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THE STRUCTURE OF NICKEL URANYL ACETATE HEXAHYDRATE

Allan Zalkin, Helena Ruben, and David H. Templeton

April 1981

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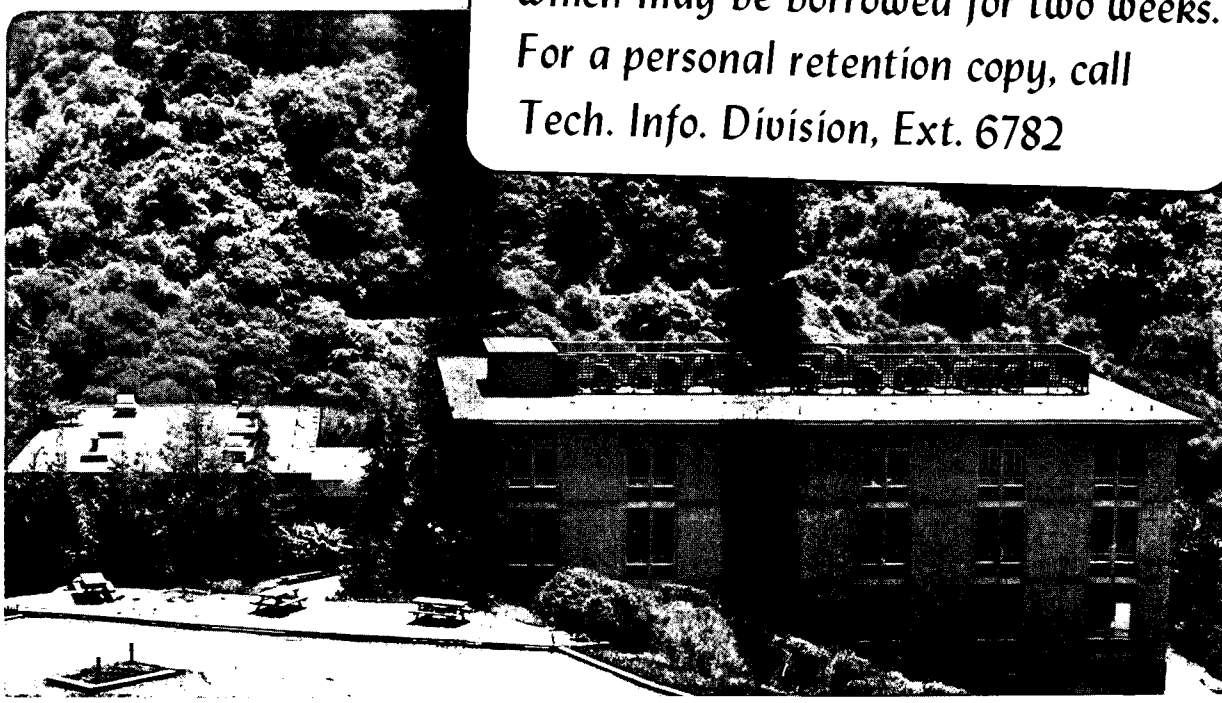

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THE STRUCTURE OF NICKEL URANYL ACETATE HEXAHYDRATE

by Allan Zalkin, Helena Ruben and David H. Templeton

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and

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April 1981

ABSTRACT

$[Ni(H_2O)_6][UO_2(CH_3COO)_3]_2$, monoclinic, $P2_1/c$, $\underline{a}$ = 13.387(3), $\underline{b}$ = 14.727(3), $\underline{c}$ = 15.349(3) Å, β = 91.12(2)°, V = 3025.5 Å^3, Z = 4, D_x = 2.329 g/cm^3. The final R was 0.030 for 2507 ($I > 3\sigma$) reflections. The structure consists of octahedral $Ni(H_2O)_6^{++}$ cations and hexagonal bipyramidal $UO_2(CH_3COO)_3^-$ anions.

This work was supported by the Director, Office of Energy Research, Office of Basic Energy Sciences, Chemical Sciences Division of the U.S. Department of Energy under Contract Number W-7405-ENG-48.

INTRODUCTION

As part of a study of uranium salts we prepared bright green crystals of $Ni(H_2O)_6[UO_2(CH_3COO)_3]_2$ from stoichiometric amounts of nickel acetate and uranyl acetate dissolved in a dilute aqueous solution of acetic acid which was allowed to evaporate slowly in air. A crystal, approximately 0.10 x 0.15 x 0.20 mm, was selected for the intensity measurements. Its shape was described by the nine planes (002), ±(200), ±(11$\bar{1}$), ±(1$\bar{1}\bar{1}$), ($\bar{1}$11) and ($\bar{1}\bar{1}\bar{1}$).

A Picker computer-controlled four-circle diffractometer equipped with a graphite monochromator and a Mo X-ray tube ($\lambda_{K\alpha_1}$ = 0.7093 Å) was used. The setting angles of 12 manually centered reflections, 42° < 2θ < 52°, were used to determine the cell parameters. A θ-2θ scan technique was used to collect the integrated intensities. Each reflection was scanned at a rate of 2°/min from 0.7° before the $K\alpha_1$ peak to 0.7° beyond the $K\alpha_2$ peak, and backgrounds were counted for 10s at each end of the scan range. The temperature during data collection was 23 ± 1°C. Three standards were measured after every 250th scan and were used to scale the data. The intensity of the standards decayed about 10% during the 5 days of data collection. The 6021 scans, not including standards, resulted in 3975 unique intensities, 2507 of which were greater than $3\sigma(F^2)$. An absorption correction was applied

(Templeton & Templeton, 1973), μ = 108 cm^{-1}; the maximum and minimum corrections were 2.8 and 1.9 respectively. The data was corrected for Lorentz and polarization effects.

A three dimensional Patterson function was used to derive the atomic positions of the uranium and the nickel atoms. Subsequent least squares and Fourier calculations revealed the positions of the carbon and oxygen atoms. A series of least squares refinements, in which the function $\Sigma w(|F_o|-|F_c|)^2/\Sigma wF_o^2$ was minimized, rapidly converged to $R = \Sigma(|F_o|-|F_c|)/\Sigma|F_o| = 0.030$ for the 3σ data, $R_w = (\Sigma w(|F_o|-|F_c|)^2/\Sigma w|F_o|^2)^{1/2} = 0.036$; R for all 3975 data was 0.063. Weights were assigned as $w = [S^2 + (pF^2)^2]^{1/2}$ where S is the variance due to counting statistics and p was set at 0.04.

All of the atoms, with the exception of the hydrogen atoms which were not included in the squares calculations, were given anisotropic thermal parameters. An empirical extinction correction of the type $F_o(corr) = F_o\ (1 + kI)$ (Zachariasen, 1967), in which $k = 2.0 \times 10^{-7}$, was applied. For 337 parameters and 2507 data the goodness-of-fit value was 1.25. The largest final shift of any parameter was 0.05σ. The largest peak in the final difference Fourier, 1.2 e/Å^3, was near a uranium atom. Several smaller peaks could be related to hydrogen atoms, but were poorly resolved.

Positional parameters are given in Table 1.* Distances and angles are given in Tables 2 and 3, with atom numbers as in Fig. 1.

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*Lists of structure factors and anisotropic thermal parameters have been deposited with the British Library Lending Division as Supplementary Publication No. SUP 00000 (16 pp). Copies may be obtained through the Executive Secretary, International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, England.

DISCUSSION

The unit cell and space group of this salt were reported by Tani (1958) and are similar to the present results except for a typographical error in the value of the b axis (Structure Reports, 1958). The structure consists of packing of octahedral $Ni(H_2O)_6$ cations and hexagonal bipyramidyl $(CH_3COO)_3UO_2$ anions. Although there are two crystallographically different formula units in the asymmetric unit, their geometry is nearly the same. With some small shifts in the positional parameters, most of the structure could be described in the orthorhombic space group Pbca with only one formula unit per asymmetric unit; the monoclinic angle is only 1.12° from orthogonality. Only the water molecules deviate more than 0.3 Å from this orthorhombic symmetry.

All of the hydrogen atoms of the water molecules are involved in hydrogen bonds with O - H ··· O hydrogen bond lengths ranging from 2.67 Å to 2.83 Å (Table 2) and O - H_2O - O angles ranging from 100° to 124° (Table 3).

The structure of the $UO_2(CH_3COO)_3^-$ anion is the same as was found in sodium uranyl acetate (Zachariasen, Plettinger, 1959).

ACKNOWLEDGMENT

This work was supported by the Director, Office of Energy Research, Office of Basic Energy Sciences, Chemical Sciences Division of the U.S. Department of Energy under Contract Number W-7405-ENG-48.

REFERENCES

Structure Reports (1958), Vol. 22, p.558, International Union of Crystallography, Utrecht:Oosthoek's Uitgevers MIJ.

Tani, M. E. (1958). Ateneo Parmense 29, Suppl. 7, 38-44.

Templeton, L. K. & Templeton, D. H. (1973). Abstracts, American Crystallographic Association Proceedings, Series 2, Vol. 1, p.143.

Zachariasen, W. H. (1962). Acta. Cryst. 23, 558-564.

Zachariasen, W. H. & Plettinger, H. A., (1959). Acta Cryst. 12, 526-530.

Table 1. Positional Parameters with e.s.d.'s in Parentheses.

Atom	x	y	z
NI(1)	0	0	0
NI(2)	.500	0	.500
U(1)	.14297(4)	.15800(3)	.66444(3)
U(2)	.35693(4)	-.16316(3)	.16958(3)
O(1)	.2350(6)	.2234(6)	.7195(6)
O(2)	.0506(7)	.0948(7)	.6110(7)
O(3)	.2703(6)	-.2322(6)	.2225(5)
O(4)	.4448(8)	-.0957(7)	.1191(6)
O(5)	.0324(8)	.1871(6)	.7893(6)
O(6)	.0271(6)	.2882(6)	.6866(6)
O(7)	.1610(7)	.2715(6)	.5476(6)
O(8)	.2468(7)	.1477(6)	.5343(6)
O(9)	.2684(7)	.0318(6)	.6768(6)
O(10)	.1614(8)	.0438(6)	.7794(6)
O(11)	.2353(7)	-.1683(6)	.0447(5)
O(12)	.3537(8)	-.2686(7)	.0450(6)
O(13)	.4756(6)	-.2908(6)	.1908(6)
O(14)	.4699(7)	-.1915(6)	.2948(6)
O(15)	.3234(7)	-.0507(6)	.2877(6)
O(16)	.2367(7)	-.0384(6)	.1685(6)
O(17)	.1438(6)	.0461(6)	.0228(6)
O(18)	.0351(6)	-.1238(6)	.0535(6)

O(19)	-.0440(7)	.0526(6)	.1166(6)
O(20)	.4978(6)	.1340(5)	.5366(6)
O(21)	.5444(7)	.0315(6)	.3754(6)
O(22)	.3546(7)	.0088(7)	.4595(7)
C(1)	.003(1)	.2661(9)	.763(1)
C(2)	-.053(1)	.3256(9)	.823(1)
C(3)	.229(1)	.228(1)	.5069(9)
C(4)	.286(1)	.270(1)	.4338(9)
C(5)	.243(1)	.0104(9)	.754(1)
C(6)	.305(1)	-.051(1)	.809(1)
C(7)	.272(1)	-.238(1)	.0132(9)
C(8)	.218(1)	-.289(1)	-.061(1)
C(9)	.5003(9)	-.269(1)	.268(1)
C(10)	.561(1)	-.3298(9)	.3257(9)
C(11)	.250(1)	-.0160(9)	.246(1)
C(12)	.178(1)	.052(1)	.289(1)

Table 2. Interatomic Distances (Å). Standard Deviations are in Parentheses.

U(1)	-O(1)	1.77(1)	C(3)	-O(7)	1.29(2)
	-O(2)	1.74(1)		-O(8)	1.27(2)
	-O(5)	2.48(1)		-C(4)	1.51(2)
	-O(6)	2.49(1)	C(5)	-O(9)	1.27(2)
	-O(7)	2.47(1)		-O(10)	1.26(2)
	-O(8)	2.46(1)		-C(6)	1.49(2)
	-O(9)	2.51(1)	C(7)	-O(11)	1.24(2)
	-O(10)	2.45(1)		-O(12)	1.28(2)
U(2)	-O(3)	1.75(1)		-C(8)	1.53(2)
	-O(4)	1.73(1)	C(9)	-O(13)	1.27(2)
	-O(11)	2.49(1)		-O(14)	1.28(2)
	-O(12)	2.46(1)		-C(10)	1.49(2)
	-O(13)	2.48(1)	C(11)	-O(15)	1.27(2)
	-O(14)	2.46(1)		-O(16)	1.24(2)
	-O(15)	2.50(1)		-C(12)	1.55(2)
	-O(16)	2.44(1)	O(17)	-O(7)	2.72(2)
Ni(1)	-2 O(17)	2.07(1)		-O(16)	2.83(2)
	-2 O(18)	2.05(1)	O(18)	-O(5)	2.76(2)
	-2 O(19)	2.05(1)		-O(11)	2.77(2)
Ni(2)	-2 O(20)	2.05(1)	O(19)	-O(6)	2.74(2)
	-2 O(21)	2.07(1)		-O(10)	2.67(2)
	-2 O(22)	2.04(1)	O(20)	-O(12)	2.77(2)
C(1)	-O(5)	1.29(2)		-O(14)	2.75(2)
	-O(6)	1.27(2)	O(21)	-O(9)	2.81(2)
	-C(2)	1.49(2)		-O(13)	2.82(2)
			O(22)	-O(8)	2.77(2)
				-O(15)	2.80(2)

Table 3. Selected Angles (°).

