB2	5	1.682	1,2,3
66.58	13 AL	KA1	1	8.338	1,2,3	67.28	70 YB	LA2	5	1.683	1,2,3
66.60	24 CR	KB3	4	2.085	1,2	67.29	60 ND	LB6	4	2.104	1,2,3
66.60	24 CR	KB1	4	2.085	1,2,3	67.36	25 MN	KA2	4	2.106	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						67.40 TO 67.40					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
67.40	59 PR	L810	4	2.107	1,2						

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						67.51 TO 70.21					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
67.51	58 CE	LY5	4	2.410	1,2	68.86	52 TE	LB7	3	2.863	1,2
67.69	69 TM	MA1	1	8.460	1,2	68.97	66 DY	LB4	5	1.723	1,2,3
67.69	69 TM	MA2	1	8.460	1,2	69.10	64 GD	LB7	5	1.723	1,2
67.83	59 PR	LB2	4	2.119	1,2,3	69.15	64 GD	LB9	5	1.724	1
67.87	69 TM	LN	5	1.696	1,2,3	69.17	53 I	LB3	3	2.874	1,2,3
67.91	63 EU	LA1	4	2.121	1,2,3	69.24	69 TM	LA1	5	1.726	1,2,3
67.91	45 RH	LB6	2	4.242	1,2,3	69.26	66 DY	LL	4	2.158	1,2,3
68.04	50 SN	LY2	3	2.833	1,3	69.29	62 SM	LY1	5	1.727	1,2,3
68.09	45 RH	LB3	2	4.252	1,2,3	69.33	73 TA	LL	5	1.728	1,2,3
68.09	60 ND	LB3	4	2.126	1,2,3	69.39	52 TE	LB2	3	2.882	1,2,3
68.15	53 I	LB6	3	2.837	1,2,3	69.47	64 GD	LB10	5	1.731	1,2
68.21	52 TE	LB9	3	2.839	1,2	69.59	60 ND	LB4	4	2.167	1,2,3
68.27	63 EU	LN	4	2.131	1	69.59	60 ND	LB1	4	2.167	1,2,3
68.31	63 EU	LA2	4	2.132	1,2,3	69.66	58 CE	LL	3	2.892	1,2,3
68.38	56 BA	LY3	4	2.134	1,2,3	69.66	55 CS	LA1	3	2.892	1,2,3
68.40	49 LN	LL	2	4.269	1,2,3	69.75	69 TM	LA2	5	1.737	1,2,3
68.42	63 EU	LY5	5	1.708	1,2	69.85	55 CS	LY4	4	2.174	1,2
68.43	52 TE	LB10	3	2.847	1,2	69.93	65 TB	LB6	5	1.741	1,2,3
68.51	66 DY	LB1	5	1.710	1,2,3	69.94	55 CS	LA2	3	2.902	1,2,3
68.53	56 BA	LY2	4	2.138	1,2,3	70.07	26 FE	XB5	5	1.744	1,2
68.54	51 SB	LY1	3	2.851	1,2,3	70.07	60 ND	LY4	5	1.744	1,2
68.67	57 LA	LY1	4	2.142	1,2,3	70.07	58 CE	LB7	4	2.130	1,2
68.73	44 RU	LY5	2	4.287	1,2	70.11	64 GD	LB2	5	1.745	1,2,3
68.76	45 RH	LB4	2	4.289	1,2,3	70.16	65 TB	LB3	5	1.746	1,2,3
68.84	56 BA	LN	3	2.862	1,2,3	70.21	34 SE	LB1	1	8.736	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							70.21 TO 72.48						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
70.21	53 I	LB4	3	2.912	1,2,3		71.69	62 SM	LY5	5	1.779	1	
70.21	46 PD	LA1	2	4.368	1,2,3		71.69	62 SM	LB5	5	1.779	2	
70.29	44 RU	LB2	2	4.372	1,2,3		71.78	72 HF	LL	5	1.781	1,2,3	
70.33	45 RH	LB1	2	4.374	1,2,3		71.86	52 TE	LB6	3	2.971	1,2,3	
70.36	58 CE	LB9	4	2.188	1,2		71.88	51 SB	LB9	3	2.972	1,2	
70.36	46 PD	LA2	2	4.376	1,2,3		71.92	68 ER	LA1	5	1.784	1,2,3	
70.44	59 PR	LB6	4	2.190	1,2,3		71.97	65 TB	LB4	5	1.785	1,2,3	
70.44	42 MO	LY2	2	4.380	1,2,3		72.01	33 AS	LB3	1	8.930	1,2,3	
70.44	42 MO	LY3	2	4.380	1,2		72.01	33 AS	LB4	1	8.930	1,2	
70.60	49 IN	LY4	3	2.926	1,2		72.03	55 CS	LY3	4	2.233	1,2,3	
70.62	68 ER	LN	5	1.756	1,2,3		72.07	65 TB	LL	4	2.234	1,2,3	
70.62	58 CE	LB10	4	2.195	1,2		72.08	51 SB	LB10	3	2.979	1,2	
70.67	26 FE	KB1	5	1.757	1,2,3		72.11	63 EU	LB7	5	1.788	1,2	
70.77	62 SM	LA1	4	2.199	1,2,3		72.11	49 IN	LY3	3	2.980	1,2	
70.77	51 SB	LY5	3	2.932	1,2		72.11	49 IN	LY2	3	2.980	1,2,3	
70.86	17 CL	KB1	2	4.403	1,2,3		72.15	27 CO	KA1	5	1.789	1,2,3	
70.91	53 I	LB1	3	2.937	1,2,3		72.18	55 CS	LY2	4	2.237	1,2,3	
70.99	57 LA	LY5	4	2.205	1,2		72.29	48 CD	LL	2	4.480	1,2,3	
71.14	58 CE	LB2	4	2.209	1,2,3		72.29	63 EU	LB9	5	1.792	1,2	
71.14	47 AG	LN	2	4.418	1,2,3		72.33	56 BA	LY1	4	2.241	1,2,3	
