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TETRAALKYL-PHOSPHINE COMPLEXES OF THE f-BLOCK METALS; PREPARATION AND CRYSTAL STRUCTURE OF Th (CH2Ph)4(Me2PCH2CH2PMe2) AND U(CH2Ph)3Me(Me2PCH2CH2 PMe2)

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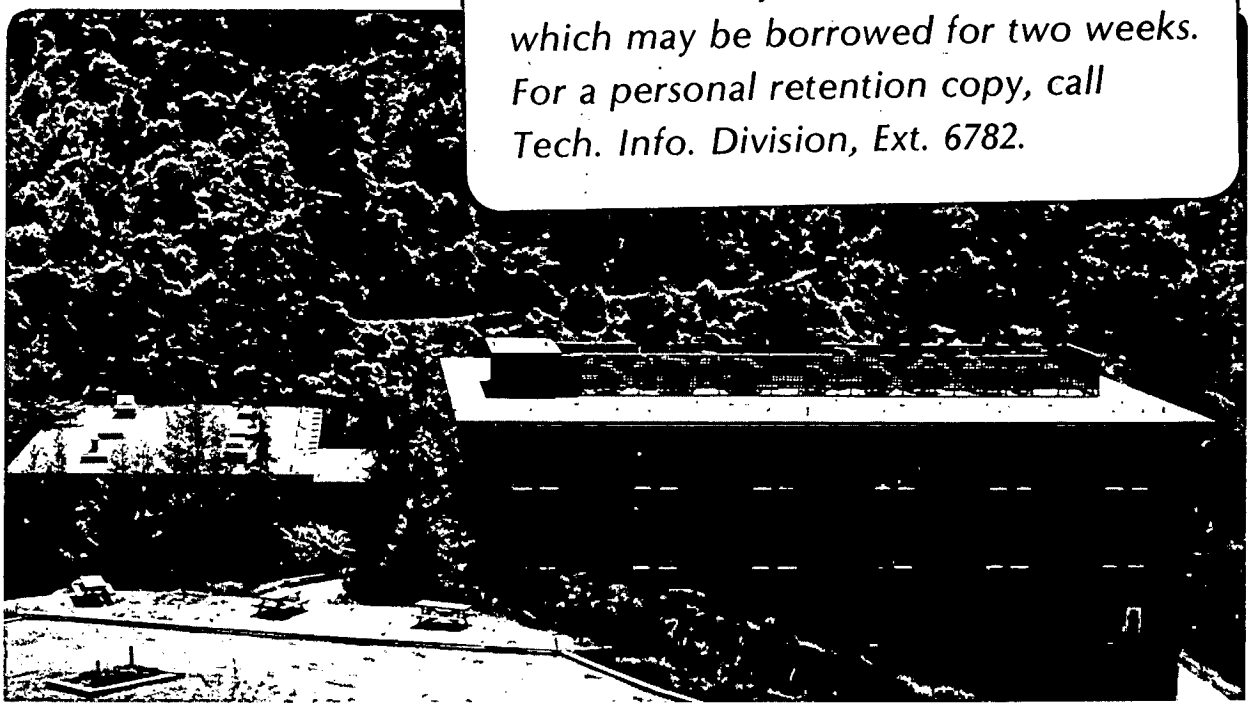

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ABSTRACT

Reaction of four molar equivalents of $PhCH_2Li$ with $MCl_4(Me_2PCH_2CH_2PMe_2)_2$ gives $M(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$, where M is Th or U. Reaction of a mixture of three molar equivalents of $PhCH_2Li$ and one molar equivalent of MeLi with $MCl_4(Me_2PCH_2CH_2PMe_2)_2$ gives the unsymmetrical alkyls, $M(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$, where M is Th or U. The molecular structure of $Th(CH_2C_6H_5)_4(Me_2PCH_2CH_2PMe_2)$ and $U(CH_2C_6H_5)_3Me(Me_2PCH_2CH_2PMe_2)$ were determined by single crystal X-ray diffraction methods. Crystals of $Th(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$ are triclinic, $P\bar{1}$, with cell dimensions, $\underline{a}$ = 11.463(2) Å, $\underline{b}$ = 16.151(3) Å, $\underline{c}$ = 21.527(3) Å, $\alpha = 106.28(2)^\circ$, $\beta = 95.85(2)^\circ$, $\gamma = 107.78(2)^\circ$; there are 4 molecules in the unit cell. Crystals of $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$ are monoclinic, $P2_1/c$, with cell dimensions, $\underline{a}$ = 13.035(2) Å, $\underline{b}$ = 15.381(2) Å, $\underline{c}$ = 14.540(2) Å, $\beta = 98.06(2)^\circ$; there are 4 molecules in the unit cell. In the Th complex there are two independent molecules in the unit cell. The Th atoms are each bonded to four benzyl groups and to two phosphorus atoms from the dimethylphosphinoethane ligands; the average Th-C distance is 1.55(2) Å, and the average Th-P distance is 3.17(3) Å. In the U complex the uranium atom is bonded to a methyl group, three benzyl groups and the two phosphorus atoms of the

dimethylphosphinoethane ligand. The U-C(methyl) distance is 2.41(1) Å; the average U-C(benzyl) distance is 2.50(4) Å.

INTRODUCTION

Binary, σ-alkyls of the actinide metals are rare, doubtless due to their thermal instability.[1] The tetrabenzyls of thorium and uranium[2] and some anionic complexes of uranium[3] are the only known binary compounds that are thermally stable at room temperature. The thermal stability of σ-alkyls increases considerably when cyclopentadienyl or related ligands are present in the coordination sphere of the actinide metal atom.[4] The principal reason for the increased thermal stability is related to the increased coordination number of the complex, i.e., kinetic stabilization. As the steric congestion about the metal atom increases, the σ-bonded alkyl cannot get sufficiently close to the metal atom, in an inter- or intra-molecular sense, to become activated and the decomposition pathway is therefore a high energy process. This explanation assumes a homolytic rather than a heterolytic decomposition pathway; increased steric congestion could well increase thermal instability in heterolytic processes.[5] Thus, the principal function of the auxillary ligands is to occupy space about the metal center.[6]

The strategy of saturating the coordination sphere with "inert" ligands has been applied to the preparation of thermally stable d-block metal alkyls.[1,7a] In particular, the pioneering work of Chatt has shown that tertiary phosphine ligands impart considerable thermal stability to the metal-carbon bond in phosphine alkyls.[7b,c] Since we have described the preparation of phosphine complexes of the tetravalent actinides of the type $MX_4(Me_2PCH_2CH_2PMe_2)_2$, where M is uranium or thorium and X is halide or methyl,[8] it was of interest to extend the range of alkyls to the β-elimination-stabilized alkyls, $PhCH_2$, etc.[9]

Addition of four molar equivalents of benzyllithium to $MCl_4(Me_2PCH_2CH_2PMe_2)_2$, where M is Th or U gives the tetrabenzyls, $M(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$, where M is Th or U. The complexes are thermally stable and melt with decomposition at ca. 85°C. The ^1H NMR spectrum of the thorium complex at 29°C in PhMe-d_8 has a singlet at δ 0.82 and a three line pattern centered at δ 1.23 [the separation between the outermost lines, which are more intense than the center-line, is 10 Hz] due to the Me_2P and CH_2P, respectively, of the coordinated phosphine ligand. The resonances of the benzyl protons appear as a singlet at 1.48 and as a complex pattern between δ 7.17 and 6.38 due to the methylene and aryl protons, respectively. Lowering the temperature to -66°C causes the resonances due to the methyl- and methylene-phosphine protons to approximate pseudo-triplet structure, and the methylene protons of the benzyl group to broaden into the base-line. The aryl protons of the benzyl ligands do not change appreciably. Clearly some type of exchange process is occurring. The $^{31}P\{^1H\}$ NMR spectrum is rather informative. The spectrum at 27°C shows a broad ($\nu_{1/2}$ = 86 Hz) signal at δ-33.3. Cooling the sample to -51°C yields a two line spectrum, δ-23.6 and -47.9. The latter resonance is due to free phosphine as shown by addition of free phosphine to the sample. Hence the coordination chemical shift at -51°C is 24.3 ppm. The $^{31}P\{^1H\}$ NMR experiment shows that the phosphine ligand is dissociating at room temperature on the NMR time scale and thus accounts for lack of coupling information and the apparent chemical equivalence of the methylene groups of the benzyl ligand in the ^1H NMR spectrum.

The ^1H NMR spectrum of the paramagnetic uranium complex at 25°C in PhMe-d_8 consists of four singlets at δ 51.3, 5.83, -2.07, and -13.4 in area ratio 4:12:20:8. At -60°C, thirteen single resonances are observed which are spread from δ 84.6 to -78.7, see experimental section for peak positions. The complex spectrum is impossible to interprete with confidence and a crystal structure is warranted. Since the thorium complex crystallizes better than that of the uranium complex, we have carried out a single crystal X-ray analysis of the thorium complex.

The $Th(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$ crystallizes in space group $P\bar{1}$ with two independent molecules in the asymmetric unit. An ORTEP drawing of molecule 1 is shown in Figure I and some bond lengths and bond angles are listed in Tables I and II. Crystal data are shown in Table V. In the following discussion we will focus upon molecule 1 as the parameters are more precisely determined than those of molecule 2 though the essential features are identical in both molecules.

Ignoring for the moment the short Th-C(9) contact, the geometry of the complex is based upon that of an octahedron with two benzyl groups trans to the chelating phosphine ligands and two benzyl groups trans to each other. The averaged thorium-carbon bond distance of 2.541 ± 0.013 Å, is similar to that found in the related benzyl derivative, $Th(Me_5C_5)(CH_2Ph)_3$, of 2.58 ± 0.02 Å.[10] The averaged thorium-phosphorus bond distance is 3.155 ± 0.003 Å and the normalized bite of the phosphine ligand is 1.08.[11]

The most interesting feature of the structure is the unusual benzyl group, defined by C(8-14). This can be seen readily by inspection of the Th-C-C angles in the four thorium-benzyl interactions. The Th(1)-

C(1)-C(2), Th(1)-C(15)-C(16), and Th(1)-C(22)-C(23) bond angles are 114.61(3)°, 105.23(3)°, and 102.51(3)°, respectively, whereas the Th(1)-C(8)-C(9) bond angle is 87.99(3)°. As a consequence of the acute Th(1)-C(8)-C(9) bond angle the benzyl group associated with C(8) has some short thorium-carbon contacts. The Th(1)-C(9), Th(1)-C(10), and Th(1)-C(14) distances are 2.871(1), 3.304(1), and 3.457(1) Å, respectively. The other thorium-carbon contacts are somewhat longer, Th(1)-C(2), Th(1)-C(16), and Th(1)-C(23) distances are 3.420(1), 3.222(1), and 3.186(1) Å, respectively. All other thorium-carbon contacts are >3.5 Å. Thus, three benzyl groups may be described as "normal" and the other is abnormal. This abnomality is discussed below.

Reaction of $MCl_4(Me_2PCH_2CH_2PMe_2)_2$ with a mixture of benzyllithium and methyllithium in a three to one molar ratio in diethyl ether gives the unsymmetrical alkyls $M(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$, where M is thorium or uranium. The alkyls are thermally stable at room temperature and melt with decomposition at ca. 80°C. The ^1H NMR spectrum of the thorium complex at 27°C in PhMe-d_8 shows the resonance due to the Me_2P group as a pseudo-triplet centered at δ 1.01, the separation of the outermost lines is 2.4 Hz, and the CH_2P protons as a widely spaced pseudo-doublet centered at δ 1.39 with a separation of 13 Hz. The benzylic methylene and methyl groups appear as resonances at δ 1.65 and -0.05, respectively. The aryl protons appear as a complex set of resonances between δ 7.38 to 6.46. The ^1H NMR spectrum of the uranium alkyl at -60°C in PhMe-d_8 contains twenty-one single resonances from δ 10 to -114. Again, as in $U(CH_2Ph)_4(dmpe)$ the complex nature of the spectrum precludes a definitive assignment and a crystal structure is required to deduce the

solid state structure.

An ORTEP drawing of $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$ is shown in Figure II. Some bond lengths and bond angles are shown in Table III. Crystal data is shown in Table V.

The geometry of the molecule, ignoring the short U-C(16) contact, is based upon that of an octahedron with two benzyl groups trans to the bidentate phosphine ligands and the remaining benzyl group trans to a methyl group. The averaged uranium-carbon (benzyl) bond length of 2.50 ± 0.03 Å is significantly shorter than the uranium-methyl bond length of 2.405(7) Å. At first glance, this is surprising since all of the carbon atoms in the benzyl and methyl groups are formally sp^3-hybridized. This type of disparity has been observed previously. The uranium-carbon (benzyl) bond length in $UCp_3CH_2(p\text{-tolyl})$ is 2.51(2) Å and the uranium-carbon (alkyl) bond length in $UCp_3(n\text{-butyl})$ is 2.43(2) Å.[12] A reasonable rationalization for this difference in U-C(sp^3) bond lengths is to note that the benzylic carbanion is resonance stabilized due to the electron-withdrawing effect of a phenyl group relative to that of hydrogen or an alkyl group. If one views the bonding in these actinide molecules as primarily electrostatic then the longest bond length should be associated with the carbanion that has the least amount of electron density at the sp^3-hybridized carbon atom, viz., the benzylic carbon atom, as observed. It is interesting to note, in this regard, that the uranium-carbon (sp^3) bond length in UCp_3 (2-methylallyl) is 2.48(3) Å.[13] This bond length is consistent with the above argument since an allyl group is more electron-withdrawing than that of a hydrogen atom or an alkyl group. We do not wish to over-

emphasize the bond length trends since the error limits are rather large.

The averaged uranium-phosphorus bond length in the unsymmetrical alkyl is 3.015 ± 0.005 Å. This is close to that found in $U(OPh)_4(Me_2PCH_2CH_2PMe_2)_2$ of 3.104 ± 0.006 Å.[8] The uranium-phosphorus distance in $U(CH_2Ph)_3Me(dmpe)$ is 0.14 Å shorter than that in $Th(CH_2Ph)_4(dmpe)$. This difference is in the direction expected since uranium(IV) is smaller than thorium (IV), in a given coordination number, by 0.05 Å.[14] The normalized bite of the bidentate phosphine is 1.10.[11]

As noted earlier, the benzyl groups in $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$ are not identical. This can be seen most readily by comparing the U-C-C bond angles. The U-C(1)-C(2), U-C(8)-C(9), and U-C(15)-C(16) bond angles are 119.6(4)°, 97.7(4)°, and 83.0(4)°, respectively. The acute nature of the latter two bond angles requires that several uranium-carbon contacts are short. The benzyl group associated with C(1) has a U-C(2) contact of 3.429(5) Å and the U-C(3,7) contact is >3.5 Å. The benzyl group associated with C(8) has a U-C(9) contact of 3.061(6) Å and the U-C(10,14) distances are >3.5 Å. The benzyl group associated with C(15) has U-C(16,17,21) contacts of 2.758(5), 3.089(6), and 3.450(7) Å, respectively. Hence, two benzyl groups are "normal" and one is peculiar, similar to that found in $Th(CH_2Ph)_4$ (dmpe).

Several benzyl derivatives of the metals are known in which there is an interaction of the metal atom with the ortho-carbon of the aryl group. Generally only one of the carbon atoms (not both) has a short metal-carbon distance which is longer than the metal-ipso carbon

distance. Thus, the bond length trend is M-CH_2 < M-C(ipso) < M-C(ortho) < M-C(ortho'). Table IV lists the crystallographically known benzyl compounds which have short ortho-carbon to metal distances. In an attempt to quantify the bond length differences we have defined two parameters Δ and Δ', where $\Delta = [MC_{(o)} - MCH_2] - [MCi - MCH_2]$ and $\Delta' = [MC_{(o')} - MCH_2] - [MCi - MCH_2]$ and where $MC_{(o)}$ is the shorter metal to ortho-carbon contact and $MC_{(o')}$ is the longer metal to ortho-carbon contact, etc. For the transition metal series, Δ ranges from ca. 0.03 to 0.30 and Δ' (which is calculated when sufficient information is reported) is ca. 1.0. The larger difference between Δ and Δ' is indicative of a η^3-benzyl ligand to metal interaction, as pointed out in the papers. For the f-block metals the Δ and Δ' values are of similar magnitude suggesting that the benzylic groups in the f-metal complexes are best viewed as η^4-benzyl groups. In this context, the binary tetrabenzyls of the Group IVA (Ti, Zr, Hf) metals have been shown to have very acute M-C-C angles.[16] These organotransition metal compounds are not listed in Table IV since they were published in preliminary form and the relevant data for calculation of Δ and Δ' are not listed.

The tendency for η^4-bonding in the organoactinide compounds may be rationalized in the following way. Hückel theory shows that the contribution to the π-charges in a benzyl radical has 4/7th of the charge on the CH_2 group, 1/7 of the change on each of the ortho- and para-carbon atoms and zero on each of the ipso- and meta-carbon atoms.[17] Consequently, in the bonding of an actinide metal atom to a benzyl group the primary interaction is by way of the methylene carbon atom. The coordination number of the actinide metal in, for example, $Th(CH_2Ph)_4(dmpe)$,

in which the benzyl groups are only σ-bonded, is only six and the metal atom is coordinatively unsaturated. The metal can increase its coordination number in a number of ways, viz., coordination to an additional phosphine or solvent ligand, formation of associated (oligomeric) species,[18] or by an intramolecular interaction with the available electron density in the aryl group by bending the $ThCH_2Ph$ angle. Clearly the thorium and uranium species described in this paper prefer the latter interaction. The thorium and uranium compounds described in this paper, and those in Table IV, show short metal to ipso-carbon distances even though this carbon atom carries a trivial amount of electron density. This is expected. The four-carbon fragment of the η^4-benzyl group in each of the compounds is essentially planar. In order for the ortho-carbon atoms to get close to the metal atom the ipso-carbon atom must get close to the metal center and the $M-CH_2Ph$ angle will bend until the intramolecular repulsions become unacceptable.

We have attempted to make other examples of phosphine-actinide, β-elimination stabilized alkyls with Me_3CCH_2, Me_2PhCCH_2, and Me_3SiCH_2 ligands. In all cases we have isolated materials that are thermally unstable at 0^oC in the solid state or in solution. Hence, reliable analytical and spectroscopic data were not obtained.

Experimental Section

All operations were performed under argon. Elemental analyses were done by the microanalytical laboratory of this department. Proton and phosphous nuclear magnetic resonance spectra were recorded on a JEOL FX90 Q instrument operating at 89.56 and 36.25 MHz, respectively. Infrared spectra were obtained as Nujol mulls.

Tetrabenzyluranium-1,2-bis(dimethylphosphino)ethane

To a cold (-70°C) suspension of uraniumtetrachloride-bis[1,2-bis(dimethylphosphino)ethane][8] (0.60 g, 0.90 mmol) in diethyl ether (50 mL) was added benzyllithium[19] (3.2 mL of a 1.1 M solution in diethyl ether, 3.5 mmol) dropwise with stirring. The brown-red solution was warmed to 10°C over 2h and stirred at that temperature for 1 h. The volatile material was evaporated, the red residue was extracted with toluene (3 x 20 mL), filtered, and the filtrate was concentrated to ca. 20 mL. Pentane (ca. 15 mL) was added until the solution appeared to become turbid. Cooling the solution (-20°C) afforded brown prisms which were collected, washed with pentane (2 x 2 mL) and dried under reduced pressure. Yield was 0.4g, 60%, mp 85°C (dec). The complex is sparingly soluble in pentane and very soluble in toluene and tetrahydrofuran. Anal. Calcd for $C_{34}H_{44}P_2U$: C, 54.3; H, 5.85; P, 8.24. Found: C, 54.8; H, 6.02; P, 7.95. The ^1H NMR (PhMe-d_8, -60°C) spectrum consists of the following single resonances whose approximate relative intensities are given in parentheses: δ 84.6(4), 39.5(2), 23.0(2), 13.4(2), 0.86(4), -3.40(6), -4.73(6), -7.18(3), -19.1(3), -20.8(3), -54.7(3), -78.7(4). The infrared spectrum is virtually identical to that of its thorium analogue, given below.

Tetrabenzylthorium-1,2-bis(dimethylphosphino)ethane

The thorium complex was prepared, in 60% yield after crystallization as yellow needles from toluene, in a manner similar to that of its uranium analogue, mp 90°C(dec). Anal. Calcd for $C_{34}H_{44}P_2Th$: C, 54,7, H, 5.90; P, 8.31. Found: C, 54.7; H, 5.65; P, 8.61. IR: 1587s, 1554w, 1298m, 1280m, 1259m, 1206s, 1172m, 1150w, 1138w, 1088mbr, 1020m,

927s, 899s br, 858m, 843w, 825w, 809m, 789s, 736s, 724s, 690s, 638w, 543m, 512m, 468m, and 340m br.

Tribenzylmonomethyluranium-1,2-bis(dimethylphosphino)ethane

To a cold (-70°C) suspension of uraniumtetrachloride bis[1,2-bis(dimethylphosphino)ethane] (1.0g, 1.5 mmol) in diethyl ether (50 mL) was added a mixture of benzylithium (7.9 mL of a 0.56 M solution in diethyl ether, 4.5 mmol) and methyllithium (1.3 mL of a 1.1 M solution in diethyl ether, 1.5 mmol). The red suspension was allowed to warm slowly (2 h) to 10°C and the solution was stirred at that temperature for 1 h. The volatile material was evaporated to dryness and the brown residue was extracted with toluene (3 x 10 mL), filtered, and the filtrate was concentrated to ca. 10 mL. Pentane (ca. 5 mL) was added and the solution was cooled (-20°C). The brown-red needles were collected, washed with pentane (2 x 2 mL) and dried under reduced pressure. Yield was 0.6g, 60%, mp 80°C(dec). The compound is soluble in toluene and tetrahydrofuran and sparingly soluble in diethyl ether and pentane. Significant amounts of decomposition of solutions of the alkyl can be observed at room temperature over periods of 1 h. Anal. Calcd for $C_{28}H_{40}P_2U$: C, 49.7; H, 5.92; P, 9.17. Found: C, 49.8; H, 5.67; P, 8.96. IR: 1588s, 1292w, 1278w, 1257w, 1217m, 1174w, 1150w, 1137w, 1083m br, 966w, 945m, 924m, 889m, 861w, 852w, 805m, 790s, 737s, 724m, 704w, 693s, 627w, 540w, 523m, 468w, 355m br, and 322w cm^{-1}.

Tribenzylmonomethylthorium-1,2-bis(dimethylphosphino)ethane

This alkyl was prepared by a procedure similar to that used to prepare its uranium analogue. The yellow prisms were crystallized from toluene-pentane mixtures in 55% yield, mp 80°C(dec). Anal. Calcd for

$C_{28}H_{40}P_2Th$: C, 50.1; H, 5.97; P, 9.25. Found: C, 49.9; H, 5.78; P, 9.03. The infrared spectrum is virtually identical to that of the uranium analogue.

X-Ray Crystallography

The crystals, because of their air sensitivity, were sealed inside thin walled quartz capillaries, and mounted on a CAD4 automatic diffractometer equipped with a MoK_α x-ray tube ($\lambda K\alpha_1$ = 0.70930 Å) and a highly oriented graphite monochromator ($2\theta_{monochromator}$ = 12.2°). A set of θ-2θ scan data were collected and corrected for crystal decay, absorption (analytical method)[20] and Lorentz and polarization effects. Details of the data collection and results are shown in Table V.

The Th and U atoms were located with the use of 3-dimensional Patterson maps, and subsequent least-squares and electron density maps revealed the locations of all the non-hydrogen atoms. The structures were refined by full-matrix least square using anisotropic thermal parameters on all of the non-hydrogen atoms, with the exception of the carbon atoms on one phenyl ring in the Th structure; hydrogen atoms were included in their calculated positions but not allowed to refine. The thorium cell contains two crystallographically independent molecules. The large number of parameters resulted in a matrix larger than our computer could handle, and therefore the molecules were alternately refined with one molecule remaining fixed while the other allowed to change. One of the phenyl rings in the Th complex indicated some disorder and its atomic parameters would not give convergence so its atoms were included with isotropic thermal parameters, and interatomic distance restraints within the group were imposed. Atomic scattering factors of

Doyle and Turner[21] were used, and anomalous scattering[22] corrections were applied. No extinction corrections were indicated. Table V gives the resulting R factors. A list of positional parameters is given in Table VI and VII. Figures 1 through 3 show ORTEP drawings of the molecules with the numbering scheme used in the tables.

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SUPPLEMENTARY MATERIAL AVAILABLE

Listing of thermal parameters, hydrogen positional parameters and listings of observed structure factors (45 pages). Ordering information is given on any current masthead.

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Table I. Distances (Å) in $Th(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$.

Th(1) - C(1)	2.54(2)	Th(2) - C(35)	2.56(2)
Th(1) - C(8)	2.53(2)	Th(2) - C(42)	2.53(2)
Th(1) - C(15)	2.54(2)	Th(2) - C(49)	2.59(2)
Th(1) - C(22)	2.57(2)	Th(2) - C(56)	2.57(2)
Th(1) - C(9)	2.86(2)	Th(2) - C(43)	2.90(2)
Th(1) - P(1)	3.16(1)	Th(2) - P(3)	3.21(1)
Th(1) - P(2)	3.15(1)	Th(2) - P(4)	3.15(1)
P(1) - C(29)	1.82(2)	P(3) - C(63)	1.85(2)
P(1) - C(30)	1.83(2)	P(3) - C(64)	1.89(2)
P(1) - C(31)	1.83(2)	P(3) - C(65)	1.89(2)
P(2) - C(32)	1.76(2)	P(4) - C(67)	1.85(2)
P(2) - C(33)	1.83(2)	P(4) - C(68)	1.85(2)
P(2) - C(34)	1.83(2)	P(4) - C(69)	1.88(2)

Table II. Angles (deg) in $Th(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$.

C(1) - Th(1) - C(22)	137.9(6)	C(49) - Th(2) - C(56)	139.7(6)
C(1) - Th(1) - C(8)	96.9(5)	C(49) - Th(2) - C(42)	105.3(6)
C(1) - Th(1) - C(15)	96.5(6)	C(49) - Th(2) - C(35)	97.3(6)
C(1) - Th(1) - P(1)	67.5(4)	C(49) - Th(2) - P(4)	68.3(5)
C(1) - Th(1) - P(2)	80.4(4)	C(49) - Th(2) - P(3)	78.9(5)
C(8) - Th(1) - C(22)	107.9(6)	C(42) - Th(2) - C(56)	101.4(6)
C(8) - Th(1) - C(15)	117.1(6)	C(42) - Th(2) - C(35)	115.1(7)
C(8) - Th(1) - P(1)	135.2(4)	C(42) - Th(2) - P(4)	140.6(5)
C(8) - Th(1) - P(2)	70.8(4)	C(42) - Th(2) - P(3)	75.6(5)
C(15) - Th(1) - C(22)	101.3(6)	C(35) - Th(2) - C(56)	98.2(6)
C(15) - Th(1) - P(1)	106.5(5)	C(35) - Th(2) - P(4)	104.4(4)
C(15) - Th(1) - P(2)	171.9(5)	C(35) - Th(2) - P(3)	169.4(4)
C(22) - Th(1) - P(1)	71.0(4)	C(56) - Th(2) - P(4)	71.9(5)
C(22) - Th(1) - P(2)	76.7(4)	C(56) - Th(2) - P(3)	79.1(5)
P(1) - Th(1) - P(2)	65.4(2)	P(3) - Th(2) - P(4)	65.0(2)

Table III. Distances (Å) in $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$.

U - C(1)	2.46(1)	P(1) - C(22)	1.81(1)
U - C(8)	2.51(1)	P(1) - C(23)	1.81(1)
U - C(15)	2.54(1)	P(1) - C(24)	1.82(1)
U - C(28)	2.41(1)		
U - P(1)	3.020(2)	P(2) - C(25)	2.84(1)
U - P(2)	3.010(2)	P(2) - C(26)	1.81(1)
U - C(2)	3.43(1)	P(2) - C(27)	1.82(1)
U - C(9)	3.06(1)		
U - C(16)	2.76(1)		

Angles (deg) in $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$

C(1) - U - C(8)	98.6(3)	C(28) - U - P(2)	71.9(2)
C(1) - U - C(15)	121.6(3)	C(28) - U - P(2)	78.6(3)
C(1) - U - C(28)	90.2(3)	P(1) - U - P(2)	67.0(1)
C(1) - U - P(1)	96.6(2)	U - C(1) - C(2)	119.6(4)
C(1) - U - P(2)	162.2(22)	U - C(8) - C(9)	97.7(4)
C(8) - U - C(15)	110.9(3)	U - C(15) - C(16)	83.0(4)
C(8) - U - C(28)	145.1(3)		
C(8) - U - P(1)	73.5(2)		
C(8) - U - P(2)	83.5(2)		
C(15) - U - C(28)	92.3(3)		
C(15) - U - P(1)	139.2(2)		
C(15) - U - P(2)	73.1(2)		

Table IV. Bond length's in benzyl-metal compounds.

Compound	$(MC_i-MCH_2)^a$	$MC_o-MCH_2{}^b$	$MC_{o'}-MCH_2{}^c$	Δ^d	Δ'^e	Reference
$CoCH_2Ph[P(OMe)_3]_3$	0.081	0.37	-	0.29	large	15a
$MoCH_2PhCp(CO)_2$	0.095	0.21	1.04	0.12	0.95	15b
$RhCH_2C_6Me_5[P(OPr^i)_3)]_2$	0.12	0.33	-	0.21	large	15c
$PdCPh_3(acac)$	0.049	0.095	1.03	0.046	0.98	15d
$PtCPh_3(acac)$	0.032	0.060	0.993	0.028	0.96	15d
$Fe_2C_{18}H_{14}(CO)_5$	0.053	0.12	-	0.067	large	15e
$Ru_2C_{18}H_{14}(CO)_5$	0.086	0.11	-	0.019	large	15e
$LiCH_2Ph(C_6H_{12}N_2)_2$	0.18	0.38	-	0.20	large	15f
$Th(CH_2Ph)_3(Me_5C_5)$ (shortest contacts)	0.29	0.77	1.00	0.48	0.71	4b
$Th(CH_2Ph)_4(dmpe)$ (shortest contacts)	0.35	0.78	0.39	0.43	0.58	this work
$U(CH_2Ph)_3Me(dmpe)$ (shortest contacts)	0.22	0.55	0.91	0.33	0.69	this work

(a) Metal to ipso-carbon bond length minus metal to methylene carbon bond length.
(b) Metal to shorter ortho-carbon bond length minus metal to methylene carbon bond length.
(c) Metal to longer ortho-carbon bond length minus metal to methylene carbon bond length.
(d) $[MC_{(o)}-MCH_2] - [MC_i-MCH_2]$.
(e) $[MC_{(o')}-MCH_2] - [MC_i-MCH_2]$.

Table V. Data collection details and results for $Th(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$ and $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$

Crystal Parameters

	Th	U
Space Group	$P\bar{1}$	$P2_1/c$
a (Å)	11.463(3)	13.035(3)
b (Å)	16.151(4)	15.381(4)
c (Å)	21.527(4)	14.540(4)
α (deg)	106.28(2)	90.00
β (deg)	95.85(2)	98.06(2)
γ (deg)	107.78(2)	90.00
Z	4	4
Color	yellow	brown-red
$\mu(cm^{-1})$	44.3	54.5
Crystal dimension (mm)	0.20 x 0.25 x 0.35	0.12 x 0.20 x 0.25
Range of absorption correction	1.87-2.58	1.80-2.77
Crystal decay	5%	13%
2θ range	$3 < 2\theta < 45^\circ$	
hkl range	$+h \pm k \pm l$	$+h + k \pm l$
No. reflections measured	7261	3029
No. independent reflections, $I > \sigma$	7033	2891
R[a]	4.70	2.37
Rw[a]	8.43	2.42

[a] $R = \Sigma||Fo| - Fc||/\Sigma|Fo|$; $Rw = [\Sigma w(|Fo| - |Fc|)^2/\Sigma|Fo|^2]^{1/2}$

Table VI. Positional parameters in $Th(CH_2Ph)_4(Me_2PCH_2CH_2Me_2)$.

