Y-1470-C
Chemistry

AEC RESEARCH AND DEVELOPMENT REPORT

32
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X-RAY FLUORESCENCE TABLES: LITHIUM FLUORIDE CRYSTAL

W. P. Amsbury
W. W. Lee
J. H. Rowan
G. E. Walden

Y-12 PLANT
Oak Ridge, Tennessee

UNION CARBIDE

UNION CARBIDE CORPORATION
NUCLEAR DIVISION

Operating the

OAK RIDGE GASEOUS DIFFUSION PLANT • OAK RIDGE NATIONAL LABORATORY
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Chemistry
TID-4500 (29th Edition)

UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

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Oak Ridge, Tennessee
April 21, 1964

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Chemistry
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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 lithium fluoride crystal.

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CONTENTS

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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 lithium fluoride 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° 2θ 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 lithium fluoride crystal.

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REFERENCES

(1) Müller, Dr. Phil. E. A. W., Wellenlängen - und Winkeltafeln zur Rontgenspektralanalyse, 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., Zemany, P. D., X-Ray Absorption and Emission in Analytical Chemistry, John Wiley and Sons, Inc, New York (1960).

(4) Amsbury, W. P., Lee, W. W., Rowan, J. H., Walden, G. E., X-Ray Fluorescence Tables: Program Description, Y-1470-A, Union Carbide Corporation, Nuclear Division, Y-12 Plant, Oak Ridge, Tennessee (to be issued).

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TABLE 1

GONIOMETER ANGLES ARRANGED BY ELEMENT, LINE, AND ORDER

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17 CL LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1										
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										

18 A

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1			149.27							
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										

19 K — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	136.48	136.79	118.07				117.36			
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										

	KB?	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	112.95	113.16	100.19				99.49			
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										

	KB?	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

21 SC LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	97.61	97.78	87.29				86.66			
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										

22 TI

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	86.04	86.19	77.24		77.24		76.66			
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										

23 V LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	76.84	76.98	69.09		69.09		68.57			
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										

24 CR

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	69.29	69.43	62.35		62.35		61.88			
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										

25 MN — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	62.91	63.05	56.61				56.19			
2			143.01				140.75			
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										

26 FE

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	57.45	57.58	51.72				51.31			
2	148.00	148.84	121.48				119.98			
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										

27 CO — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	52.74	52.86	47.46				47.09			
2	125.32	125.81	107.19				106.05			
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
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2										
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4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
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3										
4										
5										

28 NI

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	48.61	48.74	43.73	43.39			43.39			
2	110.82	111.22	96.28	95.35			95.35			
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
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2										
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

29 CU — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	44.99	45.08	40.43	40.10	40.46		40.13			
2	99.84	100.11	87.44	86.58	87.52		86.66			
3										
4										
5										

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										
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3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										

	KB6	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

30 ZN

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	41.74	41.86	37.51	37.18			37.21			
2	90.88	91.20	80.03	79.22			79.29			
3			149.37	146.00			146.29			
4										
5										

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
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5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
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	KB6	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
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3										
4										
5										

31 GA — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	38.86	38.98	34.90	34.55	34.90		34.58			
2	83.42	83.72	73.71	72.86	73.71		72.93			
3			128.24	125.94	128.24		126.13			
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										

32 GE

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	36.28	36.40	32.55	32.20	32.55		32.26			
2	77.02	77.31	68.19	67.37	68.19		67.51			
3	138.12	139.09	114.46	112.59	114.46		112.90			
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										
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4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
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3										
4										
5										

33 AS — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	33.95	34.07	30.43	30.07	30.46		30.19			
2	71.45	71.73	63.31	62.51	63.38		62.78			
3	122.30	123.01	103.86	102.21	104.00		102.76			
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										

34 SE

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	31.84	31.96	28.51	28.16	28.54		28.28			
2	66.55	66.82	59.02	58.23	59.08		58.49			
3	110.77	111.37	95.26	93.75	95.39		94.26			
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										

35 BR — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	29.93	30.04	26.79	26.44	26.79		26.55			
2	62.18	62.45	55.19	54.43	55.19		54.68			
3	101.53	102.07	88.04	86.62	88.04		87.09			
4			135.80	132.30	135.80		133.44			
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										

36 KR

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	28.16	28.28	25.18	24.83	25.21	24.83	24.98			
2	58.23	58.49	51.69	50.93	51.75	50.93	51.25			
3	93.75	94.26	81.68	80.33	81.79	80.33	80.89			
4			121.36	118.63	121.59	118.63	119.75			
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										

37 RB — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	26.58	26.70	23.75	23.38	23.75		23.55			
2	54.75	55.00	48.61	47.80	48.61		48.18			
3	87.21	87.68	76.26	74.85	76.26		75.50			
4	133.72	134.90	110.82	108.26	110.82		109.43			
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										

38 SR

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	25.09	25.21	22.42	22.07	22.42		22.19			
2	51.50	51.75	45.76	45.02	45.76		45.26			
3	81.34	81.79	71.35	70.09	71.35		70.51			
4	120.67	121.59	102.07	99.93	102.07		100.64			
5				146.29			148.32			

	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										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

39 Y — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	23.75	23.87	21.20	20.85	21.20	20.80	21.00			
2	48.61	48.86	43.18	42.44	43.18	42.32	42.75			
3	76.26	76.69	66.99	65.77	66.99	65.57	66.28			
4	110.82	111.63	94.76	92.76	94.76	92.43	93.59			
5			133.80	129.62	133.80	128.96	131.32			

	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										

	KB0	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	22.51	22.62	20.07	19.73	20.07		19.90			
2	45.94	46.19	40.80	40.07	40.80		40.43			
3	71.66	72.08	63.05	61.85	63.05		62.45			
4	102.62	103.35	88.39	86.50	88.39		87.44			
5			121.24	117.85	121.24		119.53			

	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										

41 NB — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	21.35	21.46	19.03	18.69	19.03		18.86			
2	43.48	43.73	38.62	37.90	38.62		38.26			
3	67.51	67.92	59.48	58.30	59.48		58.89			
4	95.60	96.28	82.81	81.00	82.81		81.90			
5	135.64	137.18	111.53	108.55	111.53		110.02			

	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										

42 MO

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	20.26	20.39	18.05	17.74	18.08	17.71	17.91			
2	41.22	41.47	36.58	35.92	36.64	35.86	36.28			
3	63.75	64.15	56.16	55.10	56.26	55.00	55.68			
4	89.51	90.15	77.75	76.15	77.89	76.00	77.02			
5	123.31	124.52	103.35	100.86	103.58	100.64	102.21			

	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										

43 TC — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	19.24	19.32	17.19	16.85	17.16	16.85				
2	39.04	39.22	34.78	34.07	34.72	34.07				
3	60.16	60.46	53.28	52.13	53.18	52.13				
4	83.88	84.34	73.43	71.73	73.29	71.73				
5	113.32	114.10	96.71	94.17	96.49	94.17				

	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										

44 RU

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	18.37	18.49	16.33	16.04	16.36		16.21			
2	37.24	37.48	33.00	32.41	33.06		32.76			
3	57.23	57.62	50.43	49.49	50.52		50.05			
4	79.36	79.96	69.23	67.85	69.36		68.67			
5	105.91	106.86	90.47	88.47	90.68		89.67			

	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										

45 RH — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	17.51	17.65	15.58	15.27	15.58		15.44			
2	35.44	35.74	31.46	30.81	31.46		31.16			
3	54.33	54.81	47.99	46.96	47.99		47.52			
4	75.00	75.72	65.67	64.18	65.67		64.99			
5	99.09	100.19	85.34	83.23	85.34		84.37			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1										132.37
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	132.37									
2										
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

46 PD

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	16.70	16.85	14.86	14.55	14.86		14.75			
2	33.77	34.07	29.98	29.34	29.98		29.75			
3	51.66	52.13	45.66	44.65	45.66		45.29			
4	71.03	71.73	62.31	60.86	62.31		61.78			
5	93.13	94.17	80.59	78.55	80.59		79.85			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1							140.58	141.17	135.19	120.04
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	120.04		143.19							
2										
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

47 AG — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	15.95	16.10	14.18	13.89	14.20		14.06			
2	32.23	32.53	28.57	27.99	28.63		28.34			
3	49.21	49.68	43.45	42.53	43.54		43.08			
4	67.44	68.12	59.15	57.84	59.28		58.63			
5	87.88	88.87	76.18	74.39	76.37		75.46			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	133.65	144.20	147.80		141.95		127.01	127.40	122.00	110.32
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	110.32		127.72							
2										
3										
4										
5										

	KB6	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	15.27	15.38	13.54	13.26	13.57					136.25
2	30.81	31.05	27.28	26.70	27.34					
3	46.96	47.34	41.44	40.53	41.53					
4	64.18	64.72	56.29	55.00	56.42					
5	83.23	83.99	72.26	70.51	72.44					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	121.48	129.62	132.16		127.59		116.76	117.14	111.83	102.35
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	102.30		116.49							
2										
3										
4										
5										

	KB6	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

49 IN — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	14.61	14.75	12.97	12.69	12.97		12.86	138.93	139.66	123.91
2	29.45	29.75	26.11	25.53	26.11		25.88			
3	44.83	45.29	39.62	38.71	39.62		39.25			
4	61.12	61.78	53.72	52.45	53.72		53.21			
5	78.92	79.85	68.78	67.06	68.78		68.09			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	111.93	118.96	121.07		117.09		108.45	108.74	103.44	95.43
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	95.43	93.17	107.53							
2										
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

50 SN

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	14.00	14.12	12.40	12.14	12.43		12.31	126.70	127.27	114.36
2	28.22	28.46	24.95	24.42	25.01		24.77			
3	42.90	43.27	37.81	37.00	37.90		37.54			
4	58.36	58.89	51.19	50.05	51.31		50.81			
5	75.10	75.82	65.36	63.85	65.53		64.86			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	104.04	110.32	12.19		108.50	103.12	101.31	101.56	96.32	89.39
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1		87.17	99.97		140.33					
2										
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

51 SB — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	13.40	13.54	11.88	11.63	11.91		11.80	117.25	117.74	106.43
2	26.99	27.28	23.90	23.38	23.96		23.72			
3	40.98	41.44	36.19	35.38	36.28		35.92			
4	55.64	56.29	48.93	47.80	49.05		48.55			
5	71.38	72.26	62.35	60.86	62.51		61.85			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	97.27	102.98	104.74		101.31	96.49	95.09	95.39	90.11	83.99
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	83.99	81.86	93.42		127.20	149.70				
2										
3										
4										
5										

	KB9	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	12.86	13.00	11.40	11.14	11.43			109.48	109.92	99.62
2	25.88	26.17	22.91	22.39	22.97					
3	39.25	39.71	34.66	33.86	34.75					
4	53.21	53.85	46.81	45.70	46.93					
5	68.09	68.95	59.54	58.07	59.70					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	91.37	96.67	98.26		95.05	90.60	89.63	89.95	84.64	79.18
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	79.18	77.13	87.68		117.19	134.68				
2										
3										
4										
5										

	KB9	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

53 I LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	12.34	12.49	10.94	10.68	10.97			102.80	103.26	93.63
2	24.83	25.12	21.98	21.46	22.04					
3	37.63	38.08	33.24	32.44	33.33					
4	50.93	51.56	44.83	43.73	44.96					
5	65.03	65.87	56.94	55.48	57.10					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	86.11	91.04	92.60		89.55	85.34	84.68	84.95	79.73	74.82
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	74.82	72.83	82.54		109.04	124.03				
2										
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

54 XE

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	11.86	11.97	10.48	10.26				96.92	97.35	88.19
2	23.84	24.07	21.06	20.59						
3	36.10	36.46	31.81	31.11						
4	48.80	49.30	42.87	41.89						
5	62.18	62.85	54.36	53.09						

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	81.38								75.36	
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										

55 CS — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	11.40	11.54	10.08	9.86	10.11			91.77	92.18	83.53
2	22.91	23.20	20.25	19.78	20.30					
3	34.66	35.11	30.57	29.87	30.66					
4	46.81	47.43	41.16	40.19	41.28					
5	59.54	60.36	52.13	50.87	52.29					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	77.13	81.45	82.98		80.14	76.18	75.93	76.44	71.31	67.47
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	67.33	65.33	73.75		95.98	108.40				
2										
3										
4										
5										

	KB0	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	10.97	11.11	9.71	9.48	9.71		9.63	87.09	87.48	79.18
2	22.04	22.33	19.50	19.03	19.50		19.32			
3	33.33	33.77	29.43	28.72	29.43		29.16			
4	44.96	45.57	39.59	38.62	39.59		39.22			
5	57.10	57.91	50.08	48.83	50.08		49.61			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	73.29	77.31	78.74		76.08		72.30	72.68	67.61	64.12
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	63.98	62.01	69.92		90.56	102.21				
2										
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

57 LA — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	10.57	10.68	9.34	9.11	9.37		9.28	82.85	83.19	75.21
2	21.23	21.46	18.75	18.28	18.80		18.63			
3	32.08	32.44	28.28	27.58	28.37		28.10			
4	43.24	43.73	38.02	37.06	38.14		37.78			
5	54.84	55.48	48.05	46.81	48.21		47.74			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	69.74	73.50	74.89		72.40	68.78	69.02	69.29	64.25	61.05
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	60.89	58.98	66.38		85.72	96.54				
2										
3										
4										
5										

	KBC	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

58 CE

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	10.17	10.31	9.00	8.77	9.00			78.96	79.29	71.59
2	20.42	20.71	18.05	17.59	18.05					
3	30.84	31.28	27.22	26.52	27.22					
4	41.53	42.14	36.58	35.62	36.58					
5	52.01	53.40	46.19	44.96	46.19					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	66.52	70.02	71.35		68.98	65.53	65.80	66.04	61.12	58.23
2										
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	58.07	56.26	63.18		81.15	91.77				
2		141.09								
3										
4										
5										

	KBD	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

59 PR — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	9.80	9.94	8.66	8.46	8.69			75.39	75.75	68.19
2	19.67	19.96	17.36	16.96	17.42					
3	29.69	30.13	26.17	25.56	26.26					
4	39.95	40.56	35.14	34.31	35.26					
5	50.56	51.34	44.34	43.27	44.49					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	63.48	66.79	68.09		65.87	62.55	62.85	63.08	58.27	55.61
2										137.81
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	55.45	53.69	60.20		77.16	87.44				
2	137.02	129.16								
3										
4										
5										

	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	9.46	9.57	8.34	8.14	8.37			72.08	72.44	65.09
2	18.98	19.21	16.73	16.33	16.79					
3	28.63	28.98	25.21	24.60	25.30					
4	38.50	38.98	33.83	33.00	33.95					
5	48.68	49.30	42.66	41.59	42.81					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	60.72	63.71	65.09		62.98	59.84	60.07	60.30	55.58	53.12
2									137.65	126.82
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	52.96	51.31	57.42	54.84	73.46	83.26				
2	126.19	119.98	147.80	134.16						
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

61 PM — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	9.14	9.26	8.83	7.86	8.06			69.05	69.36	62.21
2	18.34	18.57	16.10	15.75	16.16					
3	27.66	28.02	24.25	23.72	24.34					
4	37.18	37.66	32.53	31.81	32.64					
5	46.96	47.59	40.98	40.07	41.13					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	58.14								53.60	
2									128.76	
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1										
2										
3										
4										
5										

	KB6	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

62 SM

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	8.80	8.94	7.77	7.57	7.80			66.18	66.55	59.48
2	17.65	17.94	15.58	15.18	15.64					
3	26.61	27.05	23.46	22.85	23.55					
4	35.74	36.34	31.46	30.63	31.58					
5	45.11	45.88	39.62	38.56	39.77					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	55.71	58.30	59.54	52.42	57.78	54.87	55.03	55.29	50.78	48.64
2	138.28			124.09		134.31	135.05	136.25	118.07	110.92
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	NY
1	48.52	47.00	52.42		66.82	76.08				
2	110.52	105.77	124.09							
3										
4										
5										

	KB6	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

63 EU — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	8.51	8.63	7.52	7.32	7.52			63.55	63.92	56.94
2	17.08	17.31	15.06	14.66	15.06					144.85
3	25.73	26.08	22.68	22.07	22.68					
4	34.55	35.02	30.40	29.57	30.40					
5	43.57	44.19	38.26	37.21	38.26					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	53.47	55.87	57.13		55.45	52.71	52.83	53.09	48.61	46.72
2	128.24	139.09	146.06		137.02	125.19	125.69	126.70	110.82	104.92
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	46.53	45.08	50.18		63.88	72.97				
2	104.37	100.11	116.06							
3										
4										
5										

	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	8.29	8.34	7.23	7.06	7.26			61.05	61.42	54.55
2	16.44	16.73	14.49	14.15	14.55					132.86
3	24.77	25.21	21.81	21.29	21.90					
4	33.24	33.83	29.22	28.51	29.34					
5	41.89	42.66	36.76	35.86	36.91					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	51.34	53.56	54.78		53.31	50.65	50.68	50.90	46.56	44.77
2	120.09	128.63	133.87		127.59	117.63	117.74	118.52	104.46	99.22
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	44.62	43.27	48.08		61.15	70.06				
2	98.78	95.01	109.13							
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

65 TB — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	7.94	8.06	7.00	6.83	7.00			58.72	59.08	52.32
2	15.93	16.16	14.03	13.69	14.03					123.73
3	23.99	24.34	21.11	20.59	21.11					
4	32.17	32.64	28.28	27.58	28.28					
5	40.53	41.13	35.56	34.66	35.56					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	49.36	51.38	52.61	46.10	51.22	48.64		48.89	44.65	43.02
2	113.26	120.21	124.82	103.08	119.64	110.92		111.73	98.87	94.34
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	42.84	41.50	46.10		58.66	67.37				
2	93.84	90.23	103.08							
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

66 DY

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	7.69	7.80	6.75	6.60	6.77			56.58	56.94	50.24
2	15.41	15.64	13.52	13.23	13.57			142.83	144.85	116.22
3	23.20	23.55	20.33	19.90	20.42					
4	31.11	31.58	27.22	26.64	27.34					
5	39.16	39.77	34.22	33.47	34.37					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	47.52	49.33	50.56		49.33	46.78	46.81	47.03	42.90	41.38
2	107.39	113.16	117.30		113.16	105.11	105.20	105.86	94.00	89.91
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	41.19	39.89	44.28		56.19	64.79				
2	89.43	86.04	97.83		140.75					
3										
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

67 HO — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	7.43	7.57	6.55	6.38				54.52	54.87	48.27
2	14.89	15.18	13.12	12.77				132.72	134.31	109.73
3	22.42	22.85	19.73	19.21						
4	30.04	30.63	26.41	25.71						
5	37.81	38.56	33.18	32.29						

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	45.79	47.40	48.64		47.49			45.23	41.19	39.77
2	102.17	107.30	110.92		107.29			100.55	89.43	85.72
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	39.59	38.32	42.56		53.91	62.38				
2	85.26	82.05	93.09		130.09					
3										
4										
5										

	KB8	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	7.17	7.32	6.35	6.18	6.35			52.58	52.96	46.41
2	14.38	14.66	12.71	12.37	12.71			124.70	126.19	104.00
3	21.64	22.07	19.12	18.60	19.12					
4	29.98	29.57	25.59	24.89	25.59					
5	36.46	37.21	32.14	31.25	32.14					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	44.16	45.60	46.84		45.79	43.54	43.27	43.54	39.59	38.29
2	97.48	101.62	105.30		102.17	95.77	95.01	95.77	85.26	81.98
3										
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	38.11	36.94	40.86		51.69	60.16				
2	81.53	78.63	88.55		121.36					
3		143.74								
4										
5										

	KB8	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

69 TM LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	6.95	7.09	6.12	5.98	6.15			50.74	51.09	44.65
2	13.92	14.20	12.26	11.97	12.31			117.96	119.19	98.87
3	20.94	21.37	18.43	18.00	18.52					
4	28.05	28.63	24.66	24.07	24.77					
5	35.26	36.01	30.96	30.22	31.11					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	42.59	43.88	45.08		44.19			41.92	38.11	36.88
2	93.17	96.71	100.11		97.57			91.37	81.53	78.48
3										143.19
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	36.70	35.53	39.31	37.36	49.80	58.07				
2	78.04	75.21	34.57	79.66	114.73					
3	141.60	132.51		147.80						
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

70 YB

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	6.75	6.86	5.95	5.81	5.95			49.05	49.39	42.99
2	13.52	13.75	11.91	11.63	11.91			112.24	113.37	94.26
3	20.33	20.68	17.91	17.48	17.91					
4	27.22	27.69	23.96	23.38	23.96					
5	34.22	34.81	30.07	29.34	30.07					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	41.13	42.26	43.45	40.28	42.69	40.53	40.19	40.40	36.70	35.53
2	89.27	92.27	95.52	87.05	93.42	87.68	86.82	87.37	78.04	75.21
3									141.60	132.51
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	35.32	34.22	37.84	35.95	47.93	56.10				
2	74.71	72.08	80.85	76.22	108.65	140.24				
3	131.05	123.91		135.57						
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

71 LU — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	6.52	6.66	5.75	5.61	5.78			47.40	47.74	41.41
2	13.06	13.34	11.51	11.23	11.57			107.00	108.06	89.99
3	19.64	20.07	17.31	16.87	17.39					
4	26.29	26.87	23.14	22.56	23.26					
5	33.03	33.77	29.04	28.31	29.19					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	39.77	40.71	41.89	38.92	41.25	39.13	38.74	38.95	35.32	34.22
2	85.72	88.16	91.29	83.57	89.59	84.11	83.11	83.65	74.71	72.08
3									131.05	123.91
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	34.04	32.97	36.46	34.61	43.05	54.23				
2	71.66	69.16	77.46	73.00	94.42	131.46				
3	122.83	116.70	139.58	126.32						
4										
5										

	KB0	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	6.32	6.46	5.58	5.44	5.58			45.85	46.19	39.89
2	12.66	12.94	11.17	10.88	11.17			102.35	103.35	86.04
3	19.03	19.47	16.79	16.36	16.79					
4	25.47	26.06	22.45	21.87	22.45					
5	31.99	32.73	28.16	27.43	28.16					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	38.44	39.25	40.43	37.60	39.89	37.84	37.36	37.60	34.04	33.00
2	82.35	84.41	87.44	80.25	86.04	80.85	79.66	80.25	71.66	69.23
3							147.80		122.83	116.87
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	32.82	31.78	35.11	33.33	44.43	52.48				
2	66.81	66.41	74.21	69.99	98.26	124.33				
3	115.95	113.47	129.62	118.68						
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

73 TA — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	6.12	6.26	5.41	5.26	5.44	5.24	5.38	44.40	44.74	38.47
2	12.26	12.54	10.83	10.54	10.88	10.48	10.77	98.17	99.14	82.43
3	18.43	18.86	16.27	15.84	16.36	15.75	16.18			
4	24.66	25.24	21.75	21.17	21.87	21.06	21.64			
5	30.96	31.70	27.28	26.55	27.43	26.41	27.14			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	37.18	37.87	39.04	36.31	38.59	36.58	36.04	36.28	32.82	31.84
2	79.22	80.93	83.88	77.09	82.73	77.75	76.44	77.02	68.81	66.55
3	146.00			138.36		140.58	136.25	138.12	115.90	110.77
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	31.67	30.66	33.86	32.11	42.84	50.81				
2	66.14	63.85	71.24	67.16	93.84	118.18				
3	109.87	104.97	121.77	112.13						
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

74 W

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	5.95	6.09	5.24	5.09	5.26	5.09	5.21	42.99	43.33	37.12
2	11.91	12.20	10.48	10.20	10.54	10.20	10.43	94.26	95.18	79.07
3	17.91	18.34	15.75	15.32	15.84	15.32	15.67			145.42
4	23.96	24.54	21.06	20.48	21.17	20.48	20.94			
5	30.07	30.81	26.41	25.68	26.55	25.68	26.26			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	36.01	36.55	37.72	35.11	37.36	35.38	34.78	35.02	31.67	30.75
2	76.37	77.67	80.55	74.21	79.66	74.85	73.43	74.00	66.14	64.05
3	136.02	140.33		129.62	147.80	131.46	127.46	129.03	109.87	105.39
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	30.57	29.57	32.64	30.93	41.31	49.24				
2	63.65	61.58	68.40	64.45	89.75	112.85				
3	104.55	99.93	114.94	106.24						
4										
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

75 RE — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	5.78	5.92	5.09	4.95	5.09			41.68	42.02	35.83
2	11.57	11.86	10.20	9.91	10.20			90.72	91.61	75.93
3	17.39	17.82	15.32	14.89	15.32					134.68
4	23.26	23.84	20.48	19.90	20.48					
5	29.19	29.93	25.68	24.95	25.68					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	34.87	35.26	36.43	33.98	36.19	34.25	33.62	33.83	30.54	29.69
2	73.64	74.57	77.38	71.52	76.80	72.15	70.68	71.17	63.58	61.65
3	128.04	130.64	139.33	122.47	137.41	124.09	120.38	121.59	104.41	100.46
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	29.51	28.51	31.52	29.84	39.86	47.74				
2	61.25	59.02	65.80	61.98	85.96	108.06				
3	99.66	95.26	109.13	101.13						
4										
5										

	KB0	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	5.61	5.75	4.95	4.81	4.95			40.40	40.74	34.58
2	11.23	11.51	9.91	9.63	9.91			87.37	88.23	72.93
3	16.87	17.31	14.89	14.46	14.89					126.13
4	22.56	23.14	19.90	19.32	19.90					
5	28.31	29.04	24.95	24.22	24.95					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	33.77	34.07	35.20	32.88	35.05	33.15	32.47	32.67	29.48	28.69
2	71.03	71.73	74.42	68.95	74.07	69.57	67.99	68.47	61.19	59.41
3	121.24	123.01	130.23	116.22	129.22	117.69	113.99	115.10	99.53	96.03
4										
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	28.51	27.55	30.43	28.78	38.50	46.34				
2	59.02	56.87	63.31	59.61	82.51	103.81				
3	95.26	91.16	103.86	96.41						
4		144.48								
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

77 IR — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	5.44	5.58	4.81	4.67	4.81	4.64	4.75	39.19	39.53	33.42
2	10.88	11.17	9.63	9.34	9.63	9.28	9.51	84.26	85.11	70.20
3	16.36	16.79	14.46	14.03	14.46	13.95	14.29			119.19
4	21.87	22.45	19.32	18.75	19.32	18.63	19.09			
5	27.43	28.16	24.22	23.49	24.22	23.35	23.93			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	32.73	32.91	34.07	31.87	34.01	32.14	31.40	31.61	28.49	27.72
2	68.60	69.02	71.73	66.62	71.59	67.23	65.53	66.01	58.95	57.26
3	115.42	116.38	123.01	110.92	122.65	112.29	108.55	109.58	95.14	91.90
4										146.79
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	27.55	26.61	29.40	27.78	37.18	44.99				
2	56.87	54.81	60.99	57.39	79.22	99.84				
3	91.16	87.33	99.14	92.14	146.00					
4	144.48	134.02		147.59						
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

78 PT

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	5.29	5.41	4.67	4.52	4.67	4.52	4.64	38.05	38.38	32.29
2	10.60	10.83	9.34	9.06	9.34	9.06	9.28	81.38	82.20	67.57
3	15.93	16.27	14.03	13.60	14.03	13.60	13.95			113.06
4	21.29	21.75	18.75	18.17	18.75	18.17	18.63			
5	26.70	27.28	23.49	22.77	23.49	22.77	23.35			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	31.76	31.81	32.94	30.87	33.00	31.16	30.34	30.57	27.52	26.82
2	66.35	66.48	69.09	64.32	69.23	64.99	63.11	63.65	56.81	55.26
3	110.32	110.62	116.54	105.96	116.87	107.39	103.44	104.55	91.04	88.16
4									144.11	136.10
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	26.64	25.73	28.40	26.82	35.95	43.70				
2	54.37	52.90	58.76	55.26	76.22	96.20				
3	87.44	83.84	94.76	88.16	135.57					
4	134.31	125.94		136.10						
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

79 AU — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	5.12	5.26	4.52	4.41	4.55	4.38	4.50	36.94	37.30	31.22
2	10.26	10.54	9.06	8.83	9.11	8.77	9.00	78.63	79.51	65.13
3	15.41	15.84	13.60	13.26	13.69	13.17	13.52	143.74	147.19	107.68
4	20.59	21.17	18.17	17.71	18.28	17.59	18.05			
5	25.82	26.55	22.77	22.19	22.91	22.04	22.62			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	30.81	30.75	31.90	29.93	32.02	30.22	29.37	29.57	26.61	25.94
2	64.18	64.05	66.69	62.18	66.96	62.85	60.92	61.38	54.81	53.34
3	105.67	105.39	111.07	101.53	111.68	102.89	99.00	99.93	87.33	84.64
4									134.02	127.72
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	25.76		27.46	25.91	34.75	42.50				
2	52.96		56.68	53.28	73.36	92.93				
3	83.95		90.80	84.53	127.27					
4	126.19		143.37	127.46						
5										

	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	LB1
1	4.98	5.12	4.38	4.27	4.41			35.89	36.25	30.19
2	9.97	10.26	8.77	8.54	8.83			76.08	76.95	62.78
3	14.98	15.41	13.17	12.83	13.26			135.12	137.88	102.76
4	20.02	20.59	17.59	17.13	17.71					
5	25.09	25.82	22.04	21.46	22.19					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	29.93	29.75	30.87	29.04	31.11	29.31	28.34	28.63	25.73	25.09
2	62.18	61.78	64.32	60.20	64.86	60.79	58.63	59.28	52.90	51.50
3	101.53	100.73	105.96	97.57	107.10	98.74	94.51	95.77	83.84	81.34
4									125.94	120.67
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	24.92	24.04	26.52	25.03	33.59	41.35				
2	51.12	49.24	54.62	51.38	70.61	89.83				
3	80.66	77.35	86.97	81.11	120.21					
4	119.30	112.85	133.15	120.21						
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

81 TL — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	4.84	4.98	4.27	4.15	4.30			34.87	35.23	29.19
2	9.68	9.97	8.54	8.31	8.60			73.64	74.50	60.53
3	14.55	14.98	12.83	12.49	12.91			128.04	130.43	98.22
4	19.44	20.02	17.13	16.67	17.25					
5	24.36	25.09	21.46	20.88	21.61					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	29.04	28.78	29.90	28.19	30.22	28.46	27.49	27.69	24.89	24.31
2	60.20	59.61	62.11	58.30	62.85	58.89	56.74	57.19	51.06	49.80
3	97.57	96.41	101.40	93.88	102.89	95.01	90.92	91.77	80.55	78.33
4							143.74	146.39	119.08	114.73
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	24.10	23.26	25.68	24.19	32.53	40.22				
2	49.36	47.55	52.77	49.55	68.12	86.89				
3	77.56	74.42	83.61	77.89	114.31					
4	113.26	107.48	125.44	113.89						
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

82 PB

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	4.70	4.84	4.15	4.04	4.18	4.01	4.13	33.92	34.25	28.22
2	9.40	9.68	8.31	8.09	8.37	8.03	8.26	71.38	72.15	58.36
3	14.12	14.55	12.49	12.14	12.57	12.06	12.40	122.12	124.09	94.00
4	18.86	19.44	16.67	16.21	16.79	16.10	16.56			
5	23.64	24.36	20.88	20.30	21.03	20.16	20.74			

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	28.25	27.84	28.96	27.37	29.37	27.63	26.61	26.82	24.07	23.52
2	58.43	57.52	60.30	56.48	60.92	57.06	54.81	55.26	49.30	48.11
3	94.13	92.39	97.18	90.43	99.00	91.53	87.33	88.16	77.46	75.39
4		148.42		142.30		145.61	134.02	136.10	113.06	109.23
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	23.35	22.51	24.83	23.41	31.46	39.16				
2	47.74	45.94	50.93	47.87	65.67	84.18				
3	74.75	71.66	80.33	74.96	108.84					
4	108.06	102.62	118.63	108.45						
5										

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

83 BI — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	4.58	4.72	4.04	3.93	4.07			33.00	33.33	27.34
2	9.17	9.46	8.09	7.86	8.14			69.23	69.99	56.42
3	13.77	14.20	12.14	11.80	12.23			116.87	118.68	90.31
4	18.40	18.98	16.21	15.75	16.33					141.95
5	23.06	23.78	20.30	19.73	20.45					

