

data\_pbca

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_audit_creation_method          SHELXL-97
_chemical_name_systematic
;
?
;
_chemical_name_common           ?
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'C15 H20 Cl2 Ir N3 O2'
_chemical_formula_weight       537.44
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loop\_

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_atom_type_scatter_dispersion_imag
_atom_type_scatter_source
'C' 'C' 0.0033 0.0016
'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4'
'H' 'H' 0.0000 0.0000
'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4'
'N' 'N' 0.0061 0.0033
'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4'
'O' 'O' 0.0106 0.0060
'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4'
'Cl' 'Cl' 0.1484 0.1585
'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4'
'Ir' 'Ir' -1.4442 7.9887
'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4'
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_symmetry_cell_setting          Orthorhombic
_symmetry_space_group_name_H-M  Pbca
_symmetry_space_group_name_Hall '-P 2ac 2ab'
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loop\_

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_symmetry_equiv_pos_as_xyz
'x, y, z'
'-x+1/2, -y, z+1/2'
'-x, y+1/2, -z+1/2'
'x+1/2, -y+1/2, -z'
'-x, -y, -z'
'x-1/2, y, -z-1/2'
'x, -y-1/2, z-1/2'
'-x-1/2, y-1/2, z'
```

```
_cell_length_a                 7.5125(15)
_cell_length_b                 15.018(3)
_cell_length_c                 30.912(6)
_cell_angle_alpha              90.00
_cell_angle_beta               90.00
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_cell_angle_gamma	90.00
_cell_volume	3487.6(12)
_cell_formula_units_Z	8
_cell_measurement_temperature	293(2)
_cell_measurement_reflns_used	?
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_cell_measurement_theta_max	?
_exptl_crystal_description	?
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_exptl_crystal_size_min	?
_exptl_crystal_density_meas	?
_exptl_crystal_density_diffn	2.047
_exptl_crystal_density_method	'not measured'
_exptl_crystal_F_000	2064
_exptl_absorpt_coefficient_mu	7.975
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_exptl_absorpt_correction_T_min	?
_exptl_absorpt_correction_T_max	?
_exptl_absorpt_process_details	?
_exptl_special_details	
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?	
;	
_diffn_ambient_temperature	293(2)
_diffn_radiation_wavelength	0.71073
_diffn_radiation_type	MoK\alpha
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_diffn_radiation_monochromator	graphite
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_diffn_measurement_method	?
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_diffn_reflns_av_R_equivalents	0.0286
_diffn_reflns_av_sigmaI/netI	0.0327
_diffn_reflns_limit_h_min	-9
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_diffn_reflns_limit_l_min	-38
_diffn_reflns_limit_l_max	34
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_reflns_number_total	3559
_reflns_number_gt	3179
_reflns_threshold_expression	>2sigma(I)
_computing_data_collection	?
_computing_cell_refinement	?
_computing_data_reduction	?

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_computing_structure_solution      'SHELXS-97 (Sheldrick, 2008)'
_computing_structure_refinement    'SHELXL-97 (Sheldrick, 2008)'
_computing_molecular_graphics      ?
_computing_publication_material    ?

_refine_special_details
;
Refinement of F2 against ALL reflections. The weighted R-factor wR
and
goodness of fit S are based on F2, conventional R-factors R are based
on F, with F set to zero for negative F2. The threshold expression of
F2 > 2sigma(F2) is used only for calculating R-factors(gt) etc. and
is
not relevant to the choice of reflections for refinement. R-factors
based
on F2 are statistically about twice as large as those based on F, and
R-
factors based on ALL data will be even larger.
;

_refine_ls_structure_factor_coef   Fsqd
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_refine_ls_weighting_details
'calc w=1/[\s2(Fo2)+(0.0000P)2+29.6838P] where P=(Fo2+2Fc2)/3'
_atom_sites_solution_primary       direct
_atom_sites_solution_secondary     difmap
_atom_sites_solution_hydrogens     geom
_refine_ls_hydrogen_treatment      constr
_refine_ls_extinction_method       none
_refine_ls_extinction_coef         ?
_refine_ls_number_reflns           3559
_refine_ls_number_parameters        213
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_refine_ls_R_factor_gt             0.0499
_refine_ls_wR_factor_ref           0.0829
_refine_ls_wR_factor_gt            0.0796
_refine_ls_goodness_of_fit_ref     1.362
_refine_ls_restrained_S_all        1.362
_refine_ls_shift/su_max            0.001
_refine_ls_shift/su_mean           0.000