Molecule 1				Molecule 2			
Atom	x	y	z	Atom	x	y	z
TH(1)	.19407(5)	.25030(4)	.42154(3)	TH(2)	.19889(5)	.31012(4)	.02878(3)
P(1)	.1240(4)	.08570(29)	.28749(21)	P(3)	.2867(4)	.5171(3)	.12915(22)
P(2)	.4251(4)	.2092(3)	.37024(22)	P(4)	.0006(4)	.35497(29)	.11121(20)
C(1)	.1868(14)	.3028(10)	.3212(8)	C(35)	.0910(16)	.1416(12)	-.0433(9)
C(2)	.2253(15)	.4030(11)	.3364(7)	C(36)	-.0338(19)	.1162(11)	-.0290(10)
C(3)	.1417(15)	.4513(11)	.3518(9)	C(37)	-.1395(18)	.1208(12)	-.0696(10)
C(4)	.1820(18)	.5438(15)	.3697(10)	C(38)	-.2578(23)	.0981(14)	-.0548(13)
C(5)	.3020(19)	.5970(12)	.3710(8)	C(39)	-.2785(28)	.0758(15)	.0019(13)
C(6)	.3855(16)	.5490(14)	.3546(9)	C(40)	-.1757(27)	.0684(14)	.0407(11)
C(7)	.3491(16)	.4551(12)	.3377(8)	C(41)	-.0589(18)	.0906(12)	.0262(10)
C(8)	.3933(14)	.3777(12)	.4903(8)	C(42)	.4181(15)	.3860(13)	.0138(9)
C(9)	.3172(14)	.4192(9)	.5283(7)	C(43)	.4126(14)	.3028(12)	-.0308(9)
C(10)	.2623(15)	.3901(12)	.5760(8)	C(44)	.4536(28)	.2439(16)	-.0084(10)
C(11)	.1814(20)	.4223(15)	.6102(10)	C(45)	.439(3)	.1669(26)	-.0460(16)
C(12)	.1455(19)	.4855(14)	.5904(10)	C(46)	.3746(28)	.1278(16)	-.1110(17)
C(13)	.1937(18)	.5175(13)	.5416(10)	C(47)	.3307(22)	.1831(19)	-.1369(10)
C(14)	.2794(15)	.4835(11)	.5112(8)	C(48)	.3452(17)	.2708(14)	-.0970(10)
C(15)	-.0108(16)	.2651(13)	.4483(10)	C(49)	.0594(16)	.3771(11)	-.0293(8)
C(16)	-.1454(14)	.1972(10)	.3944(7)	C(50)	.1101(15)	.3816(11)	-.0893(8)
C(17)	-.1545(19)	.2101(14)	.3383(9)	C(51)	.0587(16)	.3071(12)	-.1494(8)
C(18)	-.2452(21)	.1379(14)	.2870(11)	C(52)	.1081(20)	.3125(15)	-.2053(9)
C(19)	-.2899(24)	.0516(16)	.2904(13)	C(53)	.2046(20)	.3897(17)	-.2031(11)
C(20)	-.2385(24)	.0293(17)	.3408(12)	C(54)	.2562(16)	.4600(13)	-.1448(10)
C(21)	-.1495(20)	.1048(12)	.3887(11)	C(55)	.2087(15)	.4558(11)	-.0899(8)
C(22)	.1871(18)	.1032(12)	.4474(8)	C(56)	.2450(17)	.2847(13)	.1400(9)
C(23)	.2123(16)	.1339(11)	.5171(8)	C(57)	.3586(15)	.2649(12)	.1452(8)
C(24)	.3313(19)	.1661(13)	.5530(9)	C(58)	.4731(17)	.3323(13)	.1758(9)
C(25)	.3593(19)	.2021(14)	.6218(11)	C(59)	.5768(24)	.3220(18)	.1808(13)
C(26)	.2619(24)	.2067(15)	.6569(9)	C(60)	.5776(17)	.2363(25)	.1564(12)
C(27)	.1452(21)	.1748(14)	.6228(11)	C(61)	.4659(22)	.1589(15)	.1230(10)
C(28)	.1181(17)	.1378(13)	.5531(9)	C(62)	.3519(15)	.1781(14)	.1178(9)
C(29)	.0548(23)	-.0331(12)	.2853(10)	C(63)	.4416(17)	.5703(13)	.1861(10)
C(30)	.0212(19)	.0835(13)	.2156(9)	C(64)	.2849(18)	.6118(13)	.0942(10)
C(31)	.2654(20)	.0890(14)	.2540(10)	C(65)	.1741(28)	.5274(14)	.1868(9)
C(32)	.3760(19)	.0992(14)	.3031(10)	C(66)	.0434(15)	.4798(12)	.1544(9)
C(33)	.5385(18)	.1930(17)	.4227(10)	C(67)	-.0341(16)	.3058(13)	.1780(8)
C(34)	.5159(18)	.2933(15)	.3356(10)	C(68)	-.1615(14)	.3319(12)	.0663(9)

Table VII. Positional parameters in $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$.

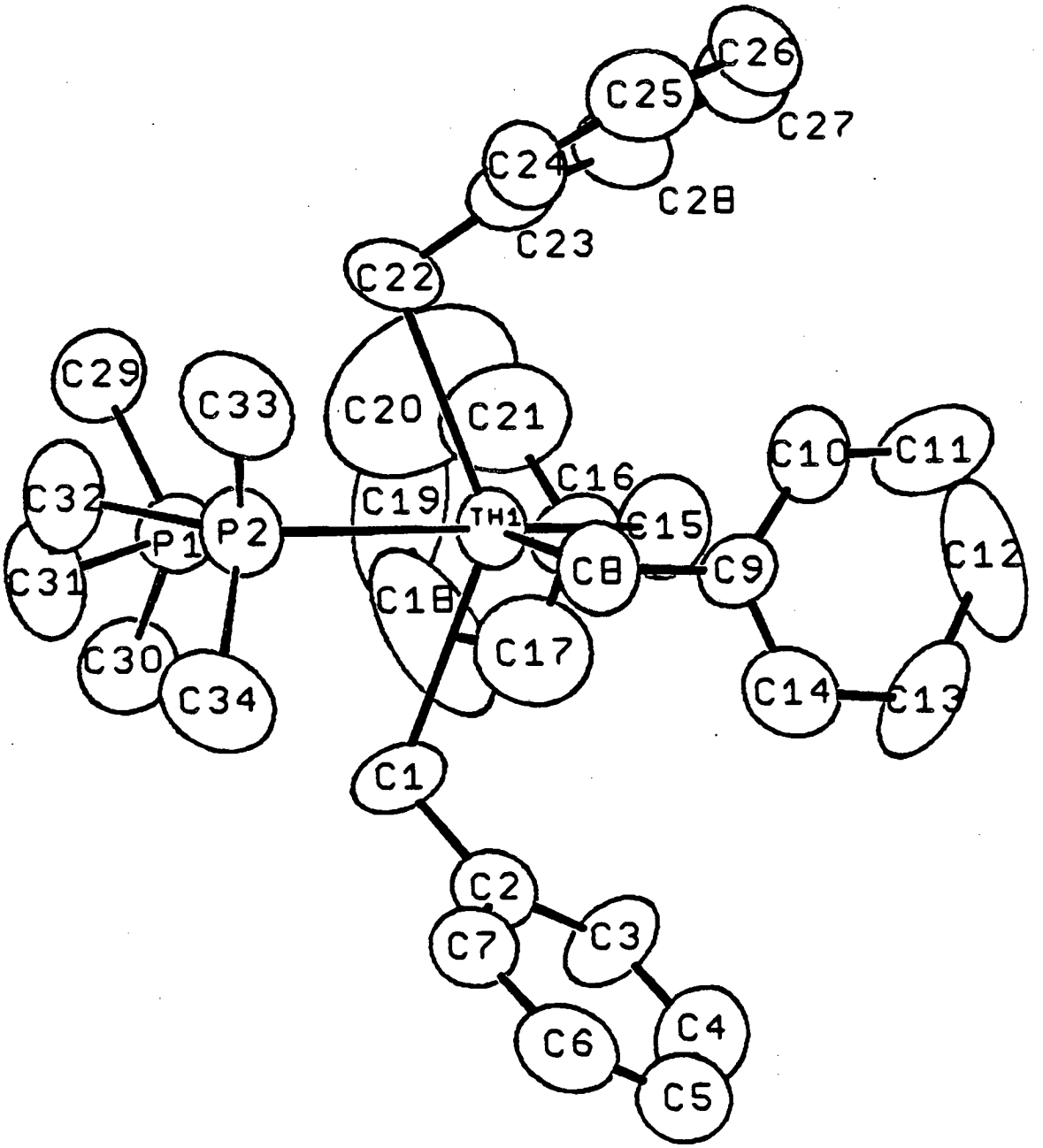
ATOM	X	Y	Z
U	.25875(1)	.10863(1)	.25003(1)
P(1)	.37923(13)	.27693(11)	.26872(12)
P(2)	.12665(13)	.26367(13)	.28032(14)
C(1)	.3997(5)	.0174(4)	.2080(6)
C(2)	.4992(4)	.0575(4)	.1957(4)
C(3)	.5743(5)	.0798(4)	.2702(4)
C(4)	.6657(5)	.1161(5)	.2548(5)
C(5)	.6870(5)	.1338(5)	.1670(5)
C(6)	.6132(5)	.1119(5)	.0938(5)
C(7)	.5215(4)	.0770(4)	.1081(4)
C(8)	.3233(7)	.1269(5)	.4194(5)
C(9)	.2854(5)	.0448(5)	.4513(4)
C(10)	.1863(6)	.0364(6)	.4765(5)
C(11)	.1481(7)	-.0425(8)	.4982(6)
C(12)	.2039(8)	-.1153(7)	.4958(6)
C(13)	.3021(8)	-.1096(6)	.4727(6)
C(14)	.3435(6)	-.0303(6)	.4506(5)
C(15)	.0718(5)	.0572(6)	.2255(7)
C(16)	.1151(4)	-.0165(4)	.1851(4)
C(17)	.1734(5)	-.0790(4)	.2404(4)
C(18)	.2242(5)	-.1448(5)	.1995(7)
C(19)	.2220(7)	-.1516(6)	.1076(9)
C(20)	.1675(7)	-.0904(7)	.0527(6)
C(21)	.1155(5)	-.0239(5)	.0889(5)
C(22)	.4562(6)	.3053(5)	.1785(5)
C(23)	.4709(6)	.2989(5)	.3716(5)
C(24)	.2914(7)	.3697(5)	.2627(7)
C(25)	.2059(7)	.3603(5)	.3146(7)
C(26)	.0436(6)	.2615(6)	.3702(5)
C(27)	.0385(6)	.3004(6)	.1794(6)
C(28)	.2409(7)	.1769(7)	.0998(5)

FIGURE CAPTIONS

Fig. 1. ORTEP drawing of molecule 1 in $Th(CH_2Ph)_4(Me_2PCH_2Ch_2PMe_2)$.

Fig. 2. ORTEP drawing of molecule 2 in $Th(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$.

Fig. 3. ORTEP drawing of $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$.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XBL 8212-12277

Fig. 1

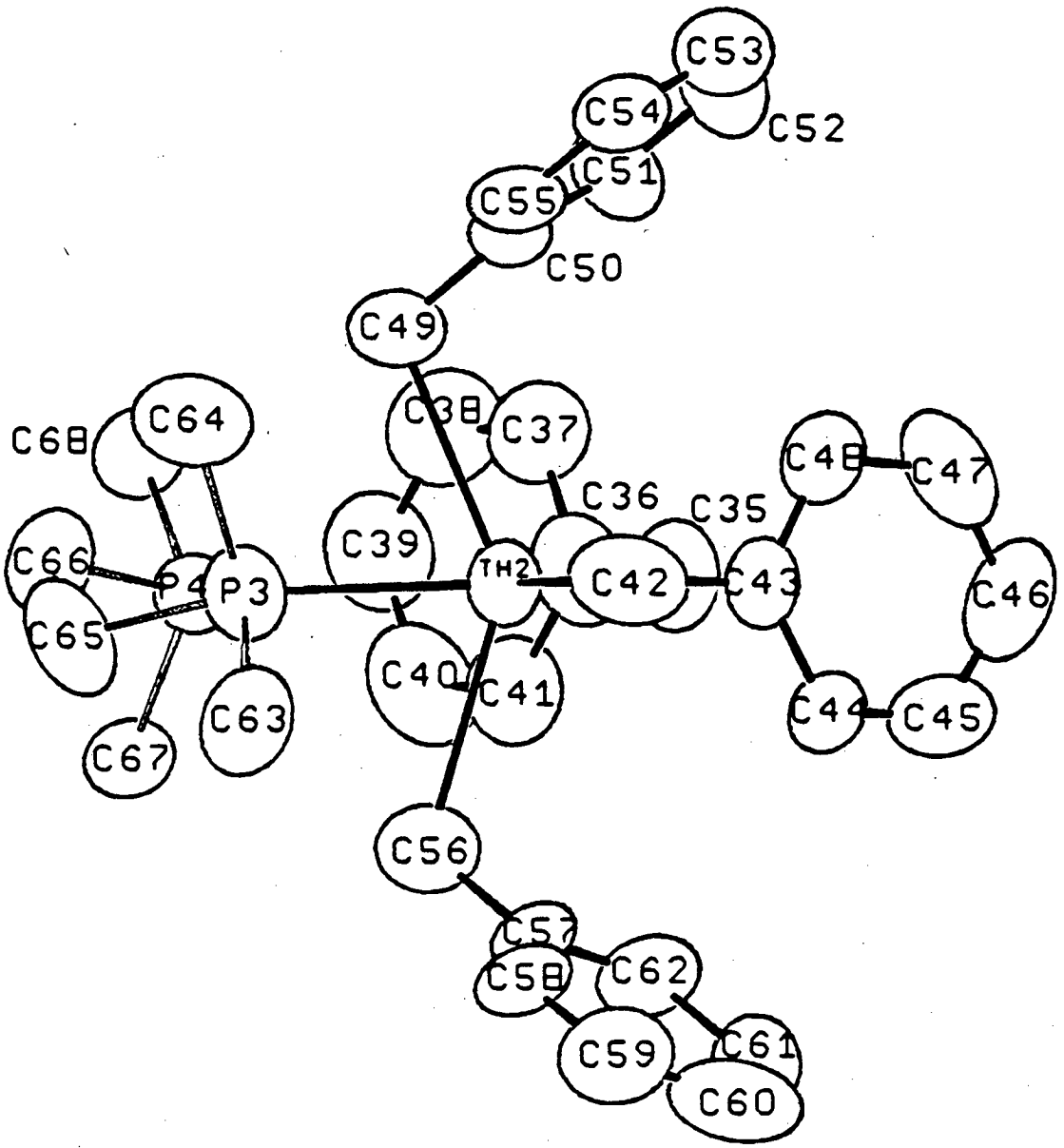

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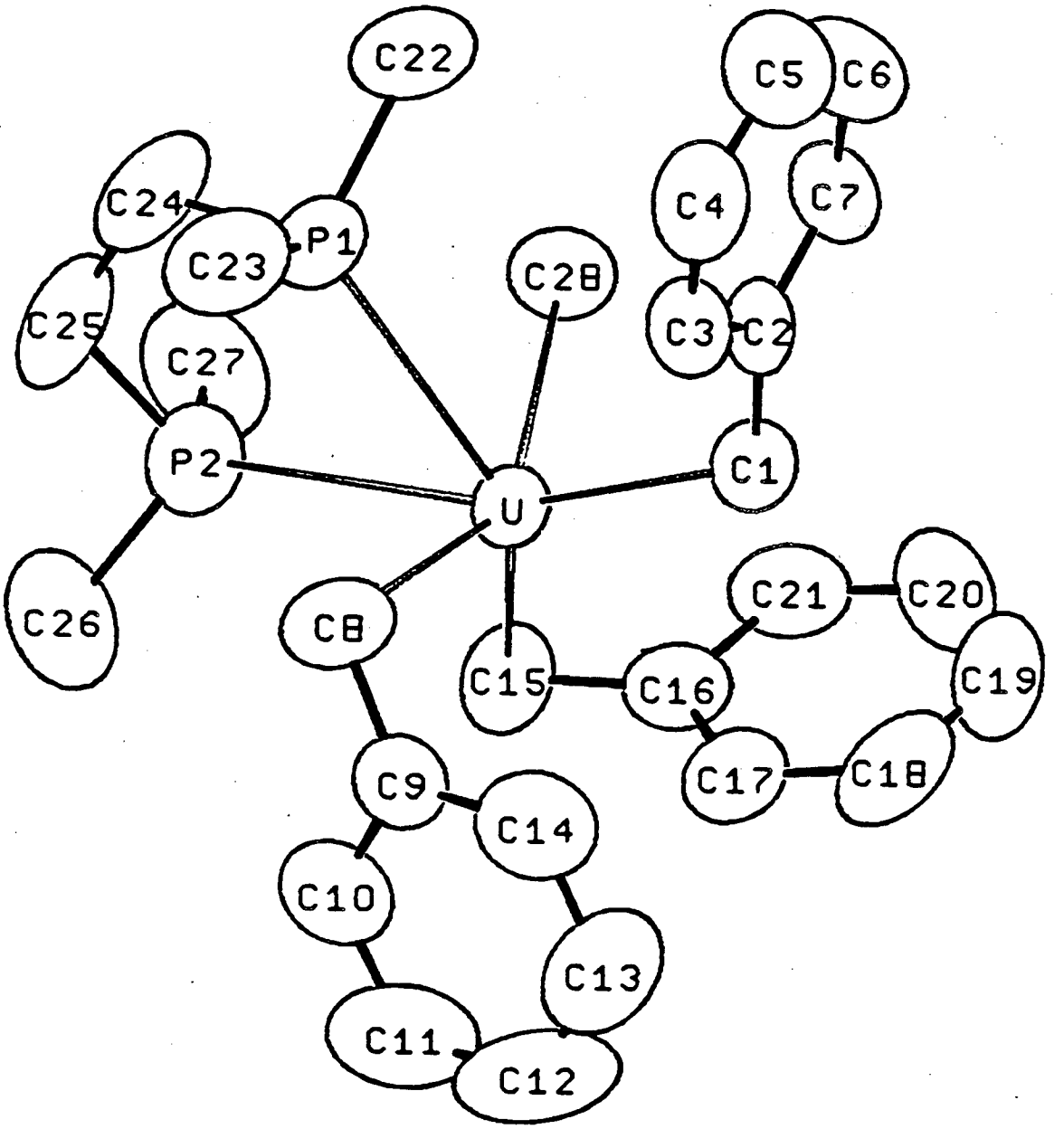
Fig. 2



XBL 824-9117

Fig. 3

SUPPLEMENTARY MATERIAL FOR:

TETRAALKYL-POSPHINE COMPLEXES OF THE f-BLOCK METALS; PREPARATION AND CRYSTAL STRUCTURE OF $Th(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$ AND $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$

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Thermal Parameters in $Th(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$[a]

Molecule 1

ATOM	B11	B22	B33	B12	B13	B23
TH(1)	4.08(3)	4.21(3)	3.637(29)	1.759(24)	1.051(22)	.950(23)
P(1)	6.01(23)	3.82(20)	4.22(20)	1.58(18)	1.28(17)	1.24(16)
P(2)	5.03(22)	5.98(29)	4.90(22)	2.71(19)	1.81(18)	1.85(19)
C(1)	4.8(8)	3.7(8)	6.3(9)	1.9(6)	.8(7)	2.4(7)
C(2)	5.2(9)	5.0(9)	3.6(7)	1.7(7)	.4(6)	1.5(6)
C(3)	4.8(8)	3.6(8)	8.0(11)	1.8(7)	1.3(8)	1.8(8)
C(4)	5.8(10)	7.0(12)	7.8(12)	3.0(10)	2.3(9)	2.4(10)
C(5)	7.2(11)	4.8(9)	4.8(9)	1.0(9)	.1(8)	1.3(7)
C(6)	4.8(9)	7.0(12)	5.3(9)	1.3(8)	.8(7)	2.6(8)
C(7)	6.1(10)	4.7(9)	4.8(9)	1.7(8)	1.2(7)	1.9(7)
C(8)	4.5(8)	6.0(9)	4.8(8)	2.3(7)	1.0(7)	1.3(7)
C(9)	4.7(8)	3.7(7)	4.2(8)	1.8(6)	.7(6)	1.3(6)
C(10)	5.5(9)	5.5(9)	5.7(10)	2.3(8)	1.8(8)	1.5(8)
C(11)	9.1(14)	7.9(13)	8.8(14)	4.9(12)	2.5(11)	4.3(11)
C(12)	6.1(13)	9.2(16)	8.1(14)	.8(11)	4.2(11)	-.9(11)
C(13)	7.7(12)	6.0(11)	8.6(13)	4.5(10)	2.1(10)	1.4(10)
C(14)	5.6(9)	5.8(10)	5.9(10)	1.4(8)	2.0(8)	2.4(8)
C(15)	5.0(9)	6.4(10)	7.7(11)	2.5(8)	2.4(8)	2.1(9)
C(16)	4.7(3)[b]					
C(17)	8.1(5)[b]					
C(18)	9.5(6)[b]					
C(19)	10.2(7)[b]					
C(20)	11.6(8)[b]					
C(21)	8.4(6)					
C(22)	8.0(11)	5.7(9)	4.7(9)	2.0(8)	1.8(8)	3.1(8)
C(23)	5.5(9)	4.4(8)	5.3(9)	2.4(7)	1.7(8)	2.5(7)
C(24)	7.1(11)	7.1(11)	5.2(10)	4.1(9)	2.7(9)	2.6(8)
C(25)	6.8(11)	7.6(12)	7.4(13)	2.9(10)	1.0(10)	3.6(10)
C(26)	10.2(15)	7.9(13)	4.4(9)	4.2(12)	2.5(10)	2.7(9)
C(27)	7.6(12)	7.4(12)	6.5(12)	4.1(10)	2.8(10)	3.5(10)
C(28)	6.4(10)	7.2(11)	5.9(10)	3.1(9)	2.3(8)	3.8(9)
C(29)	13.1(17)	4.2(9)	6.1(11)	2.4(10)	2.5(11)	1.2(8)
C(30)	8.5(12)	6.4(11)	5.5(10)	3.2(10)	-.1(9)	1.5(8)
C(31)	7.9(13)	7.3(12)	5.6(10)	2.1(10)	2.4(10)	-.2(9)
C(32)	7.5(12)	7.1(11)	6.7(11)	4.1(10)	2.4(10)	.7(9)
C(33)	6.3(11)	13.2(17)	8.1(12)	6.2(12)	4.1(9)	5.5(12)
C(34)	6.6(11)	9.1(14)	7.8(12)	2.5(10)	3.0(9)	4.0(11)

Molecule 2

ATOM	B11	B22	B33	B12	B13	B23
TH(2)	3.97(3)	3.52(3)	4.55(3)	1.132(23)	1.522(24)	1.288(24)
P(3)	4.66(21)	4.21(21)	5.01(22)	.91(17)	1.21(17)	.99(17)
P(4)	4.02(19)	4.87(21)	4.38(20)	1.68(17)	1.42(16)	1.92(17)
C(35)	5.4(9)	4.4(9)	7.1(11)	.8(7)	2.1(8)	1.1(8)
C(36)	7.5(12)	2.6(7)	6.0(10)	-.2(7)	1.3(9)	.2(7)
C(37)	5.0(10)	5.0(10)	7.6(12)	.6(8)	1.4(9)	2.3(8)
C(38)	8.2(14)	5.3(11)	9.1(15)	.7(10)	-.2(12)	.9(10)
C(39)	5.7(11)	6.6(12)	8.7(15)	.1(9)	2.1(11)	2.4(11)
C(40)	11.4(18)	5.5(11)	7.0(13)	1.0(12)	2.9(13)	1.8(10)
C(41)	6.1(10)	4.4(9)	7.4(12)	.7(8)	2.3(9)	1.8(8)
C(42)	3.6(8)	6.8(11)	7.0(11)	-.5(7)	.8(7)	4.1(9)
C(43)	4.1(8)	4.7(9)	5.2(9)	1.7(7)	2.6(7)	2.0(7)
C(44)	9.5(13)	8.5(13)	5.9(11)	6.9(12)	3.7(10)	3.8(10)
C(45)	16.5(25)	15.8(26)	9.0(18)	12.0(22)	7.2(18)	9.5(19)
C(46)	13.3(20)	7.0(13)	12.5(21)	6.9(14)	6.7(17)	5.1(15)
C(47)	9.8(15)	10.6(17)	4.8(11)	3.6(14)	2.8(10)	1.1(11)
C(48)	5.7(10)	7.4(12)	6.6(11)	3.7(9)	3.0(9)	3.4(10)
C(49)	6.1(9)	5.2(9)	4.9(9)	2.0(8)	.3(7)	2.1(7)
C(50)	5.0(8)	5.0(9)	4.2(8)	2.4(7)	1.1(7)	2.5(7)
C(51)	6.0(9)	5.7(10)	4.3(9)	1.0(8)	1.0(7)	1.3(8)
C(52)	7.0(12)	8.3(13)	4.8(10)	2.9(11)	1.0(9)	.5(9)
C(53)	6.5(11)	9.5(15)	6.4(12)	4.2(11)	2.5(10)	4.4(11)
C(54)	5.2(9)	6.6(11)	5.8(10)	2.8(8)	1.3(8)	3.3(9)
C(55)	5.0(8)	4.8(9)	4.5(8)	1.6(7)	-.3(7)	2.2(7)
C(56)	6.3(10)	6.4(10)	6.2(10)	2.0(8)	1.5(8)	3.2(9)
C(57)	4.4(9)	5.5(9)	5.4(9)	2.8(8)	1.4(7)	3.2(8)
C(58)	4.4(9)	7.6(12)	7.0(11)	3.6(9)	1.8(8)	4.7(9)
C(59)	9.0(16)	7.5(14)	10.1(16)	2.5(12)	3.1(12)	5.8(13)
C(60)	2.8(9)	19.1(26)	8.5(14)	2.2(13)	1.9(9)	9.9(17)
C(61)	9.7(15)	7.9(12)	7.1(12)	5.3(12)	4.8(11)	4.3(10)
C(62)	4.1(8)	7.3(12)	6.9(11)	2.4(8)	1.0(7)	3.7(9)
C(63)	5.9(10)	5.4(10)	8.1(12)	2.1(8)	1.1(9)	1.1(9)
C(64)	7.6(11)	5.3(10)	6.7(11)	.7(9)	-.1(9)	2.5(9)
C(65)	8.1(13)	7.1(12)	5.0(10)	1.7(10)	2.0(9)	.2(8)
C(66)	3.6(8)	5.3(9)	6.9(10)	1.3(7)	.7(7)	.8(8)
C(67)	6.3(10)	8.1(11)	6.2(10)	4.3(9)	3.2(8)	4.7(9)
C(68)	3.9(7)	5.7(9)	6.5(10)	1.5(7)	1.5(7)	2.4(8)

[a]The anisotropic temperature factor has the form $\exp(-0.25(B_{11}h^2a^{*2} + 2B_{12}hka^*b^* + \ldots))$.

[b]Isotropic temperature factors has the form $\exp(-B(\sin\theta/\lambda)^2)$. These atoms were refined isotropically because anisotropic refinement gave severly distorted thermal ellipsoids.

Anisotropic Thermal Parameters[a] in $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$

ATOM	B11	B22	B33	312	B13	B23
U	3.819(10)	3.247(10)	3.995(10)	.155(10)	.556(6)	-.162(11)
P(1)	6.08(8)	3.91(9)	5.86(9)	-.76(7)	.79(7)	-.39(7)
P(2)	5.81(9)	5.31(10)	7.75(10)	1.95(8)	1.34(8)	.12(9)
C(1)	5.5(3)	4.7(4)	5.2(4)	.55(28)	1.47(29)	.1(3)
C(2)	4.32(27)	3.85(29)	4.86(29)	.85(23)	1.33(23)	-.68(24)
C(3)	5.3(3)	5.0(3)	5.1(3)	.32(25)	.70(25)	-.58(24)
C(4)	6.0(3)	6.6(4)	6.2(4)	.5(3)	-.54(27)	-1.4(3)
C(5)	5.5(3)	7.9(5)	8.3(5)	-1.5(3)	1.5(3)	-1.6(4)
C(6)	6.8(4)	9.1(5)	6.0(4)	-.6(4)	2.0(3)	-.2(4)
C(7)	4.65(28)	6.2(4)	5.1(3)	.40(25)	1.36(23)	-.74(26)
C(8)	8.6(5)	5.4(5)	5.1(3)	.2(4)	1.1(3)	-.0(3)
C(9)	6.7(4)	5.4(4)	3.49(27)	.0(3)	.34(24)	.27(26)
C(10)	8.1(5)	7.8(5)	5.4(4)	.8(4)	1.4(3)	1.2(3)
C(11)	9.3(5)	10.6(7)	8.5(5)	.6(5)	1.9(4)	3.7(5)
C(12)	10.2(6)	9.4(7)	7.9(5)	-1.6(6)	-.6(4)	4.6(5)
C(13)	10.8(6)	6.2(5)	6.7(4)	1.7(5)	-1.8(4)	.8(4)
C(14)	7.4(4)	7.2(5)	5.4(4)	-.2(4)	-.23(29)	.7(3)
C(15)	4.6(3)	6.5(5)	7.1(5)	-.2(3)	1.1(3)	-.9(4)
C(16)	3.73(25)	5.2(4)	5.4(3)	-1.29(25)	.43(23)	-.31(28)
C(17)	4.45(29)	4.8(3)	6.7(4)	-1.27(26)	.05(26)	-.17(29)
C(18)	4.8(3)	4.5(4)	12.0(6)	-.62(29)	.5(4)	-.3(4)
C(19)	6.8(5)	7.0(5)	11.9(7)	-2.3(4)	3.5(5)	-4.2(5)
C(20)	7.7(5)	10.3(8)	7.1(5)	-3.4(5)	2.7(4)	-3.6(5)
C(21)	5.7(3)	7.3(5)	5.9(4)	-2.0(3)	.68(28)	-.3(3)
C(22)	8.7(4)	6.4(4)	7.4(4)	-3.0(4)	1.8(3)	.3(3)
C(23)	10.7(5)	7.1(5)	6.9(4)	-4.1(4)	-.1(4)	-.7(3)
C(24)	10.4(5)	3.4(4)	15.0(8)	-.3(3)	3.7(5)	-.6(4)
C(25)	11.0(6)	3.9(4)	15.2(8)	1.5(4)	4.4(5)	-1.3(4)
C(26)	7.6(4)	9.7(6)	9.2(5)	3.5(4)	1.8(4)	-.7(4)
C(27)	10.1(5)	10.9(7)	8.4(5)	6.1(5)	2.0(4)	2.0(4)
C(28)	6.6(5)	6.3(5)	4.7(3)	-.1(4)	-.1(3)	1.3(3)

[a]The anisotropic temperature factor has the form $\exp(-0.25(B_{11}h^2a^{*2} + 2B_{12}hka^*b^* + \ldots))$.