71.18	62 SM	LA2	4	2.210	1,2,3		72.34	27 CO	KA2	5	1.793	1,2,3	
71.44	59 PR	LB3	4	2.217	1,2,3		72.42	44 RU	LB3	2	4.487	1,2,3	
71.47	62 SM	LN	4	2.218	1,2,3		72.42	44 RU	LB6	2	4.487	1,2,3	
71.55	65 TB	LB1	5	1.776	1,2,3		72.47	55 CS	LN	3	2.993	1,2,3	
71.55	43 TC	LY1	2	4.440	1		72.48	68 ER	LA2	5	1.796	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						72.48 TO 75.17					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
72.48	60 ND	LY3	5	1.796	1,2,3	73.87	57 LA	LB9	4	2.282	1,2
72.57	34 SE	LA2	1	8.990	1,2	73.89	67 HC	LN	5	1.826	1,2,3
72.57	34 SE	LA1	1	8.990	1,2,3	73.91	61 PM	LA1	4	2.283	1,2,3
72.67	63 EU	LB10	5	1.800	1,2	73.95	23 V	KB1	4	2.284	1,2,3
72.70	50 SN	LY1	3	3.001	1,2,3	73.95	23 V	KB3	4	2.284	1,2
72.71	60 ND	LY2	5	1.801	1,2,3	73.97	52 TE	LB4	3	3.046	1,2,3
72.81	51 SB	LB7	3	3.005	1	74.17	24 CR	KA1	4	2.290	1,2,3
72.84	57 LA	LL	3	3.006	1,2,3	74.17	57 LA	LB10	4	2.290	1,2
72.86	59 PR	LB4	4	2.255	1,2,3	74.25	61 PM	LA2	4	2.292	1
72.92	52 TE	LB3	3	3.009	1,2,3	74.33	24 CR	KA2	4	2.294	1,2,3
72.97	59 PR	LB1	4	2.256	1,2,3	74.36	71 LU	LL	5	1.836	1,2,3
73.00	64 GD	LB6	5	1.807	1,2,3	74.50	45 RH	LA1	2	4.597	1,2,3
73.09	54 XE	LA1	3	3.015	1	74.65	45 RH	LA2	2	4.605	1,2,3
73.10	44 RU	LB4	2	4.525	1,2,3	74.67	57 LA	LB2	4	2.303	1,2,3
73.23	63 EU	LB2	5	1.812	1,2,3	74.76	20 CA	KB5	3	3.074	1,2
73.32	51 SB	LB2	3	3.025	1,2,3	74.79	67 HO	LA1	5	1.845	1,2,3
73.37	54 XE	LA2	3	3.025	1	74.84	64 GD	LB1	5	1.846	1,2,3
73.37	64 GD	LB3	5	1.815	1,2,3	74.85	52 TE	LB1	3	3.077	1,2,3
73.38	23 V	KB5	4	2.260	1,2	74.86	56 BA	LY5	4	2.308	1,2
73.42	61 PM	LY1	5	1.816	1	74.93	44 RU	LB1	2	4.620	1,2,3
73.54	21 SC	KA1	3	3.03	1,2,3	74.97	58 CE	LB3	4	2.311	1,2,3
73.56	59 PR	LY4	5	1.819	1,2	75.01	64 GD	LL	4	2.312	1,2,3
73.61	57 LA	LB7	4	2.275	1,2	75.07	35 BR	LN	1	9.254	1,3
73.65	21 SC	KA2	3	3.035	1,2,3	75.07	50 SN	LY5	3	3.085	1,2
73.83	58 CE	LB6	4	2.281	1,2,3	75.17	64 GD	LB4	5	1.853	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							75.22 TO 78.10						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
75.22	20 CA	KB1	3	3.090	1,2,3		76.69	58 CE	LB1	4	2.356	1,2,3	
75.24	43 TC	LB2	2	4.636	1		76.80	63 EU	LB3	5	1.887	1,2,3	
75.27	60 ND	LY6	5	1.855	2		76.88	53 I	LA1	3	3.148	1,2,3	
75.31	62 SM	LB7	5	1.856	1,2		76.96	42 MC	LY1	2	4.726	1,2,3	
75.31	67 HO	LA2	5	1.856	1,2,3		77.00	51 SB	LB3	3	3.152	1,2,3	
75.55	62 SM	LB9	5	1.861	1,2		77.00	17 CL	KA1	2	4.728	1,2,3	
75.58	41 NB	LY3	2	4.654	1,2		77.04	17 CL	KA2	2	4.730	1,2,3	
75.58	41 NB	LY2	2	4.654	1,2,3		77.09	50 SN	LB7	3	3.155	1,2	
75.69	46 PD	LN	2	4.660	1,2,3		77.13	70 YB	LL	5	1.894	1,2,3	
75.93	50 SN	LB9	3	3.115	1,2		77.17	53 I	LA2	3	3.158	1,2,3	
75.93	62 SM	LB10	5	1.869	1,2		77.23	60 ND	LA1	4	2.370	1,2,3	
75.93	51 SB	LB6	3	3.115	1,2,3		77.28	25 MN	KB5	5	1.897	1,2	
76.11	50 SN	LB10	3	3.121	1,2		77.28	66 DY	LN	5	1.897	1,2,3	
76.17	63 EU	LB6	5	1.874	1,2,3		77.29	49 IN	LY1	3	3.162	1,2,3	
76.17	59 PR	LY3	5	1.874	1,2,3		77.38	58 CE	LY4	5	1.899	1,2	
76.36	60 ND	LY1	5	1.878	1,2,3		77.46	56 BA	LB9	4	2.376	1,2	
76.38	55 CS	LY1	4	2.348	1,2,3		77.58	57 LA	LB6	4	2.379	1,2,3	
76.41	59 PR	LY2	5	1.879	1,2,3		77.62	60 ND	LA2	4	2.380	1,3	
76.42	58 CE	LB4	4	2.349	1,2,3		77.67	50 SN	LB2	3	3.175	1,2,3	
76.51	56 BA	LL	3	3.135	1,2,3		77.86	66 DY	LA1	5	1.909	1,2,3	