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_atom_site_fract_y
_atom_site_fract_z
_atom_site_U_iso_or_equiv
_atom_site_adp_type
_atom_site_occupancy
_atom_site_symmetry_multiplicity
_atom_site_calc_flag

```

```

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_atom_site_disorder_group
Ir1 Ir 0.14975(4) 0.78721(2) 0.398958(9) 0.02402(10) Uani 1 1 d . . .
Cl1 Cl 0.3804(3) 0.68121(14) 0.38398(7) 0.0374(5) Uani 1 1 d . . .
Cl2 Cl 0.3814(3) 0.88799(14) 0.42242(7) 0.0390(5) Uani 1 1 d . . .
O1 O 0.0465(16) 1.0798(5) 0.2845(3) 0.098(3) Uani 1 1 d . . .
O2 O 0.0101(17) 1.0268(6) 0.2218(3) 0.111(4) Uani 1 1 d . . .
N1 N 0.1731(9) 0.8295(4) 0.3319(2) 0.0288(15) Uani 1 1 d . . .
N2 N 0.1579(11) 0.9781(5) 0.3485(2) 0.045(2) Uani 1 1 d . . .
H2A H 0.1849 0.9641 0.3747 0.054 Uiso 1 1 calc R . .
H2B H 0.1404 1.0329 0.3418 0.054 Uiso 1 1 calc R . .
N3 N 0.0495(14) 1.0184(6) 0.2596(3) 0.060(2) Uani 1 1 d . . .
C1 C -0.1345(10) 0.7965(6) 0.3951(2) 0.0292(17) Uani 1 1 d . . .
C2 C -0.0834(11) 0.7060(6) 0.4005(3) 0.0348(19) Uani 1 1 d . . .
C3 C 0.0073(11) 0.7000(5) 0.4422(3) 0.0326(19) Uani 1 1 d . . .
C4 C 0.0147(10) 0.7863(6) 0.4604(2) 0.0292(17) Uani 1 1 d . . .
C5 C -0.0720(11) 0.8481(6) 0.4312(3) 0.0309(18) Uani 1 1 d . . .
C6 C -0.2394(13) 0.8316(7) 0.3572(3) 0.049(3) Uani 1 1 d . . .
H6A H -0.2196 0.8945 0.3544 0.074 Uiso 1 1 calc R . .
H6B H -0.3638 0.8206 0.3618 0.074 Uiso 1 1 calc R . .
H6C H -0.2016 0.8020 0.3312 0.074 Uiso 1 1 calc R . .
C7 C -0.1319(14) 0.6285(6) 0.3716(3) 0.051(3) Uani 1 1 d . . .
H7A H -0.0453 0.5819 0.3750 0.077 Uiso 1 1 calc R . .
H7B H -0.1336 0.6478 0.3420 0.077 Uiso 1 1 calc R . .
H7C H -0.2474 0.6064 0.3795 0.077 Uiso 1 1 calc R . .
C8 C 0.0757(14) 0.6167(6) 0.4628(3) 0.054(3) Uani 1 1 d . . .
H8A H 0.1073 0.5746 0.4407 0.081 Uiso 1 1 calc R . .
H8B H -0.0150 0.5916 0.4809 0.081 Uiso 1 1 calc R . .
H8C H 0.1787 0.6304 0.4799 0.081 Uiso 1 1 calc R . .
C9 C 0.0894(13) 0.8087(7) 0.5034(3) 0.048(3) Uani 1 1 d . . .
H9A H 0.1473 0.8656 0.5020 0.072 Uiso 1 1 calc R . .
H9B H 0.1741 0.7641 0.5118 0.072 Uiso 1 1 calc R . .
H9C H -0.0050 0.8110 0.5243 0.072 Uiso 1 1 calc R . .
C10 C -0.1057(14) 0.9446(6) 0.4392(3) 0.048(3) Uani 1 1 d . . .
H10A H -0.1280 0.9740 0.4121 0.071 Uiso 1 1 calc R . .
H10B H -0.0033 0.9708 0.4528 0.071 Uiso 1 1 calc R . .
H10C H -0.2073 0.9512 0.4577 0.071 Uiso 1 1 calc R . .
C11 C 0.1432(11) 0.9150(5) 0.3186(2) 0.0284(18) Uani 1 1 d . . .
C12 C 0.0933(12) 0.9295(6) 0.2748(3) 0.039(2) Uani 1 1 d . . .
C13 C 0.0809(12) 0.8610(6) 0.2460(3) 0.041(2) Uani 1 1 d . . .
H13 H 0.0463 0.8718 0.2176 0.050 Uiso 1 1 calc R . .
C14 C 0.1196(12) 0.7762(6) 0.2593(3) 0.041(2) Uani 1 1 d . . .
H14 H 0.1152 0.7284 0.2402 0.049 Uiso 1 1 calc R . .
C15 C 0.1656(12) 0.7649(6) 0.3023(3) 0.041(2) Uani 1 1 d . . .
H15 H 0.1936 0.7075 0.3113 0.049 Uiso 1 1 calc R . .