Calculated Positional Parameters for Hydrogen Atoms in $Th(CH_2Ph)_4(Me_2PCH_2CH_2PMe_2)$

Atom	x	y	z	Atom	x	y	z
H(1)	.0549	.4171	.348	H(45)	.0236	.0387	.176
H(2)	.1246	.5759	.3829	H(46)	.0450	.143	.210
H(3)	.3282	.6625	.3829	H(47)	.2865	.1418	.2385
H(4)	.4702	.5854	.3553	H(48)	.2451	.0343	.217
H(5)	.4884	.4258	.3267	H(49)	.3533	.0497	.3208
H(6)	.2806	.3414	.5866	H(50)	.4435	.0964	.280
H(7)	.1505	.4056	.6447	H(51)	.6046	.183	.4012
H(8)	.0864	.5071	.6102	H(52)	.5806	.1401	.436
H(9)	.1667	.5629	.5279	H(53)	.5750	.2464	.462
H(10)	.3164	.5039	.4775	H(54)	.4659	.2935	.2972
H(11)	-.1279	.2698	.3345	H(55)	.5875	.2772	.3225
H(12)	-.2857	.1346	.2462	H(56)	.5473	.3538	.3679
H(13)	-.3563	.0073	.2601	H(57)	.4447	.6265	.2190
H(14)	-.2686	-.0314	.3377	H(58)	.5064	.5855	.1618
H(15)	-.1197	.0881	.424	H(59)	.455	.5291	.2079
H(16)	.3983	.1617	.5309	H(60)	.3549	.6261	.0724
H(17)	.4468	.2248	.6459	H(61)	.2932	.6671	.129
H(18)	.2834	.2342	.7047	H(62)	.2087	.5937	.063
H(19)	.0814	.1775	.6466	H(63)	.1883	.5911	.2074
H(20)	.0323	.1150	.530	H(64)	.1937	.5017	.2207
H(21)	-.1286	.1392	-.1073	H(65)	-.0465	.4868	.1874
H(22)	-.3262	.1014	-.0831	H(66)	.0244	.5070	.1227
H(23)	-.3578	.062	.0133	H(67)	-.1809	.3226	.1953
H(24)	-.1914	.0473	.0779	H(68)	.0395	.3315	.2127
H(25)	.0688	.089	.0567	H(69)	-.0575	.2410	.161
H(26)	.5607	.2596	.0349	H(70)	-.1563	.3698	.0387
H(27)	.4586	.1195	-.0347	H(71)	-.2103	.3486	.0988
H(28)	.3571	.0639	-.1419	H(72)	-.199	.2690	.0410
H(29)	.285	.1636	-.183	H(73)	.1024	.2747	.295
H(30)	.3128	.3111	-.112	H(74)	.2411	.2804	.294
H(31)	-.0082	.254	-.1515	H(75)	.442	.4145	.4656
H(32)	.0734	.2623	-.2467	H(76)	.4517	.3592	.514
H(33)	.2356	.3938	-.2419	H(77)	-.0123	.3266	.4537
H(34)	.3260	.512	-.143	H(78)	-.0239	.2539	.4903
H(35)	.2455	.506	-.0496	H(79)	.2476	.0779	.4284
H(36)	.4765	.3934	.1961	H(80)	.1045	.0543	.428
H(37)	.6598	.3638	.1993	H(81)	.1373	.1028	-.0336
H(38)	.6500	.2124	.154	H(82)	.0887	.1339	-.0908
H(39)	.4613	.0943	.1038	H(83)	.4814	.411	.054
H(40)	.2708	.1317	.0945	H(84)	.4251	.4369	-.0041
H(41)	.0582	-.0738	.243	H(85)	.0639	.4377	0
H(42)	-.0304	-.0453	.2898	H(86)	-.029	.3378	-.0404
H(43)	.1812	-.0424	.3208	H(87)	.1741	.2339	.142
H(44)	-.065	.0672	.222	H(88)	.2508	.3393	.1760

Hydrogen positional parameters in $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$

H(1)	.5616	.0692	.3326
H(2)	.7154	.1302	.3078
H(3)	.7512	.1598	.1579
H(4)	.6264	.121	.0323
H(5)	.4702	.0655	.0557
H(6)	.1443	.0870	.4788
H(7)	.0809	-.0456	.5177
H(8)	.1749	-.1713	.5088
H(9)	.3431	-.162	.4722
H(10)	.4121	-.0282	.4348
H(11)	.1790	-.0756	.3068
H(12)	.2620	-.1875	.237
H(13)	.257	-.1969	.079
H(14)	.1659	-.0958	-.0131
H(15)	.0795	.0165	.0477
H(16)	.5163	.2695	.1835
H(17)	.4761	.3655	.1847
H(18)	.4152	.2969	.1185
H(19)	.4904	.3588	.3715
H(20)	.5306	.2628	.3702
H(21)	.439	.2860	.4252
H(22)	.2635	.3779	.1962
H(23)	.3303	.4204	.2826
H(24)	.2328	.3586	.377
H(25)	.1627	.4121	.3008
H(26)	.0039	.3144	.3654
H(27)	.0854	.2575	.4283
H(28)	-.0017	.2128	.3589
H(29)	.0786	.3193	.1315
H(30)	0	.3488	.1964
H(31)	-.0065	.2540	.1565
H(32)	.373(4)	-.016(4)	.150(4)
H(33)	.409(4)	-.011(3)	.257(3)
H(34)	.287(4)	.175(4)	.439(3)
H(35)	.409(5)	.115(4)	.422(5)
H(36)	.034(5)	.103(5)	.187(5)
H(37)	.052(4)	.058(4)	.278(4)
H(38)	.299(7)	.152(6)	.085(6)
H(39)	.173(6)	.164(5)	.076(5)
H(40)	.237(5)	.233(4)	.090(4)

Isotropic Thermal Parameters in $U(CH_2Ph)_3Me(Me_2PCH_2CH_2PMe_2)$

H(1)	10.000
H(2)	10.000
H(3)	10.000
H(4)	10.000
H(5)	10.000
H(6)	10.000
H(7)	10.000
H(8)	10.000
H(9)	10.000
H(10)	10.000
H(11)	10.000
H(12)	10.000
H(13)	10.000
H(14)	10.000
H(15)	10.000
H(16)	10.000
H(17)	10.000
H(18)	10.000
H(19)	10.000
H(20)	10.000
H(21)	10.000
H(22)	10.000
H(23)	10.000
H(24)	10.000
H(25)	10.000
H(26)	10.000
H(27)	10.000
H(28)	10.000
H(29)	10.000
H(30)	10.000
H(31)	10.000
H(32)	5.4(14)
H(33)	2.9(12)
H(34)	4.5(14)
H(35)	9.0(19)
H(36)	8.5(22)
H(37)	5.5(18)
H(38)	12.3(33)
H(39)	8.7(22)
H(40)	7.2(20)

[a]Isotropic temperature factor has the form $\exp(-B(\sin\ )\ )^2$.

OBSERVED STRUCTURE FACTORS, STANDARD DEVIATIONS, AND DIFFERENCES (ALL X 3.0)
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2 F(0,0,0) = 4323

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		21	150	5	9	-9	155	4	-8	13	275	6	6	-10	315	8	-13
-20	203	5	8	H,K=	0,	2		-8	489	11	-11	14	90	9	8	-9	202	5	-1
-18	242	6	-1	-22	94	6	-6	-7	41	6	-19	15	99	7	15	-7	535	12	-24
-17	68	10	4	-20	189	5	-5	-6	54	6	13	18	136	5	8	-6	221	5	-13
-16	153	4	-13	-19	112	5	-2	-5	71	7	11	19	107	11	-6	-5	370	8	-5
-15	277	7	9	-18	218	5	8	-3	611	13	90	H,K=	0,	5		-4	50	3	-10
-14	51	22	5	-16	75	6	-9	-2	456	10	89	-23	59	9	18	-2	81	3	6
-13	453	10	4	-15	283	7	11	-1	365	8	46	-22	167	5	2	-1	553	12	8
-11	237	6	-2	-14	51	6	7	0	61	11	-48	-20	126	6	6	0	171	4	12
-9	95	3	3	-13	151	4	-1	1	982	21	63	-19	155	5	5	1	577	13	19
-8	112	7	-1	-12	292	7	-6	2	44	14	27	-18	39	43	26*	3	60	4	14
-7	533	11	31	-11	201	5	6	3	1090	23	16	-17	243	5	2	4	286	7	24
-5	546	12	11	-10	190	4	-10	5	469	10	35	-15	338	8	-5	6	480	11	19
-4	317	7	39	-9	384	9	4	6	320	7	24	-13	79	4	7	8	383	9	-13
-3	529	11	94	-8	91	3	-1	7	72	3	-25	-12	158	4	6	9	61	6	-5
-2	817	18	-51	-7	913	19	5	8	236	5	7	-11	199	5	11	10	62	6	1
H,K=	0,	1		-5	806	17	9	9	119	4	-0	-10	331	7	26	11	103	5	3
-22	41	16	-25	-4	148	5	-16	10	338	9	6	-9	267	7	7	12	123	5	-7
-21	110	5	7	-3	568	12	91	11	191	5	-2	-8	290	7	9	13	156	4	10
-20	65	8	-4	-2	734	15	-180	12	83	4	-0	-7	292	7	-20	14	143	4	11
-17	200	5	-4	-1	97	2	-86	13	49	17	-9	-6	297	7	-10	17	117	6	2
-16	137	5	-1	0	861	19	97	14	219	5	9	-5	201	5	11	H,K=	0,	7	
-15	241	6	-1	2	397	9	68	16	276	6	2	-4	827	18	-6	-22	163	5	3
-14	54	6	-8	3	51	4	-1	18	166	5	-1	-3	188	4	3	-20	85	5	-7
-13	271	6	-1	4	369	8	19	19	74	7	6	-2	847	18	38	-19	70	6	-11
-12	254	6	-10	5	372	8	-27	H,K=	0,	4		-1	394	9	-34	-17	224	5	2
-11	39	6	-2	6	411	9	0	-20	191	5	-10	0	575	13	9	-16	82	5	4
-10	575	13	-22	7	39	5	6	-19	95	5	-4	1	729	15	27	-15	169	4	-3
-9	146	3	4	8	328	8	18	-18	162	4	-4	2	173	4	-2	-14	81	9	-7
-8	523	11	1	9	166	4	6	-17	69	7	-7	3	440	10	-17	-13	145	4	-11
-7	392	9	26	10	239	6	13	-14	356	8	-10	5	342	8	32	-12	113	3	-4
-6	236	6	23	11	288	7	-14	-12	529	12	-4	7	165	4	-2	-11	292	7	4
-5	194	5	8	13	445	10	9	-11	49	5	-19	8	98	3	10	-10	161	4	4
-4	83	5	-24	15	201	5	-6	-10	164	4	12	9	310	7	7	-9	432	10	8
-3	829	17	31	16	97	6	-5	-9	333	8	-20	10	109	4	5	-8	153	4	15
-2	480	10	-120	17	56	8	21	-8	201	5	-15	11	388	9	4	-7	356	9	4
1	717	15	-66	18	176	5	-3	-7	854	18	-34	12	115	4	1	-6	503	11	-3
3	281	7	-18	19	71	10	2	-6	199	5	18	13	151	4	7	-5	114	3	-15
4	410	9	15	20	135	5	4	-5	696	15	-7	14	181	7	-0	-4	652	14	2
5	511	11	-6	H,K=	0,	3		-4	103	7	-27	16	217	5	-8	-2	552	13	-9
6	362	8	32	-22	131	5	-9	-3	171	4	-16	18	138	5	-9	-1	29	7	11
7	92	3	-9	-21	82	6	-4	-2	202	5	-36	H,K=	0,	6		1	245	6	12
8	694	15	13	-20	118	5	-0	0	163	5	-38	-21	94	10	-0	2	202	5	-10
9	33	6	7	-19	49	9	-0	1	883	18	35	-20	77	6	-12	3	173	4	-5
10	523	12	-2	-18	31	40	-0*	2	118	5	-5	-19	158	5	-11	4	301	7	-4
12	317	8	18	-17	346	8	-5	3	303	7	-13	-17	137	4	1	5	65	4	15
13	57	5	-6	-15	378	9	-6	4	543	12	35	-16	93	5	-8	6	223	7	7
14	113	4	2	-14	130	4	1	6	362	8	-30	-15	85	4	4	7	257	6	-1
15	198	5	15	-13	264	7	-9	8	425	10	3	-14	447	11	-10	8	36	10	-3
16	225	5	13	-12	159	4	1	9	151	4	-2	-13	78	4	-4	9	309	7	-9
17	76	10	-5	-11	96	3	8	10	223	5	6	-12	497	11	8	11	262	6	6
18	135	4	1	-10	260	6	-21	11	403	9	1	-11	79	4	18	12	49	17	-5

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
13	134	5	8	2	278	6	14	6	215	6	21	-7	39	18	18	-3	80	7	7
14	198	5	10	4	382	9	-18	7	141	5	7	-6	143	8	-7	-2	123	5	12
15	46	11	1	5	115	6	9	9	161	5	8	-2	84	6	-11	-1	72	7	4
16	164	5	4	6	212	5	-4	10	107	5	0	-1	69	8	3	0	80	6	-4
H,K=		0,	8	7	192	5	15	11	60	9	1	0	175	5	-3	1	243	6	4
-21	82	6	-10	8	91	8	19	H,K=		0,	12	2	159	5	11	3	239	6	-5
-20	30	22	16*	9	253	6	-1	-19	118	5	-5	3	76	7	-4	4	77	5	2
-19	227	5	0	11	235	5	-0	-17	119	5	5	5	178	5	9	5	180	5	12
-17	251	6	2	14	76	9	-2	-15	66	10	-2	H,K=		0,	15	6	168	4	-7
-16	206	6	-0	H,K=		0,	10	-13	226	6	-7	-16	103	6	5	7	156	7	2
-15	103	5	-3	-21	155	8	-2	-11	189	5	-10	-14	93	6	-6	8	237	5	4
-14	242	6	-4	-19	239	6	-4	-10	64	7	8	-11	54	8	13	10	206	5	17
-12	295	7	3	-18	52	8	7	-9	123	4	-9	-10	192	5	4	14	94	6	-4
-11	133	5	-3	-17	158	5	-11	-8	312	7	-13	-8	166	5	4	15	73	6	-2
-10	275	6	-2	-16	69	9	-4	-6	423	10	7	-7	127	5	0	16	138	5	-0
-9	213	5	4	-14	145	4	-7	-4	164	4	-12	-6	100	7	-8	H,K=		1,	-13
-8	151	4	4	-13	173	4	1	-3	128	4	11	-5	166	5	10	-7	203	5	3
-7	258	6	4	-12	178	4	7	-1	157	4	3	-3	205	5	1	-5	161	7	-2
-6	449	10	-20	-11	96	4	2	0	109	5	9	-1	101	5	-10	-4	160	6	1
-5	157	4	15	-10	52	6	30	1	164	6	3	0	54	10	0	-3	57	8	4
-4	242	6	3	-8	254	6	1	2	67	18	1	2	108	5	16	-2	159	5	1
-3	383	9	-21	-6	483	11	-12	4	63	7	-11	H,K=		0,	16	-1	72	6	16
-2	83	4	-14	-5	61	5	14	5	180	5	-4	-11	113	5	-0	0	185	5	-3
-1	545	13	-1	-4	283	7	-17	7	272	6	5	-8	37	18	-4	1	76	9	6
0	38	13	16	-3	329	7	-5	8	41	13	22	-7	97	6	5	2	42	20	18
1	360	9	12	-2	127	6	17	9	116	5	8	-6	68	8	29	3	79	8	15
3	332	8	13	-1	324	8	-8	H,K=		0,	13	-5	135	6	12	4	113	4	8
4	243	6	3	0	61	5	-1	-19	101	7	3	-4	40	17	3	5	115	5	-12
6	369	8	8	1	311	7	5	-18	140	5	9	-2	140	5	7	6	210	5	-10
7	115	4	-10	3	100	4	-8	-16	212	5	-3	H,K=		1,	-16	7	49	8	0
8	144	5	-5	4	132	4	10	-14	105	5	0	1	50	12	-8	8	212	6	3
9	49	13	-9	6	127	7	5	-13	51	8	9	3	164	5	9	9	153	5	-11
12	207	5	-5	7	155	4	4	-11	140	5	4	4	37	18	24	10	73	6	22
13	79	6	-1	8	58	8	5	-10	90	5	-10	5	101	6	3	11	266	6	-5
14	174	5	-12	9	142	5	5	-9	136	4	1	6	109	5	0	13	264	6	-6
15	42	13	17	10	117	5	-6	-8	141	4	-2	8	165	5	7	15	97	5	-2
H,K=		0,	9	12	196	5	1	-7	86	6	2	10	202	5	-4	16	118	5	3
-22	124	5	2	H,K=		0,	11	-6	107	5	0	12	94	6	1	17	30	40	-3*
-20	112	12	7	-21	105	6	3	-5	270	6	2	13	136	5	-1	18	144	5	-5
-18	94	5	-0	-19	55	9	-2	-4	64	11	14	H,K=		1,	-15	H,K=		1,	-12
-17	68	9	-10	-18	140	6	-0	-3	286	6	-8	-2	204	5	-2	-10	134	5	1
-16	214	5	-4	-16	240	5	-4	-1	229	5	8	-1	49	11	-14	-9	69	10	6
-14	240	6	-10	-14	292	7	3	0	172	5	12	0	224	5	5	-8	85	6	-20
-13	90	5	-9	-13	143	6	3	1	92	5	-2	2	94	5	15	-6	135	5	-2
-12	127	4	5	-12	55	7	-2	2	210	5	11	3	94	5	-6	-4	245	6	-1
-11	309	7	-11	-11	244	6	-4	4	188	5	-2	4	69	7	-2	-2	272	6	14
-9	478	11	8	-9	319	7	-7	6	63	10	1	5	117	5	-2	-1	140	7	-11
-8	135	3	3	-7	182	5	3	H,K=		0,	14	7	101	8	12	0	85	12	-8
-7	426	9	20	-5	205	5	-0	-18	145	5	9	8	47	10	5	1	329	7	-0
-6	188	4	-8	-4	57	6	6	-16	65	9	-5	11	195	5	2	2	61	7	1
-4	455	11	16	-3	290	7	5	-15	122	5	-3	13	185	5	-7	3	297	7	16
-3	278	7	30	-2	93	7	-7	-13	192	5	-6	15	118	5	2	4	94	5	-4
-2	247	6	10	-1	259	6	3	-11	223	5	-2	16	90	6	-6	5	225	5	8
-1	41	12	6	0	138	7	12	-10	117	5	-0	H,K=		1,	-14	6	121	4	-4
0	65	4	7	2	239	5	0	-9	101	5	-2	-5	154	6	0	8	204	5	9
1	57	6	-1	4	275	6	-7	-8	231	5	16	-4	78	7	9	9	161	4	1

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
10	136	6	5	10	28	12	-6	3	330	8	6	-13	173	5	-5	10	506	11	-0
11	158	5	8	11	324	7	15	4	239	5	2	-12	54	7	-1	12	603	13	-5
12	37	12	12	12	162	4	1	5	174	4	21	-11	411	10	-3	13	57	5	16
14	249	6	-8	14	368	8	4	6	245	6	10	-9	410	9	-9	14	266	6	5
15	49	8	-16	15	84	6	12	7	475	10	6	-8	125	4	3	15	208	5	-5
16	209	5	-8	16	249	6	2	8	53	5	-12	-7	83	4	-4	17	244	5	3
18	119	5	9	18	100	5	-0	9	534	12	-7	-6	307	8	-12	19	127	4	-9
19	119	5	1	19	125	5	4	10	96	3	4	-5	104	3	-24	20	105	6	14
H,K=		1,	-11	21	116	5	10	11	239	5	9	-4	245	6	3	H,K=		1,	-4
-12	144	7	8	H,K=		1,	-9	12	169	4	-19	-3	341	8	22	-18	184	6	-11
-10	98	10	4	-14	197	5	2	13	63	6	6	-2	197	4	22	-16	226	5	1
-9	181	5	-7	-12	245	6	-3	14	233	5	-2	-1	221	5	-14	-14	232	6	7
-7	239	5	-4	-10	66	12	1	15	69	5	7	0	363	8	0	-13	197	5	-4
-5	130	11	5	-9	167	6	-8	16	194	6	-10	1	101	4	-28	-12	29	14	4
-3	51	8	7	-8	54	8	20	18	46	30	24	2	640	14	-47	-11	400	9	1
-2	195	5	1	-7	271	6	-14	20	113	5	-1	3	40	8	10	-10	184	4	-4
-1	262	6	6	-6	116	4	6	22	136	5	5	4	640	14	27	-9	306	7	5
0	93	9	-0	-5	180	4	-21	H,K=		1,	-7	5	44	8	-28	-8	60	4	4
1	154	4	8	-3	253	6	-16	-17	135	5	-8	6	285	7	7	-7	209	5	29
2	123	5	1	-2	68	6	-12	-16	110	5	13	7	559	12	13	-6	128	3	13
3	150	4	-1	-1	337	8	-4	-14	200	5	-5	9	573	13	3	-5	271	6	-20
4	312	7	17	1	363	8	3	-13	108	6	-5	11	247	6	-26	-4	245	6	-19
6	421	10	-17	2	71	4	13	-12	138	6	-14	12	107	4	-7	-3	308	7	-12
8	315	7	8	3	210	5	14	-9	176	5	-5	14	200	5	-12	-2	104	6	13
9	198	5	-5	4	456	10	21	-8	277	6	4	15	215	5	-3	-1	204	5	-73
10	145	5	-1	5	165	4	-10	-7	210	5	-3	16	39	11	-9	0	383	9	131
11	296	7	6	6	614	13	16	-6	436	10	-7	17	138	4	-4	1	71	3	12
12	82	5	-12	7	162	4	-2	-5	98	4	3	19	92	5	0	2	380	8	-95
13	238	5	-8	8	282	7	-20	-4	194	4	-10	20	147	4	4	4	893	18	-39
15	54	11	-7	9	84	5	13	-3	428	10	4	22	180	5	10	5	293	7	-17
16	69	7	-14	10	127	4	2	-2	40	9	15	H,K=		1,	-5	6	199	4	-9
17	123	4	6	11	268	6	-11	-1	591	13	4	-17	61	8	-4	7	482	11	18
18	54	9	-10	12	241	5	-0	0	103	3	6	-15	90	14	4	8	315	7	-18
19	128	5	-0	13	125	4	4	1	406	9	-30	-14	145	5	-13	9	272	6	-7
21	119	5	3	14	122	4	4	2	421	9	34	-13	140	4	-13	10	215	5	-15
H,K=		1,	-10	17	227	7	2	3	223	5	-21	-12	175	4	-7	11	90	3	-5
-12	71	9	-1	19	235	6	-4	4	344	8	-15	-11	171	4	-4	13	194	4	10
-11	141	5	-2	20	66	8	-4	5	92	4	8	-10	166	4	-10	14	135	4	6
-10	101	5	1	21	112	5	-3	6	384	9	-5	-8	537	12	1	15	325	7	5
-9	198	6	-7	22	96	8	-12	7	297	7	5	-7	70	5	-11	17	262	6	-1
-8	66	10	10	H,K=		1,	-8	8	157	4	-0	-6	596	13	22	18	128	7	5
-7	130	4	-2	-15	68	7	-4	9	81	3	14	-5	300	8	-1	19	56	7	-4
-6	227	5	1	-14	125	5	-4	10	370	8	27	-4	320	7	-41	20	158	6	-7
-5	84	5	-8	-13	142	5	1	11	147	4	4	-3	420	9	32	22	128	7	5
-4	462	11	2	-11	245	6	-14	12	382	9	13	-2	116	3	18	H,K=		1,	-3
-2	362	8	-7	-10	33	16	12	13	107	4	-5	-1	784	16	1	-20	61	9	0
-1	263	6	-1	-9	265	6	13	14	240	6	-8	0	181	4	-20	-19	125	5	2
0	70	4	-8	-8	88	5	6	15	198	5	7	1	266	6	88	-18	90	5	4
1	272	7	10	-7	218	5	-11	16	48	8	-5	2	172	4	-19	-15	218	5	8
2	117	4	2	-6	378	8	-10	17	308	7	3	3	200	5	54	-14	65	6	20
3	283	7	-6	-4	485	11	16	19	197	5	-2	4	429	9	52	-13	412	9	-7
4	112	4	-20	-2	58	4	-3	21	84	6	-6	5	307	7	23	-11	303	7	-1
5	82	4	-3	-1	80	3	4	H,K=		1,	-6	6	336	7	38	-10	315	7	-4
6	142	4	-17	0	176	4	12	-18	103	6	-2	7	587	13	14	-9	179	4	-2
7	196	5	-13	1	228	5	13	-16	231	5	6	8	186	4	15	-8	602	13	4
9	329	7	6	2	344	8	-11	-14	153	5	-8	9	257	6	1	-7	99	3	8

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-6	457	11	5	11	196	5	5	-14	38	17	3	6	359	8	14	-22	95	6	-1
-5	53	5	-16	13	376	9	-1	-13	32	10	-18	7	348	8	-18	-20	256	6	-2
-4	289	7	20	14	93	5	2	-12	306	7	6	8	25	9	2	-19	79	12	4
-3	289	7	12	15	352	8	-17	-11	116	4	17	9	93	3	5	-18	256	6	-1
-2	468	10	-39	16	59	6	-2	-10	671	14	45	11	299	7	2	-17	106	6	9
-1	104	5	-71	17	242	5	9	-9	46	6	4	12	95	4	0	-15	208	5	-1
0	320	7	-27	20	106	5	1	-8	358	8	-11	13	312	8	2	-14	227	5	-6
1	373	8	182	21	61	8	-5	-7	327	7	3	15	172	4	-0	-13	302	7	7
2	392	8	230	22	120	7	-7	-6	93	4	1	16	197	5	-2	-12	74	4	7
3	592	12	-58	H,K=		1,	-1	-5	550	12	38	17	71	6	-10	-9	566	12	31
4	39	3	-15	-21	83	7	-4	-4	211	6	12	18	235	5	6	-8	157	4	10
5	1159	24	20	-20	157	5	11	-3	573	12	48	19	69	7	21	-7	698	15	21
6	44	5	26	-18	219	5	-7	-2	41	2	-29	20	123	5	2	-6	117	5	-1
7	637	14	-8	-17	78	6	-4	-1	571	12	216	H,K=		1,	2	-5	443	10	-9
8	257	6	5	-16	112	5	-3	0	375	8	-60	-22	67	8	-2	-4	66	9	9
9	166	4	15	-15	271	7	0	1	388	8	137	-21	115	6	-1	-3	301	7	-4
10	380	9	-17	-14	119	5	-7	2	493	10	165	-20	78	6	1	-2	573	13	9
12	398	9	-14	-13	465	11	-4	3	348	8	41	-19	45	46	-12*	-1	289	7	-30
13	96	3	-10	-12	148	4	-2	4	82	3	-5	-18	106	5	-2	0	842	18	44
14	244	6	-9	-11	387	9	11	5	169	4	14	-17	298	8	-5	1	144	5	-1
15	56	6	13	-10	389	9	-2	6	397	9	-19	-16	71	10	2	2	363	8	-1
17	77	8	-9	-9	85	3	-3	8	722	15	27	-15	253	6	3	3	176	4	-15
18	214	6	-0	-8	405	9	7	10	513	11	16	-14	113	4	-5	4	330	8	-5
20	166	5	-5	-7	258	6	-5	11	106	4	-3	-13	196	5	6	5	317	7	20
H,K=		1,	-2	-6	280	6	-14	12	288	7	-4	-12	313	9	-29	6	422	10	30
-21	144	5	9	-5	380	8	27	13	219	5	-0	-11	80	3	4	7	109	3	7
-20	82	6	-0	-4	83	6	26	15	271	6	-7	-10	573	13	7	8	201	5	6
-19	66	9	4	-3	157	4	48	16	49	10	13	-9	108	3	-9	9	201	5	9
-18	240	6	-1	-2	683	14	26	17	174	5	-8	-8	430	10	26	11	390	9	-1
-16	261	6	-7	-1	237	5	-158	21	120	6	-7	-7	131	4	-8	13	325	7	-7
-15	148	4	-8	0	1034	22	-273	H,K=		1,	1	-6	221	5	-9	14	65	6	9
-14	139	4	5	1	87	2	67	-22	119	5	4	-5	418	9	-4	15	177	5	5
-13	76	6	-17	2	591	12	130	-20	218	5	-3	-4	342	8	30	16	80	7	-8
-12	158	4	-9	3	506	11	-116	-19	55	8	2	-3	343	9	-8	18	155	5	1
-11	332	8	2	4	463	10	24	-18	262	6	-8	-2	326	7	-20	19	81	8	-3
-10	377	10	14	5	565	12	4	-17	95	5	-1	-1	292	6	-50	H,K=		1,	4
-9	120	4	7	6	160	4	28	-16	74	6	7	0	411	9	111	-23	79	11	9
-8	363	9	11	7	606	14	-17	-15	341	8	-9	1	466	11	-50	-22	128	5	-6
-7	286	7	6	8	31	6	-6	-13	442	10	8	2	46	3	31	-20	80	8	-14
-6	188	4	-19	9	264	6	14	-12	44	6	-7	3	1039	22	5	-19	179	5	-2
-5	877	19	47	10	366	8	3	-11	256	6	-9	4	116	4	28	-17	385	9	1
-4	46	11	31	11	148	4	5	-10	83	3	0	5	616	14	-11	-15	359	8	15
-3	767	17	54	12	284	6	5	-9	518	11	4	6	331	8	-13	-14	143	6	-1
-2	136	3	-74	13	233	5	5	-8	111	4	-17	7	84	3	19	-13	104	5	4
-1	331	7	2	14	71	6	6	-7	674	14	9	8	509	12	-4	-12	493	12	-4
0	538	11	216	15	146	4	-1	-5	83	3	16	9	83	3	17	-11	83	4	9
1	87	2	-175	16	190	5	8	-4	88	6	14	10	440	10	6	-10	501	11	-11
2	914	20	116	18	208	5	6	-3	43	2	-10	12	137	4	-10	-9	123	3	9
3	51	3	1	19	38	11	17	-2	859	18	134	13	203	5	9	-8	277	6	23
4	655	14	-42	20	179	6	-3	-1	100	2	-36	14	99	5	8	-7	163	4	6
5	199	5	1	H,K=		1,	0	0	1067	23	-126	15	125	4	-1	-6	130	3	-11
6	72	7	16	-21	148	5	-5	1	87	2	12	16	241	5	-2	-5	285	6	-8
7	61	3	26	-18	114	14	9	2	559	12	-39	18	118	10	2	-4	645	14	3
8	652	14	19	-17	159	4	-4	3	254	7	-20	19	85	6	7	-3	256	6	29
9	262	7	-4	-16	271	6	-1	4	302	7	21	20	41	14	2	-2	382	9	3
10	379	8	4	-15	118	4	-11	5	887	19	44	H,K=		1,	3	-1	361	9	18

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
0	232	5	5	-14	173	4	11	11	152	5	10	4	295	7	4	6	100	5	4
1	802	17	10	-13	87	4	-2	12	112	6	-3	5	83	5	-3	7	149	6	7
2	33	5	23	-12	170	4	5	13	145	5	2	6	245	6	3	9	67	8	-1
3	834	19	12	-11	240	6	-2	14	96	5	-2	8	137	4	1	10	138	5	0
5	345	8	-4	-10	70	4	-14	H,K=		1,	8	10	80	6	-4	H,K=		1,	12
6	240	5	13	-9	342	8	-6	-22	151	5	-2	11	75	6	6	-20	62	10	7
8	411	9	2	-7	145	4	4	-20	85	6	4	12	195	5	-2	-18	137	5	-1
9	120	4	2	-6	410	9	-1	-19	106	8	9	H,K=		1,	10	-16	242	6	-4
10	296	7	7	-5	149	4	-6	-18	48	9	-3	-18	121	6	7	-14	149	5	-1
11	42	13	-4	-4	563	12	-22	-17	240	6	-1	-17	61	7	1	-13	175	5	5
12	74	5	-1	-3	23	9	-6	-16	102	6	-8	-16	179	5	-1	-11	230	5	3
13	48	9	-1	-2	711	15	15	-14	74	5	8	-14	234	5	-5	-10	62	8	4
14	207	5	-4	-1	222	5	-2	-13	136	4	-6	-13	232	5	6	-9	250	6	-0
16	225	5	-0	0	258	6	23	-11	330	8	-3	-12	107	4	-3	-7	105	5	-3
18	110	7	8	1	636	14	12	-9	405	9	-13	-11	334	8	-14	-6	133	4	8
H,K=		1,	5	2	187	4	17	-8	150	4	-3	-10	39	9	-10	-5	179	5	-4
-23	106	6	1	3	450	11	44	-7	243	6	-7	-9	286	7	2	-3	280	6	-0
-22	103	5	1	4	90	4	15	-6	364	8	14	-8	26	15	6	-1	145	9	8
-21	70	7	-1	5	149	4	0	-5	98	3	-11	-7	203	5	-5	0	174	5	2
-20	179	5	-5	6	124	4	15	-4	559	13	-15	-6	234	5	13	2	241	6	-3
-19	103	5	-6	7	117	4	-2	-3	83	3	-18	-4	385	9	2	3	57	8	4
-18	115	5	6	8	160	4	6	-2	350	8	-6	-3	117	4	-3	4	231	5	-2
-16	90	5	-4	9	249	6	-2	-1	211	5	-8	-2	89	4	-12	6	102	9	2
-15	126	4	1	11	218	5	10	0	46	6	8	-1	71	5	-0	7	125	5	-6
-14	382	9	8	13	64	7	-1	1	237	5	-1	0	131	4	2	H,K=		1,	13
-13	55	6	-4	14	200	5	-5	2	144	6	-6	2	361	8	-0	-15	150	5	5
-12	340	9	2	16	200	5	-2	3	162	4	-8	3	37	13	2	-13	184	5	-1
-11	145	5	-10	H,K=		1,	7	4	258	6	-6	4	255	6	1	-11	170	5	-4
-10	285	6	-2	-22	54	10	4	5	38	9	6	5	111	5	9	-10	143	4	13
-9	350	9	1	-21	106	5	-8	7	205	5	-12	6	119	7	6	-9	68	7	-9
-8	54	4	-9	-20	93	5	2	9	275	6	9	7	206	5	11	-8	263	6	-2
-7	578	13	31	-19	131	5	-4	11	261	6	13	9	249	6	1	-6	262	6	-14
-6	204	5	22	-17	126	5	-11	12	132	5	13	11	112	5	-3	-5	73	8	1
-5	446	10	18	-16	284	7	-0	14	145	5	1	H,K=		1,	11	-4	140	5	-7
-4	277	6	12	-14	428	10	-8	H,K=		1,	9	-21	163	5	5	-3	123	7	4
-2	373	8	10	-13	114	4	7	-21	131	5	-5	-19	167	5	-2	-2	92	9	-5
-1	193	5	-9	-12	361	8	9	-20	68	7	12	-18	72	6	1	-1	207	5	12
0	473	11	-16	-11	84	6	-18	-19	239	6	0	-17	134	5	2	0	79	6	6
1	403	10	-3	-10	246	6	10	-17	142	7	7	-16	103	5	6	3	83	6	3
2	63	5	10	-9	349	8	-4	-16	229	5	-1	-15	29	18	-12	5	151	6	-10
4	428	10	-18	-8	75	3	3	-14	291	7	10	-14	104	8	-4	H,K=		1,	14
5	118	3	-5	-7	538	12	7	-12	290	7	-5	-13	140	5	0	-17	49	11	1
6	416	10	15	-5	243	6	18	-11	79	6	-3	-11	88	5	1	-16	144	6	-5
8	357	9	11	-4	98	3	11	-10	60	5	14	-10	95	4	8	-14	84	10	-0
9	254	6	-8	-3	170	4	21	-9	102	4	-12	-8	235	5	7	-11	143	5	4
10	123	4	11	-2	128	3	17	-8	164	5	2	-7	79	5	4	-10	99	5	-7
11	297	7	7	-1	628	15	12	-7	134	4	-6	-6	396	9	-17	-9	76	6	17
13	182	5	-2	0	49	5	-5	-6	320	8	19	-5	130	4	-2	-8	33	23	-20
14	67	16	-5	1	475	11	19	-5	86	4	0	-4	277	7	0	-7	70	7	-8
16	91	10	2	2	201	5	3	-4	158	4	9	-3	318	7	2	-5	193	5	-2
17	61	9	-9	3	232	6	-9	-3	351	8	-6	-2	85	5	3	-3	257	6	-10
H,K=		1,	6	4	418	10	12	-1	468	11	10	-1	309	7	3	-2	68	7	17
-22	184	5	2	6	444	11	-25	0	102	4	-3	0	59	12	8	-1	136	5	3
-19	115	5	-9	8	207	5	-6	1	393	9	-2	1	179	5	-24	0	179	5	2
-17	359	8	4	9	161	4	3	2	151	4	2	4	118	5	-6	2	154	5	-1
-15	334	8	17	10	57	8	3	3	111	4	5	5	95	5	0	H,K=		1,	15