O(1) -U(1)-O(2)	179.0(5)	O(3) -U(2)-O(4)	178.6(4)
O(5) -U(1)-O(6)	51.7(3)	O(11)-U(2)-O(12)	51.9(3)
O(7) -U(1)-O(8)	52.2(3)	O(13)-U(2)-O(14)	52.1(3)
O(9) -U(1)-O(10)	51.6(3)	O(15)-U(2)-O(16)	51.7(3)
O(6) -U(1)-O(7)	69.4(3)	O(12)-U(2)-O(13)	68.0(3)
O(8) -U(1)-O(9)	68.2(3)	O(14)-U(2)-O(15)	70.3(3)
O(10)-U(1)-O(5)	67.4(3)	O(16)-U(2)-O(11)	66.2(3)
O(1) -U(1)-O(5)	87.5(4)	O(3) -U(2)-O(11)	84.9(3)
O(1) -U(1)-O(6)	86.9(4)	O(3) -U(2)-O(12)	89.6(4)
O(1) -U(1)-O(7)	84.3(4)	O(3) -U(2)-O(13)	85.8(4)
O(1) -U(1)-O(8)	91.3(4)	O(3) -U(2)-O(14)	86.7(3)
O(1) -U(1)-O(9)	84.8(4)	O(3) -U(2)-O(15)	85.4(4)
O(1) -U(1)-O(10)	88.3(4)	O(3) -U(2)-O(16)	89.9(4)
O(2) -U(1)-O(5)	91.6(4)	O(4) -U(2)-O(11)	96.4(4)
O(2) -U(1)-O(6)	92.2(4)	O(4) -U(2)-O(12)	90.9(4)
O(2) -U(1)-O(7)	95.7(4)	O(4) -U(2)-O(13)	93.1(4)
O(2) -U(1)-O(8)	89.5(4)	O(4) -U(2)-O(14)	92.0(4)
O(2) -U(1)-O(9)	96.2(4)	O(4) -U(2)-O(15)	94.4(4)
O(2) -U(1)-O(10)	91.9(4)	O(4) -U(2)-O(16)	91.1(4)

O(17)-Ni(1)-O(17)	180.0	O(20)-Ni(2)-O(20)[1]	180.0
O(17)-Ni(1)-O(18)	91.1(3)	O(20)-Ni(2)-O(21)	92.5(4)
O(17)-Ni(1)-O(18)[1]	88.9(3)	O(20)-Ni(2)-O(21)[1]	87.5(4)
O(17)-Ni(1)-O(19)	90.6(4)	O(20)-Ni(2)-O(22)	90.2(4)
O(17)-Ni(1)-O(19)[1]	89.4(4)	O(20)-Ni(2)-O(22)[1]	89.8(4)
O(18)-Ni(1)-O(18)[1]	180.0	O(21)-Ni(2)-O(21)	180.0
O(18)-Ni(1)-O(19)	86.9(4)	O(21)-Ni(2)-O(22)	89.7(4)
O(18)-Ni(1)-O(19)[1]	93.1(4)	O(21)-Ni(2)-O(22)[1]	90.3(4)
O(19)-Ni(1)-O(19)[1]	180.0	O(22)-Ni(2)-O(22)	180.0
C(2) -C(1) -O(5)	119.8(14)	C(8) -C(7) -O(11)	121.1(14)
C(2) -C(1) -O(6)	124.0(14)	C(8) -C(7) -O(12)	120.0(14)
O(5) -C(1) -O(6)	116.3(12)	O(11)-C(7) -O(12)	118.9(13)
C(4) -C(3) -O(7)	121.5(13)	C(10)-C(9) -O(13)	121.9(14)
C(4) -C(3) -O(8)	122.6(13)	C(10)-C(9) -O(14)	121.2(14)
O(7) -C(3) -O(8)	115.8(13)	O(13)-C(9) -O(14)	116.9(13)
C(6) -C(5) -O(9)	121.2(13)	C(12)-C(11)-O(15)	121.6(14)
C(6) -C(5) -O(10)	122.5(13)	C(12)-C(11)-O(16)	120.0(13)
O(9) -C(5) -O(10)	116.3(13)	O(15)-C(11)-O(16)	118.4(14)
O(7) -O(17)-O(16)	106.8(4)	O(12)-O(20)-O(14)	99.5(4)
O(5) -O(18)-O(11)	107.3(4)	O(9) -O(21)-O(13)	106.5(4)
O(6) -O(19)-O(10)	115.1(4)	O(8) -O(22)-O(15)	123.5(4)

FIGURE CAPTION

Fig. 1. View of the structure showing the atomic numbering.

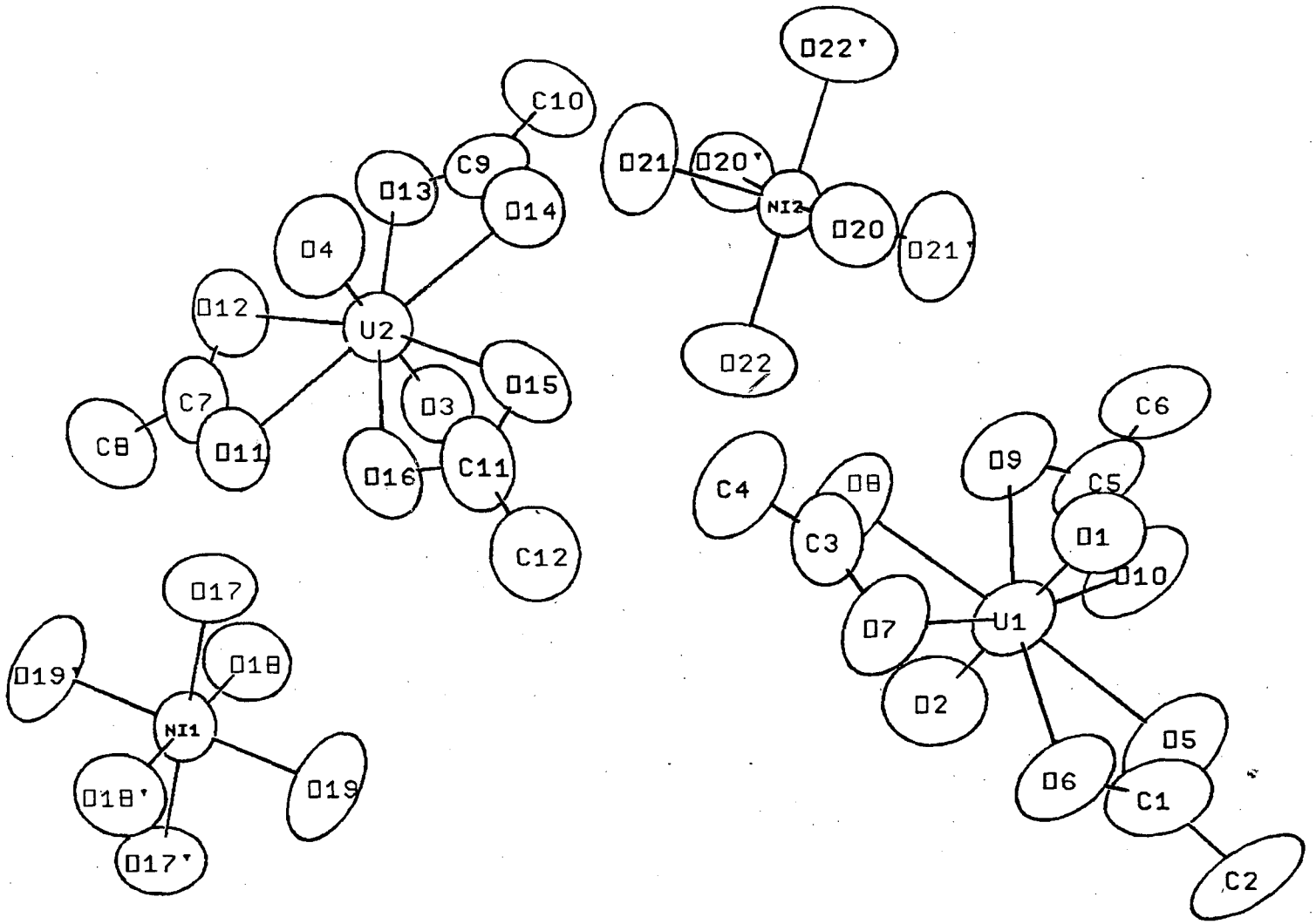

Fig. 1

XBL 812-8221

Supplementary Materials for the Paper:

THE STRUCTURE OF NICKEL URANYL ACETATE HEXAHYDRATE

by Allan Zalkin, Helena Ruben and David H. Templeton

Table of Anisotropic Thermal Parameters. The anistropic temperature factor has the form $\exp(-0.25(B_{11}h^2a^{*2} + 2B_{12}hka^*b^* + \ldots))$.

ATOM	B11	B22	B33	B12	B13	B23
NI(1)	3.0(1)	2.4(1)	2.5(1)	-.25(8)	.16(8)	.19(8)
NI(2)	2.56(9)	2.6(1)	2.3(1)	-.22(8)	.21(8)	-.13(8)
U(1)	3.39(3)	2.76(2)	3.81(3)	.31(2)	1.00(2)	.33(2)
U(2)	3.39(3)	3.00(2)	3.19(2)	.54(2)	-.04(2)	-.28(2)
O(1)	3.6(4)	4.4(5)	4.3(5)	-.2(4)	.5(4)	1.1(4)
O(2)	4.8(5)	5.4(5)	7.1(6)	-.2(4)	-.2(5)	-2.0(5)
O(3)	4.1(5)	4.5(5)	3.6(5)	.1(4)	-.4(4)	-.5(4)
O(4)	6.8(6)	5.7(6)	5.1(6)	.3(5)	.9(5)	1.1(5)
O(5)	6.7(6)	3.9(5)	5.4(5)	1.3(4)	2.9(5)	1.7(4)
O(6)	4.6(5)	3.3(4)	4.9(5)	.8(4)	2.2(4)	1.0(4)
O(7)	6.1(6)	3.7(5)	3.9(5)	1.2(4)	1.6(4)	.8(4)
O(8)	6.4(6)	3.9(5)	3.7(5)	2.2(4)	2.1(4)	.8(4)
O(9)	5.1(5)	4.4(5)	4.9(6)	1.1(4)	1.9(4)	.8(4)
O(10)	5.8(6)	3.9(5)	5.6(6)	1.5(4)	3.1(5)	2.1(4)
O(11)	5.3(5)	4.5(5)	3.5(4)	2.1(4)	-.5(4)	-1.5(4)
O(12)	6.1(6)	6.5(6)	4.0(5)	2.9(5)	-.5(5)	-1.2(4)
O(13)	3.9(5)	3.8(4)	4.6(5)	.7(4)	-.7(4)	-1.0(4)
O(14)	4.2(5)	4.2(5)	4.5(5)	.5(4)	-.5(4)	-.9(4)
O(15)	4.7(5)	4.2(5)	5.2(5)	1.5(4)	-2.1(4)	-1.3(4)
O(16)	6.1(6)	4.4(5)	3.8(5)	2.6(4)	-1.4(4)	-.8(4)
O(17)	2.5(4)	4.0(4)	5.5(5)	-.7(3)	.1(4)	.0(4)
O(18)	4.0(5)	3.4(4)	5.2(5)	-.2(4)	-.1(4)	1.0(4)
O(19)	6.4(6)	5.1(5)	4.0(5)	-2.2(4)	2.4(4)	-1.2(4)
O(20)	4.1(4)	3.3(4)	4.6(5)	.5(3)	-.6(4)	-.8(4)
O(21)	7.2(6)	5.4(5)	3.3(5)	-.5(5)	.9(4)	.5(4)
O(22)	3.5(5)	6.7(6)	8.8(7)	.7(4)	-1.3(5)	-3.3(5)
C(1)	3.1(6)	3.3(7)	5.9(9)	-.6(5)	1.4(6)	1.1(6)
C(2)	4.2(7)	4.1(8)	7.0(9)	.6(6)	3.3(7)	-.7(7)
C(3)	5.4(8)	4.7(8)	2.8(7)	1.7(7)	-.1(6)	.1(6)
C(4)	6.9(10)	6.6(9)	4.1(8)	1.7(8)	2.6(7)	2.6(7)
C(5)	4.1(7)	3.4(7)	4.9(8)	.3(6)	2.5(6)	-.1(6)
C(6)	4.0(8)	7.4(10)	6.4(9)	2.3(7)	1.6(7)	2.6(8)
C(7)	5.3(8)	4.5(8)	2.8(7)	.6(7)	-.0(6)	.4(6)
C(8)	6.2(9)	6.9(9)	5.5(9)	1.9(8)	-1.9(7)	-2.7(8)
C(9)	2.6(6)	4.1(7)	4.9(9)	-.6(5)	.8(6)	-.5(6)
C(10)	4.3(7)	4.5(8)	5.7(8)	1.0(6)	-1.4(6)	2.1(7)
C(11)	5.7(8)	3.7(7)	3.4(7)	-.1(6)	-.5(6)	-.6(6)
C(12)	6.9(10)	7.7(10)	5.4(9)	4.0(9)	-1.0(8)	-3.3(8)

OBSERVED STRUCTURE FACTORS, STANDARD DEVIATIONS, AND DIFFERENCES (ALL X 2.0)
NICKEL URANYL ACETATE HEXAHYDRATE F(0,0,0) = 3517

FOB AND FCA ARE THE OBSERVED AND CALCULATED STRUCTURE FACTORS.
SG = ESTIMATED STANDARD DEVIATION OF FOB. DEL = /FOB/ - /FCA/.
* INDICATES ZERO WEIGHTED DATA.

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
H,K=		0,	0	9	49	8	2	9	85	6	2	H,K=		0,	10	3	26	46	25*
2	579	12	-19	10	18	34	13*	10	181	5	-2	0	473	10	17	4	61	12	2*
4	72	5	7	11	69	7	-5	11	58	10	-2	1	314	7	-3	5	296	8	-7
6	1095	24	-28	12	27	31	-5*	12	452	10	-13	2	290	6	-17	6	59	15	1*
8	349	7	-15	13	79	7	10	13	57	20	-8*	3	31	25	17*	7	223	6	-10
10	189	5	-4	14	36	46	13*	14	135	6	-0	4	276	6	-7	H,K=		0,	15
12	445	10	-12	15	32	35	27*	15	20	40	-3*	5	286	6	-5	1	11	41	-21*
14	167	5	3	16	28	37	25*	H,K=		0,	7	6	330	7	-11	2	67	11	-8
16	54	17	-3*	H,K=		0,	4	1	109	4	-12	7	272	6	-1	3	54	14	31*
H,K=		0,	1	0	109	3	2	2	35	11	-9*	8	210	6	-15	4	42	27	-11*
2	4	20	-6*	1	666	14	14	3	20	28	-11*	9	40	18	9*	5	35	40	-10*
3	25	6	23*	2	284	6	-5	4	72	6	-5	10	218	6	-12	H,K=		1,	0
4	36	9	12*	3	106	3	9	5	0	26	-8*	11	130	6	-6	-16	253	7	-2
5	9	19	-6*	4	659	13	-15	6	38	12	4*	12	158	8	-10	-14	318	8	4
6	67	5	-5	5	444	9	-20	7	91	5	-9	H,K=		0,	11	-12	68	10	12
7	46	6	13	6	382	8	-8	8	0	30	-8*	1	29	30	-8*	-10	427	9	-4
8	27	28	-16*	7	512	11	-12	9	30	26	-19*	2	50	16	10*	-8	719	15	-16
9	2	30	-1*	8	342	7	-9	10	50	15	-9*	3	80	9	-8	-6	75	5	17
10	71	6	5	9	36	11	12*	11	0	34	-41*	4	40	15	29*	-4	691	14	-24
11	65	13	16*	10	272	6	-8	12	38	19	7*	5	11	43	-39*	-2	978	20	-42
12	46	11	-4*	11	254	6	-8	13	32	35	5*	6	63	15	8*	2	971	23	-5
13	35	20	13*	12	166	5	0	14	0	37	-2*	7	13	39	-18*	4	663	13	2
14	20	34	-4*	13	240	7	6	H,K=		0,	8	8	37	23	7*	6	172	4	8
15	31	35	12*	14	177	6	-5	0	28	29	-24*	9	55	12	2*	8	594	12	-5
16	50	17	1*	15	0	47	-5*	1	683	14	-16	10	55	13	25*	10	324	7	-7
H,K=		0,	2	16	151	6	3	2	365	8	1	11	0	38	-21*	12	50	11	11*
0	473	10	-6	H,K=		0,	5	3	85	5	1	H,K=		0,	12	14	206	6	3
1	1033	23	-62	1	10	23	-5*	4	245	6	-4	0	468	10	9	16	171	6	-9
2	380	10	1	2	30	12	-2*	5	487	10	-10	1	150	5	3	H,K=		1,	1
3	116	3	19	3	54	7	-2	6	90	8	2	2	121	5	-2	-16	101	13	9
4	180	4	-2	4	33	9	19*	7	553	12	-20	3	50	11	20*	-15	131	8	-13
5	563	12	-28	5	54	5	1	8	222	6	-13	4	125	8	7	-14	74	12	-5
6	203	5	-20	6	67	5	-2	9	42	13	30*	5	177	7	-6	-13	54	14	47*
7	670	14	-22	7	19	30	18*	10	17	32	-3*	6	397	9	-17	-12	55	13	7*
8	440	9	-8	8	66	6	8	11	353	8	-16	7	162	6	-0	-11	0	39	-21*
9	59	6	26	9	50	15	-1*	12	21	42	-3*	8	79	9	4	-10	258	6	-6
10	216	5	-11	10	61	9	5	13	273	7	-9	9	25	37	-7*	-9	333	8	-7
11	376	8	-9	11	44	12	10*	14	76	11	-12	10	98	8	15	-8	310	7	1
12	89	7	-8	12	90	7	-1	H,K=		0,	9	H,K=		0,	13	-7	42	10	5*
13	292	7	-7	13	25	35	16*	1	42	9	-8*	1	53	15	6*	-6	101	4	1
14	123	7	-5	14	35	36	-6*	2	65	9	-4	2	93	8	3	-5	164	4	-8
15	34	35	28*	15	45	18	-2*	3	0	27	-13*	3	52	19	15*	-4	371	8	-18
16	98	8	-7	H,K=		0,	6	4	68	6	3	4	37	46	-12*	-3	648	13	-3
H,K=		0,	3	0	1071	22	28	5	58	8	-6	5	0	37	-8*	-2	534	11	-23
1	20	24	6*	1	160	4	-2	6	0	31	-4*	6	8	37	-30*	-1	207	5	30
2	70	3	-3	2	311	7	-3	7	33	21	21*	7	49	53	-7*	0	0	29	-15*
3	39	6	6	3	270	6	17	8	86	7	-8	8	58	13	13*	1	220	5	29
4	18	20	12*	4	233	5	1	9	0	33	-21*	9	58	13	26*	2	621	13	-4
5	0	21	-23*	5	139	4	-7	10	53	25	24*	H,K=		0,	14	3	635	13	18
6	34	8	9*	6	879	18	-25	11	72	10	0	0	58	16	2*	4	397	8	-16
7	98	4	1	7	171	5	-2	12	26	35	21*	1	325	8	-3	5	37	8	18*
8	42	9	-9*	8	249	6	-13	13	54	14	11*	2	83	8	-3	6	103	3	2