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loop_
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_atom_site_aniso_U_22
_atom_site_aniso_U_33
_atom_site_aniso_U_23
_atom_site_aniso_U_13

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\_atom\_site\_aniso\_U\_12

Ir1 0.02855(16) 0.01836(15) 0.02515(16) -0.00226(14) 0.00281(12) -  
0.00081(12)  
C11 0.0335(11) 0.0286(11) 0.0501(13) -0.0075(9) 0.0038(9) 0.0069(9)  
C12 0.0397(12) 0.0319(11) 0.0453(13) -0.0077(10) -0.0042(10) -0.0096(10)  
O1 0.174(10) 0.044(5) 0.075(6) 0.005(5) -0.042(7) 0.015(6)  
O2 0.214(12) 0.076(6) 0.042(5) 0.023(4) -0.033(7) -0.011(7)  
N1 0.036(4) 0.027(4) 0.023(3) 0.001(3) 0.004(3) -0.003(3)  
N2 0.077(6) 0.022(4) 0.037(4) -0.001(3) -0.003(4) 0.001(4)  
N3 0.089(7) 0.049(5) 0.040(5) 0.012(4) -0.011(5) -0.008(5)  
C1 0.022(4) 0.041(5) 0.025(4) 0.001(4) 0.005(3) -0.005(4)  
C2 0.036(4) 0.033(5) 0.036(4) 0.007(4) 0.009(4) -0.015(4)  
C3 0.034(4) 0.026(4) 0.038(5) 0.006(4) 0.011(4) 0.003(4)  
C4 0.033(4) 0.033(4) 0.022(4) -0.002(3) 0.004(3) 0.007(4)  
C5 0.030(4) 0.033(5) 0.029(4) -0.002(4) 0.006(3) 0.003(4)  
C6 0.037(5) 0.076(7) 0.034(5) 0.011(5) -0.003(4) 0.001(5)  
C7 0.056(6) 0.043(6) 0.054(6) -0.018(5) 0.015(5) -0.021(5)  
C8 0.063(7) 0.039(6) 0.060(7) 0.018(5) 0.017(5) 0.016(5)  
C9 0.055(6) 0.061(7) 0.028(5) -0.004(4) -0.005(4) 0.012(5)  
C10 0.064(7) 0.032(5) 0.046(6) -0.008(4) 0.014(5) 0.012(5)  
C11 0.036(4) 0.023(4) 0.026(4) 0.002(3) 0.003(3) -0.006(4)  
C12 0.043(5) 0.039(5) 0.035(5) 0.009(4) -0.001(4) -0.007(4)  
C13 0.050(5) 0.053(6) 0.021(4) -0.001(4) 0.005(4) -0.004(5)  
C14 0.059(6) 0.040(5) 0.025(4) -0.011(4) 0.005(4) -0.008(5)  
C15 0.052(6) 0.025(5) 0.044(5) -0.010(4) 0.015(4) -0.005(4)

\_geom\_special\_details

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All esds (except the esd in the dihedral angle between two l.s. planes) are estimated using the full covariance matrix. The cell esds are taken into account individually in the estimation of esds in distances, angles and torsion angles; correlations between esds in cell parameters are only used when they are defined by crystal symmetry. An approximate (isotropic) treatment of cell esds is used for estimating esds involving l.s. planes.