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-13	174	5	-5	4	111	5	-4	-11	51	10	0	-12	98	5	5	17	275	6	10
-12	50	10	34	5	176	6	7	-10	149	6	2	-11	198	5	1	19	176	5	-5
-11	133	7	-10	6	92	5	-10	-9	92	5	-2	-9	161	4	-3	20	71	25	3
-10	130	6	6	7	58	10	8	-6	160	4	10	-8	48	9	7	21	87	16	0
-8	171	5	12	9	119	4	8	-5	72	6	-14	-7	54	7	-11	22	134	5	2
-6	127	6	-6	11	193	5	-3	-4	274	6	-12	-6	287	6	1	H,K=		2,	-7
-3	67	8	31	13	183	5	-3	-3	48	19	0	-5	93	4	-13	-17	143	5	3
-2	134	5	-1	14	63	14	1	-2	230	5	-2	-4	489	11	-14	-16	140	6	1
0	129	5	-3	15	104	6	-4	-1	262	6	-5	-3	100	4	-8	-14	63	10	2
H,K=		1,	16	16	166	5	-2	0	74	7	3	-2	289	7	-4	-13	175	5	-5
-8	112	9	-4	18	142	5	1	1	434	10	4	-1	272	6	-8	-11	295	7	9
-7	89	6	13	H,K=		2,-13		2	62	5	-11	1	386	9	4	-9	321	7	-4
-6	74	8	3	-8	94	7	4	3	337	8	3	2	253	6	10	-8	132	4	-0
H,K=		2,-17		-6	37	15	-9	4	86	4	-18	3	334	8	4	-7	182	4	8
6	108	6	-3	-5	129	5	-9	6	263	6	20	6	192	4	16	-6	579	13	24
7	43	13	22	-4	131	5	2	7	89	4	0	7	268	6	7	-5	86	7	-20
8	126	7	-5	-3	37	13	-14	8	229	5	5	8	90	3	10	-4	642	15	24
10	122	7	1	-2	175	7	7	10	96	4	2	9	368	9	-7	-3	71	3	24
H,K=		2,-16		-1	123	7	-2	11	168	4	-2	10	56	5	-3	-2	169	4	-21
0	156	5	5	1	311	7	18	12	151	5	-12	11	184	5	-7	-1	187	4	3
1	71	9	8	2	63	7	13	14	292	7	-8	12	207	5	8	0	197	5	-18
2	120	6	9	3	261	6	3	16	211	6	-4	14	254	6	1	1	453	11	64
3	175	5	-7	4	136	4	2	18	89	6	1	15	66	6	-0	2	341	8	41
5	192	5	17	5	127	4	-1	19	128	5	-10	16	253	6	6	3	69	3	11
7	98	5	6	6	230	5	3	21	161	8	6	19	150	4	3	4	377	9	-43
8	66	12	-1	8	249	7	1	H,K=		2,-10		21	104	6	-3	5	328	8	24
10	124	7	3	10	152	5	-3	-12	189	5	4	H,K=		2,	-8	6	110	3	-3
11	107	5	-1	13	73	6	-1	-11	114	5	-2	-16	147	5	4	7	494	11	11
13	73	14	-5	14	144	6	-1	-10	90	8	3	-14	298	7	7	8	104	3	8
14	63	8	0	15	58	7	4	-9	237	5	1	-12	177	5	3	9	498	11	16
H,K=		2,-15		16	150	4	12	-7	301	7	7	-11	103	6	-3	10	144	4	4
-3	136	8	-5	19	101	6	12	-5	226	5	-6	-10	28	28	-9*	11	364	8	21
0	65	7	-20	H,K=		2,-12		-4	205	5	-8	-9	246	6	-4	12	190	4	2
1	151	5	3	-9	179	6	6	-3	139	4	11	-8	134	4	-10	13	41	7	11
3	185	5	-3	-7	248	6	-6	-2	314	7	5	-7	363	8	-7	14	286	7	7
5	84	5	-5	-6	77	6	8	-1	234	5	3	-6	199	5	-0	15	151	4	6
6	139	4	-7	-5	168	5	-4	1	267	6	9	-5	87	5	17	16	139	4	-3
7	66	12	-7	-4	201	8	4	2	246	6	9	-3	521	12	33	19	65	7	-3
8	224	5	4	-2	319	7	-1	3	84	4	0	-2	71	4	-12	20	141	5	6
10	200	5	-2	-1	82	8	2	4	417	10	11	-1	578	13	-9	21	49	15	-7
11	89	5	-15	0	255	6	-2	5	83	4	15	0	67	3	28	22	139	5	8
12	54	20	13	4	276	7	-11	6	268	6	-11	1	286	7	15	H,K=		2,	-6
13	143	5	3	5	84	5	-1	7	167	4	8	2	246	6	-38	-17	96	5	4
15	129	5	3	6	313	7	14	8	264	6	5	3	320	7	42	-16	173	5	-4
16	41	29	22	8	128	7	11	9	296	7	-15	4	474	11	15	-15	53	13	-7
H,K=		2,-14		9	241	6	7	10	136	4	4	5	213	5	-19	-14	204	5	2
-7	114	6	0	10	97	5	8	11	326	7	-10	6	486	11	23	-13	42	11	0
-6	44	20	11	11	322	7	-1	12	98	4	16	8	221	5	-2	-12	161	5	-4
-5	82	6	5	13	235	6	5	13	158	4	11	9	228	6	1	-10	92	6	14
-4	112	6	3	14	91	11	-4	16	110	5	-6	10	134	3	2	-9	158	4	-10
-3	49	10	-2	16	132	6	-15	17	126	7	6	11	256	6	-8	-8	384	9	4
-2	245	6	8	18	127	5	0	18	109	5	-2	12	185	4	-9	-7	181	4	-3
-1	44	10	11	19	65	7	14	19	134	5	9	13	145	4	-3	-6	406	9	-4
0	293	7	5	20	74	7	-1	20	58	8	0	14	157	4	6	-5	248	6	17
2	55	14	-3	H,K=		2,-11		H,K=		2,	-9	15	116	6	-7	-4	211	5	14
3	172	6	-6	-12	134	7	-1	-15	94	6	2	16	50	8	-7	-3	596	13	-8

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-2	69	3	23	18	119	4	-5	-2	791	17	68	19	42	11	7	-8	575	13	19
-1	571	12	-19	19	52	8	25	-1	320	7	68	20	101	5	0	-7	1▲8	3	15
0	159	4	53	20	217	6	2	0	147	5	-143	H,K=		2,	-1	-6	181	4	11
1	151	4	-82	22	140	5	10	1	277	6	212	-21	92	9	1	-5	198	6	-23
2	381	9	-26	H,K=		2,	-4	2	455	10	-7	-20	165	5	-10	-4	1▲4	3	7
3	73	3	55	-19	152	5	-1	3	42	9	-29	-18	244	6	-8	-3	151	5	18
4	509	11	-55	-18	64	7	14	4	878	18	96	-16	233	5	-5	-2	578	13	-20
5	175	4	-22	-16	121	5	-3	5	353	8	-6	-15	89	5	7	-1	267	6	16
6	576	12	26	-15	150	4	-8	6	21	9	3	-13	222	5	1	1	177	5	86
8	68	3	-17	-14	92	6	-9	7	459	10	-3	-12	165	4	7	2	401	9	11
9	68	3	1	-13	289	6	-0	8	309	7	-10	-11	312	7	-3	3	497	11	41
10	366	8	-11	-12	67	5	6	9	336	8	8	-10	418	9	9	5	586	13	-15
11	31	15	-1	-11	240	5	6	10	226	5	5	-9	31	12	-7	6	237	5	13
12	466	11	0	-10	274	7	9	11	147	4	2	-8	319	8	19	7	501	11	40
13	70	4	1	-8	572	13	5	12	139	4	-2	-7	469	10	13	8	250	6	-16
14	146	5	-11	-6	571	13	8	13	224	5	-3	-6	103	5	-11	10	284	6	23
15	192	5	2	-5	372	8	28	14	71	4	7	-5	970	21	17	11	271	6	12
17	271	6	4	-4	341	8	-19	15	353	8	3	-4	222	5	16	12	2o0	6	-4
19	222	5	-4	-3	806	17	15	17	218	5	-6	-3	408	9	-15	13	1o6	4	5
20	58	11	0	-2	244	6	43	18	134	4	4	-2	334	8	72	15	64	6	0
21	53	9	-24	-1	609	13	76	20	198	5	-7	-1	83	4	-74	16	200	5	9
22	82	8	-3	1	385	9	210	H,K=		2,	-2	0	634	13	38	18	2▲4	5	3
H,K=		2,	-5	2	195	5	135	-21	166	6	3	1	93	3	-99	20	1▲6	5	4
-18	159	5	9	3	339	8	25	-19	103	5	-2	2	394	9	-104	H,K=		2,	1
-17	74	6	-9	4	305	7	-59	-17	63	12	15	3	133	3	1	-21	101	5	-10
-16	170	5	8	5	385	8	-60	-15	307	8	-3	4	105	5	10	-18	197	5	1
-15	71	7	4	6	127	3	1	-14	121	4	-11	5	76	5	-12	-17	158	5	-5
-14	143	6	-7	7	319	7	3	-13	382	9	-5	6	203	5	26	-16	152	4	-8
-13	258	6	3	8	365	8	14	-11	184	5	-3	7	172	4	-3	-15	72	8	1
-12	43	9	-6	9	235	6	-14	-10	525	12	22	8	628	14	3	-14	67	4	-5
-11	479	11	4	10	453	11	13	-9	105	3	-6	9	164	4	11	-12	4▲8	10	12
-10	95	4	-4	11	63	4	-6	-8	745	16	9	10	364	8	-7	-11	57	4	2
-9	405	9	1	12	439	11	8	-6	604	13	10	11	181	4	12	-10	591	13	-15
-8	106	3	6	14	226	5	-2	-5	272	6	-6	12	119	4	-7	-9	245	6	26
-6	562	12	2	15	215	5	2	-4	254	6	26	13	321	7	4	-8	3▲4	7	-12
-5	127	3	5	17	296	7	9	-3	563	12	13	14	65	5	-8	-7	7▲0	15	23
-4	528	11	24	18	165	5	3	-2	373	8	51	15	370	8	-2	-6	232	5	-11
-3	187	4	-13	19	79	7	-14	-1	481	10	173	16	88	5	-2	-5	879	18	29
-2	87	3	-8	21	43	12	-0	0	80	4	-135	17	163	4	-1	-4	346	8	50
-1	175	4	79	H,K=		2,	-3	1	324	7	11	18	162	5	5	-3	385	8	7
0	447	10	-59	-20	90	6	-0	2	32	9	-97	20	114	5	-3	-2	141	7	8
2	914	19	166	-18	269	6	-4	3	696	15	137	21	70	8	-13	-1	236	6	29
3	131	3	98	-16	257	6	-2	4	320	7	-21	H,K=		2,	0	0	180	5	41
4	701	15	40	-15	45	20	9	5	661	14	1	-22	90	9	2	1	88	2	16
5	260	6	38	-14	187	5	11	6	29	10	-36	-21	102	5	-3	2	2▲5	5	-6
6	202	5	1	-13	268	6	4	7	742	16	38	-20	146	5	-1	3	2o2	6	8
7	727	16	16	-12	71	4	-1	8	164	4	-5	-18	207	5	1	4	87	3	14
8	63	3	-6	-11	468	11	-6	9	109	3	-2	-17	128	4	-12	5	2o5	5	5
9	456	10	5	-10	113	3	1	10	611	13	19	-16	40	21	33	6	5o9	12	34
10	71	3	19	-9	293	7	0	11	134	3	-3	-15	326	7	6	8	757	17	15
11	175	4	10	-8	88	3	-12	12	371	9	11	-14	76	6	6	9	72	4	13
12	130	3	6	-7	130	3	10	14	149	4	2	-13	390	9	2	10	4▲5	9	-6
13	166	4	6	-6	191	4	-5	15	99	4	-7	-12	106	4	-10	11	88	4	5
14	321	7	-7	-5	648	14	-10	16	103	6	3	-11	275	6	8	13	338	8	-9
15	168	4	-3	-4	120	3	8	17	152	4	-7	-10	413	11	-4	15	250	6	0
16	139	4	-9	-3	743	16	-12	18	140	6	2	-9	180	4	24	17	79	6	7

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
19	87	8	-3	-3	143	4	-16	-23	50	28	-19	-1	360	8	26	-7	201	5	-10
H,K=		2,	2	-2	88	7	-21	-22	91	6	-4	0	331	8	23	-6	135	4	-10
-22	134	6	-0	-1	112	4	-10	-20	65	7	3	1	223	5	6	-5	114	4	3
-20	228	5	-3	0	103	5	-15	-19	210	6	-13	2	139	4	5	-3	222	5	5
-18	227	6	3	1	553	12	-21	-17	343	8	-4	4	429	13	-4	-2	150	4	-4
-17	193	5	-13	2	109	3	-8	-16	76	11	-4	5	75	4	2	-1	351	9	-3
-16	53	10	4	3	886	19	-4	-15	247	6	-14	6	458	11	-1	0	34	10	25
-15	302	7	-5	4	82	4	-17	-14	239	6	-4	7	87	4	-1	1	431	10	16
-14	52	10	3	5	371	9	35	-13	88	4	2	8	165	4	9	2	292	7	-5
-13	454	11	10	6	327	7	-18	-12	579	13	-9	9	273	7	3	3	129	4	6
-12	67	8	4	7	97	3	12	-10	386	9	23	11	237	6	-15	4	447	11	3
-11	179	5	11	8	473	11	12	-9	95	3	2	13	192	5	6	5	98	5	12
-10	231	5	-5	9	52	5	2	-8	60	4	7	H,K=		2,	7	6	242	6	-11
-9	377	9	15	10	321	7	1	-7	63	4	10	-22	139	7	3	7	141	5	1
-8	283	6	17	11	200	5	5	-6	294	7	16	-20	81	6	-7	8	148	5	2
-7	470	10	41	13	200	5	9	-5	201	5	25	-19	148	5	-2	9	173	5	-5
-5	296	7	22	14	104	8	-4	-4	435	10	6	-18	39	12	11	11	182	5	-2
-4	214	5	-24	15	87	5	-9	-3	55	6	54	-17	332	8	4	12	95	5	3
-3	40	24	7	16	144	5	-4	-2	461	11	-16	-15	174	5	3	H,K=		2,	9
-2	531	12	24	H,K=		2,	4	-1	288	7	21	-14	124	4	10	-22	133	5	-11
-1	53	7	-4	-23	77	7	13	0	143	4	3	-12	218	6	-0	-19	141	5	3
0	518	11	-13	-22	158	5	1	1	676	16	-8	-11	207	6	-10	-17	127	8	-8
1	467	10	26	-20	264	6	1	2	65	4	16	-10	137	4	2	-16	103	7	-3
2	187	4	-20	-19	63	7	14	3	495	11	-4	-9	183	4	4	-15	78	6	8
3	739	16	26	-18	142	5	11	4	223	6	8	-8	225	6	-5	-13	142	4	-12
4	226	5	9	-17	75	6	17	5	179	4	4	-7	107	3	-4	-11	389	9	-1
5	595	13	-18	-16	90	6	5	6	280	7	-5	-6	395	9	-12	-10	137	6	-7
6	279	9	-19	-15	189	5	0	7	82	4	-9	-5	74	4	-3	-9	350	8	-3
7	99	3	2	-14	177	4	6	8	328	7	6	-4	492	11	16	-8	184	4	-1
8	44	5	2	-13	356	8	-11	9	175	5	4	-2	334	8	10	-7	153	4	-4
9	158	4	3	-12	49	7	21	10	87	5	-3	-1	328	8	31	-6	343	7	-2
10	184	4	-4	-11	35	8	-7	12	61	8	4	0	80	4	-9	-4	408	10	10
11	316	8	4	-10	103	4	1	13	64	15	1	1	469	11	5	-3	52	10	-22
12	135	4	-6	-9	661	14	6	14	192	5	0	3	387	9	-3	-2	275	7	-1
13	186	5	2	-8	132	3	14	15	66	12	23	4	68	6	9	-1	192	5	-0
14	113	5	4	-7	574	13	1	16	151	5	3	6	130	4	3	1	196	6	-5
15	125	4	4	-6	109	3	1	H,K=		2,	6	7	223	5	-0	2	323	7	-8
16	231	5	2	-5	281	7	23	-22	120	6	-9	8	152	4	4	3	47	10	-14
18	203	5	3	-4	364	8	-14	-21	60	8	-3	9	150	4	-1	4	142	4	23
H,K=		2,	3	-3	124	3	21	-20	119	5	-2	11	120	5	0	5	83	6	-1
-23	125	5	5	-2	523	11	-0	-19	54	8	-17	12	125	5	0	6	61	12	11
-21	96	6	13	0	637	15	26	-18	77	15	-7	14	193	6	2	7	169	5	-6
-19	123	5	-8	2	127	4	-2	-16	169	5	-11	H,K=		2,	8	9	242	6	7
-18	88	5	2	3	133	3	19	-15	141	4	-5	-22	54	11	3	10	48	10	9
-17	314	7	3	4	315	8	22	-14	354	8	6	-21	95	6	-3	11	109	5	-2
-15	273	6	-4	5	206	5	5	-12	339	8	4	-20	134	5	6	12	126	5	3
-14	98	6	-3	6	199	5	-7	-11	255	7	5	-19	151	5	-1	H,K=		2,	10
-13	56	5	-3	7	94	3	-13	-10	171	5	-10	-17	74	8	7	-21	101	5	1
-12	489	11	1	8	137	4	-7	-9	496	12	-7	-16	258	6	-6	-20	76	7	17
-11	32	9	-12	9	275	8	10	-8	52	5	3	-15	32	17	-10	-19	156	5	-2
-10	652	14	23	11	353	9	-5	-7	503	11	-11	-14	328	7	4	-18	53	9	11
-9	182	4	14	13	209	5	-2	-6	231	5	12	-12	318	7	2	-17	77	6	-6
-8	295	7	-18	14	83	6	-2	-5	297	7	-20	-11	242	6	-11	-16	102	5	6
-7	296	7	12	15	80	8	8	-4	158	4	-10	-10	139	4	5	-14	317	7	2
-5	344	8	28	16	174	5	4	-3	63	7	41	-9	342	8	-1	-12	150	4	-6
-4	169	4	-10	H,K=		2,	5	-2	299	7	-24	-8	49	8	13	-11	72	8	-0

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-10	60	6	8	4	54	10	-2	H,K=		3,-15		18	125	5	4	-4	320	7	-1
-9	63	7	-7	5	134	5	4	-4	92	13	-2	H,K=		3,-12		-3	140	4	-1
-8	206	5	2	6	58	15	-4	-2	174	5	8	-10	182	5	0	-2	194	4	-10
-7	149	4	-4	H,K=		2, 13		0	188	5	2	-9	69	7	-10	-1	399	9	20
-6	230	5	6	-18	154	5	-0	1	111	5	10	-7	162	5	-8	0	132	4	8
-4	78	5	6	-16	163	5	-6	2	60	7	5	-6	107	6	4	1	455	10	5
-3	275	6	1	-15	94	6	5	3	239	6	4	-5	138	4	3	2	65	4	17
-2	68	6	-9	-14	96	5	-4	5	228	6	10	-4	117	8	-1	3	338	8	14
-1	396	9	-11	-13	151	5	6	7	104	6	3	-3	93	5	10	4	150	4	4
1	221	5	18	-11	189	6	-8	8	81	9	-9	-1	125	4	6	6	302	9	23
2	181	5	9	-10	48	9	18	9	81	5	4	0	73	5	0	7	91	6	5
4	255	6	7	-9	135	4	-1	10	130	5	-2	1	310	7	-2	8	173	4	0
6	166	5	-10	-8	73	6	0	11	102	5	-5	3	327	8	-2	9	126	4	10
8	36	15	13	-6	55	5	7	14	36	15	-13	4	224	5	14	12	201	5	-8
9	66	7	6	-5	146	5	-8	16	141	5	7	6	331	7	-3	14	267	6	4
10	115	6	1	-3	188	5	-0	H,K=		3,-14		7	106	4	1	16	233	5	-6
H,K=		2, 11		-2	38	14	-2	-7	142	5	-6	8	239	6	-0	17	88	6	-8
-18	88	6	-6	0	194	5	-14	-5	175	5	-5	9	85	5	-16	19	173	5	-5
-17	103	7	-4	2	201	5	6	-3	96	5	-3	10	159	4	14	20	58	8	-15
-16	168	6	-6	4	109	6	1	-2	43	11	2	11	84	7	7	21	120	5	4
-15	33	16	-15	H,K=		2, 14		0	128	5	-3	13	141	4	16	H,K=		3,	-9
-14	132	10	-0	-15	107	9	18	1	163	5	-7	14	172	5	1	-14	235	6	4
-13	294	7	-9	-13	161	5	3	2	118	7	-4	16	108	5	-8	-13	82	6	9
-11	310	7	4	-12	45	16	-2	3	126	4	-3	19	88	6	-12	-12	147	5	6
-9	259	6	-10	-11	124	7	5	4	63	22	-14	20	52	10	16	-11	238	5	1
-8	86	6	0	-10	169	5	7	5	94	5	23	H,K=		3,-11		-10	43	11	11
-7	131	4	-1	-8	202	5	-5	6	252	6	3	-12	71	8	1	-9	264	6	5
-6	238	5	5	-6	182	5	-1	7	37	29	-6	-11	129	5	3	-7	324	7	14
-5	42	11	-3	-5	71	7	11	8	270	7	-2	-9	298	7	1	-5	88	4	-17
-4	225	6	8	-4	83	6	12	10	84	5	-6	-7	219	5	-5	-4	233	5	20
-3	139	5	18	-3	168	5	1	11	129	6	-6	-6	78	10	-5	-3	159	4	-18
0	191	5	3	-2	51	10	1	13	181	6	9	-4	237	6	-13	-2	219	5	-8
1	119	6	7	-1	119	5	-5	15	116	6	-3	-2	363	9	-13	-1	264	6	-13
2	237	5	-6	H,K=		2, 15		H,K=		3,-13		0	223	5	-9	0	70	4	0
3	37	13	7	-12	52	10	-1	-9	143	5	1	2	74	9	15	1	192	4	12
4	192	5	3	-7	50	12	5	-7	168	6	-5	4	350	8	-10	2	318	7	37
5	126	5	-8	-5	165	5	-1	-6	120	5	7	5	156	4	-2	4	440	10	-10
7	185	5	-8	-3	160	6	-1	-5	65	7	-7	6	208	5	5	5	120	3	25
H,K=		2, 12		H,K=		3,-17		-4	224	5	-2	7	126	4	-8	6	350	8	11
-19	133	5	-10	3	174	5	6	-2	312	7	7	8	65	5	8	7	260	6	18
-18	64	10	3	4	46	16	27	0	254	6	-5	9	278	6	-1	8	151	4	-3
-17	129	5	8	5	226	6	14	1	149	4	-3	11	358	8	2	9	421	9	-2
-16	155	5	1	7	72	7	-6	2	57	9	-3	12	52	12	-5	10	64	4	20
-15	80	6	1	8	100	6	-0	3	285	6	10	13	169	4	-9	11	298	7	11
-14	110	5	-1	10	166	5	10	4	109	5	1	14	176	5	4	13	101	4	2
-13	114	5	-2	H,K=		3,-16		5	191	5	15	16	171	6	-7	16	100	8	-3
-10	136	4	9	-2	89	6	-10	6	180	5	-2	17	70	12	5	17	171	5	3
-8	217	5	-10	0	148	5	-1	7	60	7	23	18	125	5	2	18	39	15	-22
-6	226	5	-2	1	38	19	0	8	32	15	20	19	53	13	-3	19	86	6	-8
-5	155	9	16	2	147	5	2	9	168	6	0	H,K=		3,-10		20	47	10	10
-4	116	5	-9	3	48	15	-6	10	67	7	12	-14	133	6	-8	H,K=		3,	-8
-3	220	6	8	6	118	5	17	11	179	5	-5	-12	205	5	-6	-15	70	7	2
-1	256	6	-14	8	161	5	5	12	55	11	10	-10	68	7	-8	-14	117	5	-10
1	138	7	5	10	129	5	1	13	211	5	1	-8	58	17	-3	-13	158	5	20
2	76	6	-3	11	142	5	1	14	160	4	-4	-6	208	5	-10	-12	152	4	3
3	43	12	2	13	162	5	-2	16	194	5	-8	-5	157	4	4	-11	176	5	-14

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-9	145	4	0	16	94	6	3	1	202	5	113	-19	126	6	-6	6	127	3	9
-8	196	5	-5	17	198	5	-9	2	331	8	-72	-18	151	6	-4	7	419	9	-5
-7	30	12	6	18	51	8	1	3	46	3	19	-16	137	5	-19	8	376	8	36
-6	422	10	-3	19	158	5	-3	4	645	14	71	-15	217	6	2	9	289	7	5
-4	415	9	11	20	67	10	6	5	191	4	26	-14	133	4	7	10	122	3	6
-3	128	4	-3	21	42	14	5	6	267	6	11	-13	261	6	6	11	187	5	7
-2	352	8	29	H,K=		3,	-6	8	81	3	4	-12	96	4	4	13	316	7	-5
-1	468	10	21	-18	99	8	0	10	399	10	-3	-10	265	7	-8	14	90	5	-12
1	570	12	-21	-17	102	5	-7	11	83	3	-3	-9	61	4	-2	15	255	6	-6
2	81	3	-23	-15	79	5	11	12	420	10	6	-8	515	12	16	18	143	4	-8
3	326	8	25	-13	221	5	5	13	30	11	-7	-6	637	14	12	20	176	5	8
4	51	5	40	-11	404	9	8	14	77	5	5	-5	335	8	-12	H,K=		3,	-1
5	161	4	-24	-10	62	7	-7	15	202	5	5	-4	233	5	47	-21	197	5	14
6	102	3	3	-9	289	7	0	16	58	9	-8	-3	599	13	19	-19	49	9	7
7	426	10	13	-8	223	5	1	17	259	6	-1	-2	61	3	-3	-17	102	5	5
8	155	4	8	-7	74	6	13	19	145	5	-9	-1	736	16	-59	-16	61	7	6
9	288	7	-8	-6	412	10	6	20	88	6	-9	0	146	5	-37	-15	307	8	-2
10	168	4	-13	-4	555	12	2	H,K=		3,	-4	2	63	5	-6	-13	312	8	-5
11	200	5	4	-3	31	7	-18	-20	81	7	-1	3	231	5	-77	-12	127	4	7
12	270	6	5	-2	140	3	-6	-19	118	5	-6	4	242	5	-14	-11	262	6	-1
13	116	4	-4	-1	358	8	55	-18	175	6	3	5	209	5	16	-10	581	13	10
14	350	8	-5	0	403	9	65	-17	94	9	8	7	350	8	-16	-9	35	6	-14
15	45	9	5	1	176	4	-32	-16	141	5	-4	8	170	4	-8	-8	702	15	-10
16	187	5	-9	2	404	9	-96	-15	156	4	-1	10	532	12	-14	-7	40	4	2
17	126	7	-3	3	73	3	22	-14	197	5	2	12	368	9	3	-6	276	6	1
19	149	4	-6	4	176	4	8	-13	396	10	-1	13	142	4	-2	-5	280	6	-4
20	63	8	-1	5	238	5	-41	-11	361	8	6	14	140	4	-2	-4	350	8	35
21	130	5	11	6	34	5	0	-9	187	4	-2	15	203	5	4	-3	714	15	16
H,K=		3,	-7	7	510	11	-1	-8	185	4	2	16	77	5	1	-2	542	12	19
-17	44	19	1	8	151	4	8	-7	49	4	-3	17	236	5	-8	-1	665	14	22
-16	237	6	11	9	407	9	3	-6	626	14	15	18	69	6	-13	0	130	4	-30
-14	234	5	3	10	285	7	2	-5	308	7	-7	19	62	10	-8	1	228	5	61
-12	105	8	-12	11	331	7	-7	-4	556	12	24	H,K=		3,	-2	2	97	5	4
-11	181	6	2	12	320	7	9	-3	226	5	2	-20	189	6	-4	3	374	8	0
-10	55	7	6	13	106	4	-2	-2	237	5	-4	-18	244	6	1	4	53	4	6
-9	322	7	0	14	257	6	-4	-1	69	4	32	-16	223	5	1	5	456	10	29
-8	205	5	2	15	135	4	5	0	671	14	146	-15	120	4	7	6	30	6	7
-7	229	5	3	16	118	5	-6	1	150	4	105	-13	355	8	4	7	441	10	-7
-6	144	4	1	20	140	5	4	2	684	14	-37	-12	94	4	-4	8	430	10	20
-4	36	7	-1	21	46	12	-6	3	462	11	118	-11	378	9	7	9	64	4	3
-3	432	9	8	H,K=		3,	-5	4	533	11	-36	-10	94	3	9	10	405	9	-1
-2	169	4	-1	-19	125	5	-5	5	577	12	30	-9	208	5	-5	11	96	4	-14
-1	656	14	32	-18	106	5	-1	6	195	5	-2	-8	75	3	13	12	343	8	5
0	148	3	-46	-16	262	6	1	7	575	13	15	-7	378	9	18	13	78	4	7
1	385	9	22	-14	287	7	2	8	64	6	6	-6	237	6	13	15	165	4	-9
2	617	13	73	-10	252	6	-4	9	437	10	-18	-5	496	11	26	16	138	4	10
4	590	13	65	-9	118	4	-1	12	187	4	-21	-4	206	5	31	17	142	5	2
5	88	3	-6	-8	272	7	-6	13	169	4	-3	-3	760	16	63	18	95	7	-1
6	346	9	-32	-7	58	4	-12	14	158	4	6	-2	218	5	-17	20	93	6	11
7	124	3	5	-6	316	7	30	15	239	5	-5	-1	440	9	41	H,K=		3,	0
8	151	4	19	-5	272	6	10	16	87	5	3	0	909	19	54	-21	67	8	-4
9	336	8	19	-4	128	3	3	17	87	5	-4	1	398	9	103	-20	179	5	-5
11	195	7	9	-3	836	18	17	18	157	5	-12	2	575	12	58	-18	279	7	-2
12	233	5	-3	-2	76	3	17	19	60	9	9	3	246	6	-3	-16	161	5	5
14	101	4	-15	-1	624	13	11	20	216	6	-11	4	445	10	-10	-15	128	4	-6
15	196	5	3	0	94	3	-24	H,K=		3,	-3	5	339	8	-16	-14	41	10	6