76.56	62 SM	LB2	5	1.882	1,2,3		77.89	56 BA	LB10	4	2.387	1,2	
76.57	48 CD	LY3	3	3.137	1,2		77.91	25 MN	KB1	5	1.910	1,2,3	
76.60	47 AG	LL	2	4.707	1,2,3		77.99	12 MG	KB1	1	9.558	1,2,3	
76.60	48 CD	LY2	3	3.138	1,2,3		78.04	53 I	LY4	4	2.391	1,2	
76.60	33 AS	LB1	1	9.414	1,3		78.10	51 SB	LB4	3	3.190	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						78.20 TO 81.41					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
78.20	63 EU	LL	4	2.395	1,2,3	80.24	53 I	LY2	4	2.447	1,2,3
78.23	35 BR	LL	1	2.583	1,2,3	80.32	57 LA	LB4	4	2.449	1,2,3
78.39	66 DY	LA2	5	1.920	1,2,3	80.36	58 CE	LY2	5	1.960	1,2,3
78.39	63 EU	LB1	5	1.920	1,2,3	80.36	55 CS	LL	3	3.267	1,2,3
78.55	56 BA	LB2	4	2.404	1,2,3	80.39	49 IN	LB9	3	3.268	1,2
78.69	63 EU	LB4	5	1.926	1,2,3	80.40	59 PR	LY1	5	1.961	1,2,3
78.75	60 ND	LN	4	2.409	1,2,3	80.42	50 SN	LB6	3	3.269	1,2,3
78.78	57 LA	LB3	4	2.410	1,2,3	80.45	62 SM	LB3	5	1.962	1,2,3
79.06	55 CS	LY5	4	2.417	1,2	80.57	49 IN	LB10	3	3.274	1,2
79.09	33 AS	LA1	1	2.671	1,2,3	80.67	57 LA	LB1	4	2.458	1,2,3
79.09	33 AS	LA2	1	2.671	1,2	80.75	53 I	LN	3	3.280	1,2,3
79.12	42 MO	LY5	2	4.837	1,2	80.79	45 RH	LN	2	4.922	1,2,3
79.13	60 ND	LY5	5	1.935	1,2	80.81	42 MO	LB2	2	4.923	1,2,3
79.16	51 SB	LB1	3	3.226	1,2,3	80.83	54 XE	LY1	4	2.462	1
79.18	26 FE	KA1	5	1.936	1,2,3	80.87	59 PR	LA1	4	2.463	1,2,3
79.29	44 RU	LA1	2	4.846	1,2,3	81.00	65 TB	LN	5	1.973	1
79.37	26 FE	KA2	5	1.940	1,2,3	81.02	52 TE	LA1	3	3.289	1,2,3
79.43	44 RU	LA2	2	4.853	1,2,3	81.10	65 TB	LA1	5	1.975	1,2,3
79.67	62 SM	LB6	5	1.946	1,2,3	81.24	12 MG	KA1	1	9.889	1,2,3
79.83	49 IN	LY5	3	3.249	1,2	81.24	12 MG	KA2	1	9.889	1,2,3
80.04	43 TC	LB1	2	4.884	1	81.27	59 PR	LA2	4	2.473	1,2,3
80.11	69 TM	LL	5	1.955	1,2,3	81.29	52 TE	LA2	3	3.298	1,2,3
80.11	58 CE	LY3	5	1.955	1,2,3	81.39	46 PD	LL	2	4.952	1,2,3
80.21	61 PM	LB2	5	1.957	1	81.41	40 ZR	LY2	2	4.953	1,2,3
80.24	53 I	LY3	4	2.447	1,2	81.41	40 ZR	LY3	2	4.953	1,2

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							81.47 TO 84.81						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
81.47	55 CS	LB9	4	2.478	1,2		82.83	59 PR	LN	4	2.512	1,2,3	
81.50	57 LA	LY4	5	1.983	1,2		82.91	22 TI	KB3	4	2.514	1,2	
81.53	53 SN	LB3	3	3.306	1,2,3		82.91	22 TI	KB1	4	2.514	1,2,3	
81.53	47 AG	LY3	3	3.306	1,2		82.99	56 BA	LB3	4	2.516	1,2,3	
81.53	47 AG	LY2	3	3.306	1,3		82.99	16 S	KB1	2	5.032	1,2,3	
81.63	56 BA	LB6	4	2.482	1,2,3		83.07	41 NB	LY1	2	5.036	1,2,3	
81.63	62 SM	LL	4	2.482	1,2,3		83.09	20 CA	KA1	3	3.358	1,2,3	
81.64	65 TB	LA2	5	1.986	1,2,3		83.15	60 ND	LB9	5	2.016	1,2	
81.74	55 CS	LB7	4	2.485	1,2		83.21	20 CA	KA2	3	3.362	1,2,3	
81.93	34 SE	LN	1	9.959	1,2,3		83.30	68 ER	LL	5	2.019	1,2,3	
82.02	55 CS	LB10	4	2.492	1,2		83.33	42 MO	LB6	2	5.049	1,2,3	
82.24	62 SM	LB1	5	1.998	1,2,3		83.33	42 MO	LB4	2	5.049	1,2,3	
82.26	22 TI	KB5	4	2.498	1,2		83.35	59 PR	LY5	5	2.020	1,2	
82.34	62 SM	LB4	5	2.000	1,2,3		83.50	60 ND	LB10	5	2.023	1,2	
82.42	48 CD	LY1	3	3.336	1,2,3		83.91	50 SN	LB1	3	3.385	1,2,3	
82.46	23 V	KA1	4	2.503	1,2,3		84.16	60 ND	LB2	5	2.036	1,2,3	
82.48	49 IN	LB2	3	3.338	1,2,3		84.30	32 GE	LB1	1	10.194	2,3	
82.58	65 TB	MA1	1	10.023	2		84.42	57 LA	LY3	5	2.041	1,2,3	
82.58	65 TB	MA2	1	10.023	2		84.57	56 BA	LB4	4	2.555	1,2,3	
82.61	42 MO	LB3	2	5.013	1,2,3		84.65	43 TC	LA1	2	5.114	1	
82.63	23 V	KA2	4	2.507	1,2,3		84.67	64 GD	LA1	5	2.046	1,2,3	
