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Table S1: Atomic coordinates and isotropic displacement parameters for

 $\text{Cp}_3\text{W}_3\text{Ir}_4(\mu\text{-H})(\text{CO})_{12}$, 1.

atom	x	y	z	B_{eq}
Ir(1)	0.70613(8)	0.5963(1)	0.83839(6)	1.72(3)
Ir(2)	0.76928(8)	0.7747(1)	0.75886(6)	1.99(3)
Ir(3)	0.75398(8)	0.8707(1)	0.87770(5)	1.79(3)
Ir(4)	0.79073(8)	0.6479(1)	0.96664(6)	2.12(3)
W(1)	0.81888(9)	0.4772(2)	0.77279(6)	2.29(3)
W(2)	0.63028(9)	0.7557(2)	0.92475(6)	2.50(3)
W(3)	0.87365(8)	0.6798(1)	0.87557(6)	1.76(3)
O(16)	0.571(1)	0.578(2)	0.704(1)	3.4(5)
O(17)	0.694(1)	0.286(3)	0.889(1)	4.3(5)
O(18)	0.620(2)	0.905(4)	0.651(1)	6.8(8)
O(19)	0.883(2)	0.920(3)	0.691(1)	4.7(6)
O(20)	0.619(2)	1.059(3)	0.793(1)	4.5(6)
O(21)	0.837(2)	1.103(3)	0.976(1)	4.8(6)
O(22)	0.871(2)	0.849(3)	1.084(1)	5.6(7)
O(23)	0.740(2)	0.409(3)	1.046(1)	6.5(7)
O(24)	0.967(1)	0.593(2)	0.7280(9)	2.9(4)
O(25)	0.949(1)	0.333(3)	0.891(1)	3.6(5)
O(26)	0.499(2)	0.781(3)	0.787(1)	4.4(6)
O(27)	0.562(2)	0.438(3)	0.935(1)	5.9(7)
C(1)	0.721(2)	0.394(4)	0.668(2)	3.4(7)
C(2)	0.709(2)	0.312(3)	0.721(1)	2.4(6)
C(3)	0.784(2)	0.234(4)	0.753(2)	4.0(8)
C(4)	0.843(2)	0.273(4)	0.717(2)	3.4(7)
C(5)	0.807(2)	0.369(3)	0.668(1)	2.5(6)

atom	x	y	z	B _{eq}
C(6)	0.639(2)	0.868(4)	1.029(2)	3.7(8)
C(7)	0.635(2)	0.988(4)	0.986(2)	3.9(8)
C(8)	0.557(2)	0.961(4)	0.942(2)	4.3(9)
C(9)	0.522(3)	0.844(5)	0.960(2)	5(1)
C(10)	0.573(2)	0.776(4)	1.011(2)	4.2(8)
C(11)	1.012(2)	0.682(4)	0.947(1)	2.7(7)
C(12)	1.018(2)	0.668(4)	0.885(1)	3.0(7)
C(13)	0.984(2)	0.798(3)	0.847(1)	2.2(6)
C(14)	0.962(2)	0.888(4)	0.891(1)	2.8(7)
C(15)	0.977(2)	0.822(3)	0.953(1)	2.4(6)
C(16)	0.621(2)	0.591(3)	0.760(1)	2.2(6)
C(17)	0.699(2)	0.404(4)	0.871(1)	2.8(7)
C(18)	0.674(3)	0.845(5)	0.688(2)	5.3(10)
C(19)	0.836(2)	0.858(3)	0.715(1)	2.1(6)
C(20)	0.668(2)	0.981(4)	0.830(1)	2.8(7)
C(21)	0.810(2)	1.021(4)	0.939(1)	2.7(6)
C(22)	0.835(3)	0.767(5)	1.044(2)	5(1)
C(23)	0.757(2)	0.494(4)	1.014(2)	3.9(8)
C(24)	0.913(2)	0.561(3)	0.746(1)	1.6(5)
C(25)	0.907(2)	0.407(4)	0.853(1)	2.9(7)
C(26)	0.546(2)	0.765(4)	0.838(1)	2.7(6)
C(27)	0.588(3)	0.552(5)	0.932(2)	5(1)
H(1)	0.6821	0.4548	0.6380	4.1190
H(2)	0.6592	0.3077	0.7344	2.8315

atom	x	y	z	B _{eq}
H(3)	0.7933	0.1692	0.7897	4.7481
H(4)	0.8976	0.2376	0.7266	4.0979
H(5)	0.8330	0.4133	0.6378	2.9554
H(6)	0.6845	0.8525	1.0673	4.4034
H(7)	0.6743	1.0631	0.9863	4.6721
H(8)	0.5317	1.0199	0.9038	5.2097
H(9)	0.4669	0.8137	0.9390	6.8923
H(10)	0.5652	0.6853	1.0311	5.0550
H(11)	1.0277	0.6108	0.9810	3.2502
H(12)	1.0411	0.5866	0.8685	3.6598
H(13)	0.9785	0.8159	0.8008	2.6700
H(14)	0.9402	0.9837	0.8812	3.3543
H(15)	0.9654	0.8616	0.9912	2.8295
H(99)	0.8770	0.5571	0.9506	4.0000

$$B_{eq} = \frac{8}{3}\pi^2(U_{11}(aa^*)^2 + U_{22}(bb^*)^2 + U_{33}(cc^*)^2 + 2U_{12}aa^*bb^* \cos \gamma + 2U_{13}aa^*cc^* \cos \beta + 2U_{23}bb^*cc^* \cos \alpha)$$

Table S2: Anisotropic displacement parameters involving non-hydrogen atoms for $\text{Cp}_3\text{W}_3\text{Ir}_4(\mu\text{-H})(\text{CO})_{12}$, 1.

atom	U_{11}	U_{22}	U_{33}	U_{12}	U_{13}	U_{23}
Ir(1)	0.0234(7)	0.0199(7)	0.0210(6)	-0.0025(5)	0.0046(5)	-0.0026(5)
Ir(2)	0.0313(8)	0.0234(7)	0.0195(6)	0.0001(6)	0.0048(5)	0.0012(5)
Ir(3)	0.0260(8)	0.0184(7)	0.0217(6)	0.0007(5)	0.0040(5)	-0.0023(5)
Ir(4)	0.0301(8)	0.0300(8)	0.0187(6)	0.0018(6)	0.0042(6)	0.0024(6)
W(1)	0.0335(8)	0.0269(8)	0.0263(7)	0.0001(6)	0.0079(6)	-0.0023(6)
W(2)	0.0305(8)	0.0357(9)	0.0301(7)	0.0024(7)	0.0111(6)	-0.0032(6)
W(3)	0.0202(7)	0.0249(8)	0.0199(6)	0.0000(6)	0.0025(5)	-0.0015(5)

The general temperature factor expression:

$$\exp(-2\pi^2(a^2U_{11}h^2 + b^2U_{22}k^2 + c^2U_{33}l^2 + 2a*b*U_{12}hk + 2a*c*U_{13}hl + 2b*c*U_{23}kl))$$

Table S3: Interatomic distances (Å) for $\text{Cp}_3\text{W}_3\text{Ir}_4(\mu\text{-H})(\text{CO})_{12}$, **1**.

atom	atom	distance	atom	atom	distance
Ir(1)	Ir(2)	2.751(2)	Ir(1)	Ir(3)	2.687(2)
Ir(1)	Ir(4)	2.695(2)	Ir(1)	W(1)	2.864(2)
Ir(1)	W(2)	2.889(2)	Ir(1)	W(3)	2.824(2)
Ir(1)	C(16)	1.86(3)	Ir(1)	C(17)	1.90(3)
Ir(2)	Ir(3)	2.715(2)	Ir(2)	W(1)	2.832(2)
Ir(2)	W(3)	2.713(2)	Ir(2)	C(18)	1.96(4)
Ir(2)	C(19)	1.81(3)	Ir(3)	Ir(4)	2.704(2)
Ir(3)	W(2)	2.763(2)	Ir(3)	W(3)	2.682(2)
Ir(3)	C(20)	1.82(3)	Ir(3)	C(21)	1.92(3)
Ir(4)	W(2)	2.786(2)	Ir(4)	W(3)	2.684(2)
Ir(4)	C(22)	1.91(4)	Ir(4)	C(23)	1.90(4)
W(1)	W(3)	2.784(2)	W(1)	C(1)	2.45(3)
W(1)	C(2)	2.40(3)	W(1)	C(3)	2.30(4)
W(1)	C(4)	2.29(3)	W(1)	C(5)	2.36(3)
W(1)	C(24)	1.98(3)	W(1)	C(25)	2.01(3)
W(2)	C(6)	2.37(3)	W(2)	C(7)	2.46(4)
W(2)	C(8)	2.34(4)	W(2)	C(9)	2.31(4)
W(2)	C(10)	2.29(3)	W(2)	C(26)	1.96(3)
W(2)	C(27)	2.01(5)	W(3)	C(11)	2.38(3)
W(3)	C(12)	2.40(3)	W(3)	C(13)	2.38(3)
W(3)	C(14)	2.39(3)	W(3)	C(15)	2.39(3)
O(16)	C(16)	1.23(3)	O(17)	C(17)	1.15(4)
O(18)	C(18)	1.15(4)	O(19)	C(19)	1.20(3)
O(20)	C(20)	1.20(4)	O(21)	C(21)	1.09(3)

atom	atom	distance	atom	atom	distance
O(22)	C(22)	1.16(4)	O(23)	C(23)	1.12(4)
O(24)	C(24)	1.12(3)	O(25)	C(25)	1.12(3)
O(26)	C(26)	1.14(3)	O(27)	C(27)	1.14(5)
C(1)	C(2)	1.42(4)	C(1)	C(5)	1.47(4)
C(2)	C(3)	1.44(4)	C(3)	C(4)	1.45(4)
C(4)	C(5)	1.36(4)	C(6)	C(7)	1.40(4)
C(6)	C(10)	1.37(5)	C(7)	C(8)	1.41(5)
C(8)	C(9)	1.33(5)	C(9)	C(10)	1.33(5)
C(11)	C(12)	1.33(4)	C(11)	C(15)	1.43(4)
C(12)	C(13)	1.45(4)	C(13)	C(14)	1.38(4)
C(14)	C(15)	1.37(4)			

atom	atom	distance	atom	atom	distance
C(1)	H(1)	0.95	C(2)	H(2)	0.95
C(3)	H(3)	0.95	C(4)	H(4)	0.95
C(5)	H(5)	0.95	C(6)	H(6)	0.95
C(7)	H(7)	0.95	C(8)	H(8)	0.95
C(9)	H(9)	0.95	C(10)	H(10)	0.95
C(11)	H(11)	0.95	C(12)	H(12)	0.95
C(13)	H(13)	0.95	C(14)	H(14)	0.95
C(15)	H(15)	0.95			

Table S4: Interatomic angles (°) for $\text{Cp}_3\text{W}_3\text{Ir}_4(\mu\text{-H})(\text{CO})_{12}$, 1.

atom	atom	atom	angle	atom	atom	atom	angle
Ir(2)	Ir(1)	Ir(3)	59.88(4)	Ir(2)	Ir(1)	Ir(4)	108.01(6)
Ir(2)	Ir(1)	W(1)	60.52(4)	Ir(2)	Ir(1)	W(2)	113.49(6)
Ir(2)	Ir(1)	W(3)	58.22(4)	Ir(2)	Ir(1)	C(16)	79.5(9)
Ir(2)	Ir(1)	C(17)	147.3(9)	Ir(3)	Ir(1)	Ir(4)	60.33(4)
Ir(3)	Ir(1)	W(1)	108.40(6)	Ir(3)	Ir(1)	W(2)	59.28(5)
Ir(3)	Ir(1)	W(3)	58.19(4)	Ir(3)	Ir(1)	C(16)	112.6(9)
Ir(3)	Ir(1)	C(17)	142.6(9)	Ir(4)	Ir(1)	W(1)	107.71(6)
Ir(4)	Ir(1)	W(2)	59.74(5)	Ir(4)	Ir(1)	W(3)	58.14(4)
Ir(4)	Ir(1)	C(16)	160.9(9)	Ir(4)	Ir(1)	C(17)	82.7(9)
W(1)	Ir(1)	W(2)	165.07(6)	W(1)	Ir(1)	W(3)	58.61(4)
W(1)	Ir(1)	C(16)	91.3(9)	W(1)	Ir(1)	C(17)	86.8(9)
W(2)	Ir(1)	W(3)	106.47(5)	W(2)	Ir(1)	C(16)	101.2(9)
W(2)	Ir(1)	C(17)	98.7(9)	W(3)	Ir(1)	C(16)	135.8(9)
W(3)	Ir(1)	C(17)	108.3(10)	C(16)	Ir(1)	C(17)	100(1)
Ir(1)	Ir(2)	Ir(3)	58.89(4)	Ir(1)	Ir(2)	W(1)	61.71(5)
Ir(1)	Ir(2)	W(3)	62.24(5)	Ir(1)	Ir(2)	C(18)	105(1)
Ir(1)	Ir(2)	C(19)	163.4(10)	Ir(3)	Ir(2)	W(1)	108.57(5)
Ir(3)	Ir(2)	W(3)	59.24(4)	Ir(3)	Ir(2)	C(18)	107(1)
Ir(3)	Ir(2)	C(19)	124.2(9)	W(1)	Ir(2)	W(3)	60.24(5)
W(1)	Ir(2)	C(18)	123(1)	W(1)	Ir(2)	C(19)	104.0(10)
W(3)	Ir(2)	C(18)	165(1)	W(3)	Ir(2)	C(19)	104.2(9)
C(18)	Ir(2)	C(19)	89(1)	Ir(1)	Ir(3)	Ir(2)	61.24(4)
Ir(1)	Ir(3)	Ir(4)	59.99(4)	Ir(1)	Ir(3)	W(2)	64.00(5)
Ir(1)	Ir(3)	W(3)	63.47(5)	Ir(1)	Ir(3)	C(20)	103(1)