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	27.43	26.96	28.07	26.58	29.54	26.84	25.76	25.97	23.29	22.80
2	56.61	55.58	58.04	54.75	59.08	55.32	52.96	53.40	47.62	46.56
3	90.68	88.75	93.38	87.21	95.39	88.27	83.95	84.76	74.53	72.72
4	143.01	137.65		133.72		136.40	126.19	127.98	107.68	104.46
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	22.59	21.78	24.04	22.62	30.49	38.14				
2	46.13	44.40	49.24	46.19	63.45	81.60				
3	71.98	69.05	77.35	72.08	104.13					
4	103.17	98.17	112.85	103.35						
5		141.69								

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

84 PO

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	4.44	4.58	3.93	3.81				32.11	32.47	26.46
2	8.88	9.17	7.86	7.63				67.16	67.99	54.49
3	13.34	13.77	11.80	11.46				112.13	113.99	86.74
4	17.82	18.40	15.75	15.29						132.58
5	22.33	23.06	19.73	19.15						

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	26.67	26.08	27.20	25.79	27.78				22.53	
2	54.94	53.66	56.10	53.02	57.39				46.00	
3	87.56	85.22	89.71	84.07	92.14				71.77	
4	134.60	129.03	140.24	126.44	147.59				102.80	
5										

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	21.87			21.87						
2	44.59			44.59						
3	69.36			69.36						
4	98.70			98.70						
5	143.01			143.01						

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

85 AT LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	4.33	4.47	3.81	3.73				31.25	31.61	25.65
2	8.66	8.94	7.63	7.46				65.19	66.01	52.71
3	13.00	13.43	11.46	11.20				107.82	109.58	83.49
4	17.36	17.94	15.29	14.95						125.19
5	21.75	22.48	19.15	18.72						

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	25.97								21.84	
2	53.40								44.52	
3	84.76								69.26	
4	127.98								98.52	
5									142.57	

	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										

86 RN

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	4.21	4.35	3.73	3.61				30.43	30.78	24.83
2	8.43	8.71	7.46	7.23				63.31	64.12	50.93
3	12.66	13.09	11.20	10.86				103.86	105.53	80.33
4	16.90	17.48	14.95	14.49						118.63
5	21.17	21.90	18.72	18.14						

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	25.27								21.14	
2	51.88								43.05	
3	82.01								66.79	
4	122.06								94.42	
5									133.08	

	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										

87 FR — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	4.10	4.24	3.61	3.53				29.63	29.98	24.07
2	8.20	8.49	7.23	7.06				61.52	62.31	49.30
3	12.31	12.74	10.86	10.60				100.19	101.80	77.46
4	16.44	17.02	14.49	14.15						113.06
5	20.59	21.32	18.14	17.71						

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	24.60								20.48	
2	50.43								41.65	
3	79.44								64.45	
4	116.87								90.64	
5									125.44	

	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										

88 RA

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.98	4.13	3.53	3.41				28.90	29.22	23.32
2	7.97	8.26	7.06	6.83				59.87	60.59	47.68
3	11.97	12.40	10.60	10.26				96.92	98.35	74.64
4	15.98	16.56	14.15	13.69						107.87
5	20.02	20.74	17.71	17.13						

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	23.93	23.00	24.10	23.09	24.98	23.38	22.01	22.19	19.87	19.50
2	48.99	47.00	49.36	47.18	51.25	47.80	44.89	45.26	40.37	39.59
3	76.91	73.46	77.56	73.78	80.89	74.85	69.88	70.51	62.35	61.05
4	112.03	105.77	113.26	106.34	119.75	108.26	99.57	100.64	87.29	85.26
5							145.33	148.32	119.24	115.68

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	19.29	18.54	20.51	19.24	26.03	33.68				
2	39.16	37.60	41.71	39.04	53.53	70.82				
3	60.36	57.81	64.55	60.16	84.99	120.72				
4	84.18	80.25	90.80	83.88	128.50					
5	113.83	107.34	125.75	113.32						

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

89 AC LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.87	4.01	3.44	3.33				28.16	28.51	22.59
2	7.74	8.03	6.89	6.66				58.23	59.02	46.13
3	11.63	12.06	10.34	10.00				93.75	95.26	71.98
4	15.52	16.10	13.80	13.34						103.17
5	19.44	20.16	17.28	16.70						

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	23.32								19.27	
2	47.68								39.10	
3	74.64								60.26	
4	107.87								84.03	
5									113.57	

	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										

90 TH

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.78	3.93	3.33	3.24	3.36		3.30	27.46	27.81	21.90
2	7.57	7.86	6.66	6.49	6.72		6.60	56.68	57.45	44.65
3	11.37	11.80	10.00	9.74	10.08		9.91	90.80	92.27	69.47
4	15.18	15.75	13.34	13.00	13.46		13.23	143.37	148.00	98.87
5	19.01	19.73	16.70	16.27	16.85		16.56			143.46

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	22.74	21.61	22.71	21.90	23.72	22.16	20.68	20.88	18.66	18.34
2	46.44	44.03	46.38	44.65	48.55	45.20	42.08	42.50	37.84	37.18
3	72.51	68.43	72.40	69.47	76.15	70.40	65.16	65.87	58.20	57.13
4	104.09	97.14	103.90	98.87	110.62	100.46	91.77	92.93	80.85	79.22
5		139.17		143.46		147.80	127.65	129.96	108.30	105.67

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	18.17	17.45	19.29	18.05	24.48	32.14				
2	36.82	35.32	39.16	36.58	50.18	67.23				
3	56.55	54.14	60.36	56.16	79.00	112.29				
4	78.33	74.71	84.18	77.75	116.00					
5	104.27	98.65	113.83	103.35						

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

91 PA — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.67	3.81	3.24	3.16				26.79	27.14	21.23
2	7.34	7.63	6.49	6.32				55.19	55.97	43.24
3	11.03	11.46	9.74	9.48				88.04	89.47	67.10
4	14.72	15.29	13.00	12.66				135.80	139.58	94.93
5	18.43	19.15	16.27	15.84						134.16

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	22.16	20.94	22.04	21.32	23.14	21.61	20.04	20.25	18.11	17.82
2	45.20	42.63	44.96	43.42	47.31	44.03	40.74	41.16	36.70	36.10
3	70.40	66.07	69.99	67.40	74.00	68.43	62.95	63.65	56.35	55.39
4	105.46	93.26	99.75	95.43	106.72	97.14	88.23	89.35	78.04	76.58
5	147.80	130.64	145.81	135.27		139.17	120.95	123.01	103.81	101.53

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	17.62	16.96	18.72	17.51	23.75	31.43				
2	35.68	34.31	37.96	35.44	48.61	65.60				
3	54.71	52.51	58.40	54.33	76.26	108.69				
4	75.57	72.30	81.15	75.00	110.82					
5	99.97	95.01	108.79	99.09						

	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	3.59	3.73	3.16	3.10	3.19			26.14	26.46	20.59
2	7.17	7.46	6.32	6.20	6.38			53.79	54.49	41.89
3	10.77	11.20	9.48	9.31	9.57			85.45	86.74	64.86
4	14.38	14.95	12.66	12.43	12.77			129.56	132.58	91.29
5	18.00	18.72	15.84	15.55	15.98					126.70

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	21.61	20.30	21.40	20.77	22.56	21.06	19.47	19.64	17.56	17.28
2	44.03	41.28	43.60	42.26	46.07	42.87	39.53	39.89	35.56	34.96
3	68.43	63.85	67.71	65.46	71.87	66.48	60.95	61.55	54.52	53.56
4	97.14	89.67	95.94	92.27	102.98	93.92	85.11	86.04	75.28	73.85
5	139.17	123.61	136.40	128.63		132.02	115.42	117.03	99.53	97.35

	LY3	LY4	LY5	LY6	LN	LL	MA1	MA2	MB	MY
1	17.08		18.14	16.99	23.06	30.72				
2	34.55		36.76	34.37	47.12	63.98				
3	52.90		56.45	52.61	73.68	105.25				
4	72.86		78.19	72.44	106.15					
5	95.86		104.04	95.22						

	KB0	LB15	LB17	LBP7	LY8	LY13	LYP4	LYP8	LS	LT
1										
2										
3										
4										
5										

93 NP — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.50	3.64	3.10	2.99				25.50	25.85	19.96
2	7.00	7.29	6.20	5.98				52.39	53.15	40.56
3	10.51	10.94	9.31	8.97				82.92	84.30	62.65
4	14.03	14.61	12.43	11.97				123.97	126.95	87.76
5	17.56	18.28	15.55	14.98						120.09

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	21.06								17.05	
2	42.87								34.49	
3	66.48								52.80	
4	93.92								72.72	
5	132.02								95.64	

	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										

94 PU

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.41	3.56	3.02	2.93				24.89	25.24	19.38
2	6.83	7.12	6.03	5.86				51.06	51.82	39.35
3	10.26	10.68	9.06	8.80				80.55	81.90	60.66
4	13.69	14.26	12.08	11.74				119.08	121.83	84.64
5	17.13	17.85	15.12	14.69						114.62

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	20.54								16.53	
2	41.77								33.42	
3	64.65								51.09	
4	90.96								70.20	
5	126.06								91.90	

	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										

95 AM — LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.33	3.47	2.93	2.85				24.31	24.66	18.80
2	6.66	6.95	5.86	5.69				49.80	50.56	38.14
3	10.00	10.43	8.80	8.54				78.33	79.66	58.69
4	13.34	13.92	11.74	11.40				114.73	117.30	81.60
5	16.70	17.42	14.69	14.26						109.53

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	20.04								16.04	
2	40.74								32.41	
3	62.95								49.49	
4	88.23								67.85	
5	120.95								88.47	

	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	3.24	3.39	2.87	2.79				23.75	24.10	18.26
2	6.49	6.77	5.75	5.58				48.61	49.36	37.00
3	9.74	10.17	8.63	8.37				76.26	77.56	56.84
4	13.00	13.57	11.51	11.17				110.82	113.26	78.77
5	16.27	16.99	14.40	13.97						104.97

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	19.58								15.58	
2	39.77								31.46	
3	61.35								47.99	
4	85.72								65.67	
5	116.49								85.34	

	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										

97 BK LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.16	3.30	2.79	2.70				23.20	23.55	17.74
2	6.32	6.60	5.58	5.41				47.43	48.18	35.92
3	9.48	9.91	8.37	8.11				74.21	75.50	55.10
4	12.66	13.23	11.17	10.83				107.10	109.43	76.15
5	15.84	16.56	13.97	13.54						100.86

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	19.12								15.12	
2	38.80								30.52	
3	59.77								46.50	
4	83.26								63.51	
5	112.29								82.28	

	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										

98 CF

ORDER	KA1	KA2	KB1	KB2	KB3	KB4	KB5	LA1	LA2	LB1
1	3.07	3.22	2.76	2.65				22.68	23.03	17.22
2	6.15	6.43	5.52	5.29				46.31	47.06	34.84
3	9.23	9.66	8.29	7.94				72.30	73.57	53.37
4	12.31	12.89	11.06	10.60				103.72	105.96	73.57
5	15.41	16.13	13.83	13.26						96.92

	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LY1	LY2
1	18.66								14.69	
2	37.84								29.63	
3	58.20								45.11	
4	80.85								61.52	
5	108.30								79.48	

	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										

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TABLE 2

GONIOMETER ANGLES ARRANGED BY ANGLE MAGNITUDE

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LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 2.65 TO 3.87

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
2.65	98 CF	KB2	1	0.093	1	3.33	95 AM	KA1	1	0.117	1
2.70	97 BK	KB2	1	0.095	1	3.33	89 AC	KB2	1	0.117	1
2.76	98 CF	KB1	1	0.097	1	3.36	90 TH	KB3	1	0.118	1,2
2.79	96 CM	KB2	1	0.098	1	3.39	96 CM	KA2	1	0.119	1
2.79	97 BK	KB1	1	0.098	1	3.41	94 PU	KA1	1	0.120	1
2.84	95 AM	KB2	1	0.100	1	3.41	88 RA	KB2	1	0.120	1
2.87	96 CM	KB1	1	0.101	1	3.44	89 AC	KB1	1	0.121	1
2.93	95 AM	KB1	1	0.103	1	3.47	95 AM	KA2	1	0.122	1
2.93	94 PU	KB2	1	0.103	1	3.50	93 NP	KA1	1	0.123	1
2.99	93 NP	KB2	1	0.105	1	3.53	87 FR	KB2	1	0.124	1
3.02	94 PU	KB1	1	0.106	1	3.53	88 RA	KB1	1	0.124	1
3.07	98 CF	KA1	1	0.108	1	3.56	94 PU	KA2	1	0.125	1
3.10	92 U	KB2	1	0.109	1,2,3	3.58	92 U	KA1	1	0.126	1,2,3
3.10	93 NP	KB1	1	0.109	1	3.61	87 FR	KB1	1	0.127	1
3.16	92 U	KB1	1	0.111	1,2,3	3.61	86 RN	KB2	1	0.127	1
3.16	91 PA	KB2	1	0.111	1	3.64	93 NP	KA2	1	0.128	1
3.16	97 BK	KA1	1	0.111	1	3.67	91 PA	KA1	1	0.129	1
3.19	92 U	KB3	1	0.112	1,2	3.73	86 RN	KB1	1	0.131	1
3.21	98 CF	KA2	1	0.113	1	3.73	92 U	KA2	1	0.131	1,2,3
3.24	90 TH	KB2	1	0.114	1,3	3.73	85 AT	KB2	1	0.131	1
3.24	91 PA	KB1	1	0.114	1	3.78	90 TH	KA1	1	0.133	1,2,3
3.24	96 CM	KA1	1	0.114	1	3.81	91 PA	KA2	1	0.134	1
3.30	97 BK	KA2	1	0.116	1	3.81	84 PO	KB2	1	0.134	1
3.30	90 TH	KB5	1	0.116	1,2	3.81	85 AT	KB1	1	0.134	1
3.33	90 TH	KB1	1	0.117	1,2,3	3.87	89 AC	KA1	1	0.136	1

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 3.93 TO 4.95

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
3.93	83 BI	KB2	1	0.138	1,3	4.41	80 HG	KB3	1	0.155	1
3.93	90 TH	KA2	1	0.138	1,2,3	4.44	84 PO	KA1	1	0.156	1
3.93	84 PO	KB1	1	0.138	1	4.47	85 AT	KA2	1	0.157	1
3.98	88 RA	KA1	1	0.140	1	4.50	79 AU	KB5	1	0.158	1
4.01	82 PB	KB4	1	0.141	1,2	4.52	78 PT	KB4	1	0.159	1,2
4.01	89 AC	KA2	1	0.141	1	4.52	78 PT	KB2	1	0.159	1,3
4.04	82 PB	KB2	1	0.142	1,3	4.52	79 AU	KB1	1	0.159	1,2,3
4.04	83 BI	KB1	1	0.142	1,2,3	4.55	79 AU	KB3	1	0.160	1,2
4.07	83 BI	KB3	1	0.143	1,2	4.58	83 BI	KA1	1	0.161	1,2,3
4.10	87 FR	KA1	1	0.144	1	4.58	84 PO	KA2	1	0.161	1
4.13	82 PB	KB5	1	0.145	1	4.64	78 PT	KB5	1	0.163	1
4.13	88 RA	KA2	1	0.145	1	4.64	77 IR	KB4	1	0.163	1,2
4.15	81 TL	KB2	1	0.146	1	4.67	78 PT	KB1	1	0.164	1,2,3
4.15	82 PB	KB1	1	0.146	1,2,3	4.67	78 PT	KB3	1	0.164	1,2
4.18	82 PB	KB3	1	0.147	1	4.67	77 IR	KB2	1	0.164	1,3
4.21	86 RN	KA1	1	0.148	1	4.69	82 PB	KA1	1	0.165	1,2,3
4.24	87 FR	KA2	1	0.149	1	4.72	83 BI	KA2	1	0.166	1,2,3
4.27	80 HG	KB2	1	0.150	1	4.75	77 IR	KB5	1	0.167	1
4.27	81 TL	KB1	1	0.150	1,2,3	4.81	77 IR	KB3	1	0.169	1,2
4.30	81 TL	KB3	1	0.151	1,2	4.81	76 OS	KB2	1	0.169	1,3
4.32	85 AT	KA1	1	0.152	1	4.81	77 IR	KB1	1	0.169	1,2,3
4.35	86 RN	KA2	1	0.153	1	4.84	82 PB	KA2	1	0.170	1,2,3
4.38	79 AU	KB4	1	0.154	1,2	4.84	81 TL	KA1	1	0.170	1,2,3
4.38	80 HG	KB1	1	0.154	1	4.95	75 RE	KB2	1	0.174	1,3
4.41	79 AU	KB2	1	0.155	1,3	4.95	76 OS	KB3	1	0.174	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 4.95 TO 6.12

ANGLE	ELEM	LINE	N	LAMBDA	REF
4.95	76 OS	KB1	1	0.174	1,2,3
4.98	81 TL	KA2	1	0.175	1,2,3
4.98	80 HG	KA1	1	0.175	1
5.09	74 W	KB4	1	0.179	1
5.09	75 RE	KB3	1	0.179	1,2
5.09	75 RE	KB1	1	0.179	1,2,3
5.09	74 W	KB2	1	0.179	1,2,3
5.12	79 AU	KA1	1	0.180	1,2,3
5.12	80 HG	KA2	1	0.180	1
5.21	74 W	KB5	1	0.183	1
5.24	73 TA	KB4	1	0.184	1
5.24	74 W	KB1	1	0.184	1,2,3
5.26	73 TA	KB2	1	0.185	1,2,3
5.26	74 W	KB3	1	0.185	1,2
5.26	79 AU	KA2	1	0.185	1,2,3
5.29	98 CF	KB2	2	0.093	1
5.29	78 PT	KA1	1	0.186	1,2,3
5.38	73 TA	KB5	1	0.189	1
5.41	97 BK	KB2	2	0.095	1
5.41	78 PT	KA2	1	0.190	1,2,3
5.41	73 TA	KB1	1	0.190	1,2,3
5.44	72 HF	KB2	1	0.191	1,2,3
5.44	77 IR	KA1	1	0.191	1,2,3
5.44	73 TA	KB3	1	0.191	1,2
5.52	98 CF	KB1	2	0.097	1
5.56	72 HF	KB3	1	0.196	1,2
5.58	72 HF	KB1	1	0.196	1,2,3
5.58	77 IR	KA2	1	0.196	1,2,3
5.58	96 CM	KB2	2	0.098	1
5.58	97 BK	KB1	2	0.098	1
5.61	76 OS	KA1	1	0.197	1,2,3
5.61	71 LU	KB2	1	0.197	1,2,3
5.69	95 AM	KB2	2	0.100	1
5.75	76 OS	KA2	1	0.202	1,2,3
5.75	71 LU	KB1	1	0.202	1,2,3
5.75	96 CM	KB1	2	0.101	1
5.78	75 RE	KA1	1	0.203	1,2,3
5.78	71 LU	KB3	1	0.203	1,2
5.81	70 YB	KB2	1	0.204	1,2,3
5.86	95 AM	KB1	2	0.103	1
5.86	94 PU	KB2	2	0.103	1
5.92	75 RE	KA2	1	0.208	1,2,3
5.95	70 YB	KB1	1	0.209	1,2,3
5.95	70 YB	KB3	1	0.209	1,2
5.95	74 W	KA1	1	0.209	1,2,3
5.98	69 TM	K32	1	0.210	1
5.98	93 NP	K32	2	0.105	1
6.03	94 PU	KB1	2	0.106	1
6.09	74 W	KA2	1	0.214	1,2,3
6.12	73 TA	KA1	1	0.215	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 6.12 TO 7.17

ANGLE	ELEM	LINE	N	LAMBDA	REF
6.12	69 TM	KB1	1	0.215	1,2,3
6.15	98 CF	KA1	2	0.108	1
6.15	69 TM	KB3	1	0.216	1,2
6.18	68 ER	KB2	1	0.217	1,2,3
6.20	92 U	KB2	2	0.109	1,2,3
6.20	93 NP	KB1	2	0.109	1
6.26	73 TA	KA2	1	0.220	1,2,3
6.32	92 U	KB1	2	0.111	1,2,3
6.32	72 HF	KA1	1	0.222	1,2,3
6.32	91 PA	KB2	2	0.111	1
6.32	97 BK	KA1	2	0.111	1
6.35	68 ER	KB1	1	0.223	1,2,3
6.35	68 ER	KB3	1	0.223	1,2
6.38	92 U	KB3	2	0.112	1,2
6.38	67 HO	KB2	1	0.224	1
6.43	98 CF	KA2	2	0.113	1
6.46	72 HF	KA2	1	0.227	1,2,3
6.49	90 TH	KB2	2	0.114	1,3
6.49	96 CM	KA1	2	0.114	1
6.49	91 PA	KB1	2	0.114	1
6.52	71 LU	KA1	1	0.229	1,2,3
6.55	67 HO	KB1	1	0.230	1
6.60	90 TH	KB5	2	0.116	1,2
6.60	97 BK	KA2	2	0.116	1
6.60	66 DY	KB2	1	0.232	1,2,3
6.66	90 TH	KB1	2	0.117	1,2,3
6.66	95 AM	KA1	2	0.117	1
6.66	71 LU	KA2	1	0.234	1,2,3
6.66	89 AC	KB2	2	0.117	1
6.72	90 TH	KB3	2	0.118	1,2
6.75	66 DY	KB1	1	0.237	1,2,3
6.75	70 YB	KA1	1	0.237	1,2,3
6.77	66 DY	KB3	1	0.238	1,2
6.77	96 CM	KA2	2	0.119	1
6.83	88 RA	KB2	2	0.120	1
6.83	94 PU	KA1	2	0.120	1
6.83	65 TB	KB2	1	0.240	1,2,3
6.86	70 YB	KA2	1	0.241	1,2,3
6.89	89 AC	KB1	2	0.121	1
6.95	95 AM	KA2	2	0.122	1
6.95	69 TM	KA1	1	0.244	1,2,3
7.00	65 TB	KB3	1	0.246	1,2
7.00	93 NP	KA1	2	0.123	1
7.00	65 TB	KB1	1	0.246	1,2,3
7.06	88 RA	KB1	2	0.124	1
7.06	64 GD	KB2	1	0.248	1,2,3
7.06	87 FR	KB2	2	0.124	1
7.09	69 TM	KA2	1	0.249	1,2,3
7.12	94 PU	KA2	2	0.125	1
7.17	68 ER	KA1	1	0.252	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 7.17 TO 8.31

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
7.17	92 U	KA1	2	0.126	1,2,3	7.80	62 SM	KB3	1	0.274	1,2
7.23	87 FR	KB1	2	0.127	1	7.86	83 BI	KB2	2	0.138	1,3
7.23	86 RN	KB2	2	0.127	1	7.86	90 TH	KA2	2	0.138	1,2,3
7.23	64 GD	KB1	1	0.254	1,2,3	7.86	84 PO	KB1	2	0.138	1
7.26	64 GD	KB3	1	0.255	1,2	7.86	61 PM	KB2	1	0.276	1
7.29	93 NP	KA2	2	0.128	1	7.94	98 CF	KB2	3	0.093	1
7.32	63 EU	KB2	1	0.257	1,2,3	7.94	65 TB	KA1	1	0.279	1,2,3
7.32	68 ER	KA2	1	0.257	1,2,3	7.97	88 RA	KA1	2	0.140	1
7.34	91 PA	KA1	2	0.129	1	8.03	89 AC	KA2	2	0.141	1
7.43	67 HO	KA1	1	0.261	1,2,3	8.03	61 PM	KB1	1	0.282	1,2,3
7.46	86 RN	KB1	2	0.131	1	8.03	82 PB	KB4	2	0.141	1,2
7.46	85 AT	KB2	2	0.131	1	8.06	61 PM	KB3	1	0.283	2
7.46	92 U	KA2	2	0.131	1,2,3	8.06	65 TB	KA2	1	0.283	1,2,3
7.52	63 EU	KB1	1	0.264	1,2,3	8.09	83 BI	KB1	2	0.142	1,2,3
7.52	63 EU	KB3	1	0.264	1,2	8.09	82 PB	KB2	2	0.142	1,3
7.57	90 TH	KA1	2	0.133	1,2,3	8.11	97 BK	KB2	3	0.095	1
7.57	67 HO	KA2	1	0.266	1,2,3	8.14	60 ND	KB2	1	0.286	1,2,3
7.57	62 SM	KB2	1	0.266	1,2,3	8.14	83 BI	KB3	2	0.143	1,2
7.63	84 PO	KB2	2	0.134	1	8.20	87 FR	KA1	2	0.144	1
7.63	91 PA	KA2	2	0.134	1	8.20	64 GD	KA1	1	0.288	1,2,3
7.63	85 AT	KB1	2	0.134	1	8.26	88 RA	KA2	2	0.145	1
7.69	66 DY	KA1	1	0.270	1,2,3	8.26	82 PB	KB5	2	0.145	1
7.74	89 AC	KA1	2	0.136	1	8.29	98 CF	KB1	3	0.097	1
7.77	62 SM	KB1	1	0.273	1,2,3	8.31	81 TL	KB2	2	0.146	1
7.80	66 DY	KA2	1	0.274	1,2,3	8.31	82 PB	KB1	2	0.146	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 8.34 TO 9.31

ANGLE	ELEM	LINE	N	LAMBDA	REF
8.34	64 GD	KA2	1	0.293	1,2,3
8.34	60 ND	KB1	1	0.293	1,2,3
8.37	60 ND	KB3	1	0.294	1,2
8.37	96 CM	KB2	3	0.098	1
8.37	82 PB	KB3	2	0.147	1
8.37	97 BK	KB1	3	0.098	1
8.43	86 RN	KA1	2	0.148	1
8.46	59 PR	KB2	1	0.297	1,2,3
8.48	87 FR	KA2	2	0.149	1
8.51	63 EU	KA1	1	0.299	1,2,3
8.54	80 HG	KB2	2	0.150	1
8.54	95 AM	KB2	3	0.100	1
8.54	81 TL	KB1	2	0.150	1,2,3
8.60	81 TL	KB3	2	0.151	1,2
8.63	96 CM	KB1	3	0.101	1
8.63	63 EU	KA2	1	0.303	1,2,3
8.66	59 PR	KB1	1	0.304	1,2,3
8.66	85 AT	KA1	2	0.152	1
8.68	59 PR	KB3	1	0.305	1,2
8.71	86 RN	KA2	2	0.153	1
8.77	79 AU	KB4	2	0.154	1,2
8.77	58 CE	KB2	1	0.308	1,2,3
8.77	80 HG	KB1	2	0.154	1
8.80	94 PU	KB2	3	0.103	1
8.80	62 SM	KA1	1	0.309	1,2,3
8.80	95 AM	KB1	3	0.103	1
8.83	79 AU	KB2	2	0.155	1,3
8.83	80 HG	KB3	2	0.155	1
8.88	84 PO	KA1	2	0.156	1
8.94	85 AT	KA2	2	0.157	1
8.94	62 SM	KA2	1	0.314	1,2,3
8.97	93 NP	KB2	3	0.105	1
9.00	79 AU	KB5	2	0.158	1
9.00	58 CE	KB1	1	0.316	1,2,3
9.00	58 CE	KB3	1	0.316	1,2
9.06	78 PT	KB4	2	0.159	1,2
9.06	79 AU	KB1	2	0.159	1,2,3
9.06	78 PT	KB2	2	0.159	1,3
9.06	94 PU	KB1	3	0.106	1
9.11	57 LA	KB2	1	0.320	1,2,3
9.11	79 AU	KB3	2	0.160	1,2
9.14	61 PM	KA1	1	0.321	1,2,3
9.17	83 BI	KA1	2	0.161	1,2,3
9.17	84 PO	KA2	2	0.161	1
9.23	98 CF	KA1	3	0.108	1
9.26	61 PM	KA2	1	0.325	1,2,3
9.28	77 IR	KB4	2	0.163	1,2
9.28	57 LA	KB5	1	0.326	1
9.28	78 PT	KB5	2	0.163	1
9.31	92 U	KB2	3	0.109	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 9.31 TO 10.20

ANGLE	ELEM	LINE	N	LAMBDA	REF
9.31	93 NP	KB1	3	0.109	1
9.34	78 PT	KB3	2	0.164	1,2
9.34	57 LA	KB1	1	0.328	1,2,3
9.34	77 IR	KB2	2	0.164	1,3
9.34	78 PT	KB1	2	0.164	1,2,3
9.37	57 LA	KB3	1	0.329	1,2
9.40	82 PB	KA1	2	0.165	1,2,3
9.46	60 ND	KA1	1	0.332	1,2,3
9.46	83 BI	KA2	2	0.166	1,2,3
9.48	56 BA	KB2	1	0.333	1,2,3
9.48	91 PA	KB2	3	0.111	1
9.48	92 U	KB1	3	0.111	1,2,3
9.48	97 BK	KA1	3	0.111	1
9.51	77 IR	KB5	2	0.167	1
9.57	60 ND	KA2	1	0.336	1,2,3
9.57	92 U	KB3	3	0.112	1,2
9.63	77 IR	KB1	2	0.169	1,2,3
9.63	77 IR	KB3	2	0.169	1,2
9.63	76 OS	KB2	2	0.169	1,3
9.63	56 BA	KB5	1	0.338	1
9.66	98 CF	KA2	3	0.113	1
9.68	82 PB	KA2	2	0.170	1,2,3
9.68	81 TL	KA1	2	0.170	1,2,3
9.71	56 BA	KB3	1	0.341	1,2
9.71	56 BA	KB1	1	0.341	1,2,3
9.74	96 CM	KA1	3	0.114	1
9.74	91 PA	KB1	3	0.114	1
9.74	90 TH	KB2	3	0.114	1,3
9.80	59 PR	KA1	1	0.344	1,2,3
9.85	55 CS	KB2	1	0.346	1,2,3
9.91	75 RE	KB2	2	0.174	1,3
9.91	90 TH	KB5	3	0.116	1,2
9.91	97 BK	KA2	3	0.116	1
9.91	76 OS	KB3	2	0.174	1,2
9.91	76 OS	KB1	2	0.174	1,2,3
9.94	59 PR	KA2	1	0.349	1,2,3
9.97	81 TL	KA2	2	0.175	1,2,3
9.97	80 HG	KA1	2	0.175	1
10.00	95 AM	KA1	3	0.117	1
10.00	90 TH	KB1	3	0.117	1,2,3
10.00	89 AC	KB2	3	0.117	1
10.08	55 CS	KB1	1	0.354	1,2,3
10.08	90 TH	KB3	3	0.118	1,2
10.11	55 CS	KB3	1	0.355	1,2
10.17	58 CE	KA1	1	0.357	1,2,3
10.17	96 CM	KA2	3	0.119	1
10.20	74 W	KB4	2	0.179	1
10.20	75 RE	KB3	2	0.179	1,2
10.20	74 W	KB2	2	0.179	1,2,3
10.20	75 RE	KB1	2	0.179	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 10.25 TO 11.20

ANGLE	ELEM	LINE	N	LAMBDA	REF
10.25	54 XE	KB2	1	0.360	1,2,3
10.25	88 RA	KB2	3	0.120	1
10.25	79 AU	KA1	2	0.180	1,2,3
10.25	94 PU	KA1	3	0.120	1
10.25	80 HG	KA2	2	0.180	1
10.31	58 CE	KA2	1	0.362	1,2,3
10.34	89 AC	KB1	3	0.121	1
10.43	74 W	KB5	2	0.183	1
10.43	95 AM	KA2	3	0.122	1
10.48	54 XE	KB1	1	0.368	1,2,3
10.48	73 TA	KB4	2	0.184	1
10.48	74 W	KB1	2	0.184	1,2,3
10.51	93 NP	KA1	3	0.123	1
10.54	79 AU	KA2	2	0.185	1,2,3
10.54	73 TA	KB2	2	0.185	1,2,3
10.54	74 W	KB3	2	0.185	1,2
10.57	57 LA	KA1	1	0.371	1,2,3
10.60	87 FR	KB2	3	0.124	1
10.60	78 PT	KA1	2	0.186	1,2,3
10.60	88 RA	KB1	3	0.124	1
10.60	98 CF	KB2	4	0.093	1
10.68	94 PU	KA2	3	0.125	1
10.68	57 LA	KA2	1	0.375	1,2,3
10.68	53 I	KB2	1	0.375	1,2,3
10.77	73 TA	KB5	2	0.189	1
10.77	92 U	KA1	3	0.126	1,2,3
10.83	73 TA	KB1	2	0.190	1,2,3
10.83	78 PT	KA2	2	0.190	1,2,3
10.83	97 BK	KB2	4	0.095	1
10.85	86 RN	KB2	3	0.127	1
10.85	87 FR	KB1	3	0.127	1
10.88	73 TA	KB3	2	0.191	1,2
10.88	72 HF	KB2	2	0.191	1,2,3
10.88	77 IR	KA1	2	0.191	1,2,3
10.94	93 NP	KA2	3	0.128	1
10.94	53 I	KB1	1	0.384	1,2,3
10.97	53 I	KB3	1	0.385	1,2
10.97	56 BA	KA1	1	0.385	1,2,3
11.03	91 PA	KA1	3	0.129	1
11.05	98 CF	KB1	4	0.097	1
11.11	56 BA	KA2	1	0.390	1,2,3
11.14	52 TE	KB2	1	0.391	1,2,3
11.17	72 HF	KB3	2	0.196	1,2
11.17	96 CM	KB2	4	0.098	1
11.17	77 IR	KA2	2	0.196	1,2,3
11.17	72 HF	KB1	2	0.196	1,2,3
11.17	97 BK	KB1	4	0.098	1
11.20	85 AT	KB2	3	0.131	1
11.20	86 RN	KB1	3	0.131	1
11.20	92 U	KA2	3	0.131	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 11.23 TO 12.31