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-13	159	4	4	15	56	11	-4	-1	227	5	43	-11	159	4	-6	-20	138	5	-7
-12	293	7	10	16	188	5	3	0	495	11	-32	-9	490	11	6	-16	242	6	4
-11	221	5	3	18	184	5	2	1	389	9	-8	-7	578	13	22	-15	44	11	9
-10	473	12	32	H,K=		3,	2	2	99	3	10	-6	285	7	8	-14	259	6	4
-7	381	9	22	-21	82	6	1	3	499	12	-16	-5	130	3	-4	-13	67	6	2
-6	42	13	2	-20	169	5	-5	4	71	4	-5	-4	402	10	7	-12	153	4	-1
-31	056	22	43	-19	60	11	13	5	293	7	-5	-2	612	14	11	-11	175	4	5
-2	646	14	20	-18	244	6	-2	7	90	4	8	0	366	8	-13	-9	578	13	1
-1	86	6	8	-17	83	9	-7	9	253	6	0	1	49	5	7	-8	101	4	2
0	691	15	1	-16	85	5	4	10	155	4	-1	3	211	5	-2	-7	475	11	14
1	256	6	-0	-15	162	4	-14	11	329	8	6	4	150	4	6	-6	150	4	-5
2	351	8	3	-14	185	4	-8	13	142	7	7	5	141	4	7	-5	171	4	17
4	211	5	-9	-12	455	11	-6	14	115	5	-1	6	338	8	-4	-4	214	5	-4
5	239	6	1	-11	199	5	-20	16	193	5	5	7	133	5	8	-3	169	4	11
6	372	9	-2	-10	412	9	8	H,K=		3,	4	8	149	4	3	-2	275	6	-1
7	104	3	-19	-9	288	7	11	-20	67	7	9	9	303	7	-4	-1	136	5	8
8	594	13	15	-8	426	10	31	-19	203	6	-1	11	220	5	3	0	118	4	-4
9	67	4	-7	-7	778	17	1	-17	269	6	-2	13	157	5	8	1	67	5	4
10	319	8	2	-6	170	4	2	-15	190	6	-5	14	105	6	-9	2	156	4	-17
11	140	4	-8	-5	746	17	19	-14	237	5	-3	15	35	16	16	4	413	9	0
13	349	8	0	-4	167	4	-11	-12	511	11	8	H,K=		3,	6	6	261	6	8
14	44	10	-6	-3	472	11	49	-11	44	7	5	-21	94	6	-3	7	149	5	7
15	195	6	-1	-2	317	7	-7	-10	539	12	-3	-20	89	8	4	8	69	6	5
16	87	14	-4	-1	68	5	-12	-9	172	4	2	-19	186	5	-10	9	184	5	-9
17	83	5	3	0	326	7	11	-8	286	7	16	-17	301	7	3	11	230	5	1
18	125	5	8	1	376	9	24	-7	431	10	-7	-16	40	13	-11	13	90	6	3
H,K=		3,	1	2	337	8	5	-6	141	3	-12	-15	218	5	3	H,K=		3,	8
-22	113	10	3	3	230	5	4	-5	426	10	-17	-14	272	6	8	-22	121	6	-2
-21	79	6	10	4	87	3	11	-4	126	3	-1	-12	332	8	-1	-21	92	6	11
-20	139	5	1	5	104	3	-10	-3	116	3	11	-11	137	4	6	-20	104	12	-2
-18	93	9	-3	6	391	9	4	-1	211	5	-13	-10	332	7	-2	-19	200	6	2
-17	228	5	-3	7	131	3	11	0	105	3	14	-9	128	4	13	-17	179	6	-4
-15	332	7	-7	8	388	9	-10	1	556	12	27	-8	145	4	15	-15	107	12	0
-14	67	5	12	10	247	6	-0	3	328	8	8	-7	263	6	-0	-14	144	5	5
-13	401	10	-3	11	219	5	-0	4	178	5	-4	-6	443	12	-1	-13	49	9	11
-11	31	9	-8	12	58	7	-2	5	164	4	6	-5	74	4	-7	-12	318	7	1
-10	477	11	39	13	298	7	-2	6	379	9	-4	-4	367	9	-7	-11	182	5	4
-9	81	4	-3	15	202	5	1	7	25	17	15	-3	118	4	8	-10	76	5	-8
-8	651	14	-12	18	69	8	10	8	494	11	2	-2	246	6	-1	-9	127	4	-10
-6	236	5	3	H,K=		3,	3	9	65	6	-8	-1	398	10	-9	-8	300	7	-3
-5	105	4	8	-22	145	5	-6	10	131	4	10	0	44	7	5	-7	100	4	-11
-4	414	9	-2	-20	228	5	2	11	148	4	11	1	422	10	-1	-6	439	11	-5
-3	459	10	20	-19	135	5	-2	12	62	7	-10	2	134	4	-3	-4	278	6	-1
-2	536	12	-11	-18	121	6	-0	13	174	5	1	3	393	10	-11	-3	145	6	14
-1	142	4	-8	-17	228	5	1	14	114	5	1	4	232	5	-0	-2	132	4	3
0	383	9	2	-15	263	6	-1	15	95	5	-8	5	144	4	3	-1	290	7	-9
1	220	5	-17	-14	136	4	-11	H,K=		3,	5	6	262	6	-6	0	98	4	-8
2	73	2	-6	-13	299	7	8	-22	193	5	-0	7	189	5	3	1	375	9	-1
3	700	15	-6	-10	356	8	13	-20	181	5	-1	8	193	6	1	2	63	7	14
6	123	3	-12	-9	482	12	45	-18	70	10	2	9	72	13	2	3	222	5	-14
7	310	7	3	-8	290	6	19	-17	98	6	-9	10	83	11	8	5	91	5	7
8	140	4	5	-7	614	14	30	-16	118	5	-2	12	83	7	6	6	143	5	-1
10	270	6	-1	-6	175	4	3	-15	286	7	-2	13	111	10	9	7	152	6	-11
11	269	6	0	-5	39	6	-13	-14	171	4	5	14	171	5	12	9	165	5	7
12	224	5	-1	-4	590	13	44	-13	120	5	1	H,K=		3,	7	12	150	5	8
14	80	6	-3	-2	650	15	-21	-12	102	4	-5	-22	177	5	8	H,K=		3,	9

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-21	115	7	4	-11	164	6	4	-2	83	7	11	8	286	6	3	H,K=		4,	-10
-20	68	8	6	-9	133	5	7	0	53	9	-2	10	128	4	-2	-14	89	7	0
-19	135	5	-2	-8	152	5	7	1	91	6	-5	11	156	4	6	-11	236	5	13
-16	180	5	-8	-6	124	6	-3	3	207	7	-3	13	269	6	-5	-9	267	7	4
-14	328	8	2	-5	129	7	5	5	180	5	-15	14	33	15	-4	-7	296	7	-1
-13	70	7	1	-4	65	10	-6	6	71	6	-14	15	111	5	6	-6	143	4	1
-12	194	5	6	-3	224	5	-10	7	123	5	-1	H,K=		4,	-12	-5	66	8	5
-11	236	5	6	-1	286	7	12	8	143	5	4	-11	69	11	9	-4	372	8	-13
-10	46	10	5	0	83	17	7	10	171	5	3	-10	110	6	4	-2	333	8	9
-9	293	7	-2	1	148	5	4	12	60	8	2	-9	199	5	2	0	162	4	-5
-8	104	4	13	2	180	5	5	H,K=		4,	-15	-7	123	6	-4	1	50	6	-3
-7	197	5	13	4	199	5	0	-5	181	8	-0	-6	191	5	-4	2	142	4	-33
-6	30	36	-6*	5	39	14	6	-4	98	6	0	-4	259	6	-4	3	208	5	-4
-4	187	6	-3	6	100	11	-2	-3	83	6	-4	-2	294	7	2	4	356	8	13
-3	119	4	2	H,K=		3,	12	-2	136	5	-16	-1	101	4	-14	5	87	4	49
-1	229	5	18	-18	99	6	6	0	190	6	9	0	209	5	-9	6	230	6	12
0	120	5	13	-16	123	5	6	1	67	8	-14	1	208	5	8	7	205	5	10
1	250	6	-1	-14	40	13	-11	2	114	5	-7	2	61	8	1	9	412	9	5
2	246	6	10	-13	217	5	-3	6	112	5	-9	3	296	7	6	10	103	4	-12
3	53	9	12	-11	269	7	-4	8	218	5	-1	4	182	4	-3	11	295	7	9
4	294	7	-10	-9	197	6	3	9	51	8	19	5	204	5	-10	12	104	5	3
6	206	5	12	-8	188	6	1	10	60	8	3	6	108	4	-7	13	108	5	-5
7	73	6	-7	-6	153	7	3	11	134	5	-8	7	119	4	-13	14	208	6	1
9	135	6	-15	-5	47	11	-0	13	161	5	-2	8	61	6	16	15	52	8	-2
10	77	12	-0	-4	128	5	-3	15	145	6	7	9	197	5	9	16	196	5	5
H,K=		3,	10	-1	66	8	9	16	88	10	6	10	90	6	-10	17	58	7	0
-19	129	8	-2	0	95	6	-14	H,K=		4,	-14	11	237	5	8	18	81	6	2
-18	66	8	-7	2	187	6	5	-4	196	5	3	13	94	7	-10	H,K=		4,	-9
-17	143	5	-7	3	61	9	4	-2	230	5	-19	14	218	7	-5	-15	44	13	-23
-16	66	8	-0	4	132	5	2	0	136	6	-10	16	183	5	1	-14	228	6	4
-13	216	6	8	5	106	6	-2	1	182	5	-5	18	122	5	-6	-13	93	5	-2
-12	44	17	2	H,K=		3,	13	3	264	7	-8	H,K=		4,	-11	-12	221	5	-9
-11	238	5	-10	-16	135	5	-0	5	252	6	-0	-12	239	6	6	-11	52	8	2
-10	70	7	10	-14	73	11	-15	7	98	5	20	-10	157	5	4	-8	126	4	4
-9	257	6	-11	-10	144	5	-3	8	92	9	-1	-9	147	5	-5	-7	100	5	-10
-8	184	5	-1	-8	210	5	-0	9	150	5	15	-7	194	5	9	-6	331	8	-4
-7	79	9	2	-7	91	6	5	10	130	6	8	-6	169	5	1	-4	269	6	-4
-6	337	8	9	-6	144	5	3	11	116	6	2	-5	169	5	-5	-3	197	4	12
-4	267	7	2	-5	108	5	4	12	59	12	5	-4	111	4	-2	-2	208	5	4
-3	120	5	-1	-3	207	5	-2	14	95	6	-7	-3	88	5	9	-1	396	10	3
-2	128	5	15	-1	218	5	12	16	178	5	2	-1	206	5	-6	1	629	14	31
-1	156	5	11	0	55	10	-8	H,K=		4,	-13	1	341	8	4	3	321	7	-35
0	95	6	-8	1	66	12	-3	-9	137	5	-3	2	31	11	20	4	353	8	65
1	105	11	3	H,K=		3,	14	-8	51	10	14	3	310	7	-17	6	292	7	-8
2	179	5	10	-13	140	5	3	-7	251	6	-2	4	247	6	14	7	231	5	-18
3	54	27	16	-11	123	5	-6	-6	29	23	5	6	398	9	-14	8	178	4	-11
4	54	9	-21	-8	57	9	5	-5	167	5	-2	7	42	8	-12	9	159	4	-3
5	87	6	-3	-5	109	7	3	-3	68	7	-17	8	278	6	9	10	107	5	-7
7	199	5	4	-3	91	7	10	-2	62	15	1	10	107	4	8	11	149	6	9
9	139	5	-4	-2	80	8	3	-1	99	7	8	11	172	4	-6	12	197	5	11
H,K=		3,	11	H,K=		4,	-17	0	179	5	15	12	164	4	10	14	301	7	1
-19	140	5	-2	2	140	10	-2	1	137	5	-3	13	155	5	12	15	144	6	-3
-18	45	13	-1	5	109	6	-10	2	74	6	-9	14	137	4	-4	16	186	6	1
-16	213	5	-3	7	88	6	5	3	75	6	-13	16	84	5	-7	17	203	5	-5
-14	224	5	-9	9	66	8	15	4	121	4	-4	17	105	6	0	19	161	5	-5
-12	61	11	-2	H,K=		4,	-16	6	315	7	-24	19	165	5	-4	H,K=		4,	-8

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-16	178	6	0	17	104	9	-2	1	88	3	-26	-16	149	5	-3	7	145	3	18
-14	196	5	-0	19	120	5	-3	2	595	13	80	-15	225	5	-4	8	317	8	-6
-13	86	8	-4	20	54	9	4	4	137	3	23	-14	69	6	2	9	40	6	10
-11	295	7	7	21	111	6	14	5	424	9	11	-13	470	11	-18	10	430	11	10
-9	425	10	5	H,K=		4,	-6	6	210	5	35	-11	293	7	3	11	136	4	3
-8	38	10	1	-18	116	5	3	7	533	12	-5	-10	232	6	10	12	288	7	-7
-7	228	5	-17	-17	52	9	21	8	184	4	29	-9	206	5	3	13	109	4	4
-6	143	5	-5	-16	272	6	-3	9	270	6	1	-8	318	7	-9	14	46	9	-7
-5	54	5	-9	-14	266	6	-10	10	213	5	-16	-7	105	3	3	15	184	5	5
-4	131	4	4	-13	147	6	2	11	60	4	9	-6	422	10	18	16	108	5	8
-3	233	5	6	-12	119	8	6	12	369	9	13	-5	431	10	33	17	176	5	3
-2	335	8	-4	-11	348	8	2	14	267	6	7	-4	319	7	4	18	44	10	7
-1	249	6	-8	-10	108	4	4	15	47	8	9	-3	154	4	-12	H,K=		4,	-1
2	378	9	-50	-9	305	7	-0	16	81	5	-6	-2	140	3	3	-20	197	5	-1
4	385	9	-32	-8	135	6	3	18	99	9	-9	-1	243	5	16	-18	244	6	4
5	43	5	14	-7	42	6	11	19	77	6	-2	0	700	15	-16	-17	54	8	3
6	384	9	39	-5	133	4	11	20	140	6	7	1	181	4	-22	-16	104	8	-11
7	196	4	-13	-4	184	4	4	H,K=		4,	-4	2	634	14	-18	-15	342	8	-6
8	40	6	1	-3	515	11	8	-19	86	6	-10	3	341	8	2	-13	420	10	4
9	394	9	20	-2	108	3	8	-18	189	5	-5	4	80	4	-1	-11	293	7	-1
10	77	4	8	-1	570	13	2	-16	313	7	6	5	600	14	37	-10	151	4	-8
11	304	7	4	0	292	7	62	-14	289	7	-12	6	88	5	25	-8	154	4	0
12	79	4	-0	1	200	5	-55	-12	67	8	0	7	454	10	-1	-7	344	8	-11
13	111	4	-0	2	639	14	62	-11	146	4	-5	9	294	7	-12	-6	335	8	18
14	116	4	5	3	71	3	-30	-10	244	5	2	10	200	5	-1	-5	460	10	2
15	132	5	-4	4	523	12	-46	-9	128	4	3	12	156	4	-8	-4	58	3	-13
16	73	6	-4	5	221	5	-39	-8	186	4	0	13	129	4	-3	-3	496	11	-20
17	137	5	-6	6	349	8	16	-7	25	13	12	14	65	6	5	-2	648	14	-7
19	73	9	6	7	323	7	36	-6	399	9	5	15	166	5	8	-1	168	4	17
H,K=		4,	-7	8	33	34	1*	-5	407	9	24	18	138	5	4	0	855	19	-12
-17	124	5	-4	9	316	8	4	-4	45	4	-19	19	51	9	-2	1	48	3	18
-14	176	5	-8	10	171	4	-1	-3	664	14	30	20	144	7	-0	2	523	11	30
-13	116	5	6	11	130	4	-8	-1	655	14	30	H,K=		4,	-2	3	83	4	-19
-12	155	6	-9	12	158	4	-2	0	273	6	-6	-21	189	5	9	4	141	3	9
-11	190	5	-3	15	250	6	9	1	57	3	-25	-19	94	5	3	5	397	9	24
-9	148	4	16	17	199	5	-2	2	504	11	59	-18	118	5	5	6	39	5	4
-8	410	9	4	19	141	5	3	3	175	4	46	-16	200	6	-1	7	572	13	22
-6	366	8	-2	20	112	5	0	4	563	12	-4	-15	190	5	9	8	40	9	5
-4	312	7	15	H,K=		4,	-5	5	56	4	22	-14	107	4	1	9	84	3	-10
-3	203	5	6	-19	117	6	-11	6	71	3	8	-13	122	4	3	11	156	4	11
-2	171	4	-7	-18	108	6	2	7	171	4	3	-12	165	5	-1	13	239	5	4
-1	653	14	-21	-17	89	6	-1	8	169	4	18	-10	449	10	8	15	168	5	0
0	116	3	-2	-15	79	8	2	9	227	6	10	-9	43	6	8	16	66	6	-4
1	555	13	42	-14	55	8	12	10	364	8	18	-8	636	14	37	18	149	5	-0
2	190	5	82	-13	265	6	6	12	229	5	2	-7	55	6	-10	H,K=		4,	0
3	163	4	27	-11	374	9	-3	13	241	5	7	-6	205	5	5	-22	57	10	-16
4	132	3	26	-10	174	4	-13	14	103	5	-8	-5	396	9	37	-21	135	5	6
5	367	9	60	-9	135	4	10	15	250	7	-2	-3	690	15	40	-18	87	7	11
6	207	5	33	-8	290	7	-0	17	206	5	-2	-2	103	3	-1	-17	185	5	2
7	473	11	2	-7	67	4	22	19	69	7	-1	-1	696	15	21	-16	116	5	-8
9	187	4	13	-6	481	11	2	20	91	11	-1	0	175	4	10	-15	269	9	2
10	219	5	4	-5	120	3	13	H,K=		4,	-3	1	68	2	-6	-14	93	4	-4
11	111	5	8	-4	467	11	1	-20	145	6	-2	2	266	6	-3	-13	316	8	-6
12	360	8	-2	-3	166	4	1	-19	105	5	-5	3	535	12	33	-12	291	8	11
14	345	8	5	-1	341	8	-48	-18	178	5	4	4	71	3	-5	-11	152	4	6
16	92	5	-14	0	297	7	-65	-17	39	13	-7	5	225	5	-6	-10	521	12	1

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-9	117	3	-1	13	320	7	-2	0	203	5	-13	-7	494	12	3	-11	80	6	8
-8	514	11	39	15	173	5	0	1	285	7	-16	-6	204	5	20	-10	206	5	2
-7	97	3	-12	18	118	5	-2	2	108	4	-3	-5	344	8	14	-9	192	5	10
-6	224	5	17	H,K=		4,	2	3	221	6	9	-4	154	4	1	-8	154	5	10
-5	395	9	22	-22	109	6	-1	4	90	3	-10	-2	62	4	2	-7	121	4	1
-4	279	7	26	-21	92	6	-1	6	276	7	3	-1	401	10	3	-6	343	8	7
-3	621	14	22	-20	118	7	-1	8	420	10	1	0	70	5	-2	-5	95	4	1
-2	385	9	12	-19	82	6	-2	9	131	4	1	1	309	7	5	-4	260	6	-2
-1	97	3	11	-17	282	6	-4	10	197	5	-0	3	118	4	-2	-3	165	5	-6
0	146	3	-24	-16	63	7	-3	11	254	6	-8	4	218	5	-3	-1	312	8	10
1	449	10	36	-15	348	8	-1	13	207	5	-4	5	121	4	-6	1	325	8	-14
2	148	3	14	-14	90	4	4	14	56	8	-1	6	453	10	-0	2	99	7	9
3	362	8	-19	-13	263	6	7	15	131	5	0	8	312	7	5	3	286	7	9
4	55	3	-18	-12	166	4	6	H,K=		4,	4	10	44	10	-3	4	182	5	-10
5	413	10	-27	-10	442	11	8	-22	187	6	5	11	81	6	-5	6	179	5	4
6	234	5	12	-9	117	4	-1	-20	177	5	5	12	53	17	-5	7	62	8	6
7	319	7	1	-8	457	10	24	-19	172	6	-4	13	148	5	3	8	102	5	-1
8	374	8	-9	-7	206	5	19	-17	287	7	1	14	95	6	1	12	128	5	0
9	86	4	-5	-5	128	3	-2	-15	304	7	3	H,K=		4,	6	H,K=		4,	8
10	326	7	-3	-4	451	10	-7	-13	103	4	12	-22	179	5	0	-20	119	5	-7
11	65	6	1	-3	171	4	-10	-12	89	5	-3	-20	168	7	4	-16	204	5	-4
12	250	6	3	-2	486	11	37	-11	68	5	-1	-19	110	5	5	-14	202	5	-10
15	121	5	-7	-1	89	3	29	-10	116	4	8	-18	75	14	5	-12	50	13	-15
16	123	5	4	0	254	6	-7	-9	387	9	5	-17	232	6	1	-11	286	7	4
17	101	5	-1	1	369	8	10	-8	249	6	-3	-16	107	9	-7	-9	424	10	14
18	101	5	5	3	688	15	-11	-7	434	10	1	-15	157	6	5	-8	82	5	-2
H,K=		4,	1	4	55	4	-0	-6	192	4	-5	-14	112	5	-2	-7	303	7	8
-22	61	9	-3	5	419	10	3	-5	35	9	11	-12	104	4	11	-6	141	4	2
-21	51	10	-9	6	104	3	2	-4	601	13	-3	-11	132	4	-10	-4	279	6	2
-20	217	5	-1	7	92	4	-3	-3	48	5	4	-10	117	4	-6	-3	81	9	1
-18	307	7	-3	8	210	6	5	-2	722	16	1	-9	460	11	7	-2	134	4	-1
-16	161	5	4	9	49	6	14	-1	153	4	-2	-7	381	10	8	-1	33	15	-24
-15	200	5	5	10	260	6	1	0	381	9	30	-6	309	8	12	0	33	16	-3
-14	80	5	7	11	159	5	-1	1	244	7	-19	-5	206	5	-25	1	114	5	5
-13	174	5	-1	12	58	16	-2	2	56	9	10	-4	467	11	-12	2	198	6	-7
-12	369	9	-1	13	89	5	0	3	332	8	-1	-2	460	10	11	4	285	6	6
-11	69	4	0	14	89	5	-1	4	46	6	6	-1	41	7	-14	6	136	5	-2
-10	250	6	6	16	149	6	3	5	255	6	2	0	114	4	6	7	158	5	1
-9	166	4	3	H,K=		4,	3	6	84	4	-0	1	192	5	7	9	204	5	-3
-7	469	11	17	-20	225	5	-6	9	257	6	12	3	237	5	2	10	33	39	9*
-6	116	3	1	-19	78	6	-8	11	203	5	7	4	145	4	-7	H,K=		4,	9
-5	860	18	-7	-18	228	6	3	13	113	5	11	5	79	6	-20	-20	39	21	3
-4	321	8	24	-17	81	6	1	14	102	5	-1	6	227	5	4	-19	214	6	0
-3	575	12	-12	-15	50	9	-12	H,K=		4,	5	7	132	5	-6	-18	53	10	15
-2	611	13	17	-14	253	6	4	-22	46	13	9	9	181	5	-3	-17	148	6	6
0	500	11	-32	-12	360	9	-3	-20	76	7	8	11	220	5	7	-15	60	9	0
1	200	5	-6	-10	398	9	18	-19	125	5	-4	13	86	7	-3	-14	167	5	10
2	401	9	5	-9	193	5	-2	-18	79	12	0	H,K=		4,	7	-13	93	10	10
3	226	5	-13	-8	218	5	1	-17	215	6	-1	-21	77	10	1	-12	195	7	-1
4	140	4	14	-7	583	13	10	-16	69	7	-10	-19	232	6	9	-11	141	7	10
5	242	5	-16	-6	109	4	2	-15	113	5	-2	-17	213	5	3	-9	127	5	1
6	289	7	13	-5	618	14	17	-14	372	8	-1	-16	185	5	-2	-8	184	8	3
7	30	16	-2	-4	221	5	1	-12	396	9	13	-15	109	6	11	-6	390	10	-1
8	224	6	8	-3	160	5	-13	-11	39	45	14*	-14	203	5	3	-4	204	5	4
10	135	4	-0	-2	369	9	50	-10	355	9	9	-13	60	8	12	-3	239	5	1
11	227	5	5	-1	111	3	14	-9	182	4	3	-12	315	7	12	-2	101	5	-8

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2 PAGE15

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-1	253	6	9	-1	156	5	-9	13	227	6	-2	1	235	5	9	5	62	12	16
0	45	35	14	0	108	8	7	15	77	6	-2	2	49	7	9	6	264	6	-34
1	221	5	-11	1	109	6	16	16	93	10	4	3	322	7	10	7	324	7	17
2	33	46	22*	2	146	6	5	H,K=		5,-13		4	58	5	-30	9	386	9	-1
3	146	6	-10	H,K=		4, 13		-8	99	5	6	5	141	4	-27	10	95	4	-11
4	83	6	-6	-13	149	5	7	-6	123	5	12	7	119	4	-13	11	205	5	1
6	97	8	4	-11	219	5	-4	-4	235	5	-8	9	312	7	-8	12	112	4	-1
7	139	5	-0	-10	114	5	-0	-3	73	6	3	10	62	6	-14	13	75	5	3
9	114	6	-5	-8	167	5	-5	-2	241	6	7	11	218	5	-5	14	209	5	-3
H,K=		4, 10		-6	133	5	-0	-1	45	24	-2	12	84	12	1	16	137	4	2
-19	62	10	-13	-5	40	23	-9	0	83	7	7	14	213	5	-6	H,K=		5, -8	
-18	102	6	7	-4	115	6	5	1	291	7	-3	16	200	5	7	-16	73	8	-7
-17	41	15	-9	H,K=		5,-17		3	306	7	-12	18	114	8	13	-14	200	5	-3
-16	241	6	1	3	141	5	-4	4	49	10	12	19	67	9	-2	-13	92	5	4
-14	256	6	5	6	68	13	1	5	215	5	3	H,K=		5,-10		-12	191	5	-7
-13	167	5	8	8	114	7	-7	6	127	6	-2	-14	189	5	-1	-11	40	12	-9
-12	80	7	-12	H,K=		5,-16		8	153	6	4	-13	38	15	-9	-10	128	6	-0
-11	222	6	9	-2	180	7	4	9	102	6	4	-12	232	6	-1	-9	110	5	-14
-9	250	6	-2	0	218	6	8	10	109	5	-0	-10	100	9	-6	-8	255	6	3
-7	163	5	-7	2	122	5	2	11	105	6	-4	-9	109	5	-7	-7	170	4	4
-5	92	13	-10	3	94	5	2	14	163	5	-1	-7	281	6	-2	-6	380	9	11
-4	59	13	-10	4	29	23	19	16	150	5	-1	-6	174	4	11	-5	120	4	9
-3	211	8	4	5	150	6	4	H,K=		5,-12		-5	128	5	-16	-4	136	4	-9
-1	180	5	5	7	100	5	-4	-10	117	5	2	-4	77	5	8	-3	273	6	2
0	86	6	1	8	62	11	11	-9	204	5	-0	-3	287	7	11	-1	484	12	-2
1	52	9	-7	9	33	17	11	-7	267	6	-3	-1	337	8	1	0	31	8	-1
2	193	5	-4	11	154	5	-3	-5	197	5	-5	1	285	7	-18	1	446	10	-43
4	228	7	7	13	145	6	-1	-2	135	10	-2	2	88	4	0	2	246	6	36
5	59	9	9	H,K=		5,-15		-1	131	4	4	3	182	4	15	3	228	5	-2
6	157	6	-0	-5	122	5	0	1	211	5	0	4	299	7	-53	4	194	4	-29
H,K=		4, 11		-2	114	5	-6	3	141	4	10	5	100	7	1	5	97	3	-29
-17	104	7	-5	0	54	8	14	4	215	5	3	6	416	10	7	6	240	6	-16
-13	156	5	-8	1	158	6	-7	5	73	5	29	8	241	5	-2	7	295	7	-4
-12	63	8	-10	3	201	5	-8	6	426	10	19	10	59	6	5	8	103	3	-2
-11	153	5	-0	5	194	5	3	7	69	6	0	11	162	4	-9	9	37	8	-8
-9	131	6	3	6	122	4	-4	8	254	6	-16	12	110	4	-11	10	91	4	5
-8	227	5	6	7	120	5	-1	9	123	5	-3	13	146	4	4	11	127	4	-8
-7	56	10	3	8	208	5	1	10	88	5	10	14	103	5	-0	12	230	5	-4
-6	249	6	-5	9	49	9	-11	11	168	6	-20	17	161	5	3	13	65	6	-6
-4	191	5	-C	10	170	5	-0	12	86	6	-6	18	50	9	3	14	259	6	-5
-2	77	6	10	13	64	13	-12	13	201	5	4	19	152	5	-6	15	125	8	4
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1	156	6	3	-7	220	7	21	16	76	9	11	-15	92	6	-2	17	205	5	-2
2	45	26	-1	-5	203	5	4	17	48	12	-4	-14	94	6	-4	19	146	5	-2
5	109	6	2	-4	132	5	0	H,K=		5,-11		-11	240	5	-7	H,K=		5, -7	
H,K=		4, 12		-3	73	6	-3	-13	69	8	25	-9	295	7	1	-16	223	7	-1
-16	158	6	-5	-2	188	5	7	-11	113	7	-2	-7	283	6	20	-14	123	7	-10
-14	138	5	0	-1	93	5	-9	-10	104	6	10	-6	382	9	-0	-13	92	5	-3
-11	133	5	7	0	200	5	-9	-9	187	5	2	-4	352	10	7	-11	337	8	-7
-10	89	6	-10	2	49	10	-15	-7	144	7	-9	-3	91	5	-9	-9	501	11	4
-9	110	5	-1	3	87	5	-6	-6	167	5	9	-2	287	7	3	-8	73	5	-13
-8	151	5	11	6	176	5	-6	-4	422	10	3	0	149	4	25	-7	109	4	2
-7	100	6	14	8	228	5	-6	-3	73	5	12	1	245	6	-13	-6	234	5	10
-6	87	6	9	9	57	7	-10	-2	258	6	-13	2	194	4	35	-5	125	4	20
-5	141	6	2	10	45	10	-22	-1	227	5	3	3	275	6	40	-4	267	6	-4
-3	190	5	8	11	163	5	-6	0	97	5	19	4	311	7	12	-3	250	6	6