atom	atom	atom	angle	atom	atom	atom	angle
Ir(1)	Ir(3)	C(21)	156.0(9)	Ir(2)	Ir(3)	Ir(4)	108.82(6)
Ir(2)	Ir(3)	W(2)	118.88(6)	Ir(2)	Ir(3)	W(3)	60.35(4)
Ir(2)	Ir(3)	C(20)	87.3(9)	Ir(2)	Ir(3)	C(21)	132.6(9)
Ir(4)	Ir(3)	W(2)	61.25(5)	Ir(4)	Ir(3)	W(3)	59.77(5)
Ir(4)	Ir(3)	C(20)	141(1)	Ir(4)	Ir(3)	C(21)	96.1(9)
W(2)	Ir(3)	W(3)	114.36(6)	W(2)	Ir(3)	C(20)	80(1)
W(2)	Ir(3)	C(21)	108.3(9)	W(3)	Ir(3)	C(20)	147.6(9)
W(3)	Ir(3)	C(21)	103.9(10)	C(20)	Ir(3)	C(21)	97(1)
Ir(1)	Ir(4)	Ir(3)	59.69(4)	Ir(1)	Ir(4)	W(2)	63.59(5)
Ir(1)	Ir(4)	W(3)	63.34(4)	Ir(1)	Ir(4)	C(22)	155(1)
Ir(1)	Ir(4)	C(23)	103(1)	Ir(3)	Ir(4)	W(2)	60.41(5)
Ir(3)	Ir(4)	W(3)	59.71(4)	Ir(3)	Ir(4)	C(22)	96(1)
Ir(3)	Ir(4)	C(23)	150(1)	W(2)	Ir(4)	W(3)	113.57(6)
W(2)	Ir(4)	C(22)	100(1)	W(2)	Ir(4)	C(23)	90(1)
W(3)	Ir(4)	C(22)	112(1)	W(3)	Ir(4)	C(23)	138(1)
C(22)	Ir(4)	C(23)	95(1)	Ir(1)	W(1)	Ir(2)	57.77(4)
Ir(1)	W(1)	W(3)	59.98(4)	Ir(1)	W(1)	C(1)	100.0(8)
Ir(1)	W(1)	C(2)	85.0(7)	Ir(1)	W(1)	C(3)	106.3(9)
Ir(1)	W(1)	C(4)	142.2(9)	Ir(1)	W(1)	C(5)	135.4(8)
Ir(1)	W(1)	C(24)	133.3(8)	Ir(1)	W(1)	C(25)	99.2(9)
Ir(2)	W(1)	W(3)	57.77(4)	Ir(2)	W(1)	C(1)	95.7(8)
Ir(2)	W(1)	C(2)	112.7(7)	Ir(2)	W(1)	C(3)	148.4(9)
Ir(2)	W(1)	C(4)	144.7(8)	Ir(2)	W(1)	C(5)	111.1(8)
Ir(2)	W(1)	C(24)	80.6(8)	Ir(2)	W(1)	C(25)	121.3(9)

atom	atom	atom	angle	atom	atom	atom	angle
W(3)	W(1)	C(1)	152.1(8)	W(3)	W(1)	C(2)	143.8(7)
W(3)	W(1)	C(3)	142.3(8)	W(3)	W(1)	C(4)	149.6(9)
W(3)	W(1)	C(5)	156.2(7)	W(3)	W(1)	C(24)	81.1(8)
W(3)	W(1)	C(25)	64.0(9)	C(1)	W(1)	C(2)	33.9(10)
C(1)	W(1)	C(3)	57(1)	C(1)	W(1)	C(4)	57(1)
C(1)	W(1)	C(5)	35.4(10)	C(1)	W(1)	C(24)	104(1)
C(1)	W(1)	C(25)	142(1)	C(2)	W(1)	C(3)	35(1)
C(2)	W(1)	C(4)	59(1)	C(2)	W(1)	C(5)	58.3(10)
C(2)	W(1)	C(24)	134(1)	C(2)	W(1)	C(25)	118(1)
C(3)	W(1)	C(4)	36(1)	C(3)	W(1)	C(5)	58(1)
C(3)	W(1)	C(24)	120(1)	C(3)	W(1)	C(25)	86(1)
C(4)	W(1)	C(5)	33(1)	C(4)	W(1)	C(24)	84(1)
C(4)	W(1)	C(25)	88(1)	C(5)	W(1)	C(24)	76(1)
C(5)	W(1)	C(25)	119(1)	C(24)	W(1)	C(25)	84(1)
Ir(1)	W(2)	Ir(3)	56.72(4)	Ir(1)	W(2)	Ir(4)	56.68(4)
Ir(1)	W(2)	C(6)	150.2(9)	Ir(1)	W(2)	C(7)	143.2(8)
Ir(1)	W(2)	C(8)	148.4(9)	Ir(1)	W(2)	C(9)	155(1)
Ir(1)	W(2)	C(10)	153.9(10)	Ir(1)	W(2)	C(26)	77.4(9)
Ir(1)	W(2)	C(27)	79(1)	Ir(3)	W(2)	Ir(4)	58.33(5)
Ir(3)	W(2)	C(6)	107.8(9)	Ir(3)	W(2)	C(7)	86.5(8)
Ir(3)	W(2)	C(8)	104.0(10)	Ir(3)	W(2)	C(9)	137(1)
Ir(3)	W(2)	C(10)	141.8(10)	Ir(3)	W(2)	C(26)	94.6(9)
Ir(3)	W(2)	C(27)	134(1)	Ir(4)	W(2)	C(6)	93.6(9)
Ir(4)	W(2)	C(7)	104.7(8)	Ir(4)	W(2)	C(8)	138.7(10)

atom	atom	atom	angle	atom	atom	atom	angle
Ir(4)	W(2)	C(9)	144(1)	Ir(4)	W(2)	C(10)	112.1(10)
Ir(4)	W(2)	C(26)	133.8(9)	Ir(4)	W(2)	C(27)	89(1)
C(6)	W(2)	C(7)	33(1)	C(6)	W(2)	C(8)	53(1)
C(6)	W(2)	C(9)	53(1)	C(6)	W(2)	C(10)	34(1)
C(6)	W(2)	C(26)	131(1)	C(6)	W(2)	C(27)	105(1)
C(7)	W(2)	C(8)	34(1)	C(7)	W(2)	C(9)	56(1)
C(7)	W(2)	C(10)	58(1)	C(7)	W(2)	C(26)	110(1)
C(7)	W(2)	C(27)	135(1)	C(8)	W(2)	C(9)	33(1)
C(8)	W(2)	C(10)	56(1)	C(8)	W(2)	C(26)	79(1)
C(8)	W(2)	C(27)	120(1)	C(9)	W(2)	C(10)	33(1)
C(9)	W(2)	C(26)	81(1)	C(9)	W(2)	C(27)	88(1)
C(10)	W(2)	C(26)	111(1)	C(10)	W(2)	C(27)	77(1)
C(26)	W(2)	C(27)	86(1)	Ir(1)	W(3)	Ir(2)	59.55(4)
Ir(1)	W(3)	Ir(3)	58.34(4)	Ir(1)	W(3)	Ir(4)	58.52(4)
Ir(1)	W(3)	W(1)	61.41(5)	Ir(1)	W(3)	C(11)	154.5(7)
Ir(1)	W(3)	C(12)	158.6(8)	Ir(1)	W(3)	C(13)	148.5(7)
Ir(1)	W(3)	C(14)	142.8(8)	Ir(1)	W(3)	C(15)	144.5(7)
Ir(2)	W(3)	Ir(3)	60.41(4)	Ir(2)	W(3)	Ir(4)	109.48(6)
Ir(2)	W(3)	W(1)	61.99(5)	Ir(2)	W(3)	C(11)	145.9(7)
Ir(2)	W(3)	C(12)	118.3(7)	Ir(2)	W(3)	C(13)	89.2(7)
Ir(2)	W(3)	C(14)	95.4(7)	Ir(2)	W(3)	C(15)	126.5(7)
Ir(3)	W(3)	Ir(4)	60.52(5)	Ir(3)	W(3)	W(1)	110.92(6)
Ir(3)	W(3)	C(11)	126.5(8)	Ir(3)	W(3)	C(12)	141.7(8)
Ir(3)	W(3)	C(13)	111.3(8)	Ir(3)	W(3)	C(14)	86.0(8)

atom	atom	atom	angle	atom	atom	atom	angle
Ir(3)	W(3)	C(15)	92.6(7)	Ir(4)	W(3)	W(1)	110.39(6)
Ir(4)	W(3)	C(11)	100.2(7)	Ir(4)	W(3)	C(12)	131.7(7)
Ir(4)	W(3)	C(13)	146.9(7)	Ir(4)	W(3)	C(14)	115.1(7)
Ir(4)	W(3)	C(15)	90.6(7)	W(1)	W(3)	C(11)	122.5(8)
W(1)	W(3)	C(12)	98.1(8)	W(1)	W(3)	C(13)	102.5(7)
W(1)	W(3)	C(14)	133.9(7)	W(1)	W(3)	C(15)	153.9(7)
C(11)	W(3)	C(12)	32.3(9)	C(11)	W(3)	C(13)	56.8(10)
C(11)	W(3)	C(14)	55(1)	C(11)	W(3)	C(15)	34.8(10)
C(12)	W(3)	C(13)	35.2(10)	C(12)	W(3)	C(14)	55(1)
C(12)	W(3)	C(15)	55(1)	C(13)	W(3)	C(14)	33.5(9)
C(13)	W(3)	C(15)	56.7(10)	C(14)	W(3)	C(15)	33.3(9)
W(1)	C(1)	C(2)	71(1)	W(1)	C(1)	C(5)	68(1)
C(2)	C(1)	C(5)	107(2)	W(1)	C(2)	C(1)	74(1)
W(1)	C(2)	C(3)	68(1)	C(1)	C(2)	C(3)	107(2)
W(1)	C(3)	C(2)	76(2)	W(1)	C(3)	C(4)	71(2)
C(2)	C(3)	C(4)	107(3)	W(1)	C(4)	C(3)	72(2)
W(1)	C(4)	C(5)	75(2)	C(3)	C(4)	C(5)	109(3)
W(1)	C(5)	C(1)	75(1)	W(1)	C(5)	C(4)	70(1)
C(1)	C(5)	C(4)	108(2)	W(2)	C(6)	C(7)	76(1)
W(2)	C(6)	C(10)	69(2)	C(7)	C(6)	C(10)	114(3)
W(2)	C(7)	C(6)	69(2)	W(2)	C(7)	C(8)	68(2)
C(6)	C(7)	C(8)	98(3)	W(2)	C(8)	C(7)	77(2)
W(2)	C(8)	C(9)	72(2)	C(7)	C(8)	C(9)	111(3)
W(2)	C(9)	C(8)	74(2)	W(2)	C(9)	C(10)	72(2)

atom	atom	atom	angle	atom	atom	atom	angle
C(8)	C(9)	C(10)	111(4)	W(2)	C(10)	C(6)	76(2)
W(2)	C(10)	C(9)	74(2)	C(6)	C(10)	C(9)	102(3)
W(3)	C(11)	C(12)	74(1)	W(3)	C(11)	C(15)	72(1)
C(12)	C(11)	C(15)	108(2)	W(3)	C(12)	C(11)	73(1)
W(3)	C(12)	C(13)	71(1)	C(11)	C(12)	C(13)	109(2)
W(3)	C(13)	C(12)	73(1)	W(3)	C(13)	C(14)	73(1)
C(12)	C(13)	C(14)	104(2)	W(3)	C(14)	C(13)	73(1)
W(3)	C(14)	C(15)	73(1)	C(13)	C(14)	C(15)	111(3)
W(3)	C(15)	C(11)	72(1)	W(3)	C(15)	C(14)	73(1)
C(11)	C(15)	C(14)	106(2)	Ir(1)	C(16)	O(16)	171(2)
Ir(1)	C(17)	O(17)	177(2)	Ir(2)	C(18)	O(18)	170(4)
Ir(2)	C(19)	O(19)	174(2)	Ir(3)	C(20)	O(20)	169(2)
Ir(3)	C(21)	O(21)	174(3)	Ir(4)	C(22)	O(22)	168(3)
Ir(4)	C(23)	O(23)	174(3)	W(1)	C(24)	O(24)	171(2)
W(1)	C(25)	O(25)	161(3)	W(2)	C(26)	O(26)	175(2)
W(2)	C(27)	O(27)	177(3)				

atom	atom	atom	angle	atom	atom	atom	angle
W(1)	C(1)	H(1)	125.2	C(2)	C(1)	H(1)	126.4
C(5)	C(1)	H(1)	126.4	W(1)	C(2)	H(2)	122.1
C(1)	C(2)	H(2)	126.2	C(3)	C(2)	H(2)	126.2
W(1)	C(3)	H(3)	118.4	C(2)	C(3)	H(3)	126.4
C(4)	C(3)	H(3)	126.4	W(1)	C(4)	H(4)	118.4
C(3)	C(4)	H(4)	125.4	C(5)	C(4)	H(4)	125.5
W(1)	C(5)	H(5)	120.2	C(1)	C(5)	H(5)	125.5
C(4)	C(5)	H(5)	125.6	W(2)	C(6)	H(6)	122.4
C(7)	C(6)	H(6)	122.5	C(10)	C(6)	H(6)	122.5
W(2)	C(7)	H(7)	123.5	C(6)	C(7)	H(7)	130.7
C(8)	C(7)	H(7)	130.8	W(2)	C(8)	H(8)	117.0
C(7)	C(8)	H(8)	124.2	C(9)	C(8)	H(8)	124.3
W(2)	C(9)	H(9)	120.7	C(8)	C(9)	H(9)	124.2
C(10)	C(9)	H(9)	124.2	W(2)	C(10)	H(10)	114.4
C(6)	C(10)	H(10)	128.5	C(9)	C(10)	H(10)	128.6
W(3)	C(11)	H(11)	118.9	C(12)	C(11)	H(11)	125.7
C(15)	C(11)	H(11)	125.6	W(3)	C(12)	H(12)	121.3
C(11)	C(12)	H(12)	125.4	C(13)	C(12)	H(12)	125.4
W(3)	C(13)	H(13)	118.3	C(12)	C(13)	H(13)	127.7
C(14)	C(13)	H(13)	127.7	W(3)	C(14)	H(14)	120.5
C(13)	C(14)	H(14)	124.4	C(15)	C(14)	H(14)	124.4
W(3)	C(15)	H(15)	119.6	C(11)	C(15)	H(15)	127.0
C(14)	C(15)	H(15)	127.0				

Table S5: Torsion angles (°) for $\text{Cp}_3\text{W}_3\text{Ir}_4(\mu\text{-H})(\text{CO})_{12}$, 1.