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
7	81	5	-14	-5	352	8	-10	-15	87	13	-21	9	116	5	3	4	108	7	-1
8	449	9	2	-4	107	4	-4	-14	145	7	-8	10	336	7	-7	5	199	5	4
9	371	8	-1	-3	476	10	4	-13	0	39	-38*	11	49	12	4*	6	43	19	27*
10	322	7	-6	-2	102	5	4	-12	62	11	34	12	25	33	-8*	7	180	6	-1
11	39	14	-8*	-1	558	11	12	-11	0	35	-18*	13	45	17	11*	8	54	14	-1*
12	44	12	9*	0	53	3	-1	-10	242	6	-7	14	128	6	0	9	427	9	-9
13	40	16	10*	1	627	13	33	-9	256	6	-11	15	34	37	3*	10	119	8	-13
14	204	6	5	2	148	3	3	-8	182	5	-14	H,K=		1,	7	11	126	10	1
15	179	6	-10	3	542	11	2	-7	121	5	-5	-14	56	19	4*	12	64	15	-5*
16	153	10	-4	4	22	11	3*	-6	52	16	-8*	-13	0	40	-12*	13	0	45	-49*
H,K=		1,	2	5	333	7	-12	-5	98	5	4	-12	49	20	9*	14	27	44	11*
-16	90	11	1	6	178	4	10	-4	466	10	-4	-11	0	38	-17*	H,K=		1,	9
-15	276	7	-2	7	510	11	15	-3	267	6	-3	-10	159	6	-13	-13	59	28	-16*
-14	120	8	-3	8	34	11	23*	-2	338	7	-31	-9	270	7	-17	-12	15	41	-27*
-13	160	9	-3	9	338	7	-3	-1	202	5	-6	-8	163	7	-17	-11	187	7	-10
-12	32	35	17*	10	32	29	18*	0	21	15	6*	-7	0	33	-41*	-10	0	39	-22*
-11	243	6	2	11	255	6	-8	1	124	3	-4	-6	0	39	-11*	-9	215	7	-6
-10	111	6	0	12	32	38	26*	2	277	6	-19	-5	51	9	8	-8	140	9	5
-9	513	11	-11	13	240	6	-3	3	184	4	7	-4	243	6	-4	-7	190	6	2
-8	185	5	-6	14	43	22	11*	4	631	13	2	-3	560	12	-14	-6	70	10	-12
-7	343	7	-2	15	213	6	4	5	78	4	-0	-2	220	5	-12	-5	319	8	1
-6	221	5	1	16	37	37	3*	6	26	28	20*	-1	80	7	-11	-4	104	6	7
-5	364	8	-11	H,K=		1,	4	7	20	27	-16*	0	51	7	1	-3	230	6	-4
-4	389	8	27	-16	132	9	14	8	320	7	-9	1	43	6	12	-2	124	6	-1
-3	799	16	-11	-15	234	7	9	9	272	6	-5	2	296	6	-4	-1	294	7	-4
-2	409	8	-9	-14	148	7	-11	10	338	7	-0	3	598	12	-5	0	101	4	-6
-1	519	11	-4	-13	155	6	5	11	40	15	-10*	4	161	4	-2	1	363	8	2
0	32	6	1	-12	0	43	-2*	12	29	39	3*	5	131	4	-4	2	119	4	2
1	551	11	21	-11	129	6	8	13	42	24	17*	6	50	8	-11	3	296	6	-4
2	387	10	5	-10	286	9	-7	14	225	6	-1	7	36	16	16*	4	150	4	-6
3	758	18	12	-9	350	8	-9	15	143	9	-3	8	304	7	-1	5	311	7	-11
4	321	7	35	-8	288	7	-12	H,K=		1,	6	9	371	8	-11	6	24	28	-11*
5	333	7	-12	-7	254	6	-9	-15	51	39	-0*	10	179	5	3	7	271	6	-9
6	237	5	-1	-6	40	18	13*	-14	239	7	4	11	79	8	-8	8	66	10	1
7	263	6	-1	-5	324	7	-6	-13	50	18	37*	12	49	18	25*	9	304	7	2
8	129	4	-4	-4	354	8	-11	-12	0	38	-8*	13	35	45	22*	10	93	8	-5
9	433	9	-14	-3	475	10	-35	-11	33	36	23*	14	133	7	-9	11	187	6	-13
10	44	12	-5*	-2	460	10	2	-10	413	9	-10	H,K=		1,	8	12	0	36	-3*
11	138	5	0	-1	313	7	-16	-9	110	6	5	-14	0	46	-37*	13	134	7	-9
12	36	17	23*	0	75	3	1	-8	447	10	-13	-13	117	8	9	H,K=		1,	10
13	53	12	-23*	1	292	6	-2	-7	23	32	15*	-12	0	41	-8*	-12	38	47	27*
14	57	12	-11*	2	440	9	16	-6	27	29	19*	-11	176	7	-10	-11	82	11	18
15	186	7	-1	3	443	9	-13	-5	41	12	-13*	-10	102	8	-8	-10	225	7	11
16	45	22	-35*	4	244	5	0	-4	572	12	-11	-9	530	11	-6	-9	237	7	-9
H,K=		1,	3	5	353	7	1	-3	50	8	-19	-8	144	6	-7	-8	324	8	-7
-16	27	42	19*	6	30	17	7*	-2	588	12	-13	-7	228	6	-7	-7	92	9	-16
-15	84	24	18*	7	163	4	-0	-1	104	4	2	-6	69	9	4	-6	51	15	-5*
-14	0	40	-39*	8	280	6	-3	0	64	5	2	-5	279	7	-3	-5	63	13	1*
-13	162	7	-14	9	244	6	-3	1	209	5	2	-4	52	10	-2*	-4	282	9	-5
-12	0	36	-7*	10	203	5	-6	2	632	13	9	-3	554	12	-3	-3	229	6	-9
-11	243	6	-13	11	138	5	-1	3	44	6	12	-2	136	5	-5	-2	313	8	-6
-10	39	35	-17*	12	0	32	-1*	4	551	11	-12	-1	326	8	-5	-1	201	6	-5
-9	162	5	1	13	90	8	13	5	28	14	15*	0	27	12	13*	0	59	8	4
-8	34	36	17*	14	90	8	6	6	0	26	-22*	1	390	8	3	1	105	6	-0
-7	461	10	-8	15	141	8	-1	7	74	6	2	2	48	6	20	2	341	15	-7
-6	240	6	5	H,K=		1,	5	8	353	8	-12	3	513	11	-10	3	242	6	-3

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
4	212	5	-7	-9	160	8	6	0	169	4	0	-4	40	8	-1*	-15	0	41	-3*
5	118	5	-6	-8	60	18	1*	2	221	8	9	-3	104	4	-2	-14	16	40	9*
6	47	20	36*	-7	0	47	-40*	4	145	3	14	-2	613	13	12	-13	124	10	9
7	52	12	-1*	-6	62	17	-1*	6	48	6	-16	-1	353	7	12	-12	196	6	19
8	275	6	-0	-5	22	42	4*	8	183	4	13	0	198	4	12	-11	153	8	7
9	193	6	-2	-4	76	13	-2	10	176	5	-3	1	277	6	16	-10	43	20	-24*
10	142	6	-5	-3	298	8	-5	12	29	31	11*	2	605	12	25	-9	37	18	32*
11	96	9	5	-2	94	12	2	14	58	17	-16*	3	37	6	3	-8	66	8	13
12	29	39	25*	-1	100	10	-2	16	53	24	20*	4	35	6	4	-7	231	6	2
H,K=	1,	11		0	75	10	2	H,K=	2,	1		5	117	3	12	-6	348	8	-5
-11	75	13	67	1	0	33	-28*	-16	88	17	-6*	6	57	6	6	-5	97	4	6
-10	140	14	8	2	123	6	-6	-15	0	40	-4*	7	150	4	0	-4	76	5	18
-9	90	11	-15	3	327	8	-12	-14	155	9	-9	8	134	4	5	-3	145	4	5
-8	174	7	-9	4	69	14	-9*	-13	178	6	-3	9	0	32	-19*	-2	30	9	17*
-7	118	9	10	5	94	7	2	-12	325	8	-7	10	116	5	8	-1	218	5	14
-6	37	29	34*	6	0	37	-44*	-11	215	6	-6	11	39	14	22*	0	30	5	-5
-5	0	56	-32*	7	33	37	20*	-10	198	8	-10	12	27	31	-6*	1	182	4	12
-4	210	6	4	8	95	17	-10	-9	0	31	-11*	13	56	10	13	2	128	3	1
-3	130	7	-4	9	212	6	6	-8	321	7	-1	14	62	16	-7*	3	52	4	-8
-2	248	8	-12	H,K=	1,	14		-7	314	7	-8	15	47	33	13*	4	17	23	-5*
-1	72	9	-7	-7	113	12	-10	-6	719	15	-20	16	50	18	-18*	5	45	6	-4
0	31	32	28*	-6	32	45	-3*	-5	431	9	7	H,K=	2,	3		6	222	5	13
1	61	8	5	-5	177	8	-0	-4	328	7	-13	-16	50	23	29*	7	136	4	5
2	295	7	13	-4	59	19	23*	-3	30	8	-3*	-15	0	41	-5*	8	101	6	-3
3	125	6	14	-3	295	8	-4	-2	523	11	17	-14	50	24	45*	9	37	24	8*
4	291	8	10	-2	26	35	-8*	-1	619	13	0	-13	334	8	5	10	104	5	1
5	120	7	-9	-1	163	6	7	0	1201	24	-8	-12	39	26	-12*	11	16	33	14*
6	18	33	17*	0	64	9	20	1	636	13	8	-11	370	8	-13	12	73	8	13
7	26	39	19*	1	176	6	6	2	505	10	23	-10	35	24	16*	13	16	34	-8*
8	237	7	-9	2	14	35	-8*	3	29	9	10*	-9	60	9	7	14	38	24	-9*
9	107	7	2	3	263	7	-7	4	325	7	-6	-8	38	15	-8*	15	36	37	-1*
10	213	6	-1	4	48	17	4*	5	442	9	8	-7	620	13	-12	H,K=	2,		5
11	41	32	-17*	5	145	9	-3	6	744	15	-3	-6	112	5	-1	-15	0	42	-6*
H,K=	1,	12		6	48	18	-10*	7	276	6	-8	-5	852	17	-21	-14	126	8	-2
-10	188	8	3	7	96	9	-0	8	302	7	-9	-4	113	4	3	-13	106	13	-9
-9	97	10	19	H,K=	1,	15		9	16	29	14*	-3	50	5	9	-12	397	10	-1
-8	223	8	-7	-5	163	8	2	10	213	6	-2	-2	105	3	-2	-11	131	6	-4
-7	46	51	-12*	-4	78	10	-2	11	225	5	4	-1	986	20	32	-10	227	8	-2
-6	21	40	15*	-3	110	8	-11	12	358	8	7	0	167	4	20	-9	41	43	-4*
-5	139	8	-10	-2	154	6	4	13	168	6	-6	1	1011	20	45	-8	293	7	1
-4	290	7	8	-1	139	6	11	14	143	6	-2	2	168	4	8	-7	209	6	-6
-3	153	7	6	0	81	9	2	15	19	47	10*	3	73	3	-1	-6	651	14	-23
-2	294	7	-4	1	173	6	-10	16	103	8	-10	4	80	4	-1	-5	195	5	-9
-1	63	12	12*	2	115	7	11	H,K=	2,	2		5	900	18	11	-4	514	11	5
0	59	8	25	3	141	8	10	-16	45	28	22*	6	54	5	0	-3	135	4	-1
1	111	6	1	4	143	7	6	-15	58	20	52*	7	670	14	-9	-2	415	9	6
2	292	7	3	5	149	7	11	-14	79	12	-15	8	37	16	24*	-1	302	6	8
3	165	5	-5	H,K=	2,	0		-13	168	6	8	9	12	28	-4*	0	649	13	-27
4	271	6	1	-16	153	8	4	-12	138	6	4	10	0	29	-7*	1	245	5	13
5	35	33	6*	-14	128	14	-5	-11	190	6	10	11	413	9	1	2	453	9	6
6	40	19	-10*	-12	156	6	8	-10	33	27	0*	12	52	11	-1*	3	85	4	12
7	124	6	6	-10	270	7	-3	-9	25	31	22*	13	379	8	-3	4	518	11	9
8	159	5	0	-8	361	8	-8	-8	225	6	-8	14	22	35	14*	5	193	5	5
9	61	13	-8*	-6	35	11	-11*	-7	265	6	-6	15	17	44	12*	6	683	14	-16
10	161	8	-3	-4	111	4	-11	-6	252	6	-17	16	31	39	1*	7	220	6	-3
H,K=	1,	13		-2	263	6	15	-5	281	6	8	H,K=	2,	4		8	269	6	-2