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loop\_

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\_geom\_bond\_site\_symmetry\_2  
\_geom\_bond\_publ\_flag  
Ir1 C2 2.135(8) . ?  
Ir1 C1 2.143(7) . ?  
Ir1 C5 2.146(8) . ?  
Ir1 C4 2.153(7) . ?  
Ir1 C3 2.155(8) . ?  
Ir1 N1 2.174(6) . ?  
Ir1 C11 2.398(2) . ?  
Ir1 C12 2.418(2) . ?  
O1 N3 1.202(11) . ?

O2 N3 1.213(10) . ?  
N1 C15 1.336(10) . ?  
N1 C11 1.367(10) . ?  
N2 C11 1.329(10) . ?  
N2 H2A 0.8600 . ?  
N2 H2B 0.8600 . ?  
N3 C12 1.453(12) . ?  
C1 C2 1.422(12) . ?  
C1 C5 1.439(11) . ?  
C1 C6 1.507(11) . ?  
C2 C3 1.459(12) . ?  
C2 C7 1.512(12) . ?  
C3 C4 1.415(11) . ?  
C3 C8 1.494(12) . ?  
C4 C5 1.448(11) . ?  
C4 C9 1.482(11) . ?  
C5 C10 1.492(11) . ?  
C6 H6A 0.9600 . ?  
C6 H6B 0.9600 . ?  
C6 H6C 0.9600 . ?  
C7 H7A 0.9600 . ?  
C7 H7B 0.9600 . ?  
C7 H7C 0.9600 . ?  
C8 H8A 0.9600 . ?  
C8 H8B 0.9600 . ?  
C8 H8C 0.9600 . ?  
C9 H9A 0.9600 . ?  
C9 H9B 0.9600 . ?  
C9 H9C 0.9600 . ?  
C10 H10A 0.9600 . ?  
C10 H10B 0.9600 . ?  
C10 H10C 0.9600 . ?  
C11 C12 1.421(11) . ?  
C12 C13 1.363(12) . ?  
C13 C14 1.368(13) . ?  
C13 H13 0.9300 . ?  
C14 C15 1.385(12) . ?  
C14 H14 0.9300 . ?  
C15 H15 0.9300 . ?

loop\_

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C2 Ir1 C5 66.2(3) . . ?  
C1 Ir1 C5 39.2(3) . . ?  
C2 Ir1 C4 65.8(3) . . ?  
C1 Ir1 C4 65.2(3) . . ?  
C5 Ir1 C4 39.4(3) . . ?