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Ir(1)	Ir(2)	Ir(3)	Ir(4)	37.82(5)	Ir(1)	Ir(2)	Ir(3)	W(2)	-29.08(6)
Ir(1)	Ir(2)	Ir(3)	W(3)	74.10(5)	Ir(1)	Ir(2)	Ir(3)	C(20)	-106(1)
Ir(1)	Ir(2)	Ir(3)	C(21)	155(1)	Ir(1)	Ir(2)	W(1)	W(3)	-72.44(5)
Ir(1)	Ir(2)	W(1)	C(1)	98.2(8)	Ir(1)	Ir(2)	W(1)	C(2)	67.9(7)
Ir(1)	Ir(2)	W(1)	C(3)	67(1)	Ir(1)	Ir(2)	W(1)	C(4)	136(1)
Ir(1)	Ir(2)	W(1)	C(5)	131.2(8)	Ir(1)	Ir(2)	W(1)	C(24)	-157.7(8)
Ir(1)	Ir(2)	W(1)	C(25)	-80(1)	Ir(1)	Ir(2)	W(3)	Ir(3)	-68.51(5)
Ir(1)	Ir(2)	W(3)	Ir(4)	-31.75(5)	Ir(1)	Ir(2)	W(3)	W(1)	71.58(5)
Ir(1)	Ir(2)	W(3)	C(11)	179(1)	Ir(1)	Ir(2)	W(3)	C(12)	155.6(9)
Ir(1)	Ir(2)	W(3)	C(13)	176.2(7)	Ir(1)	Ir(2)	W(3)	C(14)	-150.8(8)
Ir(1)	Ir(2)	W(3)	C(15)	-137.7(9)	Ir(1)	Ir(2)	C(18)	O(18)	113(23)
Ir(1)	Ir(2)	C(19)	O(19)	-87(28)	Ir(1)	Ir(3)	Ir(2)	W(1)	-38.12(5)
Ir(1)	Ir(3)	Ir(2)	W(3)	-74.10(5)	Ir(1)	Ir(3)	Ir(2)	C(18)	97(1)
Ir(1)	Ir(3)	Ir(2)	C(19)	-160(1)	Ir(1)	Ir(3)	Ir(4)	W(2)	-74.90(5)
Ir(1)	Ir(3)	Ir(4)	W(3)	74.90(5)	Ir(1)	Ir(3)	Ir(4)	C(22)	-173(1)
Ir(1)	Ir(3)	Ir(4)	C(23)	-61(2)	Ir(1)	Ir(3)	W(2)	Ir(4)	68.45(5)
Ir(1)	Ir(3)	W(2)	C(6)	151.6(9)	Ir(1)	Ir(3)	W(2)	C(7)	178.1(8)
Ir(1)	Ir(3)	W(2)	C(8)	-152.4(9)	Ir(1)	Ir(3)	W(2)	C(9)	-153(1)
Ir(1)	Ir(3)	W(2)	C(10)	154(1)	Ir(1)	Ir(3)	W(2)	C(26)	-71.7(9)
Ir(1)	Ir(3)	W(2)	C(27)	17(1)	Ir(1)	Ir(3)	W(3)	Ir(2)	70.45(5)
Ir(1)	Ir(3)	W(3)	Ir(4)	-69.14(5)	Ir(1)	Ir(3)	W(3)	W(1)	33.12(5)
Ir(1)	Ir(3)	W(3)	C(11)	-149.7(9)	Ir(1)	Ir(3)	W(3)	C(12)	169(1)
Ir(1)	Ir(3)	W(3)	C(13)	146.6(7)	Ir(1)	Ir(3)	W(3)	C(14)	169.0(7)
Ir(1)	Ir(3)	W(3)	C(15)	-158.3(7)	Ir(1)	Ir(3)	C(20)	O(20)	-102(17)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Ir(1)	Ir(3)	C(21)	O(21)	-67(31)	Ir(1)	Ir(4)	Ir(3)	Ir(2)	-38.38(5)
Ir(1)	Ir(4)	Ir(3)	W(2)	74.90(5)	Ir(1)	Ir(4)	Ir(3)	W(3)	-74.90(5)
Ir(1)	Ir(4)	Ir(3)	C(20)	72(1)	Ir(1)	Ir(4)	Ir(3)	C(21)	-177.5(9)
Ir(1)	Ir(4)	W(2)	Ir(3)	-68.53(5)	Ir(1)	Ir(4)	W(2)	C(6)	-177.2(9)
Ir(1)	Ir(4)	W(2)	C(7)	-144.9(8)	Ir(1)	Ir(4)	W(2)	C(8)	-142(1)
Ir(1)	Ir(4)	W(2)	C(9)	163(1)	Ir(1)	Ir(4)	W(2)	C(10)	153(1)
Ir(1)	Ir(4)	W(2)	C(26)	-6(1)	Ir(1)	Ir(4)	W(2)	C(27)	77(1)
Ir(1)	Ir(4)	W(3)	Ir(2)	32.13(5)	Ir(1)	Ir(4)	W(3)	Ir(3)	68.85(5)
Ir(1)	Ir(4)	W(3)	W(1)	-34.29(6)	Ir(1)	Ir(4)	W(3)	C(11)	-164.8(8)
Ir(1)	Ir(4)	W(3)	C(12)	-156(1)	Ir(1)	Ir(4)	W(3)	C(13)	153(1)
Ir(1)	Ir(4)	W(3)	C(14)	138.1(8)	Ir(1)	Ir(4)	W(3)	C(15)	161.5(7)
Ir(1)	Ir(4)	C(22)	O(22)	-66(20)	Ir(1)	Ir(4)	C(23)	O(23)	-171(34)
Ir(1)	W(1)	Ir(2)	Ir(3)	36.88(5)	Ir(1)	W(1)	Ir(2)	W(3)	72.44(5)
Ir(1)	W(1)	Ir(2)	C(18)	-90(1)	Ir(1)	W(1)	Ir(2)	C(19)	170.9(9)
Ir(1)	W(1)	W(3)	Ir(2)	-68.66(5)	Ir(1)	W(1)	W(3)	Ir(3)	-31.99(5)
Ir(1)	W(1)	W(3)	Ir(4)	33.18(5)	Ir(1)	W(1)	W(3)	C(11)	150.7(9)
Ir(1)	W(1)	W(3)	C(12)	173.5(8)	Ir(1)	W(1)	W(3)	C(13)	-150.9(8)
Ir(1)	W(1)	W(3)	C(14)	-137(1)	Ir(1)	W(1)	W(3)	C(15)	174(1)
Ir(1)	W(1)	C(1)	C(2)	-65(1)	Ir(1)	W(1)	C(1)	C(5)	177(1)
Ir(1)	W(1)	C(2)	C(1)	116(1)	Ir(1)	W(1)	C(2)	C(3)	-127(1)
Ir(1)	W(1)	C(3)	C(2)	55(1)	Ir(1)	W(1)	C(3)	C(4)	169(1)
Ir(1)	W(1)	C(4)	C(3)	-16(2)	Ir(1)	W(1)	C(4)	C(5)	99(2)
Ir(1)	W(1)	C(5)	C(1)	-4(2)	Ir(1)	W(1)	C(5)	C(4)	-120(1)
Ir(1)	W(1)	C(24)	O(24)	178(17)	Ir(1)	W(1)	C(25)	O(25)	111(8)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Ir(1)	W(2)	Ir(3)	Ir(2)	28.30(6)	Ir(1)	W(2)	Ir(3)	Ir(4)	-68.45(5)
Ir(1)	W(2)	Ir(3)	W(3)	-39.96(5)	Ir(1)	W(2)	Ir(3)	C(20)	109(1)
Ir(1)	W(2)	Ir(3)	C(21)	-155(1)	Ir(1)	W(2)	Ir(4)	Ir(3)	68.53(5)
Ir(1)	W(2)	Ir(4)	W(3)	40.24(6)	Ir(1)	W(2)	Ir(4)	C(22)	160(1)
Ir(1)	W(2)	Ir(4)	C(23)	-104(1)	Ir(1)	W(2)	C(6)	C(7)	106(2)
Ir(1)	W(2)	C(6)	C(10)	-130(2)	Ir(1)	W(2)	C(7)	C(6)	-127(1)
Ir(1)	W(2)	C(7)	C(8)	124(2)	Ir(1)	W(2)	C(8)	C(7)	-108(2)
Ir(1)	W(2)	C(8)	C(9)	133(2)	Ir(1)	W(2)	C(9)	C(8)	-113(2)
Ir(1)	W(2)	C(9)	C(10)	127(2)	Ir(1)	W(2)	C(10)	C(6)	120(2)
Ir(1)	W(2)	C(10)	C(9)	-131(2)	Ir(1)	W(2)	C(26)	O(26)	-100(33)
Ir(1)	W(2)	C(27)	O(27)	-112.8	Ir(1)	W(3)	Ir(2)	Ir(3)	68.51(5)
Ir(1)	W(3)	Ir(2)	W(1)	-71.58(5)	Ir(1)	W(3)	Ir(2)	C(18)	36(4)
Ir(1)	W(3)	Ir(2)	C(19)	-169.8(10)	Ir(1)	W(3)	Ir(3)	Ir(2)	-70.45(5)
Ir(1)	W(3)	Ir(3)	Ir(4)	69.14(5)	Ir(1)	W(3)	Ir(3)	W(2)	40.18(5)
Ir(1)	W(3)	Ir(3)	C(20)	-71(1)	Ir(1)	W(3)	Ir(3)	C(21)	158.1(9)
Ir(1)	W(3)	Ir(4)	Ir(3)	-68.85(5)	Ir(1)	W(3)	Ir(4)	W(2)	-40.34(6)
Ir(1)	W(3)	Ir(4)	C(22)	-153(1)	Ir(1)	W(3)	Ir(4)	C(23)	80(1)
Ir(1)	W(3)	W(1)	Ir(2)	68.66(5)	Ir(1)	W(3)	W(1)	C(1)	48(1)
Ir(1)	W(3)	W(1)	C(2)	-16(1)	Ir(1)	W(3)	W(1)	C(3)	-77(1)
Ir(1)	W(3)	W(1)	C(4)	-145(1)	Ir(1)	W(3)	W(1)	C(5)	136(1)
Ir(1)	W(3)	W(1)	C(24)	153.2(8)	Ir(1)	W(3)	W(1)	C(25)	-119.2(10)
Ir(1)	W(3)	C(11)	C(12)	137(1)	Ir(1)	W(3)	C(11)	C(15)	-107(2)
Ir(1)	W(3)	C(12)	C(11)	-126(2)	Ir(1)	W(3)	C(12)	C(13)	115(2)
Ir(1)	W(3)	C(13)	C(12)	-141(1)	Ir(1)	W(3)	C(13)	C(14)	107(1)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Ir(1)	W(3)	C(14)	C(13)	-124(1)	Ir(1)	W(3)	C(14)	C(15)	116(1)
Ir(1)	W(3)	C(15)	C(11)	135(1)	Ir(1)	W(3)	C(15)	C(14)	-111(1)
Ir(2)	Ir(1)	Ir(3)	Ir(4)	-137.91(6)	Ir(2)	Ir(1)	Ir(3)	W(2)	151.74(6)
Ir(2)	Ir(1)	Ir(3)	W(3)	-69.10(5)	Ir(2)	Ir(1)	Ir(3)	C(20)	79.4(10)
Ir(2)	Ir(1)	Ir(3)	C(21)	-131(2)	Ir(2)	Ir(1)	Ir(4)	Ir(3)	37.57(5)
Ir(2)	Ir(1)	Ir(4)	W(2)	107.19(6)	Ir(2)	Ir(1)	Ir(4)	W(3)	-31.32(5)
Ir(2)	Ir(1)	Ir(4)	C(22)	53(3)	Ir(2)	Ir(1)	Ir(4)	C(23)	-168(1)
Ir(2)	Ir(1)	W(1)	W(3)	68.66(5)	Ir(2)	Ir(1)	W(1)	C(1)	-90.5(8)
Ir(2)	Ir(1)	W(1)	C(2)	-121.0(7)	Ir(2)	Ir(1)	W(1)	C(3)	-149.8(9)
Ir(2)	Ir(1)	W(1)	C(4)	-139(1)	Ir(2)	Ir(1)	W(1)	C(5)	-88(1)
Ir(2)	Ir(1)	W(1)	C(24)	30(1)	Ir(2)	Ir(1)	W(1)	C(25)	121.4(10)
Ir(2)	Ir(1)	W(2)	Ir(3)	-26.52(6)	Ir(2)	Ir(1)	W(2)	Ir(4)	-97.86(6)
Ir(2)	Ir(1)	W(2)	C(6)	-92(1)	Ir(2)	Ir(1)	W(2)	C(7)	-29(1)
Ir(2)	Ir(1)	W(2)	C(8)	32(1)	Ir(2)	Ir(1)	W(2)	C(9)	105(2)
Ir(2)	Ir(1)	W(2)	C(10)	-169(2)	Ir(2)	Ir(1)	W(2)	C(26)	77.6(10)
Ir(2)	Ir(1)	W(2)	C(27)	165(1)	Ir(2)	Ir(1)	W(3)	Ir(3)	71.92(5)
Ir(2)	Ir(1)	W(3)	Ir(4)	144.44(6)	Ir(2)	Ir(1)	W(3)	W(1)	-72.54(5)
Ir(2)	Ir(1)	W(3)	C(11)	-178(1)	Ir(2)	Ir(1)	W(3)	C(12)	-90(2)
Ir(2)	Ir(1)	W(3)	C(13)	-7(1)	Ir(2)	Ir(1)	W(3)	C(14)	53(1)
Ir(2)	Ir(1)	W(3)	C(15)	111(1)	Ir(2)	Ir(1)	C(16)	O(16)	68(17)
Ir(2)	Ir(1)	C(17)	O(17)	-42(77)	Ir(2)	Ir(3)	Ir(1)	Ir(4)	137.91(6)
Ir(2)	Ir(3)	Ir(1)	W(1)	37.57(5)	Ir(2)	Ir(3)	Ir(1)	W(2)	-151.74(6)
Ir(2)	Ir(3)	Ir(1)	W(3)	69.10(5)	Ir(2)	Ir(3)	Ir(1)	C(16)	-61.9(10)
Ir(2)	Ir(3)	Ir(1)	C(17)	147(1)	Ir(2)	Ir(3)	Ir(4)	W(2)	-113.27(6)