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
9	33	23	22*	2	348	7	10	-1	597	13	3	3	56	16	-1*	-3	34	46	4*
10	242	6	-2	3	32	12	-6*	0	243	5	2	4	212	5	-1	-2	144	8	15
11	107	6	-4	4	179	4	3	1	549	11	-2	5	29	32	-1*	-1	115	9	-2
12	420	15	-12	5	369	8	-1	2	112	5	-6	6	431	9	-7	0	52	16	-14*
13	119	6	-3	6	441	9	-5	3	25	29	4*	7	95	7	5	1	93	9	-14
14	182	8	15	7	423	9	-1	4	87	5	7	8	205	7	4	2	14	34	-11*
15	35	37	31*	8	192	5	4	5	461	10	-8	9	26	36	8*	3	40	21	19*
H,K=		2,	6	9	22	32	7*	6	196	5	-3	10	160	7	-5	4	123	7	1
-15	0	43	-5*	10	127	7	-4	7	415	9	-9	11	35	41	18*	5	0	43	-9*
-14	175	7	6	11	256	6	-3	8	65	8	3	H,K=		2,	12	6	69	12	-16
-13	6	40	-27*	12	239	7	3	9	0	33	-11*	-10	122	16	-4	7	45	39	6*
-12	100	9	5	13	183	6	-4	10	80	8	-6	-9	61	29	-2*	H,K=		2,	15
-11	0	50	-8*	14	84	12	-13	11	293	7	-2	-8	106	9	15	-5	210	8	10
-10	267	7	2	H,K=		2,	8	12	98	8	0	-7	59	21	3*	-4	129	9	5
-9	70	10	-5	-14	65	17	18*	13	217	6	4	-6	38	40	-10*	-3	37	43	14*
-8	175	6	0	-13	120	11	5	H,K=		2,	10	-5	12	39	-6*	-2	68	16	14*
-7	55	10	11	-12	69	15	-8*	-12	131	8	7	-4	129	9	-8	-1	248	7	-3
-6	23	35	-21*	-11	129	8	0	-11	89	11	-7	-3	96	9	-10	0	186	7	14
-5	0	29	-20*	-10	49	35	39*	-10	79	12	-10	-2	80	10	1	1	221	7	4
-4	326	7	-4	-9	37	30	8*	-9	41	31	9*	-1	118	7	-4	2	90	9	-8
-3	0	27	-28*	-8	77	10	2	-8	92	10	16	0	24	30	-18*	3	14	37	-4*
-2	233	5	8	-7	172	6	-5	-7	110	9	7	1	7	37	-21*	4	97	17	1
-1	144	4	-1	-6	142	6	-0	-6	252	7	3	2	130	5	9	H,K=		3,	0
0	36	6	-11	-5	223	6	5	-5	109	7	1	3	52	13	-20*	-16	41	59	5*
1	313	7	7	-4	50	22	11*	-4	104	7	5	4	58	10	-8	-14	0	40	-22*
2	221	5	6	-3	39	14	3*	-3	165	6	-1	5	45	19	12*	-12	0	37	-26*
3	29	11	9*	-2	254	6	-1	-2	41	16	8*	6	37	22	1*	-10	200	6	-1
4	203	5	3	-1	189	5	9	-1	75	8	13	7	45	20	16*	-8	143	5	-11
5	91	4	-6	0	122	4	-3	0	298	7	-5	8	128	7	5	-6	155	4	-5
6	76	5	6	1	149	5	-7	1	0	31	-23*	9	0	37	-34*	-4	313	7	-2
7	35	12	16*	2	81	7	6	2	76	7	-0	10	34	38	-1*	-2	465	10	46
8	117	5	1	3	137	4	4	3	0	29	-29*	H,K=		2,	13	0	19	14	-4*
9	58	9	-7	4	137	4	-4	4	54	11	26*	-9	0	44	-23*	2	568	12	54
10	113	6	-3	5	110	4	-2	5	28	36	15*	-8	78	18	-11*	4	277	6	-5
11	24	34	12*	6	121	5	2	6	174	6	-4	-7	217	8	-4	6	115	4	1
12	64	10	15	7	49	10	7*	7	117	7	0	-6	137	8	-4	8	359	8	-8
13	37	44	11*	8	0	30	-11*	8	52	12	-6*	-5	298	8	-3	10	304	7	-12
14	129	7	-3	9	59	9	31	9	63	15	5*	-4	84	11	-17	12	40	16	10*
15	63	12	21*	10	84	7	-4	10	70	10	-0	-3	61	14	29*	14	156	6	1
H,K=		2,	7	11	39	40	29*	11	0	37	-4*	-2	104	9	-11	16	130	8	2
-14	95	11	5	12	72	11	7	12	50	17	5*	-1	286	8	-4	H,K=		3,	1
-13	207	7	15	13	41	52	10*	H,K=		2,	11	0	199	6	5	-16	232	7	13
-12	250	9	1	14	26	37	14*	-11	34	49	29*	1	314	7	4	-15	90	17	3*
-11	283	7	4	H,K=		2,	9	-10	166	8	-7	2	92	8	5	-14	266	7	-0
-10	66	24	-24*	-13	210	7	2	-9	45	48	9*	3	10	41	3*	-13	167	7	-5
-9	61	12	-4*	-12	106	10	-6	-8	188	7	0	4	112	7	5	-12	0	38	-28*
-8	228	6	-3	-11	274	7	4	-7	76	12	-10	5	265	6	-10	-11	240	6	3
-7	417	10	-6	-10	118	8	-4	-6	425	11	-3	6	181	7	-4	-10	392	9	2
-6	434	9	-12	-9	60	15	-3*	-5	0	45	-7*	7	252	6	-6	-9	220	6	-14
-5	388	9	-5	-8	0	37	-18*	-4	234	7	-4	8	82	11	11	-8	525	12	-8
-4	202	5	2	-7	426	10	-12	-3	29	38	21*	9	42	26	34*	-7	418	9	3
-3	40	12	-8*	-6	176	6	3	-2	246	6	-8	H,K=		2,	14	-6	202	5	10
-2	356	8	-5	-5	426	9	-5	-1	92	8	8	-7	113	10	10	-5	410	9	-13
-1	490	11	6	-4	93	7	-7	0	518	11	-1	-6	61	21	-26*	-4	522	11	-21
0	576	12	7	-3	20	31	15*	1	59	10	6	-5	46	30	14*	-3	416	9	18
1	502	10	1	-2	69	8	8	2	213	5	-5	-4	0	51	-19*	-2	807	16	29

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-1	403	8	1	-11	175	6	-1	13	138	6	7	5	187	5	3	2	85	5	-15
0	38	5	7	-10	119	6	-3	14	119	7	1	6	67	6	8	3	312	7	4
1	481	10	10	-9	689	15	-3	15	137	8	-5	7	41	10	9*	4	30	16	3*
2	841	17	46	-8	136	5	6	H,K=		3,	5	8	248	6	-2	5	179	5	-2
3	367	8	39	-7	111	5	1	-15	0	44	-15*	9	74	9	-7	6	40	12	-5*
4	505	10	-3	-6	37	11	-0*	-14	246	7	2	10	205	5	-1	7	105	6	-5
5	283	6	3	-5	411	9	9	-13	130	8	13	11	37	20	5*	8	75	7	11
6	206	5	9	-4	34	9	18*	-12	39	33	20*	12	0	35	-25*	9	197	5	-1
7	251	6	16	-3	1046	21	-0	-11	220	7	5	13	19	36	6*	10	0	37	-14*
8	455	9	-2	-2	112	4	11	-10	412	9	6	14	181	6	5	11	110	7	4
9	163	5	-2	-1	447	9	14	-9	0	42	-47*	H,K=		3,	7	12	35	38	18*
10	296	7	-2	0	21	22	10*	-8	457	10	-11	-14	166	8	-9	13	105	8	-10
11	207	5	-1	1	377	8	18	-7	219	6	3	-13	187	7	2	H,K=		3,	9
12	0	33	-24*	2	67	3	13	-6	11	28	3*	-12	47	53	9*	-13	48	32	-26*
13	121	6	-2	3	1036	21	26	-5	294	7	11	-11	180	7	6	-12	0	43	-9*
14	200	6	12	4	38	6	-7	-4	871	18	-4	-10	342	8	6	-11	84	12	-0
15	46	19	-7*	5	449	9	9	-3	322	7	3	-9	262	8	1	-10	106	11	12
16	169	6	13	6	95	4	-2	-2	804	17	21	-8	304	8	4	-9	459	11	6
H,K=		3,	2	7	110	4	-1	-1	290	6	-0	-7	306	7	-13	-8	187	9	14
-16	0	44	-46*	8	173	5	-1	0	22	12	20*	-6	55	11	-5*	-7	136	6	-9
-15	67	14	14*	9	613	13	0	1	254	5	5	-5	347	8	0	-6	0	35	-38*
-14	14	40	-8*	10	101	5	-1	2	793	16	24	-4	377	9	-8	-5	101	7	1
-13	62	14	-1*	11	118	5	-3	3	241	6	14	-3	271	6	9	-4	90	7	-2
-12	29	37	-9*	12	13	38	7*	4	692	14	16	-2	425	9	-0	-3	642	14	-3
-11	64	12	1*	13	48	14	6*	5	353	8	18	-1	421	9	2	-2	138	5	2
-10	185	6	-5	14	18	36	-11*	6	14	25	-17*	0	17	26	10*	-1	134	5	1
-9	127	6	-4	15	275	7	10	7	174	4	4	1	423	9	8	0	9	25	-4*
-8	176	5	-7	H,K=		3,	4	8	354	8	-6	2	326	7	11	1	171	5	1
-7	166	7	-9	-15	36	43	-6*	9	48	15	18*	3	290	6	-5	2	223	5	-2
-6	22	26	7*	-14	78	15	-9*	10	344	7	-1	4	438	9	1	3	596	12	12
-5	98	4	10	-13	35	39	-12*	11	213	6	2	5	246	6	3	4	66	8	-6
-4	128	4	-2	-12	15	38	-5*	12	54	17	4*	6	7	27	-8*	5	113	6	6
-3	301	6	-10	-11	104	9	1	13	64	11	5	7	284	7	-3	6	26	30	4*
-2	173	5	13	-10	33	39	-19*	14	164	5	0	8	295	7	6	7	86	7	-3
-1	158	4	-1	-9	185	6	4	15	18	37	7*	9	196	5	-12	8	149	5	2
0	15	23	-4*	-8	114	5	4	H,K=		3,	6	10	235	6	-3	9	382	8	5
1	158	4	4	-7	147	5	-3	-15	27	43	19*	11	127	6	1	10	67	10	3
2	292	6	30	-6	50	16	-19*	-14	48	26	-26*	12	66	15	13*	11	76	17	-3*
3	407	8	-5	-5	108	5	-2	-13	49	23	5*	13	149	8	5	12	44	44	6*
4	183	4	3	-4	299	7	15	-12	29	39	17*	14	124	7	4	13	35	38	22*
5	41	8	11*	-3	211	5	-10	-11	21	38	0*	H,K=		3,	8	H,K=		3,	10
6	64	5	9	-2	284	6	5	-10	125	9	-7	-13	83	12	19	-12	0	47	-37*
7	192	5	-6	-1	35	13	-1*	-9	14	34	3*	-12	43	36	-12*	-11	41	52	-28*
8	174	5	0	0	81	4	7	-8	119	8	-4	-11	0	42	-35*	-10	76	12	15
9	297	6	1	1	82	3	-4	-7	91	6	3	-10	0	39	-24*	-9	29	40	-10*
10	206	5	-5	2	355	7	19	-6	0	31	-9*	-9	95	12	1	-8	109	8	-4
11	103	6	-3	3	303	6	-3	-5	100	5	-0	-8	0	45	-13*	-7	0	38	-25*
12	36	21	14*	4	339	7	13	-4	325	7	4	-7	97	7	9	-6	30	37	-31*
13	122	6	1	5	58	6	8	-3	222	6	6	-6	89	7	-8	-5	127	6	2
14	68	10	-6	6	57	7	10	-2	230	5	3	-5	160	6	-1	-4	148	9	-1
15	158	6	13	7	193	5	6	-1	210	6	6	-4	143	5	1	-3	145	6	6
H,K=		3,	3	8	140	4	-1	0	20	21	13*	-3	237	7	4	-2	134	6	3
-15	364	9	10	9	301	7	-3	1	87	4	7	-2	48	16	3*	-1	0	33	-22*
-14	42	32	-9*	10	161	7	-0	2	267	6	5	-1	103	5	2	0	71	6	-7
-13	120	7	12	11	73	13	-4	3	220	5	-1	0	56	5	3	1	140	4	4
-12	35	38	-15*	12	35	36	24*	4	388	8	-3	1	65	5	0	2	157	6	2