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
11.23	71 LU	KB2	2	0.197	1,2,3	11.86	54 XE	KA1	1	0.416	1,2,3
11.23	76 OS	KA1	2	0.197	1,2,3	11.86	75 RE	KA2	2	0.208	1,2,3
11.37	90 TH	KA1	3	0.133	1,2,3	11.88	51 SB	KB1	1	0.417	1,2,3
11.40	95 AM	KB2	4	0.100	1	11.91	51 SB	KB3	1	0.418	1,2
11.40	52 TE	KB1	1	0.400	1,2,3	11.91	70 YB	KB3	2	0.209	1,2
11.40	55 CS	KA1	1	0.400	1,2,3	11.91	74 W	KA1	2	0.209	1,2,3
11.43	52 TE	KB3	1	0.401	1,2	11.91	70 YB	KB1	2	0.209	1,2,3
11.45	84 PO	KB2	3	0.134	1	11.97	54 XE	KA2	1	0.420	1,2,3
11.45	85 AT	KB1	3	0.134	1	11.97	88 RA	KA1	3	0.140	1
11.45	91 PA	KA2	3	0.134	1	11.97	69 TM	KB2	2	0.210	1
11.51	71 LU	KB1	2	0.202	1,2,3	11.97	93 NP	KB2	4	0.105	1
11.51	76 CS	KA2	2	0.202	1,2,3	12.06	82 PB	KB4	3	0.141	1,2
11.51	96 CM	KB1	4	0.101	1	12.06	89 AC	KA2	3	0.141	1
11.54	55 CS	KA2	1	0.405	1,2,3	12.08	94 PU	KB1	4	0.106	1
11.57	75 RE	KA1	2	0.203	1,2,3	12.14	82 PB	KB2	3	0.142	1,3
11.57	71 LU	KB3	2	0.203	1,2	12.14	50 SN	KB2	1	0.426	1,2,3
11.63	70 YB	KB2	2	0.204	1,2,3	12.14	83 BI	KB1	3	0.142	1,2,3
11.63	51 SB	KB2	1	0.408	1,2,3	12.20	74 W	KA2	2	0.214	1,2,3
11.63	89 AC	KA1	3	0.136	1	12.23	83 BI	KB3	3	0.143	1,2
11.74	94 PU	KB2	4	0.103	1	12.26	69 TM	KB1	2	0.215	1,2,3
11.74	95 AM	KB1	4	0.103	1	12.26	73 TA	KA1	2	0.215	1,2,3
11.80	51 SB	KB5	1	0.414	1	12.31	69 TM	KB3	2	0.216	1,2
11.80	84 PO	KB1	3	0.138	1	12.31	50 SN	KB5	1	0.432	1
11.80	83 BI	KB2	3	0.138	1,3	12.31	98 CF	KA1	4	0.108	1
11.80	90 TH	KA2	3	0.138	1,2,3	12.31	87 FR	KA1	3	0.144	1

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 12.34 TO 13.26

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
12.34	53 I	KA1	1	0.433	1,2,3	12.83	81 TL	KB1	3	0.150	1,2,3
12.37	68 ER	KB2	2	0.217	1,2,3	12.86	49 IN	KB5	1	0.451	1
12.40	88 RA	KA2	3	0.145	1	12.86	52 TE	KA1	1	0.451	1,2,3
12.40	50 SN	KB1	1	0.435	1,2,3	12.89	98 CF	KA2	4	0.113	1
12.40	82 PB	KB5	3	0.145	1	12.91	81 TL	KB3	3	0.151	1,2
12.43	92 U	KB2	4	0.109	1,2,3	12.94	72 HF	KA2	2	0.227	1,2,3
12.43	50 SN	KB3	1	0.436	1,2	12.97	49 IN	KB3	1	0.455	1,2
12.43	93 NP	KB1	4	0.109	1	12.97	49 IN	KB1	1	0.455	1,2,3
12.48	81 TL	KB2	3	0.146	1	13.00	91 PA	KB1	4	0.114	1
12.48	53 I	KA2	1	0.438	1,2,3	13.00	90 TH	KB2	4	0.114	1,3
12.48	82 PB	KB1	3	0.146	1,2,3	13.00	52 TE	KA2	1	0.456	1,2,3
12.54	73 TA	KA2	2	0.220	1,2,3	13.00	85 AT	KA1	3	0.152	1
12.57	82 PB	KB3	3	0.147	1	13.00	96 CM	KA1	4	0.114	1
12.66	97 BK	KA1	4	0.111	1	13.06	71 LU	KA1	2	0.229	1,2,3
12.66	86 RN	KA1	3	0.148	1	13.09	86 RN	KA2	3	0.153	1
12.66	91 PA	KB2	4	0.111	1	13.11	67 HO	KB1	2	0.230	1
12.66	72 HF	KA1	2	0.222	1,2,3	13.17	79 AU	KB4	3	0.154	1,2
12.66	92 U	KB1	4	0.111	1,2,3	13.17	80 HG	KB1	3	0.154	1
12.69	49 IN	KB2	1	0.445	1,2,3	13.23	66 DY	KB2	2	0.232	1,2,3
12.71	68 ER	KB3	2	0.223	1,2	13.23	97 BK	KA2	4	0.116	1
12.71	68 ER	KB1	2	0.223	1,2,3	13.23	90 TH	KB5	4	0.116	1,2
12.74	87 FR	KA2	3	0.149	1	13.26	98 CF	KB2	5	0.093	1
12.77	92 U	KB3	4	0.112	1,2	13.26	80 HG	KB3	3	0.155	1
12.77	67 HO	KB2	2	0.224	1	13.26	79 AU	KB2	3	0.155	1,3
12.83	80 HG	KB2	3	0.150	1	13.26	48 CD	KB2	1	0.465	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 13.34 TO 14.17

ANGLE	ELEM	LINE	N	LAMBDA	REF
13.34	84 PO	KA1	3	0.156	1
13.34	95 AM	KA1	4	0.117	1
13.34	90 TH	KB1	4	0.117	1,2,3
13.34	89 AC	KB2	4	0.117	1
13.34	71 LU	KA2	2	0.234	1,2,3
13.40	51 SB	KA1	1	0.470	1,2,3
13.43	85 AT	KA2	3	0.157	1
13.46	90 TH	KB3	4	0.118	1,2
13.52	66 DY	KB1	2	0.237	1,2,3
13.52	79 AU	KB5	3	0.158	1
13.52	70 YB	KA1	2	0.237	1,2,3
13.54	48 CD	KB1	1	0.475	1,2,3
13.54	51 SB	KA2	1	0.475	1,2,3
13.54	97 BK	KB2	5	0.095	1
13.57	48 CD	KB3	1	0.476	1,2
13.57	66 DY	KB3	2	0.238	1,2
13.57	96 CM	KA2	4	0.119	1
13.60	78 PT	KB2	3	0.159	1,3
13.60	78 PT	KB4	3	0.159	1,2
13.60	79 AU	KB1	3	0.159	1,2,3
13.69	65 TB	KB2	2	0.240	1,2,3
13.69	88 RA	KB2	4	0.120	1
13.69	79 AU	KB3	3	0.160	1,2
13.69	94 PU	KA1	4	0.120	1
13.74	70 YB	KA2	2	0.241	1,2,3
13.77	83 BI	KA1	3	0.161	1,2,3
13.77	84 PO	KA2	3	0.161	1
13.80	89 AC	KB1	4	0.121	1
13.83	98 CF	KB1	5	0.097	1
13.89	47 AG	KB2	1	0.487	1,2,3
13.92	69 TM	KA1	2	0.244	1,2,3
13.92	95 AM	KA2	4	0.122	1
13.95	78 PT	KB5	3	0.163	1
13.95	77 IR	KB4	3	0.163	1,2
13.97	96 CM	KB2	5	0.098	1
13.97	97 BK	KB1	5	0.098	1
14.00	50 SN	KA1	1	0.491	1,2,3
14.03	65 TB	KB1	2	0.246	1,2,3
14.03	65 TB	KB3	2	0.246	1,2
14.03	78 PT	KB1	3	0.164	1,2,3
14.03	77 IR	KB2	3	0.164	1,3
14.03	93 NP	KA1	4	0.123	1
14.03	78 PT	KB3	3	0.164	1,2
14.06	47 AG	KB5	1	0.493	1
14.12	82 PB	KA1	3	0.165	1,2,3
14.12	50 SN	KA2	1	0.495	1,2,3
14.15	87 FR	KB2	4	0.124	1
14.15	64 GD	KB2	2	0.248	1,2,3
14.15	88 RA	KB1	4	0.124	1
14.17	47 AG	KB1	1	0.497	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 14.20 TO 15.26

ANGLE	ELEM	LINE	N	LAMBDA	REF
14.20	83 BI	KA2	3	0.166	1,2,3
14.20	69 TM	KA2	2	0.249	1,2,3
14.20	47 AG	KB3	1	0.498	1,2
14.26	94 PU	KA2	4	0.125	1
14.26	95 AM	KB2	5	0.100	1
14.29	77 IR	KB5	3	0.167	1
14.38	92 U	KA1	4	0.126	1,2,3
14.38	68 ER	KA1	2	0.252	1,2,3
14.40	96 CM	KB1	5	0.101	1
14.46	77 IR	KB1	3	0.169	1,2,3
14.46	77 IR	KB3	3	0.169	1,2
14.46	76 OS	KB2	3	0.169	1,3
14.49	64 GD	KB1	2	0.254	1,2,3
14.49	86 RN	KB2	4	0.127	1
14.49	87 FR	KB1	4	0.127	1
14.55	81 TL	KA1	3	0.170	1,2,3
14.55	64 GD	KB3	2	0.255	1,2
14.55	46 PD	KB2	1	0.510	1,2,3
14.55	82 PB	KA2	3	0.170	1,2,3
14.60	93 NP	KA2	4	0.128	1
14.60	49 IN	KA1	1	0.512	1,2,3
14.66	63 EU	KB2	2	0.257	1,2,3
14.66	68 ER	KA2	2	0.257	1,2,3
14.69	98 CF	LY1	1	0.515	1
14.69	94 PU	KB2	5	0.103	1
14.69	95 AM	KB1	5	0.103	1
14.72	91 PA	KA1	4	0.129	1
14.75	49 IN	KA2	1	0.517	1,2,3
14.75	46 PD	KB5	1	0.517	1
14.86	46 PD	KB1	1	0.521	1,2,3
14.86	46 PD	KB3	1	0.521	1,2
14.89	76 OS	KB3	3	0.174	1,2
14.89	76 OS	KB1	3	0.174	1,2,3
14.89	75 RE	KB2	3	0.174	1,3
14.89	67 HO	KA1	2	0.261	1,2,3
14.95	86 RN	KB1	4	0.131	1
14.95	85 AT	KB2	4	0.131	1
14.95	92 U	KA2	4	0.131	1,2,3
14.98	80 HG	KA1	3	0.175	1
14.98	93 NP	KB2	5	0.105	1
14.98	81 TL	KA2	3	0.175	1,2,3
15.06	63 EU	KB3	2	0.264	1,2
15.06	63 EU	KB1	2	0.264	1,2,3
15.12	94 PU	KB1	5	0.106	1
15.12	97 BK	LY1	1	0.530	1
15.18	62 SM	KB2	2	0.266	1,2,3
15.18	67 HO	KA2	2	0.266	1,2,3
15.18	90 TH	KA1	4	0.133	1,2,3
15.26	45 RH	KB2	1	0.535	1,2,3
15.26	48 CD	KA1	1	0.535	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 15.29 TO 16.18

ANGLE	ELEM	LINE	N	LAMBDA	REF
15.29	84 PO	KB2	4	0.134	1
15.29	85 AT	KB1	4	0.134	1
15.29	91 PA	KA2	4	0.134	1
15.32	75 RE	KB1	3	0.179	1,2,3
15.32	74 W	KB2	3	0.179	1,2,3
15.32	75 RE	KB3	3	0.179	1,2
15.32	74 W	KB4	3	0.179	1
15.38	48 CD	KA2	1	0.559	1,2,3
15.41	66 DY	KA1	2	0.270	1,2,3
15.41	79 AU	KA1	3	0.180	1,2,3
15.41	80 HG	KA2	3	0.180	1
15.41	98 CF	KA1	5	0.108	1
15.44	45 RH	KB5	1	0.541	1
15.52	89 AC	KA1	4	0.136	1
15.55	92 U	KB2	5	0.109	1,2,3
15.55	93 NP	KB1	5	0.109	1
15.58	45 RH	KB3	1	0.546	1,2
15.58	45 RH	KB1	1	0.546	1,2,3
15.58	96 CM	LY1	1	0.546	1
15.58	62 SM	KB1	2	0.273	1,2,3
15.64	62 SM	KB3	2	0.274	1,2
15.64	66 DY	KA2	2	0.274	1,2,3
15.67	74 W	KB5	3	0.183	1
15.75	74 W	KB1	3	0.184	1,2,3
15.75	90 TH	KA2	4	0.138	1,2,3
15.75	61 PM	KB2	2	0.276	1
15.75	84 PO	KB1	4	0.138	1
15.75	83 BI	KB2	4	0.138	1,3
15.75	73 TA	KB4	3	0.184	1
15.84	74 W	KB3	3	0.185	1,2
15.84	91 PA	KB2	5	0.111	1
15.84	97 BK	KA1	5	0.111	1
15.84	73 TA	KB2	3	0.185	1,2,3
15.84	92 U	KB1	5	0.111	1,2,3
15.84	79 AU	KA2	3	0.185	1,2,3
15.93	78 PT	KA1	3	0.186	1,2,3
15.93	65 TB	KA1	2	0.279	1,2,3
15.95	47 AG	KA1	1	0.559	1,2,3
15.98	92 U	KB3	5	0.112	1,2
15.98	88 RA	KA1	4	0.140	1
16.04	95 AM	LY1	1	0.562	1,3
16.04	44 RU	KB2	1	0.562	1,2,3
16.10	61 PM	KB1	2	0.282	1,2,3
16.10	47 AG	KA2	1	0.564	1,2,3
16.10	82 PB	KB4	4	0.141	1,2
16.10	89 AC	KA2	4	0.141	1
16.13	98 CF	KA2	5	0.113	1
16.15	65 TB	KA2	2	0.283	1,2,3
16.15	61 PM	KB3	2	0.283	2
16.18	73 TA	KB5	3	0.189	1

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 16.21 TO 17.07

ANGLE	ELEM	LINE	N	LAMBDA	REF
16.21	44 RU	KB5	1	0.568	1
16.21	83 BI	KB1	4	0.142	1,2,3
16.21	82 PB	KB2	4	0.142	1,3
16.27	91 PA	KB1	5	0.114	1
16.27	96 CM	KA1	5	0.114	1
16.27	73 TA	KB1	3	0.190	1,2,3
16.27	78 PT	KA2	3	0.190	1,2,3
16.27	90 TH	KB2	5	0.114	1,3
16.33	83 BI	KB3	4	0.143	1,2
16.33	60 ND	KB2	2	0.286	1,2,3
16.33	44 RU	KB1	1	0.572	1,2,3
16.36	72 HF	KB2	3	0.191	1,2,3
16.36	44 RU	KB3	1	0.573	1,2
16.36	77 IR	KA1	3	0.191	1,2,3
16.36	73 TA	KB3	3	0.191	1,2
16.44	64 GD	KA1	2	0.288	1,2,3
16.44	87 FR	KA1	4	0.144	1
16.53	94 PU	LY1	1	0.579	1
16.56	88 RA	KA2	4	0.145	1
16.56	90 TH	KB5	5	0.116	1,2
16.56	82 PB	KB5	4	0.145	1
16.56	97 BK	KA2	5	0.116	1
16.67	81 TL	KB2	4	0.146	1
16.67	82 PB	KB1	4	0.146	1,2,3
16.70	89 AC	KB2	5	0.117	1
16.70	46 PD	KA1	1	0.585	1,2,3
16.70	95 AM	KA1	5	0.117	1
16.70	90 TH	KB1	5	0.117	1,2,3
16.73	60 ND	KB1	2	0.293	1,2,3
16.73	64 GD	KA2	2	0.293	1,2,3
16.79	72 HF	KB1	3	0.196	1,2,3
16.79	60 ND	KB3	2	0.294	1,2
16.79	82 PB	KB3	4	0.147	1
16.79	77 IR	KA2	3	0.196	1,2,3
16.79	72 HF	KB3	3	0.196	1,2
16.84	43 TC	KB2	1	0.590	1
16.84	46 PD	KA2	1	0.590	1,2,3
16.84	43 TC	KB4	1	0.590	1
16.84	90 TH	KB3	5	0.118	1,2
16.87	71 LU	KB2	3	0.197	1,2,3
16.87	76 OS	KA1	3	0.197	1,2,3
16.90	86 RN	KA1	4	0.148	1
16.96	59 PR	KB2	2	0.297	1,2,3
16.96	91 PA	LY4	1	0.594	1,2
16.99	96 CM	KA2	5	0.119	1
16.99	92 U	LY6	1	0.595	1,2
17.02	87 FR	KA2	4	0.149	1
17.05	93 NP	LY1	1	0.597	1,2,3
17.07	92 U	LY3	1	0.598	1,2,3
17.07	63 EU	KA1	2	0.299	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 17.13 TO 18.00

ANGLE	ELEM	LINE	N	LAMBDA	REF
17.13	94 PU	KA1	5	0.120	1
17.13	81 TL	KB1	4	0.150	1,2,3
17.13	80 HG	KB2	4	0.150	1
17.13	88 RA	KB2	5	0.120	1
17.16	43 TC	KB3	1	0.601	1,2
17.19	43 TC	KB1	1	0.602	1,2,3
17.22	98 CF	LB1	1	0.603	1
17.25	81 TL	KB3	4	0.15	1,2
17.28	92 U	LY2	1	0.605	1,2,3
17.28	89 AC	KB1	5	0.121	1
17.31	71 LU	KB1	3	0.202	1,2,3
17.31	76 OS	KA2	3	0.202	1,2,3
17.31	63 EU	KA2	2	0.303	1,2,3
17.36	85 AT	KA1	4	0.152	1
17.36	59 PR	KB1	2	0.304	1,2,3
17.39	71 LU	KB3	3	0.203	1,2
17.39	75 RE	KA1	3	0.203	1,2,3
17.42	59 PR	KB3	2	0.305	1,2
17.42	95 AM	KA2	5	0.122	1
17.45	90 TH	LY4	1	0.611	1,2
17.48	70 YB	KB2	3	0.204	1,2,3
17.48	86 RN	KA2	4	0.153	1
17.51	91 PA	LY6	1	0.613	1,2
17.51	45 RH	KA1	1	0.613	1,2,3
17.56	93 NP	KA1	5	0.123	1
17.56	92 U	LY1	1	0.615	1,2,3
17.59	79 AU	KB4	4	0.154	1,2
17.59	80 HG	KB1	4	0.154	1
17.59	58 CE	KB2	2	0.306	1,2,3
17.62	91 PA	LY3	1	0.617	1,2,3
17.65	62 SM	KA1	2	0.309	1,2,3
17.65	45 RH	KA2	1	0.618	1,2,3
17.71	87 FR	KB2	5	0.124	1
17.71	80 HG	KB3	4	0.155	1
17.71	42 MO	KB4	1	0.620	2
17.71	79 AU	KB2	4	0.155	1,3
17.71	88 RA	KB1	5	0.124	1
17.74	42 MO	KB2	1	0.621	1,2,3
17.74	97 BK	LB1	1	0.621	1
17.82	91 PA	LY2	1	0.624	1,2,3
17.82	84 PO	KA1	4	0.156	1
17.82	75 RE	KA2	3	0.208	1,2,3
17.85	94 PU	KA2	5	0.125	1
17.91	42 MO	KB5	1	0.627	1
17.91	70 YB	KB1	3	0.209	1,2,3
17.91	70 YB	KB3	3	0.209	1,2
17.91	74 W	KA1	3	0.209	1,2,3
17.94	85 AT	KA2	4	0.157	1
17.94	62 SM	KA2	2	0.314	1,2,3
18.00	92 U	KA1	5	0.126	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 18.00 TO 18.86

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
18.00	69 TM	KB2	3	0.210	1	18.43	91 PA	KA1	5	0.129	1
18.05	79 AU	KB5	4	0.158	1	18.43	73 TA	KA1	3	0.215	1,2,3
18.05	58 CE	KB1	2	0.316	1,2,3	18.43	69 TM	KB1	3	0.215	1,2,3
18.05	90 TH	LY6	1	0.632	1,2	18.49	44 RU	KA2	1	0.647	1,2,3
18.05	58 CE	KB3	2	0.316	1,2	18.51	69 TM	KB3	3	0.216	1,2
18.05	42 MO	KB1	1	0.632	1,2,3	18.54	88 RA	LY4	1	0.649	1,2
18.08	42 MO	KB3	1	0.633	1,2	18.57	61 PM	KA2	2	0.325	1,2,3
18.11	91 PA	LY1	1	0.634	1,2,3	18.60	68 ER	KB2	3	0.217	1,2,3
18.14	87 FR	KB1	5	0.127	1	18.63	77 IR	KB4	4	0.163	1,2
18.14	86 RN	KB2	5	0.127	1	18.63	57 LA	KB5	2	0.326	1
18.14	92 U	LY5	1	0.635	1,2	18.63	78 PT	KB5	4	0.163	1
18.17	79 AU	KB1	4	0.159	1,2,3	18.66	90 TH	LY1	1	0.653	1,2,3
18.17	78 PT	KB4	4	0.159	1,2	18.66	98 CF	LB2	1	0.653	1
18.17	90 TH	LY3	1	0.636	1,2,3	18.69	41 NB	KB2	1	0.654	1,2,3
18.17	78 PT	KB2	4	0.159	1,3	18.72	86 RN	KB1	5	0.131	1
18.26	96 CM	LB1	1	0.639	1	18.72	92 U	KA2	5	0.131	1,2,3
18.28	93 NP	KA2	5	0.128	1	18.72	85 AT	KB2	5	0.131	1
18.28	79 AU	KB3	4	0.160	1,2	18.72	91 PA	LY5	1	0.655	1,2
18.28	57 LA	KB2	2	0.320	1,2,3	18.75	77 IR	KB2	4	0.164	1,3
18.34	90 TH	LY2	1	0.642	1,2,3	18.75	78 PT	KB3	4	0.164	1,2
18.34	61 PM	KA1	2	0.321	1,2,3	18.75	57 LA	KB1	2	0.328	1,2,3
18.34	74 W	KA2	3	0.214	1,2,3	18.75	78 PT	KB1	4	0.164	1,2,3
18.37	44 RU	KA1	1	0.643	1,2,3	18.80	95 AM	LB1	1	0.658	1,3
18.40	83 BI	KA1	4	0.161	1,2,3	18.80	57 LA	KB3	2	0.329	1,2
18.40	84 PO	KA2	4	0.161	1	18.86	82 PB	KA1	4	0.165	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 18.86 TO 19.90

ANGLE	ELEM	LINE	N	LAMBDA	REF
18.86	73 TA	KA2	3	0.220	1,2,3
18.86	41 NB	KB5	1	0.660	1
18.98	60 ND	KA1	2	0.332	1,2,3
18.98	83 BI	KA2	4	0.166	1,2,3
19.00	90 TH	KA1	5	0.133	1,2,3
19.03	72 HF	KA1	3	0.222	1,2,3
19.03	56 BA	KB2	2	0.333	1,2,3
19.03	41 NB	KB1	1	0.666	1,2,3
19.03	41 NB	KB3	1	0.666	1,2
19.09	77 IR	KB5	4	0.167	1
19.12	68 ER	KB3	3	0.223	1,2
19.12	97 BK	LB2	1	0.669	1
19.12	68 ER	KB1	3	0.223	1,2,3
19.15	91 PA	KA2	5	0.134	1
19.15	85 AT	KB1	5	0.134	1
19.15	84 PO	KB2	5	0.134	1
19.21	60 ND	KA2	2	0.336	1,2,3
19.21	67 HO	KB2	3	0.224	1
19.24	88 RA	LY6	1	0.673	1,2
19.24	43 TC	KA1	1	0.673	2,3
19.26	89 AC	LY1	1	0.674	1
19.29	90 TH	LY5	1	0.675	1,2
19.29	88 RA	LY3	1	0.675	1,2,3
19.32	76 OS	KB2	4	0.169	1,3
19.32	77 IR	KB3	4	0.169	1,2
19.32	77 IR	KB1	4	0.169	1,2,3
19.32	43 TC	KA2	1	0.676	2,3
19.32	56 BA	KB5	2	0.338	1
19.38	94 PU	LB1	1	0.678	1
19.44	89 AC	KA1	5	0.136	1
19.44	81 TL	KA1	4	0.170	1,2,3
19.44	82 PB	KA2	4	0.170	1,2,3
19.47	92 U	LB9	1	0.681	1,2
19.47	72 HF	KA2	3	0.227	1,2,3
19.50	56 BA	KB3	2	0.341	1,2
19.50	88 RA	LY2	1	0.682	1,2,3
19.50	56 BA	KB1	2	0.341	1,2,3
19.58	96 CM	LB2	1	0.685	1
19.64	71 LU	KA1	3	0.229	1,2,3
19.64	92 U	LB10	1	0.687	1,2
19.67	59 PR	KA1	2	0.344	1,2,3
19.73	40 ZR	KB2	1	0.690	1,2,3
19.73	67 HO	KB1	3	0.230	1
19.73	90 TH	KA2	5	0.138	1,2,3
19.73	84 PO	KB1	5	0.138	1
19.73	83 BI	KB2	5	0.138	1,3
19.78	55 CS	KB2	2	0.346	1,2,3
19.87	88 RA	LY1	1	0.695	1,2,3
19.90	40 ZR	KB5	1	0.696	1
19.90	76 OS	KB3	4	0.174	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 19.90 TO 19.96

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
19.90	75 RE	KB2	4	0.174	1,3						
19.90	76 OS	KB1	4	0.174	1,2,3						
19.90	66 DY	KB2	3	0.232	1,2,3						
19.96	93 NP	LB1	1	0.698	1,2,3						
19.96	59 PR	KA2	2	0.349	1,2,3						

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 20.02 TO 20.94

ANGLE	ELEM	LINE	N	LAMBDA	REF
20.02	80 HG	KA1	4	0.175	1
20.02	88 RA	KA1	5	0.140	1
20.02	8 TL	KA2	4	0.175	1,2,3
20.04	95 AM	LB2	1	0.701	1,3
20.04	91 PA	LB9	1	0.701	1,2
20.07	40 ZR	KB1	1	0.702	1,2,3
20.07	71 LU	KA2	3	0.234	1,2,3
20.07	40 ZR	KB3	1	0.702	1,2
20.16	89 AC	KA2	5	0.141	1
20.16	82 PB	KB4	5	0.141	1,2
20.25	55 CS	KB1	2	0.354	1,2,3
20.25	91 PA	LB10	1	0.708	1,2
20.28	42 MO	KA1	1	0.709	1,2,3
20.30	92 U	LB3	1	0.710	1,2,3
20.31	83 BI	KB1	5	0.142	1,2,3
20.31	82 PB	KB2	5	0.142	1,3
20.31	55 CS	KB3	2	0.355	1,2
20.33	70 YB	KA1	3	0.237	1,2,3
20.33	66 DY	KB1	3	0.237	1,2,3
20.39	42 MO	KA2	1	0.713	1,2,3
20.42	66 DY	KB3	3	0.238	1,2
20.42	58 CE	KA1	2	0.357	1,2,3
20.45	83 BI	KB3	5	0.143	1,2
20.48	74 W	KB2	4	0.179	1,2,3
20.48	74 W	KB4	4	0.179	1
20.48	75 RE	KB1	4	0.179	1,2,3
20.48	87 FR	LY1	1	0.716	1,2,3
20.48	75 RE	KB3	4	0.179	1,2
20.51	88 RA	LY5	1	0.717	1,2
20.54	94 PU	LB2	1	0.718	1
20.59	87 FR	KA1	5	0.144	1
20.59	54 XE	KB2	2	0.360	1,2,3
20.59	80 HG	KA2	4	0.180	1
20.59	65 TB	KB2	3	0.240	1,2,3
20.59	92 U	LB1	1	0.720	1,2,3
20.59	79 AU	KA1	4	0.180	1,2,3
20.68	70 YB	KA2	3	0.241	1,2,3
20.68	90 TH	LB9	1	0.723	1,2
20.71	58 CE	KA2	2	0.362	1,2,3
20.74	82 PB	KB5	5	0.145	1
20.74	88 RA	KA2	5	0.145	1
20.77	92 U	LB5	1	0.726	1,2
20.80	39 Y	KB4	1	0.727	2
20.85	39 Y	KB2	1	0.729	1,2,3
20.88	90 TH	LB10	1	0.730	1,2
20.88	81 TL	KB2	5	0.146	1
20.88	82 PB	KB1	5	0.146	1,2,3
20.94	69 TM	KA1	3	0.244	1,2,3
20.94	74 W	KB5	4	0.183	1
20.94	91 PA	LB3	1	0.732	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 21.00 TO 21.90

ANGLE	ELEM	LINE	N	LAMBDA	REF
21.00	39 Y	KB5	1	0.734	1
21.03	82 PB	KB3	5	0.147	1
21.06	93 NP	LB2	1	0.736	1,2,3
21.06	92 U	LB7	1	0.736	1,2
21.06	73 TA	KB4	4	0.184	1
21.06	54 XE	KB1	2	0.368	1,2,3
21.06	74 W	KB1	4	0.184	1,2,3
21.11	65 TB	KB3	3	0.246	1,2
21.11	65 TB	KB1	3	0.246	1,2,3
21.14	86 RN	LY1	1	0.739	1
21.17	74 W	KB3	4	0.185	1,2
21.17	86 RN	KA1	5	0.148	1
21.17	79 AU	KA2	4	0.185	1,2,3
21.17	73 TA	KB2	4	0.185	1,2,3
21.20	39 Y	KB1	1	0.741	1,2,3
21.20	39 Y	KB3	1	0.741	1,2
21.23	57 LA	KA1	2	0.371	1,2,3
21.23	91 PA	LB1	1	0.742	1,2,3
21.29	78 PT	KA1	4	0.186	1,2,3
21.29	64 GD	KB2	3	0.248	1,2,3
21.32	91 PA	LB5	1	0.745	1,2
21.32	87 FR	KA2	5	0.149	1
21.35	41 NB	KA1	1	0.746	1,2,3
21.38	69 TM	KA2	3	0.249	1,2,3
21.40	92 U	LB4	1	0.748	1,2,3
21.46	81 TL	KB1	5	0.150	1,2,3
21.46	80 HG	KB2	5	0.150	1
21.46	53 I	KB2	2	0.375	1,2,3
21.46	41 NB	KA2	1	0.750	1,2,3
21.46	57 LA	KA2	2	0.375	1,2,3
21.61	90 TH	LB3	1	0.755	1,2,3
21.61	91 PA	LB7	1	0.755	1,2
21.61	92 U	LB2	1	0.755	1,2,3
21.61	81 TL	KB3	5	0.151	1,2
21.64	68 ER	KA1	3	0.252	1,2,3
21.64	73 TA	KB5	4	0.189	1
21.75	78 PT	KA2	4	0.190	1,2,3
21.75	73 TA	KB1	4	0.190	1,2,3
21.75	85 AT	KA1	5	0.152	1
21.78	83 BI	LY4	1	0.761	1,2
21.81	64 GD	KB1	3	0.254	1,2,3
21.84	85 AT	LY1	1	0.763	1
21.87	84 PO	LY6	1	0.764	1,2
21.87	77 IR	KA1	4	0.191	1,2,3
21.87	72 HF	KB2	4	0.191	1,2,3
21.87	84 PO	LY3	1	0.764	1,2,3
21.87	73 TA	KB3	4	0.191	1,2
21.90	90 TH	LB5	1	0.765	1,2
21.90	86 RN	KA2	5	0.153	1
21.90	90 TH	LB1	1	0.765	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 21.90 TO 22.91