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atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Ir(2)	Ir(3)	Ir(4)	W(3)	36.53(5)	Ir(2)	Ir(3)	Ir(4)	C(22)	148(1)
Ir(2)	Ir(3)	Ir(4)	C(23)	-99(2)	Ir(2)	Ir(3)	W(2)	Ir(4)	96.75(7)
Ir(2)	Ir(3)	W(2)	C(6)	179.9(9)	Ir(2)	Ir(3)	W(2)	C(7)	-153.6(8)
Ir(2)	Ir(3)	W(2)	C(8)	-124.1(9)	Ir(2)	Ir(3)	W(2)	C(9)	-125(1)
Ir(2)	Ir(3)	W(2)	C(10)	-177(1)	Ir(2)	Ir(3)	W(2)	C(26)	-43.4(9)
Ir(2)	Ir(3)	W(2)	C(27)	45(1)	Ir(2)	Ir(3)	W(3)	Ir(4)	-139.59(6)
Ir(2)	Ir(3)	W(3)	W(1)	-37.33(5)	Ir(2)	Ir(3)	W(3)	C(11)	139.9(9)
Ir(2)	Ir(3)	W(3)	C(12)	99(1)	Ir(2)	Ir(3)	W(3)	C(13)	76.1(7)
Ir(2)	Ir(3)	W(3)	C(14)	98.5(7)	Ir(2)	Ir(3)	W(3)	C(15)	131.2(7)
Ir(2)	Ir(3)	C(20)	O(20)	-42(16)	Ir(2)	Ir(3)	C(21)	O(21)	174(29)
Ir(2)	W(1)	Ir(1)	Ir(3)	-37.28(5)	Ir(2)	W(1)	Ir(1)	Ir(4)	-101.09(6)
Ir(2)	W(1)	Ir(1)	W(2)	-69.9(2)	Ir(2)	W(1)	Ir(1)	W(3)	-68.66(5)
Ir(2)	W(1)	Ir(1)	C(16)	77.1(9)	Ir(2)	W(1)	Ir(1)	C(17)	177.6(9)
Ir(2)	W(1)	W(3)	Ir(3)	36.67(5)	Ir(2)	W(1)	W(3)	Ir(4)	101.84(6)
Ir(2)	W(1)	W(3)	C(11)	-140.7(8)	Ir(2)	W(1)	W(3)	C(12)	-117.8(8)
Ir(2)	W(1)	W(3)	C(13)	-82.3(7)	Ir(2)	W(1)	W(3)	C(14)	-68(1)
Ir(2)	W(1)	W(3)	C(15)	-116(1)	Ir(2)	W(1)	C(1)	C(2)	-123(1)
Ir(2)	W(1)	C(1)	C(5)	118(1)	Ir(2)	W(1)	C(2)	C(1)	64(1)
Ir(2)	W(1)	C(2)	C(3)	-179(1)	Ir(2)	W(1)	C(3)	C(2)	1(2)
Ir(2)	W(1)	C(3)	C(4)	115(2)	Ir(2)	W(1)	C(4)	C(3)	-124(1)
Ir(2)	W(1)	C(4)	C(5)	-9(2)	Ir(2)	W(1)	C(5)	C(1)	-69(1)
Ir(2)	W(1)	C(5)	C(4)	174(1)	Ir(2)	W(1)	C(24)	O(24)	-155(17)
Ir(2)	W(1)	C(25)	O(25)	169(8)	Ir(2)	W(3)	Ir(1)	Ir(3)	-71.92(5)
Ir(2)	W(3)	Ir(1)	Ir(4)	-144.44(6)	Ir(2)	W(3)	Ir(1)	W(1)	72.54(5)

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atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Ir(2)	W(3)	Ir(1)	W(2)	-107.80(6)	Ir(2)	W(3)	Ir(1)	C(16)	18(1)
Ir(2)	W(3)	Ir(1)	C(17)	146.9(9)	Ir(2)	W(3)	Ir(3)	Ir(4)	139.59(6)
Ir(2)	W(3)	Ir(3)	W(2)	110.63(6)	Ir(2)	W(3)	Ir(3)	C(20)	-1(1)
Ir(2)	W(3)	Ir(3)	C(21)	-131.4(9)	Ir(2)	W(3)	Ir(4)	Ir(3)	-36.72(5)
Ir(2)	W(3)	Ir(4)	W(2)	-8.22(8)	Ir(2)	W(3)	Ir(4)	C(22)	-121(1)
Ir(2)	W(3)	Ir(4)	C(23)	112(1)	Ir(2)	W(3)	W(1)	C(1)	-20(1)
Ir(2)	W(3)	W(1)	C(2)	-84(1)	Ir(2)	W(3)	W(1)	C(3)	-146(1)
Ir(2)	W(3)	W(1)	C(4)	146(1)	Ir(2)	W(3)	W(1)	C(5)	67(1)
Ir(2)	W(3)	W(1)	C(24)	84.5(8)	Ir(2)	W(3)	W(1)	C(25)	172.2(10)
Ir(2)	W(3)	C(11)	C(12)	-41(2)	Ir(2)	W(3)	C(11)	C(15)	74(2)
Ir(2)	W(3)	C(12)	C(11)	155(1)	Ir(2)	W(3)	C(12)	C(13)	37(1)
Ir(2)	W(3)	C(13)	C(12)	-147(1)	Ir(2)	W(3)	C(13)	C(14)	101(1)
Ir(2)	W(3)	C(14)	C(13)	-80(1)	Ir(2)	W(3)	C(14)	C(15)	160(1)
Ir(2)	W(3)	C(15)	C(11)	-137(1)	Ir(2)	W(3)	C(15)	C(14)	-24(2)
Ir(3)	Ir(1)	Ir(2)	W(1)	138.35(6)	Ir(3)	Ir(1)	Ir(2)	W(3)	69.06(5)
Ir(3)	Ir(1)	Ir(2)	C(18)	-101(1)	Ir(3)	Ir(1)	Ir(2)	C(19)	105(3)
Ir(3)	Ir(1)	Ir(4)	W(2)	69.62(5)	Ir(3)	Ir(1)	Ir(4)	W(3)	-68.89(5)
Ir(3)	Ir(1)	Ir(4)	C(22)	16(3)	Ir(3)	Ir(1)	Ir(4)	C(23)	153(1)
Ir(3)	Ir(1)	W(1)	W(3)	31.37(5)	Ir(3)	Ir(1)	W(1)	C(1)	-127.7(8)
Ir(3)	Ir(1)	W(1)	C(2)	-158.2(7)	Ir(3)	Ir(1)	W(1)	C(3)	173.0(9)
Ir(3)	Ir(1)	W(1)	C(4)	-176(1)	Ir(3)	Ir(1)	W(1)	C(5)	-125(1)
Ir(3)	Ir(1)	W(1)	C(24)	-6(1)	Ir(3)	Ir(1)	W(1)	C(25)	84.1(10)
Ir(3)	Ir(1)	W(2)	Ir(4)	-71.34(5)	Ir(3)	Ir(1)	W(2)	C(6)	-65(1)
Ir(3)	Ir(1)	W(2)	C(7)	-3(1)	Ir(3)	Ir(1)	W(2)	C(8)	58(1)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Ir(3)	Ir(1)	W(2)	C(9)	132(2)	Ir(3)	Ir(1)	W(2)	C(10)	-142(2)
Ir(3)	Ir(1)	W(2)	C(26)	104.2(10)	Ir(3)	Ir(1)	W(2)	C(27)	-167(1)
Ir(3)	Ir(1)	W(3)	Ir(4)	72.52(5)	Ir(3)	Ir(1)	W(3)	W(1)	-144.46(6)
Ir(3)	Ir(1)	W(3)	C(11)	109(1)	Ir(3)	Ir(1)	W(3)	C(12)	-162(2)
Ir(3)	Ir(1)	W(3)	C(13)	-79(1)	Ir(3)	Ir(1)	W(3)	C(14)	-18(1)
Ir(3)	Ir(1)	W(3)	C(15)	39(1)	Ir(3)	Ir(1)	C(16)	O(16)	119(17)
Ir(3)	Ir(1)	C(17)	O(17)	-163(75)	Ir(3)	Ir(2)	Ir(1)	Ir(4)	-37.77(5)
Ir(3)	Ir(2)	Ir(1)	W(1)	-138.35(6)	Ir(3)	Ir(2)	Ir(1)	W(2)	26.35(6)
Ir(3)	Ir(2)	Ir(1)	W(3)	-69.06(5)	Ir(3)	Ir(2)	Ir(1)	C(16)	124.1(9)
Ir(3)	Ir(2)	Ir(1)	C(17)	-142(1)	Ir(3)	Ir(2)	W(1)	W(3)	-35.56(5)
Ir(3)	Ir(2)	W(1)	C(1)	135.1(8)	Ir(3)	Ir(2)	W(1)	C(2)	104.8(7)
Ir(3)	Ir(2)	W(1)	C(3)	103(1)	Ir(3)	Ir(2)	W(1)	C(4)	173(1)
Ir(3)	Ir(2)	W(1)	C(5)	168.1(8)	Ir(3)	Ir(2)	W(1)	C(24)	-120.9(8)
Ir(3)	Ir(2)	W(1)	C(25)	-43(1)	Ir(3)	Ir(2)	W(3)	Ir(4)	36.77(5)
Ir(3)	Ir(2)	W(3)	W(1)	140.09(6)	Ir(3)	Ir(2)	W(3)	C(11)	-112(1)
Ir(3)	Ir(2)	W(3)	C(12)	-135.9(9)	Ir(3)	Ir(2)	W(3)	C(13)	-115.3(7)
Ir(3)	Ir(2)	W(3)	C(14)	-82.3(8)	Ir(3)	Ir(2)	W(3)	C(15)	-69.2(9)
Ir(3)	Ir(2)	C(18)	O(18)	51(23)	Ir(3)	Ir(2)	C(19)	O(19)	7(28)
Ir(3)	Ir(4)	Ir(1)	W(1)	101.51(6)	Ir(3)	Ir(4)	Ir(1)	W(2)	-69.62(5)
Ir(3)	Ir(4)	Ir(1)	W(3)	68.89(5)	Ir(3)	Ir(4)	Ir(1)	C(16)	-73(2)
Ir(3)	Ir(4)	Ir(1)	C(17)	-174.2(10)	Ir(3)	Ir(4)	W(2)	C(6)	-108.7(9)
Ir(3)	Ir(4)	W(2)	C(7)	-76.4(8)	Ir(3)	Ir(4)	W(2)	C(8)	-74(1)
Ir(3)	Ir(4)	W(2)	C(9)	-128(1)	Ir(3)	Ir(4)	W(2)	C(10)	-138(1)
Ir(3)	Ir(4)	W(2)	C(26)	62(1)	Ir(3)	Ir(4)	W(2)	C(27)	146(1)