82.64	50 SN	LB4	3	3.343	1,2,3		84.67	57 LA	LY2	5	2.046	1,2,3	
82.79	52 TE	LY4	4	2.511	1,2		84.73	83 BI	MA1	2	5.118	1,2	
82.79	55 CS	LB2	4	2.511	1,2,3		84.77	58 CE	LY1	5	2.048	1,2,3	
82.80	60 ND	LB7	5	2.009	1,2		84.81	58 CE	LA1	4	2.561	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						84.82 TO 88.15					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
84.82	64 GD	LN	5	2.049	1,2,3	86.52	49 IN	LB3	3	3.470	1,2,3
84.83	43 TC	LA2	2	5.123	1	86.52	44 RU	LN	2	5.205	1,2,3
84.96	83 BC	MA2	2	5.129	1,2	86.68	24 CR	KB3	5	2.085	1,2
85.06	56 BA	LB1	4	2.567	1,2,3	86.68	24 CR	KB1	5	2.085	1,2,3
85.06	52 TE	LY3	4	2.567	1,2	86.73	67 HQ	LL	5	2.086	1,2,3
85.06	52 TE	LY2	4	2.567	1,3	86.77	45 RH	LL	2	5.217	1,2,3
85.13	48 CD	LY5	3	3.425	1,2	86.99	59 PR	LB7	5	2.091	1,2
85.18	58 CE	LA2	4	2.570	1,2,3	87.00	32 GE	LA1	1	10.456	2,3
85.23	64 GD	LA2	5	2.057	1,2,3	87.00	32 GE	LA2	1	10.456	2
85.28	48 CD	LB9	3	3.430	1,2	87.11	46 PD	LY2	3	3.489	1,2,3
85.31	34 SE	LL	1	10.293	1,2,3	87.11	46 PD	LY3	3	3.489	1,2
85.41	41 NB	LY5	2	5.151	1,2	87.21	41 NB	LB2	2	5.238	1,2,3
85.47	49 IN	LB6	3	3.436	1,2,3	87.25	58 CE	LN	4	2.620	1,2,3
85.50	48 CD	LB10	3	3.437	1,2	87.46	59 PR	LB9	5	2.100	1,2
85.53	52 TE	LN	3	3.438	1,2,3	87.50	54 XE	LB2	4	2.626	1
85.56	51 SB	LA1	3	3.439	1,2,3	87.56	25 MN	KA1	5	2.102	1,2,3
85.62	19 K	KB5	3	3.441	1,2	87.58	55 CS	LB3	4	2.626	1,2,3
85.67	53 I	LY1	4	2.582	1,2,3	87.67	60 ND	LB6	5	2.104	1,2,3
85.84	51 SB	LA2	3	3.448	1,2,3	87.68	49 IN	LB4	3	3.507	1,2,3
85.94	42 MO	LB1	2	5.177	1,2,3	87.77	25 MN	KA2	5	2.106	1,2,3
85.95	24 CR	KB5	5	2.071	1,2	87.82	59 PR	LB10	5	2.107	1,2
86.02	19 K	KB1	3	3.454	1,2,3	87.90	48 CD	LB2	3	3.514	1,2,3
86.13	55 CS	LB6	4	2.593	1,2,3	87.98	58 CE	LY5	5	2.110	1,2
86.16	56 BA	LY4	5	2.075	1,2	88.04	51 SB	LY4	4	2.639	1,2
86.47	61 FM	LB1	5	2.081	1,2,3	88.15	39 Y	LY2	2	5.283	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						88.15 TO 89.91					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
88.15	39 Y	LY3	2	5.283	2						
88.18	47 AG	LY1	3	3.523	1,2,3						
88.19	82 PB	MA1	2	5.285	1,2						
88.45	59 PR	LB2	5	2.119	1,2,3						
88.48	82 PB	MA2	2	5.299	1,2						
88.56	63 EU	LA1	5	2.121	1,2,3						
88.72	41 NB	LB3	2	5.310	1,2,3						
88.80	53 I	LY5	4	2.657	1,2						
88.82	60 ND	LB3	5	2.126	1,2,3						
89.09	63 EU	LN	5	2.131	1						
89.14	57 LA	LA1	4	2.665	1,2,3						
89.14	63 EU	LA2	5	2.132	1,2,3						
89.18	55 CS	LB4	4	2.666	1,2,3						
89.19	49 IN	LB1	3	3.555	1,2,3						
89.25	56 BA	LY3	5	2.134	1,2,3						
89.26	53 I	LL	3	3.557	1,2,3						
89.46	41 NB	LB4	2	5.345	1,2,3						
89.46	56 BA	LY2	5	2.138	1,2,3						
89.52	57 LA	LA2	4	2.674	1,2,3						
89.61	60 ND	LL	4	2.676	1,2,3						
89.67	57 LA	LY1	5	2.142	1,2,3						
89.80	41 NB	LB6	2	5.361	1,2,3						
89.90	55 CS	LB1	4	2.683	1,2,3						
89.91	33 AS	LN	1	10.733	1,3						

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						90.03 TO 93.90					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
90.03	16 S	KA1	2	5.372	1,2,3	92.14	58 CE	LB9	5	2.188	1,2
90.10	16 S	KA2	2	5.375	1,2,3	92.19	81 TL	MA2	2	5.472	1,2
90.29	40 ZR	LY1	2	5.384	1,2,3	92.25	59 PR	LB6	5	2.190	1,2,3
90.42	51 S8	LY2	4	2.695	1,2,3	92.30	63 EU	MA1	1	10.954	1
90.42	51 S3	LY3	4	2.695	1,2	92.36	57 LA	LN	4	2.740	1,2,3