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-2	210	6	-15	-16	284	6	-5	9	143	4	4	-2	298	7	34	-20	184	5	-6
-1	195	5	18	-14	312	7	4	10	242	6	3	-1	155	4	28	-19	50	10	-11
0	149	4	-27	-13	142	4	-1	12	326	7	7	0	756	17	39	-18	246	7	6
1	138	3	47	-12	72	6	2	14	162	4	-1	1	127	3	20	-17	90	8	-3
2	486	11	4	-11	393	9	-4	18	134	5	-1	2	597	13	-8	-16	88	6	0
3	154	4	45	-10	184	4	-3	19	67	9	-1	3	379	9	19	-15	392	9	-6
4	537	12	54	-9	274	6	-4	H,K=		5,	-3	4	112	3	7	-13	405	10	3
5	37	6	12	-7	68	5	12	-20	69	8	-4	5	480	11	-8	-11	153	4	4
6	290	7	-14	-6	112	3	3	-19	64	8	-18	6	139	3	-7	-10	89	5	3
7	386	9	-10	-5	359	8	16	-18	167	5	-8	7	582	13	11	-9	148	4	-5
9	333	8	3	-4	252	6	3	-16	262	6	-4	8	120	3	-0	-8	251	6	1
11	206	5	5	-3	506	11	27	-15	97	5	-3	9	139	4	9	-7	139	3	3
14	136	5	7	-2	148	4	10	-14	236	5	7	10	202	6	-11	-5	446	11	26
15	163	5	-5	-1	275	6	12	-13	153	4	-5	11	71	8	5	-4	73	3	-12
16	67	6	-3	0	369	9	7	-12	123	4	-2	12	130	4	-3	-3	274	7	27
17	105	5	-7	1	253	6	30	-11	340	8	4	13	101	5	3	-2	610	14	22
19	55	9	-2	2	528	11	-31	-10	183	4	-8	14	86	14	9	0	719	16	51
20	79	8	6	4	627	14	0	-9	166	4	-1	15	87	5	7	1	27	7	-16
H,K=		5,	-6	6	155	4	-11	-8	328	8	1	16	81	5	7	2	388	9	-7
-17	83	6	6	7	250	6	4	-7	223	5	1	18	141	5	-1	3	205	5	1
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-14	178	9	-7	9	235	5	-9	-5	508	12	-6	-21	141	5	-1	5	443	10	21
-13	84	5	1	10	260	6	-15	-3	305	8	-11	-19	68	7	10	6	143	4	7
-12	167	5	-0	11	151	4	-5	-2	202	5	14	-18	112	5	-4	7	277	7	1
-11	240	5	9	12	42	8	13	-1	569	12	29	-17	103	5	-3	8	55	5	-0
-10	176	4	5	13	97	4	-8	0	407	10	-9	-16	234	6	4	11	182	5	-3
-9	24	21	-11	15	229	5	1	1	119	3	-10	-15	117	5	3	12	100	6	-3
-8	481	11	8	17	179	5	-8	2	597	13	10	-14	42	10	-12	13	222	6	1
-7	31	13	16	18	57	8	10	3	182	5	4	-13	26	30	4*	15	113	5	1
-6	391	9	-6	19	32	23	-26	4	266	6	4	-12	236	5	3	16	97	5	-13
-5	113	3	13	H,K=		5,	-4	5	110	3	10	-10	564	13	21	H,K=		5,	1
-4	264	6	-11	-19	131	6	-9	7	148	4	8	-8	317	7	-2	-21	98	6	-2
-3	437	10	-1	-18	101	5	-1	8	244	6	-1	-7	421	9	41	-18	131	5	-5
-2	32	7	-9	-15	131	7	0	9	248	6	7	-6	37	5	-1	-17	207	5	2
-1	518	12	11	-14	76	6	-2	10	247	6	-10	-5	504	11	3	-16	91	10	12
0	87	3	25	-13	341	8	8	11	77	4	-1	-4	48	4	26	-15	230	5	10
1	413	9	23	-11	239	6	0	12	164	5	-2	-3	678	15	-4	-14	115	5	-0
3	211	5	-44	-10	323	7	-9	13	194	5	-1	-2	41	6	10	-13	174	4	2
4	358	8	35	-9	117	3	-11	15	261	6	6	-1	377	9	20	-12	368	9	2
5	341	8	-17	-8	476	11	28	16	61	7	0	0	258	6	-16	-11	37	14	9
6	294	7	-5	-7	37	6	23	17	164	5	-6	1	225	5	-12	-10	545	12	24
7	429	10	2	-6	733	16	17	H,K=		5,	-2	2	154	4	-18	-9	121	5	0
8	144	4	-8	-5	113	3	6	-20	175	5	1	3	419	9	5	-8	319	8	-1
9	96	4	-18	-4	221	6	-7	-18	200	5	-3	4	198	5	30	-7	266	7	25
10	251	6	4	-3	346	8	35	-15	319	7	-9	5	279	6	3	-6	105	3	-9
11	89	5	6	-2	85	3	4	-14	113	5	2	6	64	4	-19	-5	284	7	-1
12	288	7	-3	-1	423	9	-5	-13	512	12	14	8	407	9	22	-4	269	7	2
13	54	7	1	0	316	7	17	-12	87	4	-0	9	64	6	13	-3	364	9	17
14	288	7	11	1	205	5	5	-11	420	9	12	10	310	7	0	-2	194	5	-16
15	96	5	6	2	341	8	11	-10	279	6	1	12	184	5	2	-1	65	3	-21
16	123	4	7	3	191	5	-1	-9	111	3	13	13	183	8	17	0	103	4	1
17	106	5	-5	4	79	3	1	-8	432	10	9	15	204	5	2	1	425	10	-8
19	124	5	5	5	538	12	10	-7	448	11	39	16	40	12	-6	2	72	3	-2
20	54	10	12	6	61	4	5	-6	169	4	6	17	96	5	-6	3	675	14	-2
H,K=		5,	-5	7	498	11	34	-5	44	4	-3	H,K=		5,	0	5	346	8	-6
-18	173	5	-8	8	63	4	9	-3	42	4	4	-21	36	23	1	6	253	6	-2

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
7	57	6	-4	-2	487	11	10	-4	479	11	-3	9	170	5	3	0	41	24	1
8	287	8	-2	-1	135	3	4	-2	512	12	12	H,K=		5,	8	1	143	5	-2
10	319	7	11	0	262	7	-18	-1	135	4	5	-19	188	5	-4	4	93	8	-3
12	149	4	5	1	491	11	0	0	116	4	-1	-18	89	7	3	5	56	13	31
13	74	6	-3	2	26	12	5	1	284	7	-12	-17	144	5	5	H,K=		5,	11
14	59	13	13	3	468	11	5	3	264	6	-3	-16	152	5	-3	-16	202	6	-2
15	85	6	-3	5	172	4	-4	5	165	5	17	-15	101	6	-5	-14	130	6	-10
16	105	5	-7	6	194	5	9	8	74	12	-4	-14	269	6	0	-13	118	5	19
17	56	10	-3	7	83	5	2	9	139	5	-3	-13	30	26	-16	-11	175	5	2
H,K=		5,	2	8	303	7	-5	11	126	5	5	-12	285	6	-2	-9	214	5	8
-20	244	6	-8	9	70	7	2	12	61	8	5	-11	53	19	15	-5	123	5	6
-19	71	7	2	10	159	7	-3	H,K=		5,	6	-10	88	8	-3	-4	49	10	12
-18	232	5	1	11	97	6	-1	-21	61	10	16	-9	72	6	-8	-3	168	5	-1
-16	83	7	9	14	99	5	2	-20	93	6	2	-8	86	8	1	-2	43	13	17
-15	170	5	9	15	42	14	-9	-19	103	6	-0	-7	131	4	-11	-1	97	7	2
-14	106	5	0	H,K=		5,	4	-17	98	7	-5	-6	213	5	7	0	110	6	1
-13	211	5	0	-20	150	5	-2	-16	184	5	1	-4	120	4	-3	2	171	5	4
-12	258	7	18	-19	51	10	-13	-14	254	6	0	-3	249	6	4	H,K=		5,	12
-10	78	4	2	-18	162	5	7	-12	283	7	5	-2	86	5	-2	-13	114	7	-14
-9	282	7	17	-17	46	13	14	-10	167	4	6	-1	324	7	-6	-12	48	26	38
-7	354	8	-1	-15	122	5	0	-9	276	7	-3	1	307	7	-1	-11	173	5	1
-6	55	6	-1	-14	267	6	-1	-7	341	8	-14	2	57	17	-14	-10	116	5	2
-5	389	9	4	-12	336	9	5	-5	285	7	-2	3	128	5	-2	-9	82	6	-4
-4	271	6	-3	-11	232	5	2	-4	111	4	-4	4	181	5	-8	-8	242	6	-4
-3	226	5	17	-10	198	5	3	-3	101	4	-2	6	167	5	1	-6	202	5	2
-2	422	10	-12	-9	200	6	3	-2	92	4	1	8	84	7	-1	-4	117	6	-2
-1	29	8	9	-7	419	10	-3	-1	333	8	-17	H,K=		5,	9	-3	89	7	-5
0	483	11	9	-5	435	11	-4	0	90	4	-1	-16	166	6	-8	-1	117	6	2
1	130	3	16	-4	158	5	-6	1	278	6	5	-14	159	5	-5	H,K=		6,	-17
2	258	7	11	-3	220	5	2	2	87	5	-7	-13	135	5	-7	5	165	5	8
4	229	6	-1	-2	275	8	-7	3	100	7	0	-11	220	5	-2	7	115	6	13
5	162	4	-4	-1	173	4	-9	4	232	5	3	-9	254	6	1	H,K=		6,	-16
6	215	5	3	0	278	6	10	6	252	6	-9	-7	212	5	7	1	102	6	-10
7	114	4	-1	1	235	5	3	8	170	5	-4	-6	218	5	-7	2	100	5	10
8	118	5	9	4	191	5	0	11	123	5	-0	-5	37	39	30*	3	146	5	13
9	98	5	4	5	50	7	-4	12	83	7	5	-4	273	6	-8	5	63	7	2
10	27	28	-8*	6	313	7	-8	H,K=		5,	7	-3	111	9	12	6	109	5	4
11	292	7	1	8	277	6	3	-20	152	5	3	-2	110	5	18	8	175	5	-3
13	231	5	-4	9	115	7	-6	-19	138	5	-6	-1	42	20	-12	10	149	5	-2
15	109	7	0	11	160	5	0	-17	159	8	-3	0	86	5	9	11	112	11	8
H,K=		5,	3	12	46	10	20	-16	95	6	0	2	157	5	5	12	74	7	10
-22	132	6	-2	13	143	5	3	-15	65	8	-7	4	120	7	-7	H,K=		6,	-15
-20	90	7	-7	H,K=		5,	5	-11	290	6	12	6	104	8	6	-5	95	12	2
-19	159	5	1	-20	98	6	-6	-9	322	8	8	7	127	7	-8	-4	131	6	12
-17	273	6	10	-19	147	5	-3	-8	114	4	3	H,K=		5,	10	-3	59	8	11
-15	299	7	10	-17	313	7	-12	-7	262	6	-9	-17	151	6	3	-2	222	5	3
-14	161	5	-2	-15	309	7	3	-6	205	5	-5	-16	73	8	-0	0	228	5	4
-13	196	5	6	-14	126	5	2	-5	101	5	-1	-14	156	5	7	2	86	5	14
-12	389	9	0	-12	109	4	9	-4	360	9	-10	-13	87	7	22	3	127	5	-9
-10	317	8	-10	-11	169	5	12	-3	28	17	7	-12	81	7	-12	5	130	6	14
-9	102	7	1	-10	146	4	5	-2	281	6	-5	-8	150	4	-1	6	87	5	6
-8	261	6	0	-9	216	5	6	1	137	5	-11	-6	315	7	-11	7	111	5	18
-7	96	3	-3	-8	74	4	-14	2	148	4	-7	-5	100	5	1	9	35	15	-14
-6	115	3	8	-7	72	4	-1	3	207	6	-5	-4	233	5	-7	10	51	9	6
-5	142	4	4	-6	212	5	3	4	133	5	-0	-3	162	5	-11	11	167	5	5
-4	483	11	27	-5	109	5	1	7	119	5	-1	-1	223	5	-4	13	151	5	7

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
H,K=		6,-14		H,K=		6,-11		-12	183	6	-13	17	38	15	25	15	107	4	0
-7	89	9	-5	-12	197	5	-2	-11	67	6	1	H,K=		6,	-7	17	100	8	-0
-5	127	5	2	-11	87	6	2	-10	101	6	-7	-17	101	6	6	18	76	6	-2
-4	123	6	2	-10	92	5	10	-9	176	6	-2	-16	142	6	0	H,K=		6,	-5
-3	112	5	1	-9	169	5	-7	-8	73	6	-2	-14	192	5	3	-15	77	6	-5
-2	126	5	-4	-7	283	7	-8	-7	302	7	0	-12	140	4	-5	-14	118	5	-3
1	239	5	-9	-5	254	6	4	-6	106	4	-0	-9	122	4	-3	-13	167	4	-0
3	237	5	8	-4	207	5	12	-3	307	7	3	-8	339	8	5	-12	72	6	-0
4	105	6	-12	-3	95	5	2	-1	374	8	17	-7	97	4	2	-11	130	6	-3
5	126	4	5	-2	157	5	-8	0	36	9	7	-6	302	7	7	-10	214	5	-5
6	192	5	2	-1	226	5	-3	1	229	5	24	-5	90	4	-12	-8	392	9	-18
8	214	5	7	1	164	4	-2	2	183	4	-28	-4	145	4	12	-6	552	12	11
10	180	5	19	2	36	10	-14	3	65	5	-6	-3	436	10	-2	-5	161	4	-4
14	128	5	6	4	272	6	13	4	389	9	32	-1	496	11	33	-4	209	5	21
H,K=		6,-13		5	31	13	21	5	82	5	-9	1	326	7	2	-3	436	10	4
-9	172	5	12	6	277	7	-4	6	401	9	9	2	291	7	-3	-2	98	4	14
-7	217	5	0	7	137	4	17	7	71	4	13	3	155	4	15	-1	314	8	9
-6	47	10	-3	8	227	5	-1	8	153	5	-0	4	370	8	-3	1	202	5	2
-5	173	6	-5	9	173	4	-17	9	135	7	-4	5	141	4	-5	2	218	5	8
-4	108	5	2	10	31	35	-12*	10	44	23	10	6	260	6	-7	3	114	3	-2
-2	209	5	0	11	215	6	-2	11	190	5	10	7	37	8	-6	4	290	7	11
-1	95	8	14	12	80	5	9	12	142	4	-2	10	185	4	-2	5	275	6	3
0	168	6	17	13	151	4	3	13	107	4	0	11	63	6	-11	6	49	9	-12
3	109	6	25	16	78	6	-10	14	99	5	-3	12	253	6	1	7	381	9	-19
4	199	5	1	17	115	5	-2	15	68	6	15	13	124	7	6	8	99	4	20
5	95	6	-39	18	99	6	5	16	49	8	6	14	148	5	-10	9	106	4	-2
6	181	5	-20	H,K=		6,-10		17	170	5	-0	15	91	5	14	10	268	6	-9
7	49	11	10	-13	61	11	-5	H,K=		6,	-8	17	196	5	14	11	88	5	-0
8	89	7	-1	-12	100	5	2	-16	115	6	-5	H,K=		6,	-6	12	271	6	9
9	107	5	-8	-11	153	5	-4	-14	50	10	3	-18	118	6	-5	14	159	5	-13
10	104	6	9	-10	66	6	8	-13	116	7	-4	-17	57	13	6	15	128	4	3
11	208	5	-4	-9	130	5	-2	-12	37	12	9	-16	216	6	5	16	49	9	-2
13	206	5	-5	-8	37	18	-1	-11	238	6	-9	-14	137	7	-8	17	141	5	-4
16	89	8	6	-7	83	10	2	-10	35	13	-3	-13	134	4	-9	18	80	7	0
H,K=		6,-12		-6	239	6	-8	-9	320	7	-6	-12	34	20	12	H,K=		6,	-4
-11	55	11	8	-5	29	17	4	-8	134	4	7	-11	388	9	-8	-18	207	5	-5
-10	149	5	-10	-4	441	11	6	-7	138	4	-4	-9	375	8	6	-16	280	6	2
-9	63	8	10	-3	81	5	-3	-6	363	8	-15	-8	155	4	5	-14	195	5	-2
-6	114	6	-6	-2	247	6	8	-4	391	9	-5	-7	128	4	-14	-13	172	5	5
-5	107	4	-5	-1	136	4	-2	-2	267	6	28	-6	375	9	-4	-11	389	10	-7
-4	254	6	-3	1	263	6	-8	-1	119	3	11	-5	73	4	-13	-10	66	5	0
-2	169	4	12	2	73	5	-24	0	116	3	27	-4	354	8	11	-9	264	6	5
-1	222	5	3	3	228	5	-21	1	278	6	27	-3	191	4	-8	-7	47	9	-8
1	306	7	-5	4	25	16	8	2	186	5	0	-2	54	4	5	-6	130	3	2
3	359	8	4	5	57	5	29	3	105	4	-30	0	254	6	12	-5	372	9	11
5	150	4	24	7	183	4	3	4	189	4	-54	2	343	8	8	-4	26	12	-3
6	235	6	-5	8	80	5	-10	5	135	4	-3	4	362	8	2	-3	377	9	9
7	60	6	17	9	304	7	4	6	169	5	16	5	154	4	-10	-2	244	6	12
8	191	6	20	11	142	4	-13	7	285	7	-15	6	224	5	-2	-1	164	4	-1
9	81	5	-6	12	117	7	1	9	340	8	6	7	394	9	8	0	408	10	33
10	83	6	-0	14	185	5	-9	10	50	7	-5	9	333	8	-11	1	27	8	14
11	94	5	-3	16	169	5	-1	11	245	6	-6	10	93	4	3	2	546	12	1
12	88	6	3	17	40	15	29	12	129	4	4	11	116	5	-11	3	222	5	35
14	154	5	-2	18	35	17	2	14	191	5	-12	12	86	5	6	4	443	10	5
15	61	7	4	H,K=		6,	-9	15	90	5	-1	13	63	6	7	5	201	5	13
16	137	6	1	-14	230	5	1	16	126	5	3	14	183	5	2	6	141	4	4

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
7	216	5	-20	-4	32	7	12	-11	108	5	2	15	75	7	-4	-19	116	5	-11
8	186	5	-14	-3	576	14	44	-10	490	11	-7	H,K=	6,	2		-17	244	6	-10
9	285	6	3	-2	135	3	-2	-9	126	4	3	-21	78	8	3	-15	262	6	3
10	179	4	6	-1	313	8	3	-8	278	6	8	-19	100	5	2	-14	179	5	4
11	55	11	-0	0	467	11	29	-7	348	8	-8	-18	60	8	8	-13	75	6	7
13	169	4	11	1	88	3	-1	-6	63	4	5	-17	247	6	3	-12	325	9	-3
14	93	6	2	2	435	10	3	-5	461	11	5	-15	238	5	9	-10	281	7	-6
15	223	5	-12	4	236	5	-11	-4	145	4	12	-14	115	5	-7	-9	78	5	11
17	116	5	-11	5	95	3	-2	-3	403	9	17	-13	99	5	14	-8	94	4	5
18	86	7	-5	6	65	4	3	-2	57	4	22	-12	446	10	-18	-7	106	4	-6
H,K=	6,	-3		7	165	4	-4	-1	79	4	2	-10	528	12	1	-6	117	4	5
-18	110	5	2	8	259	7	-6	0	224	5	-8	-9	139	4	-9	-5	156	4	1
-17	52	13	-7	9	123	4	-3	1	213	5	34	-8	247	6	1	-4	237	6	13
-15	223	6	1	10	242	7	-13	2	365	8	17	-7	196	5	6	-3	60	5	-7
-14	136	4	-2	11	88	5	6	3	308	7	-6	-6	106	4	5	-2	290	6	-7
-13	324	7	2	12	56	8	-10	5	197	4	-0	-5	270	7	-8	-1	122	4	-5
-11	258	6	-5	13	201	5	-3	6	278	6	3	-4	115	3	-4	1	384	9	-9
-10	357	8	4	15	213	5	3	8	336	8	5	-3	218	5	-8	3	327	8	-6
-9	101	4	-6	17	121	5	-0	9	86	5	11	-2	36	7	16	5	154	5	-9
-8	473	11	-5	H,K=	6,	-1		10	267	6	-2	1	405	10	5	6	197	5	-7
-7	83	4	-11	-20	141	5	-0	11	44	9	4	3	456	11	-8	8	228	5	-4
-6	367	8	-1	-18	160	5	-1	12	84	5	3	4	101	4	7	10	58	8	6
-5	95	3	-9	-17	113	5	3	13	193	5	-3	5	217	5	-1	H,K=	6,	5	
-4	153	4	15	-15	308	7	-8	15	157	5	4	6	195	5	-17	-20	124	7	19
-3	228	5	4	-14	97	5	-4	H,K=	6,	1		8	316	7	5	-18	118	5	8
-2	179	5	-8	-13	403	9	1	-20	200	5	-2	9	61	14	2	-16	85	6	-1
-1	361	8	2	-11	295	7	-2	-18	208	6	5	10	230	5	11	-15	117	10	13
0	254	6	18	-10	320	7	3	-17	105	5	2	13	86	10	5	-14	268	7	12
1	202	5	29	-9	65	4	7	-16	102	5	11	H,K=	6,	3		-12	303	7	11
2	109	3	11	-8	357	9	3	-15	214	5	2	-20	199	5	0	-11	190	5	1
3	236	6	9	-7	97	3	-15	-14	34	15	-7	-18	167	5	9	-10	139	4	2
4	65	4	-7	-6	221	5	5	-13	324	7	10	-15	245	6	1	-9	351	8	3
5	498	11	20	-4	60	4	3	-11	147	4	-3	-14	122	5	4	-7	355	8	2
6	88	4	10	-3	166	4	10	-10	233	5	-4	-13	250	6	1	-6	108	4	-8
7	418	10	-6	-2	380	9	-10	-9	191	4	-14	-12	94	5	-12	-5	264	6	-3
8	81	4	6	-1	73	3	-15	-8	157	4	4	-11	81	5	7	-4	107	4	2
9	115	4	5	0	415	9	-17	-7	252	6	8	-9	288	7	9	-3	29	14	-21
10	276	6	9	1	109	3	-3	-6	50	5	-1	-8	52	6	-1	-2	241	5	-12
12	235	5	-6	2	321	8	20	-5	182	4	-9	-7	370	9	5	-1	130	4	-8
14	98	5	2	3	284	7	-7	-4	182	4	12	-5	222	5	17	0	176	5	-11
17	89	6	-10	4	89	3	1	-3	48	5	5	-4	285	7	1	1	106	4	1
18	103	6	3	5	494	11	3	-2	371	9	11	-3	179	4	-10	3	44	10	14
H,K=	6,	-2		7	367	8	1	-1	36	14	-8	-2	475	10	11	4	243	5	-4
-20	123	5	-1	8	73	5	-6	0	522	12	-14	0	358	9	-5	5	52	10	-6
-19	72	7	-1	10	205	5	-4	1	108	3	-3	3	102	4	-15	6	291	6	8
-18	180	5	0	11	179	5	-4	2	332	8	1	4	167	4	-5	8	122	5	-8
-16	220	5	-1	12	184	6	-2	3	360	9	8	5	132	4	2	9	101	5	-6
-14	141	4	5	13	70	12	-3	4	80	4	2	6	209	5	6	11	168	5	1
-13	188	5	-3	16	114	9	-2	5	315	7	4	7	96	10	-4	H,K=	6,	6	
-12	97	4	12	H,K=	6,	0		6	134	4	0	8	78	8	-7	-20	100	7	-2
-11	234	5	4	-21	108	8	3	7	140	4	-3	9	150	4	6	-19	158	5	4
-10	296	7	-5	-18	165	5	4	10	135	5	-9	11	202	5	-9	-17	257	6	4
-8	242	6	19	-17	110	5	-5	11	180	5	-1	13	136	6	2	-15	160	8	3
-7	342	8	-8	-16	134	5	1	12	75	6	-10	H,K=	6,	4		-14	96	9	13
-6	43	6	1	-15	154	4	2	13	159	5	3	-21	51	22	6	-12	98	7	2
-5	455	10	22	-12	252	6	15	14	53	9	-7	-20	60	10	-6	-11	160	5	-5

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-10	142	4	-7	-16	157	6	9	-2	235	5	6	-1	195	5	-7	6	82	5	11
-9	106	6	-8	-15	44	14	-4	0	218	5	3	1	350	8	10	7	193	5	5
-8	67	6	-1	-14	225	6	1	1	124	4	6	2	97	4	21	8	145	4	4
-7	75	7	5	-12	91	6	-9	3	152	6	-20	3	269	6	12	9	185	5	-2
-6	227	5	7	-8	96	5	2	4	102	5	-7	4	121	6	5	11	137	4	3
-4	327	8	-4	-7	125	5	-4	5	136	4	12	5	43	9	-8	12	185	6	-5
-2	277	6	4	-6	121	4	-7	6	97	5	-2	6	229	5	9	14	206	5	-11
-1	221	5	-13	-4	83	6	-5	11	155	5	-6	7	64	9	-4	15	45	10	14
0	101	5	-12	-3	226	5	-3	13	157	5	9	8	201	5	1	16	92	5	1
1	322	8	2	-2	48	10	-7	14	80	10	11	9	108	7	-6	H,K=		7,	-8
2	63	7	13	-1	241	6	2	H,K=		7,-13		12	112	4	4	-14	214	5	-1
3	238	6	13	1	149	5	-5	-7	105	8	-5	14	148	5	-1	-12	139	5	-5
7	49	10	-5	2	111	5	-3	-5	125	5	-5	16	129	5	-2	-11	163	5	1
8	77	7	8	4	147	8	1	-4	109	5	3	H,K=		7,-10		-9	220	6	-1
9	74	7	-4	H,K=		6,	10	-3	114	5	-1	-12	163	5	7	-8	127	8	-3
H,K=		6,	7	-16	134	6	-4	-1	62	7	-9	-11	140	5	-3	-7	219	5	4
-19	141	6	8	-14	94	6	-0	1	281	6	10	-10	50	12	1	-4	50	7	14
-17	71	20	10	-13	185	5	-2	3	287	7	-25	-9	174	5	-7	-3	313	7	2
-16	182	7	-7	-11	182	5	0	4	93	5	-2	-7	263	6	-10	-2	115	4	-8
-14	267	7	-7	-9	183	5	-1	6	179	5	-6	-6	69	11	4	-1	428	10	-3
-12	273	6	-5	-8	76	6	-2	7	42	10	-25	-5	154	6	9	0	74	4	-2
-11	186	5	-4	-7	111	5	-7	8	188	6	10	-4	175	5	-13	1	144	4	-16
-10	132	5	4	-6	183	5	-6	10	156	4	11	-3	129	4	13	2	296	7	-11
-9	266	6	-7	-4	140	7	-7	11	61	7	-6	-2	187	5	-6	3	35	11	4
-7	193	5	-5	0	98	6	4	13	62	8	-13	-1	284	6	3	4	310	7	5
-6	41	11	-8	2	122	6	-9	14	113	5	3	0	123	4	8	5	54	6	-16
-5	119	4	5	H,K=		6,	11	H,K=		7,-12		1	99	4	-19	6	281	6	14
-4	76	5	-5	-10	53	11	1	-9	209	5	1	2	153	4	11	7	154	4	-1
-3	108	5	6	-8	175	5	2	-7	194	6	-11	3	36	37	-15*	8	119	4	5
-2	90	10	-8	-6	171	5	-10	-6	43	11	11	4	296	7	-29	9	201	5	3
-1	262	6	1	-5	78	12	-6	-5	143	4	-11	5	60	6	11	11	163	5	2
1	266	6	-11	-4	110	6	-11	-4	194	5	-15	6	306	7	4	12	158	4	-4
2	118	6	-4	-3	142	5	-5	-3	56	8	-7	7	101	4	1	14	72	6	-2
4	242	6	-3	-1	171	5	-5	-2	237	5	1	8	81	5	12	15	79	6	-3
6	154	5	-9	H,K=		7,-16		0	124	5	-11	9	223	5	-1	16	60	9	-1
7	61	9	-12	0	168	7	-6	2	27	32	-10*	11	213	5	4	17	116	10	-2
8	101	7	4	2	79	9	7	3	44	21	-27	13	122	4	9	H,K=		7,	-7
H,K=		6,	8	3	161	5	1	4	233	5	-13	16	87	6	-4	-16	77	7	15
-17	158	5	8	5	172	5	16	5	104	4	18	17	117	5	6	-13	181	5	-2
-16	59	9	13	7	98	6	8	6	129	6	15	H,K=		7,	-9	-11	322	8	-5
-15	85	9	-5	8	75	11	-1	8	52	8	-1	-14	79	7	-2	-9	245	6	8
-13	73	7	-5	10	97	6	-3	9	179	5	-0	-13	123	5	3	-8	165	6	-12
-11	245	6	8	H,K=		7,-15		11	251	6	2	-12	100	5	-6	-7	99	4	-2
-9	213	6	5	-3	99	6	-11	13	133	4	3	-11	162	5	12	-6	353	8	1
-7	84	10	-7	0	104	5	-1	14	71	6	10	-9	116	5	-4	-5	40	8	8
-6	230	6	-7	1	112	5	5	16	96	6	-7	-8	88	5	-9	-4	456	11	9
-4	328	7	-4	2	64	8	-6	H,K=		7,-11		-6	306	7	1	-2	136	5	-1
-3	90	6	-4	3	124	4	8	-12	185	5	0	-4	428	10	4	-1	164	4	-5
-2	182	5	-9	5	90	5	19	-11	59	9	11	-2	280	6	2	0	250	7	-0
-1	70	6	-10	6	122	6	-21	-10	100	5	-5	-1	197	5	-1	1	182	4	15
1	99	6	-8	8	182	5	13	-7	50	8	-10	0	46	7	-3	2	270	7	9
2	119	6	-8	10	120	6	-1	-6	130	4	-4	1	334	8	-3	3	139	5	19
3	98	5	-3	11	101	10	9	-5	115	5	8	2	59	5	7	4	129	4	-2
4	63	8	-9	H,K=		7,-14		-4	249	6	-1	3	156	5	18	5	179	4	0
H,K=		6,	9	-5	96	10	7	-3	72	11	2	4	55	6	-2	7	344	8	-1
-17	107	6	-1	-4	133	6	-6	-2	142	4	-13	5	52	7	-22	8	80	5	8

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
9	325	7	-4	5	311	8	18	0	478	11	-14	-4	46	10	-10	-4	46	9	-5
10	117	5	-1	6	114	4	-2	1	34	8	-3	-3	404	11	-18	-3	159	5	-1
11	166	5	3	7	339	8	18	2	366	8	26	-2	154	4	3	-2	186	4	10
12	148	5	-10	8	40	9	-0	3	122	3	-0	0	316	7	4	0	219	5	-8
13	65	6	11	9	289	7	14	4	215	5	8	1	25	12	14	1	137	4	-4
14	180	5	-6	11	83	5	1	5	200	5	4	2	318	7	-5	2	182	4	-5
15	46	13	-5	12	169	5	9	6	52	5	1	4	143	4	-9	3	214	5	1
16	92	5	3	14	137	5	-8	7	305	7	5	5	71	5	-3	4	69	6	-5
H,K=		7,	-6	15	119	5	-5	8	140	4	-3	6	129	5	2	5	79	8	9
-16	202	5	2	17	32	26	-22	9	117	4	9	7	80	5	-5	6	216	5	10
-14	181	5	-4	H,K=		7,	-4	10	79	7	-8	8	226	6	-2	8	243	6	-12
-12	65	8	0	-18	101	13	6	11	85	5	13	10	180	5	-4	10	165	6	2
-10	131	4	-3	-16	100	7	-15	13	142	4	-3	13	171	5	6	11	91	5	-5
-9	138	4	-6	-15	135	5	-1	14	91	5	-1	15	153	11	5	13	152	5	-1
-8	244	6	11	-14	128	5	8	15	174	5	8	H,K=		7,	0	H,K=		7,	2
-7	109	5	10	-13	137	4	-2	H,K=		7,	-2	-20	118	6	4	-20	195	5	-11
-6	237	6	-14	-10	188	5	-2	-19	79	9	16	-18	90	7	-4	-19	72	7	13
-5	128	4	5	-9	43	8	13	-17	58	10	-8	-17	190	5	6	-18	163	5	-1
-4	94	4	-16	-8	433	10	9	-16	73	7	-11	-16	71	9	-2	-17	128	5	5
-3	526	12	8	-6	541	13	25	-15	206	5	6	-15	259	6	-0	-15	218	5	-7
-1	385	9	10	-5	264	7	2	-14	100	7	3	-13	286	6	-7	-14	38	17	5
0	70	4	13	-4	121	4	-11	-13	269	6	-4	-12	77	6	-6	-13	271	6	-5
1	178	4	13	-3	401	9	23	-11	238	5	2	-11	178	4	3	-12	83	5	8
2	230	5	-6	-2	114	3	-7	-10	275	7	0	-10	347	8	3	-11	132	4	5
4	422	10	13	-1	334	8	14	-8	437	10	3	-9	86	4	8	-10	153	5	-5
5	99	4	-7	0	50	5	-8	-7	45	13	29	-8	408	9	9	-9	194	5	3
6	199	5	18	1	104	3	-10	-6	338	8	11	-7	103	4	8	-8	132	4	13
7	40	8	-4	2	223	5	17	-5	235	5	19	-6	162	4	-2	-7	343	8	2
8	52	6	-9	3	149	4	-4	-4	52	5	-17	-5	40	7	7	-5	54	6	-5
10	240	5	9	4	172	4	9	-3	358	8	10	-4	234	6	-6	-4	254	6	5
11	127	6	12	5	190	4	-6	-2	332	8	5	-3	122	4	-2	-2	331	7	-8
12	178	5	1	6	68	4	-1	-1	219	6	13	-2	297	8	-3	-1	77	4	4
14	80	5	4	7	236	6	6	0	222	5	7	-1	83	4	2	0	321	7	-18
15	121	5	-3	8	156	4	-2	1	90	4	9	0	200	5	10	1	145	4	-0
17	160	5	-4	9	40	10	-6	2	78	5	12	1	158	4	9	2	123	4	1
H,K=		7,	-5	10	284	6	-1	3	163	5	10	2	145	4	-5	3	275	6	-2
-18	135	5	3	12	196	5	-3	4	62	5	2	3	340	8	1	5	234	5	-12
-16	187	5	1	14	95	5	-3	5	355	8	-1	5	327	8	-1	7	127	8	2
-15	125	5	3	15	124	5	0	7	270	6	3	7	179	4	11	9	101	5	-2
-14	130	5	1	16	46	13	9	8	235	5	21	8	71	5	-3	10	85	5	-4
-13	218	5	1	H,K=		7,	-3	10	241	5	2	10	165	4	1	11	152	5	5
-12	35	40	-7*	-18	227	5	2	11	67	6	-1	11	117	6	-1	13	90	6	-1
-11	315	7	8	-16	207	5	-5	12	160	5	-10	12	140	4	0	H,K=		7,	3
-9	219	5	-11	-15	92	5	-2	14	57	8	-1	H,K=		7,	1	-19	106	6	7
-8	141	4	-4	-13	239	5	1	15	94	6	-3	-20	137	5	-7	-17	182	5	3
-7	134	4	6	-11	283	6	-2	H,K=		7,	-1	-18	164	6	7	-15	125	6	-4
-6	338	8	-19	-10	82	6	5	-18	194	5	9	-17	126	5	-3	-14	138	7	4
-5	172	4	6	-9	204	5	6	-16	164	5	-10	-15	103	6	9	-13	39	12	-5
-4	266	6	10	-8	36	16	3	-14	50	12	-7	-14	38	41	-7*	-12	369	8	10
-3	230	5	8	-7	169	4	11	-13	60	9	-7	-12	233	6	-12	-10	402	11	-12
-2	149	4	-12	-6	168	5	10	-12	141	4	-7	-11	121	6	-1	-9	92	6	3
0	309	7	3	-5	381	9	8	-11	159	4	-10	-10	386	9	-6	-8	137	4	-12
1	136	4	6	-4	59	4	-2	-10	274	7	8	-9	134	4	5	-7	273	6	-4
2	420	10	23	-3	311	7	-13	-8	77	4	13	-8	326	8	-11	-6	106	4	5
3	24	30	-38*	-2	209	5	1	-7	335	8	4	-7	421	9	-4	-5	278	6	-2
4	201	5	-1	-1	137	4	17	-5	539	12	16	-5	404	10	-4	-3	88	4	1