C2 Ir1 C3 39.8(3) . . ?  
C1 Ir1 C3 65.1(3) . . ?  
C5 Ir1 C3 65.5(3) . . ?  
C4 Ir1 C3 38.4(3) . . ?  
C2 Ir1 N1 104.8(3) . . ?  
C1 Ir1 N1 90.4(3) . . ?  
C5 Ir1 N1 112.4(3) . . ?  
C4 Ir1 N1 151.7(3) . . ?  
C3 Ir1 N1 143.9(3) . . ?  
C2 Ir1 C11 102.6(2) . . ?  
C1 Ir1 C11 138.8(2) . . ?  
C5 Ir1 C11 159.0(2) . . ?  
C4 Ir1 C11 120.4(2) . . ?  
C3 Ir1 C11 94.3(2) . . ?  
N1 Ir1 C11 87.24(18) . . ?  
C2 Ir1 C12 160.3(2) . . ?  
C1 Ir1 C12 133.9(2) . . ?  
C5 Ir1 C12 98.8(2) . . ?  
C4 Ir1 C12 94.5(2) . . ?  
C3 Ir1 C12 123.5(2) . . ?  
N1 Ir1 C12 92.58(18) . . ?  
C11 Ir1 C12 87.33(8) . . ?  
C15 N1 C11 117.9(7) . . ?  
C15 N1 Ir1 116.0(6) . . ?  
C11 N1 Ir1 123.3(5) . . ?  
C11 N2 H2A 120.0 . . ?  
C11 N2 H2B 120.0 . . ?  
H2A N2 H2B 120.0 . . ?  
O1 N3 O2 122.3(10) . . ?  
O1 N3 C12 120.1(8) . . ?  
O2 N3 C12 117.5(10) . . ?  
C2 C1 C5 109.5(7) . . ?  
C2 C1 C6 124.6(8) . . ?  
C5 C1 C6 125.9(8) . . ?  
C2 C1 Ir1 70.3(4) . . ?  
C5 C1 Ir1 70.5(4) . . ?  
C6 C1 Ir1 126.0(6) . . ?  
C1 C2 C3 106.8(7) . . ?  
C1 C2 C7 126.9(8) . . ?  
C3 C2 C7 125.9(8) . . ?  
C1 C2 Ir1 70.9(4) . . ?  
C3 C2 Ir1 70.9(5) . . ?  
C7 C2 Ir1 128.6(6) . . ?  
C4 C3 C2 108.2(7) . . ?  
C4 C3 C8 125.7(8) . . ?  
C2 C3 C8 126.0(8) . . ?  
C4 C3 Ir1 70.7(4) . . ?  
C2 C3 Ir1 69.4(4) . . ?  
C8 C3 Ir1 127.0(6) . . ?  
C3 C4 C5 108.7(7) . . ?  
C3 C4 C9 125.5(8) . . ?  
C5 C4 C9 125.7(8) . . ?  
C3 C4 Ir1 70.9(4) . . ?  
C5 C4 Ir1 70.1(4) . . ?

C9 C4 Ir1 127.7(6) . . ?  
C1 C5 C4 106.6(7) . . ?  
C1 C5 C10 126.5(8) . . ?  
C4 C5 C10 126.6(8) . . ?  
C1 C5 Ir1 70.3(4) . . ?  
C4 C5 Ir1 70.6(4) . . ?  
C10 C5 Ir1 128.4(6) . . ?  
C1 C6 H6A 109.5 . . ?  
C1 C6 H6B 109.5 . . ?  
H6A C6 H6B 109.5 . . ?  
C1 C6 H6C 109.5 . . ?  
H6A C6 H6C 109.5 . . ?  
H6B C6 H6C 109.5 . . ?  
C2 C7 H7A 109.5 . . ?  
C2 C7 H7B 109.5 . . ?  
H7A C7 H7B 109.5 . . ?  
C2 C7 H7C 109.5 . . ?  
H7A C7 H7C 109.5 . . ?  
H7B C7 H7C 109.5 . . ?  
C3 C8 H8A 109.5 . . ?  
C3 C8 H8B 109.5 . . ?  
H8A C8 H8B 109.5 . . ?  
C3 C8 H8C 109.5 . . ?  
H8A C8 H8C 109.5 . . ?  
H8B C8 H8C 109.5 . . ?  
C4 C9 H9A 109.5 . . ?  
C4 C9 H9B 109.5 . . ?  
H9A C9 H9B 109.5 . . ?  
C4 C9 H9C 109.5 . . ?  
H9A C9 H9C 109.5 . . ?  
H9B C9 H9C 109.5 . . ?  
C5 C10 H10A 109.5 . . ?  
C5 C10 H10B 109.5 . . ?  
H10A C10 H10B 109.5 . . ?  
C5 C10 H10C 109.5 . . ?  
H10A C10 H10C 109.5 . . ?  
H10B C10 H10C 109.5 . . ?  
N2 C11 N1 116.5(7) . . ?  
N2 C11 C12 125.2(8) . . ?  
N1 C11 C12 118.3(7) . . ?  
C13 C12 C11 121.6(8) . . ?  
C13 C12 N3 117.8(8) . . ?  
C11 C12 N3 120.6(8) . . ?  
C12 C13 C14 119.5(8) . . ?  
C12 C13 H13 120.2 . . ?  
C14 C13 H13 120.2 . . ?  
C13 C14 C15 117.0(8) . . ?  
C13 C14 H14 121.5 . . ?  
C15 C14 H14 121.5 . . ?  
N1 C15 C14 125.5(9) . . ?  
N1 C15 H15 117.3 . . ?  
C14 C15 H15 117.3 . . ?