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
3	203	5	2	H,K=		3,	13	8	438	9	0	4	245	5	12	-4	156	5	-10
4	198	5	-1	-8	111	11	1	10	388	8	3	5	748	15	33	-3	50	7	8
5	45	20	-11*	-7	197	10	1	12	309	7	6	6	450	9	15	-2	407	9	-2
6	56	10	2	-6	15	42	14*	14	196	6	5	7	423	9	-5	-1	479	10	-14
7	131	7	4	-5	216	7	-0	H,K=		4,	1	8	20	32	-2*	0	731	15	-24
8	132	7	-2	-4	190	8	-12	-15	29	43	17*	9	33	17	-5*	1	598	12	-9
9	61	12	-17*	-3	243	7	3	-14	119	8	18	10	43	12	3*	2	346	7	-0
10	145	8	-12	-2	206	6	5	-13	105	10	-2	11	375	8	9	3	26	12	7*
11	0	37	-30*	-1	199	7	-4	-12	272	7	14	12	292	7	4	4	35	9	3*
12	12	56	9*	0	15	32	4*	-11	173	6	12	13	283	7	-1	5	620	13	-1
H,K=		3,	11	1	208	6	-5	-10	154	6	6	14	56	15	4*	6	538	11	-8
-11	70	17	13*	2	152	6	6	-9	0	32	-13*	15	31	37	25*	7	460	10	8
-10	288	8	19	3	216	6	-4	-8	149	5	-7	H,K=		4,	3	8	30	17	5*
-9	0	52	-47*	4	248	6	6	-7	169	5	2	-15	26	42	20*	9	0	29	-1*
-8	307	8	-12	5	178	7	1	-6	407	9	-3	-14	0	55	-5*	10	50	10	27*
-7	20	39	-11*	6	62	15	0*	-5	163	4	3	-13	259	7	15	11	314	7	-0
-6	0	58	-6*	7	194	6	-4	-4	115	4	1	-12	0	39	-20*	12	358	8	-4
-5	95	9	-9	8	66	12	-2*	-3	119	4	10	-11	245	7	3	13	262	7	7
-4	412	10	-7	H,K=		3,	14	-2	152	4	4	-10	33	35	-0*	14	0	44	-20*
-3	57	12	35*	-7	6	44	-51*	-1	112	3	-19	-9	34	24	13*	15	4	49	-11*
-2	421	10	16	-6	66	18	4*	0	444	9	19	-8	124	5	-1	H,K=		4,	5
-1	125	6	2	-5	58	28	9*	1	127	3	-18	-7	344	8	-11	-15	34	45	27*
0	33	20	11*	-4	0	42	-9*	2	165	4	12	-6	53	8	11	-14	109	10	4
1	59	21	6*	-3	151	8	-6	3	32	9	5*	-5	423	9	-1	-13	75	14	1*
2	418	9	12	-2	56	22	-1*	4	54	6	14	-4	86	4	2	-12	285	8	3
3	12	33	-22*	-1	65	15	-0*	5	45	6	8	-3	31	13	-4*	-11	73	12	0
4	389	8	-2	0	79	9	-3	6	248	5	8	-2	147	4	5	-10	137	6	7
5	198	5	-8	1	80	10	19	7	129	4	-3	-1	250	5	-14	-9	16	34	-11*
6	36	20	16*	2	9	35	-13*	8	116	5	-1	0	92	3	12	-8	173	5	11
7	46	16	15*	3	169	6	2	9	40	15	16*	1	331	7	9	-7	0	46	-17*
8	268	6	-1	4	61	12	3*	10	63	8	-1	2	79	3	4	-6	394	9	1
9	51	15	14*	5	81	12	17	11	43	17	-6*	3	36	9	10*	-5	198	5	-4
10	226	6	-4	6	67	12	9	12	94	7	7	4	14	22	-11*	-4	243	6	6
11	86	11	-7	H,K=		3,	15	13	41	43	21*	5	258	6	14	-3	80	5	3
H,K=		3,	12	-4	154	8	11	14	65	11	4	6	35	10	21*	-2	177	5	-6
-10	93	12	9	-3	282	8	-6	15	22	48	18*	7	221	5	3	-1	145	4	3
-9	82	18	8*	-2	134	10	15	H,K=		4,	2	8	49	8	6	0	263	6	-7
-8	72	13	-1	-1	63	16	13*	-15	11	52	9*	9	53	10	1*	1	145	4	1
-7	76	13	-14	0	43	47	28*	-14	46	24	4*	10	0	36	-6*	2	123	4	2
-6	0	40	-11*	1	17	36	-16*	-13	251	7	5	11	93	7	8	3	112	4	6
-5	0	46	-59*	2	135	6	-6	-12	239	7	4	12	7	41	-4*	4	268	6	-2
-4	151	7	0	3	273	8	3	-11	348	9	5	13	112	7	4	5	113	4	5
-3	119	8	-9	4	74	11	-8	-10	68	9	-5	14	0	38	-23*	6	242	5	5
-2	150	6	3	H,K=		4,	0	-9	17	33	-31*	15	44	23	1*	7	30	30	7*
-1	110	8	6	-16	165	11	1	-8	0	31	-22*	H,K=		4,	4	8	159	5	3
0	73	7	13	-14	219	7	4	-7	397	9	2	-15	84	12	51	9	30	25	1*
1	34	19	0*	-12	301	8	2	-6	486	10	-2	-14	57	61	28*	10	89	6	-2
2	172	5	2	-10	306	7	7	-5	791	16	15	-13	279	7	1	11	56	11	17*
3	150	5	3	-8	399	9	5	-4	207	5	5	-12	369	9	-5	12	104	10	2
4	194	5	-7	-6	540	11	9	-3	103	4	4	-11	284	7	-6	13	78	13	15
5	99	7	-1	-4	643	13	-20	-2	69	4	-0	-10	38	22	4*	14	98	12	9
6	53	14	-2*	-2	314	7	-6	-1	685	14	-5	-9	41	18	-18*	H,K=		4,	6
7	0	37	-11*	0	220	5	-8	0	306	6	-24	-8	33	21	11*	-14	155	9	11
8	137	6	6	2	521	11	4	1	567	12	-14	-7	402	9	-5	-13	19	43	-37*
9	79	15	-23*	4	706	14	4	2	94	3	0	-6	512	11	-10	-12	254	7	-2
10	115	8	-5	6	644	13	15	3	112	3	4	-5	527	12	-15	-11	104	9	-6

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-10	216	8	3	-13	172	8	11	-10	82	12	5	1	217	6	5	0	17	19	1*
-9	46	16	33*	-12	149	8	4	-9	0	40	-27*	2	241	6	7	2	585	12	8
-8	314	8	6	-11	255	7	1	-8	59	16	9*	3	66	9	-6	4	598	12	9
-7	85	7	7	-10	55	17	-11*	-7	264	8	3	4	275	7	3	6	79	5	-3
-6	435	9	-4	-9	36	37	26*	-6	397	9	8	5	148	6	-4	8	502	10	13
-5	126	6	4	-8	22	42	-26*	-5	177	8	6	6	251	7	-1	10	452	10	-11
-4	441	9	-2	-7	349	9	1	-4	131	6	11	7	109	7	3	12	49	21	22*
-3	24	28	-24*	-6	147	6	-14	-3	32	34	20*	8	224	6	3	14	209	8	5
-2	534	12	5	-5	455	10	-6	-2	99	7	5	9	0	38	-24*	H,K=	5,		1
-1	130	4	9	-4	164	5	-4	-1	263	6	-8	H,K=	4,	13	-15	86	12		25
0	544	11	-1	-3	0	31	-19*	0	509	11	3	-8	30	52	-6*	-14	29	41	21*
1	223	5	-1	-2	47	13	-1*	1	302	7	11	-7	158	8	18	-13	69	13	10*
2	531	11	19	-1	494	12	-7	2	188	5	-12	-6	103	10	-10	-12	33	38	28*
3	72	5	1	0	277	6	-1	3	19	32	-30*	-5	96	10	-13	-11	13	36	-11*
4	483	10	9	1	465	10	-7	4	85	6	6	-4	87	19	-7*	-10	44	21	9*
5	130	4	0	2	66	7	3	5	202	6	-2	-3	67	15	8*	-9	40	19	0*
6	462	10	13	3	17	27	-10*	6	411	9	6	-2	27	46	-4*	-8	52	11	10*
7	160	5	-4	4	85	7	-7	7	233	6	9	-1	155	8	2	-7	138	7	-13
8	318	15	2	5	459	10	6	8	105	8	11	0	83	7	5	-6	0	28	-19*
9	37	22	31*	6	179	6	10	9	41	19	33*	1	92	8	-4	-5	181	5	2
10	263	6	8	7	326	7	-0	10	59	12	17*	2	108	8	4	-4	81	5	-1
11	74	16	-26*	8	102	6	12	11	170	6	-2	3	0	40	-22*	-3	49	6	8
12	289	9	1	9	21	37	4*	H,K=	4,		11	4	39	43	23*	-2	82	4	-3
13	0	44	-42*	10	0	39	-14*	-11	74	15	7*	5	123	6	2	-1	229	5	1
14	154	9	-6	11	266	7	2	-10	62	19	13*	6	108	13	-1	0	54	8	5
H,K=	4,		7	12	154	8	14	-9	55	19	11*	7	60	13	-5*	1	320	7	-8
-14	65	22	-4*	13	193	9	0	-8	117	9	-12	8	94	9	1	2	189	4	4
-13	113	10	-6	H,K=	4,		9	-7	23	39	6*	H,K=	4,		14	3	50	5	4
-12	165	7	-4	-12	31	44	-5*	-6	214	7	-4	-6	0	49	-28*	4	151	4	-7
-11	143	7	6	-11	175	10	3	-5	32	39	-4*	-5	248	8	6	5	241	5	7
-10	88	9	1	-10	0	41	-18*	-4	112	7	5	-4	134	8	3	6	32	13	2*
-9	0	36	-10*	-9	9	39	3*	-3	136	8	4	-3	0	41	-2*	7	169	5	-4
-8	99	9	4	-8	68	13	-1*	-2	156	6	-15	-2	32	41	5*	8	148	4	-6
-7	179	6	-7	-7	190	6	10	-1	0	35	-12*	-1	258	7	10	9	35	14	22*
-6	235	6	-1	-6	111	9	15	0	258	6	-10	0	45	26	-13*	10	89	8	-8
-5	136	5	8	-5	229	7	-1	1	49	15	34*	1	264	6	0	11	159	5	-0
-4	214	5	8	-4	51	16	-19*	2	116	6	-4	2	79	11	-7	12	73	18	13*
-3	55	9	4	-3	24	33	8*	3	97	7	1	3	43	18	41*	13	109	10	6
-2	131	5	-3	-2	115	6	9	4	99	6	-0	4	75	18	14*	14	110	10	0
-1	243	6	-2	-1	171	5	0	5	16	38	5*	5	252	6	-1	15	53	37	41*
0	249	6	-9	0	161	4	3	6	170	7	4	6	62	15	14*	H,K=	5,		2
1	167	5	4	1	193	5	-7	7	77	13	5	H,K=	4,	15	-15	261	8		15
2	196	5	1	2	24	27	1*	8	68	10	-14	-3	0	43	-12*	-14	91	12	-14
3	148	4	9	3	24	28	10*	9	47	20	-16*	-2	45	38	-17*	-13	179	7	-6
4	81	5	13	4	66	7	0	10	0	38	-8*	-1	88	13	-1	-12	18	38	-3*
5	128	4	4	5	125	5	5	H,K=	4,		12	0	24	35	-15*	-11	268	7	-2
6	157	5	-1	6	7	39	-12*	-9	0	44	-35*	1	111	7	9	-10	211	7	-8
7	104	5	2	7	118	5	0	-8	239	9	3	2	54	25	33*	-9	556	12	-0
8	63	8	-3	8	21	32	10*	-7	69	14	-4*	H,K=	5,		0	-8	250	6	-7
9	56	10	19	9	60	10	19	-6	255	7	-16	-14	307	8	23	-7	289	9	-4
10	30	37	-8*	10	24	37	-14*	-5	200	7	4	-12	40	43	36*	-6	12	28	4*
11	61	11	-6	11	55	18	-12*	-4	230	7	-6	-10	474	11	-7	-5	423	9	4
12	61	20	-22*	12	0	50	-14*	-3	31	41	14*	-8	555	12	-0	-4	308	7	6
13	0	50	-18*	H,K=	4,		10	-2	263	7	2	-6	34	14	4*	-3	873	18	-11
14	46	48	-13*	-12	251	8	11	-1	172	6	2	-4	602	13	-7	-2	423	9	3
H,K=	4,		8	-11	122	9	13	0	295	7	-3	-2	542	11	-6	-1	231	5	-11

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
0	32	6	2*	-8	291	8	0	-12	0	47	-9*	-13	161	10	19	-9	218	10	-1
1	239	5	-7	-7	219	8	-4	-11	20	53	2*	-12	21	43	-11*	-8	277	7	-3
2	441	9	9	-6	0	40	-4*	-10	383	9	14	-11	144	8	-10	-7	102	11	-9
3	879	18	23	-5	381	8	-17	-9	112	10	9	-10	60	31	12*	-6	26	37	-24*
4	292	6	15	-4	590	12	1	-8	370	10	-3	-9	394	9	3	-5	231	6	-2
5	387	8	2	-3	847	18	8	-7	69	10	-18	-8	61	13	-12*	-4	288	9	2
6	51	7	-2	-2	445	10	-4	-6	19	32	-7*	-7	247	6	1	-3	291	7	-10
7	274	6	11	-1	412	9	14	-5	110	5	6	-6	30	37	8*	-2	373	9	3
8	201	5	6	0	19	21	17*	-4	673	14	-1	-5	230	6	-5	-1	215	6	3
9	462	10	4	1	381	8	12	-3	140	5	-3	-4	87	7	4	0	23	28	-4*
10	192	5	-4	2	377	8	-4	-2	578	12	-10	-3	608	13	7	1	169	6	-7
11	242	6	-3	3	796	16	26	-1	92	5	2	-2	116	7	-2	2	340	8	5
12	46	22	40*	4	563	12	0	0	22	23	7*	-1	304	7	-3	3	324	7	11
13	136	9	5	5	336	7	0	1	85	4	-1	0	0	26	-18*	4	267	6	-7
14	73	16	9*	6	16	26	16*	2	550	11	-5	1	307	7	-3	5	210	6	3
15	196	13	18	7	209	5	5	3	115	4	-1	2	141	4	6	6	50	12	2*
H,K=		5,	3	8	239	6	4	4	618	13	3	3	569	12	6	7	61	11	-0
-15	96	22	32*	9	348	7	5	5	96	5	2	4	81	6	-7	8	240	6	1
-14	0	44	-3*	10	201	5	-3	6	37	23	4*	5	210	6	4	9	212	8	9
-13	97	10	2	11	216	6	5	7	106	6	1	6	32	21	-12*	10	179	6	-2
-12	0	39	-8*	12	40	41	37*	8	304	7	3	7	204	6	-4	11	102	8	-1
-11	85	9	17	13	100	11	6	9	53	11	-4*	8	67	9	-1	H,K=		5,	11
-10	10	35	-5*	14	166	8	3	10	320	7	10	9	333	7	2	-10	24	48	5*
-9	139	6	-9	H,K=		5,	5	11	0	34	-9*	10	64	10	-4	-9	96	11	-10
-8	33	35	26*	-14	0	46	-2*	12	0	43	-23*	11	137	9	-10	-8	6	41	-37*
-7	82	7	3	-13	50	23	21*	13	73	15	-2*	12	36	45	-4*	-7	0	52	-22*
-6	68	7	2	-12	57	16	10*	14	193	8	6	13	110	11	13	-6	0	45	-14*
-5	29	32	-7*	-11	93	10	-20	H,K=		5,	7	H,K=		5,	9	-5	137	11	-7
-4	27	25	5*	-10	25	43	21*	-13	107	10	8	-12	40	44	6*	-4	66	12	-0
-3	220	5	17	-9	78	9	8	-12	63	14	30*	-11	84	12	2	-3	114	10	-2
-2	157	4	12	-8	135	7	-6	-11	37	39	17*	-10	46	23	43*	-2	119	7	7
-1	25	16	-1*	-7	53	13	-5*	-10	37	38	11*	-9	58	16	-9*	-1	0	36	-10*
0	150	4	1	-6	34	35	2*	-9	69	11	18	-8	59	15	-8*	0	14	30	10*
1	58	4	13	-5	191	5	-5	-8	36	30	3*	-7	65	12	-11	1	139	5	-3
2	166	4	16	-4	40	11	26*	-7	154	6	10	-6	51	15	4*	2	105	6	2
3	448	9	6	-3	26	28	-2*	-6	92	7	7	-5	0	40	-16*	3	80	7	6
4	94	4	0	-2	160	5	-4	-5	85	7	-4	-4	40	18	36*	4	114	6	-0
5	46	7	3	-1	68	6	4	-4	110	6	2	-3	194	6	-7	5	4	33	-16*
6	122	4	-4	0	63	6	-5	-3	70	8	-6	-2	108	6	-4	6	19	34	-2*
7	29	22	-9*	1	219	5	1	-2	55	9	5	-1	48	24	-10*	7	85	8	-7
8	40	15	-1*	2	152	4	-2	-1	259	6	-13	0	119	4	1	8	98	8	-5
9	315	7	-7	3	33	15	-1*	0	31	13	8*	1	0	28	-10*	9	76	10	4
10	57	14	6*	4	66	46	-17*	1	159	4	-4	2	33	16	-9*	10	68	12	6
11	57	11	3*	5	135	5	-0	2	166	5	5	3	221	6	5	H,K=		5,	12
12	0	42	-12*	6	36	21	19*	3	26	29	-7*	4	82	7	-14	-9	173	8	22
13	0	43	-30*	7	175	5	-7	4	122	4	6	5	17	30	-11*	-8	215	8	-7
14	0	47	-3*	8	147	5	1	5	205	5	2	6	69	8	1	-7	114	9	9
15	152	9	6	9	29	35	-13*	6	27	28	12*	7	32	27	11*	-6	29	48	4*
H,K=		5,	4	10	116	6	1	7	148	5	4	8	56	16	-14*	-5	55	33	31*
-15	222	8	12	11	88	10	-5	8	113	5	-1	9	150	6	-0	-4	356	8	6
-14	200	8	7	12	0	42	-26*	9	0	32	-23*	10	74	13	-7	-3	205	6	13
-13	100	10	-8	13	80	13	9	10	57	11	-3*	11	31	36	-5*	-2	330	8	-1
-12	0	40	-15*	14	121	10	9	11	88	8	2	12	49	28	28*	-1	23	38	-20*
-11	253	7	6	H,K=		5,	6	12	55	40	10*	H,K=		5,	10	0	43	17	28*
-10	291	7	5	-14	263	8	16	13	118	10	5	-11	114	9	7	1	74	9	5
-9	410	9	-0	-13	78	15	1*	H,K=		5,	8	-10	229	7	1	2	299	7	-3