90.52	66 DY	LL	5	2.158	1,2,3	92.52	58 CE	LB10	5	2.195	1,2
90.63	50 S4	LA1	3	3.600	1,2,3	92.62	41 NB	LB1	2	5.492	1,2,3
90.76	42 MD	LA1	2	5.406	1,2,3	92.71	22 TI	KA1	4	2.748	1,2,3
90.79	47 AG	LB9	3	3.505	1,2	92.73	40 ZR	LY5	2	5.497	1,2
90.89	51 S3	LN	3	3.608	1,2,3	92.74	62 SM	LA1	5	2.199	1,2,3
90.92	50 S4	LA2	3	3.609	1,2,3	92.80	53 I	LB2	4	2.750	1,2,3
90.93	42 MD	LA2	2	5.414	1,2,3	92.86	44 RU	LL	2	5.503	1,2,3
90.99	47 AG	LB10	3	3.611	1,2	92.89	22 TI	KA2	4	2.752	1,2,3
91.01	60 ND	LB1	5	2.167	1,2,3	93.07	57 LA	LY5	5	2.205	1,2
91.01	60 ND	LB4	5	2.167	1,2,3	93.29	58 CE	LB2	5	2.209	1,2,3
91.08	48 CD	LB6	3	3.614	1,2,3	93.29	31 GA	LB1	1	11.545	3
91.15	47 AG	LY5	3	3.616	1,2	93.30	48 CD	LB4	3	3.682	1,2,3
91.15	52 TE	LY1	4	2.712	1,2,3	93.35	62 SM	LA2	5	2.210	1,2,3
91.19	53 I	LB9	4	2.713	1,2	93.40	45 RH	LY3	3	3.685	1,2
91.38	55 CS	LY4	5	2.174	1,2	93.40	45 RH	LY2	3	3.685	1,2,3
91.49	53 I	LB10	4	2.720	1,2	93.41	21 SC	KB5	4	2.764	1,2
91.71	58 CE	LB7	5	2.180	1,2	93.56	33 AS	LL	1	11.069	1,3
91.93	53 I	LB7	4	2.730	1,2	93.73	59 PR	LB3	5	2.217	1,2,3
91.95	81 TL	MA1	2	5.461	1,2	93.79	62 SM	LN	5	2.218	1,2,3
92.09	48 CD	LB3	3	3.645	1,2,3	93.90	56 BA	LA1	4	2.775	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							93.99 TO 97.84					
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF
93.99	50 SN	LY4	4	2.777	1,2		96.49	80 HG	MA2	2	5.666	1,2
94.00	47 AG	LB2	3	3.703	1,2,3		96.49	80 HG	MA1	2	5.666	1,2
94.12	21 SC	KB1	4	2.780	1,2,3		96.49	50 SN	LY2	4	2.833	1,3
94.30	59 PR	LL	4	2.784	1,2,3		96.54	40 ZR	LB4	2	5.668	1,2,3
94.34	56 BA	LA2	4	2.785	1,2,3		96.62	49 IN	LA2	3	3.781	1,2,3
94.46	52 TE	LL	3	3.717	1,2,3		96.64	23 V	KB5	5	2.269	1,2
94.56	52 TE	LY5	4	2.790	1,2		96.67	53 I	LB6	4	2.837	1,2,3
94.62	55 CS	LY3	5	2.233	1,2,3		96.76	52 TE	LB9	4	2.839	1,2
94.67	65 TB	LL	5	2.234	1,2,3		96.89	50 SN	LN	3	3.789	1,2,3
94.70	40 ZR	LB2	2	5.586	2,3		96.98	57 LA	LB7	5	2.275	1,2
94.70	46 PD	LY1	3	3.724	1,2,3		96.99	46 PD	LB9	3	3.792	1,2
94.84	55 CS	LY2	5	2.237	1,2,3		97.13	52 TE	LB10	4	2.847	1,2
95.06	56 BA	LY1	5	2.241	1,2,3		97.23	46 PD	LB10	3	3.799	1,2
95.14	54 XE	LB1	4	2.803	1		97.31	51 SB	LY1	4	2.851	1,2,3
95.16	48 CD	LB1	3	3.738	1,2,3		97.32	58 CE	LB6	5	2.281	1,2,3
95.27	19 K	KA1	3	3.741	1,2,3		97.38	57 LA	LB9	5	2.282	1,2
95.29	30 ZN	LB3	1	11.225	3		97.44	61 PM	LA1	5	2.283	1,2,3
95.40	19 K	KA2	3	3.745	1,2,3		97.49	23 V	KB3	5	2.284	1,2
95.75	40 ZR	LB3	2	5.633	1,2,3		97.49	40 ZR	LB6	2	5.710	1,2,3
95.85	59 PR	LB4	5	2.255	1,2,3		97.49	23 V	KB1	5	2.284	1,2,3
96.00	38 SR	LY3	2	5.644	1,2		97.54	47 AG	LB6	3	3.808	1,2,3
96.00	38 SR	LY2	2	5.644	1,2,3		97.82	56 BA	LN	4	2.862	1,2,3
96.02	59 PR	LB1	5	2.258	1,2,3		97.82	41 NB	LA1	2	5.724	1,2,3
96.28	31 GA	LA1	1	11.313	3		97.84	57 LA	LB10	5	2.290	1,2
96.31	49 IN	LA1	3	3.772	1,3		97.84	24 CR	KA1	5	2.290	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						97.86 TO 103.26					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
97.86	52 TE	LB7	4	2.863	1,2	100.64	44 RU	LY2	3	3.897	1,2,3
97.95	61 PM	LA2	5	2.292	1	100.68	42 MO	LN	2	5.847	1,2,3
98.00	41 NB	LA2	2	5.732	2,3	100.80	49 IN	LY4	4	2.926	1,2
98.02	46 PD	LY5	3	3.822	1,2	100.85	79 AU	MA2	2	5.854	1,2
98.07	24 CR	KA2	5	2.294	1,2,3	101.07	46 PD	LB2	3	3.909	1,2,3
98.37	53 I	LB3	4	2.874	1,2,3	101.08	51 SB	LY5	4	2.932	1,2