loop\_



\_geom\_torsion\_atom\_site\_label\_1  
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 C5 Ir1 N1 C15 -121.1(6) . . . . ?  
 C4 Ir1 N1 C15 -117.3(8) . . . . ?  
 C3 Ir1 N1 C15 -42.3(9) . . . . ?  
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 C12 Ir1 N1 C15 138.4(6) . . . . ?  
 C2 Ir1 N1 C11 109.4(7) . . . . ?  
 C1 Ir1 N1 C11 72.9(7) . . . . ?  
 C5 Ir1 N1 C11 39.5(7) . . . . ?  
 C4 Ir1 N1 C11 43.3(10) . . . . ?  
 C3 Ir1 N1 C11 118.2(7) . . . . ?  
 C11 Ir1 N1 C11 -148.3(6) . . . . ?  
 C12 Ir1 N1 C11 -61.1(6) . . . . ?  
 C5 Ir1 C1 C2 -120.2(7) . . . . ?  
 C4 Ir1 C1 C2 -81.6(5) . . . . ?  
 C3 Ir1 C1 C2 -39.1(5) . . . . ?  
 N1 Ir1 C1 C2 113.4(5) . . . . ?  
 C11 Ir1 C1 C2 27.1(6) . . . . ?  
 C12 Ir1 C1 C2 -152.6(4) . . . . ?  
 C2 Ir1 C1 C5 120.2(7) . . . . ?  
 C4 Ir1 C1 C5 38.6(5) . . . . ?  
 C3 Ir1 C1 C5 81.1(5) . . . . ?  
 N1 Ir1 C1 C5 -126.4(5) . . . . ?  
 C11 Ir1 C1 C5 147.3(4) . . . . ?  
 C12 Ir1 C1 C5 -32.4(6) . . . . ?  
 C2 Ir1 C1 C6 -119.0(10) . . . . ?  
 C5 Ir1 C1 C6 120.8(10) . . . . ?  
 C4 Ir1 C1 C6 159.4(9) . . . . ?  
 C3 Ir1 C1 C6 -158.2(9) . . . . ?  
 N1 Ir1 C1 C6 -5.6(8) . . . . ?  
 C11 Ir1 C1 C6 -92.0(8) . . . . ?  
 C12 Ir1 C1 C6 88.4(8) . . . . ?  
 C5 C1 C2 C3 2.3(9) . . . . ?  
 C6 C1 C2 C3 -177.1(7) . . . . ?  
 Ir1 C1 C2 C3 62.1(5) . . . . ?  
 C5 C1 C2 C7 175.8(8) . . . . ?  
 C6 C1 C2 C7 -3.7(13) . . . . ?  
 Ir1 C1 C2 C7 -124.4(8) . . . . ?  
 C5 C1 C2 Ir1 -59.8(5) . . . . ?  
 C6 C1 C2 Ir1 120.7(8) . . . . ?  
 C5 Ir1 C2 C1 36.7(5) . . . . ?  
 C4 Ir1 C2 C1 79.9(5) . . . . ?  
 C3 Ir1 C2 C1 116.4(7) . . . . ?