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
3	163	5	-3	-11	171	7	-2	14	121	10	-4	10	149	5	3	7	51	11	-3*
4	328	7	8	-10	235	6	-1	H,K=		6,	3	11	93	8	-5	8	50	11	1*
5	74	8	39	-9	0	42	-3*	-14	0	44	-5*	12	49	32	-8*	9	30	32	17*
6	39	22	-2*	-8	199	6	4	-13	194	7	-6	13	145	8	4	10	33	34	-12*
7	100	8	-0	-7	279	7	-3	-12	62	17	6*	14	84	14	9	11	57	11	17*
8	183	7	2	-6	428	10	2	-11	266	7	-11	H,K=		6,	5	12	186	7	-5
9	111	8	2	-5	249	6	3	-10	0	36	-13*	-14	62	21	-16*	13	0	66	-21*
H,K=		5,	13	-4	271	6	-0	-9	0	35	-28*	-13	66	17	-3*	H,K=		6,	7
-7	127	12	-2	-3	9	26	-6*	-8	0	33	-7*	-12	226	8	7	-13	104	20	11*
-6	28	42	-18*	-2	102	5	-4	-7	376	8	1	-11	44	24	-6*	-12	176	7	4
-5	41	45	37*	-1	278	6	-10	-6	98	8	-13	-10	162	6	1	-11	137	8	-7
-4	49	22	6*	0	489	10	-9	-5	408	9	-8	-9	17	37	-10*	-10	76	11	7
-3	14	54	2*	1	329	7	-8	-4	0	29	-17*	-8	184	6	-2	-9	85	10	3
-2	18	39	6*	2	127	4	-5	-3	51	8	-7	-7	136	6	16	-8	99	8	9
-1	121	8	-5	3	25	14	15*	-2	73	8	5	-6	441	10	-0	-7	199	8	1
0	74	8	12	4	336	7	2	-1	469	10	10	-5	141	5	3	-6	288	7	0
1	18	35	-30*	5	250	6	7	0	152	4	15	-4	258	6	5	-5	290	7	3
2	64	14	10*	6	426	9	1	1	473	10	-7	-3	24	36	-3*	-4	119	6	-7
3	35	36	16*	7	269	6	-5	2	113	4	-6	-2	307	7	7	-3	64	16	12*
4	32	43	17*	8	228	6	-9	3	55	6	-7	-1	182	5	7	-2	186	6	1
5	117	7	-2	9	21	30	15*	4	65	6	3	0	582	12	-8	-1	282	7	-0
6	55	21	0*	10	269	6	-4	5	451	10	4	1	148	4	3	0	371	8	-4
7	82	14	-13	11	212	6	3	6	116	4	1	2	310	7	-5	1	368	8	-10
H,K=		5,	14	12	277	7	1	7	421	9	-3	3	119	5	3	2	133	5	1
-5	134	9	6	13	118	9	3	8	56	12	-4*	4	261	6	7	3	35	15	3*
-4	0	42	-4*	14	137	8	25	9	5	31	-9*	5	176	5	6	4	198	5	-1
-3	319	8	-2	H,K=		6,	2	10	31	30	25*	6	467	10	4	5	239	6	3
-2	54	19	34*	-15	15	44	12*	11	307	7	-2	7	110	5	12	6	322	7	2
-1	154	11	8	-14	179	7	-1	12	62	15	19*	8	194	5	7	7	239	6	1
0	33	37	19*	-13	237	7	12	13	196	9	-3	9	31	32	23*	8	85	7	-0
1	146	7	1	-12	112	8	6	14	54	48	46*	10	162	5	-2	9	0	32	-24*
2	19	41	0*	-11	238	7	-6	H,K=		6,	4	11	97	7	8	10	114	6	1
3	287	8	-5	-10	196	6	-5	-14	139	9	15	12	261	7	4	11	168	6	13
4	34	37	20*	-9	72	9	16	-13	226	7	18	13	70	16	0*	12	193	9	2
5	138	7	10	-8	178	5	-3	-12	157	9	-2	14	102	11	26	13	134	9	7
H,K=		6,	0	-7	366	9	3	-11	243	7	4	H,K=		6,	6	H,K=		6,	8
-14	86	13	14	-6	83	6	5	-10	146	7	-1	-13	73	16	15*	-12	35	42	24*
-12	338	8	7	-5	390	9	-5	-9	17	35	4*	-12	327	8	2	-11	181	7	4
-10	125	7	-10	-4	259	6	4	-8	196	6	-7	-11	73	12	-2	-10	90	10	5
-8	185	6	-6	-3	87	6	1	-7	315	7	-1	-10	43	27	19*	-9	39	46	-4*
-6	659	14	-20	-2	248	6	-2	-6	193	6	7	-9	36	33	3*	-8	89	9	9
-4	37	12	-11*	-1	320	7	2	-5	420	9	-12	-8	103	7	13	-7	257	7	-2
-2	161	4	-11	0	101	4	1	-4	219	5	8	-7	167	6	2	-6	0	36	-12*
0	739	15	-5	1	445	9	-2	-3	22	28	19*	-6	500	11	-7	-5	258	6	2
2	102	4	-0	2	396	8	-4	-2	317	8	9	-5	19	32	-8*	-4	173	6	-8
4	39	10	11*	3	30	13	3*	-1	354	8	-17	-4	139	5	2	-3	53	12	-8*
6	427	9	12	4	313	7	5	0	128	4	-2	-3	49	15	3*	-2	171	5	-11
8	126	5	-2	5	313	7	1	1	275	6	-0	-2	86	6	-8	-1	339	9	-8
10	56	10	-2	6	33	12	-5*	2	327	7	-1	-1	197	6	-2	0	27	21	-4*
12	191	7	0	7	233	5	-3	3	31	11	10*	0	499	10	-0	1	367	8	-6
14	65	17	33*	8	217	5	-10	4	295	6	9	1	104	4	3	2	248	6	2
H,K=		6,	1	9	58	8	9	5	291	6	9	2	63	9	3	3	32	17	7*
-15	0	45	-4*	10	162	5	-6	6	89	5	9	3	73	5	3	4	0	34	-16*
-14	114	10	4	11	135	6	-0	7	232	5	6	4	59	7	-3	5	209	5	-2
-13	97	12	1	12	0	41	-26*	8	150	6	-5	5	43	17	15*	6	35	18	14*
-12	240	7	-3	13	118	9	10	9	47	12	-22*	6	402	9	1	7	189	6	-0

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
8	140	5	10	-6	297	7	-5	H,K=		7,	0	-5	33	20	0*	-8	39	21	23*
9	44	45	9*	-5	56	58	10*	-14	66	17	29*	-4	81	6	-13	-7	70	9	5
10	45	16	37*	-4	178	9	-6	-12	45	38	4*	-3	49	9	8	-6	26	33	-23*
11	119	10	11	-3	60	14	-7*	-10	132	7	3	-2	82	6	-5	-5	31	31	8*
12	47	34	34*	-2	158	6	-6	-8	110	7	-0	-1	28	21	-2*	-4	94	7	10
H,K=		6,	9	-1	28	36	13*	-6	65	9	-5	0	64	4	5	-3	29	29	22*
-11	177	9	19	0	378	9	6	-4	22	29	-4*	1	31	15	-6*	-2	22	29	10*
-10	77	12	14	1	31	32	4*	-2	68	6	10	2	38	9	5*	-1	44	13	1*
-9	0	40	-12*	2	188	7	-2	0	17	22	-10*	3	30	15	-9*	0	9	23	2*
-8	43	23	20*	3	66	9	7	2	39	8	8*	4	51	7	0	1	117	4	-1
-7	242	7	0	4	175	5	1	4	131	4	-1	5	140	4	1	2	47	7	8
-6	142	7	-3	5	34	25	26*	6	70	8	-10	6	71	6	0	3	16	26	-16*
-5	278	7	6	6	294	7	4	8	68	7	9	7	59	12	-5*	4	25	26	9*
-4	114	9	-3	7	0	36	-4*	10	48	13	7*	8	7	41	-18*	5	32	16	5*
-3	23	35	9*	8	141	6	6	12	22	41	-18*	9	51	11	3*	6	19	29	10*
-2	47	17	5*	9	32	38	-7*	14	109	11	9	10	19	35	-15*	7	28	32	3*
-1	336	8	4	H,K=		6,	12	H,K=		7,	1	11	27	34	26*	8	52	10	-6*
0	217	5	-8	-8	30	49	-13*	-14	188	8	0	12	9	41	-17*	9	28	34	-5*
1	324	7	0	-7	80	18	1*	-13	44	31	11*	13	47	48	-13*	10	60	11	17
2	147	5	-8	-6	267	7	4	-12	51	18	17*	14	36	45	1*	11	19	39	-13*
3	31	32	14*	-5	91	10	-7	-11	71	12	-1	H,K=		7,	3	12	0	45	-2*
4	32	24	-9*	-4	83	11	3	-10	403	9	5	-14	0	46	-52*	13	0	44	-26*
5	313	7	3	-3	0	40	-34*	-9	384	9	4	-13	232	8	1	H,K=		7,	5
6	136	5	-2	-2	52	16	14*	-8	473	12	-13	-12	20	41	-28*	-13	0	44	-42*
7	238	7	5	-1	90	13	6	-7	23	32	-21*	-11	256	7	7	-12	58	16	28*
8	85	8	-14	0	241	6	0	-6	48	11	29*	-10	36	41	-16*	-11	17	43	4*
9	13	44	-3*	1	33	35	-1*	-5	50	10	16*	-9	414	10	4	-10	349	8	4
10	0	37	-27*	2	84	7	11	-4	548	12	-5	-8	24	35	-12*	-9	198	6	-1
11	190	6	2	3	60	10	6	-3	557	12	6	-7	383	8	-7	-8	320	7	-1
H,K=		6,	10	4	28	34	-7*	-2	568	12	11	-6	30	32	-2*	-7	0	34	-6*
-11	137	9	2	5	89	13	-5	-1	41	10	15*	-5	439	11	3	-6	44	15	18*
-10	142	8	5	6	233	6	-2	0	10	26	-13*	-4	133	5	7	-5	22	33	-16*
-9	0	41	-7*	7	18	37	-3*	1	36	10	-9*	-3	562	12	-4	-4	511	11	-1
-8	165	7	7	8	52	21	6*	2	547	11	-1	-2	86	6	-4	-3	317	7	5
-7	168	7	-0	H,K=		6,	13	3	575	12	-8	-1	442	10	6	-2	554	12	-9
-6	141	8	5	-6	129	8	3	4	509	11	2	0	54	7	2	-1	48	10	2*
-5	172	6	-1	-5	207	7	-0	5	54	9	-15	1	464	10	-10	0	4	26	3*
-4	137	7	-11	-4	39	48	35*	6	0	37	-5*	2	31	11	7*	1	42	10	-1*
-3	24	39	18*	-3	23	43	-13*	7	86	5	-1	3	482	10	10	2	498	10	-0
-2	278	7	2	-2	115	9	0	8	422	9	1	4	100	5	3	3	349	8	9
-1	261	7	-0	-1	169	8	-8	9	349	8	1	5	395	8	10	4	548	12	-3
0	162	5	0	0	132	6	1	10	367	8	0	6	46	11	-2*	5	49	9	-6*
1	257	6	-7	1	215	6	2	11	66	9	10	7	343	7	-1	6	28	29	11*
2	178	5	-2	2	45	17	-8*	12	56	18	9*	8	43	13	14*	7	49	11	42*
3	95	7	-5	3	59	12	35*	13	27	44	16*	9	324	7	2	8	301	7	-5
4	169	6	-4	4	74	9	2	14	155	8	12	10	36	21	17*	9	210	5	7
5	91	8	-3	5	174	6	-4	H,K=		7,	2	11	228	6	-2	10	260	7	-1
6	64	9	11	6	132	7	-1	-14	0	44	-21*	12	18	42	17*	11	29	35	12*
7	159	6	-2	H,K=		6,	14	-13	39	42	14*	13	188	8	10	12	28	50	6*
8	106	7	9	-3	38	54	36*	-12	0	40	-35*	H,K=		7,	4	13	0	54	-22*
9	52	15	-6*	-2	54	23	22*	-11	61	14	-11*	-14	7	47	-30*	H,K=		7,	6
10	106	9	7	-1	147	12	6	-10	112	11	6	-13	51	22	5*	-13	0	44	-29*
H,K=		6,	11	0	15	37	-24*	-9	37	27	-0*	-12	16	41	-11*	-12	39	43	22*
-9	0	42	-33*	1	109	7	-2	-8	70	9	3	-11	39	40	1*	-11	42	30	20*
-8	121	9	3	2	122	9	11	-7	72	8	-10	-10	0	38	-41*	-10	55	16	-0*
-7	40	34	4*	3	36	30	34*	-6	0	32	-11*	-9	87	8	8	-9	33	37	31*