98.40	47 AG	LB3	3	3.833	1,2,3	101.11	92 U	MA1	3	3.910	1,2
98.59	57 LA	LB2	5	2.333	1,2,3	101.23	55 CS	LY1	5	2.348	1,2,3
98.74	52 TE	LB2	4	2.882	1,2,3	101.28	58 CE	LB4	5	2.349	1,2,3
98.88	56 BA	LY5	5	2.308	1,2	101.32	53 I	LB1	4	2.937	1,2,3
99.05	58 CE	LB3	5	2.311	1,2,3	101.34	39 Y	LY5	2	5.875	1,2
99.11	64 GD	LL	5	2.312	1,2,3	101.61	92 U	MA2	3	3.924	1,2
99.20	55 CS	LA1	4	2.892	1,2,3	101.70	58 CE	LB1	5	2.356	1,2,3
99.20	58 CE	LL	4	2.892	1,2,3	101.97	47 AG	LB1	3	3.934	1,2,3
99.67	15 P	KB1	2	5.854	1,2,3	102.29	45 RH	LY1	3	3.943	1,2,3
99.67	32 GE	LN	1	11.658	3	102.54	60 ND	LA1	5	2.370	1,2,3
99.67	55 CS	LA2	4	2.902	1,2,3	102.76	48 CD	LA1	3	3.956	1,2,3
99.69	47 AG	LB4	3	3.870	1,2,3	102.90	56 BA	LB9	5	2.376	1,2
99.77	11 NA	KB1	1	11.617	1,3	102.95	52 TE	LB6	4	2.971	1,2,3
100.14	53 I	LB4	4	2.912	1,2,3	103.00	51 SB	LB9	4	2.972	1,2
100.18	18 A	KB1	3	3.884	1	103.09	48 CD	LA2	3	3.965	1,2,3
100.33	51 SB	LL	3	3.883	1,2,3	103.09	57 LA	LB6	5	2.379	1,2,3
100.42	40 ZR	LB1	2	5.835	1,2,3	103.15	60 ND	LA2	5	2.380	1,3
100.51	79 AU	MA1	2	5.845	1,2	103.26	11 NA	KA2	1	11.909	1,3
100.64	44 RU	LY3	3	3.897	1,2	103.26	11 NA	KA1	1	11.909	1,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							103.34 TO 108.33						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
103.34	51 SB	LB10	4	2.979	1,2		105.51	51 SB	LB2	4	3.023	1,2,3	
103.39	49 IN	LY3	4	2.980	1,2		105.61	54 XE	LA2	4	3.025	1	
103.39	49 IN	LY2	4	2.980	1,2,3		105.63	46 PD	LB3	3	4.034	1,2,3	
103.57	56 BA	LB10	5	2.387	1,2		105.67	91 PA	MA2	3	4.035	1,2	
103.68	32 GE	LL	1	11.944	3		105.78	78 PT	MA2	2	6.057	1,2	
103.74	49 IN	LN	3	3.983	1,2,3		105.91	21 SC	KA1	4	3.031	1,2,3	
103.82	53 I	LY4	5	2.391	1,2		106.05	45 RH	LY5	3	4.045	1,2	
103.95	39 Y	LB3	2	5.983	1,2,3		106.11	40 ZR	LA1	2	6.070	1,2,3	
104.03	55 CS	LN	4	2.993	1,2,3		106.11	21 SC	KA2	4	3.035	1,2,3	
104.06	63 EU	LL	5	2.395	1,2,3		106.31	40 ZR	LA2	2	6.078	1,2,3	
104.42	50 SN	LY1	4	3.001	1,2,3		106.66	52 TE	LB4	4	3.046	1,2,3	
104.62	56 BA	LB2	5	2.404	1,2,3		106.71	39 Y	LB6	2	6.094	1,2,3	
104.62	51 SB	LB7	4	3.005	1		107.03	50 SN	LL	3	4.071	1,2,3	
104.67	57 LA	LL	4	3.006	1,2,3		107.03	46 PD	LB4	3	4.071	1,2,3	
104.81	39 Y	LB4	2	6.018	1,2,3		107.31	53 I	LY3	5	2.447	1,2	
104.81	52 TE	LB3	4	3.009	1,2,3		107.31	53 I	LY2	5	2.447	1,2,3	
104.92	60 ND	LN	5	2.409	1,2,3		107.44	57 LA	LB4	5	2.449	1,2,3	
104.96	46 PD	LB6	3	4.016	1,2,3		108.01	57 LA	LB1	5	2.458	1,2,3	
104.99	57 LA	LB3	5	2.410	1,2,3		108.09	20 CA	KB5	4	3.074	1,2	
105.11	54 XE	LA1	4	3.015	1		108.14	42 MC	LL	2	6.150	1,2,3	
105.19	91 PA	MA1	3	4.022	1,2		108.24	52 TE	LB1	4	3.077	1,2,3	
105.42	55 CS	LY5	5	2.417	1,2		108.27	15 P	KA1	2	6.155	1,2,3	
105.48	37 RB	LY3	2	6.045	1,2		108.27	15 P	KA2	2	6.155	1,2,3	
105.51	37 RB	LY2	2	6.046	1,2,3		108.27	54 XE	LY1	5	2.462	1	
105.51	78 PT	MA1	2	6.046	1,2		108.33	59 PR	LA1	5	2.463	1,2,3	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						108.66 TO 112.36					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
108.66	50 SN	LY5	4	3.085	1,2	111.39	48 CD	LY3	4	3.137	1,2
108.92	23 CA	KB1	4	3.090	1,2,3	111.42	77 IR	MA2	2	6.275	1,2
108.98	59 PR	LA2	5	2.473	1,2,3	111.45	48 CD	LY2	4	3.138	1,2,3
109.31	55 CS	LB9	5	2.478	1,2	111.49	52 TE	LY4	5	2.511	1,2
109.35	45 RH	LB2	3	4.131	1,2,3	111.49	55 CS	LB2	5	2.511	1,2,3
109.57	56 BA	LB6	5	2.482	1,2,3	111.55	59 PR	LN	5	2.512	1,2,3