N1 Ir1 C2 C1 -71.7(5) . . . . ?  
C11 Ir1 C2 C1 -162.1(4) . . . . ?  
C12 Ir1 C2 C1 79.1(8) . . . . ?  
C1 Ir1 C2 C3 -116.4(7) . . . . ?  
C5 Ir1 C2 C3 -79.8(5) . . . . ?  
C4 Ir1 C2 C3 -36.5(5) . . . . ?  
N1 Ir1 C2 C3 171.9(4) . . . . ?  
C11 Ir1 C2 C3 81.5(5) . . . . ?  
C12 Ir1 C2 C3 -37.3(10) . . . . ?  
C1 Ir1 C2 C7 122.5(10) . . . . ?  
C5 Ir1 C2 C7 159.1(9) . . . . ?  
C4 Ir1 C2 C7 -157.6(9) . . . . ?  
C3 Ir1 C2 C7 -121.1(10) . . . . ?  
N1 Ir1 C2 C7 50.8(9) . . . . ?  
C11 Ir1 C2 C7 -39.6(9) . . . . ?  
C12 Ir1 C2 C7 -158.4(6) . . . . ?  
C1 C2 C3 C4 -1.8(9) . . . . ?  
C7 C2 C3 C4 -175.3(8) . . . . ?  
Ir1 C2 C3 C4 60.3(6) . . . . ?  
C1 C2 C3 C8 176.4(8) . . . . ?  
C7 C2 C3 C8 2.9(13) . . . . ?  
Ir1 C2 C3 C8 -121.5(8) . . . . ?  
C1 C2 C3 Ir1 -62.1(5) . . . . ?  
C7 C2 C3 Ir1 124.3(8) . . . . ?  
C2 Ir1 C3 C4 -119.0(7) . . . . ?  
C1 Ir1 C3 C4 -80.8(5) . . . . ?  
C5 Ir1 C3 C4 -37.5(5) . . . . ?  
N1 Ir1 C3 C4 -132.4(5) . . . . ?  
C11 Ir1 C3 C4 136.4(4) . . . . ?  
C12 Ir1 C3 C4 46.7(5) . . . . ?  
C1 Ir1 C3 C2 38.2(5) . . . . ?  
C5 Ir1 C3 C2 81.6(5) . . . . ?  
C4 Ir1 C3 C2 119.0(7) . . . . ?  
N1 Ir1 C3 C2 -13.4(7) . . . . ?  
C11 Ir1 C3 C2 -104.6(5) . . . . ?  
C12 Ir1 C3 C2 165.8(4) . . . . ?  
C2 Ir1 C3 C8 120.2(10) . . . . ?  
C1 Ir1 C3 C8 158.4(9) . . . . ?  
C5 Ir1 C3 C8 -158.2(9) . . . . ?  
C4 Ir1 C3 C8 -120.7(10) . . . . ?  
N1 Ir1 C3 C8 106.9(9) . . . . ?  
C11 Ir1 C3 C8 15.7(8) . . . . ?  
C12 Ir1 C3 C8 -74.0(9) . . . . ?  
C2 C3 C4 C5 0.6(9) . . . . ?  
C8 C3 C4 C5 -177.6(8) . . . . ?  
Ir1 C3 C4 C5 60.1(6) . . . . ?  
C2 C3 C4 C9 177.3(8) . . . . ?  
C8 C3 C4 C9 -1.0(14) . . . . ?  
Ir1 C3 C4 C9 -123.3(8) . . . . ?  
C2 C3 C4 Ir1 -59.5(5) . . . . ?  
C8 C3 C4 Ir1 122.3(9) . . . . ?  
C2 Ir1 C4 C3 37.8(5) . . . . ?  
C1 Ir1 C4 C3 80.7(5) . . . . ?  
C5 Ir1 C4 C3 119.2(7) . . . . ?