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-8	0	37	-38*	-4	0	42	-30*	6	49	14	6*	-4	104	5	5	5	300	7	-1
-7	103	7	-1	-3	0	34	-3*	7	47	15	4*	-2	59	8	-0	6	60	9	-3
-6	0	37	-3*	-2	48	26	-8*	8	48	54	24*	0	645	14	9	7	281	6	-6
-5	135	9	-0	-1	29	34	-4*	9	52	21	26*	2	64	8	-4	8	89	9	-6
-4	100	11	-14	0	59	7	6	H,K=	7,	11		4	20	28	-10*	9	26	38	-11*
-3	62	9	3	1	28	35	11*	-9	80	25	-3*	6	419	9	2	10	99	8	-10
-2	28	31	-1*	2	55	9	-10	-8	285	8	10	8	66	9	6	11	206	6	1
-1	35	26	19*	3	0	30	-21*	-7	63	17	5*	10	145	6	4	12	0	43	-17*
0	48	15	-3*	4	81	6	6	-6	4	41	-5*	12	289	9	1	13	142	9	1
1	97	4	-5	5	0	31	-11*	-5	0	40	-17*	H,K=	8,	1		H,K=	8,	3	
2	23	26	7*	6	0	44	-19*	-4	338	8	9	-13	108	10	-10	-13	245	8	7
3	48	9	7*	7	59	10	-9	-3	65	13	10*	-12	241	9	2	-12	59	17	11*
4	0	29	-7*	8	0	34	-8*	-2	357	8	2	-11	154	8	10	-11	302	10	-2
5	40	11	30*	9	44	21	-0*	-1	28	53	6*	-10	159	7	-1	-10	10	37	3*
6	32	19	1*	10	6	36	-21*	0	34	22	13*	-9	42	22	-5*	-9	17	48	8*
7	32	35	-5*	11	31	37	26*	1	33	24	21*	-8	274	8	-11	-8	0	41	-13*
8	75	9	-7	H,K=	7,	9		2	337	7	1	-7	218	6	-7	-7	367	9	-9
9	37	19	8*	-11	199	7	8	3	65	11	4	-6	412	9	2	-6	53	12	5*
10	0	34	-16*	-10	108	14	11	4	310	7	5	-5	244	6	-9	-5	412	9	0
11	47	27	9*	-9	288	7	4	5	40	41	7*	-4	223	6	-2	-4	33	38	0*
12	51	25	21*	-8	149	7	0	6	22	36	6*	-3	36	15	22*	-3	25	30	19*
H,K=	7,		7	-7	255	7	8	7	58	16	-10*	-2	251	6	-8	-2	78	7	1
-12	41	43	9*	-6	61	13	14*	8	229	6	4	-1	324	7	-10	-1	452	10	-5
-11	43	37	-6*	-5	302	8	10	H,K=	7,	12		0	543	11	-12	0	47	11	6*
-10	222	7	-9	-4	141	6	13	-7	53	23	10*	1	275	6	-2	1	378	8	-4
-9	371	9	-5	-3	343	8	-0	-6	51	22	23*	2	239	5	-4	2	30	36	-19*
-8	288	7	3	-2	183	9	6	-5	50	24	4*	3	39	11	2*	3	0	26	-13*
-7	78	10	-15	-1	390	9	1	-4	66	13	10*	4	180	5	1	4	40	11	20*
-6	40	23	-13*	0	0	29	-3*	-3	44	45	35*	5	208	5	11	5	363	8	3
-5	95	8	-3	1	333	7	-8	-2	0	41	-36*	6	329	7	-4	6	49	10	-16*
-4	363	9	-10	2	112	5	-12	-1	100	9	14	7	161	5	2	7	280	6	-1
-3	553	12	11	3	361	8	6	0	43	18	16*	8	223	6	1	8	81	7	-9
-2	382	8	-8	4	100	7	0	1	40	19	15*	9	0	36	-12*	9	46	14	8*
-1	149	6	-0	5	268	6	-1	2	0	36	-4*	10	68	9	5	10	28	49	7*
0	27	21	0*	6	0	33	-18*	3	38	22	27*	11	75	9	-18	11	157	6	7
1	122	4	-5	7	200	6	-8	4	36	38	-6*	12	125	9	-10	12	6	43	-23*
2	398	8	-8	8	114	9	12	5	66	19	-2*	13	79	18	-12*	13	149	9	-1
3	467	10	5	9	252	7	0	6	30	36	10*	H,K=	8,	2		H,K=	8,	4	
4	318	7	8	10	80	9	6	7	11	44	2*	-13	124	9	8	-13	54	25	-13*
5	106	7	0	H,K=	7,	10		H,K=	7,	13		-12	36	51	1*	-12	0	59	-17*
6	16	32	-19*	-10	51	26	-0*	-5	71	16	7*	-11	146	10	-14	-11	93	10	3
7	78	7	9	-9	54	42	12*	-4	143	8	9	-10	71	21	2*	-10	153	7	-14
8	253	6	14	-8	0	41	-9*	-3	338	8	14	-9	0	37	-38*	-9	0	42	-9*
9	300	7	0	-7	57	22	-6*	-2	135	8	2	-8	153	6	10	-8	181	7	-2
10	228	6	1	-6	40	29	9*	-1	50	23	-20*	-7	262	8	-13	-7	201	6	-8
11	44	20	-4*	-5	24	43	20*	0	13	34	-2*	-6	31	38	-3*	-6	92	8	-17
12	17	45	-27*	-4	0	37	-7*	1	81	8	10	-5	231	7	-3	-5	183	6	-7
H,K=	7,		8	-3	47	19	-15*	2	144	7	-3	-4	182	5	-0	-4	277	7	2
-12	0	45	-25*	-2	88	9	11	3	306	7	1	-3	43	12	3*	-3	0	35	-16*
-11	75	40	2*	-1	72	11	1	4	111	10	-1	-2	223	6	-6	-2	113	6	-2
-10	0	50	-23*	0	80	7	-5	5	65	17	5*	-1	338	8	1	-1	282	6	6
-9	36	57	11*	1	41	18	9*	H,K=	8,		0	0	130	4	1	0	62	6	-2
-8	83	10	-2	2	49	23	3*	-12	259	10	-4	1	356	8	-8	1	236	5	-6
-7	0	49	-19*	3	24	37	-7*	-10	136	7	-3	2	220	5	-8	2	182	5	-6
-6	60	25	-10*	4	28	33	-5*	-8	34	35	1*	3	0	26	-15*	3	75	6	1
-5	78	9	-4	5	69	10	6	-6	460	11	6	4	156	5	10	4	236	6	3

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
5	201	5	-1	9	28	33	8*	-6	92	10	-6	-1	44	44	-14*	-11	120	9	-1
6	168	5	-4	10	64	13	-9*	-5	274	8	-7	0	238	6	8	-10	117	8	2
7	212	6	1	11	31	40	4*	-4	47	20	-14*	1	89	9	-13	-9	384	9	2
8	176	6	-0	12	201	9	-5	-3	23	37	-13*	2	49	15	29*	-8	160	6	-7
9	32	40	3*	H,K=		8,	7	-2	90	8	5	3	21	45	5*	-7	230	6	2
10	129	6	-11	-11	175	9	19	-1	331	8	-5	4	50	14	27*	-6	24	35	-19*
11	138	6	-3	-10	79	12	-8	0	73	10	3	5	60	13	-6*	-5	206	6	-3
12	67	16	5*	-9	21	41	-1*	1	385	8	5	H,K=		8,	13	-4	166	6	-2
H,K=		8,	5	-8	124	11	-26	2	43	14	30*	-2	52	56	14*	-3	465	10	-1
-12	271	9	10	-7	283	7	12	3	13	32	-16*	-1	173	7	15	-2	218	6	-2
-11	88	11	-5	-6	290	7	-10	4	66	9	5	0	142	7	11	-1	293	7	5
-10	119	8	-7	-5	206	8	3	5	178	5	-8	1	103	7	-9	0	12	30	9*
-9	53	15	47*	-4	101	7	-2	6	69	10	2	2	101	7	10	1	280	6	-10
-8	173	8	-4	-3	0	37	-8*	7	224	6	-6	H,K=		9,	0	2	211	5	-3
-7	134	6	3	-2	169	6	-7	8	38	43	24*	-12	0	42	-22*	3	454	10	-11
-6	375	10	-6	-1	290	7	-0	9	40	48	-4*	-10	331	8	-8	4	161	5	11
-5	103	9	1	0	383	8	-8	H,K=		8,	10	-8	453	10	-2	5	197	5	8
-4	210	6	-1	1	211	5	-6	-9	83	12	38	-6	54	12	-16*	6	39	14	19*
-3	20	32	-10*	2	220	5	4	-8	86	12	16	-4	499	11	5	7	183	6	-2
-2	259	6	-11	3	40	12	21*	-7	82	13	-18	-2	585	13	2	8	160	5	4
-1	120	7	-2	4	54	15	13*	-6	131	8	6	0	23	26	-13*	9	335	7	-5
0	379	8	1	5	198	6	-0	-5	76	11	2	2	566	12	-17	10	116	8	-3
1	143	4	-0	6	234	6	3	-4	203	7	7	4	426	9	-16	11	107	7	-11
2	197	5	5	7	178	5	1	-3	61	14	9*	6	37	16	-25*	12	0	43	-7*
3	0	43	-13*	8	152	7	5	-2	113	8	10	8	369	8	-2	H,K=		9,	3
4	168	5	7	9	17	34	8*	-1	143	11	5	10	259	6	-7	-12	0	47	-37*
5	84	7	3	10	0	37	-17*	0	172	5	1	12	35	43	29*	-11	0	53	-26*
6	327	7	7	11	88	9	7	1	87	7	1	H,K=		9,	1	-10	0	39	-15*
7	139	5	1	H,K=		8,	8	2	155	5	15	-13	65	22	1*	-9	223	7	-2
8	111	6	4	-11	167	15	19	3	0	35	-49*	-12	38	45	17*	-8	21	42	11*
9	36	19	4*	-10	0	43	-30*	4	130	6	-8	-11	132	8	-5	-7	46	34	9*
10	56	12	-1*	-9	47	26	7*	5	125	6	2	-10	87	10	-9	-6	31	34	27*
11	77	11	3	-8	117	10	-0	6	131	7	2	-9	29	38	-19*	-5	0	34	-17*
12	141	9	-19	-7	182	6	9	7	100	12	4	-8	133	7	-3	-4	0	43	-4*
H,K=		8,	6	-6	32	38	-20*	8	135	8	5	-7	160	6	-9	-3	257	6	-6
-12	171	8	-1	-5	230	7	-2	H,K=		8,	11	-6	0	35	-6*	-2	59	24	1*
-11	61	16	11*	-4	94	8	3	-7	37	43	-28*	-5	171	6	-2	-1	7	31	-4*
-10	66	45	12*	-3	43	19	-11*	-6	261	7	7	-4	62	10	-9	0	37	12	-13*
-9	83	15	7	-2	138	6	5	-5	41	32	25*	-3	36	19	17*	1	0	28	-26*
-8	16	37	-4*	-1	317	8	4	-4	139	8	12	-2	110	6	5	2	45	10	-7*
-7	69	12	-12	0	135	6	1	-3	0	46	-29*	-1	117	5	-4	3	194	5	8
-6	319	7	-3	1	315	7	-3	-2	106	9	-5	0	10	26	-4*	4	27	28	20*
-5	81	11	6	2	42	23	35*	-1	32	43	0*	1	144	5	-5	5	28	30	9*
-4	93	7	11	3	0	37	-14*	0	257	6	-5	2	92	7	4	6	55	9	3
-3	27	34	4*	4	160	6	0	1	96	7	2	3	0	28	-3*	7	63	13	13*
-2	44	15	-1*	5	254	6	-0	2	120	6	6	4	42	17	2*	8	45	13	26*
-1	17	37	-4*	6	35	38	23*	3	18	38	3*	5	85	6	5	9	80	9	-3
0	460	10	3	7	229	6	-1	4	101	7	-5	6	21	30	10*	10	18	36	13*
1	96	7	-7	8	57	12	3*	5	36	27	26*	7	68	12	9	11	0	36	-13*
2	47	9	-0*	9	25	38	-2*	6	198	6	4	8	21	32	11*	12	55	21	38*
3	33	16	25*	10	90	8	12	7	75	10	5	9	0	33	-15*	H,K=		9,	4
4	106	6	9	H,K=		8,	9	H,K=		8,	12	10	41	18	6*	-12	27	50	2*
5	9	33	-11*	-10	72	25	16*	-5	121	9	12	11	97	7	-6	-11	106	10	-10
6	352	8	1	-9	40	42	28*	-4	57	17	47*	12	53	22	18*	-10	166	7	4
7	114	5	8	-8	64	15	8*	-3	107	9	18	H,K=		9,	2	-9	291	8	9
8	58	20	16*	-7	289	9	-13	-2	66	14	27*	-12	39	42	33*	-8	236	7	2

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-7	161	10	-2	-1	131	6	2	H,K=		9,	9	H,K=		10,	0	6	233	6	1
-6	0	40	-15*	0	4	29	-27*	-9	180	8	11	-12	221	7	3	7	242	6	5
-5	178	6	2	1	54	10	-11	-8	34	41	25*	-10	218	11	-1	8	76	8	18
-4	217	6	-3	2	371	8	-0	-7	0	42	-24*	-8	281	8	-1	9	13	34	-4*
-3	351	8	0	3	112	6	-4	-6	49	21	-4*	-6	370	8	4	10	41	18	12*
-2	285	7	3	4	360	8	4	-5	54	16	18*	-4	334	8	7	11	146	6	7
-1	205	6	0	5	62	9	2	-4	21	50	-5*	-2	320	7	-2	H,K=		10,	3
0	0	28	-16*	6	22	36	3*	-3	151	10	-21	0	536	11	0	-11	87	11	13
1	216	6	-2	7	8	40	-1*	-2	20	38	-3*	2	277	6	-9	-10	54	23	-1*
2	284	7	-1	8	287	7	-6	-1	52	15	33*	4	258	6	2	-9	0	38	-10*
3	325	7	-2	9	70	13	1*	0	28	41	-29*	6	298	7	1	-8	7	38	-16*
4	214	5	-7	10	240	7	2	1	32	30	30*	8	211	6	1	-7	93	10	-1
5	166	6	-3	11	47	18	28*	2	35	23	14*	10	163	6	4	-6	28	37	15*
6	0	39	-9*	H,K=		9,	7	3	122	6	-6	H,K=		10,	1	-5	171	6	7
7	171	6	1	-10	92	11	-3	4	32	33	19*	-12	68	18	8*	-4	63	11	-1
8	209	5	6	-9	41	46	29*	5	48	14	15*	-11	69	14	8*	-3	0	41	-13*
9	252	6	-6	-8	103	10	3	6	155	129	116*	-10	0	44	-18*	-2	44	17	-15*
10	162	6	-3	-7	46	22	20*	7	84	16	3*	-9	59	14	11*	-1	216	6	15
11	82	11	-9	-6	0	38	-19*	8	0	46	-26*	-8	3	39	-31*	0	54	9	-5
12	0	51	-9*	-5	195	8	2	H,K=		9,	10	-7	47	47	13*	1	175	5	-6
H,K=		9,	5	-4	0	51	-40*	-7	51	25	-14*	-6	155	6	3	2	27	29	-4*
-12	25	43	14*	-3	0	36	-21*	-6	0	41	-13*	-5	84	9	9	3	23	37	1*
-11	96	11	-9	-2	113	10	-5	-5	90	11	-13	-4	45	16	-6*	4	26	31	-21*
-10	101	10	-9	-1	114	7	-2	-4	238	7	13	-3	6	40	-17*	5	179	5	-10
-9	0	56	-33*	0	23	43	2*	-3	220	7	6	-2	153	6	-3	6	32	28	7*
-8	96	8	7	1	157	5	-2	-2	269	7	10	-1	85	7	-5	7	137	5	-2
-7	157	6	7	2	25	42	-5*	-1	84	10	13	0	239	6	0	8	39	19	27*
-6	77	10	10	3	56	9	17	0	19	33	-19*	1	72	7	2	9	39	23	-13*
-5	99	12	3	4	81	9	-8	1	118	6	3	2	134	5	-6	10	51	16	13*
-4	144	6	-8	5	92	7	2	2	241	6	-10	3	21	29	3*	11	116	7	-1
-3	18	34	3*	6	23	33	-26*	3	194	5	4	4	74	8	7	H,K=		10,	4
-2	76	8	0	7	51	13	12*	4	203	6	-0	5	122	5	6	-11	169	10	-3
-1	104	7	-4	8	52	19	15*	5	92	8	3	6	206	6	-12	-10	0	42	-40*
0	44	13	34*	9	63	14	5*	6	38	44	9*	7	44	15	-17*	-9	27	39	22*
1	37	13	-7*	10	57	26	11*	7	95	8	3	8	44	15	11*	-8	85	10	12
2	67	7	5	H,K=		9,	8	H,K=		9,	11	9	39	23	20*	-7	250	8	0
3	0	35	-19*	-10	72	15	-4*	-6	27	57	-2*	10	19	36	-35*	-6	309	9	4
4	36	21	4*	-9	327	8	6	-5	33	43	-6*	11	74	10	2	-5	251	7	2
5	137	6	5	-8	55	18	34*	-4	60	18	-22*	H,K=		10,	2	-4	96	9	8
6	69	8	4	-7	193	7	8	-3	22	41	7*	-11	238	7	-2	-3	36	24	27*
7	55	11	-4*	-6	47	20	18*	-2	73	13	14	-10	29	41	-2*	-2	100	7	6
8	40	41	15*	-5	192	6	1	-1	150	7	-3	-9	0	40	-18*	-1	303	7	-4
9	0	34	-1*	-4	82	10	1	0	0	34	-12*	-8	80	12	2	0	311	7	-7
10	30	35	24*	-3	417	10	3	1	49	15	-11*	-7	317	9	5	1	264	6	-10
11	103	12	0	-2	71	10	-4	2	34	36	-15*	-6	307	7	-6	2	55	9	21
H,K=		9,	6	-1	249	7	4	3	13	36	-2*	-5	342	8	1	3	17	30	-5*
-11	41	48	27*	0	38	16	4*	4	29	47	-7*	-4	25	34	12*	4	47	24	-16*
-10	287	8	2	1	207	5	-6	5	115	9	2	-3	0	34	-14*	5	238	6	-3
-9	100	13	9	2	69	8	17	H,K=		9,	12	-2	34	27	16*	6	268	6	0
-8	323	8	-8	3	398	8	-1	-3	158	9	16	-1	408	9	-6	7	234	6	1
-7	68	26	-1*	4	79	8	-4	-2	208	7	7	0	241	6	-5	8	24	33	-4*
-6	40	36	-9*	5	198	5	1	-1	82	12	3	1	346	8	-16	9	8	35	-25*
-5	93	9	3	6	31	34	23*	0	47	23	36*	2	23	29	9*	10	21	42	9*
-4	380	10	6	7	142	6	-0	1	43	23	-7*	3	19	32	-3*	H,K=		10,	5
-3	107	7	6	8	49	16	-20*	2	201	6	3	4	0	30	-24*	-10	63	16	-3*
-2	407	9	7	9	281	7	3	3	131	7	6	5	276	7	4	-9	31	42	25*