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-2	29	14	0	H,K=	7,	6		-6	209	5	-2	-6	104	5	1	-11	194	5	-2
-1	99	4	-0	-16	127	5	4	-5	43	12	4	-5	135	5	8	-9	284	7	9
0	68	5	-5	-14	184	5	-2	-4	178	5	-3	-4	75	6	-9	-7	220	6	15
1	227	5	-4	-12	180	6	-16	-2	111	5	6	-1	123	5	7	-6	101	8	17
3	206	5	8	-11	207	6	3	1	117	6	10	1	290	7	-9	-4	187	5	11
4	84	5	-11	-10	91	11	-10	H,K=	7,	10		2	39	17	8	-3	94	5	-10
5	162	5	-1	-9	361	8	-7	-11	40	18	-17	3	234	5	-19	-2	250	6	-4
6	226	5	-5	-8	90	5	11	-9	91	7	-1	4	128	6	-15	-1	167	4	-1
8	241	6	13	-7	265	7	-4	-8	98	6	4	6	213	6	-3	0	31	33	-12*
10	94	5	3	-5	85	11	10	-7	35	27	16	7	56	7	11	1	79	6	12
H,K=	7,	4	-4	149	5	-8	-6	91	6	3	8	183	5	9	2	236	5	3	
-18	103	6	-1	-2	203	5	-8	-5	67	8	3	10	57	12	-1	4	355	8	10
-17	96	6	-2	0	87	9	1	-3	124	5	10	11	115	5	9	6	250	6	-1
-15	184	5	-10	1	100	5	-0	H,K=	8,-15			13	98	6	1	7	130	6	-2
-14	149	5	-3	2	71	7	-13	-2	138	5	-12	14	82	6	5	9	207	6	-14
-13	83	11	-7	4	233	5	3	0	117	5	-18	H,K=	8,-11			11	191	5	3
-12	161	5	-5	6	147	5	-5	1	121	5	-9	-11	125	5	0	13	70	6	6
-11	105	5	-9	H,K=	7,	7		2	60	8	6	-9	187	5	-4	H,K=	8,	-8	
-10	52	8	15	-17	165	6	-7	3	169	5	-4	-8	32	33	27*	-14	119	6	-2
-9	328	8	-17	-15	126	5	8	4	55	8	50	-7	204	5	-8	-13	116	6	0
-8	46	10	-12	-14	105	5	2	5	184	5	5	-6	124	4	-2	-12	90	6	-7
-7	324	8	9	-12	167	5	4	9	75	7	10	-4	243	6	7	-11	188	5	-0
-6	134	4	-1	-11	120	5	-1	10	117	5	19	-2	243	6	-3	-9	58	7	-7
-5	195	5	-2	-9	147	4	9	H,K=	8,-14			0	195	5	-9	-8	191	5	8
-4	253	8	-3	-8	140	5	-0	-5	120	6	-12	2	64	7	0	-6	272	6	4
-3	66	6	-8	-6	212	5	-3	-3	89	5	10	3	110	8	7	-4	341	7	-20
-2	295	7	-4	-5	74	6	2	-2	79	6	5	4	205	5	1	-3	121	4	8
0	199	5	-4	-4	171	5	2	0	132	5	1	6	116	4	-6	-2	234	5	7
1	105	5	-7	-3	95	10	10	1	92	5	-2	7	70	6	9	-1	329	7	-19
3	112	4	-4	-2	156	4	-5	2	50	9	0	9	198	5	-1	1	315	7	4
4	141	4	-0	-1	170	5	-13	3	126	5	-1	11	181	5	-3	2	128	4	1
5	94	8	-2	0	108	5	-5	4	51	9	-4	13	109	5	10	3	154	6	9
6	193	5	-1	1	216	5	-1	6	195	6	13	14	103	5	5	5	124	5	-9
8	63	7	13	3	145	5	3	7	51	9	12	H,K=	8,-10			6	158	4	-1
9	109	5	-9	H,K=	7,	8		8	153	6	-14	-12	168	5	-2	7	199	5	2
H,K=	7,	5	-16	145	10	8		10	89	6	-2	-10	113	5	1	8	56	10	7
-19	142	7	-7	-15	33	21	28	11	108	6	-1	-9	38	12	19	9	121	4	-3
-17	240	6	-7	-14	224	5	-3	H,K=	8,-13			-8	88	5	10	10	94	5	6
-15	180	5	1	-13	72	7	13	-7	120	6	-6	-7	75	6	-5	11	90	5	5
-14	143	5	-0	-12	147	7	-1	-6	74	7	2	-6	254	6	5	12	197	5	0
-13	68	8	9	-11	177	5	1	-4	163	5	-9	-4	189	5	-18	13	29	20	20
-12	280	6	5	-9	163	5	2	-2	221	5	-4	-3	70	6	9	14	168	5	-5
-11	50	16	27	-7	123	5	-0	-1	93	5	6	-2	110	4	1	16	46	12	0
-10	311	7	8	-4	94	7	-4	0	185	5	-1	-1	196	5	-3	H,K=	8,	-7	
-7	138	4	10	-3	103	5	8	1	134	4	-21	0	30	31	9*	-14	233	6	5
-6	200	5	5	-2	33	17	16	3	215	5	22	1	358	8	2	-13	103	5	-1
-5	76	7	-2	-1	166	5	-0	4	135	4	-0	2	54	11	-2	-12	107	5	2
-4	231	5	0	1	144	5	3	5	154	4	-0	3	181	5	-6	-11	200	5	-6
-2	71	6	-8	2	116	5	0	8	47	9	21	4	140	6	4	-10	105	5	-2
-1	191	5	11	4	147	9	-0	9	108	5	-2	6	224	5	-2	-9	226	5	5
1	266	6	-2	H,K=	7,	9		10	53	9	1	7	145	4	-4	-8	96	6	0
3	241	5	-7	-13	148	5	-5	11	154	5	-4	8	157	4	-4	-7	160	4	-0
4	38	40	-11*	-11	185	5	-2	13	75	7	0	12	117	4	-12	-5	33	12	18
5	87	7	9	-9	143	5	-11	H,K=	8,-12			14	163	5	3	-4	103	4	3
6	153	5	-2	-8	108	6	1	-9	87	9	6	H,K=	8,	-9		-3	296	7	2
8	127	5	0	-7	70	7	3	-7	125	5	-9	-12	110	5	-2	-2	57	6	-7

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-1	352	8	17	10	172	6	-6	H,K=		8,	-2	-16	127	5	7	-5	327	7	-4
0	115	4	-1	12	136	5	3	-18	211	5	0	-15	103	6	2	-4	82	5	4
1	164	4	-5	13	85	12	5	-16	155	8	-8	-13	111	5	4	-3	171	4	1
2	235	5	8	14	89	5	1	-15	205	5	-2	-12	142	4	7	-2	194	7	-17
3	98	4	5	15	122	5	3	-13	256	6	-2	-11	143	4	5	0	192	5	-5
4	392	9	8	H,K=		8,	-4	-12	103	7	-0	-10	110	5	-5	1	177	5	13
6	191	5	4	-16	132	5	0	-11	211	5	8	-8	83	5	-4	2	96	8	2
7	173	4	14	-15	120	5	-11	-8	156	4	3	-7	326	8	4	4	56	12	11
9	176	7	2	-13	275	6	-1	-7	152	5	4	-6	41	10	7	6	141	4	-1
10	73	7	-2	-11	257	6	1	-6	151	4	-10	-5	454	11	-4	8	200	6	-7
11	123	6	-8	-9	198	5	0	-5	245	6	-5	-4	88	4	3	10	110	6	7
12	82	5	-18	-8	208	5	7	-4	80	8	4	-3	215	5	6	H,K=		8,	3
15	90	6	1	-7	79	5	14	-3	333	8	7	-2	257	6	-4	-18	81	7	8
H,K=		8,	-6	-6	368	8	7	-2	266	6	-5	-1	40	12	15	-17	170	5	1
-13	274	6	2	-5	167	4	-1	-1	79	4	-0	0	324	7	9	-15	229	5	-4
-11	270	6	-2	-4	196	4	8	0	388	9	-1	2	277	6	-4	-14	32	18	6
-10	54	10	12	-3	57	10	7	1	68	5	-0	3	29	19	-5	-13	138	6	-1
-9	123	4	-0	-2	71	6	-4	2	175	4	10	5	153	4	-3	-10	126	6	8
-8	183	5	6	-1	45	7	2	3	48	7	1	6	101	6	2	-9	175	12	4
-6	389	9	14	0	425	10	21	4	117	5	-2	8	184	5	5	-8	82	6	-8
-5	28	17	4	1	89	4	2	5	253	6	-12	10	97	5	-5	-7	224	5	-5
-4	347	8	-1	2	310	7	-12	7	193	5	6	11	80	6	-0	-6	98	6	2
-3	91	6	4	3	99	4	3	8	83	5	-2	H,K=		8,	1	-5	121	4	10
-1	186	4	7	4	121	4	2	12	52	8	7	-18	49	12	4	-4	281	6	-1
0	228	5	6	5	246	6	8	13	122	6	-6	-17	197	5	-1	-3	57	7	-4
1	202	5	-9	7	305	7	-4	14	62	13	9	-15	226	5	-6	-2	346	8	2
2	308	7	-14	9	120	6	-4	H,K=		8,	-1	-13	155	8	-4	0	153	4	-8
4	59	6	7	10	104	5	-2	-18	48	13	-8	-12	183	5	1	1	161	4	0
5	276	7	-15	12	113	5	-2	-17	116	5	-2	-10	266	6	8	3	173	5	-10
7	290	6	16	14	83	8	7	-15	208	5	-7	-9	48	10	23	5	165	5	-5
9	199	5	4	15	118	5	-0	-13	241	7	2	-8	263	6	-12	7	39	12	18
10	128	4	-1	H,K=		8,	-3	-12	132	5	9	-7	96	5	1	9	144	5	-3
11	96	6	9	-18	83	12	-6	-10	329	8	13	-4	198	5	-1	H,K=		8,	4
12	182	6	-6	-16	196	5	-12	-9	60	7	-9	-3	156	4	3	-17	145	5	3
14	126	5	11	-15	114	5	0	-8	358	8	-15	-2	253	6	-6	-16	66	8	8
H,K=		8,	-5	-14	96	5	-5	-7	103	5	2	0	278	6	-0	-15	89	6	4
-16	238	6	1	-13	79	5	8	-6	289	7	0	1	204	5	-15	-14	173	5	3
-14	214	5	4	-12	87	5	4	-5	274	6	-5	2	39	11	-7	-12	239	6	3
-11	103	6	-8	-10	230	5	9	-3	321	7	-2	3	276	6	-13	-10	231	6	2
-10	116	4	6	-9	61	6	6	-2	276	7	0	5	215	6	11	-9	160	5	5
-9	132	4	3	-8	374	9	13	0	115	4	-5	6	60	12	-7	-8	78	16	1
-8	243	6	3	-6	239	5	-10	1	116	4	-1	7	96	6	2	-7	298	7	-0
-6	187	5	-4	-5	258	6	-6	2	51	8	-19	8	91	6	1	-5	182	5	-5
-5	246	6	8	-4	78	4	9	3	225	6	2	9	53	9	7	-4	99	9	-4
-3	406	9	5	-3	502	11	-5	4	98	4	10	10	133	5	6	-1	154	5	-1
-2	41	8	14	-2	57	9	-5	5	274	6	2	11	72	7	5	0	78	10	-7
-1	376	9	13	-1	380	10	-17	6	133	5	-1	H,K=		8,	2	1	170	5	3
0	78	4	-4	1	77	4	-1	7	155	6	-3	-18	113	8	7	3	163	5	-1
1	168	4	10	2	158	4	-20	8	181	5	1	-17	63	8	-12	4	146	5	-11
2	301	7	-6	3	104	4	-3	10	176	5	-1	-14	149	5	-1	5	134	5	-2
3	148	4	15	4	171	4	6	11	71	6	8	-12	233	5	-2	6	217	5	-3
4	310	7	14	5	170	4	3	12	135	5	8	-10	232	6	6	8	130	7	-2
5	86	4	0	7	106	4	-9	13	32	33	21*	-9	138	7	8	H,K=		8,	5
6	93	4	-1	8	209	5	-2	H,K=		8,	0	-8	190	5	6	-17	121	6	6
8	134	4	4	10	199	5	-5	-18	224	6	5	-7	377	8	-0	-16	63	8	8
9	82	6	-1	12	175	5	11	-17	62	8	4	-6	37	25	23	-15	103	6	-8

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-14	99	5	5	-7	78	7	-7	12	54	10	-2	10	49	8	11	-4	155	5	10
-13	36	15	-5	H,K=	9,-15			13	85	6	5	11	143	6	10	-3	128	4	11
-12	67	12	0	2	98	11	19	H,K=	9,-10			14	51	11	-12	-2	64	6	15
-11	92	7	-16	6	128	6	-3	-11	119	5	2	H,K=	9, -7			-1	216	5	7
-10	64	7	-3	H,K=	9,-14			-9	244	6	-0	-14	120	5	9	0	53	7	-16
-9	247	6	-9	-3	78	11	10	-7	155	5	-15	-13	129	5	-9	1	218	6	7
-7	261	6	-4	-2	157	5	3	-6	200	5	6	-12	88	8	-13	2	200	5	-2
-6	179	5	-1	0	56	9	-13	-4	232	5	0	-11	148	5	-13	3	69	6	5
-5	128	5	-4	1	155	5	-15	-2	208	6	-0	-10	80	6	9	5	242	5	-2
-4	204	5	-10	3	211	6	4	-1	32	35	-2*	-8	228	5	1	6	93	5	-11
-2	210	5	-1	5	163	5	7	0	136	4	-0	-7	31	15	10	7	198	5	-1
0	94	5	-11	6	62	8	7	1	127	6	3	-6	235	6	-5	9	115	5	7
1	89	5	-4	8	94	6	6	3	81	12	1	-4	198	5	6	10	167	5	-12
3	112	5	8	H,K=	9,-13			4	194	5	-16	-3	199	5	-0	12	177	5	10
4	102	7	-10	-6	41	15	-1	6	134	4	2	-1	316	7	11	H,K=	9, -4		
6	82	7	-8	-5	152	6	2	7	97	5	3	0	82	5	3	-16	216	5	2
H,K=	8,	6		-2	122	5	2	8	46	9	-6	1	256	6	15	-15	41	14	-9
-16	82	11	16	-1	95	5	-1	9	184	5	4	2	65	6	-9	-14	170	5	-1
-15	92	6	13	0	89	8	4	11	145	5	6	3	128	5	4	-13	98	5	5
-14	118	5	0	1	95	5	-27	13	69	7	3	4	74	5	6	-11	133	5	-1
-12	212	5	-3	3	52	8	-17	H,K=	9, -9			5	144	8	5	-10	159	4	10
-10	176	5	-5	4	116	5	8	-12	175	5	2	6	99	5	-5	-9	76	10	-8
-7	69	13	-9	6	165	5	-4	-10	70	12	-4	7	168	5	-4	-8	196	5	-5
-6	190	5	5	8	140	5	-14	-8	179	5	6	9	87	5	-3	-7	77	6	6
-5	74	6	5	11	134	7	7	-6	244	6	-13	10	94	5	9	-6	81	5	5
-4	141	6	-14	H,K=	9,-12			-4	134	7	-1	12	180	5	9	-5	244	6	0
-1	180	5	1	-7	92	6	-10	-3	104	4	-3	14	131	5	9	-4	56	7	3
0	50	9	3	-6	120	5	-7	-1	276	6	7	H,K=	9, -6			-3	295	7	-9
1	208	7	-5	-4	246	6	9	1	287	6	0	-14	220	5	1	-1	289	7	-2
2	39	13	-1	-2	183	5	-1	2	125	5	20	-13	106	5	-9	0	205	5	-1
3	139	5	-7	-1	92	6	-2	3	106	4	-10	-11	245	6	2	1	59	11	-9
4	80	7	-7	0	100	5	-18	4	129	5	6	-9	177	5	-8	2	228	6	-1
H,K=	8,	7		1	146	4	4	5	57	7	6	-6	67	8	2	3	91	6	7
-14	137	5	12	3	222	7	9	6	207	5	-4	-5	155	4	2	4	149	4	-6
-12	91	6	-8	5	113	4	2	7	94	5	3	-4	87	5	2	5	106	4	-1
-11	185	5	-2	7	37	13	-15	8	115	4	3	-3	287	7	4	6	83	5	2
-10	84	6	11	9	143	5	-11	12	124	5	-7	-1	176	5	-7	7	58	7	6
-9	235	6	-0	10	54	12	-8	H,K=	9, -8			0	128	4	5	8	103	5	9
-8	46	11	2	11	120	7	-7	-13	67	12	-10	1	123	4	1	9	130	4	6
-7	162	5	-6	12	39	15	9	-12	59	11	-16	2	312	7	-1	10	160	5	3
-6	61	9	-6	H,K=	9,-11			-11	268	6	3	4	320	7	-4	12	106	5	-0
-4	141	5	-5	-10	102	6	-6	-10	42	11	3	7	111	4	5	13	80	7	-5
-2	117	5	-5	-9	96	6	-10	-9	289	7	-1	8	57	7	5	H,K=	9, -3		
2	96	6	12	-7	187	5	-3	-7	105	5	-7	9	158	4	-4	-15	182	5	1
H,K=	8,	8		-6	155	5	-4	-6	114	7	7	10	78	6	7	-13	330	8	10
-12	118	10	6	-4	51	9	-7	-5	54	11	-2	11	92	5	-1	-12	47	10	-0
-11	84	7	4	-3	117	5	-1	-4	190	5	16	12	31	19	-8	-11	243	6	-11
-9	79	7	-5	-1	164	5	-3	-3	100	9	8	H,K=	9, -5			-10	133	6	12
-8	110	7	7	1	209	5	-16	-2	160	5	-4	-15	81	7	-4	-8	176	5	-1
-6	189	6	3	2	51	12	5	-1	44	10	-8	-13	274	6	2	-7	78	7	2
-4	152	5	-5	3	139	4	7	0	110	5	14	-12	36	14	17	-6	209	5	9
-3	91	10	-2	4	237	6	2	2	211	5	-5	-11	194	5	-9	-5	59	7	-10
-2	106	6	-2	5	60	7	18	4	302	7	13	-10	133	4	1	-4	193	5	4
-1	138	8	1	6	235	6	-16	6	175	4	8	-9	50	11	-16	-2	91	6	5
H,K=	8,	9		8	136	5	6	7	173	5	-6	-8	272	6	-3	-1	70	6	-8
-9	174	5	2	11	108	5	-2	9	198	5	-6	-6	311	7	-5	0	326	7	8

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2 PAGE25

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
2	189	5	6	-16	35	18	-9	-2	271	7	-0	-4	217	5	6	-6	176	5	-3
3	120	4	-2	-15	179	5	2	-1	55	19	2	-2	158	5	-0	-4	2.8	5	-4
4	91	5	6	-13	124	5	-3	0	162	4	6	-1	33	22	-6	-3	67	6	16
5	233	5	2	-12	228	5	-2	1	189	5	-6	0	56	10	-3	-2	145	4	3
7	235	5	-2	-10	269	6	-1	3	195	5	1	H,K=	9,	7		0	43	10	5
9	124	6	12	-9	31	17	7	5	169	7	0	-10	71	16	2	1	114	5	-4
10	104	5	-4	-8	243	6	-11	6	87	6	-3	-7	94	7	7	2	132	4	9
H,K=	9,	-2	-7	56	8	-3	8	124	5	2	-6	122	5	-4	3	64	6	4	
-16	188	5	0	-6	144	5	-9	H,K=	9,	3	-4	101	6	-3	4	157	5	-16	
-15	73	7	-9	-5	204	5	2	-14	162	6	-2	-3	102	6	2	7	121	5	2
-14	50	21	-5	-4	71	6	-2	-12	184	5	7	H,K=	10,	-13		9	164	5	-6
-13	62	9	-2	-3	250	6	-1	-11	38	13	12	-3	35	19	-3	11	99	6	-1
-12	175	5	-2	-2	165	4	-2	-10	122	5	2	-2	140	5	-7	H,K=	10,	-8	
-10	314	7	7	-1	67	6	6	-9	152	4	3	-1	108	6	6	-9	97	5	-7
-8	181	5	-2	0	46	11	-2	-7	283	6	-9	1	176	5	-6	-8	151	5	-2
-7	113	5	0	1	126	4	10	-5	272	6	-11	2	41	13	-2	-7	95	6	6
-6	129	4	-14	2	103	5	3	-4	82	5	3	3	179	5	-7	-6	179	5	6
-5	267	7	3	3	231	5	-10	-3	130	4	1	5	93	12	4	-4	91	7	-9
-4	107	4	9	5	146	4	-2	-2	128	4	-4	6	101	7	12	-3	230	5	0
-3	391	10	-4	6	73	6	-1	-1	121	6	-8	H,K=	10,	-12		-1	285	6	0
-2	95	5	-7	7	36	13	-1	0	138	4	-2	-5	135	5	-5	1	203	5	-2
-1	207	5	-0	8	139	6	-10	1	119	5	-3	-2	77	6	0	2	103	5	7
2	182	6	3	10	176	6	2	4	68	7	-7	-1	137	5	-6	3	1.7	4	5
3	157	4	-4	H,K=	9,	1	6	150	5	-8	0	82	6	11	4	168	5	7	
4	140	4	-0	-16	83	7	1	H,K=	9,	4	1	84	6	-7	5	42	10	13	
5	153	6	-0	-15	124	5	4	-15	151	6	-5	4	145	6	-15	6	150	4	-0
8	165	5	-3	-14	75	6	2	-13	36	16	-19	6	163	5	-3	8	58	7	6
9	39	12	26	-13	168	5	-6	-12	58	8	-1	8	127	5	0	11	78	6	12
10	178	5	9	-12	110	5	1	-10	141	5	-2	9	76	7	5	H,K=	10,	-7	
12	110	9	3	-10	85	5	-1	-9	116	5	-6	H,K=	10,	-11		-11	249	7	-8
H,K=	9,	-1	-9	115	5	10	-7	96	7	-0	-6	182	5	13	-9	223	7	-14	
-17	88	7	4	-8	49	27	-1	-6	74	8	-3	-4	265	6	5	-8	81	6	9
-16	130	7	2	-7	213	5	2	-4	210	5	-2	-2	139	5	-10	-7	96	5	4
-15	193	6	-4	-5	262	6	-5	-2	249	6	-5	-1	68	7	4	-6	166	5	-5
-14	30	31	-6*	-4	125	5	-5	-1	45	10	1	1	183	5	4	-5	101	5	-1
-13	246	6	-4	-3	191	5	7	0	95	6	4	3	155	5	1	-4	104	6	-3
-12	64	7	-10	-2	280	6	-3	1	165	5	2	9	144	7	-0	-3	152	4	-6
-11	127	7	-7	0	282	6	-8	3	189	7	-8	H,K=	10,	-10		0	98	4	-10
-10	34	37	14*	1	79	9	-5	5	110	6	3	-9	133	5	0	2	195	5	-7
-9	71	16	-1	2	140	4	-10	H,K=	9,	5	-7	194	5	9	4	218	5	10	
-8	159	4	-3	5	109	6	-1	-15	44	14	-7	-6	112	5	1	5	1.1	5	2
-7	96	6	-18	6	98	5	5	-14	123	5	-3	-5	41	11	4	6	85	9	2
-6	114	6	-5	7	98	5	14	-12	173	6	-1	-3	131	5	-2	7	151	7	-8
-5	189	7	-5	8	123	5	-1	-10	128	5	-13	-2	104	5	8	9	176	7	4
-4	73	7	-2	H,K=	9,	2	-9	146	5	-6	-1	176	5	-10	10	76	7	-1	
-3	216	5	18	-17	174	5	-4	-7	183	5	-7	0	53	14	-7	11	98	12	-3
-2	245	6	-2	-15	228	6	-2	-6	56	9	-8	1	123	5	-13	H,K=	10,	-6	
0	305	7	8	-14	87	6	8	-5	123	5	-5	2	143	4	-2	-13	1.1	6	-12
2	275	6	1	-13	123	5	-8	-1	141	5	5	4	205	5	-12	-12	92	6	-3
3	140	4	-4	-12	201	5	-4	1	138	6	0	6	209	5	4	-11	65	9	13
5	239	5	-1	-10	132	5	-7	3	93	6	5	8	129	5	16	-10	84	6	-1
6	60	7	-9	-9	92	5	-13	H,K=	9,	6	11	85	8	11	-8	224	5	-5	
7	140	5	5	-8	86	6	2	-11	107	6	5	H,K=	10,	-9	-6	268	6	3	
8	62	7	2	-6	43	17	26	-9	165	5	1	-9	206	5	-14	-5	100	5	11
H,K=	9,	0	-5	103	5	6	-7	160	5	16	-8	76	10	15	-4	1.7	5	-0	
-17	149	5	4	-4	148	4	2	-6	118	5	1	-7	111	5	1	-3	203	5	2

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-1	234	5	-1	0	241	5	1	7	85	6	-4	-1	73	12	-5	H,K=	11,		-6
1	245	5	5	2	223	5	1	H,K=	10,		1	1	162	5	-1	-11	166	5	4
4	99	7	6	3	65	9	-1	-12	254	6	2	3	151	5	11	-9	198	5	3
5	164	5	2	4	141	5	15	-10	219	5	1	H,K=	11,		-11	-8	88	6	1
6	97	5	13	7	95	6	10	-8	125	5	3	-2	95	6	-11	-6	185	5	0
7	137	6	-4	8	98	6	2	-7	127	5	9	-1	125	6	2	-5	120	5	-2
10	95	11	-2	9	65	9	-8	-6	30	19	-3	0	72	7	5	-4	120	5	-11
H,K=	10,		-5	10	96	6	-4	-5	203	5	3	2	59	10	-7	-3	94	5	-5
-14	123	5	2	H,K=	10,		-2	-3	130	4	2	4	168	5	5	0	117	5	-1
-13	137	5	6	-15	154	5	-1	-2	59	8	-15	6	150	5	-1	2	199	5	3
-11	209	7	-13	-13	274	6	-4	0	44	10	9	H,K=	11,		-10	4	153	5	8
-9	171	5	5	-11	199	5	1	1	150	5	-12	-6	144	5	1	5	143	5	8
-6	96	10	9	-10	169	5	-6	3	186	5	-13	-4	195	5	-7	7	172	5	4
-5	243	5	7	-8	250	6	-1	5	91	6	8	-2	127	6	5	H,K=	11,		-5
-4	82	7	15	-6	125	4	3	6	62	9	-9	-1	106	5	4	-10	73	7	-15
-3	159	4	-15	-4	34	19	15	H,K=	10,		2	1	159	8	0	-8	254	6	-9
-1	67	6	-6	-2	144	4	4	-13	125	5	13	2	40	12	4	-6	238	6	7
0	147	6	-12	-1	57	7	4	-12	104	7	-1	3	114	5	10	-5	89	7	-2
1	39	11	4	0	188	6	-11	-10	70	9	-2	7	80	12	3	-4	70	6	4
2	270	6	2	2	157	4	-12	-9	132	5	-3	H,K=	11,		-9	-3	186	5	4
4	223	5	3	3	151	4	-3	-8	59	9	6	-7	151	6	7	-2	31	40	5*
6	69	9	2	5	221	5	-3	-7	184	5	-11	-3	134	5	-3	-1	185	6	-6
7	137	5	5	7	147	5	-11	-5	172	5	-17	-2	78	7	-2	1	89	5	7
8	78	6	2	9	49	11	0	-4	142	5	-6	-1	214	6	8	3	40	12	-4
9	171	5	-2	H,K=	10,		-1	-3	104	5	6	1	134	5	1	5	136	5	-3
H,K=	10,		-4	-15	58	11	4	-2	189	5	-2	2	114	5	3	7	99	5	-2
-14	77	7	2	-12	150	5	10	0	177	5	-1	4	190	5	12	H,K=	11,		-4
-13	184	5	-2	-11	46	11	-11	2	67	7	14	5	36	14	7	-11	184	5	3
-11	191	5	5	-10	261	6	2	3	50	18	5	6	151	5	1	-9	147	5	3
-10	180	5	-7	-8	180	5	-1	H,K=	10,		3	7	55	10	-1	-6	90	5	2
-9	69	12	5	-7	159	4	5	-13	124	6	1	H,K=	11,		-8	-5	189	5	4
-8	304	7	14	-6	62	7	10	-12	175	5	2	-9	148	6	-5	-3	174	5	-1
-7	42	11	-7	-5	250	6	9	-10	131	7	-3	-7	93	5	9	-2	95	5	11
-6	234	5	-3	-3	209	5	-2	-9	56	9	19	-6	177	5	-7	0	225	5	1
-4	77	7	-4	-1	92	5	-10	-7	58	8	-5	-4	220	5	-5	2	190	5	-6
-3	136	4	-1	0	117	4	3	-5	46	11	-14	-2	86	8	8	3	55	8	14
-2	52	33	10	2	145	4	-2	-4	122	5	4	-1	81	6	-2	4	152	5	9
-1	192	5	3	3	166	5	3	-2	164	5	7	1	122	5	1	5	89	5	13
0	90	5	7	4	60	8	14	-1	68	7	7	2	107	5	-8	6	33	21	-8
2	96	5	-4	5	104	5	6	0	55	9	9	3	97	5	17	7	145	5	-5
3	130	4	-12	8	129	5	-7	1	163	5	2	5	52	9	-3	H,K=	11,		-3
5	191	5	-2	H,K=	10,		0	3	155	5	-8	7	165	5	3	-11	122	5	-1
6	70	8	-6	-15	152	6	-1	H,K=	10,		4	H,K=	11,		-7	-10	168	5	-4
7	193	5	8	-13	216	5	-7	-12	144	5	-2	-9	89	7	-4	-8	233	7	-9
10	151	6	1	-11	90	5	4	-11	63	11	-6	-8	103	6	0	-6	176	5	5
H,K=	10,		-3	-10	39	15	-2	-9	167	5	4	-7	98	5	10	-3	147	5	-3
-14	95	6	-1	-9	89	5	-1	-7	183	5	-1	-6	162	5	2	-2	106	5	0
-13	102	5	0	-8	75	6	-4	-5	149	5	3	-5	79	8	13	-1	123	5	-6
-11	117	5	-2	-7	140	4	-1	-4	68	7	3	-4	69	6	3	0	64	10	6
-10	179	5	-9	-5	122	4	2	-2	112	6	3	-3	213	5	-2	3	116	5	-9
-9	43	20	16	-4	140	4	3	0	85	7	-5	-1	217	5	-3	5	189	5	5
-8	104	5	-1	-2	200	5	-1	H,K=	10,		5	0	31	18	-1	H,K=	11,		-2
-7	97	5	-9	0	244	6	-3	-9	93	6	-12	1	151	5	-2	-12	90	6	6
-5	221	6	-10	2	178	5	0	-6	100	6	1	2	106	5	-7	-11	133	5	-4
-3	292	7	3	3	120	5	1	-4	183	6	2	4	190	5	4	-10	128	6	8
-1	175	5	0	5	137	5	8	H,K=	11,		-12	6	89	6	-3	-8	66	7	18