Ir(3)	Ir(4)	W(3)	W(1)	-103.15(6)	Ir(3)	Ir(4)	W(3)	C(11)	126.3(8)
Ir(3)	Ir(4)	W(3)	C(12)	134(1)	Ir(3)	Ir(4)	W(3)	C(13)	84(1)
Ir(3)	Ir(4)	W(3)	C(14)	69.3(8)	Ir(3)	Ir(4)	W(3)	C(15)	92.7(7)
Ir(3)	Ir(4)	C(22)	O(22)	-52(19)	Ir(3)	Ir(4)	C(23)	O(23)	-120(34)
Ir(3)	W(2)	Ir(1)	Ir(4)	71.34(5)	Ir(3)	W(2)	Ir(1)	W(1)	36.3(2)
Ir(3)	W(2)	Ir(1)	W(3)	35.41(5)	Ir(3)	W(2)	Ir(1)	C(16)	-109.8(9)
Ir(3)	W(2)	Ir(1)	C(17)	147.6(10)	Ir(3)	W(2)	Ir(4)	W(3)	-28.29(6)
Ir(3)	W(2)	Ir(4)	C(22)	91(1)	Ir(3)	W(2)	Ir(4)	C(23)	-173(1)
Ir(3)	W(2)	C(6)	C(7)	53(2)	Ir(3)	W(2)	C(6)	C(10)	176(2)
Ir(3)	W(2)	C(7)	C(6)	-130(2)	Ir(3)	W(2)	C(7)	C(8)	121(2)
Ir(3)	W(2)	C(8)	C(7)	-61(2)	Ir(3)	W(2)	C(8)	C(9)	-178(2)
Ir(3)	W(2)	C(9)	C(8)	1(3)	Ir(3)	W(2)	C(9)	C(10)	-117(2)
Ir(3)	W(2)	C(10)	C(6)	-5(3)	Ir(3)	W(2)	C(10)	C(9)	103(2)
Ir(3)	W(2)	C(26)	O(26)	-45(33)	Ir(3)	W(2)	C(27)	O(27)	-127.4
Ir(3)	W(3)	Ir(1)	Ir(4)	-72.52(5)	Ir(3)	W(3)	Ir(1)	W(1)	144.46(6)
Ir(3)	W(3)	Ir(1)	W(2)	-35.89(5)	Ir(3)	W(3)	Ir(1)	C(16)	90(1)
Ir(3)	W(3)	Ir(1)	C(17)	-141.2(9)	Ir(3)	W(3)	Ir(2)	W(1)	-140.09(6)
Ir(3)	W(3)	Ir(2)	C(18)	-31(4)	Ir(3)	W(3)	Ir(2)	C(19)	121.6(10)
Ir(3)	W(3)	Ir(4)	W(2)	28.51(6)	Ir(3)	W(3)	Ir(4)	C(22)	-84(1)
Ir(3)	W(3)	Ir(4)	C(23)	148(1)	Ir(3)	W(3)	W(1)	C(1)	16(1)
Ir(3)	W(3)	W(1)	C(2)	-48(1)	Ir(3)	W(3)	W(1)	C(3)	-109(1)
Ir(3)	W(3)	W(1)	C(4)	-177(1)	Ir(3)	W(3)	W(1)	C(5)	104(1)
Ir(3)	W(3)	W(1)	C(24)	121.2(8)	Ir(3)	W(3)	W(1)	C(25)	-151.2(10)
Ir(3)	W(3)	C(11)	C(12)	-130(1)	Ir(3)	W(3)	C(11)	C(15)	-15(1)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Ir(3)	W(3)	C(12)	C(11)	78(2)	Ir(3)	W(3)	C(12)	C(13)	-39(2)
Ir(3)	W(3)	C(13)	C(12)	155(1)	Ir(3)	W(3)	C(13)	C(14)	43(1)
Ir(3)	W(3)	C(14)	C(13)	-140(1)	Ir(3)	W(3)	C(14)	C(15)	100(1)
Ir(3)	W(3)	C(15)	C(11)	167(1)	Ir(3)	W(3)	C(15)	C(14)	-78(1)
Ir(4)	Ir(1)	Ir(2)	W(1)	100.59(6)	Ir(4)	Ir(1)	Ir(2)	W(3)	31.29(5)
Ir(4)	Ir(1)	Ir(2)	C(18)	-139(1)	Ir(4)	Ir(1)	Ir(2)	C(19)	68(3)
Ir(4)	Ir(1)	Ir(3)	W(2)	-70.36(5)	Ir(4)	Ir(1)	Ir(3)	W(3)	68.81(5)
Ir(4)	Ir(1)	Ir(3)	C(20)	-142.7(10)	Ir(4)	Ir(1)	Ir(3)	C(21)	6(2)
Ir(4)	Ir(1)	W(1)	W(3)	-32.43(5)	Ir(4)	Ir(1)	W(1)	C(1)	168.4(8)
Ir(4)	Ir(1)	W(1)	C(2)	138.0(7)	Ir(4)	Ir(1)	W(1)	C(3)	109.2(9)
Ir(4)	Ir(1)	W(1)	C(4)	119(1)	Ir(4)	Ir(1)	W(1)	C(5)	170(1)
Ir(4)	Ir(1)	W(1)	C(24)	-70(1)	Ir(4)	Ir(1)	W(1)	C(25)	20.3(10)
Ir(4)	Ir(1)	W(2)	C(6)	5(1)	Ir(4)	Ir(1)	W(2)	C(7)	68(1)
Ir(4)	Ir(1)	W(2)	C(8)	130(1)	Ir(4)	Ir(1)	W(2)	C(9)	-156(2)
Ir(4)	Ir(1)	W(2)	C(10)	-71(2)	Ir(4)	Ir(1)	W(2)	C(26)	175.5(10)
Ir(4)	Ir(1)	W(2)	C(27)	-96(1)	Ir(4)	Ir(1)	W(3)	W(1)	143.02(6)
Ir(4)	Ir(1)	W(3)	C(11)	36(1)	Ir(4)	Ir(1)	W(3)	C(12)	125(2)
Ir(4)	Ir(1)	W(3)	C(13)	-151(1)	Ir(4)	Ir(1)	W(3)	C(14)	-90(1)
Ir(4)	Ir(1)	W(3)	C(15)	-33(1)	Ir(4)	Ir(1)	C(16)	O(16)	-176(15)
Ir(4)	Ir(1)	C(17)	O(17)	-155(76)	Ir(4)	Ir(3)	Ir(1)	W(1)	-100.34(6)
Ir(4)	Ir(3)	Ir(1)	W(2)	70.36(5)	Ir(4)	Ir(3)	Ir(1)	W(3)	-68.81(5)
Ir(4)	Ir(3)	Ir(1)	C(16)	160.2(10)	Ir(4)	Ir(3)	Ir(1)	C(17)	9(1)
Ir(4)	Ir(3)	Ir(2)	W(1)	-0.29(7)	Ir(4)	Ir(3)	Ir(2)	W(3)	-36.28(6)
Ir(4)	Ir(3)	Ir(2)	C(18)	135(1)	Ir(4)	Ir(3)	Ir(2)	C(19)	-122(1)

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atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Ir(4)	Ir(3)	W(2)	C(6)	83.1(9)	Ir(4)	Ir(3)	W(2)	C(7)	109.6(8)
Ir(4)	Ir(3)	W(2)	C(8)	139.1(9)	Ir(4)	Ir(3)	W(2)	C(9)	138(1)
Ir(4)	Ir(3)	W(2)	C(10)	86(1)	Ir(4)	Ir(3)	W(2)	C(26)	-140.1(9)
Ir(4)	Ir(3)	W(2)	C(27)	-51(1)	Ir(4)	Ir(3)	W(3)	W(1)	102.26(6)
Ir(4)	Ir(3)	W(3)	C(11)	-80.5(9)	Ir(4)	Ir(3)	W(3)	C(12)	-121(1)
Ir(4)	Ir(3)	W(3)	C(13)	-144.3(7)	Ir(4)	Ir(3)	W(3)	C(14)	-121.9(7)
Ir(4)	Ir(3)	W(3)	C(15)	-89.2(7)	Ir(4)	Ir(3)	C(20)	O(20)	-160(15)
Ir(4)	Ir(3)	C(21)	O(21)	-62(30)	Ir(4)	W(2)	Ir(1)	W(1)	-34.8(2)
Ir(4)	W(2)	Ir(1)	W(3)	-35.93(5)	Ir(4)	W(2)	Ir(1)	C(16)	178.9(9)
Ir(4)	W(2)	Ir(1)	C(17)	76.2(10)	Ir(4)	W(2)	Ir(3)	W(3)	28.50(5)
Ir(4)	W(2)	Ir(3)	C(20)	178(1)	Ir(4)	W(2)	Ir(3)	C(21)	-86(1)
Ir(4)	W(2)	C(6)	C(7)	111(2)	Ir(4)	W(2)	C(6)	C(10)	-125(2)
Ir(4)	W(2)	C(7)	C(6)	-74(2)	Ir(4)	W(2)	C(7)	C(8)	177(1)
Ir(4)	W(2)	C(8)	C(7)	-3(2)	Ir(4)	W(2)	C(8)	C(9)	-121(2)
Ir(4)	W(2)	C(9)	C(8)	102(2)	Ir(4)	W(2)	C(9)	C(10)	-16(4)
Ir(4)	W(2)	C(10)	C(6)	61(2)	Ir(4)	W(2)	C(10)	C(9)	169(2)
Ir(4)	W(2)	C(26)	O(26)	-94(33)	Ir(4)	W(2)	C(27)	O(27)	-169.0
Ir(4)	W(3)	Ir(1)	W(1)	-143.02(6)	Ir(4)	W(3)	Ir(1)	W(2)	36.63(5)
Ir(4)	W(3)	Ir(1)	C(16)	163(1)	Ir(4)	W(3)	Ir(1)	C(17)	-68.7(9)
Ir(4)	W(3)	Ir(2)	W(1)	-103.32(6)	Ir(4)	W(3)	Ir(2)	C(18)	4(4)
Ir(4)	W(3)	Ir(2)	C(19)	158.4(10)	Ir(4)	W(3)	Ir(3)	W(2)	-28.96(6)
Ir(4)	W(3)	Ir(3)	C(20)	-140(1)	Ir(4)	W(3)	Ir(3)	C(21)	89.0(9)
Ir(4)	W(3)	W(1)	C(1)	81(1)	Ir(4)	W(3)	W(1)	C(2)	16(1)
Ir(4)	W(3)	W(1)	C(3)	-44(1)	Ir(4)	W(3)	W(1)	C(4)	-111(1)

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atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Ir(4)	W(3)	W(1)	C(5)	169(1)	Ir(4)	W(3)	W(1)	C(24)	-173.7(8)
Ir(4)	W(3)	W(1)	C(25)	-86.0(10)	Ir(4)	W(3)	C(11)	C(12)	168(1)
Ir(4)	W(3)	C(11)	C(15)	-76(1)	Ir(4)	W(3)	C(12)	C(11)	-15(2)
Ir(4)	W(3)	C(12)	C(13)	-133(1)	Ir(4)	W(3)	C(13)	C(12)	86(2)
Ir(4)	W(3)	C(13)	C(14)	-24(2)	Ir(4)	W(3)	C(14)	C(13)	165(1)
Ir(4)	W(3)	C(14)	C(15)	46(2)	Ir(4)	W(3)	C(15)	C(11)	107(1)
Ir(4)	W(3)	C(15)	C(14)	-139(1)	W(1)	Ir(1)	Ir(2)	W(3)	-69.29(5)
W(1)	Ir(1)	Ir(2)	C(18)	119(1)	W(1)	Ir(1)	Ir(2)	C(19)	-32(3)
W(1)	Ir(1)	Ir(3)	W(2)	-170.69(6)	W(1)	Ir(1)	Ir(3)	W(3)	-31.53(5)
W(1)	Ir(1)	Ir(3)	C(20)	117.0(10)	W(1)	Ir(1)	Ir(3)	C(21)	-94(2)
W(1)	Ir(1)	Ir(4)	W(2)	171.13(6)	W(1)	Ir(1)	Ir(4)	W(3)	32.62(5)
W(1)	Ir(1)	Ir(4)	C(22)	117(3)	W(1)	Ir(1)	Ir(4)	C(23)	-104(1)
W(1)	Ir(1)	W(2)	C(6)	-29(1)	W(1)	Ir(1)	W(2)	C(7)	33(1)
W(1)	Ir(1)	W(2)	C(8)	95(1)	W(1)	Ir(1)	W(2)	C(9)	168(2)
W(1)	Ir(1)	W(2)	C(10)	-106(2)	W(1)	Ir(1)	W(2)	C(26)	140.7(10)
W(1)	Ir(1)	W(2)	C(27)	-130(1)	W(1)	Ir(1)	W(3)	C(11)	-106(1)
W(1)	Ir(1)	W(3)	C(12)	-17(2)	W(1)	Ir(1)	W(3)	C(13)	65(1)
W(1)	Ir(1)	W(3)	C(14)	126(1)	W(1)	Ir(1)	W(3)	C(15)	-176(1)
W(1)	Ir(1)	C(16)	O(16)	8(17)	W(1)	Ir(1)	C(17)	O(17)	-46(76)
W(1)	Ir(2)	Ir(1)	W(2)	164.70(7)	W(1)	Ir(2)	Ir(1)	W(3)	69.29(5)
W(1)	Ir(2)	Ir(1)	C(16)	-97.6(9)	W(1)	Ir(2)	Ir(1)	C(17)	-4(1)
W(1)	Ir(2)	Ir(3)	W(2)	-67.20(8)	W(1)	Ir(2)	Ir(3)	W(3)	35.98(6)
W(1)	Ir(2)	Ir(3)	C(20)	-144(1)	W(1)	Ir(2)	Ir(3)	C(21)	117(1)
W(1)	Ir(2)	W(3)	C(11)	107(1)	W(1)	Ir(2)	W(3)	C(12)	84.0(9)