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-8	73	12	14	6	95	8	7	1	39	43	23*	8	17	35	-10*	0	26	39	23*
-7	0	39	-16*	7	116	7	-7	2	61	12	4*	9	52	15	-10*	1	125	6	7
-6	131	9	-9	8	32	36	1*	3	55	14	9*	10	33	37	11*	2	256	6	3
-5	55	14	38*	9	0	37	-4*	H,K=	11,	0		H,K=	11,	3		3	16	33	-6*
-4	151	6	-3	H,K=	10,	8		-10	157	7	-4	-10	0	42	-17*	4	282	7	9
-3	33	44	-10*	-8	0	43	-12*	-8	173	7	-5	-9	327	8	-1	5	99	7	-0
-2	107	8	-3	-7	304	8	7	-6	21	53	-34*	-8	79	11	22	6	43	17	4*
-1	0	36	-44*	-6	130	8	-1	-4	155	6	-18	-7	132	8	-14	7	116	6	4
0	204	5	1	-5	281	7	7	-2	216	6	-14	-6	35	40	-13*	8	213	6	-12
1	52	10	3*	-4	0	39	-15*	0	30	35	-20*	-5	121	7	5	9	57	16	30*
2	138	6	7	-3	42	52	39*	2	163	5	3	-4	31	39	0*	H,K=	11,	6	
3	37	17	4*	-2	0	39	-14*	4	161	5	4	-3	446	11	1	-8	130	9	-12
4	94	6	2	-1	277	7	-1	6	50	18	9*	-2	78	9	16	-7	0	42	-13*
5	26	38	-3*	0	151	7	0	8	73	10	-2	-1	172	6	6	-6	0	41	-21*
6	182	5	-8	1	271	6	-2	10	63	12	-15*	0	27	30	2*	-5	39	39	15*
7	37	20	33*	2	46	14	39*	H,K=	11,	1		1	138	5	-12	-4	152	7	-13
8	63	11	-8	3	17	46	11*	-10	150	7	7	2	57	10	3	-3	0	39	-7*
9	50	18	20*	4	0	35	-21*	-9	97	10	6	3	439	9	-6	-2	166	6	2
10	78	9	9	5	208	6	7	-8	215	7	7	4	56	10	25	-1	0	39	-15*
H,K=	10,	6		6	141	6	5	-7	138	7	-11	5	96	8	5	0	0	32	-1*
-10	202	7	1	7	217	6	4	-6	0	38	-15*	6	14	33	-5*	1	28	32	-9*
-9	0	47	-4*	8	42	47	33*	-5	172	6	15	7	102	8	-4	2	131	6	3
-8	255	10	1	H,K=	10,	9		-4	283	8	-2	8	34	35	6*	3	22	44	-10*
-7	63	28	-10*	-7	66	16	-0*	-3	156	7	10	9	300	8	-5	4	159	5	4
-6	292	7	2	-6	75	14	29*	-2	319	7	4	10	30	37	10*	5	0	35	-18*
-5	49	19	-15*	-5	111	9	6	-1	165	6	5	H,K=	11,	4		6	30	35	-9*
-4	239	7	2	-4	82	12	3	0	0	30	-19*	-10	119	9	10	7	27	36	-17*
-3	69	21	-4*	-3	48	22	37*	1	158	6	-4	-9	128	9	-10	8	67	11	8
-2	314	8	-5	-2	0	40	-20*	2	299	7	-13	-8	94	10	36	H,K=	11,	7	
-1	66	11	7	-1	129	7	12	3	137	6	5	-7	22	40	-9*	-8	114	10	-12
0	345	8	-10	0	63	13	11*	4	248	6	-7	-6	29	45	3*	-7	177	7	-2
1	41	17	12*	1	78	8	-2	5	154	6	9	-5	118	7	-3	-6	0	47	-6*
2	298	7	0	2	43	17	0*	6	0	33	-23*	-4	138	6	7	-5	148	8	-2
3	64	10	-2	3	39	21	12*	7	148	6	-2	-3	185	7	-15	-4	174	9	-5
4	189	5	3	4	25	34	23*	8	181	7	2	-2	118	7	3	-3	181	7	2
5	65	11	8	5	140	6	-1	9	71	11	3	-1	108	7	-2	-2	179	7	12
6	251	6	2	6	41	46	-17*	10	134	6	4	0	63	10	14	-1	204	6	14
7	43	19	-8*	7	85	9	1	H,K=	11,	2		1	61	10	-7	0	0	33	-4*
8	198	6	-5	H,K=	10,	10		-10	35	43	-18*	2	63	9	7	1	157	7	-6
9	24	37	5*	-6	289	8	20	-9	167	11	-6	3	132	5	10	2	165	7	-4
H,K=	10,	7		-5	142	8	-10	-8	46	46	-0*	4	84	7	2	3	173	6	-2
-9	29	42	-2*	-4	73	20	17*	-7	59	15	4*	5	122	7	-9	4	151	6	-7
-8	46	25	13*	-3	61	16	23*	-6	31	39	-15*	6	31	34	23*	5	163	6	-3
-7	71	13	9*	-2	29	41	-8*	-5	99	9	6	7	20	35	17*	6	34	39	17*
-6	49	22	-8*	-1	118	8	-8	-4	80	10	1	8	54	14	12*	7	126	8	-9
-5	144	10	7	0	267	7	-5	-3	216	6	-4	9	52	19	8*	H,K=	11,	8	
-4	0	38	-24*	1	148	6	-2	-2	91	8	-2	H,K=	11,	5		-7	72	15	11*
-3	31	44	-15*	2	22	36	-5*	-1	51	17	-26*	-9	55	20	25*	-6	57	19	51*
-2	79	10	5	3	32	45	16*	0	24	31	3*	-8	261	7	0	-5	89	15	10
-1	118	9	5	4	45	25	2*	1	106	6	5	-7	67	14	-11*	-4	0	56	-45*
0	83	8	8	5	127	8	10	2	71	12	0	-6	0	47	-50*	-3	123	8	-3
1	150	6	-0	H,K=	10,	11		3	139	5	-0	-5	116	8	-4	-2	58	16	-15*
2	33	24	22*	-3	84	12	17	4	55	12	11*	-4	279	7	14	-1	57	16	-2*
3	26	36	4*	-2	47	26	29*	5	102	9	1	-3	42	22	1*	0	16	33	-3*
4	112	8	-2	-1	0	41	-6*	6	56	11	1*	-2	270	7	8	1	68	10	-1
5	118	8	-13	0	138	8	6	7	40	18	6*	-1	97	11	8	2	52	30	14*

STRUCTURE FACTORS CONTINUED FOR
NICKEL URANYL ACETATE HEXAHYDRATE

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
3	108	8	12	-5	28	40	-19*	-1	132	7	9	-5	33	42	18*	-4	186	7	-4
4	64	11	4	-4	6	51	-35*	0	303	7	-1	-4	167	7	-7	-3	142	8	-8
5	65	14	18*	-3	22	40	-1*	1	96	7	-5	-3	175	7	3	-2	156	11	11
6	41	23	1*	-2	56	13	27*	2	166	6	-16	-2	166	7	-1	-1	0	41	-7*
H,K= 11,			9	-1	54	16	1*	3	35	29	6*	-1	58	34	29*	0	28	34	24*
-5	65	17	-7*	0	94	6	-0	4	153	6	-6	0	0	34	-6*	1	62	12	29*
-4	80	13	10	1	61	11	-1*	5	80	10	-5	1	45	24	30*	2	136	8	-6
-3	313	9	12	2	32	33	-15*	6	228	6	-3	2	136	6	-9	3	135	7	-7
-2	130	8	24	3	27	34	13*	7	87	9	-5	3	149	6	-11	4	135	7	1
-1	59	16	15*	4	33	38	-22*	H,K= 12,			6	4	126	10	-2	H,K= 13,			6
0	29	35	-5*	5	88	7	-4	-7	30	43	23*	5	31	36	9*	-3	58	20	-2*
1	57	13	-12*	6	102	7	-1	-6	14	43	3*	6	39	23	6*	-2	188	7	3
2	87	10	-8	7	33	36	-23*	-5	85	12	6	H,K= 13,			2	-1	0	46	-42*
3	298	7	-3	8	38	27	-13*	-4	68	15	1*	-7	78	15	-18*	0	0	36	-7*
4	78	10	2	H,K= 12,			3	-3	35	43	7*	-6	0	43	-11*	1	35	37	11*
5	84	14	24	-8	0	43	-3*	-2	115	8	22	-5	74	14	-4*	2	168	6	-5
H,K= 11,			10	-7	313	8	1	-1	0	57	-20*	-4	84	20	5*	3	41	24	-3*
-2	56	22	-20*	-6	55	17	21*	0	27	49	19*	-3	266	7	14	H,K= 14,			0
-1	96	11	7	-5	330	8	2	1	59	16	-12*	-2	67	14	5*	-4	76	14	14*
0	0	46	-30*	-4	25	49	-6*	2	95	10	-1	-1	126	8	8	-2	59	21	-12*
1	43	20	15*	-3	16	38	-0*	3	35	46	7*	0	38	21	26*	0	326	7	-2
2	73	10	8	-2	18	39	4*	4	116	6	2	1	93	8	-13	2	64	12	5*
H,K= 12,			0	-1	333	8	1	5	57	13	34*	2	102	7	4	H,K= 14,			1
-8	47	26	1*	0	55	10	20*	6	48	36	31*	3	217	6	-7	-4	0	44	-17*
-6	54	16	39*	1	326	7	-8	H,K= 12,			7	4	64	11	-13	-3	0	42	-21*
-4	157	7	13	2	37	38	31*	-5	180	9	12	5	96	8	0	-2	38	42	6*
-2	88	9	12	3	0	40	-6*	-4	110	11	2	6	15	37	-6*	-1	46	29	37*
0	33	23	21*	4	18	38	-25*	-3	10	43	9*	H,K= 13,			3	0	43	24	6*
2	72	9	-4	5	273	7	-3	-2	97	10	-9	-6	0	44	-13*	1	30	36	17*
4	185	6	-11	6	32	35	10*	-1	176	7	13	-5	195	7	-6	2	37	43	12*
6	40	20	-6*	7	243	7	5	0	173	6	1	-4	52	20	41*	3	40	33	12*
8	92	8	3	8	22	36	6*	1	180	6	2	-3	169	7	-14	H,K= 14,			2
H,K= 12,			1	H,K= 12,			4	2	82	9	-5	-2	0	40	-3*	-3	42	41	40*
-9	0	65	-2*	-8	57	20	-20*	3	65	12	38	-1	169	12	0	-2	127	9	0
-8	96	11	-2	-7	31	53	28*	4	85	11	4	0	38	21	15*	-1	213	9	6
-7	159	8	14	-6	63	17	-10*	5	132	6	4	1	144	7	-9	0	85	9	-1
-6	315	9	8	-5	49	52	29*	H,K= 12,			8	2	0	40	-7*	1	199	6	-4
-5	171	7	1	-4	53	17	35*	-4	81	14	-18	3	134	6	3	2	117	10	-5
-4	135	8	14	-3	40	30	10*	-3	56	19	36*	4	0	36	-14*	3	31	42	29*
-3	0	39	-15*	-2	0	46	-18*	-2	40	52	28*	5	169	7	-7	H,K= 14,			3
-2	118	7	-10	-1	58	15	7*	-1	36	49	12*	6	6	37	3*	-2	0	43	-3*
-1	171	6	-3	0	153	5	-0	0	57	13	-8*	H,K= 13,			4	-1	45	30	42*
0	321	7	1	1	80	10	5	1	25	36	-4*	-6	0	53	-38*	0	47	18	-4*
1	187	6	-8	2	22	35	4*	2	55	14	-17*	-5	81	15	-11	1	0	36	-8*
2	128	5	-5	3	48	26	19*	3	35	36	20*	-4	130	9	5	2	9	47	-23*
3	0	33	-15*	4	34	35	-13*	H,K= 13,			0	-3	172	7	14				
4	134	6	8	5	54	13	10*	-6	30	41	13*	-2	156	8	1				
5	117	9	-4	6	99	9	-1	-4	223	9	-8	-1	82	12	-5				
6	217	6	1	7	15	43	-15*	-2	260	7	17	0	40	19	37*				
7	107	9	-4	H,K= 12,			5	0	35	24	29*	1	79	9	-13				
8	76	11	-14	-7	87	12	-10	2	209	6	1	2	138	6	-1				
H,K= 12,			2	-6	313	8	4	4	207	6	-6	3	171	6	1				
-9	34	42	6*	-5	81	12	-12	6	34	36	19*	4	132	6	-2				
-8	0	41	-16*	-4	192	7	4	H,K= 13,			1	5	93	10	19				
-7	0	41	-5*	-3	6	40	-24*	-7	0	43	-5*	H,K= 13,			5				
-6	78	12	5	-2	166	7	-9	-6	0	42	-35*	-5	0	43	-10*				

This report was done with support from the Department of Energy. Any conclusions or opinions expressed in this report represent solely those of the author(s) and not necessarily those of The Regents of the University of California, the Lawrence Berkeley Laboratory or the Department of Energy.

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