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
21.90	64 GD	KB3	3	0.255	1,2	22.45	77 IR	KA2	4	0.196	1,2,3
21.98	53 I	KB1	2	0.384	1,2,3	22.48	85 AT	KA2	5	0.157	1
22.01	88 RA	LB9	1	0.769	1,2	22.50	82 PB	LY4	1	0.786	1
22.04	56 BA	KA1	2	0.385	1,2,3	22.50	40 ZR	KA1	1	0.786	1,2,3
22.04	80 HG	KB1	5	0.154	1	22.53	84 PO	LY1	1	0.787	1,2,3
22.04	79 AU	KB4	5	0.154	1,2	22.56	71 LU	KB2	4	0.197	1,2,3
22.04	53 I	KB3	2	0.385	1,2	22.56	92 U	LB6	1	0.788	1,2,3
22.04	91 PA	LB4	1	0.770	1,2,3	22.56	76 OS	KA1	4	0.197	1,2,3
22.07	38 SR	KB2	1	0.771	1,2,3	22.59	83 BI	LY3	1	0.789	1,2,3
22.07	63 EU	KB2	3	0.257	1,2,3	22.59	89 AC	LB1	1	0.789	1
22.07	68 ER	KA2	3	0.257	1,2,3	22.62	40 ZR	KA2	1	0.790	1,2,3
22.16	91 PA	LB2	1	0.774	1,2,3	22.62	83 BI	LY6	1	0.790	1,2
22.16	90 TH	LB7	1	0.774	1,2	22.62	79 AU	KB5	5	0.158	1
22.19	38 SR	KB5	1	0.775	1	22.68	63 EU	KB1	3	0.264	1,2,3
22.19	79 AU	KB2	5	0.155	1,3	22.68	98 CF	LA1	1	0.792	1
22.19	80 HG	KB3	5	0.155	1	22.68	63 EU	KB3	3	0.264	1,2
22.19	88 RA	LB10	1	0.775	1,2	22.71	90 TH	LB4	1	0.793	1,2,3
22.33	56 BA	KA2	2	0.390	1,2,3	22.74	90 TH	LB2	1	0.794	1,2,3
22.33	84 PO	KA1	5	0.156	1	22.77	79 AU	KB1	5	0.159	1,2,3
22.39	52 TE	KB2	2	0.391	1,2,3	22.77	78 PT	KB2	5	0.159	1,3
22.42	38 SR	KB1	1	0.783	1,2,3	22.77	78 PT	KB4	5	0.159	1,2
22.42	38 SR	KB3	1	0.783	1,2	22.79	83 BI	LY2	1	0.796	1,2,3
22.42	67 HO	KA1	3	0.251	1,2,3	22.85	67 HO	KA2	3	0.266	1,2,3
22.45	72 HF	KB1	4	0.196	1,2,3	22.85	62 SM	KB2	3	0.266	1,2,3
22.45	72 HF	KB3	4	0.196	1,2	22.91	79 AU	KB3	5	0.160	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 22.91 TO 23.84

ANGLE	ELEM	LINE	N	LAMBDA	REF
22.91	55 CS	KA1	2	0.400	1,2,3
22.91	52 TE	KB1	2	0.400	1,2,3
22.97	52 TE	KB3	2	0.401	1,2
23.00	88 RA	LB3	1	0.803	1,2,3
23.03	98 CF	LA2	1	0.804	1
23.06	83 BI	KA1	5	0.161	1,2,3
23.06	92 U	LN	1	0.805	1,2,3
23.06	84 PO	KA2	5	0.161	1
23.09	88 RA	LB5	1	0.806	1,2
23.14	71 LU	KB1	4	0.202	1,2,3
23.14	91 PA	LB6	1	0.808	1,2,3
23.14	76 OS	KA2	4	0.202	1,2,3
23.20	66 DY	KA1	3	0.270	1,2,3
23.20	97 BK	LA1	1	0.810	1
23.20	55 CS	KA2	2	0.405	1,2,3
23.26	75 RE	KA1	4	0.203	1,2,3
23.26	71 LU	KB3	4	0.203	1,2
23.26	81 TL	LY4	1	0.812	1,2
23.29	83 BI	LY1	1	0.813	1,2,3
23.32	89 AC	LB2	1	0.814	1
23.32	88 RA	LB1	1	0.814	1,2,3
23.35	77 IR	KB4	5	0.163	1,2
23.35	82 PB	LY3	1	0.815	1,2,3
23.35	78 PT	KB5	5	0.163	1
23.38	37 RB	KB2	1	0.816	1,2,3
23.38	88 RA	LB7	1	0.816	1,2
23.38	51 SB	KB2	2	0.408	1,2,3
23.38	70 YB	KB2	4	0.204	1,2,3
23.40	82 PB	LY6	1	0.817	1,2
23.46	62 SM	KB1	3	0.273	1,2,3
23.49	77 IR	KB2	5	0.164	1,3
23.49	78 PT	KB1	5	0.164	1,2,3
23.49	78 PT	KB3	5	0.164	1,2
23.52	82 PB	LY2	1	0.821	1,2,3
23.55	62 SM	KB3	3	0.274	1,2
23.55	66 DY	KA2	3	0.274	1,2,3
23.55	97 BK	LA2	1	0.822	1
23.55	37 RB	KB5	1	0.822	1
23.64	82 PB	KA1	5	0.165	1,2,3
23.72	90 TH	LB6	1	0.828	1,2,3
23.72	61 PM	KB2	3	0.276	1
23.72	51 SB	KB5	2	0.414	1
23.75	37 RB	KB1	1	0.829	1,2,3
23.75	96 CM	LA1	1	0.829	1
23.75	91 PA	LN	1	0.829	1,2,3
23.75	39 Y	KA1	1	0.829	1,2,3
23.75	37 RB	KB3	1	0.829	1,2
23.78	83 BI	KA2	5	0.166	1,2,3
23.84	54 XE	KA1	2	0.416	1,2,3
23.84	75 RE	KA2	4	0.208	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 23.87 TO 24.95

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
23.87	39 Y	KA2	1	0.833	1,2,3	24.34	65 TB	KA2	3	0.283	1,2,3
23.90	51 SB	KB1	2	0.417	1,2,3	24.34	61 PM	KB3	3	0.283	2
23.93	77 IR	KB5	5	0.167	1	24.36	81 TL	KA1	5	0.170	1,2,3
23.93	88 RA	LB2	1	0.835	1,2,3	24.36	82 PB	KA2	5	0.170	1,2,3
23.96	70 YB	KB1	4	0.209	1,2,3	24.42	50 SN	KB2	2	0.426	1,2,3
23.96	70 YB	KB3	4	0.209	1,2	24.48	90 TH	LN	1	0.854	1,2,3
23.96	51 SB	KB3	2	0.418	1,2	24.54	74 W	KA2	4	0.214	1,2,3
23.96	74 W	KA1	4	0.209	1,2,3	24.60	60 ND	KB2	3	0.286	1,2,3
23.99	65 TB	KA1	3	0.279	1,2,3	24.60	87 FR	LB2	1	0.858	1,2,3
24.04	83 BI	LY5	1	0.839	1,2	24.66	95 AM	LA2	1	0.860	1,3
24.04	80 HG	LY4	1	0.839	1,2	24.66	73 TA	KA1	4	0.215	1,2,3
24.07	82 PB	LY1	1	0.840	1,2,3	24.66	69 TM	KB1	4	0.215	1,2,3
24.07	87 FR	LB1	1	0.840	1,2,3	24.77	69 TM	KB3	4	0.216	1,2
24.07	54 XE	KA2	2	0.420	1,2,3	24.77	50 SN	KB5	2	0.432	1
24.07	69 TM	KB2	4	0.210	1	24.77	64 GD	KA1	3	0.288	1,2,3
24.10	96 CM	LA2	1	0.841	1	24.83	36 KR	KB2	1	0.866	1,2,3
24.10	81 TL	LY3	1	0.841	1,2,3	24.83	36 KR	KB4	1	0.866	2
24.10	88 RA	LB4	1	0.841	1,2,3	24.83	86 RN	LB1	1	0.866	1
24.19	81 TL	LY6	1	0.844	1,2	24.83	53 I	KA1	2	0.433	1,2,3
24.22	76 OS	KB2	5	0.169	1,3	24.83	82 PB	LY5	1	0.866	1,2
24.22	77 IR	KB3	5	0.169	1,2	24.89	94 PU	LA1	1	0.868	1
24.22	77 IR	KB1	5	0.169	1,2,3	24.89	81 TL	LY1	1	0.868	1,2,3
24.25	61 PM	KB1	3	0.282	1,2,3	24.89	68 ER	KB2	4	0.217	1,2,3
24.31	81 TL	LY2	1	0.848	1,2,3	24.92	80 HG	LY3	1	0.869	1,2,3
24.31	95 AM	LA1	1	0.848	1,3	24.95	76 OS	KB1	5	0.174	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 24.95 TO 26.03

ANGLE	ELEM	LINE	N	LAMBDA	REF
24.95	76 OS	KB3	5	0.174	1,2
24.95	75 RE	KB2	5	0.174	1,3
24.95	50 SN	KB1	2	0.435	1,2,3
24.98	36 KR	KB5	1	0.871	1,2
24.98	88 RA	LB6	1	0.871	1,2,3
25.00	50 SN	KB3	2	0.436	1,2
25.03	80 HG	LY6	1	0.873	1,2
25.09	80 HG	LY2	1	0.875	1,2,3
25.09	38 SR	KA1	1	0.875	1,2,3
25.09	80 HG	KA1	5	0.175	1
25.09	81 TL	KA2	5	0.175	1,2,3
25.12	53 I	KA2	2	0.438	1,2,3
25.18	36 KR	KB1	1	0.878	1,2,3
25.21	64 GD	KA2	3	0.293	1,2,3
25.21	36 KR	KB3	1	0.879	1,2
25.21	38 SR	KA2	1	0.879	1,2,3
25.21	60 ND	KB1	3	0.293	1,2,3
25.24	73 TA	KA2	4	0.220	1,2,3
25.24	94 PU	LA2	1	0.880	1
25.27	86 RN	LB2	1	0.881	1
25.30	60 ND	KB3	3	0.294	1,2
25.47	72 HF	KA1	4	0.222	1,2,3
25.50	93 NP	LA1	1	0.889	1,2,3
25.53	49 IN	KB2	2	0.445	1,2,3
25.56	59 PR	KB2	3	0.297	1,2,3
25.59	68 ER	KB3	4	0.223	1,2
25.59	68 ER	KB1	4	0.223	1,2,3
25.65	85 AT	LB1	1	0.894	1
25.68	81 TL	LY5	1	0.895	1,2
25.68	74 W	KB2	5	0.179	1,2,3
25.68	74 W	KB4	5	0.179	1
25.68	75 RE	KB3	5	0.179	1,2
25.68	75 RE	KB1	5	0.179	1,2,3
25.70	67 HO	KB2	4	0.224	1
25.73	78 PT	LY4	1	0.897	1,2
25.73	80 HG	LY1	1	0.897	1,2,3
25.73	63 EU	KA1	3	0.299	1,2,3
25.76	83 BI	LB9	1	0.898	1,2
25.76	79 AU	LY3	1	0.898	1,2,3
25.79	84 PO	LB5	1	0.899	1,2
25.82	79 AU	KA1	5	0.180	1,2,3
25.82	80 HG	KA2	5	0.180	1
25.85	93 NP	LA2	1	0.901	1
25.88	49 IN	KB5	2	0.451	1
25.88	52 TE	KA1	2	0.451	1,2,3
25.91	79 AU	LY6	1	0.903	1,2
25.94	79 AU	LY2	1	0.904	1,2,3
25.97	85 AT	LB2	1	0.905	1
25.97	83 BI	LB10	1	0.905	1,2
26.03	88 RA	LN	1	0.907	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 26.05 TO 27.22

ANGLE	ELEM	LINE	N	LAMBDA	REF
26.05	72 HF	KA2	4	0.227	1,2,3
26.08	63 EU	KA2	3	0.303	1,2,3
26.08	84 PO	LB3	1	0.909	1,2,3
26.11	49 IN	KB3	2	0.455	1,2
26.11	49 IN	KB1	2	0.455	1,2,3
26.14	92 U	LA1	1	0.911	1,2,3
26.17	52 TE	KA2	2	0.456	1,2,3
26.17	59 PR	KB1	3	0.304	1,2,3
26.26	59 PR	KB3	3	0.305	1,2
26.26	74 W	KB5	5	0.183	1
26.29	71 LU	KA1	4	0.229	1,2,3
26.41	67 HO	KB1	4	0.230	1
26.41	74 W	KB1	5	0.184	1,2,3
26.41	73 TA	KB4	5	0.184	1
26.43	35 BR	KB2	1	0.921	1,2,3
26.46	92 U	LA2	1	0.922	1,2,3
26.46	84 PO	LB1	1	0.922	1,2,3
26.52	80 HG	LY5	1	0.924	1,2
26.52	58 CE	KB2	3	0.308	1,2,3
26.55	79 AU	KA2	5	0.185	1,2,3
26.55	35 BR	KB5	1	0.925	1,2
26.55	73 TA	KB2	5	0.185	1,2,3
26.55	74 W	KB3	5	0.185	1,2
26.58	83 BI	LB5	1	0.926	1,2
26.58	37 RB	KA1	1	0.926	1,2,3
26.61	62 SM	KA1	3	0.309	1,2,3
26.61	77 IR	LY4	1	0.927	1,2
26.61	79 AU	LY1	1	0.927	1,2,3
26.61	82 PB	LB9	1	0.927	1,2
26.64	66 DY	KB2	4	0.232	1,2,3
26.64	78 PT	LY3	1	0.928	1,2,3
26.67	84 PO	LB2	1	0.929	1,2,3
26.70	37 RB	KA2	1	0.930	1,2,3
26.70	48 CD	KB2	2	0.465	1,2,3
26.70	78 PT	KA1	5	0.186	1,2,3
26.79	91 PA	LA1	1	0.933	1,2,3
26.79	35 BR	KB1	1	0.933	1,2,3
26.79	35 BR	KB3	1	0.933	1,2
26.81	78 PT	LY6	1	0.934	1,2
26.81	78 PT	LY2	1	0.934	1,2,3
26.81	82 PB	LB10	1	0.934	1,2
26.84	83 BI	LB7	1	0.935	1,2
26.87	71 LU	KA2	4	0.234	1,2,3
26.96	83 BI	LB3	1	0.939	1,2,3
26.99	51 SB	KA1	2	0.470	1,2,3
27.05	62 SM	KA2	3	0.314	1,2,3
27.14	91 PA	LA2	1	0.945	1,2,3
27.14	73 TA	KB5	5	0.189	1
27.20	84 PO	LB4	1	0.947	1,2,3
27.22	66 DY	KB1	4	0.237	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 27.22 TO 28.28

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
27.22	58 CE	KB3	3	0.316	1,2	27.69	81 TL	LB10	1	0.964	1,2
27.22	70 YB	KA1	4	0.237	1,2,3	27.69	70 YB	KA2	4	0.241	1,2,3
27.22	58 CE	KB1	3	0.316	1,2,3	27.72	77 IR	LY2	1	0.965	1,2,3
27.28	73 TA	KB1	5	0.190	1,2,3	27.78	77 IR	LY6	1	0.967	1,2
27.28	78 PT	KA2	5	0.190	1,2,3	27.78	84 PO	LB6	1	0.967	1,2,3
27.28	48 CD	KB1	2	0.475	1,2,3	27.81	90 TH	LA2	1	0.968	1,2,3
27.28	51 SB	KA2	2	0.475	1,2,3	27.84	82 PB	LB3	1	0.969	1,2,3
27.34	48 CD	KB3	2	0.476	1,2	27.99	47 AG	KB2	2	0.487	1,2,3
27.34	66 DY	KB3	4	0.238	1,2	28.02	61 PM	KA2	3	0.325	1,2,3
27.34	83 BI	LB1	1	0.952	1,2,3	28.04	69 TM	KA1	4	0.244	1,2,3
27.37	82 PB	LB5	1	0.953	1,2	28.07	83 BI	LB4	1	0.977	1,2,3
27.43	72 HF	KB2	5	0.191	1,2,3	28.10	57 LA	KB5	3	0.326	1
27.43	77 IR	KA1	5	0.191	1,2,3	28.16	72 HF	KB3	5	0.196	1,2
27.43	73 TA	KB3	5	0.191	1,2	28.16	72 HF	KB1	5	0.196	1,2,3
27.43	83 BI	LB2	1	0.955	1,2,3	28.16	34 SE	KB2	1	0.980	1,2,3
27.46	90 TH	LA1	1	0.956	1,2,3	28.16	89 AC	LA1	1	0.980	1
27.46	79 AU	LY5	1	0.956	1,2	28.16	77 IR	KA2	5	0.196	1,2,3
27.49	81 TL	LB9	1	0.957	1,2	28.16	36 KR	KA1	1	0.980	1,2,3
27.52	78 PT	LY1	1	0.958	1,2,3	28.19	81 TL	LB5	1	0.981	1,2
27.55	76 OS	LY4	1	0.959	1,2	28.22	50 SN	KA1	2	0.491	1,2,3
27.55	77 IR	LY3	1	0.959	1,2,3	28.22	82 PB	LB1	1	0.982	1,2,3
27.58	65 TB	KB2	4	0.240	1,2,3	28.25	82 PB	LB2	1	0.983	1,2,3
27.58	57 LA	KB2	3	0.320	1,2,3	28.28	57 LA	KB1	3	0.328	1,2,3
27.63	82 PB	LB7	1	0.962	1,2	28.28	65 TB	KB3	4	0.246	1,2
27.66	61 PM	KA1	3	0.321	1,2,3	28.28	36 KR	KA2	1	0.984	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 28.28 TO 29.42

ANGLE	ELEM	LINE	N	LAMBDA	REF
28.28	34 SE	KB5	1	0.984	1,2
28.28	65 TB	KB1	4	0.246	1,2,3
28.31	76 OS	KA1	5	0.197	1,2,3
28.31	71 LU	KB2	5	0.197	1,2,3
28.34	47 AG	KB5	2	0.493	1
28.34	80 HG	LB9	1	0.986	1,2
28.37	57 LA	KB3	3	0.329	1,2
28.40	78 PT	LY5	1	0.983	1,2
28.46	50 SN	KA2	2	0.495	1,2,3
28.46	81 TL	LB7	1	0.990	1,2
28.48	77 IR	LY1	1	0.991	1,2,3
28.51	89 AC	LA2	1	0.992	1
28.51	34 SE	KB1	1	0.992	1,2,3
28.51	76 OS	LY3	1	0.992	1,2,3
28.51	75 RE	LY4	1	0.992	1,2
28.51	64 GD	KB2	4	0.248	1,2,3
28.54	83 BI	LB6	1	0.993	1,2,3
28.54	34 SE	KB3	1	0.993	1,2
28.57	47 AG	KB1	2	0.497	1,2,3
28.63	47 AG	KB3	2	0.498	1,2
28.63	60 ND	KA1	3	0.332	1,2,3
28.63	80 HG	LB10	1	0.996	1,2
28.63	69 TM	KA2	4	0.249	1,2,3
28.69	76 OS	LY2	1	0.998	1,2,3
28.72	56 BA	KB2	3	0.333	1,2,3
28.78	76 OS	LY6	1	1.001	1,2
28.78	81 TL	LB3	1	1.001	1,2,3
28.90	88 RA	LA1	1	1.005	1,2,3
28.95	82 PB	LB4	1	1.007	1,2,3
28.98	68 ER	KA1	4	0.252	1,2,3
28.98	60 ND	KA2	3	0.336	1,2,3
29.04	81 TL	LB2	1	1.010	1,2,3
29.04	80 HG	LB5	1	1.010	1,2
29.04	76 OS	KA2	5	0.202	1,2,3
29.04	71 LU	KB1	5	0.202	1,2,3
29.16	56 BA	KB5	3	0.338	1
29.19	71 LU	KB3	5	0.203	1,2
29.19	75 RE	KA1	5	0.203	1,2,3
29.19	81 TL	LB1	1	1.015	1,2,3
29.22	88 RA	LA2	1	1.016	1,2,3
29.22	64 GD	KB1	4	0.254	1,2,3
29.31	80 HG	LB7	1	1.019	1,2
29.34	46 PD	KB2	2	0.510	1,2,3
29.34	70 YB	KB2	5	0.204	1,2,3
29.34	64 GD	KB3	4	0.255	1,2
29.37	79 AU	LB9	1	1.021	1,2
29.37	82 PB	LB6	1	1.021	1,2,3
29.40	77 IR	LY5	1	1.022	1,2
29.42	56 BA	KB3	3	0.341	1,2
29.42	56 BA	KB1	3	0.341	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 29.45 TO 30.63

ANGLE	ELEM	LINE	N	LAMBDA	REF
29.45	49 IN	KA1	2	0.512	1,2,3
29.48	76 OS	LY1	1	1.025	1,2,3
29.51	75 RE	LY3	1	1.026	1,2,3
29.57	79 AU	LB10	1	1.028	1,2
29.57	74 W	LY4	1	1.028	1,2
29.57	63 EU	KB2	4	0.257	1,2,3
29.57	68 ER	KA2	4	0.257	1,2,3
29.63	87 FR	LA1	1	1.030	1,2,3
29.63	98 CF	LY1	2	0.515	1
29.69	75 RE	LY2	1	1.032	1,2,3
29.69	59 PR	KA1	3	0.344	1,2,3
29.75	49 IN	KA2	2	0.517	1,2,3
29.75	46 PD	KB5	2	0.517	1
29.75	80 HG	LB3	1	1.034	1,2,3
29.84	75 RE	LY6	1	1.037	1,2
29.87	55 CS	KB2	3	0.346	1,2,3
29.90	81 TL	LB4	1	1.039	1,2,3
29.93	80 HG	LB2	1	1.040	1,2,3
29.93	79 AU	LB5	1	1.040	1,2
29.93	75 RE	KA2	5	0.208	1,2,3
29.93	35 BR	KA1	1	1.040	1,2,3
29.98	87 FR	LA2	1	1.042	1
29.98	46 PD	KB3	2	0.521	1,2
29.98	46 PD	KB1	2	0.521	1,2,3
30.04	67 HO	KA1	4	0.261	1,2,3
30.04	35 BR	KA2	1	1.044	1,2,3
30.07	70 YB	KB3	5	0.209	1,2
30.07	70 YB	KB1	5	0.209	1,2,3
30.07	33 AS	KB2	1	1.045	1,2,3
30.07	74 W	KA1	5	0.209	1,2,3
30.13	59 PR	KA2	3	0.349	1,2,3
30.19	80 HG	LB1	1	1.049	1,2,3
30.19	33 AS	KB5	1	1.049	1,2
30.22	69 TM	KB2	5	0.210	1
30.22	81 TL	LB6	1	1.050	1,2,3
30.22	79 AU	LB7	1	1.050	1,2
30.34	78 PT	LB9	1	1.054	1,2
30.40	63 EU	KB1	4	0.264	1,2,3
30.40	63 EU	KB3	4	0.264	1,2
30.43	86 RN	LA1	1	1.057	1
30.43	76 OS	LY5	1	1.057	1,2
30.43	33 AS	KB1	1	1.057	1,2,3
30.46	33 AS	KB3	1	1.058	1,2
30.49	83 BI	LN	1	1.059	1,2,3
30.51	97 BK	LY1	2	0.530	1
30.54	75 RE	LY1	1	1.061	1,2,3
30.57	74 W	LY3	1	1.062	1,2,3
30.57	78 PT	LB10	1	1.062	1,2
30.57	55 CS	KB1	3	0.354	1,2,3
30.63	67 HO	KA2	4	0.266	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 30.63 TO 31.84

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
30.63	62 SM	KB2	4	0.265	1,2,3	31.25	68 ER	KB2	5	0.217	1,2,3
30.66	55 CS	KB3	3	0.355	1,2	31.25	85 AT	LA1	1	1.085	1
30.66	73 TA	LY4	1	1.065	1,2	31.28	58 CE	KA2	3	0.362	1,2,3
30.72	92 U	LL	1	1.067	2,3	31.40	77 IR	LB9	1	1.090	1,2
30.75	79 AU	LB3	1	1.068	1,2,3	31.43	91 PA	LL	1	1.091	1,2,3
30.75	74 W	LY2	1	1.068	1,2,3	31.46	82 PB	LN	1	1.092	1,2,3
30.78	86 RN	LA2	1	1.069	1	31.46	96 CM	LY1	2	0.546	1
30.81	48 CD	KA1	2	0.535	1,2,3	31.46	45 RH	KB3	2	0.546	1,2
30.81	74 W	KA2	5	0.214	1,2,3	31.46	45 RH	KB1	2	0.546	1,2,3
30.81	45 RH	KB2	2	0.535	1,2,3	31.46	62 SM	KB1	4	0.273	1,2,3
30.81	79 AU	LB2	1	1.070	1,2,3	31.52	75 RE	LY5	1	1.094	1,2
30.84	58 CE	KA1	3	0.357	1,2,3	31.58	62 SM	KB3	4	0.274	1,2
30.87	78 PT	LB5	1	1.072	1,2	31.58	66 DY	KA2	4	0.274	1,2,3
30.87	80 HG	LB4	1	1.072	1,2,3	31.61	85 AT	LA2	1	1.097	1
30.93	74 W	LY6	1	1.074	1,2	31.61	77 IR	LB10	1	1.097	1,2
30.96	69 TM	KB1	5	0.215	1,2,3	31.67	74 W	LY1	1	1.099	1,2,3
30.96	73 TA	KA1	5	0.215	1,2,3	31.67	73 TA	LY3	1	1.099	1,2,3
31.05	48 CD	KA2	2	0.539	1,2,3	31.70	73 TA	KA2	5	0.220	1,2,3
31.10	80 HG	LB6	1	1.080	1,2,3	31.75	78 PT	LB2	1	1.102	1,2,3
31.10	66 DY	KA1	4	0.270	1,2,3	31.78	72 HF	LY4	1	1.103	1,2
31.10	54 XE	KB2	3	0.360	1,2,3	31.81	54 XE	KB1	3	0.368	1,2,3
31.10	69 TM	KB3	5	0.216	1,2	31.81	78 PT	LB3	1	1.104	1,2,3
31.16	46 RH	KB5	2	0.541	1	31.81	61 PM	KB2	4	0.276	1
31.16	73 PT	LB7	1	1.082	1,2	31.84	34 SE	KA1	1	1.105	1,2,3
31.22	77 AU	LB1	1	1.084	1,2,3	31.84	73 TA	LY2	1	1.105	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 31.87 TO 33.15

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
31.87	77 IR	LB5	1	1.106	1,2	32.52	47 AG	KA2	2	0.564	1,2,3
31.90	79 AU	LB4	1	1.107	1,2,3	32.52	81 TL	LN	1	1.128	1,2,3
31.96	34 SE	KA2	1	1.109	1,2,3	32.55	32 GE	KB1	1	1.129	1,2,3
31.99	72 HF	KA1	5	0.222	1,2,3	32.55	32 GE	KB3	1	1.129	1,2
32.02	79 AU	LB6	1	1.111	1,2,3	32.64	74 W	LY5	1	1.132	1,2
32.08	57 LA	KA1	3	0.371	1,2,3	32.64	61 PM	KB3	4	0.283	2
32.11	73 TA	LY6	1	1.114	1,2	32.64	65 TB	KA2	4	0.283	1,2,3
32.11	84 PO	LA1	1	1.114	1,2,3	32.67	76 OS	LB10	1	1.133	1,2
32.14	77 IR	LB7	1	1.115	1,2	32.73	77 IR	LB2	1	1.135	1,2,3
32.14	90 TH	LL	1	1.115	1,2,3	32.73	72 HF	KA2	5	0.227	1,2,3
32.14	68 ER	KB3	5	0.223	1,2	32.76	44 RU	KB5	2	0.568	1
32.14	68 ER	KB1	5	0.223	1,2,3	32.82	73 TA	LY1	1	1.138	1,2,3
32.17	65 TB	KA1	4	0.279	1,2,3	32.82	72 HF	LY3	1	1.138	1,2,3
32.20	32 GE	KB2	1	1.117	1,2,3	32.88	76 OS	LB5	1	1.140	1,2
32.23	47 AG	KA1	2	0.559	1,2,3	32.91	77 IR	LB3	1	1.141	1,2,3
32.26	32 GE	KB5	1	1.119	1,2	32.94	78 PT	LB4	1	1.142	1,2,3
32.29	67 HO	KB2	5	0.224	1	32.97	71 LU	LY4	1	1.143	1
32.29	78 PT	LB1	1	1.120	1,2,3	33.00	83 BI	LA1	1	1.144	1,2,3
32.41	95 AM	LY1	2	0.562	1,3	33.00	44 RU	KB1	2	0.572	1,2,3
32.41	44 RU	KB2	2	0.562	1,2,3	33.00	78 PT	LB6	1	1.144	1,2,3
32.44	57 LA	KA2	3	0.375	1,2,3	33.00	72 HF	LY2	1	1.144	1,2,3
32.44	53 I	KB2	3	0.375	1,2,3	33.00	60 ND	KB2	4	0.286	1,2,3
32.47	76 OS	LB9	1	1.126	1,2	33.03	71 LU	KA1	5	0.229	1,2,3
32.47	84 PO	LA2	1	1.126	1,2,3	33.06	44 RU	KB3	2	0.573	1,2
32.52	61 PM	KB1	4	0.282	1,2,3	33.15	76 OS	LB7	1	1.149	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 33.18 TO 34.57

ANGLE	ELEM	LINE	N	LAMBDA	REF
33.18	67 HO	KB1	5	0.230	1
33.24	53 I	KB1	3	0.384	1,2,3
33.24	64 GD	KA1	4	0.288	1,2,3
33.33	83 BI	LA2	1	1.155	1,2,3
33.33	56 BA	KA1	3	0.385	1,2,3
33.33	53 I	KB3	3	0.385	1,2
33.33	72 HF	LY6	1	1.155	1,2
33.41	77 IR	LB1	1	1.156	1,2,3
33.41	94 PU	LY1	2	0.579	1
33.47	66 DY	KB2	5	0.232	1,2,3
33.59	80 HG	LN	1	1.164	1,2,3
33.62	75 RE	LB9	1	1.165	1,2
33.68	88 RA	LL	1	1.167	1,2,3
33.77	71 LU	KA2	5	0.234	1,2,3
33.77	56 BA	KA2	3	0.390	1,2,3
33.77	76 OS	LB2	1	1.170	1,2,3
33.77	46 PD	KA1	2	0.585	1,2,3
33.83	64 GD	KA2	4	0.293	1,2,3
33.83	75 RE	LB10	1	1.172	1,2
33.83	60 ND	KB1	4	0.293	1,2,3
33.86	52 TE	KB2	3	0.391	1,2,3
33.86	73 TA	LY5	1	1.173	1,2
33.92	82 PB	LA1	1	1.175	1,2,3
33.95	60 ND	KB3	4	0.294	1,2
33.95	33 AS	KA1	1	1.176	1,2,3
33.98	75 RE	LB5	1	1.177	1,2
34.01	77 IR	LB6	1	1.178	1,2,3
34.04	72 HF	LY1	1	1.179	1,2,3
34.04	71 LU	LY3	1	1.179	1,2,3
34.07	77 IR	LB4	1	1.180	1,2,3
34.07	43 TC	KB4	2	0.590	1
34.07	33 AS	KA2	1	1.180	1,2,3
34.07	43 TC	KB2	2	0.590	1
34.07	46 PD	KA2	2	0.590	1,2,3
34.07	76 OS	LB3	1	1.180	1,2,3
34.22	66 DY	KB1	5	0.237	1,2,3
34.22	70 YB	LY4	1	1.185	1,2
34.22	71 LU	LY2	1	1.185	1,2,3
34.22	70 YB	KA1	5	0.237	1,2,3
34.25	75 RE	LB7	1	1.186	1,2
34.25	82 PB	LA2	1	1.186	1,2,3
34.31	59 PR	KB2	4	0.297	1,2,3
34.31	91 PA	LY4	2	0.594	1,2
34.37	66 DY	KB3	5	0.238	1,2
34.37	92 U	LY6	2	0.595	1,2
34.49	93 NP	LY1	2	0.597	1,2,3
34.55	31 GA	KB2	1	1.196	1,2,3
34.55	92 U	LY3	2	0.598	1,2,3
34.55	63 EU	KA1	4	0.299	1,2,3
34.57	76 OS	LB1	1	1.197	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 34.57 TO 35.92