109.57	62 SM	LL	5	2.482	1,2,3	111.69	22 TI	KB1	5	2.514	1,2,3
109.62	93 TH	MA1	3	4.133	1,2	111.69	22 TI	KB3	5	2.514	1,2
109.72	41 NR	LN	2	6.211	1,2,3	111.77	18 A	KA1	3	4.192	1,2,3
109.75	39 Y	LB1	2	6.212	1,2,3	111.81	48 CD	LN	3	4.193	1,3
109.76	55 CS	LB7	5	2.485	1,2	111.82	56 BA	LB3	5	2.516	1,2,3
109.93	46 PD	LB1	3	4.146	1,2,3	111.89	18 A	KA2	3	4.195	1,2,3
110.13	90 TH	MA2	3	4.151	1,2	111.98	53 I	LA1	4	3.148	1,2,3
110.22	51 SB	LB6	4	3.115	1,2,3	111.98	38 SR	LY5	2	6.296	1,2
110.22	50 SN	LB9	4	3.115	1,2	112.20	51 SB	LB3	4	3.152	1,2,3
110.22	55 CS	LB10	5	2.492	1,2	112.36	50 SN	LB7	4	3.155	1,2
110.25	47 AG	LA1	3	4.154	1,2,3						
110.54	50 SN	LB10	4	3.121	1,2						
110.61	47 AG	LA2	3	4.163	1,2,3						
110.62	22 TI	KB5	5	2.458	1,2						
110.95	23 V	KA1	5	2.503	1,2,3						
111.05	77 IR	MA1	2	6.261	1,2						
111.22	23 V	KA2	5	2.507	1,2,3						
111.29	56 BA	LL	4	3.135	1,2,3						
111.37	44 RU	LY1	3	4.182	1,2,3						

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS							112.53 TO 121.05						
ANGLE	ELEM	LINE	N	LAMBDA	REF		ANGLE	ELEM	LINE	N	LAMBDA	REF	
112.53	53 I	LA2	4	3.158	1,2,3		118.20	41 NB	LL	2	6.517	1,2,3	
112.74	49 IN	LY1	4	3.162	1,2,3		118.26	38 SR	LB6	2	6.519	1,2,3	
113.46	50 SN	LB2	4	3.175	1,2,3		118.52	75 RE	MA1	2	6.528	1,2	
113.81	45 RH	LB6	3	4.242	1,2,3		118.70	55 CS	LL	4	3.267	1,2,3	
113.92	38 SR	LB3	2	6.367	1,2,3		118.76	49 IN	LB9	4	3.268	1,2	
114.23	45 RH	LB3	3	4.252	1,2,3		118.82	50 SN	LB6	4	3.269	1,2,3	
114.29	51 SB	LB4	4	3.190	1,2,3		119.12	49 IN	LB10	4	3.274	1,2	
114.49	56 BA	LB4	5	2.555	1,2,3		119.18	58 CE	LN	5	2.620	1,2,3	
114.91	58 CE	LA1	5	2.561	1,2,3		119.24	46 PD	LA1	3	4.368	1,2,3	
114.93	38 SR	LB4	2	6.403	1,2,3		119.41	44 RU	LB2	3	4.372	1,2,3	
114.94	49 IN	LL	3	4.269	1,2,3		119.47	53 I	LN	4	3.280	1,2,3	
115.34	52 TE	LY3	5	2.567	1,2		119.50	45 RH	LB1	3	4.374	1,2,3	
115.34	52 TE	LY2	5	2.567	1,3		119.59	46 PD	LA2	3	4.376	1,2,3	
115.34	56 BA	LB1	5	2.567	1,2,3		119.63	54 XE	LB2	5	2.626	1	
115.55	58 CE	LA2	5	2.570	1,2,3		119.77	42 MO	LY3	3	4.380	1,2	
115.70	44 RU	LY5	3	4.287	1,2		119.77	55 CS	LB3	5	2.628	1,2,3	
115.79	45 RH	LB4	3	4.289	1,2,3		119.77	42 MO	LY2	3	4.380	1,2,3	
116.23	39 Y	LA1	2	6.449	1,2,3		120.02	52 TE	LA1	4	3.289	1,2,3	
116.32	51 SB	LB1	4	3.226	1,2,3		120.56	52 TE	LA2	4	3.298	1,2,3	
116.40	53 I	LY1	5	2.582	1,2,3		120.61	51 SB	LY4	5	2.639	1,2	
116.43	39 Y	LA2	2	6.456	1,2,3		120.82	17 CL	KB1	3	4.403	1,2,3	
117.19	55 CS	LB6	5	2.593	1,2,3		120.90	40 ZR	LN	2	6.607	1,2,3	
117.41	76 OS	MA1	2	6.490	1,2		121.05	50 SN	LB3	4	3.306	1,2,3	
117.41	76 OS	MA2	2	6.490	1,2		121.05	47 AG	LY2	4	3.306	1,3	
117.64	49 IN	LY5	4	3.249	1,2		121.05	47 AG	LY3	4	3.306	1,2	

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						121.42 TO 131.97					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
121.42	38 SR	LB1	2	6.624	1,2,3	126.66	37 RB	LB3	2	6.787	1,2,3
121.51	47 AG	LN	3	4.418	1,2,3	127.10	53 I	LB10	5	2.720	1,2
121.99	53 I	LY5	5	2.657	1,2	127.78	37 RB	LB4	2	6.820	1,2,3
122.54	43 TC	LY1	3	4.440	1	127.95	53 I	LB7	5	2.730	1,2
122.62	57 LA	LA1	5	2.665	1,2,3	128.82	48 CD	LY5	4	3.425	1,2
122.70	55 CS	LB4	5	2.666	1,2,3	128.82	57 LA	LN	5	2.740	1,2,3
122.92	48 CD	LY1	4	3.336	1,2,3	129.17	48 CD	LB9	4	3.430	1,2
123.04	49 IN	LB2	4	3.338	1,2,3	129.28	38 SR	LA1	2	6.863	1,2,3