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atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
W(1)	Ir(2)	W(3)	C(13)	104.7(7)	W(1)	Ir(2)	W(3)	C(14)	137.7(8)
W(1)	Ir(2)	W(3)	C(15)	150.7(9)	W(1)	Ir(2)	C(18)	O(18)	179(22)
W(1)	Ir(2)	C(19)	O(19)	-116(28)	W(1)	W(3)	Ir(1)	W(2)	179.65(6)
W(1)	W(3)	Ir(1)	C(16)	-53(1)	W(1)	W(3)	Ir(1)	C(17)	74.3(9)
W(1)	W(3)	Ir(2)	C(18)	108(4)	W(1)	W(3)	Ir(2)	C(19)	-98.3(10)
W(1)	W(3)	Ir(3)	W(2)	73.30(7)	W(1)	W(3)	Ir(3)	C(20)	-38(1)
W(1)	W(3)	Ir(3)	C(21)	-168.8(9)	W(1)	W(3)	Ir(4)	W(2)	-74.64(8)
W(1)	W(3)	Ir(4)	C(22)	172(1)	W(1)	W(3)	Ir(4)	C(23)	45(1)
W(1)	W(3)	C(11)	C(12)	45(2)	W(1)	W(3)	C(11)	C(15)	161(1)
W(1)	W(3)	C(12)	C(11)	-142(1)	W(1)	W(3)	C(12)	C(13)	100(1)
W(1)	W(3)	C(13)	C(12)	-86(1)	W(1)	W(3)	C(13)	C(14)	162(1)
W(1)	W(3)	C(14)	C(13)	-24(2)	W(1)	W(3)	C(14)	C(15)	-143(1)
W(1)	W(3)	C(15)	C(11)	-37(2)	W(1)	W(3)	C(15)	C(14)	76(2)
W(1)	C(1)	C(2)	C(3)	-60(2)	W(1)	C(1)	C(5)	C(4)	62(2)
W(1)	C(2)	C(1)	C(5)	59(2)	W(1)	C(2)	C(3)	C(4)	-64(2)
W(1)	C(3)	C(2)	C(1)	65(2)	W(1)	C(3)	C(4)	C(5)	-67(2)
W(1)	C(4)	C(3)	C(2)	68(2)	W(1)	C(4)	C(5)	C(1)	-66(2)
W(1)	C(5)	C(1)	C(2)	-61(2)	W(1)	C(5)	C(4)	C(3)	64(2)
W(2)	Ir(1)	Ir(2)	W(3)	95.41(6)	W(2)	Ir(1)	Ir(2)	C(18)	-75(1)
W(2)	Ir(1)	Ir(2)	C(19)	132(3)	W(2)	Ir(1)	Ir(3)	W(3)	139.16(6)
W(2)	Ir(1)	Ir(3)	C(20)	-72.3(10)	W(2)	Ir(1)	Ir(3)	C(21)	76(2)
W(2)	Ir(1)	Ir(4)	W(3)	-138.51(6)	W(2)	Ir(1)	Ir(4)	C(22)	-53(3)
W(2)	Ir(1)	Ir(4)	C(23)	83(1)	W(2)	Ir(1)	W(1)	W(3)	-1.3(2)
W(2)	Ir(1)	W(1)	C(1)	-160.4(9)	W(2)	Ir(1)	W(1)	C(2)	169.1(7)

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atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
W(2)	Ir(1)	W(1)	C(3)	140.3(9)	W(2)	Ir(1)	W(1)	C(4)	150(1)
W(2)	Ir(1)	W(1)	C(5)	-158(1)	W(2)	Ir(1)	W(1)	C(24)	-39(1)
W(2)	Ir(1)	W(1)	C(25)	51(1)	W(2)	Ir(1)	W(3)	C(11)	73(1)
W(2)	Ir(1)	W(3)	C(12)	161(2)	W(2)	Ir(1)	W(3)	C(13)	-115(1)
W(2)	Ir(1)	W(3)	C(14)	-54(1)	W(2)	Ir(1)	W(3)	C(15)	3(1)
W(2)	Ir(1)	C(16)	O(16)	-179(17)	W(2)	Ir(1)	C(17)	O(17)	147(76)
W(2)	Ir(3)	Ir(1)	W(3)	-139.16(6)	W(2)	Ir(3)	Ir(1)	C(16)	89.8(10)
W(2)	Ir(3)	Ir(1)	C(17)	-60(1)	W(2)	Ir(3)	Ir(2)	W(3)	-103.18(7)
W(2)	Ir(3)	Ir(2)	C(18)	68(1)	W(2)	Ir(3)	Ir(2)	C(19)	170(1)
W(2)	Ir(3)	Ir(4)	W(3)	149.80(6)	W(2)	Ir(3)	Ir(4)	C(22)	-98(1)
W(2)	Ir(3)	Ir(4)	C(23)	13(2)	W(2)	Ir(3)	W(3)	C(11)	-109.5(9)
W(2)	Ir(3)	W(3)	C(12)	-150(1)	W(2)	Ir(3)	W(3)	C(13)	-173.2(7)
W(2)	Ir(3)	W(3)	C(14)	-150.9(7)	W(2)	Ir(3)	W(3)	C(15)	-118.2(7)
W(2)	Ir(3)	C(20)	O(20)	-162(17)	W(2)	Ir(3)	C(21)	O(21)	0(31)
W(2)	Ir(4)	Ir(1)	W(3)	138.51(6)	W(2)	Ir(4)	Ir(1)	C(16)	-3(2)
W(2)	Ir(4)	Ir(1)	C(17)	-104.6(10)	W(2)	Ir(4)	Ir(3)	W(3)	-149.80(6)
W(2)	Ir(4)	Ir(3)	C(20)	-2(1)	W(2)	Ir(4)	Ir(3)	C(21)	107.6(9)
W(2)	Ir(4)	W(3)	C(11)	154.8(8)	W(2)	Ir(4)	W(3)	C(12)	163(1)
W(2)	Ir(4)	W(3)	C(13)	112(1)	W(2)	Ir(4)	W(3)	C(14)	97.8(8)
W(2)	Ir(4)	W(3)	C(15)	121.2(7)	W(2)	Ir(4)	C(22)	O(22)	-113(19)
W(2)	Ir(4)	C(23)	O(23)	-108(34)	W(2)	C(6)	C(7)	C(8)	62(2)
W(2)	C(6)	C(10)	C(9)	-69(2)	W(2)	C(7)	C(6)	C(10)	-59(3)
W(2)	C(7)	C(8)	C(9)	65(3)	W(2)	C(8)	C(7)	C(6)	-64(2)
W(2)	C(8)	C(9)	C(10)	63(3)	W(2)	C(9)	C(8)	C(7)	-68(2)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
W(2)	C(9)	C(10)	C(6)	71(2)	W(2)	C(10)	C(6)	C(7)	63(3)
W(2)	C(10)	C(9)	C(8)	-64(3)	W(3)	Ir(1)	Ir(2)	C(18)	-170(1)
W(3)	Ir(1)	Ir(2)	C(19)	36(3)	W(3)	Ir(1)	Ir(3)	C(20)	148.5(10)
W(3)	Ir(1)	Ir(3)	C(21)	-62(2)	W(3)	Ir(1)	Ir(4)	C(22)	85(3)
W(3)	Ir(1)	Ir(4)	C(23)	-137(1)	W(3)	Ir(1)	W(1)	C(1)	-159.1(8)
W(3)	Ir(1)	W(1)	C(2)	170.4(7)	W(3)	Ir(1)	W(1)	C(3)	141.6(9)
W(3)	Ir(1)	W(1)	C(4)	151(1)	W(3)	Ir(1)	W(1)	C(5)	-156(1)
W(3)	Ir(1)	W(1)	C(24)	-37(1)	W(3)	Ir(1)	W(1)	C(25)	52.7(10)
W(3)	Ir(1)	W(2)	C(6)	-30(1)	W(3)	Ir(1)	W(2)	C(7)	32(1)
W(3)	Ir(1)	W(2)	C(8)	94(1)	W(3)	Ir(1)	W(2)	C(9)	167(2)
W(3)	Ir(1)	W(2)	C(10)	-107(2)	W(3)	Ir(1)	W(2)	C(26)	139.6(10)
W(3)	Ir(1)	W(2)	C(27)	-132(1)	W(3)	Ir(1)	C(16)	O(16)	52(18)
W(3)	Ir(1)	C(17)	O(17)	-102(76)	W(3)	Ir(2)	Ir(1)	C(16)	-166.8(9)
W(3)	Ir(2)	Ir(1)	C(17)	-73(1)	W(3)	Ir(2)	Ir(3)	C(20)	179(1)
W(3)	Ir(2)	Ir(3)	C(21)	81(1)	W(3)	Ir(2)	W(1)	C(1)	170.7(8)
W(3)	Ir(2)	W(1)	C(2)	140.3(7)	W(3)	Ir(2)	W(1)	C(3)	139(1)
W(3)	Ir(2)	W(1)	C(4)	-150(1)	W(3)	Ir(2)	W(1)	C(5)	-156.4(8)
W(3)	Ir(2)	W(1)	C(24)	-85.3(8)	W(3)	Ir(2)	W(1)	C(25)	-8(1)
W(3)	Ir(2)	C(18)	O(18)	79(24)	W(3)	Ir(2)	C(19)	O(19)	-54(28)
W(3)	Ir(3)	Ir(1)	C(16)	-131.0(10)	W(3)	Ir(3)	Ir(1)	C(17)	78(1)
W(3)	Ir(3)	Ir(2)	C(18)	171(1)	W(3)	Ir(3)	Ir(2)	C(19)	-86(1)
W(3)	Ir(3)	Ir(4)	C(22)	111(1)	W(3)	Ir(3)	Ir(4)	C(23)	-135(2)
W(3)	Ir(3)	W(2)	C(6)	111.6(9)	W(3)	Ir(3)	W(2)	C(7)	138.1(8)
W(3)	Ir(3)	W(2)	C(8)	167.6(9)	W(3)	Ir(3)	W(2)	C(9)	166(1)