ANGLE	ELEM	LINE	N	LAMBDA	REF
34.57	31 GA	KB5	1	1.197	1,2
34.60	71 LU	LY6	1	1.198	1,2
34.66	55 CS	KA1	3	0.400	1,2,3
34.66	65 TB	KB2	5	0.240	1,2,3
34.66	52 TE	KB1	3	0.400	1,2,3
34.72	43 TC	KB3	2	0.601	1,2
34.75	52 TE	KB3	3	0.401	1,2
34.75	79 AU	LN	1	1.203	1,2,3
34.78	74 W	LB9	1	1.204	1,2
34.78	43 TC	KB1	2	0.602	1,2,3
34.81	70 YB	KA2	5	0.241	1,2,3
34.84	98 CF	LB1	2	0.603	1
34.87	75 RE	LB2	1	1.207	1,2,3
34.87	81 TL	LA1	1	1.207	1,2,3
34.90	31 GA	KB3	1	1.208	1,2
34.90	31 GA	KB1	1	1.208	1,2,3
34.96	92 U	LY2	2	0.605	1,2,3
35.02	63 EU	KA2	4	0.303	1,2,3
35.02	74 W	LB10	1	1.212	1,2
35.05	76 OS	LB6	1	1.213	1,2,3
35.11	72 HF	LY5	1	1.215	1,2
35.11	74 W	LB5	1	1.215	1,2
35.11	55 CS	KA2	3	0.405	1,2,3
35.14	59 PR	KB1	4	0.304	1,2,3
35.20	76 OS	LB4	1	1.218	1,2,3
35.23	81 TL	LA2	1	1.219	1,2,3
35.26	59 PR	KB3	4	0.305	1,2
35.26	69 TM	KA1	5	0.244	1,2,3
35.26	75 RE	LB3	1	1.220	1,2,3
35.32	90 TH	LY4	2	0.611	1,2
35.32	71 LU	LY1	1	1.222	1,2,3
35.32	70 YB	LY3	1	1.222	1,2,3
35.38	74 W	LB7	1	1.224	1,2
35.38	51 SB	KB2	3	0.408	1,2,3
35.44	91 PA	LY6	2	0.613	1,2
35.44	45 RH	KA1	2	0.613	1,2,3
35.53	69 TM	LY4	1	1.229	1
35.53	70 YB	LY2	1	1.229	1,2,3
35.56	92 U	LY1	2	0.615	1,2,3
35.56	65 TB	KB3	5	0.246	1,2
35.56	65 TB	KB1	5	0.246	1,2,3
35.62	58 CE	KB2	4	0.308	1,2,3
35.68	91 PA	LY3	2	0.617	1,2,3
35.74	62 SM	KA1	4	0.309	1,2,3
35.74	45 RH	KA2	2	0.618	1,2,3
35.83	75 RE	LB1	1	1.239	1,2,3
35.86	42 MO	KB4	2	0.620	2
35.86	64 GD	KB2	5	0.248	1,2,3
35.89	80 HG	LA1	1	1.241	1,2,3
35.92	51 SB	KB5	3	0.414	1

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 35.92 TO 37.21

ANGLE	ELEM	LINE	N	LAMBDA	REF
35.92	97 BK	LB1	2	0.621	1
35.92	42 MO	KB2	2	0.621	1,2,3
35.95	78 PT	LN	1	1.243	1,2,3
35.95	70 YB	LY6	1	1.243	1,2
36.01	69 TM	KA2	5	0.249	1,2,3
36.01	74 W	LB2	1	1.245	1,2,3
36.04	73 TA	LB9	1	1.246	1,2
36.10	54 XE	KA1	3	0.416	1,2,3
36.10	91 PA	LY2	2	0.624	1,2,3
36.19	51 SB	KB1	3	0.417	1,2,3
36.19	75 RE	LB6	1	1.251	1,2,3
36.25	80 HG	LA2	1	1.253	1,2,3
36.28	42 MO	KB5	2	0.627	1
36.28	51 SB	KB3	3	0.418	1,2
36.28	73 TA	LB10	1	1.254	1,2
36.28	32 GE	KA1	1	1.254	1,2,3
36.31	73 TA	LB5	1	1.255	1,2
36.34	62 SM	KA2	4	0.314	1,2,3
36.40	32 GE	KA2	1	1.258	1,2,3
36.43	75 RE	LB4	1	1.259	1,2,3
36.46	71 LU	LY5	1	1.260	1,2
36.46	68 ER	KA1	5	0.252	1,2,3
36.46	54 XE	KA2	3	0.420	1,2,3
36.55	74 W	LB3	1	1.263	1,2,3
36.58	73 TA	LB7	1	1.264	1,2
36.58	90 TH	LY6	2	0.632	1,2
36.58	42 MO	KB1	2	0.632	1,2,3
36.58	58 CE	KB3	4	0.316	1,2
36.58	58 CE	KB1	4	0.316	1,2,3
36.64	42 MO	KB3	2	0.633	1,2
36.70	69 TM	LY3	1	1.268	1,2,3
36.70	91 PA	LY1	2	0.634	1,2,3
36.70	70 YB	LY1	1	1.268	1,2,3
36.76	92 U	LY5	2	0.635	1,2
36.76	64 GD	KB1	5	0.254	1,2,3
36.82	90 TH	LY3	2	0.636	1,2,3
36.88	69 TM	LY2	1	1.274	1,2,3
36.91	64 GD	KB3	5	0.255	1,2
36.94	68 ER	LY4	1	1.276	1,2
36.94	79 AU	LA1	1	1.276	1,3
37.00	50 SN	KB2	3	0.426	1,2,3
37.00	96 CM	LB1	2	0.639	1
37.06	57 LA	KB2	4	0.320	1,2,3
37.12	74 W	LB1	1	1.282	1,2,3
37.18	90 TH	LY2	2	0.642	1,2,3
37.18	73 TA	LB2	1	1.284	1,2,3
37.18	30 ZN	KB2	1	1.284	1,2,3
37.18	77 IR	LN	1	1.284	1,2,3
37.18	61 PM	KA1	4	0.321	1,2,3
37.21	68 ER	KA2	5	0.257	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 37.21 TO 38.62

ANGLE	ELEM	LINE	N	LAMBDA	REF
37.21	63 EU	KB2	5	0.257	1,2,3
37.21	30 ZN	KB5	1	1.285	1,2
37.24	44 RU	KA1	2	0.643	1,2,3
37.30	79 AU	LA2	1	1.288	1,2,3
37.36	72 HF	LB9	1	1.290	1,2
37.36	74 W	LB6	1	1.290	1,2,3
37.36	69 TM	LY6	1	1.290	1
37.48	44 RU	KA2	2	0.647	1,2,3
37.51	30 ZN	KB1	1	1.295	1,2,3
37.54	50 SN	KB5	3	0.432	1
37.60	72 HF	LB10	1	1.298	1,2
37.60	72 HF	LB5	1	1.298	1,2
37.60	88 RA	LY4	2	0.649	1,2
37.63	53 I	KA1	3	0.433	1,2,3
37.66	61 PM	KA2	4	0.325	1,2,3
37.72	74 W	LB4	1	1.302	1,2,3
37.78	57 LA	KB5	4	0.326	1
37.81	67 HO	KA1	5	0.261	1,2,3
37.81	50 SN	KB1	3	0.435	1,2,3
37.84	70 YB	LY5	1	1.306	1,2
37.84	90 TH	LY1	2	0.653	1,2,3
37.84	98 CF	LB2	2	0.653	1
37.84	72 HF	LB7	1	1.306	1,2
37.87	73 TA	LB3	1	1.307	1,2,3
37.90	41 NB	KB2	2	0.654	1,2,3
37.90	50 SN	KB3	3	0.436	1,2
37.96	91 PA	LY5	2	0.655	1,2
38.02	57 LA	KB1	4	0.328	1,2,3
38.05	78 PT	LA1	1	1.313	1,2,3
38.08	53 I	KA2	3	0.438	1,2,3
38.11	68 ER	LY3	1	1.315	1,2,3
38.11	69 TM	LY1	1	1.315	1,2,3
38.14	57 LA	KB3	4	0.329	1,2
38.14	83 BI	LL	1	1.316	1,2,3
38.14	95 AM	LB1	2	0.658	1,3
38.26	41 NB	KB5	2	0.660	1
38.26	63 EU	KB3	5	0.264	1,2
38.26	63 EU	KB1	5	0.264	1,2,3
38.29	68 ER	LY2	1	1.321	1,2,3
38.32	67 HO	LY4	1	1.322	1,2
38.38	78 PT	LA2	1	1.324	1,2,3
38.44	72 HF	LB2	1	1.326	1,2,3
38.47	73 TA	LB1	1	1.327	1,2,3
38.50	76 OS	LN	1	1.328	1,2,3
38.50	60 ND	KA1	4	0.332	1,2,3
38.56	62 SM	KB2	5	0.266	1,2,3
38.56	67 HO	KA2	5	0.266	1,2,3
38.59	73 TA	LB6	1	1.331	1,2,3
38.62	56 BA	KB2	4	0.333	1,2,3
38.62	41 NB	KB3	2	0.666	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 38.62 TO 40.07

ANGLE	ELEM	LINE	N	LAMBDA	REF
38.62	41 NB	KB1	2	0.665	1,2,3
38.71	49 IN	KB2	3	0.445	1,2,3
38.74	71 LU	LB9	1	1.335	1,2
38.80	97 BK	LB2	2	0.669	1
38.86	31 GA	KA1	1	1.343	1,2,3
38.92	71 LU	LB5	1	1.342	1,2
38.95	71 LU	LB10	1	1.343	1,2
38.98	60 ND	KA2	4	0.336	1,2,3
38.98	31 GA	KA2	1	1.344	1,2,3
39.04	73 TA	LB4	1	1.346	1,2,3
39.04	88 RA	LY6	2	0.673	1,2
39.04	43 TC	KA1	2	0.673	2,3
39.10	89 AC	LY1	2	0.674	1
39.13	71 LU	LB7	1	1.349	1,2
39.16	82 PB	LL	1	1.350	1,2,3
39.16	90 TH	LY5	2	0.675	1,2
39.16	88 RA	LY3	2	0.675	1,2,3
39.16	66 DY	KA1	5	0.270	1,2,3
39.19	77 IR	LA1	1	1.351	1,2,3
39.22	43 TC	KA2	2	0.676	2,3
39.22	56 BA	KB5	4	0.338	1
39.25	49 IN	KB5	3	0.451	1
39.25	72 HF	LB3	1	1.353	1,2,3
39.25	52 TE	KA1	3	0.451	1,2,3
39.31	69 TM	LY5	1	1.355	1,2
39.34	94 PU	LB1	2	0.678	1
39.53	77 IR	LA2	1	1.362	1,2,3
39.53	92 U	LB9	2	0.681	1,2
39.59	68 ER	LY1	1	1.364	1,2,3
39.59	56 BA	KB1	4	0.341	1,2,3
39.59	67 HO	LY3	1	1.364	1,2,3
39.59	56 BA	KB3	4	0.341	1,2
39.59	88 RA	LY2	2	0.682	1,2,3
39.62	49 IN	KB3	3	0.455	1,2
39.62	62 SM	KB1	5	0.273	1,2,3
39.62	49 IN	KB1	3	0.455	1,2,3
39.71	52 TE	KA2	3	0.456	1,2,3
39.77	67 HO	LY2	1	1.370	1,2,3
39.77	66 DY	KA2	5	0.274	1,2,3
39.77	62 SM	KB3	5	0.274	1,2
39.77	96 CM	LB2	2	0.685	1
39.77	71 LU	LB2	1	1.370	1,2,3
39.86	75 RE	LN	1	1.373	1,2,3
39.89	66 DY	LY4	1	1.374	1,2
39.89	72 HF	LB6	1	1.374	1,2,3
39.89	72 HF	LB1	1	1.374	1,2,3
39.89	92 U	LB10	2	0.687	1,2
39.95	59 PR	KA1	4	0.344	1,2,3
40.07	61 PM	KB2	5	0.276	1
40.07	40 ZR	KB2	2	0.690	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 40.10 TO 41.65

ANGLE	ELEM	LINE	N	LAMBDA	REF
40.10	29 CU	KB2	1	1.381	2,3
40.13	29 CU	KB5	1	1.382	2
40.19	70 YB	LB9	1	1.384	1,2
40.19	55 CS	KB2	4	0.346	1,2,3
40.22	81 TL	LL	1	1.385	1,2,3
40.28	70 YB	LB5	1	1.387	1,2
40.37	88 RA	LY1	2	0.695	1,2,3
40.40	70 YB	LB10	1	1.391	1,2
40.40	76 OS	LA1	1	1.391	1,2,3
40.43	72 HF	LB4	1	1.392	1,2,3
40.43	29 CU	KB1	1	1.392	1,2,3
40.43	40 ZR	KB5	2	0.696	1
40.46	29 CU	KB3	1	1.393	1,2
40.52	70 YB	LB7	1	1.395	1,2
40.52	65 TB	KA1	5	0.279	1,2,3
40.53	48 CD	KB2	3	0.465	1,2,3
40.56	59 PR	KA2	4	0.349	1,2,3
40.56	93 NP	LB1	2	0.698	1,2,3
40.71	71 LU	LB3	1	1.401	1,2,3
40.74	95 AM	LB2	2	0.701	1,3
40.74	91 PA	LB9	2	0.701	1,2
40.74	76 OS	LA2	1	1.402	1,2,3
40.80	40 ZR	KB1	2	0.702	1,2,3
40.80	40 ZR	KB3	2	0.702	1,2
40.86	68 ER	LY5	1	1.406	1,2
40.98	61 PM	KB1	5	0.282	1,2,3
40.98	51 SB	KA1	3	0.470	1,2,3
41.13	65 TB	KA2	5	0.283	1,2,3
41.13	70 YB	LB2	1	1.415	1,2,3
41.13	61 PM	KB3	5	0.283	2
41.16	55 CS	KB1	4	0.354	1,2,3
41.16	91 PA	LB10	2	0.708	1,2
41.19	66 DY	LY3	1	1.417	1,2,3
41.19	67 HO	LY1	1	1.417	1,2,3
41.22	42 MO	KA1	2	0.709	1,2,3
41.25	71 LU	LB6	1	1.419	1,2,3
41.28	55 CS	KB3	4	0.355	1,2
41.28	92 U	LB3	2	0.710	1,2,3
41.31	74 W	LN	1	1.421	1,2,3
41.34	80 HG	LL	1	1.422	1,2,3
41.38	66 DY	LY2	1	1.423	1,2,3
41.41	71 LU	LB1	1	1.424	1,2,3
41.44	51 SB	KA2	3	0.475	1,2,3
41.44	48 CD	KB1	3	0.475	1,2,3
41.47	42 MO	KA2	2	0.713	1,2,3
41.50	65 TB	LY4	1	1.427	1,2
41.53	58 CE	KA1	4	0.357	1,2,3
41.53	48 CD	KB3	3	0.476	1,2
41.59	60 ND	KB2	5	0.286	1,2,3
41.65	87 FR	LY1	2	0.716	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 41.68 TO 43.33

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
41.68	75 RE	LA1	1	1.433	1,2,3	42.69	70 YB	LB6	1	1.466	1,2,3
41.71	88 RA	LY5	2	0.717	1,2	42.75	39 Y	KB5	2	0.734	1
41.74	30 ZN	KA1	1	1.435	1,2,3	42.81	60 ND	KB3	5	0.294	1,2
41.77	94 PU	LB2	2	0.718	1	42.84	73 TA	LN	1	1.471	1,2,3
41.86	30 ZN	KA2	1	1.439	1,2,3	42.84	65 TB	LY3	1	1.471	1,2,3
41.89	54 XE	KB2	4	0.360	1,2,3	42.87	93 NP	LB2	2	0.736	1,2,3
41.89	64 GD	KA1	5	0.288	1,2,3	42.87	92 U	LB7	2	0.736	1,2
41.89	92 U	LB1	2	0.720	1,2,3	42.87	54 XE	KB1	4	0.368	1,2,3
41.89	71 LU	LB4	1	1.440	1,2,3	42.90	50 SN	KA1	3	0.491	1,2,3
41.92	69 TM	LB10	1	1.441	1	42.90	66 DY	LY1	1	1.473	1,2,3
42.01	75 RE	LA2	1	1.444	1,2,3	42.99	70 YB	LB1	1	1.476	1,2,3
42.08	90 TH	LB9	2	0.723	1,2	42.99	74 W	LA1	1	1.476	1,2,3
42.14	58 CE	KA2	4	0.362	1,2,3	43.02	65 TB	LY2	1	1.477	1,2,3
42.26	92 U	LB5	2	0.726	1,2	43.05	71 LU	LN	1	1.478	1,2
42.26	70 YB	LB3	1	1.452	1,2,3	43.05	86 RN	LY1	2	0.739	1
42.32	39 Y	KB4	2	0.727	2	43.08	47 AG	KB5	3	0.493	1
42.44	39 Y	KB2	2	0.729	1,2,3	43.17	39 Y	KB3	2	0.741	1,2
42.50	90 TH	LB10	2	0.730	1,2	43.17	39 Y	KB1	2	0.741	1,2,3
42.50	79 AU	LL	1	1.460	1,2,3	43.24	57 LA	KA1	4	0.371	1,2,3
42.53	47 AG	KB2	3	0.487	1,2,3	43.24	91 PA	LB1	2	0.742	1,2,3
42.56	67 HO	LY5	1	1.452	1,2	43.27	64 GD	LY4	1	1.485	1,2
42.59	69 TM	LB2	1	1.453	1,2,3	43.27	50 SN	KA2	3	0.495	1,2,3
42.63	91 PA	LB3	2	0.732	1,2,3	43.27	68 ER	LB9	1	1.485	1,2
42.65	64 GD	KA2	5	0.293	1,2,3	43.27	59 PR	KB2	5	0.297	1,2,3
42.65	60 ND	KB1	5	0.293	1,2,3	43.33	74 W	LA2	1	1.487	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 43.39 TO 44.99

ANGLE	ELEM	LINE	N	LAMBDA	REF
43.39	28 NI	KB5	1	1.489	1,2
43.39	28 NI	KB2	1	1.489	1,2,3
43.42	91 PA	LB5	2	0.745	1,2
43.45	47 AG	KB1	3	0.497	1,2,3
43.45	70 YB	LB4	1	1.491	1,2,3
43.48	41 NB	KA1	2	0.746	1,2,3
43.54	68 ER	LB7	1	1.494	1,2
43.54	47 AG	KB3	3	0.498	1,2
43.54	68 ER	LB10	1	1.494	1,2
43.57	63 EU	KA1	5	0.299	1,2,3
43.60	92 U	LB4	2	0.748	1,2,3
43.70	78 PT	LL	1	1.499	1,2,3
43.73	53 I	KB2	4	0.375	1,2,3
43.73	41 NB	KA2	2	0.750	1,2,3
43.73	28 NI	KB1	1	1.500	1,2,3
43.73	57 LA	KA2	4	0.375	1,2,3
43.88	69 TM	LB3	1	1.505	1,2,3
44.03	90 TH	LB3	2	0.755	1,2,3
44.03	91 PA	LB7	2	0.755	1,2
44.03	92 U	LB2	2	0.755	1,2,3
44.16	68 ER	LB2	1	1.514	1,2,3
44.19	63 EU	KA2	5	0.303	1,2,3
44.19	69 TM	LB6	1	1.515	1,2,3
44.28	66 DY	LY5	1	1.518	1,2
44.34	59 PR	KB1	5	0.304	1,2,3
44.40	83 BI	LY4	2	0.761	1,2
44.40	73 TA	LA1	1	1.522	1,2,3
44.43	72 HF	LN	1	1.523	1,2,3
44.49	59 PR	KB3	5	0.305	1,2
44.52	85 AT	LY1	2	0.763	1
44.59	84 PO	LY3	2	0.764	1,2,3
44.59	84 PO	LY6	2	0.764	1,2
44.62	64 GD	LY3	1	1.529	1,2,3
44.65	65 TB	LY1	1	1.530	1,2,3
44.65	90 TH	LB1	2	0.765	1,2,3
44.65	69 TM	LB1	1	1.530	1,2,3
44.65	90 TH	LB5	2	0.765	1,2
44.65	46 PD	KB2	3	0.510	1,2,3
44.74	73 TA	LA2	1	1.533	1,2,3
44.77	64 GD	LY2	1	1.534	1,2,3
44.83	49 IN	KA1	3	0.512	1,2,3
44.83	53 I	KB1	4	0.384	1,2,3
44.89	88 RA	LB9	2	0.769	1,2
44.95	53 I	KB3	4	0.385	1,2
44.95	91 PA	LB4	2	0.770	1,2,3
44.95	58 CE	KB2	5	0.308	1,2,3
44.95	56 BA	KA1	4	0.385	1,2,3
44.99	77 IR	LL	1	1.541	1,2,3
44.99	29 CU	KA1	1	1.541	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 45.02 TO 46.81

ANGLE	ELEM	LINE	N	LAMBDA	REF
45.02	38 SR	KB2	2	0.778	1,2,3
45.08	69 TM	LB4	1	1.544	1,2,3
45.08	29 CU	KA2	1	1.544	1,2,3
45.08	63 EU	LY4	1	1.544	1,2
45.11	98 CF	LY1	3	0.515	1
45.11	62 SM	KA1	5	0.309	1,2,3
45.20	90 TH	LB7	2	0.774	1,2
45.20	91 PA	LB2	2	0.774	1,2,3
45.23	67 HO	LB10	1	1.549	1
45.26	88 RA	LB10	2	0.775	1,2
45.26	38 SR	KB5	2	0.775	1
45.29	46 PD	KB5	3	0.517	1
45.29	49 IN	KA2	3	0.517	1,2,3
45.57	56 BA	KA2	4	0.390	1,2,3
45.60	68 ER	LB3	1	1.561	1,2,3
45.66	46 PD	KB1	3	0.521	1,2,3
45.66	45 PD	KB3	3	0.521	1,2
45.69	52 TE	KB2	4	0.391	1,2,3
45.76	38 SR	KB1	2	0.783	1,2,3
45.76	38 SR	KB3	2	0.783	1,2
45.79	68 ER	LB6	1	1.567	1,2,3
45.79	67 HO	LB2	1	1.567	1,2,3
45.85	72 HF	LA1	1	1.569	1,2,3
45.88	62 SM	KA2	5	0.314	1,2,3
45.94	40 ZR	KA1	2	0.786	1,2,3
45.94	82 PB	LY4	2	0.786	1
46.00	84 PO	LY1	2	0.787	1,2,3
46.07	92 U	LB6	2	0.788	1,2,3
46.10	65 TB	LY5	1	1.577	1
46.10	65 TB	LB5	1	1.577	2
46.13	89 AC	LB1	2	0.789	1
46.13	83 BI	LY3	2	0.789	1,2,3
46.19	58 CE	KB3	5	0.316	1,2
46.19	58 CE	KB1	5	0.316	1,2,3
46.19	83 BI	LY6	2	0.790	1,2
46.19	40 ZR	KA2	2	0.790	1,2,3
46.19	72 HF	LA2	1	1.580	1,2,3
46.31	98 CF	LA1	2	0.792	1
46.34	76 OS	LL	1	1.585	1,2,3
46.38	90 TH	LB4	2	0.793	1,2,3
46.41	68 ER	LB1	1	1.587	1,2,3
46.44	90 TH	LB2	2	0.794	1,2,3
46.50	97 BK	LY1	3	0.530	1
46.53	63 EU	LY3	1	1.591	1,2,3
46.56	64 GD	LY1	1	1.592	1,2,3
46.56	83 BI	LY2	2	0.796	1,2,3
46.72	63 EU	LY2	1	1.597	1,2,3
46.78	66 DY	LB7	1	1.599	1,2
46.81	66 DY	LB9	1	1.600	1
46.81	57 LA	KB2	5	0.320	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 46.81 TO 48.55

ANGLE	ELEM	LINE	N	LAMBDA	REF
46.81	55 CS	KA1	4	0.400	1,2,3
46.81	52 TE	KB1	4	0.400	1,2,3
46.84	68 ER	LB4	1	1.601	1,2,3
46.93	52 TE	KB3	4	0.401	1,2
46.96	48 CD	KA1	3	0.535	1,2,3
46.96	61 PM	KA1	5	0.321	1,2,3
46.96	45 RH	KB2	3	0.535	1,2,3
46.99	62 SM	LY4	1	1.606	1,2
46.99	88 RA	LB3	2	0.803	1,2,3
47.03	66 DY	LB10	1	1.607	1
47.06	98 CF	LA2	2	0.804	1
47.09	27 CO	KB5	1	1.609	1,2
47.12	92 U	LN	2	0.805	1,2,3
47.18	88 RA	LB5	2	0.806	1,2
47.30	91 PA	LB6	2	0.808	1,2,3
47.34	48 CD	KA2	3	0.539	1,2,3
47.40	71 LU	LA1	1	1.619	1,2,3
47.40	67 HO	LB3	1	1.619	1,2,3
47.43	55 CS	KA2	4	0.405	1,2,3
47.43	97 BK	LA1	2	0.810	1
47.46	27 CO	KB1	1	1.621	1,2,3
47.49	67 HO	LB6	1	1.622	1,2,3
47.52	66 DY	LB2	1	1.623	1,2,3
47.52	45 RH	KB5	3	0.541	1
47.55	81 TL	LY4	2	0.812	1,2
47.58	61 PM	KA2	5	0.325	1,2,3
47.62	83 BI	LY1	2	0.813	1,2,3
47.66	89 AC	LB2	2	0.814	1
47.68	88 RA	LB1	2	0.814	1,2,3
47.74	71 LU	LA2	1	1.630	1,2,3
47.74	82 PB	LY3	2	0.815	1,2,3
47.74	75 RE	LL	1	1.630	1,2,3
47.74	57 LA	KB5	5	0.326	1
47.80	88 RA	LB7	2	0.816	1,2
47.80	51 SB	KB2	4	0.408	1,2,3
47.80	37 RB	KB2	2	0.816	1,2,3
47.86	82 PB	LY6	2	0.817	1,2
47.93	70 YB	LN	1	1.636	1,2,3
47.99	45 RH	KB3	3	0.546	1,2
47.99	96 CM	LY1	3	0.546	1
47.99	45 RH	KB1	3	0.546	1,2,3
48.05	57 LA	KB1	5	0.328	1,2,3
48.08	64 GD	LY5	1	1.641	1
48.11	82 PB	LY2	2	0.821	1,2,3
48.18	37 RB	KB5	2	0.822	1
48.18	97 BK	LA2	2	0.822	1
48.21	57 LA	KB3	5	0.329	1,2
48.27	67 HO	LB1	1	1.647	1,2,3
48.52	62 SM	LY3	1	1.655	1,2,3
48.55	51 SB	KB5	4	0.414	1

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 48.55 TO 50.18

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
48.55	90 TH	LB6	2	0.828	1,2,3	49.30	82 PB	LY1	2	0.840	1,2,3
48.61	91 PA	LN	2	0.829	1,2,3	49.30	87 FR	LB1	2	0.840	1,2,3
48.61	37 RB	KB3	2	0.829	1,2	49.30	60 ND	KA2	5	0.336	1,2,3
48.61	37 RB	KB1	2	0.829	1,2,3	49.30	54 XE	KA2	4	0.420	1,2,3
48.61	96 CM	LA1	2	0.829	1	49.33	66 DY	LB6	1	1.681	1,2,3
48.61	39 Y	KA1	2	0.829	1,2,3	49.33	66 DY	LB3	1	1.681	1,2,3
48.61	63 EU	LY1	1	1.658	1,2,3	49.36	96 CM	LA2	2	0.841	1
48.61	28 NI	KA1	1	1.658	1,2,3	49.36	65 TB	LB2	1	1.682	1,2,3
48.64	67 HO	LB4	1	1.659	1,2,3	49.36	81 TL	LY3	2	0.841	1,2,3
48.64	65 TB	LB7	1	1.659	1,2	49.36	88 RA	LB4	2	0.841	1,2,3
48.64	62 SM	LY2	1	1.659	1,2,3	49.39	70 YB	LA2	1	1.683	1,2,3
48.68	60 ND	KA1	5	0.332	1,2,3	49.49	95 AM	LY1	3	0.562	1,3
48.74	28 NI	KA2	1	1.662	1,2,3	49.49	44 RU	KB2	3	0.562	1,2,3
48.80	54 XE	KA1	4	0.416	1,2,3	49.55	81 TL	LY6	2	0.844	1,2
48.83	56 BA	KB2	5	0.333	1,2,3	49.61	56 BA	KB5	5	0.338	1
48.86	39 Y	KA2	2	0.833	1,2,3	49.68	47 AG	KA2	3	0.564	1,2,3
48.89	65 TB	LB10	1	1.667	1,2	49.80	81 TL	LY2	2	0.848	1,2,3
48.92	51 SB	KB1	4	0.417	1,2,3	49.80	95 AM	LA1	2	0.848	1,3
48.99	88 RA	LB2	2	0.835	1,2,3	49.80	69 TM	LN	1	1.696	1,2,3
49.05	51 SB	KB3	4	0.418	1,2	50.05	44 RU	KB5	3	0.568	1
49.05	70 YB	LA1	1	1.672	1,2,3	50.05	50 SN	KB2	4	0.426	1,2,3
49.21	47 AG	KA1	3	0.559	1,2,3	50.08	56 BA	KB1	5	0.341	1,2,3
49.24	80 HG	LY4	2	0.839	1,2	50.08	56 BA	KB3	5	0.341	1,2
49.24	74 W	LL	1	1.678	1,2,3	50.18	90 TH	LN	2	0.854	1,2,3
49.24	83 BI	LY5	2	0.839	1,2	50.18	63 EU	LY5	1	1.708	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 50.24 TO 52.13

ANGLE	ELEM	LINE	N	LAMBDA	REF
50.24	66 DY	LB1	1	1.710	1,2,3
50.43	87 FR	LB2	2	0.858	1,2,3
50.43	44 RU	KB1	3	0.572	1,2,3
50.52	44 RU	KB3	3	0.573	1,2
50.56	66 DY	LB4	1	1.720	1,2,3
50.56	95 AM	LA2	2	0.860	1,3
50.56	59 PR	KA1	5	0.344	1,2,3
50.65	64 GD	LB7	1	1.723	1,2
50.68	64 GD	LB9	1	1.724	1
50.74	69 TM	LA1	1	1.726	1,2,3
50.78	62 SM	LY1	1	1.727	1,2,3
50.81	73 TA	LL	1	1.728	1,2,3
50.81	50 SN	KB5	4	0.432	1
50.87	55 CS	KB2	5	0.346	1,2,3
50.90	64 GD	LB10	1	1.731	1,2
50.93	86 RN	LB1	2	0.866	1
50.93	36 KR	KB2	2	0.866	1,2,3
50.93	36 KR	KB4	2	0.866	2
50.93	82 PB	LY5	2	0.866	1,2
50.93	53 I	KA1	4	0.433	1,2,3
51.06	94 PU	LA1	2	0.868	1
51.06	81 TL	LY1	2	0.868	1,2,3
51.09	69 TM	LA2	1	1.737	1,2,3
51.09	94 PU	LY1	3	0.579	1
51.12	80 HG	LY3	2	0.869	1,2,3
51.19	50 SN	KB1	4	0.435	1,2,3
51.22	65 TB	LB6	1	1.741	1,2,3
51.25	88 RA	LB6	2	0.871	1,2,3
51.25	36 KR	KB5	2	0.871	1,2
51.31	60 ND	LY4	1	1.744	1,2
51.31	50 SN	KB3	4	0.436	1,2
51.31	26 FE	KB5	1	1.744	1,2
51.34	64 GD	LB2	1	1.745	1,2,3
51.34	59 PR	KA2	5	0.349	1,2,3
51.38	80 HG	LY6	2	0.873	1,2
51.38	65 TB	LB3	1	1.746	1,2,3
51.50	80 HG	LY2	2	0.875	1,2,3
51.50	38 SR	KA1	2	0.875	1,2,3
51.56	53 I	KA2	4	0.438	1,2,3
51.66	46 PD	KA1	3	0.585	1,2,3
51.69	36 KR	KB1	2	0.878	1,2,3
51.69	68 ER	LN	1	1.756	1,2,3
51.72	26 FE	KB1	1	1.757	1,2,3
51.75	36 KR	KB3	2	0.879	1,2
51.75	38 SR	KA2	2	0.879	1,2,3
51.82	94 PU	LA2	2	0.880	1
51.88	86 RN	LB2	2	0.881	1
52.13	43 TC	KB2	3	0.590	1
52.13	43 TC	KB4	3	0.590	1
52.13	46 PD	KA2	3	0.590	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 52.13 TO 53.69