123.33	57 LA	LA2	5	2.674	1,2,3	129.49	38 SR	LA2	2	6.869	1,2,3
123.36	50 SN	LB4	4	3.343	1,2,3	129.52	22 TI	KA1	5	2.748	1,2,3
123.49	60 ND	LL	5	2.676	1,2,3	129.59	49 IN	LB6	4	3.436	1,2,3
124.05	55 CS	LB1	5	2.683	1,2,3	129.66	48 CD	LB10	4	3.437	1,2
124.32	20 CA	KA1	4	3.358	1,2,3	129.70	53 I	LB2	5	2.750	1,2,3
124.45	48 CD	LL	3	4.480	1,2,3	129.74	52 TE	LN	4	3.438	1,2,3
124.58	20 CA	KA2	4	3.362	1,2,3	129.81	51 SB	LA1	4	3.439	1,2,3
124.79	44 RU	LB3	3	4.487	1,2,3	129.88	22 TI	KA2	5	2.752	1,2,3
124.79	44 RU	LB6	3	4.487	1,2,3	129.95	19 K	KB5	4	3.441	1,2
125.02	51 SB	LY2	5	2.695	1,2,3	130.43	45 RH	LA1	3	4.597	1,2,3
125.02	51 SB	LY3	5	2.695	1,2	130.45	51 SB	LA2	4	3.448	1,2,3
125.56	37 RB	LY5	2	6.754	1,2	130.87	45 RH	LA2	3	4.605	1,2,3
126.03	14 SI	KB1	2	6.768	1,2,3	130.88	19 K	KB1	4	3.454	1,2,3
126.09	50 SN	LB1	4	3.385	1,2,3	130.96	21 SC	KB5	5	2.764	1,2
126.43	52 TE	LY1	5	2.712	1,2,3	131.25	40 ZR	LL	2	6.918	1,2,3
126.51	53 I	LB9	5	2.713	1,2	131.69	44 RU	LB1	3	4.620	1,2,3
126.58	44 RU	LB4	3	4.523	1,2,3	131.97	56 BA	LA1	5	2.775	1,2,3

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						132.06 TO 134.89					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
132.06	49 IN	LB3	4	3.470	1,2,3						
132.15	50 SN	LY4	5	2.777	1,2						
132.43	21 SC	KB1	5	2.780	1,2,3						
132.58	43 TC	LB2	3	4.636	1						
132.81	59 PR	LL	5	2.784	1,2,3						
132.90	56 BA	LA2	5	2.785	1,2,3						
133.38	52 TE	LY5	5	2.790	1,2						
133.49	46 PD	LY3	4	3.489	1,2						
133.49	46 PD	LY2	4	3.489	1,2,3						
133.61	41 NB	LY3	3	4.654	1,2						
133.61	41 NB	LY2	3	4.654	1,2,3						
133.68	74 W	MA1	2	6.983	1,2						
133.72	37 RB	LB6	2	6.984	1,2,3						
133.95	74 W	MA2	2	6.990	1,2						
133.95	46 PD	LN	3	4.660	1,2,3						
134.63	54 XE	LB1	5	2.803	1						
134.89	49 IN	LB4	4	3.507	1,2,3						

GYPSUM CRYSTAL, D# 7.595 ANGSTROMS						135.44 TO 149.64					
ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
135.44	48 CD	LB2	4	3.514	1,2,3	143.94	47 AG	LB10	4	3.611	1,2
135.92	39 Y	LN	2	7.040	1,2,3	144.23	48 CD	LB6	4	3.614	1,2,3
136.16	47 AG	LY1	4	3.523	1,2,3	144.33	55 CS	LA1	5	2.892	1,2,3
136.75	47 AG	LL	3	4.707	1,2,3	144.33	58 CE	LL	5	2.892	1,2,3
137.39	37 RB	LB1	2	7.076	1,2,3	144.43	47 AG	LY5	4	3.616	1,2
137.66	50 SN	LY2	5	2.833	1,3	145.38	73 TA	MA1	2	7.251	1,2
137.93	42 MO	LY1	3	4.726	1,2,3	145.58	55 CS	LA2	5	2.932	1,2,3
138.06	17 CL	KA1	3	4.728	1,2,3	145.61	42 MO	LY5	3	4.837	1,2
138.08	53 I	LB6	5	2.837	1,2,3	145.74	73 TA	MA2	2	7.258	1,2
138.19	17 CL	KA2	3	4.730	1,2,3	146.30	44 RU	LA1	3	4.846	1,2,3
138.29	52 TE	LB9	5	2.839	1,2	146.85	44 RU	LA2	3	4.853	1,2,3
138.83	49 IN	LB1	4	3.555	1,2,3	146.88	53 I	LB4	5	2.912	1,2,3
139.00	53 I	LL	4	3.557	1,2,3	147.41	48 CD	LB3	4	3.645	1,2,3
139.15	52 TE	LB10	5	2.847	1,2	148.79	49 IN	LY4	5	2.926	1,2
139.48	14 SI	KA1	2	7.125	1,2,3	148.96	37 RB	LA1	2	7.318	1,2,3
139.58	51 SB	LY1	5	2.851	1,2,3	149.35	37 RB	LA2	2	7.325	1,2,3
139.61	14 SI	KA2	2	7.128	1,2,3	149.41	43 TC	LB1	3	4.884	1
140.80	56 BA	LN	5	2.862	1,2,3	149.64	51 SB	LY5	5	2.932	1,2
140.92	52 TE	LB7	5	2.863	1,2						
142.18	53 I	LB3	5	2.874	1,2,3						
142.88	50 SN	LA1	4	3.600	1,2,3						
143.12	52 TE	LB2	5	2.882	1,2,3						
143.36	47 AG	LB9	4	3.605	1,2						
143.65	51 SB	LN	4	3.608	1,2,3						
143.74	50 SN	LA2	4	3.609	1,2,3						