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atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
W(3)	Ir(3)	W(2)	C(10)	114(1)	W(3)	Ir(3)	W(2)	C(26)	-111.6(9)
W(3)	Ir(3)	W(2)	C(27)	-22(1)	W(3)	Ir(3)	C(20)	O(20)	-41(18)
W(3)	Ir(3)	C(21)	O(21)	-122(30)	W(3)	Ir(4)	Ir(1)	C(16)	-141(2)
W(3)	Ir(4)	Ir(1)	C(17)	116.9(10)	W(3)	Ir(4)	Ir(3)	C(20)	146(1)
W(3)	Ir(4)	Ir(3)	C(21)	-102.6(9)	W(3)	Ir(4)	W(2)	C(6)	-137.0(9)
W(3)	Ir(4)	W(2)	C(7)	-104.7(8)	W(3)	Ir(4)	W(2)	C(8)	-102(1)
W(3)	Ir(4)	W(2)	C(9)	-156(1)	W(3)	Ir(4)	W(2)	C(10)	-166(1)
W(3)	Ir(4)	W(2)	C(26)	34(1)	W(3)	Ir(4)	W(2)	C(27)	117(1)
W(3)	Ir(4)	C(22)	O(22)	7(20)	W(3)	Ir(4)	C(23)	O(23)	124(34)
W(3)	W(1)	Ir(1)	C(16)	145.8(9)	W(3)	W(1)	Ir(1)	C(17)	-113.7(9)
W(3)	W(1)	Ir(2)	C(18)	-163(1)	W(3)	W(1)	Ir(2)	C(19)	98.5(9)
W(3)	W(1)	C(1)	C(2)	-106(2)	W(3)	W(1)	C(1)	C(5)	135(1)
W(3)	W(1)	C(2)	C(1)	130(1)	W(3)	W(1)	C(2)	C(3)	-113(1)
W(3)	W(1)	C(3)	C(2)	117(1)	W(3)	W(1)	C(3)	C(4)	-128(1)
W(3)	W(1)	C(4)	C(3)	109(2)	W(3)	W(1)	C(4)	C(5)	-134(1)
W(3)	W(1)	C(5)	C(1)	-126(1)	W(3)	W(1)	C(5)	C(4)	117(2)
W(3)	W(1)	C(24)	O(24)	145(17)	W(3)	W(1)	C(25)	O(25)	-161(9)
W(3)	C(11)	C(12)	C(13)	63(2)	W(3)	C(11)	C(15)	C(14)	-65(2)
W(3)	C(12)	C(11)	C(15)	-65(2)	W(3)	C(12)	C(13)	C(14)	67(2)
W(3)	C(13)	C(12)	C(11)	-64(2)	W(3)	C(13)	C(14)	C(15)	64(2)
W(3)	C(14)	C(13)	C(12)	-66(2)	W(3)	C(14)	C(15)	C(11)	65(2)
W(3)	C(15)	C(11)	C(12)	66(2)	W(3)	C(15)	C(14)	C(13)	-63(2)
O(16)	C(16)	Ir(1)	C(17)	-78(17)	O(17)	C(17)	Ir(1)	C(16)	43(76)
O(18)	C(18)	Ir(2)	C(19)	-74(23)	O(19)	C(19)	Ir(2)	C(18)	119(28)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
O(20)	C(20)	Ir(3)	C(21)	89(17)	O(21)	C(21)	Ir(3)	C(20)	81(30)
O(22)	C(22)	Ir(4)	C(23)	154(19)	O(23)	C(23)	Ir(4)	C(22)	-7(35)
O(24)	C(24)	W(1)	C(1)	-62(17)	O(24)	C(24)	W(1)	C(2)	-42(18)
O(24)	C(24)	W(1)	C(3)	-1(18)	O(24)	C(24)	W(1)	C(4)	-7(17)
O(24)	C(24)	W(1)	C(5)	-41(17)	O(24)	C(24)	W(1)	C(25)	81(17)
O(25)	C(25)	W(1)	C(1)	-8(10)	O(25)	C(25)	W(1)	C(2)	22(9)
O(25)	C(25)	W(1)	C(3)	5(8)	O(25)	C(25)	W(1)	C(4)	-31(8)
O(25)	C(25)	W(1)	C(5)	-45(9)	O(25)	C(25)	W(1)	C(24)	-115(8)
O(26)	C(26)	W(2)	C(6)	73(33)	O(26)	C(26)	W(2)	C(7)	42(33)
O(26)	C(26)	W(2)	C(8)	57(33)	O(26)	C(26)	W(2)	C(9)	91(33)
O(26)	C(26)	W(2)	C(10)	105(33)	O(26)	C(26)	W(2)	C(27)	-179.8
O(27)	C(27)	W(2)	C(6)	97.5	O(27)	C(27)	W(2)	C(7)	80.7
O(27)	C(27)	W(2)	C(8)	40.9	O(27)	C(27)	W(2)	C(9)	46.2
O(27)	C(27)	W(2)	C(10)	78.1	O(27)	C(27)	W(2)	C(26)	-34.9
C(1)	W(1)	Ir(1)	C(16)	-13(1)	C(1)	W(1)	Ir(1)	C(17)	87(1)
C(1)	W(1)	Ir(2)	C(18)	7(1)	C(1)	W(1)	Ir(2)	C(19)	-90(1)
C(1)	W(1)	W(3)	C(11)	-160(1)	C(1)	W(1)	W(3)	C(12)	-137(1)
C(1)	W(1)	W(3)	C(13)	-102(1)	C(1)	W(1)	W(3)	C(14)	-88(1)
C(1)	W(1)	W(3)	C(15)	-136(2)	C(1)	W(1)	C(2)	C(3)	116(2)
C(1)	W(1)	C(3)	C(2)	-36(1)	C(1)	W(1)	C(3)	C(4)	77(2)
C(1)	W(1)	C(4)	C(3)	-78(2)	C(1)	W(1)	C(4)	C(5)	37(1)
C(1)	W(1)	C(5)	C(4)	-116(2)	C(1)	C(2)	W(1)	C(3)	-116(2)
C(1)	C(2)	W(1)	C(4)	-76(2)	C(1)	C(2)	W(1)	C(5)	-37(1)
C(1)	C(2)	W(1)	C(24)	-34(2)	C(1)	C(2)	W(1)	C(25)	-145(1)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
C(1)	C(2)	C(3)	C(4)	0(4)	C(1)	C(5)	W(1)	C(2)	35(1)
C(1)	C(5)	W(1)	C(3)	77(2)	C(1)	C(5)	W(1)	C(4)	116(2)
C(1)	C(5)	W(1)	C(24)	-143(2)	C(1)	C(5)	W(1)	C(25)	142(1)
C(1)	C(5)	C(4)	C(3)	-1(4)	C(2)	W(1)	Ir(1)	C(16)	-43(1)
C(2)	W(1)	Ir(1)	C(17)	56(1)	C(2)	W(1)	Ir(2)	C(18)	-22(1)
C(2)	W(1)	Ir(2)	C(19)	-121(1)	C(2)	W(1)	W(3)	C(11)	134(1)
C(2)	W(1)	W(3)	C(12)	157(1)	C(2)	W(1)	W(3)	C(13)	-167(1)
C(2)	W(1)	W(3)	C(14)	-153(1)	C(2)	W(1)	W(3)	C(15)	158(2)
C(2)	W(1)	C(1)	C(5)	-117(2)	C(2)	W(1)	C(3)	C(4)	114(2)
C(2)	W(1)	C(4)	C(3)	-38(1)	C(2)	W(1)	C(4)	C(5)	77(2)
C(2)	W(1)	C(5)	C(4)	-81(2)	C(2)	C(1)	W(1)	C(3)	38(1)
C(2)	C(1)	W(1)	C(4)	81(2)	C(2)	C(1)	W(1)	C(5)	117(2)
C(2)	C(1)	W(1)	C(24)	154(1)	C(2)	C(1)	W(1)	C(25)	55(2)
C(2)	C(1)	C(5)	C(4)	1(3)	C(2)	C(3)	W(1)	C(4)	-114(2)
C(2)	C(3)	W(1)	C(5)	-78(1)	C(2)	C(3)	W(1)	C(24)	-125(1)
C(2)	C(3)	W(1)	C(25)	154(1)	C(2)	C(3)	C(4)	C(5)	0(4)
C(3)	W(1)	Ir(1)	C(16)	-72(1)	C(3)	W(1)	Ir(1)	C(17)	27(1)
C(3)	W(1)	Ir(2)	C(18)	-23(2)	C(3)	W(1)	Ir(2)	C(19)	-121(1)
C(3)	W(1)	W(3)	C(11)	73(1)	C(3)	W(1)	W(3)	C(12)	96(1)
C(3)	W(1)	W(3)	C(13)	131(1)	C(3)	W(1)	W(3)	C(14)	145(1)
C(3)	W(1)	W(3)	C(15)	97(2)	C(3)	W(1)	C(1)	C(5)	-79(2)
C(3)	W(1)	C(4)	C(5)	115(3)	C(3)	W(1)	C(5)	C(4)	-39(2)
C(3)	C(2)	W(1)	C(4)	39(1)	C(3)	C(2)	W(1)	C(5)	79(1)
C(3)	C(2)	W(1)	C(24)	81(2)	C(3)	C(2)	W(1)	C(25)	-29(2)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
C(3)	C(2)	C(1)	C(5)	-1(3)	C(3)	C(4)	W(1)	C(5)	-115(3)
C(3)	C(4)	W(1)	C(24)	170(2)	C(3)	C(4)	W(1)	C(25)	86(2)
C(4)	W(1)	Ir(1)	C(16)	-62(1)	C(4)	W(1)	Ir(1)	C(17)	38(1)
C(4)	W(1)	Ir(2)	C(18)	45(2)	C(4)	W(1)	Ir(2)	C(19)	-52(1)
C(4)	W(1)	W(3)	C(11)	5(1)	C(4)	W(1)	W(3)	C(12)	28(1)
C(4)	W(1)	W(3)	C(13)	64(1)	C(4)	W(1)	W(3)	C(14)	77(1)
C(4)	W(1)	W(3)	C(15)	29(2)	C(4)	W(1)	C(1)	C(5)	-36(1)
C(4)	C(3)	W(1)	C(5)	35(1)	C(4)	C(3)	W(1)	C(24)	-10(2)
C(4)	C(3)	W(1)	C(25)	-91(2)	C(4)	C(5)	W(1)	C(24)	100(2)
C(4)	C(5)	W(1)	C(25)	25(2)	C(5)	W(1)	Ir(1)	C(16)	-10(1)
C(5)	W(1)	Ir(1)	C(17)	89(1)	C(5)	W(1)	Ir(2)	C(18)	40(1)
C(5)	W(1)	Ir(2)	C(19)	-57(1)	C(5)	W(1)	W(3)	C(11)	-72(2)
C(5)	W(1)	W(3)	C(12)	-49(2)	C(5)	W(1)	W(3)	C(13)	-14(2)
C(5)	W(1)	W(3)	C(14)	0(2)	C(5)	W(1)	W(3)	C(15)	-48(2)
C(5)	C(1)	W(1)	C(24)	37(2)	C(5)	C(1)	W(1)	C(25)	-62(2)
C(5)	C(4)	W(1)	C(24)	-73(2)	C(5)	C(4)	W(1)	C(25)	-157(2)
C(6)	W(2)	Ir(1)	C(16)	-175(2)	C(6)	W(2)	Ir(1)	C(17)	81(2)
C(6)	W(2)	Ir(3)	C(20)	-98(1)	C(6)	W(2)	Ir(3)	C(21)	-3(1)
C(6)	W(2)	Ir(4)	C(22)	-17(1)	C(6)	W(2)	Ir(4)	C(23)	78(1)
C(6)	W(2)	C(7)	C(8)	-108(3)	C(6)	W(2)	C(8)	C(7)	40(1)
C(6)	W(2)	C(8)	C(9)	-76(2)	C(6)	W(2)	C(9)	C(8)	77(2)
C(6)	W(2)	C(9)	C(10)	-41(2)	C(6)	W(2)	C(10)	C(9)	108(3)
C(6)	C(7)	W(2)	C(8)	108(3)	C(6)	C(7)	W(2)	C(9)	72(2)
C(6)	C(7)	W(2)	C(10)	33(2)	C(6)	C(7)	W(2)	C(26)	136(2)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
C(6)	C(7)	W(2)	C(27)	30(3)	C(6)	C(7)	C(8)	C(9)	1(4)
C(6)	C(10)	W(2)	C(7)	-32(2)	C(6)	C(10)	W(2)	C(8)	-73(2)
C(6)	C(10)	W(2)	C(9)	-108(3)	C(6)	C(10)	W(2)	C(26)	-134(2)
C(6)	C(10)	W(2)	C(27)	145(2)	C(6)	C(10)	C(9)	C(8)	6(5)
C(7)	W(2)	Ir(1)	C(16)	-112(1)	C(7)	W(2)	Ir(1)	C(17)	144(1)
C(7)	W(2)	Ir(3)	C(20)	-72(1)	C(7)	W(2)	Ir(3)	C(21)	22(1)
C(7)	W(2)	Ir(4)	C(22)	15(1)	C(7)	W(2)	Ir(4)	C(23)	110(1)
C(7)	W(2)	C(6)	C(10)	123(3)	C(7)	W(2)	C(8)	C(9)	-117(3)
C(7)	W(2)	C(9)	C(8)	36(2)	C(7)	W(2)	C(9)	C(10)	-82(2)
C(7)	W(2)	C(10)	C(9)	75(2)	C(7)	C(6)	W(2)	C(8)	-41(2)
C(7)	C(6)	W(2)	C(9)	-82(2)	C(7)	C(6)	W(2)	C(10)	-123(3)
C(7)	C(6)	W(2)	C(26)	-60(2)	C(7)	C(6)	W(2)	C(27)	-158(2)
C(7)	C(6)	C(10)	C(9)	-6(4)	C(7)	C(8)	W(2)	C(9)	117(3)
C(7)	C(8)	W(2)	C(10)	82(2)	C(7)	C(8)	W(2)	C(26)	-153(2)
C(7)	C(8)	W(2)	C(27)	127(2)	C(7)	C(8)	C(9)	C(10)	-5(5)
C(8)	W(2)	Ir(1)	C(16)	-50(2)	C(8)	W(2)	Ir(1)	C(17)	-153(2)
C(8)	W(2)	Ir(3)	C(20)	-42(1)	C(8)	W(2)	Ir(3)	C(21)	52(1)
C(8)	W(2)	Ir(4)	C(22)	17(1)	C(8)	W(2)	Ir(4)	C(23)	112(1)
C(8)	W(2)	C(6)	C(10)	82(2)	C(8)	W(2)	C(9)	C(10)	-119(4)
C(8)	W(2)	C(10)	C(9)	34(2)	C(8)	C(7)	W(2)	C(9)	-35(2)
C(8)	C(7)	W(2)	C(10)	-75(2)	C(8)	C(7)	W(2)	C(26)	27(2)
C(8)	C(7)	W(2)	C(27)	-78(3)	C(8)	C(7)	C(6)	C(10)	2(4)
C(8)	C(9)	W(2)	C(10)	119(4)	C(8)	C(9)	W(2)	C(26)	-85(2)
C(8)	C(9)	W(2)	C(27)	-171(2)	C(9)	W(2)	Ir(1)	C(16)	22(2)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
C(9)	W(2)	Ir(1)	C(17)	-80(2)	C(9)	W(2)	Ir(3)	C(20)	-43(1)
C(9)	W(2)	Ir(3)	C(21)	51(1)	C(9)	W(2)	Ir(4)	C(22)	-36(2)
C(9)	W(2)	Ir(4)	C(23)	58(2)	C(9)	W(2)	C(6)	C(10)	40(2)
C(9)	C(8)	W(2)	C(10)	-35(2)	C(9)	C(8)	W(2)	C(26)	88(2)
C(9)	C(8)	W(2)	C(27)	9(3)	C(9)	C(10)	W(2)	C(26)	-26(3)
C(9)	C(10)	W(2)	C(27)	-106(3)	C(10)	W(2)	Ir(1)	C(16)	107(2)
C(10)	W(2)	Ir(1)	C(17)	4(2)	C(10)	W(2)	Ir(3)	C(20)	-95(1)
C(10)	W(2)	Ir(3)	C(21)	0(1)	C(10)	W(2)	Ir(4)	C(22)	-46(1)
C(10)	W(2)	Ir(4)	C(23)	48(1)	C(10)	C(6)	W(2)	C(26)	63(2)
C(10)	C(6)	W(2)	C(27)	-35(2)	C(10)	C(9)	W(2)	C(26)	155(2)
C(10)	C(9)	W(2)	C(27)	69(2)	C(11)	W(3)	Ir(1)	C(16)	-160(2)
C(11)	W(3)	Ir(1)	C(17)	-31(1)	C(11)	W(3)	Ir(2)	C(18)	-144(5)
C(11)	W(3)	Ir(2)	C(19)	9(1)	C(11)	W(3)	Ir(3)	C(20)	138(2)
C(11)	W(3)	Ir(3)	C(21)	8(1)	C(11)	W(3)	Ir(4)	C(22)	41(1)
C(11)	W(3)	Ir(4)	C(23)	-84(1)	C(11)	W(3)	W(1)	C(24)	-56(1)
C(11)	W(3)	W(1)	C(25)	31(1)	C(11)	W(3)	C(12)	C(13)	-117(2)
C(11)	W(3)	C(13)	C(12)	34(1)	C(11)	W(3)	C(13)	C(14)	-77(1)
C(11)	W(3)	C(14)	C(13)	79(2)	C(11)	W(3)	C(14)	C(15)	-39(1)
C(11)	W(3)	C(15)	C(14)	113(2)	C(11)	C(12)	W(3)	C(13)	117(2)
C(11)	C(12)	W(3)	C(14)	79(2)	C(11)	C(12)	W(3)	C(15)	38(1)
C(11)	C(12)	C(13)	C(14)	2(3)	C(11)	C(15)	W(3)	C(12)	-35(1)
C(11)	C(15)	W(3)	C(13)	-78(1)	C(11)	C(15)	W(3)	C(14)	-113(2)
C(11)	C(15)	C(14)	C(13)	1(3)	C(12)	W(3)	Ir(1)	C(16)	-71(2)
C(12)	W(3)	Ir(1)	C(17)	56(2)	C(12)	W(3)	Ir(2)	C(18)	-167(5)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
C(12)	W(3)	Ir(2)	C(19)	-14(1)	C(12)	W(3)	Ir(3)	C(20)	98(2)
C(12)	W(3)	Ir(3)	C(21)	-32(1)	C(12)	W(3)	Ir(4)	C(22)	50(1)
C(12)	W(3)	Ir(4)	C(23)	-76(1)	C(12)	W(3)	W(1)	C(24)	-33(1)
C(12)	W(3)	W(1)	C(25)	54(1)	C(12)	W(3)	C(11)	C(15)	115(2)
C(12)	W(3)	C(13)	C(14)	-111(2)	C(12)	W(3)	C(14)	C(13)	40(1)
C(12)	W(3)	C(14)	C(15)	-78(1)	C(12)	W(3)	C(15)	C(14)	77(1)
C(12)	C(11)	W(3)	C(13)	-37(1)	C(12)	C(11)	W(3)	C(14)	-78(2)
C(12)	C(11)	W(3)	C(15)	-115(2)	C(12)	C(11)	C(15)	C(14)	0(3)
C(12)	C(13)	W(3)	C(14)	111(2)	C(12)	C(13)	W(3)	C(15)	76(1)
C(12)	C(13)	C(14)	C(15)	-2(3)	C(13)	W(3)	Ir(1)	C(16)	11(1)
C(13)	W(3)	Ir(1)	C(17)	139(1)	C(13)	W(3)	Ir(2)	C(18)	-147(5)
C(13)	W(3)	Ir(2)	C(19)	6(1)	C(13)	W(3)	Ir(3)	C(20)	74(2)
C(13)	W(3)	Ir(3)	C(21)	-55(1)	C(13)	W(3)	Ir(4)	C(22)	0(1)
C(13)	W(3)	Ir(4)	C(23)	-126(2)	C(13)	W(3)	W(1)	C(24)	2(1)
C(13)	W(3)	W(1)	C(25)	89(1)	C(13)	W(3)	C(11)	C(15)	77(1)
C(13)	W(3)	C(14)	C(15)	-118(2)	C(13)	W(3)	C(15)	C(14)	35(1)
C(13)	C(12)	W(3)	C(14)	-38(1)	C(13)	C(12)	W(3)	C(15)	-79(1)
C(13)	C(12)	C(11)	C(15)	-2(3)	C(13)	C(14)	W(3)	C(15)	118(2)
C(14)	W(3)	Ir(1)	C(16)	72(1)	C(14)	W(3)	Ir(1)	C(17)	-159(1)
C(14)	W(3)	Ir(2)	C(18)	-114(5)	C(14)	W(3)	Ir(2)	C(19)	39(1)
C(14)	W(3)	Ir(3)	C(20)	97(2)	C(14)	W(3)	Ir(3)	C(21)	-32(1)
C(14)	W(3)	Ir(4)	C(22)	-15(1)	C(14)	W(3)	Ir(4)	C(23)	-141(1)
C(14)	W(3)	W(1)	C(24)	15(1)	C(14)	W(3)	W(1)	C(25)	103(1)
C(14)	W(3)	C(11)	C(15)	37(1)	C(14)	C(13)	W(3)	C(15)	-35(1)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
C(15)	W(3)	Ir(1)	C(16)	130(1)	C(15)	W(3)	Ir(1)	C(17)	-101(1)
C(15)	W(3)	Ir(2)	C(18)	-101(5)	C(15)	W(3)	Ir(2)	C(19)	52(1)
C(15)	W(3)	Ir(3)	C(20)	129(2)	C(15)	W(3)	Ir(3)	C(21)	0(1)
C(15)	W(3)	Ir(4)	C(22)	8(1)	C(15)	W(3)	Ir(4)	C(23)	-118(1)
C(15)	W(3)	W(1)	C(24)	-31(1)	C(15)	W(3)	W(1)	C(25)	55(1)
C(16)	Ir(1)	Ir(2)	C(18)	22(1)	C(16)	Ir(1)	Ir(2)	C(19)	-129(3)
C(16)	Ir(1)	Ir(3)	C(20)	17(1)	C(16)	Ir(1)	Ir(3)	C(21)	166(2)
C(16)	Ir(1)	Ir(4)	C(22)	-56(4)	C(16)	Ir(1)	Ir(4)	C(23)	80(3)
C(16)	Ir(1)	W(1)	C(24)	108(1)	C(16)	Ir(1)	W(1)	C(25)	-161(1)
C(16)	Ir(1)	W(2)	C(26)	-5(1)	C(16)	Ir(1)	W(2)	C(27)	82(1)
C(17)	Ir(1)	Ir(2)	C(18)	115(2)	C(17)	Ir(1)	Ir(2)	C(19)	-36(3)
C(17)	Ir(1)	Ir(3)	C(20)	-133(1)	C(17)	Ir(1)	Ir(3)	C(21)	15(2)
C(17)	Ir(1)	Ir(4)	C(22)	-157(3)	C(17)	Ir(1)	Ir(4)	C(23)	-20(1)
C(17)	Ir(1)	W(1)	C(24)	-151(1)	C(17)	Ir(1)	W(1)	C(25)	-61(1)
C(17)	Ir(1)	W(2)	C(26)	-108(1)	C(17)	Ir(1)	W(2)	C(27)	-19(1)
C(18)	Ir(2)	Ir(3)	C(20)	-8(1)	C(18)	Ir(2)	Ir(3)	C(21)	-106(1)
C(18)	Ir(2)	W(1)	C(24)	111(1)	C(18)	Ir(2)	W(1)	C(25)	-171(1)
C(19)	Ir(2)	Ir(3)	C(20)	92(1)	C(19)	Ir(2)	Ir(3)	C(21)	-5(1)
C(19)	Ir(2)	W(1)	C(24)	13(1)	C(19)	Ir(2)	W(1)	C(25)	90(1)
C(20)	Ir(3)	Ir(4)	C(22)	-101(2)	C(20)	Ir(3)	Ir(4)	C(23)	10(2)
C(20)	Ir(3)	W(2)	C(26)	38(1)	C(20)	Ir(3)	W(2)	C(27)	127(1)
C(21)	Ir(3)	Ir(4)	C(22)	9(1)	C(21)	Ir(3)	Ir(4)	C(23)	121(2)
C(21)	Ir(3)	W(2)	C(26)	132(1)	C(21)	Ir(3)	W(2)	C(27)	-138(1)
C(22)	Ir(4)	W(2)	C(26)	153(1)	C(22)	Ir(4)	W(2)	C(27)	-122(1)
C(23)	Ir(4)	W(2)	C(26)	-110(1)	C(23)	Ir(4)	W(2)	C(27)	-27(1)