ANGLE	ELEM	LINE	N	LAMBDA	REF
52.13	55 CS	KB1	5	0.354	1,2,3
52.29	55 CS	KB3	5	0.355	1,2
52.32	65 TB	LB1	1	1.775	1,2,3
52.39	93 NP	LA1	2	0.889	1,2,3
52.42	62 SM	LB5	1	1.779	2
52.42	62 SM	LY5	1	1.779	1
52.45	49 IN	KB2	4	0.445	1,2,3
52.48	72 HF	LL	1	1.781	1,2,3
52.51	91 PA	LY4	3	0.594	1,2
52.58	68 ER	LA1	1	1.784	1,2,3
52.61	65 TB	LB4	1	1.785	1,2,3
52.61	92 U	LY6	3	0.595	1,2
52.61	58 CE	KA1	5	0.357	1,2,3
52.70	63 EU	LB7	1	1.788	1,2
52.70	85 AT	LB1	2	0.894	1
52.74	27 CO	KA1	1	1.789	1,2,3
52.77	81 TL	LY5	2	0.895	1,2
52.80	93 NP	LY1	3	0.597	1,2,3
52.83	63 EU	LB9	1	1.792	1,2
52.85	27 CO	KA2	1	1.793	1,2,3
52.90	78 PT	LY4	2	0.897	1,2
52.90	80 HG	LY1	2	0.897	1,2,3
52.90	92 U	LY3	3	0.598	1,2,3
52.96	68 ER	LA2	1	1.796	1,2,3
52.96	79 AU	LY3	2	0.898	1,2,3
52.96	83 BI	LB9	2	0.898	1,2
52.96	60 ND	LY3	1	1.796	1,2,3
53.02	84 PO	LB5	2	0.899	1,2
53.09	54 XE	KB2	5	0.360	1,2,3
53.09	63 EU	LB10	1	1.800	1,2
53.12	60 ND	LY2	1	1.801	1,2,3
53.15	93 NP	LA2	2	0.901	1
53.18	43 TC	KB3	3	0.601	1,2
53.21	49 IN	KB5	4	0.451	1
53.21	52 TE	KA1	4	0.451	1,2,3
53.28	79 AU	LY6	2	0.903	1,2
53.28	43 TC	KB1	3	0.602	1,2,3
53.31	64 GD	LB6	1	1.807	1,2,3
53.34	79 AU	LY2	2	0.904	1,2,3
53.37	98 CF	LB1	3	0.603	1
53.40	83 BI	LB10	2	0.905	1,2
53.40	58 CE	KA2	5	0.362	1,2,3
53.40	85 AT	LB2	2	0.905	1
53.47	63 EU	LB2	1	1.812	1,2,3
53.53	88 RA	LN	2	0.907	1,2,3
53.56	92 U	LY2	3	0.605	1,2,3
53.56	64 GD	LB3	1	1.815	1,2,3
53.60	61 PM	LY1	1	1.816	1
53.66	84 PO	LB3	2	0.909	1,2,3
53.69	59 PR	LY4	1	1.819	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 53.72 TO 55.48

ANGLE	ELEM	LINE	N	LAMBDA	REF
53.72	49 IN	KB3	4	0.455	1,2
53.72	49 IN	KB1	4	0.455	1,2,3
53.79	92 U	LA1	2	0.911	1,2,3
53.85	52 TE	KA2	4	0.456	1,2,3
53.91	67 HO	LN	1	1.826	1,2,3
54.14	90 TH	LY4	3	0.611	1,2
54.23	71 LU	LL	1	1.836	1,2,3
54.33	91 PA	LY6	3	0.613	1,2
54.33	45 RH	KA1	3	0.613	1,2,3
54.36	54 XE	KB1	5	0.368	1,2,3
54.43	35 BR	KB2	2	0.921	1,2,3
54.49	92 U	LA2	2	0.922	1,2,3
54.49	84 PO	LB1	2	0.922	1,2,3
54.52	67 HO	LA1	1	1.845	1,2,3
54.52	92 U	LY1	3	0.615	1,2,3
54.55	64 GD	LB1	1	1.846	1,2,3
54.62	80 HG	LY5	2	0.924	1,2
54.68	35 BR	KB5	2	0.925	1,2
54.71	91 PA	LY3	3	0.617	1,2,3
54.75	83 BI	LB5	2	0.926	1,2
54.75	37 RB	KA1	2	0.926	1,2,3
54.78	64 GD	LB4	1	1.853	1,2,3
54.81	82 PB	LB9	2	0.927	1,2
54.81	77 IR	LY4	2	0.927	1,2
54.81	45 RH	KA2	3	0.618	1,2,3
54.81	79 AU	LY1	2	0.927	1,2,3
54.84	60 ND	LY6	1	1.855	2
54.84	57 LA	KA1	5	0.371	1,2,3
54.87	67 HO	LA2	1	1.856	1,2,3
54.87	62 SM	LB7	1	1.856	1,2
54.87	78 PT	LY3	2	0.928	1,2,3
54.94	84 PO	LB2	2	0.929	1,2,3
55.00	48 CD	KB2	4	0.465	1,2,3
55.00	37 RB	KA2	2	0.930	1,2,3
55.00	42 MO	KB4	3	0.620	2
55.03	62 SM	LB9	1	1.861	1,2
55.10	97 BK	LB1	3	0.621	1
55.10	42 MO	KB2	3	0.621	1,2,3
55.19	91 PA	LA1	2	0.933	1,2,3
55.19	35 BR	KB1	2	0.933	1,2,3
55.19	35 BR	KB3	2	0.933	1,2
55.26	82 PB	LB10	2	0.934	1,2
55.26	78 PT	LY2	2	0.934	1,2,3
55.26	78 PT	LY6	2	0.934	1,2
55.29	62 SM	LB10	1	1.869	1,2
55.32	83 BI	LB7	2	0.935	1,2
55.39	91 PA	LY2	3	0.624	1,2,3
55.45	59 PR	LY3	1	1.874	1,2,3
55.45	63 EU	LB6	1	1.874	1,2,3
55.48	53 I	KB2	5	0.375	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 55.48 TO 57.45

ANGLE	ELEM	LINE	N	LAMBDA	REF
55.48	57 LA	KA2	5	0.375	1,2,3
55.58	60 ND	LY1	1	1.878	1,2,3
55.58	83 BI	LB3	2	0.939	1,2,3
55.61	59 PR	LY2	1	1.879	1,2,3
55.64	51 SB	KA1	4	0.470	1,2,3
55.68	42 MO	KB5	3	0.627	1
55.71	62 SM	LB2	1	1.882	1,2,3
55.87	63 EU	LB3	1	1.887	1,2,3
55.97	91 PA	LA2	2	0.945	1,2,3
56.10	70 YB	LL	1	1.894	1,2,3
56.10	84 PO	LB4	2	0.947	1,2,3
56.16	90 TH	LY6	3	0.632	1,2
56.16	42 MO	KB1	3	0.632	1,2,3
56.19	25 MN	KB5	1	1.897	1,2
56.19	65 DY	LN	1	1.897	1,2,3
56.26	58 CE	LY4	1	1.899	1,2
56.26	42 MO	KB3	3	0.633	1,2
56.29	48 CD	KB1	4	0.475	1,2,3
56.29	51 SB	KA2	4	0.475	1,2,3
56.35	91 PA	LY1	3	0.634	1,2,3
56.42	48 CD	KB3	4	0.476	1,2
56.42	83 BI	LB1	2	0.952	1,2,3
56.45	92 U	LY5	3	0.635	1,2
56.48	82 PB	LB5	2	0.953	1,2
56.55	90 TH	LY3	3	0.636	1,2,3
56.58	66 DY	LA1	1	1.909	1,2,3
56.61	83 BI	LB2	2	0.955	1,2,3
56.61	25 MN	KB1	1	1.910	1,2,3
56.68	79 AU	LY5	2	0.956	1,2
56.68	90 TH	LA1	2	0.956	1,2,3
56.74	81 TL	LB9	2	0.957	1,2
56.81	78 PT	LY1	2	0.958	1,2,3
56.84	96 CM	LB1	3	0.639	1
56.87	76 OS	LY4	2	0.959	1,2
56.87	77 IR	LY3	2	0.959	1,2,3
56.93	53 I	KB1	5	0.384	1,2,3
56.93	63 EU	LB1	1	1.920	1,2,3
56.93	66 DY	LA2	1	1.920	1,2,3
57.06	82 PB	LB7	2	0.962	1,2
57.10	56 BA	KA1	5	0.385	1,2,3
57.10	53 I	KB3	5	0.385	1,2
57.13	63 EU	LB4	1	1.926	1,2,3
57.13	90 TH	LY2	3	0.642	1,2,3
57.19	81 TL	LB10	2	0.964	1,2
57.23	44 RU	KA1	3	0.643	1,2,3
57.26	77 IR	LY2	2	0.965	1,2,3
57.39	84 PO	LB6	2	0.967	1,2,3
57.39	77 IR	LY6	2	0.967	1,2
57.42	60 ND	LY5	1	1.935	1,2
57.45	26 FE	KA1	1	1.936	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 57.45 TO 59.28

ANGLE	ELEM	LINE	N	LAMBDA	REF
57.45	90 TH	LA2	2	0.968	1,2,3
57.52	82 PB	LB3	2	0.969	1,2,3
57.58	26 FE	KA2	1	1.940	1,2,3
57.62	44 RU	KA2	3	0.647	1,2,3
57.78	62 SM	LB6	1	1.946	1,2,3
57.81	88 RA	LY4	3	0.649	1,2
57.84	47 AG	KB2	4	0.487	1,2,3
57.91	56 BA	KA2	5	0.390	1,2,3
58.04	83 BI	LB4	2	0.977	1,2,3
58.07	69 TM	LL	1	1.955	1,2,3
58.07	58 CE	LY3	1	1.955	1,2,3
58.07	52 TE	KB2	5	0.391	1,2,3
58.14	61 PM	LB2	1	1.957	1
58.20	98 CF	LB2	3	0.653	1
58.20	90 TH	LY1	3	0.653	1,2,3
58.23	58 CE	LY2	1	1.960	1,2,3
58.23	36 KR	KA1	2	0.980	1,2,3
58.23	89 AC	LA1	2	0.980	1
58.23	34 SE	KB2	2	0.980	1,2,3
58.27	59 PR	LY1	1	1.961	1,2,3
58.30	62 SM	LB3	1	1.962	1,2,3
58.30	81 TL	LB5	2	0.981	1,2
58.30	41 NB	KB2	3	0.654	1,2,3
58.36	50 SN	KA1	4	0.491	1,2,3
58.36	82 PB	LB1	2	0.982	1,2,3
58.40	91 PA	LY5	3	0.655	1,2
58.43	82 PB	LB2	2	0.983	1,2,3
58.49	36 KR	KA2	2	0.984	1,2,3
58.49	34 SE	KB5	2	0.984	1,2
58.63	47 AG	KB5	4	0.493	1
58.63	80 HG	LB9	2	0.986	1,2
58.66	65 TB	LN	1	1.973	1
58.69	95 AM	LB1	3	0.658	1,3
58.72	65 TB	LA1	1	1.975	1,2,3
58.76	78 PT	LY5	2	0.988	1,2
58.89	50 SN	KA2	4	0.495	1,2,3
58.89	41 NB	KB5	3	0.660	1
58.89	81 TL	LB7	2	0.990	1,2
58.95	77 IR	LY1	2	0.991	1,2,3
58.98	57 LA	LY4	1	1.983	1,2
59.02	76 OS	LY3	2	0.992	1,2,3
59.02	89 AC	LA2	2	0.992	1
59.02	34 SE	KB1	2	0.992	1,2,3
59.02	75 RE	LY4	2	0.992	1,2
59.08	83 BI	LB6	2	0.993	1,2,3
59.08	34 SE	KB3	2	0.993	1,2
59.08	65 TB	LA2	1	1.986	1,2,3
59.15	47 AG	KB1	4	0.497	1,2,3
59.28	47 AG	KB3	4	0.498	1,2
59.28	80 HG	LB10	2	0.996	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 59.41 TO 61.38

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
59.41	76 OS	LY2	2	0.998	1,2,3	60.36	90 TH	LY5	3	0.675	1,2
59.47	41 NB	KB1	3	0.666	1,2,3	60.46	43 TC	KA2	3	0.676	2,3
59.47	62 SM	LB1	1	1.998	1,2,3	60.53	81 TL	LB1	2	1.015	1,2,3
59.47	41 NB	KB3	3	0.666	1,2	60.59	88 RA	LA2	2	1.016	1,2,3
59.54	55 CS	KA1	5	0.400	1,2,3	60.66	94 PU	LB1	3	0.678	1
59.54	52 TE	KB1	5	0.400	1,2,3	60.72	60 ND	LB2	1	2.036	1,2,3
59.54	62 SM	LB4	1	2.000	1,2,3	60.79	80 HG	LB7	2	1.019	1,2
59.61	76 OS	LY6	2	1.001	1,2	60.86	51 SB	KB2	5	0.408	1,2,3
59.61	81 TL	LB3	2	1.001	1,2,3	60.86	46 PD	KB2	4	0.510	1,2,3
59.70	52 TE	KB3	5	0.401	1,2	60.89	57 LA	LY3	1	2.041	1,2,3
59.77	97 BK	LB2	3	0.669	1	60.92	82 PB	LB6	2	1.021	1,2,3
59.84	60 ND	LB7	1	2.009	1,2	60.92	79 AU	LB9	2	1.021	1,2
59.87	88 RA	LA1	2	1.005	1,2,3	60.95	92 U	LB9	3	0.681	1,2
60.00	82 PB	LB4	2	1.007	1,2,3	60.99	77 IR	LY5	2	1.022	1,2
60.07	60 ND	LB9	1	2.016	1,2	61.05	88 RA	LY2	3	0.682	1,2,3
60.16	43 TC	KA1	3	0.673	2,3	61.05	57 LA	LY2	1	2.046	1,2,3
60.16	68 ER	LL	1	2.019	1,2,3	61.05	64 GD	LA1	1	2.046	1,2,3
60.16	88 RA	LY6	3	0.673	1,2	61.12	58 CE	LY1	1	2.048	1,2,3
60.20	80 HG	LB5	2	1.010	1,2	61.12	49 IN	KA1	4	0.512	1,2,3
60.20	59 PR	LY5	1	2.020	1,2	61.15	64 GD	LN	1	2.049	1,2,3
60.20	81 TL	LB2	2	1.010	1,2,3	61.19	76 OS	LY1	2	1.025	1,2,3
60.26	89 AC	LY1	3	0.674	1	61.25	75 RE	LY3	2	1.026	1,2,3
60.30	60 ND	LB10	1	2.023	1,2	61.35	96 CM	LB2	3	0.685	1
60.36	88 RA	LY3	3	0.675	1,2,3	61.38	74 W	LY4	2	1.028	1,2
60.36	55 CS	KA2	5	0.405	1,2,3	61.38	79 AU	LB10	2	1.028	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 61.42 TO 63.31

ANGLE	ELEM	LINE	N	LAMBDA	REF
61.42	64 GD	LA2	1	2.057	1,2,3
61.52	98 CF	LY1	4	0.515	1
61.52	87 FR	LA1	2	1.030	1,2,3
61.55	92 U	LB10	3	0.687	1,2
61.65	75 RE	LY2	2	1.032	1,2,3
61.78	80 HG	LB3	2	1.034	1,2,3
61.78	46 PD	KB5	4	0.517	1
61.78	49 IN	KA2	4	0.517	1,2,3
61.85	40 ZR	KB2	3	0.690	1,2,3
61.85	51 SB	KB5	5	0.414	1
61.88	24 CR	KB5	1	2.071	1,2
61.98	75 RE	LY6	2	1.037	1,2
62.01	56 BA	LY4	1	2.075	1,2
62.11	81 TL	LB4	2	1.039	1,2,3
62.18	79 AU	LB5	2	1.040	1,2
62.18	80 HG	LB2	2	1.040	1,2,3
62.18	54 XE	KA1	5	0.416	1,2,3
62.18	35 BR	KA1	2	1.040	1,2,3
62.21	61 PM	LB1	1	2.081	1,2,3
62.31	46 PD	KB3	4	0.521	1,2
62.31	46 PD	KB1	4	0.521	1,2,3
62.31	87 FR	LA2	2	1.042	1
62.35	24 CR	KB1	1	2.085	1,2,3
62.35	88 RA	LY1	3	0.695	1,2,3
62.35	51 SB	KB1	5	0.417	1,2,3
62.35	24 CR	KB3	1	2.085	1,2
62.38	67 HO	LL	1	2.086	1,2,3
62.45	40 ZR	KB5	3	0.696	1
62.45	35 BR	KA2	2	1.044	1,2,3
62.51	33 AS	KB2	2	1.045	1,2,3
62.51	51 SB	KB3	5	0.418	1,2
62.55	59 PR	LB7	1	2.091	1,2
62.65	93 NP	LB1	3	0.698	1,2,3
62.78	33 AS	KB5	2	1.049	1,2
62.78	80 HG	LB1	2	1.049	1,2,3
62.85	79 AU	LB7	2	1.050	1,2
62.85	59 PR	LB9	1	2.100	1,2
62.85	81 TL	LB6	2	1.050	1,2,3
62.85	54 XE	KA2	5	0.420	1,2,3
62.91	25 MN	KA1	1	2.102	1,2,3
62.95	91 PA	LB9	3	0.701	1,2
62.95	95 AM	LB2	3	0.701	1,3
62.98	60 ND	LB6	1	2.104	1,2,3
63.05	25 MN	KA2	1	2.106	1,2,3
63.05	40 ZR	KB3	3	0.702	1,2
63.05	40 ZR	KB1	3	0.702	1,2,3
63.08	59 PR	LB10	1	2.107	1,2
63.11	78 PT	LB9	2	1.054	1,2
63.18	58 CE	LY5	1	2.110	1,2
63.31	33 AS	KB1	2	1.057	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 63.31 TO 65.36

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
63.31	86 RN	LA1	2	1.057	1	64.18	45 RH	KB2	4	0.535	1,2,3
63.31	76 OS	LY5	2	1.057	1,2	64.18	79 AU	LB2	2	1.070	1,2,3
63.38	33 AS	KB3	2	1.058	1,2	64.18	48 CD	KA1	4	0.535	1,2,3
63.45	83 BI	LN	2	1.059	1,2,3	64.25	57 LA	LY1	1	2.142	1,2,3
63.48	59 PR	LB2	1	2.119	1,2,3	64.32	78 PT	LB5	2	1.072	1,2
63.51	97 BK	LY1	4	0.530	1	64.32	80 HG	LB4	2	1.072	1,2,3
63.55	63 EU	LA1	1	2.121	1,2,3	64.45	87 FR	LY1	3	0.716	1,2,3
63.58	75 RE	LY1	2	1.061	1,2,3	64.45	74 W	LY6	2	1.074	1,2
63.65	91 PA	LB10	3	0.708	1,2	64.55	88 RA	LY5	3	0.717	1,2
63.65	78 PT	LB10	2	1.062	1,2	64.65	94 PU	LB2	3	0.718	1
63.65	74 W	LY3	2	1.062	1,2,3	64.72	48 CD	KA2	4	0.539	1,2,3
63.71	60 ND	LB3	1	2.126	1,2,3	64.79	66 DY	LL	1	2.158	1,2,3
63.75	42 MO	KA1	3	0.709	1,2,3	64.86	80 HG	LB6	2	1.080	1,2,3
63.85	50 SN	KB2	5	0.426	1,2,3	64.86	92 U	LB1	3	0.720	1,2,3
63.85	92 U	LB3	3	0.710	1,2,3	64.86	50 SN	KB5	5	0.432	1
63.85	73 TA	LY4	2	1.065	1,2	64.99	78 PT	LB7	2	1.082	1,2
63.88	63 EU	LN	1	2.131	1	64.99	45 RH	KB5	4	0.541	1
63.92	63 EU	LA2	1	2.132	1,2,3	65.03	53 I	KA1	5	0.433	1,2,3
63.98	56 BA	LY3	1	2.134	1,2,3	65.09	60 ND	LB1	1	2.167	1,2,3
63.98	92 U	LL	2	1.067	2,3	65.09	60 ND	LB4	1	2.167	1,2,3
64.05	79 AU	LB3	2	1.068	1,2,3	65.13	79 AU	LB1	2	1.084	1,2,3
64.05	74 W	LY2	2	1.068	1,2,3	65.16	90 TH	LB9	3	0.723	1,2
64.12	56 BA	LY2	1	2.138	1,2,3	65.19	85 AT	LA1	2	1.085	1
64.12	86 RN	LA2	2	1.069	1	65.33	55 CS	LY4	1	2.174	1,2
64.15	42 MO	KA2	3	0.713	1,2,3	65.36	50 SN	KB1	5	0.435	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 65.46 TO 67.33

ANGLE	ELEM	LINE	N	LAMBDA	REF
65.46	92 U	LB5	3	0.726	1,2
65.53	50 SN	KB3	5	0.436	1,2
65.53	58 CE	LB7	1	2.180	1,2
65.53	77 IR	LB9	2	1.090	1,2
65.57	39 Y	KB4	3	0.727	2
65.60	91 PA	LL	2	1.091	1,2,3
65.67	82 PB	LN	2	1.092	1,2,3
65.67	45 RH	KB1	4	0.546	1,2,3
65.67	45 RH	KB3	4	0.546	1,2
65.67	96 CM	LY1	4	0.546	1
65.77	39 Y	KB2	3	0.729	1,2,3
65.80	75 RE	LY5	2	1.094	1,2
65.80	58 CE	LB9	1	2.188	1,2
65.87	59 PR	LB6	1	2.190	1,2,3
65.87	53 I	KA2	5	0.438	1,2,3
65.87	90 TH	LB10	3	0.730	1,2
66.01	85 AT	LA2	2	1.097	1
66.01	77 IR	LB10	2	1.097	1,2
66.04	58 CE	LB10	1	2.195	1,2
66.07	91 PA	LB3	3	0.732	1,2,3
66.14	73 TA	LY3	2	1.099	1,2,3
66.14	74 W	LY1	2	1.099	1,2,3
66.18	62 SM	LA1	1	2.199	1,2,3
66.28	39 Y	KB5	3	0.734	1
66.35	78 PT	LB2	2	1.102	1,2,3
66.38	57 LA	LY5	1	2.205	1,2
66.41	72 HF	LY4	2	1.103	1,2
66.48	92 U	LB7	3	0.736	1,2
66.48	93 NP	LB2	3	0.736	1,2,3
66.48	78 PT	LB3	2	1.104	1,2,3
66.52	58 CE	LB2	1	2.209	1,2,3
66.55	73 TA	LY2	2	1.105	1,2,3
66.55	34 SE	KA1	2	1.105	1,2,3
66.55	62 SM	LA2	1	2.210	1,2,3
66.62	77 IR	LB5	2	1.106	1,2
66.69	79 AU	LB4	2	1.107	1,2,3
66.79	86 RN	LY1	3	0.739	1
66.79	59 PR	LB3	1	2.217	1,2,3
66.82	34 SE	KA2	2	1.109	1,2,3
66.82	62 SM	LN	1	2.218	1,2,3
66.96	79 AU	LB6	2	1.111	1,2,3
66.99	39 Y	KB3	3	0.741	1,2
66.99	39 Y	KB1	3	0.741	1,2,3
67.06	49 IN	KB2	5	0.445	1,2,3
67.09	91 PA	LB1	3	0.742	1,2,3
67.16	73 TA	LY6	2	1.114	1,2
67.16	84 PO	LA1	2	1.114	1,2,3
67.23	90 TH	LL	2	1.115	1,2,3
67.23	77 IR	LB7	2	1.115	1,2
67.33	55 CS	LY3	1	2.233	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 67.37 TO 67.47

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
67.37	65 TB	LL	1	2.234	1,2,3						
67.37	32 GE	KB2	2	1.117	1,2,3						
67.40	91 PA	LB5	3	0.745	1,2						
67.44	47 AG	KA1	4	0.559	1,2,3						
67.47	55 CS	LY2	1	2.237	1,2,3						

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 67.51 TO 69.36

ANGLE	ELEM	LINE	N	LAMBDA	REF
67.51	32 GE	KB5	2	1.119	1,2
67.51	41 NB	KA1	3	0.746	1,2,3
67.57	78 PT	LB1	2	1.120	1,2,3
67.61	56 BA	LY1	1	2.241	1,2,3
67.71	92 U	LB4	3	0.748	1,2,3
67.85	95 AM	LY1	4	0.562	1,3
67.85	44 RU	KB2	4	0.562	1,2,3
67.92	41 NB	KA2	3	0.750	1,2,3
67.98	84 PO	LA2	2	1.126	1,2,3
67.98	76 OS	LB9	2	1.126	1,2
68.09	52 TE	KA1	5	0.451	1,2,3
68.09	49 IN	KB5	5	0.451	1
68.09	59 PR	LB4	1	2.255	1,2,3
68.12	81 TL	LN	2	1.128	1,2,3
68.12	47 AG	KA2	4	0.564	1,2,3
68.19	59 PR	LB1	1	2.258	1,2,3
68.19	32 GE	KB1	2	1.129	1,2,3
68.19	32 GE	KB3	2	1.129	1,2
68.40	74 W	LY5	2	1.132	1,2
68.43	90 TH	LB3	3	0.755	1,2,3
68.43	91 PA	LB7	3	0.755	1,2
68.43	92 U	LB2	3	0.755	1,2,3
68.47	76 OS	LB10	2	1.133	1,2
68.57	23 V	KB5	1	2.269	1,2
68.60	77 IR	LB2	2	1.135	1,2,3
68.67	44 RU	KB5	4	0.568	1
68.78	49 IN	KB1	5	0.455	1,2,3
68.78	57 LA	LB7	1	2.275	1,2
68.78	49 IN	KB3	5	0.455	1,2
68.81	73 TA	LY1	2	1.138	1,2,3
68.81	72 HF	LY3	2	1.138	1,2,3
68.95	76 OS	LB5	2	1.140	1,2
68.95	52 TE	KA2	5	0.456	1,2,3
68.98	58 CE	LB6	1	2.281	1,2,3
69.02	77 IR	LB3	2	1.141	1,2,3
69.02	57 LA	LB9	1	2.282	1,2
69.05	61 PM	LA1	1	2.283	1,2,3
69.05	83 BI	LY4	3	0.761	1,2
69.09	23 V	KB1	1	2.284	1,2,3
69.09	78 PT	LB4	2	1.142	1,2,3
69.09	23 V	KB3	1	2.284	1,2
69.16	71 LU	LY4	2	1.143	1
69.22	78 PT	LB6	2	1.144	1,2,3
69.22	83 BI	LA1	2	1.144	1,2,3
69.22	44 RU	KB1	4	0.572	1,2,3
69.22	72 HF	LY2	2	1.144	1,2,3
69.26	85 AT	LY1	3	0.763	1
69.29	24 CR	KA1	1	2.290	1,2,3
69.29	57 LA	LB10	1	2.290	1,2
69.36	84 PO	LY3	3	0.764	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 69.36 TO 71.73

ANGLE	ELEM	LINE	N	LAMBDA	REF
69.36	61 PM	LA2	1	2.292	1
69.36	44 RU	KB3	4	0.573	1,2
69.36	84 PO	LY6	3	0.764	1,2
69.43	24 CR	KA2	1	2.294	1,2,3
69.47	90 TH	LB1	3	0.765	1,2,3
69.47	90 TH	LB5	3	0.765	1,2
69.57	76 OS	LB7	2	1.149	1,2
69.74	57 LA	LB2	1	2.303	1,2,3
69.85	88 RA	LB9	3	0.769	1,2
69.92	56 BA	LY5	1	2.308	1,2
69.95	91 PA	LB4	3	0.770	1,2,3
69.99	72 HF	LY6	2	1.155	1,2
69.99	83 BI	LA2	2	1.155	1,2,3
70.02	58 CE	LB3	1	2.311	1,2,3
70.06	64 GD	LL	1	2.312	1,2,3
70.09	38 SR	KB2	3	0.771	1,2,3
70.20	77 IR	LB1	2	1.158	1,2,3
70.20	94 PU	LY1	4	0.579	1
70.40	90 TH	LB7	3	0.774	1,2
70.40	91 PA	LB2	3	0.774	1,2,3
70.5	88 RA	LB10	3	0.775	1,2
70.5	48 CD	KB2	5	0.465	1,2,3
70.5	38 SR	KB5	3	0.775	1
70.6	80 HG	LN	2	1.164	1,2,3
70.68	75 RE	LB9	2	1.165	1,2
70.82	88 RA	LL	2	1.167	1,2,3
71.03	76 OS	LB2	2	1.170	1,2,3
71.03	46 PD	KA1	4	0.585	1,2,3
71.17	75 RE	LB10	2	1.172	1,2
71.24	73 TA	LY5	2	1.173	1,2
71.31	55 CS	LY1	1	2.348	1,2,3
71.35	38 SR	KB3	3	0.783	1,2
71.35	38 SR	KB1	3	0.783	1,2,3
71.35	58 CE	LB4	1	2.349	1,2,3
71.38	82 PB	LA1	2	1.175	1,2,3
71.38	51 SB	KA1	5	0.470	1,2,3
71.45	33 AS	KA1	2	1.176	1,2,3
71.52	75 RE	LB5	2	1.177	1,2
71.59	58 CE	LB1	1	2.356	1,2,3
71.59	77 IR	LB6	2	1.178	1,2,3
71.66	71 LU	LY3	2	1.179	1,2,3
71.66	40 ZR	KA1	3	0.786	1,2,3
71.66	72 HF	LY1	2	1.179	1,2,3
71.66	82 PB	LY4	3	0.786	1
71.73	33 AS	KA2	2	1.180	1,2,3
71.73	43 TC	KB2	4	0.590	1
71.73	46 PD	KA2	4	0.590	1,2,3
71.73	77 IR	LB4	2	1.180	1,2,3
71.73	43 TC	KB4	4	0.590	1
71.73	76 OS	LB3	2	1.180	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 71.77 TO 73.85

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
71.77	84 PO	LY1	3	0.787	1,2,3	72.82	53 I	LY4	1	2.391	1,2
71.87	92 U	LB6	3	0.788	1,2,3	72.86	31 GA	KB2	2	1.196	1,2,3
71.98	89 AC	LB1	3	0.789	1	72.86	92 U	LY3	4	0.598	1,2,3
71.98	83 BI	LY3	3	0.789	1,2,3	72.93	31 GA	KB5	2	1.197	1,2
72.08	60 ND	LA1	1	2.370	1,2,3	72.93	76 OS	LB1	2	1.197	1,2,3
72.08	71 LU	LY2	2	1.185	1,2,3	72.97	63 EU	LL	1	2.395	1,2,3
72.08	70 YB	LY4	2	1.185	1,2	73.00	71 LU	LY6	2	1.198	1,2
72.08	83 BI	LY6	3	0.790	1,2	73.28	43 TC	KB3	4	0.601	1,2
72.08	40 ZR	KA2	3	0.790	1,2,3	73.28	56 BA	LB2	1	2.404	1,2,3
72.15	82 PB	LA2	2	1.186	1,2,3	73.36	79 AU	LN	2	1.203	1,2,3
72.15	75 RE	LB7	2	1.186	1,2	73.43	74 W	LB9	2	1.204	1,2
72.26	48 CD	KB1	5	0.475	1,2,3	73.43	43 TC	KB1	4	0.602	1,2,3
72.26	51 SB	KA2	5	0.475	1,2,3	73.46	60 ND	LN	1	2.409	1,2,3
72.30	91 PA	LY4	4	0.594	1,2	73.46	88 RA	LB3	3	0.803	1,2,3
72.30	56 BA	LB9	1	2.376	1,2	73.50	57 LA	LB3	1	2.410	1,2,3
72.30	98 CF	LA1	3	0.792	1	73.57	98 CF	LB1	4	0.603	1
72.40	90 TH	LB4	3	0.793	1,2,3	73.57	98 CF	LA2	3	0.804	1
72.40	57 LA	LB6	1	2.379	1,2,3	73.64	75 RE	LB2	2	1.207	1,2,3
72.44	60 ND	LA2	1	2.380	1,3	73.64	81 TL	LA1	2	1.207	1,2,3
72.44	48 CD	KB3	5	0.476	1,2	73.68	92 U	LN	3	0.805	1,2,3
72.44	92 U	LY6	4	0.595	1,2	73.71	31 GA	KB1	2	1.208	1,2,3
72.51	90 TH	LB2	3	0.794	1,2,3	73.71	31 GA	KB3	2	1.208	1,2
72.68	56 BA	LB10	1	2.387	1,2	73.75	55 CS	LY5	1	2.417	1,2
72.72	83 BI	LY2	3	0.796	1,2,3	73.78	88 RA	LB5	3	0.806	1,2
72.72	93 NP	LY1	4	0.597	1,2,3	73.85	92 U	LY2	4	0.605	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 74.00 TO 76.15