N1 Ir1 C4 C3 113.6(7) . . . . ?  
C11 Ir1 C4 C3 -52.9(5) . . . . ?  
C12 Ir1 C4 C3 -142.5(5) . . . . ?  
C2 Ir1 C4 C5 -81.3(5) . . . . ?  
C1 Ir1 C4 C5 -38.5(5) . . . . ?  
C3 Ir1 C4 C5 -119.2(7) . . . . ?  
N1 Ir1 C4 C5 -5.6(9) . . . . ?  
C11 Ir1 C4 C5 -172.1(4) . . . . ?  
C12 Ir1 C4 C5 98.4(5) . . . . ?  
C2 Ir1 C4 C9 158.4(9) . . . . ?  
C1 Ir1 C4 C9 -158.8(9) . . . . ?  
C5 Ir1 C4 C9 -120.3(10) . . . . ?  
C3 Ir1 C4 C9 120.6(10) . . . . ?  
N1 Ir1 C4 C9 -125.8(8) . . . . ?  
C11 Ir1 C4 C9 67.6(8) . . . . ?  
C12 Ir1 C4 C9 -21.9(8) . . . . ?  
C2 C1 C5 C4 -1.9(9) . . . . ?  
C6 C1 C5 C4 177.5(7) . . . . ?  
Ir1 C1 C5 C4 -61.6(5) . . . . ?  
C2 C1 C5 C10 -176.5(8) . . . . ?  
C6 C1 C5 C10 2.9(13) . . . . ?  
Ir1 C1 C5 C10 123.8(9) . . . . ?  
C2 C1 C5 Ir1 59.7(5) . . . . ?  
C6 C1 C5 Ir1 -120.9(8) . . . . ?  
C3 C4 C5 C1 0.8(9) . . . . ?  
C9 C4 C5 C1 -175.8(8) . . . . ?  
Ir1 C4 C5 C1 61.4(5) . . . . ?  
C3 C4 C5 C10 175.4(8) . . . . ?  
C9 C4 C5 C10 -1.3(14) . . . . ?  
Ir1 C4 C5 C10 -124.0(9) . . . . ?  
C3 C4 C5 Ir1 -60.6(6) . . . . ?  
C9 C4 C5 Ir1 122.8(9) . . . . ?  
C2 Ir1 C5 C1 -36.3(5) . . . . ?  
C4 Ir1 C5 C1 -116.6(7) . . . . ?  
C3 Ir1 C5 C1 -80.1(5) . . . . ?  
N1 Ir1 C5 C1 60.5(5) . . . . ?  
C11 Ir1 C5 C1 -97.4(7) . . . . ?  
C12 Ir1 C5 C1 157.0(4) . . . . ?  
C2 Ir1 C5 C4 80.3(5) . . . . ?  
C1 Ir1 C5 C4 116.6(7) . . . . ?  
C3 Ir1 C5 C4 36.5(5) . . . . ?  
N1 Ir1 C5 C4 177.2(4) . . . . ?  
C11 Ir1 C5 C4 19.3(9) . . . . ?  
C12 Ir1 C5 C4 -86.4(5) . . . . ?  
C2 Ir1 C5 C10 -157.9(9) . . . . ?  
C1 Ir1 C5 C10 -121.5(10) . . . . ?  
C4 Ir1 C5 C10 121.8(10) . . . . ?  
C3 Ir1 C5 C10 158.4(9) . . . . ?  
N1 Ir1 C5 C10 -61.0(9) . . . . ?  
C11 Ir1 C5 C10 141.1(7) . . . . ?  
C12 Ir1 C5 C10 35.5(8) . . . . ?  
C15 N1 C11 N2 -177.7(8) . . . . ?  
Ir1 N1 C11 N2 22.1(10) . . . . ?  
C15 N1 C11 C12 4.5(12) . . . . ?

Ir1 N1 C11 C12 -155.7(6) . . . . ?  
 N2 C11 C12 C13 -179.8(9) . . . . ?  
 N1 C11 C12 C13 -2.2(13) . . . . ?  
 N2 C11 C12 N3 -1.4(14) . . . . ?  
 N1 C11 C12 N3 176.3(8) . . . . ?  
 O1 N3 C12 C13 174.8(11) . . . . ?  
 O2 N3 C12 C13 -2.4(15) . . . . ?  
 O1 N3 C12 C11 -3.8(16) . . . . ?  
 O2 N3 C12 C11 179.1(11) . . . . ?  
 C11 C12 C13 C14 -0.9(14) . . . . ?  
 N3 C12 C13 C14 -179.5(9) . . . . ?  
 C12 C13 C14 C15 1.6(14) . . . . ?  
 C11 N1 C15 C14 -4.1(13) . . . . ?  
 Ir1 N1 C15 C14 157.6(7) . . . . ?  
 C13 C14 C15 N1 0.9(14) . . . . ?

_diffrn_measured_fraction_theta_max	0.998
_diffrn_reflns_theta_full	26.37
_diffrn_measured_fraction_theta_full	0.998
_refine_diff_density_max	1.496
_refine_diff_density_min	-2.877
_refine_diff_density_rms	0.154