Table S6: Non-bonded Contacts out to 3.64 Å for $\text{Cp}_3\text{W}_3\text{Ir}_4(\mu\text{-H})(\text{CO})_{12}$, 1.

atom	atom	distance	ADC	atom	atom	distance	ADC
O(16)	O(26)	2.99(3)	64602	O(16)	O(20)	3.24(3)	64602
O(16)	C(8)	3.36(4)	64602	O(16)	C(26)	3.44(4)	64602
O(17)	O(20)	2.91(3)	54501	O(17)	C(20)	3.02(4)	54501
O(17)	O(21)	3.07(4)	54501	O(17)	C(21)	3.10(4)	54501
O(18)	O(27)	3.11(4)	65602	O(18)	C(10)	3.25(5)	56404
O(19)	O(24)	3.06(3)	75602	O(19)	O(22)	3.29(4)	56404
O(19)	C(4)	3.37(4)	56501	O(19)	C(22)	3.41(5)	56404
O(19)	C(12)	3.46(4)	75602	O(19)	C(24)	3.57(4)	75602
O(20)	O(26)	2.99(4)	65602	O(20)	C(2)	3.33(4)	56501
O(20)	C(3)	3.52(4)	56501	O(20)	C(17)	3.63(4)	56501
O(21)	C(15)	3.16(4)	77703	O(21)	C(11)	3.26(4)	77703
O(21)	O(25)	3.62(3)	56501	O(22)	O(24)	3.03(3)	56504
O(22)	C(24)	3.35(4)	56504	O(22)	O(25)	3.38(4)	76703
O(22)	C(5)	3.45(4)	56504	O(22)	C(19)	3.51(4)	56504
O(22)	C(14)	3.63(4)	77703	O(23)	C(5)	3.54(4)	4
O(24)	C(13)	3.34(4)	74602	O(24)	C(4)	3.51(4)	75602
O(24)	C(14)	3.59(4)	74602	O(25)	C(11)	3.27(4)	76703
O(25)	C(15)	3.45(4)	76703	O(25)	C(22)	3.62(5)	76703
O(26)	C(16)	3.46(4)	65602	O(26)	C(2)	3.48(4)	65602
O(27)	C(10)	3.43(5)	66703	C(1)	C(6)	3.57(5)	56404
C(4)	C(13)	3.55(4)	74602	C(7)	C(9)	3.53(5)	67703
C(8)	C(9)	3.27(5)	67703	C(8)	C(10)	3.57(5)	67703
C(8)	C(8)	3.57(7)	67703	C(9)	C(9)	3.48(9)	67703
Ir(1)	C(16)	1.86(3)	1	Ir(1)	C(17)	1.90(3)	1

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atom	atom	distance	ADC
Ir(2)	C(19)	1.81(3)	1
Ir(3)	C(20)	1.82(3)	1
Ir(4)	C(23)	1.90(4)	1
W(1)	C(24)	1.98(3)	1
W(2)	C(26)	1.96(3)	1

atom	atom	distance	ADC
Ir(2)	C(18)	1.96(4)	1
Ir(3)	C(21)	1.92(3)	1
Ir(4)	C(22)	1.91(4)	1
W(1)	C(25)	2.01(3)	1
W(2)	C(27)	2.01(5)	i

The ADC (atom designator code) specifies the position of an atom in a crystal. The 5-digit number shown in the table is a composite of three one-digit numbers and one two-digit number: TA (first digit) + TB (second digit) + TC (third digit) + SN (last two digits). TA, TB and TC are the crystal lattice translation digits along cell edges a, b and c. A translation digit of 5 indicates the origin unit cell. If TA = 4, this indicates a translation of one unit cell length along the a-axis in the negative direction. Each translation digit can range in value from 1 to 9 and thus ± 4 lattice translations from the origin (TA=5, TB=5, TC=5) can be represented.

The SN, or symmetry operator number, refers to the number of the symmetry operator used to generate the coordinates of the target atom. A list of symmetry operators relevant to this structure are given below.

For a given intermolecular contact, the first atom (origin atom) is located in the origin unit cell and its position can be generated using the identity operator (SN=1). Thus, the ADC for an origin atom is always 55501. The position of the second atom (target atom) can be generated using the ADC and the coordinates of the atom in the parameter table. For example, an ADC of 47502 refers to the target atom moved through symmetry operator two, then translated -1 cell translations along the a axis, +2 cell translations along the b axis, and 0 cell translations along the c axis.

An ADC of 1 indicates an intermolecular contact between two fragments (eg. cation and anion) that reside in the same asymmetric unit.

Symmetry Operators:

(1)	X,	Y,	Z	(2)	-X,	1/2+Y,	1/2-Z
(3)	-X,	-Y,	-Z	(4)	X,	1/2-Y,	1/2+Z

Table S7: Selected Least Squares Planes for $\text{Cp}_3\text{W}_3\text{Ir}_4(\mu\text{-H})(\text{CO})_{12}$, 1.

Plane number 1	
Atoms defining plane	Distance
C(1)	-0.01(3)
C(2)	0.01(3)
C(3)	0.00(4)
C(4)	-0.01(3)
C(5)	0.01(3)
Additional Atoms	Distance
W(1)	2.022

Plane number 2	
Atoms defining plane	Distance
C(6)	-0.02(3)
C(7)	0.01(3)
C(8)	0.02(4)
C(9)	-0.04(4)
C(10)	0.03(4)
Additional Atoms	Distance
W(2)	2.045

Plane number 3	
Atoms defining plane	Distance
C(11)	-0.01(3)
C(12)	0.02(3)
C(13)	-0.01(3)
C(14)	0.01(3)
C(15)	0.00(3)
Additional Atoms	Distance
W(3)	-2.074

Summary		
plane	mean deviation	χ^2
1	0.0059	0.2
2	0.0229	1.8
3	0.0107	0.6

Dihedral angles between planes ($^\circ$)

plane	1	2
2	134.83	
3	52.87	82.14