ANGLE	ELEM	LINE	N	LAMBDA	REF
74.00	74 W	LB10	2	1.212	1,2
74.00	91 PA	LB6	3	0.808	1,2,3
74.07	76 OS	LB6	2	1.213	1,2,3
74.21	74 W	LB5	2	1.215	1,2
74.21	72 HF	LY5	2	1.215	1,2
74.21	97 BK	LA1	3	0.810	1
74.39	47 AG	KB2	5	0.487	1,2,3
74.42	81 TL	LY4	3	0.812	1,2
74.42	76 OS	LB4	2	1.213	1,2,3
74.50	81 TL	LA2	2	1.219	1,2,3
74.53	83 BI	LY1	3	0.813	1,2,3
74.57	75 RE	LB3	2	1.220	1,2,3
74.64	88 RA	LB1	3	0.814	1,2,3
74.64	89 AC	LB2	3	0.814	1
74.71	71 LU	LY1	2	1.222	1,2,3
74.71	70 YB	LY3	2	1.222	1,2,3
74.71	90 TH	LY4	4	0.611	1,2
74.75	82 PB	LY3	3	0.815	1,2,3
74.82	53 I	LY3	1	2.447	1,2
74.82	53 I	LY2	1	2.447	1,2,3
74.85	88 RA	LB7	3	0.816	1,2
74.85	37 RB	KB2	3	0.816	1,2,3
74.85	74 W	LB7	2	1.224	1,2
74.85	57 LA	LB4	1	2.449	1,2,3
74.96	82 PB	LY6	3	0.817	1,2
75.00	91 PA	LY6	4	0.613	1,2
75.00	45 RH	KA1	4	0.613	1,2,3
75.10	50 SN	KA1	5	0.491	1,2,3
75.21	70 YB	LY2	2	1.229	1,2,3
75.21	57 LA	LB1	1	2.458	1,2,3
75.21	69 TM	LY4	2	1.229	1
75.28	92 U	LY1	4	0.615	1,2,3
75.36	54 XE	LY1	1	2.462	1
75.39	82 PB	LY2	3	0.821	1,2,3
75.39	59 PR	LA1	1	2.463	1,2,3
75.46	47 AG	KB5	5	0.493	1
75.50	37 RB	KB5	3	0.822	1
75.50	97 BK	LA2	3	0.822	1
75.57	91 PA	LY3	4	0.617	1,2,3
75.72	45 RH	KA2	4	0.618	1,2,3
75.75	59 PR	LA2	1	2.473	1,2,3
75.82	50 SN	KA2	5	0.495	1,2,3
75.93	55 CS	LB9	1	2.478	1,2
75.93	75 RE	LB1	2	1.239	1,2,3
76.00	42 MO	KB4	4	0.620	2
76.08	62 SM	LL	1	2.482	1,2,3
76.08	56 BA	LB6	1	2.482	1,2,3
76.08	80 HG	LA1	2	1.241	1,2,3
76.15	42 MO	KB2	4	0.621	1,2,3
76.15	97 BK	LB1	4	0.621	1

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 76.15 TO 78.04

ANGLE	ELEM	LINE	N	LAMBDA	REF
76.15	90 TH	LB6	3	0.828	1,2,3
76.18	47 AG	KB1	5	0.497	1,2,3
76.18	55 CS	LB7	1	2.485	1,2
76.22	78 PT	LN	2	1.243	1,2,3
76.22	70 YB	LY6	2	1.243	1,2
76.26	37 RB	KB3	3	0.829	1,2
76.26	39 Y	KA1	3	0.829	1,2,3
76.26	91 PA	LN	3	0.829	1,2,3
76.26	37 RB	KB1	3	0.829	1,2,3
76.26	96 CM	LA1	3	0.829	1
76.37	74 W	LB2	2	1.245	1,2,3
76.37	47 AG	KB3	5	0.498	1,2
76.44	55 CS	LB10	1	2.492	1,2
76.44	73 TA	LB9	2	1.246	1,2
76.58	91 PA	LY2	4	0.624	1,2,3
76.66	22 TI	KB5	1	2.498	1,2
76.69	39 Y	KA2	3	0.833	1,2,3
76.80	75 RE	LB6	2	1.251	1,2,3
76.84	23 V	KA1	1	2.503	1,2,3
76.91	88 RA	LB2	3	0.835	1,2,3
76.95	80 HG	LA2	2	1.253	1,2,3
76.98	23 V	KA2	1	2.507	1,2,3
77.02	42 MO	KB5	4	0.627	1
77.02	73 TA	LB10	2	1.254	1,2
77.02	32 GE	KA1	2	1.254	1,2,3
77.09	73 TA	LB5	2	1.255	1,2
77.13	52 TE	LY4	1	2.511	1,2
77.13	55 CS	LB2	1	2.511	1,2,3
77.16	59 PR	LN	1	2.512	1,2,3
77.24	22 TI	KB1	1	2.514	1,2,3
77.24	22 TI	KB3	1	2.514	1,2
77.31	32 GE	KA2	2	1.258	1,2,3
77.31	56 BA	LB3	1	2.516	1,2,3
77.35	80 HG	LY4	3	0.839	1,2
77.35	83 BI	LY5	3	0.839	1,2
77.38	75 RE	LB4	2	1.259	1,2,3
77.46	82 PB	LY1	3	0.840	1,2,3
77.46	71 LU	LY5	2	1.260	1,2
77.46	87 FR	LB1	3	0.840	1,2,3
77.56	88 RA	LB4	3	0.841	1,2,3
77.56	96 CM	LA2	3	0.841	1
77.56	81 TL	LY3	3	0.841	1,2,3
77.67	74 W	LB3	2	1.263	1,2,3
77.75	42 MO	KB1	4	0.632	1,2,3
77.75	73 TA	LB7	2	1.264	1,2
77.75	90 TH	LY6	4	0.632	1,2
77.89	42 MO	KB3	4	0.633	1,2
77.89	81 TL	LY6	3	0.844	1,2
78.04	70 YB	LY1	2	1.268	1,2,3
78.04	91 PA	LY1	4	0.634	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 78.04 TO 80.59

ANGLE	ELEM	LINE	N	LAMBDA	REF
78.04	69 TM	LY3	2	1.268	1,2,3
78.19	92 U	LY5	4	0.635	1,2
78.33	90 TH	LY3	4	0.636	1,2,3
78.33	95 AM	LA1	3	0.848	1,3
78.33	81 TL	LY2	3	0.848	1,2,3
78.48	69 TM	LY2	2	1.274	1,2,3
78.55	46 PD	KB2	5	0.513	1,2,3
78.63	68 ER	LY4	2	1.275	1,2
78.63	79 AU	LA1	2	1.275	1,3
78.74	56 BA	LB4	1	2.555	1,2,3
78.77	96 CM	LB1	4	0.639	1
78.92	49 IN	KA1	5	0.512	1,2,3
78.96	58 CE	LA1	1	2.561	1,2,3
78.99	90 TH	LN	3	0.854	1,2,3
79.07	74 W	LB1	2	1.282	1,2,3
79.18	52 TE	LY2	1	2.567	1,3
79.18	52 TE	LY3	1	2.567	1,2
79.18	56 BA	LB1	1	2.567	1,2,3
79.22	73 TA	LB2	2	1.284	1,2,3
79.22	77 IR	LN	2	1.284	1,2,3
79.22	30 ZN	KB2	2	1.284	1,2,3
79.22	90 TH	LY2	4	0.642	1,2,3
79.29	58 CE	LA2	1	2.570	1,2,3
79.29	30 ZN	KB5	2	1.285	1,2
79.36	44 RU	KA1	4	0.643	1,2,3
79.44	87 FR	LB2	3	0.858	1,2,3
79.48	98 CF	LY1	5	0.515	1
79.51	79 AU	LA2	2	1.288	1,2,3
79.66	74 W	LB6	2	1.290	1,2,3
79.66	72 HF	LB9	2	1.290	1,2
79.66	69 TM	LY6	2	1.290	1
79.66	95 AM	LA2	3	0.860	1,3
79.73	53 I	LY1	1	2.582	1,2,3
79.85	46 PD	KB5	5	0.517	1
79.85	49 IN	KA2	5	0.517	1,2,3
79.96	44 RU	KA2	4	0.647	1,2,3
80.03	30 ZN	KB1	2	1.295	1,2,3
80.14	55 CS	LB6	1	2.593	1,2,3
80.25	72 HF	LB10	2	1.298	1,2
80.25	88 RA	LY4	4	0.649	1,2
80.25	72 HF	LB5	2	1.298	1,2
80.33	36 KR	KB4	3	0.866	2
80.33	36 KR	KB2	3	0.866	1,2,3
80.33	82 PB	LY5	3	0.866	1,2
80.33	86 RN	LB1	3	0.866	1
80.55	94 PU	LA1	3	0.868	1
80.55	74 W	LB4	2	1.302	1,2,3
80.55	81 TL	LY1	3	0.868	1,2,3
80.59	46 PD	KB3	5	0.521	1,2
80.59	46 PD	KB1	5	0.521	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 80.66 TO 83.49

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
80.66	80 HG	LY3	3	0.869	1,2,3	81.90	94 PU	LA2	3	0.880	1
80.85	90 TH	LY1	4	0.653	1,2,3	81.90	41 NB	KB5	4	0.660	1
80.85	72 HF	LB7	2	1.306	1,2	81.98	68 ER	LY2	2	1.321	1,2,3
80.85	70 YB	LY5	2	1.306	1,2	82.01	86 RN	LB2	3	0.881	1
80.85	98 CF	LB2	4	0.653	1	82.05	67 HO	LY4	2	1.322	1,2
80.89	36 KR	KB5	3	0.871	1,2	82.20	78 PT	LA2	2	1.324	1,2,3
80.89	88 RA	LB6	3	0.871	1,2,3	82.28	97 BK	LY1	5	0.530	1
80.93	73 TA	LB3	2	1.307	1,2,3	82.35	72 HF	LB2	2	1.326	1,2,3
81.00	41 NB	KB2	4	0.654	1,2,3	82.43	73 TA	LB1	2	1.327	1,2,3
81.11	80 HG	LY6	3	0.873	1,2	82.51	76 OS	LN	2	1.328	1,2,3
81.15	91 PA	LY5	4	0.655	1,2	82.54	53 I	LY5	1	2.657	1,2
81.15	58 CE	LN	1	2.620	1,2,3	82.73	73 TA	LB6	2	1.331	1,2,3
81.34	80 HG	LY2	3	0.875	1,2,3	82.81	41 NB	KB1	4	0.666	1,2,3
81.34	38 SR	KA1	3	0.875	1,2,3	82.81	41 NB	KB3	4	0.666	1,2
81.38	54 XE	LB2	1	2.626	1	82.85	57 LA	LA1	1	2.665	1,2,3
81.38	78 PT	LA1	2	1.313	1,2,3	82.88	55 CS	LB4	1	2.666	1,2,3
81.45	55 CS	LB3	1	2.628	1,2,3	82.92	93 NP	LA1	3	0.889	1,2,3
81.53	69 TM	LY1	2	1.315	1,2,3	83.11	71 LU	LB9	2	1.336	1,2
81.53	68 ER	LY3	2	1.315	1,2,3	83.19	57 LA	LA2	1	2.674	1,2,3
81.60	95 AM	LB1	4	0.658	1,3	83.23	45 RH	KB2	5	0.535	1,2,3
81.60	83 BI	LL	2	1.316	1,2,3	83.23	48 CD	KA1	5	0.535	1,2,3
81.68	36 KR	KB1	3	0.878	1,2,3	83.26	60 ND	LL	1	2.676	1,2,3
81.79	36 KR	KB3	3	0.879	1,2	83.26	97 BK	LB2	4	0.669	1
81.79	38 SR	KA2	3	0.879	1,2,3	83.42	31 GA	KA1	2	1.340	1,2,3
81.86	51 SB	LY4	1	2.639	1,2	83.49	85 AT	LB1	3	0.894	1

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 83.53 TO 85.72

ANGLE	ELEM	LINE	N	LAMBDA	REF
83.53	55 CS	LB1	1	2.683	1,2,3
83.57	71 LU	LB5	2	1.342	1,2
83.61	81 TL	LY5	3	0.895	1,2
83.65	71 LU	LB1D	2	1.343	1,2
83.72	31 GA	KA2	2	1.344	1,2,3
83.84	80 HG	LY1	3	0.897	1,2,3
83.84	78 PT	LY4	3	0.897	1,2
83.88	83 BI	LY6	4	0.673	1,2
83.88	73 TA	LB4	2	1.346	1,2,3
83.88	43 TC	KA1	4	0.673	2,3
83.95	83 BI	LB9	3	0.898	1,2
83.95	79 AU	LY3	3	0.898	1,2,3
83.99	48 CD	KA2	5	0.539	1,2,3
83.99	51 SB	LY2	1	2.695	1,2,3
83.99	51 SB	LY3	1	2.695	1,2
84.03	89 AC	LY1	4	0.674	1
84.07	84 PO	LB5	3	0.899	1,2
84.13	71 LU	LB7	2	1.349	1,2
84.18	82 PB	LL	2	1.350	1,2,3
84.18	90 TH	LY5	4	0.675	1,2
84.18	88 RA	LY3	4	0.675	1,2,3
84.26	77 IR	LA1	2	1.351	1,2,3
84.30	93 NP	LA2	3	0.901	1
84.33	43 TC	KA2	4	0.676	2,3
84.37	45 RH	KB5	5	0.541	1
84.41	72 HF	LB3	2	1.353	1,2,3
84.53	79 AU	LY6	3	0.903	1,2
84.57	69 TM	LY5	2	1.355	1,2
84.64	52 TE	LY1	1	2.712	1,2,3
84.64	79 AU	LY2	3	0.904	1,2,3
84.64	94 PU	LB1	4	0.678	1
84.68	53 I	LB9	1	2.713	1,2
84.76	83 BI	LB1D	3	0.905	1,2
84.76	85 AT	LB2	3	0.905	1
84.95	53 I	LB1D	1	2.720	1,2
84.99	88 RA	LN	3	0.907	1,2,3
85.10	77 IR	LA2	2	1.362	1,2,3
85.10	92 U	LB9	4	0.681	1,2
85.22	84 PO	LB3	3	0.909	1,2,3
85.26	88 RA	LY2	4	0.682	1,2,3
85.26	67 HO	LY3	2	1.364	1,2,3
85.26	68 ER	LY1	2	1.364	1,2,3
85.34	45 RH	KB3	5	0.546	1,2
85.34	45 RH	KB1	5	0.546	1,2,3
85.34	96 CM	LY1	5	0.546	1
85.34	53 I	LB7	1	2.730	1,2
85.45	92 U	LA1	3	0.911	1,2,3
85.72	57 LA	LN	1	2.740	1,2,3
85.72	96 CM	LB2	4	0.685	1
85.72	67 HO	LY2	2	1.370	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 85.72 TO 88.15

ANGLE	ELEM	LINE	N	LAMBDA	REF
85.72	71 LU	LB2	2	1.370	1,2,3
85.96	75 RE	LN	2	1.373	1,2,3
86.03	66 DY	LY4	2	1.374	1,2
86.03	92 U	LB10	4	0.687	1,2
86.03	72 HF	LB1	2	1.374	1,2,3
86.03	22 TI	KA1	1	2.748	1,2,3
86.03	72 HF	LB6	2	1.374	1,2,3
86.11	53 I	LB2	1	2.750	1,2,3
86.19	22 TI	KA2	1	2.752	1,2,3
86.50	40 ZR	KB2	4	0.690	1,2,3
86.58	29 CU	KB2	2	1.381	2,3
86.62	35 BR	KB2	3	0.921	1,2,3
86.66	29 CU	KB5	2	1.382	2
86.66	21 SC	KB5	1	2.764	1,2
86.74	84 PO	LB1	3	0.922	1,2,3
86.74	92 U	LA2	3	0.922	1,2,3
86.82	70 YB	LB9	2	1.384	1,2
86.89	81 TL	LL	2	1.385	1,2,3
86.97	80 HG	LY5	3	0.924	1,2
87.05	70 YB	LB5	2	1.387	1,2
87.09	56 BA	LA1	1	2.775	1,2,3
87.09	35 BR	KB5	3	0.925	1,2
87.17	50 SN	LY4	1	2.777	1,2
87.21	83 BI	LB5	3	0.926	1,2
87.21	37 RB	KA1	3	0.926	1,2,3
87.29	21 SC	KB1	1	2.780	1,2,3
87.29	88 RA	LY1	4	0.695	1,2,3
87.33	77 IR	LY4	3	0.927	1,2
87.33	82 PB	LB9	3	0.927	1,2
87.33	79 AU	LY1	3	0.927	1,2,3
87.37	76 OS	LA1	2	1.391	1,2,3
87.37	70 YB	LB10	2	1.391	1,2
87.44	72 HF	LB4	2	1.392	1,2,3
87.44	59 PR	LL	1	2.784	1,2,3
87.44	40 ZR	KB5	4	0.696	1
87.44	78 PT	LY3	3	0.928	1,2,3
87.44	29 CU	KB1	2	1.392	1,2,3
87.48	56 BA	LA2	1	2.785	1,2,3
87.52	29 CU	KB3	2	1.393	1,2
87.56	84 PO	LB2	3	0.929	1,2,3
87.68	52 TE	LY5	1	2.790	1,2
87.68	37 RB	KA2	3	0.930	1,2,3
87.68	70 YB	LB7	2	1.395	1,2
87.76	93 NP	LB1	4	0.698	1,2,3
87.88	47 AG	KA1	5	0.559	1,2,3
88.04	35 BR	KB1	3	0.933	1,2,3
88.04	35 BR	KB3	3	0.933	1,2
88.04	91 PA	LA1	3	0.933	1,2,3
88.15	71 LU	LB3	2	1.401	1,2,3
88.15	82 PB	LB10	3	0.934	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 88.15 TO 89.99

ANGLE	ELEM	LINE	N	LAMBDA	REF
88.15	78 PT	LY2	3	0.934	1,2,3
88.15	78 PT	LY6	3	0.934	1,2
88.19	54 XE	LB1	1	2.803	1
88.23	91 PA	LB9	4	0.701	1,2
88.23	95 AM	LB2	4	0.701	1,3
88.23	76 OS	LA2	2	1.402	1,2,3
88.27	83 BI	LB7	3	0.935	1,2
88.39	40 ZR	KB3	4	0.702	1,2
88.39	40 ZR	KB1	4	0.702	1,2,3
88.47	44 RU	KB2	5	0.562	1,2,3
88.47	95 AM	LY1	5	0.562	1,3
88.55	68 ER	LY5	2	1.406	1,2
88.75	83 BI	LB3	3	0.939	1,2,3
88.87	47 AG	KA2	5	0.564	1,2,3
89.27	70 YB	LB2	2	1.415	1,2,3
89.35	91 PA	LB10	4	0.708	1,2
89.39	50 SN	LY2	1	2.833	1,3
89.43	67 HO	LY1	2	1.417	1,2,3
89.43	66 DY	LY3	2	1.417	1,2,3
89.47	91 PA	LA2	3	0.945	1,2,3
89.51	42 MO	KA1	4	0.709	1,2,3
89.55	53 I	LB6	1	2.837	1,2,3
89.59	71 LU	LB6	2	1.419	1,2,3
89.63	52 TE	LB9	1	2.839	1,2
89.67	92 U	LB3	4	0.710	1,2,3
89.67	44 RU	KB5	5	0.568	1
89.71	84 PO	LB4	3	0.947	1,2,3
89.75	74 W	LN	2	1.421	1,2,3
89.83	80 HG	LL	2	1.422	1,2,3
89.91	66 DY	LY2	2	1.423	1,2,3
89.95	52 TE	LB10	1	2.847	1,2
89.99	71 LU	LB1	2	1.424	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 90.11 TO 93.17

ANGLE	ELEM	LINE	N	LAMBDA	REF
90.11	51 SB	LY1	1	2.851	1,2,3
90.15	42 MO	KA2	4	0.713	1,2,3
90.23	65 TB	LY4	2	1.427	1,2
90.31	83 BI	LB1	3	0.952	1,2,3
90.43	82 PB	LB5	3	0.953	1,2
90.47	44 RU	KB1	5	0.572	1,2,3
90.56	56 BA	LN	1	2.862	1,2,3
90.60	52 TE	LB7	1	2.863	1,2
90.64	87 FR	LY1	4	0.716	1,2,3
90.68	44 RU	KB3	5	0.573	1,2
90.68	83 BI	LB2	3	0.955	1,2,3
90.72	75 RE	LA1	2	1.433	1,2,3
90.80	90 TH	LA1	3	0.956	1,2,3
90.80	88 RA	LY5	4	0.717	1,2
90.80	79 AU	LY5	3	0.956	1,2
90.88	30 ZN	KA1	2	1.435	1,2,3
90.92	81 TL	LB9	3	0.957	1,2
90.96	94 PU	LB2	4	0.718	1
91.04	53 I	LB3	1	2.874	1,2,3
91.04	78 PT	LY1	3	0.958	1,2,3
91.16	76 OS	LY4	3	0.959	1,2
91.16	77 IR	LY3	3	0.959	1,2,3
91.20	30 ZN	KA2	2	1.439	1,2,3
91.29	92 U	LB1	4	0.720	1,2,3
91.29	71 LU	LB4	2	1.440	1,2,3
91.37	52 TE	LB2	1	2.882	1,2,3
91.37	69 TM	LB10	2	1.441	1
91.53	82 PB	LB7	3	0.962	1,2
91.61	75 RE	LA2	2	1.444	1,2,3
91.77	58 CE	LL	1	2.892	1,2,3
91.77	90 TH	LB9	4	0.723	1,2
91.77	55 CS	LA1	1	2.892	1,2,3
91.77	81 TL	LB10	3	0.964	1,2
91.90	77 IR	LY2	3	0.965	1,2,3
91.90	94 PU	LY1	5	0.579	1
92.14	84 PO	LB6	3	0.967	1,2,3
92.14	77 IR	LY6	3	0.967	1,2
92.18	55 CS	LA2	1	2.902	1,2,3
92.27	92 U	LB5	4	0.726	1,2
92.27	90 TH	LA2	3	0.968	1,2,3
92.27	70 YB	LB3	2	1.452	1,2,3
92.39	82 PB	LB3	3	0.969	1,2,3
92.43	39 Y	KB4	4	0.727	2
92.59	53 I	LB4	1	2.912	1,2,3
92.76	39 Y	KB2	4	0.729	1,2,3
92.92	90 TH	LB10	4	0.730	1,2
92.92	79 AU	LL	2	1.460	1,2,3
93.09	67 HO	LY5	2	1.462	1,2
93.13	46 PD	KA1	5	0.585	1,2,3
93.17	69 TM	LB2	2	1.463	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 93.17 TO 95.39

ANGLE	ELEM	LINE	N	LAMBDA	REF
93.17	49 IN	LY4	1	2.925	1,2
93.26	91 PA	LB3	4	0.732	1,2,3
93.38	83 BI	LB4	3	0.977	1,2,3
93.42	51 SB	LY5	1	2.932	1,2
93.42	70 YB	LB6	2	1.465	1,2,3
93.59	39 Y	KB5	4	0.734	1
93.63	53 I	LB1	1	2.937	1,2,3
93.75	34 SE	KB2	3	0.980	1,2,3
93.75	89 AC	LA1	3	0.980	1
93.75	36 KR	KA1	3	0.980	1,2,3
93.84	65 TB	LY3	2	1.471	1,2,3
93.84	73 TA	LN	2	1.471	1,2,3
93.88	81 TL	LB5	3	0.981	1,2
93.92	93 NP	LB2	4	0.736	1,2,3
93.92	92 U	LB7	4	0.736	1,2
94.00	66 DY	LY1	2	1.473	1,2,3
94.00	82 PB	LB1	3	0.982	1,2,3
94.13	82 PB	LB2	3	0.983	1,2,3
94.17	43 TC	KB4	5	0.590	1
94.17	46 PD	KA2	5	0.590	1,2,3
94.17	43 TC	KB2	5	0.590	1
94.25	70 YB	LB1	2	1.476	1,2,3
94.25	34 SE	KB5	3	0.984	1,2
94.25	74 W	LA1	2	1.476	1,2,3
94.25	36 KR	KA2	3	0.984	1,2,3
94.34	65 TB	LY2	2	1.477	1,2,3
94.42	86 RN	LY1	4	0.739	1
94.42	71 LU	LN	2	1.478	1,2
94.51	80 HG	LB9	3	0.986	1,2
94.76	78 PT	LY5	3	0.988	1,2
94.76	39 Y	KB3	4	0.741	1,2
94.76	39 Y	KB1	4	0.741	1,2,3
94.93	91 PA	LB1	4	0.742	1,2,3
95.01	91 PA	LY4	5	0.594	1,2
95.01	68 ER	LB9	2	1.485	1,2
95.01	81 TL	LB7	3	0.990	1,2
95.01	64 GD	LY4	2	1.485	1,2
95.05	52 TE	LB6	1	2.971	1,2,3
95.09	51 SB	LB9	1	2.972	1,2
95.14	77 IR	LY1	3	0.991	1,2,3
95.18	74 W	LA2	2	1.487	1,2,3
95.22	92 U	LY6	5	0.595	1,2
95.26	89 AC	LA2	3	0.992	1
95.26	76 OS	LY3	3	0.992	1,2,3
95.26	34 SE	KB1	3	0.992	1,2,3
95.26	75 RE	LY4	3	0.992	1,2
95.35	28 NI	KB5	2	1.489	1,2
95.35	28 NI	KB2	2	1.489	1,2,3
95.39	34 SE	KB3	3	0.993	1,2
95.39	51 SB	LB10	1	2.979	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 95.39 TO 98.52

ANGLE	ELEM	LINE	N	LAMBDA	REF
95.39	83 BI	LB6	3	0.993	1,2,3
95.43	91 PA	LB5	4	0.745	1,2
95.43	49 IN	LY2	1	2.980	1,2,3
95.43	49 IN	LY3	1	2.980	1,2
95.52	70 YB	LB4	2	1.491	1,2,3
95.60	41 NB	KA1	4	0.746	1,2,3
95.64	93 NP	LY1	5	0.597	1,2,3
95.77	80 HG	LB10	3	0.996	1,2
95.77	68 ER	LB7	2	1.494	1,2
95.77	68 ER	LB10	2	1.494	1,2
95.86	92 U	LY3	5	0.598	1,2,3
95.94	92 U	LB4	4	0.748	1,2,3
95.98	55 CS	LN	1	2.993	1,2,3
96.03	76 OS	LY2	3	0.998	1,2,3
96.20	78 PT	LL	2	1.499	1,2,3
96.28	41 NB	KA2	4	0.750	1,2,3
96.28	28 NI	KB1	2	1.500	1,2,3
96.32	50 SN	LY1	1	3.001	1,2,3
96.41	76 OS	LY6	3	1.001	1,2
96.41	81 TL	LB3	3	1.001	1,2,3
96.49	43 TC	KB3	5	0.601	1,2
96.49	51 SB	LB7	1	3.005	1
96.54	57 LA	LL	1	3.006	1,2,3
96.67	52 TE	LB3	1	3.009	1,2,3
96.71	43 TC	KB1	5	0.602	1,2,3
96.71	69 TM	LB3	2	1.505	1,2,3
96.92	88 RA	LA1	3	1.005	1,2,3
96.92	54 XE	LA1	1	3.015	1
96.92	98 CF	LB1	5	0.603	1
97.14	91 PA	LB7	4	0.755	1,2
97.14	92 U	LB2	4	0.755	1,2,3
97.14	90 TH	LB3	4	0.755	1,2,3
97.18	82 PB	LB4	3	1.007	1,2,3
97.27	51 SB	LB2	1	3.023	1,2,3
97.35	54 XE	LA2	1	3.025	1
97.35	92 U	LY2	5	0.605	1,2,3
97.48	68 ER	LB2	2	1.514	1,2,3
97.57	81 TL	LB2	3	1.010	1,2,3
97.57	69 TM	LB6	2	1.515	1,2,3
97.57	80 HG	LB5	3	1.010	1,2
97.61	21 SC	KA1	1	3.031	1,2,3
97.78	21 SC	KA2	1	3.035	1,2,3
97.83	66 DY	LY5	2	1.518	1,2
98.17	83 BI	LY4	4	0.761	1,2
98.17	73 TA	LA1	2	1.522	1,2,3
98.22	81 TL	LB1	3	1.015	1,2,3
98.26	72 HF	LN	2	1.523	1,2,3
98.26	52 TE	LB4	1	3.046	1,2,3
98.35	88 RA	LA2	3	1.016	1,2,3
98.52	85 AT	LY1	4	0.763	1

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 98.65 TO 101.40

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
98.65	90 TH	LY4	5	0.61	1,2	99.93	38 SR	KB2	4	0.771	1,2,3
98.70	84 PO	LY6	4	0.764	1,2	99.93	79 AU	LB10	3	1.028	1,2
98.70	84 PO	LY3	4	0.764	1,2,3	99.93	74 W	LY4	3	1.028	1,2
98.74	80 HG	LB7	3	1.019	1,2	99.97	91 PA	LY3	5	0.617	1,2,3
98.78	64 GD	LY3	2	1.529	1,2,3	99.97	50 SN	LY5	1	3.085	1,2
98.87	69 TM	LB1	2	1.530	1,2,3	100.10	63 EU	LY4	2	1.544	1,2
98.87	90 TH	LB1	4	0.765	1,2,3	100.10	29 CU	KA2	2	1.544	1,2,3
98.87	90 TH	LB5	4	0.765	1,2	100.10	69 TM	LB4	2	1.544	1,2,3
98.87	65 TB	LY1	2	1.530	1,2,3	100.19	45 RH	KA2	5	0.618	1,2,3
99.00	82 PB	LB6	3	1.021	1,2,3	100.19	20 CA	KB1	1	3.090	1,2,3
99.00	79 AU	LB9	3	1.021	1,2	100.19	87 FR	LA1	3	1.030	1,2,3
99.09	91 PA	LY6	5	0.613	1,2	100.46	91 PA	LB2	4	0.774	1,2,3
99.09	45 RH	KA1	5	0.613	1,2,3	100.46	75 RE	LY2	3	1.032	1,2,3
99.13	77 IR	LY5	3	1.022	1,2	100.46	90 TH	LB7	4	0.774	1,2
99.13	73 TA	LA2	2	1.533	1,2,3	100.55	67 HO	LB10	2	1.549	1
99.22	64 GD	LY2	2	1.534	1,2,3	100.64	38 SR	KB5	4	0.775	1
99.49	20 CA	KB5	1	3.074	1,2	100.64	42 MO	KB4	5	0.620	2
99.53	76 OS	LY1	3	1.025	1,2,3	100.64	88 RA	LB10	4	0.775	1,2
99.53	92 U	LY1	5	0.615	1,2,3	100.73	80 HG	LB3	3	1.034	1,2,3
99.57	88 RA	LB9	4	0.769	1,2	100.86	97 BK	LB1	5	0.621	1
99.62	52 TE	LB1	1	3.077	1,2,3	100.86	42 MO	KB2	5	0.621	1,2,3
99.66	75 RE	LY3	3	1.026	1,2,3	101.13	75 RE	LY6	3	1.037	1,2
99.75	9 PA	LB4	4	0.770	1,2,3	101.31	51 SB	LB6	1	3.115	1,2,3
99.84	29 CU	KA1	2	1.541	1,2,3	101.31	50 SN	LB9	1	3.115	1,2
99.84	77 IR	LL	2	1.541	1,2,3	101.40	81 TL	LB4	3	1.039	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 101.53 TO 103.99

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
101.53	80 HG	LB2	3	1.040	1,2,3	102.89	81 TL	LB6	3	1.050	1,2,3
101.53	91 PA	LY2	5	0.624	1,2,3	102.98	51 SB	LB3	1	3.152	1,2,3
101.53	79 AU	LB5	3	1.040	1,2	102.98	92 U	LB6	4	0.788	1,2,3
101.53	35 BR	KA1	3	1.040	1,2,3	103.08	65 TB	LY5	2	1.577	1
101.58	50 SN	LB10	1	3.121	1,2	103.08	65 TB	LB5	2	1.577	2
101.62	68 ER	LB3	2	1.561	1,2,3	103.12	50 SN	LB7	1	3.155	1,2
101.80	87 FR	LA2	3	1.042	1	103.17	83 BI	LY3	4	0.789	1,2,3
102.07	35 BR	KA2	3	1.044	1,2,3	103.17	89 AC	LB1	4	0.789	1
102.07	38 SR	KB1	4	0.783	1,2,3	103.26	53 I	LA2	1	3.158	1,2,3
102.07	38 SR	KB3	4	0.783	1,2	103.35	40 ZR	KA2	4	0.790	1,2,3
102.16	67 HO	LB2	2	1.567	1,2,3	103.35	72 HF	LA2	2	1.580	1,2,3
102.16	68 ER	LB6	2	1.567	1,2,3	103.35	42 MO	KB1	5	0.632	1,2,3
102.21	42 MO	KB5	5	0.627	1	103.35	90 TH	LY6	5	0.632	1,2
102.21	33 AS	KB2	3	1.045	1,2,3	103.35	83 BI	LY6	4	0.790	1,2
102.21	56 BA	LL	1	3.135	1,2,3	103.44	49 IN	LY1	1	3.162	1,2,3
102.30	48 CD	LY3	1	3.137	1,2	103.44	78 PT	LB9	3	1.054	1,2
102.35	72 HF	LA1	2	1.569	1,2,3	103.58	42 MO	KB3	5	0.633	1,2
102.35	48 CD	LY2	1	3.138	1,2,3	103.72	98 CF	LA1	4	0.792	1
102.62	40 ZR	KA1	4	0.786	1,2,3	103.81	76 OS	LL	2	1.585	1,2,3
102.62	82 PB	LY4	4	0.786	1	103.81	91 PA	LY1	5	0.634	1,2,3
102.76	33 AS	KB5	3	1.049	1,2	103.86	33 AS	KB1	3	1.057	1,2,3
102.76	80 HG	LB1	3	1.049	1,2,3	103.86	76 OS	LY5	3	1.057	1,2
102.80	53 I	LA1	1	3.148	1,2,3	103.86	86 RN	LA1	3	1.057	1
102.80	84 PO	LY1	4	0.787	1,2,3	103.90	90 TH	LB4	4	0.793	1,2,3
102.89	79 AU	LB7	3	1.050	1,2	103.99	33 AS	KB3	3	1.058	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 103.99 TO 107.53

ANGLE	ELEM	LINE	N	LAMBDA	REF
103.99	68 ER	LB1	2	1.587	1,2,3
104.04	50 SN	LB2	1	3.175	1,2,3
104.04	92 U	LY5	5	0.635	1,2
104.09	90 TH	LB2	4	0.794	1,2,3
104.13	83 BI	LN	3	1.059	1,2,3
104.27	90 TH	LY3	5	0.636	1,2,3
104.36	63 EU	LY3	2	1.591	1,2,3
104.41	75 RE	LY1	3	1.061	1,2,3
104.46	83 BI	LY2	4	0.796	1,2,3
104.46	64 GD	LY1	2	1.592	1,2,3
104.55	74 W	LY3	3	1.062	1,2,3
104.55	78 PT	LB10	3	1.062	1,2
104.74	51 SB	LB4	1	3.190	1,2,3
104.92	63 EU	LY2	2	1.597	1,2,3
104.97	96 CM	LB1	5	0.639	1
104.97	73 TA	LY4	3	1.065	1,2
105.11	66 DY	LB7	2	1.599	1,2
105.20	66 DY	LB9	2	1.600	1
105.25	92 U	LL	3	1.067	2,3
105.30	68 ER	LB4	2	1.601	1,2,3
105.39	74 W	LY2	3	1.068	1,2,3
105.39	79 AU	LB3	3	1.068	1,2,3
105.53	86 RN	LA2	3	1.069	1
105.67	79 AU	LB2	3	1.070	1,2,3
105.67	90 TH	LY2	5	0.642	1,2,3
105.77	88 RA	LB3	4	0.803	1,2,3
105.77	62 SM	LY4	2	1.606	1,2
105.86	66 DY	LB10	2	1.607	1
105.91	44 RU	KA1	5	0.643	1,2,3
105.96	98 CF	LA2	4	0.804	1
105.96	78 PT	LB5	3	1.072	1,2
105.96	80 HG	LB4	3	1.072	1,2,3
106.05	27 CO	KB5	2	1.609	1,2
106.15	92 U	LN	4	0.805	1,2,3
106.24	74 W	LY6	3	1.074	1,2
106.34	88 RA	LB5	4	0.806	1,2
106.43	51 SB	LB1	1	3.226	1,2,3
106.72	91 PA	LB6	4	0.808	1,2,3
106.86	44 RU	KA2	5	0.647	1,2,3
107.00	71 LU	LA1	2	1.619	1,2,3
107.00	67 HO	LB3	2	1.619	1,2,3
107.10	80 HG	LB6	3	1.080	1,2,3
107.10	97 BK	LA1	4	0.810	1
107.19	27 CO	KB1	2	1.621	1,2,3
107.29	67 HO	LB6	2	1.622	1,2,3
107.34	88 RA	LY4	5	0.649	1,2
107.39	66 DY	LB2	2	1.623	1,2,3
107.39	78 PT	LB7	3	1.082	1,2
107.48	81 TL	LY4	4	0.812	1,2
107.53	49 IN	LY5	1	3.249	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 107.67 TO 110.82

ANGLE	ELEM	LINE	N	LAMBDA	REF
107.67	79 AU	LB1	3	1.084	1,2,3
107.67	83 BI	LY1	4	0.813	1,2,3
107.82	85 AT	LA1	3	1.085	1
107.87	89 AC	LB2	4	0.814	1
107.87	88 RA	LB1	4	0.814	1,2,3
108.06	71 LU	LA2	2	1.630	1,2,3
108.06	75 RE	LL	2	1.630	1,2,3
108.06	82 PB	LY3	4	0.815	1,2,3
108.26	88 RA	LB7	4	0.816	1,2
108.26	37 RB	KB2	4	0.816	1,2,3
108.30	98 CF	LB2	5	0.653	1
108.30	90 TH	LY1	5	0.653	1,2,3
108.40	55 CS	LL	1	3.267	1,2,3
108.45	82 PB	LY6	4	0.817	1,2
108.45	49 IN	LB9	1	3.268	1,2
108.50	50 SN	LB6	1	3.269	1,2,3
108.55	41 NB	KB2	5	0.654	1,2,3
108.55	77 IR	LB9	3	1.090	1,2
108.64	70 YB	LN	2	1.636	1,2,3
108.69	91 PA	LL	3	1.091	1,2,3
108.74	49 IN	LB10	1	3.274	1,2
108.79	91 PA	LY5	5	0.655	1,2
108.84	82 PB	LN	3	1.092	1,2,3
109.04	53 I	LN	1	3.280	1,2,3
109.13	75 RE	LY5	3	1.094	1,2
109.13	64 GD	LY5	2	1.641	1
109.23	82 PB	LY2	4	0.821	1,2,3
109.43	97 BK	LA2	4	0.822	1
109.43	37 RB	KB5	4	0.822	1
109.48	52 TE	LA1	1	3.289	1,2,3
109.53	95 AM	LB1	5	0.658	1,3
109.58	77 IR	LB10	3	1.097	1,2
109.58	85 AT	LA2	3	1.097	1
109.73	67 HO	LB1	2	1.647	1,2,3
109.87	73 TA	LY3	3	1.099	1,2,3
109.87	74 W	LY1	3	1.099	1,2,3
109.92	52 TE	LA2	1	3.298	1,2,3
110.02	41 NB	KB5	5	0.660	1
110.32	78 PT	LB2	3	1.102	1,2,3
110.32	47 AG	LY2	1	3.306	1,3
110.32	50 SN	LB3	1	3.306	1,2,3
110.32	47 AG	LY3	1	3.306	1,2
110.47	72 HF	LY4	3	1.103	1,2
110.52	62 SM	LY3	2	1.655	1,2,3
110.62	78 PT	LB3	3	1.104	1,2,3
110.62	90 TH	LB6	4	0.828	1,2,3
110.77	34 SE	KA1	3	1.105	1,2,3
110.77	73 TA	LY2	3	1.105	1,2,3
110.82	96 CM	LA1	4	0.829	1
110.82	39 Y	KA1	4	0.829	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 110.82 TO 112.29

ANGLE	ELEM	LINE	N	LAMBDA	REF
110.82	91 PA	LN	4	0.829	1,2,3
110.82	63 EU	LY1	2	1.658	1,2,3
110.82	37 RB	KB3	4	0.829	1,2
110.82	37 RB	KB1	4	0.829	1,2,3
110.82	28 NI	KA1	2	1.658	1,2,3
110.92	77 IR	LB5	3	1.106	1,2
110.92	62 SM	LY2	2	1.659	1,2,3
110.92	65 TB	LB7	2	1.659	1,2
110.92	67 HO	LB4	2	1.659	1,2,3
111.07	79 AU	LB4	3	1.107	1,2,3
111.22	23 NI	KA2	2	1.662	1,2,3
111.37	34 SE	KA2	3	1.109	1,2,3
111.52	41 NB	KB3	5	0.666	1,2
111.52	41 NB	KB1	5	0.666	1,2,3
111.63	39 Y	KA2	4	0.833	1,2,3
111.68	79 AU	LB6	3	1.111	1,2,3
111.73	65 TB	LB10	2	1.667	1,2
111.83	48 CD	LY1	1	3.336	1,2,3
111.93	49 IN	LB2	1	3.338	1,2,3
112.03	88 RA	LB2	4	0.835	1,2,3
112.13	73 TA	LY6	3	1.114	1,2
112.13	84 PO	LA1	3	1.114	1,2,3
112.13	50 SN	LB4	1	3.343	1,2,3
112.24	70 YB	LA1	2	1.672	1,2,3
112.29	77 IR	LB7	3	1.115	1,2
112.29	97 BK	LB2	5	0.669	1
112.29	90 TH	LL	3	1.115	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 112.59 TO 116.70

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
112.59	32 GE	KB2	3	1.117	1,2,3	114.10	43 TC	KA2	5	0.676	2,3
112.85	80 HG	LY4	4	0.839	1,2	114.30	81 TL	LN	3	1.128	1,2,3
112.85	83 BI	LY5	4	0.839	1,2	114.36	50 SN	LB1	1	3.385	1,2,3
112.85	74 W	LL	2	1.678	1,2,3	114.46	32 GE	KB1	3	1.129	1,2,3
112.90	32 GE	KB5	3	1.119	1,2	114.46	32 GE	KB3	3	1.129	1,2
112.95	20 CA	KA1	1	3.358	1,2,3	114.62	94 PU	LB1	5	0.678	1
113.06	82 PB	LY1	4	0.840	1,2,3	114.73	95 AM	LA1	4	0.848	1,3
113.06	78 PT	LB1	3	1.120	1,2,3	114.73	81 TL	LY2	4	0.848	1,2,3
113.06	87 FR	LB1	4	0.840	1,2,3	114.73	69 TM	LN	2	1.696	1,2,3
113.16	20 CA	KA2	1	3.362	1,2,3	114.94	74 W	LY5	3	1.132	1,2
113.16	66 DY	LB3	2	1.681	1,2,3	115.10	76 OS	LB10	3	1.133	1,2
113.16	66 DY	LB6	2	1.681	1,2,3	115.41	92 U	LB9	5	0.681	1,2
113.26	96 CM	LA2	4	0.841	1	115.41	77 IR	LB2	3	1.135	1,2,3
113.26	65 TB	LB2	2	1.682	1,2,3	115.68	88 RA	LY2	5	0.682	1,2,3
113.26	88 RA	LB4	4	0.841	1,2,3	115.90	73 TA	LY1	3	1.138	1,2,3
113.26	81 TL	LY3	4	0.841	1,2,3	115.90	72 HF	LY3	3	1.138	1,2,3
113.32	88 RA	LY6	5	0.673	1,2	116.00	63 EU	LY5	2	1.708	1,2
113.32	43 TC	KA1	5	0.673	2,3	116.00	90 TH	LN	4	0.854	1,2,3
113.37	70 YB	LA2	2	1.683	1,2,3	116.22	76 OS	LB5	3	1.140	1,2
113.57	89 AC	LY1	5	0.674	1	116.22	66 DY	LB1	2	1.710	1,2,3
113.83	90 TH	LY5	5	0.675	1,2	116.38	77 IR	LB3	3	1.141	1,2,3
113.83	88 RA	LY3	5	0.675	1,2,3	116.49	48 CD	LY5	1	3.425	1,2
113.89	81 TL	LY6	4	0.844	1,2	116.49	96 CM	LB2	5	0.685	1
113.99	84 PO	LA2	3	1.126	1,2,3	116.54	78 PT	LB4	3	1.142	1,2,3
113.99	76 OS	LB9	3	1.126	1,2	116.70	71 LU	LY4	3	1.143	1

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 116.76 TO 120.38

ANGLE	ELEM	LINE	N	LAMBDA	REF
116.76	48 CD	LB9	1	3.430	1,2
116.87	87 FR	LB2	4	0.858	1,2,3
116.87	83 BI	LA1	3	1.144	1,2,3
116.87	78 PT	LB6	3	1.144	1,2,3
116.87	72 HF	LY2	3	1.144	1,2,3
117.03	92 U	LB10	5	0.687	1,2
117.08	49 IN	LB6	1	3.436	1,2,3
117.14	48 CD	LB10	1	3.437	1,2
117.19	52 TE	LN	1	3.433	1,2,3
117.25	51 SB	LA1	1	3.439	1,2,3
117.30	95 AM	LA2	4	0.860	1,3
117.30	66 DY	LB4	2	1.720	1,2,3
117.36	19 K	KB5	1	3.441	1,2
117.63	64 GD	LB7	2	1.723	1,2
117.69	76 OS	LB7	3	1.149	1,2
117.74	64 GD	LB9	2	1.724	1
117.74	51 SB	LA2	1	3.448	1,2,3
117.85	40 ZR	KB2	5	0.690	1,2,3
117.96	69 TM	LA1	2	1.726	1,2,3
118.07	62 SM	LY1	2	1.727	1,2,3
118.07	19 K	KB1	1	3.454	1,2,3
118.18	73 TA	LL	2	1.728	1,2,3
118.52	64 GD	LB10	2	1.731	1,2
118.63	86 RN	LB1	4	0.866	1
118.63	36 KR	KB4	4	0.866	2
118.63	36 KR	KB2	4	0.866	1,2,3
118.63	82 PB	LY5	4	0.866	1,2
118.68	83 BI	LA2	3	1.155	1,2,3
118.68	72 HF	LY6	3	1.155	1,2
118.96	49 IN	LB3	1	3.470	1,2,3
119.08	81 TL	LY1	4	0.868	1,2,3
119.08	94 PU	LA1	4	0.868	1
119.19	77 IR	LB1	3	1.158	1,2,3
119.19	69 TM	LA2	2	1.737	1,2,3
119.24	88 RA	LY1	5	0.695	1,2,3
119.30	80 HG	LY3	4	0.869	1,2,3
119.53	40 ZR	KB5	5	0.696	1
119.64	65 TB	LB6	2	1.741	1,2,3
119.75	36 KR	KB5	4	0.871	1,2
119.75	88 RA	LB6	4	0.871	1,2,3
119.98	26 FE	KB5	2	1.744	1,2
119.98	60 ND	LY4	2	1.744	1,2
120.04	46 PD	LY2	1	3.489	1,2,3
120.04	46 PD	LY3	1	3.489	1,2
120.09	93 NP	LB1	5	0.698	1,2,3
120.09	64 GD	LB2	2	1.745	1,2,3
120.21	65 TB	LB3	2	1.746	1,2,3
120.21	80 HG	LN	3	1.164	1,2,3
120.21	80 HG	LY6	4	0.873	1,2
120.38	75 RE	LB9	3	1.165	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 120.67 TO 125.44

ANGLE	ELEM	LINE	N	LAMBDA	REF
120.67	80 HG	LY2	4	0.875	1,2,3
120.67	38 SR	KA1	4	0.875	1,2,3
120.72	88 RA	LL	3	1.167	1,2,3
120.95	95 AM	LB2	5	0.701	1,3
120.95	91 PA	LB9	5	0.701	1,2
121.07	49 IN	LB4	1	3.507	1,2,3
121.24	76 OS	LB2	3	1.170	1,2,3
121.24	40 ZR	KB3	5	0.702	1,2
121.24	40 ZR	KB1	5	0.702	1,2,3
121.36	68 ER	LN	2	1.756	1,2,3
121.36	36 KR	KB1	4	0.878	1,2,3
121.48	26 FE	KB1	2	1.757	1,2,3
121.48	48 CD	LB2	1	3.514	1,2,3
121.59	36 KR	KB3	4	0.879	1,2
121.59	75 RE	LB10	3	1.172	1,2
121.59	38 SR	KA2	4	0.879	1,2,3
121.77	73 TA	LY5	3	1.173	1,2
121.83	94 PU	LA2	4	0.880	1
122.00	47 AG	LY1	1	3.523	1,2,3
122.06	86 RN	LB2	4	0.881	1
122.12	82 PB	LA1	3	1.175	1,2,3
122.30	33 AS	KA1	3	1.176	1,2,3
122.47	75 RE	LB5	3	1.177	1,2
122.65	77 IR	LB6	3	1.178	1,2,3
122.83	72 HF	LY1	3	1.179	1,2,3
122.83	71 LU	LY3	3	1.179	1,2,3
123.01	76 OS	LB3	3	1.180	1,2,3
123.01	33 AS	KA2	3	1.180	1,2,3
123.01	77 IR	LB4	3	1.180	1,2,3
123.01	91 PA	LB10	5	0.708	1,2
123.31	42 MO	KA1	5	0.709	1,2,3
123.61	92 U	LB3	5	0.710	1,2,3
123.73	65 TB	LB1	2	1.776	1,2,3
123.91	49 IN	LB1	1	3.555	1,2,3
123.91	70 YB	LY4	3	1.185	1,2
123.91	71 LU	LY2	3	1.185	1,2,3
123.97	93 NP	LA1	4	0.889	1,2,3
124.03	53 I	LL	1	3.557	1,2,3
124.09	82 PB	LA2	3	1.186	1,2,3
124.09	62 SM	LB5	2	1.779	2
124.09	75 RE	LB7	3	1.186	1,2
124.09	62 SM	LY5	2	1.779	1
124.33	72 HF	LL	2	1.781	1,2,3
124.52	42 MO	KA2	5	0.713	1,2,3
124.70	68 ER	LA1	2	1.784	1,2,3
124.82	65 TB	LB4	2	1.785	1,2,3
125.19	85 AT	LB1	4	0.894	1
125.19	63 EU	LB7	2	1.788	1,2
125.32	27 CO	KA1	2	1.789	1,2,3
125.44	87 FR	LY1	5	0.716	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 125.44 TO 129.56

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
125.44	81 TL	LY5	4	0.895	1,2	127.40	47 AG	LB10	1	3.611	1,2
125.69	63 EU	LB9	2	1.792	1,2	127.46	74 W	LB9	3	1.204	1,2
125.75	88 RA	LY5	5	0.717	1,2	127.46	79 AU	LY6	4	0.903	1,2
125.81	27 CO	KA2	2	1.793	1,2,3	127.59	64 GD	LB6	2	1.807	1,2,3
125.94	31 GA	KB2	3	1.196	1,2,3	127.59	48 CD	LB6	1	3.614	1,2,3
125.94	80 HG	LY1	4	0.897	1,2,3	127.65	90 TH	LB9	5	0.723	1,2
125.94	78 PT	LY4	4	0.897	1,2	127.72	79 AU	LY2	4	0.904	1,2,3
126.06	94 PU	LB2	5	0.718	1	127.72	47 AG	LY5	1	3.616	1,2
126.13	31 GA	KB5	3	1.197	1,2	127.98	83 BI	LB10	4	0.905	1,2
126.13	76 OS	LB1	3	1.197	1,2,3	127.98	85 AT	LB2	4	0.905	1
126.19	68 ER	LA2	2	1.796	1,2,3	128.04	75 RE	LB2	3	1.207	1,2,3
126.19	79 AU	LY3	4	0.898	1,2,3	128.04	81 TL	LA1	3	1.207	1,2,3
126.19	83 BI	LB9	4	0.898	1,2	128.24	31 GA	KB1	3	1.208	1,2,3
126.19	60 ND	LY3	2	1.796	1,2,3	128.24	31 GA	KB3	3	1.208	1,2
126.32	71 LU	LY6	3	1.198	1,2	128.24	63 EU	LB2	2	1.812	1,2,3
126.44	84 PO	LB5	4	0.899	1,2	128.50	88 RA	LN	4	0.907	1,2,3
126.69	50 SN	LA1	1	3.600	1,2,3	128.63	64 GD	LB3	2	1.815	1,2,3
126.69	92 U	LB1	5	0.720	1,2,3	128.63	92 U	LB5	5	0.726	1,2
126.69	63 EU	LB10	2	1.800	1,2	128.76	61 PM	LY1	2	1.816	1
126.82	60 ND	LY2	2	1.801	1,2,3	128.96	39 Y	KB4	5	0.727	2
126.95	93 NP	LA2	4	0.901	1	129.03	74 W	LB10	3	1.212	1,2
127.01	47 AG	LB9	1	3.605	1,2	129.03	84 PO	LB3	4	0.909	1,2,3
127.20	51 SB	LN	1	3.608	1,2,3	129.16	59 PR	LY4	2	1.819	1,2
127.27	50 SN	LA2	1	3.609	1,2,3	129.22	76 OS	LB6	3	1.213	1,2,3
127.27	79 AU	LN	3	1.203	1,2,3	129.56	92 U	LA1	4	0.911	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 129.62 TO 134.90

ANGLE	ELEM	LINE	N	LAMBDA	REF
129.62	48 CD	LB3	1	3.645	1,2,3
129.62	72 HF	LY5	3	1.215	1,2
129.62	39 Y	KB2	5	0.729	1,2,3
129.62	74 W	LB5	3	1.215	1,2
129.96	90 TH	LB10	5	0.730	1,2
130.09	67 HO	LN	2	1.826	1,2,3
130.23	76 OS	LB4	3	1.218	1,2,3
130.43	81 TL	LA2	3	1.219	1,2,3
130.64	91 PA	LB3	5	0.732	1,2,3
130.64	75 RE	LB3	3	1.220	1,2,3
131.05	71 LU	LY1	3	1.222	1,2,3
131.05	70 YB	LY3	3	1.222	1,2,3
131.32	39 Y	KB5	5	0.734	1
131.46	74 W	LB7	3	1.224	1,2
131.46	71 LU	LL	2	1.836	1,2,3
132.02	92 U	LB7	5	0.736	1,2
132.02	93 NP	LB2	5	0.736	1,2,3
132.16	48 CD	LB4	1	3.682	1,2,3
132.30	35 BR	KB2	4	0.921	1,2,3
132.37	45 RH	LY3	1	3.685	1,2
132.37	45 RH	LY2	1	3.685	1,2,3
132.51	70 YB	LY2	3	1.229	1,2,3
132.51	69 TM	LY4	3	1.229	1
132.58	84 PO	LB1	4	0.922	1,2,3
132.58	92 U	LA2	4	0.922	1,2,3
132.72	67 HO	LA1	2	1.845	1,2,3
132.86	64 GD	LB1	2	1.846	1,2,3
133.08	86 RN	LY1	5	0.739	1
133.15	80 HG	LY5	4	0.924	1,2
133.44	35 BR	KB5	4	0.925	1,2
133.65	47 AG	LB2	1	3.703	1,2,3
133.72	83 BI	LB5	4	0.926	1,2
133.72	37 RB	KA1	4	0.926	1,2,3
133.80	39 Y	KB1	5	0.741	1,2,3
133.80	39 Y	KB3	5	0.741	1,2
133.87	64 GD	LB4	2	1.853	1,2,3
134.01	77 IR	LY4	4	0.927	1,2
134.01	79 AU	LY1	4	0.927	1,2,3
134.01	82 PB	LB9	4	0.927	1,2
134.16	60 ND	LY6	2	1.855	2
134.16	91 PA	LB1	5	0.742	1,2,3
134.31	62 SM	LB7	2	1.856	1,2
134.31	67 HO	LA2	2	1.856	1,2,3
134.31	78 PT	LY3	4	0.928	1,2,3
134.60	84 PO	LB2	4	0.929	1,2,3
134.67	75 RE	LB1	3	1.239	1,2,3
134.67	52 TE	LL	1	3.717	1,2,3
134.90	37 RB	KA2	4	0.930	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 135.05 TO 140.75

ANGLE	ELEM	LINE	N	LAMBDA	REF
135.05	62 SM	LB9	2	1.861	1,2
135.12	80 HG	LA1	3	1.241	1,2,3
135.19	46 PD	LY1	1	3.724	1,2,3
135.27	91 PA	LB5	5	0.745	1,2
135.57	70 YB	LY6	3	1.243	1,2
135.57	78 PT	LN	3	1.243	1,2,3
135.64	41 NB	KA1	5	0.746	1,2,3
135.80	35 BR	KB3	4	0.933	1,2
135.80	35 BR	KB1	4	0.933	1,2,3
135.80	91 PA	LA1	4	0.933	1,2,3
136.02	74 W	LB2	3	1.245	1,2,3
136.10	78 PT	LY2	4	0.934	1,2,3
136.10	78 PT	LY6	4	0.934	1,2
136.10	82 PB	LB10	4	0.934	1,2
136.25	62 SM	LB10	2	1.869	1,2
136.25	73 TA	LB9	3	1.246	1,2
136.25	48 CD	LB1	1	3.738	1,2,3
136.40	92 U	LB4	5	0.748	1,2,3
136.40	83 BI	LB7	4	0.935	1,2
136.48	19 K	KA1	1	3.741	1,2,3
136.79	19 K	KA2	1	3.745	1,2,3
137.02	63 EU	LB6	2	1.874	1,2,3
137.02	59 PR	LY3	2	1.874	1,2,3
137.18	41 NB	KA2	5	0.750	1,2,3
137.41	75 RE	LB6	3	1.251	1,2,3
137.65	60 ND	LY1	2	1.878	1,2,3
137.65	83 BI	LB3	4	0.939	1,2,3
137.80	59 PR	LY2	2	1.879	1,2,3
137.88	80 HG	LA2	3	1.253	1,2,3
138.12	73 TA	LB10	3	1.254	1,2
138.12	32 GE	KA1	3	1.254	1,2,3
138.28	62 SM	LB2	2	1.882	1,2,3
138.36	73 TA	LB5	3	1.255	1,2
138.93	49 IN	LA1	1	3.772	1,3
139.09	32 GE	KA2	3	1.258	1,2,3
139.09	63 EU	LB3	2	1.887	1,2,3
139.17	90 TH	LB3	5	0.755	1,2,3
139.17	91 PA	LB7	5	0.755	1,2
139.17	92 U	LB2	5	0.755	1,2,3
139.33	75 RE	LB4	3	1.259	1,2,3
139.58	91 PA	LA2	4	0.945	1,2,3
139.58	71 LU	LY5	3	1.260	1,2
139.66	49 IN	LA2	1	3.781	1,2,3
140.24	84 PO	LB4	4	0.947	1,2,3
140.24	70 YB	LL	2	1.894	1,2,3
140.33	74 W	LB3	3	1.263	1,2,3
140.33	50 SN	LN	1	3.789	1,2,3
140.58	46 PD	LB9	1	3.792	1,2
140.58	73 TA	LB7	3	1.264	1,2
140.75	66 DY	LN	2	1.897	1,2,3

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 140.75 TO 147.80

ANGLE	ELEM	LINE	N	LAMBDA	REF
140.75	25 MN	KB5	2	1.897	1,2
141.09	58 CE	LY4	2	1.899	1,2
141.17	46 PD	LB10	1	3.799	1,2
141.60	69 TM	LY3	3	1.268	1,2,3
141.60	70 YB	LY1	3	1.268	1,2,3
141.69	83 BI	LY4	5	0.761	1,2
141.95	83 BI	LB1	4	0.952	1,2,3
141.95	47 AG	LB6	1	3.808	1,2,3
142.30	82 PB	LB5	4	0.953	1,2
142.57	85 AT	LY1	5	0.763	1
142.83	66 DY	LA1	2	1.909	1,2,3
143.01	25 MN	KB1	2	1.910	1,2,3
143.01	84 PO	LY3	5	0.764	1,2,3
143.01	83 BI	LB2	4	0.955	1,2,3
143.01	84 PO	LY6	5	0.764	1,2
143.19	69 TM	LY2	3	1.274	1,2,3
143.19	46 PD	LY5	1	3.822	1,2
143.37	90 TH	LA1	4	0.956	1,2,3
143.37	79 AU	LY5	4	0.956	1,2
143.46	90 TH	LB1	5	0.765	1,2,3
143.46	90 TH	LB5	5	0.765	1,2
143.74	79 AU	LA1	3	1.276	1,3
143.74	68 ER	LY4	3	1.276	1,2
143.74	81 TL	LB9	4	0.957	1,2
144.11	78 PT	LY1	4	0.958	1,2,3
144.20	47 AG	LB3	1	3.833	1,2,3
144.48	76 OS	LY4	4	0.959	1,2
144.48	77 IR	LY3	4	0.959	1,2,3
144.85	63 EU	LB1	2	1.920	1,2,3
144.85	66 DY	LA2	2	1.920	1,2,3
145.33	88 RA	LB9	5	0.769	1,2
145.42	74 W	LB1	3	1.282	1,2,3
145.61	82 PB	LB7	4	0.962	1,2
145.81	91 PA	LB4	5	0.770	1,2,3
146.00	63 EU	LB4	2	1.926	1,2,3
146.00	77 IR	LN	3	1.284	1,2,3
146.00	73 TA	LB2	3	1.284	1,2,3
146.00	30 ZN	KB2	3	1.284	1,2,3
146.29	30 ZN	KB5	3	1.285	1,2
146.29	38 SR	KB2	5	0.771	1,2,3
146.39	81 TL	LB10	4	0.964	1,2
146.79	77 IR	LY2	4	0.965	1,2,3
147.19	79 AU	LA2	3	1.288	1,2,3
147.59	77 IR	LY6	4	0.967	1,2
147.59	84 PO	LB6	4	0.967	1,2,3
147.80	91 PA	LB2	5	0.774	1,2,3
147.80	69 TM	LY6	3	1.290	1
147.80	47 AG	LB4	1	3.870	1,2,3
147.80	72 HF	LB9	3	1.290	1,2
147.80	60 ND	LY5	2	1.935	1,2

LITHIUM FLUORIDE CRYSTAL, D# 2.014 ANGSTROMS 147.80 TO 149.70

ANGLE	ELEM	LINE	N	LAMBDA	REF	ANGLE	ELEM	LINE	N	LAMBDA	REF
147.80	90 TH	LB7	5	0.774	1,2						
147.80	74 W	LB6	3	1.290	1,2,3						
148.00	26 FE	KA1	2	1.936	1,2,3						
148.00	90 TH	LA2	4	0.968	1,2,3						
148.31	88 RA	LB10	5	0.775	1,2						
148.31	38 SR	KB5	5	0.775	1						
148.42	82 PB	LB3	4	0.969	1,2,3						
148.84	26 FE	KA2	2	1.940	1,2,3						
149.27	18 A	KB1	1	3.884	1						
149.37	30 ZN	KB1	3	1.295	1,2,3						
149.70	51 SB	LL	1	3.888	1,2,3						