STRUCTURE FACTORS CONTINUED FOR
(C6H5CH2)4 TH (CH3)2PCH2CH2P(CH3)2 PAGE27

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-7	134	5	-1	1	77	7	-7												
-5	245	6	3	2	101	6	5												
-3	170	5	-2	H,K=	12,		-7												
-2	97	5	11	-4	170	7	9												
-1	63	7	2	-1	75	7	-2												
0	156	5	-11	0	85	10	4												
2	180	6	10	1	111	6	14												
4	70	9	-6	2	95	6	-4												
H,K=	11,		-1	H,K=	12,		-6												
-11	122	8	11	-6	101	8	-16												
-10	183	5	10	-3	162	5	6												
-9	30	33	6*	-1	185	5	3												
-8	208	5	-4	1	69	8	10												
-7	67	7	-3	2	123	6	13												
-6	54	9	-4	H,K=	12,		-5												
-4	97	5	-2	-7	47	12	37												
-3	80	6	-14	-6	137	5	3												
-2	127	5	2	-4	112	5	5												
-1	44	11	2	-3	63	8	23												
0	128	5	-1	0	152	5	-3												
2	97	5	5	2	118	5	3												
3	164	7	-3	H,K=	12,		-4												
H,K=	11,		0	-6	144	6	0												
-11	54	13	18	-5	110	5	12												
-10	207	5	-0	-4	69	8	7												
-9	89	6	4	-3	181	5	-6												
-8	157	6	-1	-2	48	11	7												
-7	165	5	-4	-1	138	5	-2												
-5	188	5	1	H,K=	12,		-3												
-3	130	5	-6	-5	146	5	-5												
-2	64	9	-4	-3	130	5	-4												
0	122	5	11	-2	80	8	-10												
1	64	8	-3	0	142	5	-5												
2	86	6	8	H,K=	12,		-2												
3	91	6	-6	-6	125	9	2												
H,K=	11,		1	-3	121	5	1												
-11	58	10	1	-2	103	6	7												
-10	64	9	2	-1	80	8	2												
-9	87	7	4																
-8	92	9	1																
-7	126	6	11																
-4	106	5	-2																
-2	169	5	6																
0	163	5	1																
H,K=	11,		2																
-8	90	6	7																
-7	148	5	-1																
-5	133	5	-7																
-4	56	9	27																
-3	91	6	8																
-1	46	13	-1																
H,K=	12,		-8																
-4	47	11	1																
-3	153	5	8																
-2	46	12	4																
-1	161	8	4																

OBSERVED STRUCTURE FACTORS, STANDARD DEVIATIONS, AND DIFFERENCES (ALL X 4.0)
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV) F(0,0,0) = 5115

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		13	340	5	-9	-11	46	19	-3	-7	67	8	2	-11	169	7	1
21	789	25	-20	14	78	28	-0	-10	102	9	4	-6	115	5	-1	-10	293	5	-2
8	726	12	-13	15	220	6	-5	-9	146	6	5	-4	155	4	5	-9	198	8	4
10	494	10	-2	H,K=	0,	3		-7	58	8	-5	-3	72	6	2	-8	371	6	-5
12	403	7	7	-11	72	10	-13	-6	105	4	-2	-2	79	6	6	-7	187	6	2
14	303	5	-2	-10	119	7	-3	-5	45	8	-6	3	74	5	4	-6	428	7	0
H,K=	0,	1		-8	129	6	5	-3	53	6	4	4	150	5	1	-5	215	7	8
-14	50	16	29	-9	93	4	-2	-2	72	10	2	6	120	5	4	-4	471	8	10
-12	123	6	-0	-4	141	3	1	-1	45	20	-2	7	62	9	-3	-3	214	4	4
-10	155	4	-3	-2	156	3	2	1	51	20	5	8	134	5	-2	-2	501	11	2
-9	72	8	-1	-1	231	5	3	2	67	5	-3	9	89	8	6	-1	142	5	6
-8	180	4	-4	1	235	6	7	6	105	4	-2	11	63	17	-1	0	480	8	1
-7	163	3	-0	2	155	3	2	7	60	9	-3	H,K=	0,	8		1	133	6	-4
-6	136	5	-8	4	138	3	-2	9	148	5	7	-13	202	8	-3	2	500	9	2
-5	114	5	0	5	101	3	6	10	89	8	-8	-12	223	6	3	3	217	5	7
-4	100	8	-4	8	124	6	0	11	73	10	24	-11	250	5	-0	4	463	10	2
-3	689	11	1	9	39	22	-22	13	40	52	-8	-10	260	5	1	5	214	6	7
-2	171	3	-7	10	120	5	-2	H,K=	0,	6		-9	268	6	-3	6	424	7	-3
2	176	3	-2	11	60	12	-22	-14	121	10	-7	-8	331	7	1	7	192	5	8
3	705	11	17	H,K=	0,	4		-13	249	5	-4	-7	400	7	2	8	374	6	-3
4	104	6	0	-14	274	5	8	-12	176	5	-7	-6	460	8	2	9	193	5	-1
5	118	6	4	-13	111	7	0	-11	375	6	-12	-5	365	7	2	10	293	6	-2
6	143	3	-1	-12	412	8	8	-10	282	6	-7	-4	547	12	1	11	169	7	0
7	164	4	2	-11	134	8	4	-9	409	10	-8	-3	414	8	3	12	230	6	-9
8	183	4	-1	-10	451	8	4	-8	443	9	13	-2	618	11	8	H,K=	0,	11	
9	70	8	-3	-9	252	6	1	-7	632	13	-3	-1	452	8	16	-7	74	15	-10
10	146	5	-12	-8	582	11	-12	-6	535	10	-1	0	686	12	0	-5	128	7	0
12	131	6	8	-7	302	6	-0	-5	632	12	5	1	439	8	3	-3	125	7	-13
H,K=	0,	2		-6	731	14	1	-4	738	13	11	2	610	11	-0	3	134	9	-3
-15	217	6	-8	-5	371	7	-4	-3	749	13	2	3	411	9	-0	5	122	7	-6
-14	82	9	3	-4	807	13	22	-2	731	12	32	4	539	10	-8	7	81	10	-3
-13	346	7	-4	-3	646	11	12	-1	973	16	6	5	365	7	2	9	73	12	-3
-11	453	8	-7	-2	816	12	21	0	738	13	-5	6	458	10	0	H,K=	0,	12	
-10	97	8	2	-11	031	16	20	1	972	16	4	7	398	8	0	-10	111	10	8
-9	528	9	-13	0	1089	15	37	2	725	12	26	8	327	6	-3	-9	305	6	-0
-7	838	16	-19	1	1023	15	12	3	744	16	-3	9	274	6	2	-7	410	7	-1
-6	115	4	3	2	809	13	12	4	742	15	15	10	262	6	3	-6	142	13	17
-5	960	17	3	3	655	11	21	5	629	13	2	11	247	5	-3	-5	480	8	5
-4	431	7	6	4	805	14	20	6	541	12	5	12	218	6	-2	-4	185	6	2
-3	913	14	9	5	378	8	3	7	631	11	-4	13	205	6	0	-3	564	10	9
-2	246	6	7	6	733	13	3	8	417	8	-14	H,K=	0,	9		-2	144	6	-1
-1	1054	14	42	7	300	6	-2	9	417	8	-0	-12	53	59	8	-1	594	16	10
0	275	5	20	8	594	11	1	10	289	6	0	-8	51	51	8	0	240	6	7
1	1053	14	41	9	253	5	3	11	385	6	-1	-5	83	10	6	1	576	12	-8
2	247	6	8	10	440	11	-6	12	183	5	0	-2	124	5	-5	2	150	7	5
3	919	14	15	11	130	6	8	13	245	5	-8	2	125	6	-5	3	559	10	4
4	444	8	19	12	413	7	5	14	125	9	-4	4	51	11	6	4	189	6	6
5	965	15	8	13	110	7	0	H,K=	0,	7		5	76	8	-1	5	471	8	-5
6	112	3	1	14	282	6	16	-13	62	15	51	7	82	9	-1	6	135	7	11
9	537	9	-5	15	85	14	-4	-12	54	16	-1	9	55	61	20	7	408	6	-2
10	101	9	7	H,K=	0,	5		-9	88	8	5	H,K=	0,	10		8	107	8	3
11	458	7	-2	-12	58	39	14	-8	130	6	-6	-12	233	9	-6	9	308	6	3

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV) PAGE 2

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
H,K=		0,	13	6	715	11	3	8	497	10	5	-4	97	4	4	0	45	12	5
-7	50	22	9	7	408	7	1	9	221	4	1	-3	99	4	2	1	518	10	9
-1	81	19	1	8	416	8	-4	10	441	8	5	-2	138	3	-3	2	38	17	2
5	50	20	-19	9	499	11	-17	11	200	5	-1	-1	99	5	3	3	555	10	-1
H,K=		0,	14	10	297	5	-1	12	286	5	0	1	137	7	1	5	477	10	0
-8	252	6	-1	11	293	5	-4	13	150	6	-16	2	150	5	1	7	439	10	1
-7	67	17	12	12	196	5	3	14	230	6	-2	3	143	3	4	9	375	6	-14
-6	296	6	1	13	228	5	-4	H,K=		1,	4	4	64	6	6	11	334	6	2
-4	336	7	-2	14	145	6	1	-12	104	7	1	6	93	5	6	H,K=		1,	10
-3	81	12	-9	15	172	6	1	-10	87	7	0	7	184	4	-4	-11	76	13	6
-2	302	6	9	H,K=		1,	2	-8	111	6	-4	8	125	5	4	-6	110	7	8
-1	133	10	0	-13	55	14	10	-6	171	4	10	9	131	6	4	-5	81	9	-3
0	349	6	0	-10	35	20	-4	-5	90	4	1	14	60	17	17	-4	55	13	-17
1	117	10	-15	-9	67	7	1	-3	45	6	8	H,K=		1,	7	-2	112	6	1
2	294	6	1	-8	101	4	-2	-1	176	5	-2	-14	219	6	5	0	117	5	-6
4	330	6	-8	-6	115	3	3	0	292	5	15	-12	311	5	2	5	144	6	5
5	88	11	-1	-5	266	4	5	1	370	6	9	-10	399	6	2	9	79	11	-11
6	289	6	-6	-4	242	4	8	2	92	11	5	-8	534	13	2	H,K=		1,	11
8	241	6	-12	-3	118	6	11	4	63	7	14	-7	88	6	5	-11	118	8	14
H,K=		0,	15	-2	153	6	10	7	149	7	1	-6	732	15	1	-10	323	6	12
-5	56	22	51	-1	249	4	7	10	79	17	-14	-4	800	14	13	-9	123	8	-11
3	58	19	43	0	70	3	18	12	38	39	13	-3	86	5	-6	-8	378	9	-2
H,K=		0,	16	1	378	6	5	H,K=		1,	5	-2	998	17	36	-7	190	5	-1
-3	266	7	9	2	65	14	11	-14	84	21	31	-1	231	5	-4	-6	421	7	1
-1	293	6	-0	3	106	8	12	-13	317	5	3	0	842	15	9	-5	236	8	3
1	285	7	-8	4	350	6	-5	-12	115	13	16	1	88	7	-9	-4	489	8	-5
3	245	6	-12	5	89	4	6	-11	473	8	-10	2	977	17	7	-3	310	5	7
H,K=		1,	0	6	98	7	8	-10	119	6	7	4	742	13	13	-2	586	14	13
10	51	12	17	7	108	5	-2	-9	597	10	-8	5	131	5	-6	-1	319	5	6
-8	123	4	8	8	185	4	-3	-8	166	6	4	6	636	12	5	0	527	9	11
-4	85	9	11	9	108	6	-9	-7	698	13	9	7	75	13	-7	1	309	6	-3
-2	121	3	3	12	88	10	-5	-6	229	4	-9	8	520	10	-1	2	537	10	-3
0	269	5	7	14	53	17	18	-5	946	16	8	10	417	9	-1	3	297	5	4
2	277	5	-1	H,K=		1,	3	-4	94	4	-4	11	44	21	20	4	463	9	11
4	102	5	14	-14	256	6	2	-3	1002	15	19	12	316	5	6	5	146	6	-2
6	381	6	-1	-13	141	7	-10	-2	275	5	-1	H,K=		1,	8	6	446	9	1
10	145	9	4	-12	370	6	1	-1	919	14	12	-11	38	30	-2	7	178	6	2
12	78	16	19	-11	173	5	-1	0	100	6	6	-9	74	10	-2	8	343	6	-2
H,K=		1,	1	-10	490	10	7	1	966	17	5	-5	120	5	2	9	102	9	-11
-15	209	6	1	-9	237	4	-2	2	40	23	4	-2	93	5	2	10	270	6	3
-14	190	5	2	-8	514	12	-11	3	968	15	15	1	63	7	5	H,K=		1,	12
-13	278	5	-6	-7	417	9	1	4	114	4	-8	2	66	19	-16	-4	55	17	-5
-12	285	5	6	-6	666	12	-10	5	756	13	-11	4	114	7	5	0	94	13	16
-11	368	6	-10	-5	440	7	3	6	171	5	-3	8	70	11	-5	2	99	8	0
-10	357	6	1	-4	785	13	9	7	613	12	-9	H,K=		1,	9	3	119	7	17
-9	421	8	-3	-3	213	3	-4	8	116	5	5	-13	222	7	9	5	92	13	2
-8	456	8	2	-2	713	12	14	9	515	10	1	-12	51	23	-16	7	88	16	-10
-6	689	13	-12	-1	139	7	3	10	119	6	5	-11	297	5	7	H,K=		1,	13
-4	704	11	11	0	409	8	-7	11	335	5	-2	-10	50	22	-10	-9	230	8	-2
-3	522	9	4	1	231	7	2	12	172	6	17	-9	363	6	7	-8	137	11	8
-11	070	17	-10	2	1012	16	36	13	250	5	4	-8	91	9	6	-7	281	6	1
0	998	13	3	3	284	5	3	14	113	9	19	-7	415	7	-5	-6	138	7	-6
1	1103	14	10	4	575	9	-2	H,K=		1,	6	-6	83	8	4	-5	353	7	1
3	549	9	6	5	284	5	4	-9	54	12	34	-5	513	11	9	-4	183	6	2
4	682	11	-0	6	635	12	-5	-8	80	14	-9	-3	577	11	13	-3	368	6	5
5	999	16	19	7	413	10	0	-5	143	4	3	-1	549	11	4	-2	178	8	-6

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV) PAGE 3

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-1	423	7	9	-10	141	5	3	4	836	14	4	-6	152	4	4	-3	295	6	4
0	194	11	9	-9	582	12	-2	5	408	7	12	-5	119	4	3	-2	540	10	-9
1	412	6	-2	-8	163	6	5	6	650	12	-12	-4	131	4	-2	-1	345	6	1
2	244	10	4	-7	679	12	-9	7	266	5	-5	-3	209	4	1	0	474	9	5
3	368	7	-2	-6	115	3	6	8	521	12	-13	-2	38	11	4	1	347	9	-1
4	186	6	5	-5	715	14	-4	9	202	9	-4	-1	188	4	-0	2	487	10	5
5	380	8	3	-4	109	5	-5	10	395	7	-10	0	60	8	4	3	312	6	8
6	193	6	5	-3	916	15	-2	11	174	8	2	1	48	10	3	4	492	8	-3
7	260	7	-3	-2	276	5	2	12	344	5	-2	5	120	5	-6	5	281	6	2
8	169	7	1	0	359	9	1	13	101	11	7	7	66	10	3	6	398	6	2
9	237	7	-2	1	896	15	23	14	230	6	2	8	93	8	-2	7	262	5	-2
H,K=		1,	15	2	99	8	18	H,K=		2,	5	10	62	17	1	8	338	6	-3
-6	192	7	-0	3	829	14	8	-13	51	17	-7	12	54	19	11	9	202	5	4
-5	169	9	-15	4	262	5	4	-11	107	7	2	H,K=		2,	8	10	239	8	-4
-4	185	7	-4	5	835	13	11	-7	76	7	-1	-13	156	7	9	11	152	8	-5
-3	205	6	4	7	730	14	-3	-6	119	4	1	-12	207	5	13	H,K=		2,	11
-2	237	8	3	8	135	4	-4	-5	37	10	12	-11	201	5	-2	-6	63	32	4
-1	227	6	-1	9	555	9	-4	-4	41	8	15	-10	199	5	2	-5	40	42	21
0	260	6	-1	10	200	5	1	-1	87	6	1	-9	298	5	-5	-4	104	7	23
1	203	6	-4	11	506	9	-3	0	36	37	-9	-8	299	5	6	-2	164	5	1
2	233	6	5	12	80	12	-3	1	71	8	10	-7	406	8	2	-1	53	15	7
3	181	7	1	13	305	5	-3	4	57	7	-6	-6	352	9	3	0	140	6	-8
4	218	6	-0	14	79	14	-1	9	64	10	-4	-5	385	8	6	2	107	8	-9
5	177	13	-10	H,K=		2,	3	H,K=		2,	6	-4	433	10	-6	3	111	10	13
6	223	6	10	-14	41	25	23	-14	134	7	-3	-3	603	10	-3	5	52	17	8
H,K=		2,	0	-7	78	5	-7	-13	258	6	11	-2	625	14	5	9	56	17	11
-14	327	6	5	-9	103	7	7	-12	208	5	-2	-1	634	13	2	H,K=		2,	12
-12	470	8	21	-4	138	4	1	-11	332	5	3	0	694	11	2	-10	124	10	17
-10	540	12	8	-3	224	4	1	-10	295	5	-3	1	572	11	12	-9	281	6	0
-8	734	13	2	-2	278	4	11	-9	397	7	-0	2	567	10	-9	-8	155	6	4
-4	1017	16	8	-1	178	3	4	-8	300	7	-1	3	520	10	2	-7	336	6	0
0	1476	19	-5	0	130	3	4	-7	615	11	-6	4	535	11	2	-6	169	6	-7
2	449	7	-11	1	292	5	2	-6	356	6	-0	5	416	9	-6	-5	365	6	-7
8	629	12	-5	2	250	4	3	-5	600	11	-9	6	387	8	3	-4	192	7	-5
10	572	11	-2	3	242	4	-8	-4	530	9	0	7	367	6	-4	-3	438	9	-5
12	381	6	-1	4	27	14	12	-2	392	8	-8	8	322	5	1	-2	188	7	2
14	257	7	-1	5	108	4	3	-1	759	13	8	9	298	5	-8	-1	484	8	-14
H,K=		2,	1	7	80	5	-3	0	343	7	1	10	276	5	4	0	199	5	-9
-12	81	9	10	8	75	9	5	1	554	11	6	11	260	5	-9	1	569	12	7
-10	120	12	-5	H,K=		2,	4	2	525	12	4	12	211	9	1	2	117	8	3
-5	30	14	-1	-15	72	19	-15	3	712	13	3	13	196	6	2	3	470	8	-3
-3	201	3	6	-14	243	6	3	4	588	12	-1	H,K=		2,	9	4	158	10	-2
-2	94	9	2	-13	135	8	3	5	614	12	4	-5	64	10	-5	5	401	7	5
-1	512	8	4	-12	353	6	-0	6	361	6	8	-3	69	8	12	7	341	6	-1
2	69	4	-2	-11	192	5	-4	7	478	10	2	1	71	9	-0	9	235	6	-0
3	242	4	1	-10	462	9	11	8	311	5	-5	9	61	14	5	H,K=		2,	13
4	252	5	-4	-9	305	6	-4	9	349	6	-3	H,K=		2,	10	-3	72	12	1
5	57	5	-1	-8	529	11	-9	10	257	5	-7	-12	212	6	2	1	103	17	18
6	243	5	1	-7	214	4	4	11	320	5	2	-11	147	7	1	H,K=		2,	14
8	92	5	-5	-6	723	13	3	12	175	5	-11	-10	294	6	0	-8	236	8	-8
11	44	47	11	-5	366	8	-2	13	181	6	-13	-9	199	5	4	-7	60	19	-2
H,K=		2,	2	-3	372	7	-5	H,K=		2,	7	-8	382	6	-2	-6	297	6	7
-15	225	6	-2	-1	54	33	-2	-10	116	8	3	-7	227	5	5	-4	319	10	8
-13	338	6	-7	1	176	6	11	-9	82	9	-4	-6	457	7	-3	-2	328	7	-2
-12	43	49	-17	2	938	16	14	-8	40	19	21	-5	252	5	1	0	380	6	-7
-11	421	9	-4	3	395	7	7	-7	76	7	-2	-4	536	14	3	2	340	7	3

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV) PAGE 4

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
4	371	6	5	-9	45	25	-5	-7	83	5	6	-5	248	5	-2	1	701	14	7
6	315	8	3	-8	202	4	-2	-6	76	5	7	-4	90	5	-1	2	87	8	-3
H,K=		2,	15	-7	83	5	9	-5	76	5	-7	-2	128	4	-3	3	701	14	-7
3	62	19	24	-6	128	4	-0	-4	66	6	-8	-1	345	7	1	4	84	9	14
H,K=		2,	16	-5	84	4	9	-3	183	4	7	1	138	4	2	5	586	11	-9
-3	301	6	8	-4	116	3	-2	-2	246	4	-0	3	156	4	2	7	490	8	-5
-2	61	21	29	-3	89	3	6	0	243	4	-1	4	74	6	-1	8	78	24	14
-1	313	6	-6	-2	261	4	7	1	88	12	1	5	45	12	-0	9	387	8	-4
1	293	7	0	-1	492	9	17	2	130	6	-12	7	55	11	20	11	298	6	14
H,K=		3,	0	0	145	7	17	3	135	5	-3	12	56	16	18	H,K=		3,	10
-12	127	6	6	1	359	6	9	4	238	5	-4	H,K=		3,	7	-9	60	14	4
-10	296	5	-1	2	330	5	10	5	203	4	1	-14	250	6	7	-4	65	11	2
-8	268	5	1	3	206	3	13	6	172	4	-2	-12	324	5	9	-2	106	6	4
-6	138	3	-1	4	71	6	-9	7	108	7	1	-10	433	7	15	-1	88	8	10
-2	294	5	-0	5	225	4	-1	8	103	6	7	-8	491	8	-11	0	123	7	-11
2	192	3	3	6	210	5	0	10	120	7	10	-6	561	9	0	2	150	6	-6
4	241	4	1	7	190	4	-2	11	71	11	3	-4	614	12	5	3	62	13	16
6	347	6	5	9	110	5	-2	12	121	7	9	-3	103	5	-3	4	175	5	-3
10	123	6	3	9	89	8	7	14	76	16	22	-2	839	13	-3	6	94	9	4
12	54	54	6	10	113	6	-11	H,K=		3,	5	-1	208	4	1	7	86	13	10
H,K=		3,	1	11	177	5	2	-14	57	18	-6	0	670	15	-11	8	79	14	-3
-15	179	6	-13	13	86	11	19	-13	304	5	-4	1	161	4	8	H,K=		3,	11
-14	214	5	4	H,K=		3,	3	-12	111	12	13	2	788	16	-18	-11	104	10	-2
-13	243	5	1	-13	86	11	-3	-11	405	6	-2	4	643	13	-1	-10	281	6	4
-12	285	5	6	-14	230	5	5	-10	138	5	9	6	590	13	-3	-9	122	12	2
-11	368	7	-2	-13	167	5	-2	-9	490	9	4	8	462	11	-4	-8	366	6	8
-10	311	6	1	-12	313	5	-5	-8	221	5	7	10	365	6	0	-7	100	11	-5
-9	452	8	-10	-11	167	5	1	-7	649	15	-2	12	279	9	2	-6	438	7	4
-8	416	8	-7	-10	452	9	-5	-6	366	6	-1	H,K=		3,	8	-5	106	11	2
-7	782	13	-3	-9	239	4	-3	-5	779	13	-0	-12	86	14	-3	-4	481	9	3
-6	490	8	-3	-8	681	12	5	-4	240	4	-3	-10	97	8	16	-3	87	9	-19
-5	635	12	-2	-7	360	6	-9	-3	736	13	1	-8	132	6	-2	-2	468	10	-8
-4	426	8	7	-6	803	14	11	-2	420	8	2	-6	168	6	0	-1	143	6	7
-3	738	12	-9	-5	415	7	-5	-1	812	13	2	-5	66	8	8	0	507	9	-10
-2	270	4	-4	-4	958	17	2	0	303	5	-0	-4	112	5	-5	1	142	7	-0
-1	1007	17	-8	-3	377	7	-7	1	773	14	22	-2	116	5	-2	2	529	12	2
0	301	5	6	-2	1052	18	-7	2	510	10	4	-1	97	5	7	3	158	6	5
1	617	10	0	-1	939	17	9	3	792	15	1	0	217	5	-4	4	399	6	0
2	472	8	2	1	813	16	14	4	372	7	6	2	87	6	9	5	97	10	1
3	537	9	6	2	1069	18	-7	5	701	14	9	3	143	5	-3	6	379	6	-5
4	497	10	-1	3	417	9	7	6	227	4	1	5	125	7	-2	7	154	6	2
5	763	13	-15	4	771	14	-4	7	513	10	-2	7	98	8	-4	8	280	6	2
6	546	9	0	5	428	8	3	8	169	5	0	9	106	8	6	10	228	9	-2
7	438	8	1	6	791	13	-5	9	407	7	-1	H,K=		3,	9	H,K=		3,	12
8	308	7	-12	7	372	9	-4	10	113	9	17	-13	252	8	16	-9	91	11	24
9	487	9	-8	8	484	10	-13	11	317	6	-0	-11	310	6	-2	-5	79	30	-11
10	286	5	-1	9	161	5	2	12	85	10	12	-9	418	7	3	-4	76	11	-5
11	288	5	-1	10	425	8	-0	13	248	6	3	-8	96	8	-10	-3	130	7	-1
12	230	5	4	11	162	6	2	H,K=		3,	6	-7	506	9	-6	-1	139	7	10
13	252	5	-11	12	298	5	-1	-13	73	12	-19	-6	146	6	-7	0	122	8	12
14	166	6	5	13	143	6	3	-11	161	6	10	-5	615	14	-7	2	94	10	-6
H,K=		3,	2	14	224	6	-4	-10	38	27	-9	-4	176	8	1	6	79	11	-2
-14	50	27	16	H,K=		3,	4	-9	136	5	-7	-3	669	12	-2	H,K=		3,	13
-13	53	17	18	-13	52	17	23	-8	96	8	-0	-2	216	4	-1	-9	204	6	3
-12	78	9	-3	-11	83	8	2	-7	158	5	1	-1	705	13	1	-8	138	9	-7
-10	78	8	-3	-9	89	7	2	-6	103	5	-1	0	114	6	-2	-7	225	7	-8

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV) PAGE 5

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-6	160	6	8	-1	185	4	3	-14	253	6	8	-3	544	10	-9	4	389	7	-1
-5	238	8	-10	0	268	4	4	-13	122	7	-2	-2	322	6	-7	5	453	10	5
-4	196	10	2	1	153	3	8	-12	314	6	2	-1	374	7	-11	6	308	5	4
-3	250	7	-4	5	186	5	-2	-11	137	7	0	0	325	8	7	7	368	6	-9
-2	197	8	-0	7	148	4	1	-10	381	8	5	1	385	7	9	8	287	6	-1
-1	269	5	-11	9	60	11	7	-9	169	8	-1	2	299	5	-1	9	261	5	-6
0	230	6	-2	11	66	20	4	-8	555	11	-2	3	543	10	11	10	240	5	1
1	295	6	5	H,K=	4,	2		-7	145	4	-7	4	299	6	-1	11	176	8	-12
2	234	6	4	-15	231	6	3	-6	758	14	1	5	358	6	-0	12	175	7	-2
3	273	5	-0	-13	329	5	1	-5	238	5	2	6	227	4	2	H,K=	4,	9	
4	187	9	4	-12	58	40	-24	-4	921	16	2	7	410	7	2	-7	54	14	31
5	269	6	-4	-11	395	6	1	-3	218	4	5	8	239	5	-8	-2	72	12	-1
6	226	6	-1	-10	127	5	-5	-1	342	9	8	9	348	6	3	1	199	6	12
7	212	6	10	-9	521	9	-11	1	488	9	11	10	191	6	-2	3	190	8	3
8	152	8	-2	-8	176	5	-4	3	175	5	-2	11	274	5	1	4	78	10	-6
H,K=	3,	14		-7	547	12	-10	4	890	16	6	12	149	11	1	5	189	5	2
-5	65	15	1	-6	366	7	5	5	202	4	1	13	173	7	5	7	152	6	-2
H,K=	3,	15		-5	874	16	-11	6	574	14	-13	H,K=	4,	7		9	129	7	-0
-6	222	6	5	-4	419	7	-2	7	149	4	3	-12	129	7	2	11	51	26	5
-5	236	6	8	-3	948	15	-16	8	459	11	-9	-11	87	9	-7	H,K=	4,	10	
-4	235	6	9	-2	382	7	2	9	156	7	-15	-10	140	11	5	-12	215	9	9
-3	248	9	6	-1	917	17	1	10	335	5	0	-8	134	6	-4	-11	143	7	2
-2	248	9	-3	0	81	14	-3	11	128	6	-10	-7	76	9	-1	-10	270	6	-5
-1	253	6	-8	1	941	15	27	12	254	5	-4	-6	248	7	-2	-9	204	7	3
0	239	10	-1	2	436	7	11	13	96	10	3	-5	79	6	-5	-8	340	6	-0
1	259	9	-3	3	799	15	4	H,K=	4,	5		-4	151	4	-5	-7	258	7	3
2	217	9	9	4	376	8	-2	-13	83	13	-0	-2	134	4	-1	-6	414	7	7
3	241	9	4	5	766	13	-3	-12	45	19	25	-1	77	7	-4	-5	323	5	-4
4	206	7	-2	6	170	6	-2	-11	61	27	-7	0	240	4	-2	-4	458	8	-3
5	202	7	4	7	620	10	-4	-10	43	23	-7	1	100	6	17	-3	404	9	3
H,K=	4,	0		8	151	4	-1	-9	132	9	3	2	118	5	1	-2	428	10	-4
-14	305	5	4	9	471	10	-5	-8	110	5	-1	3	89	6	-1	-1	356	7	-5
-12	417	7	14	11	373	6	5	-7	252	4	-1	4	75	13	4	0	440	13	-5
-10	467	8	8	12	41	23	19	-5	273	5	2	5	68	11	-12	1	330	6	-6
-8	587	10	-10	13	243	5	4	-4	134	4	5	6	49	22	14	2	486	11	11
-6	667	11	6	H,K=	4,	3		-3	301	5	3	7	77	10	-11	3	327	8	-0
-4	428	8	5	-9	41	21	3	-2	205	6	3	8	65	13	-11	4	417	7	-1
-2	979	16	2	-8	34	17	-3	-1	124	4	-4	11	51	18	17	5	279	5	10
0	805	14	-11	-7	67	6	10	1	132	4	-6	H,K=	4,	8		6	322	5	0
2	623	12	-6	-6	110	6	-1	2	94	5	1	-13	178	6	4	7	191	8	-6
4	545	11	-10	-5	44	8	-1	4	193	4	-1	-12	223	6	19	8	310	6	-4
6	444	8	-16	-4	160	3	-1	6	126	5	-5	-11	238	5	3	9	162	6	1
8	545	14	-0	-3	191	4	-2	8	109	7	-0	-10	300	5	14	10	218	7	4
10	407	7	-6	-2	244	4	3	9	58	20	8	-9	361	6	1	H,K=	4,	11	
12	270	5	-6	-1	93	10	-14	H,K=	4,	6		-8	350	8	7	-6	59	65	-1
14	268	6	13	0	395	7	4	-14	146	7	-5	-7	433	8	-5	-5	39	60	30
H,K=	4,	1		2	277	5	4	-13	226	5	0	-6	301	6	3	-2	67	12	10
-12	107	9	9	3	42	9	1	-12	205	5	1	-5	510	11	-19	-1	45	25	5
-10	131	5	-3	4	325	8	-4	-11	282	5	-5	-4	406	8	-8	0	51	26	22
-9	86	6	-2	5	159	4	1	-10	245	5	3	-3	615	12	-8	4	84	11	18
-8	267	5	8	6	372	6	-3	-9	375	7	2	-2	413	8	6	5	49	55	26
-7	52	8	-5	8	208	4	-2	-8	236	4	3	-1	533	15	-2	H,K=	4,	12	
-6	417	11	9	9	52	14	-1	-7	377	6	3	0	295	8	-3	-10	68	16	15
-5	118	3	3	10	125	7	-3	-6	282	5	3	1	625	13	-4	-9	272	9	-2
-4	319	5	-3	11	67	11	21	-5	389	7	-12	2	299	6	-5	-8	86	10	20
-2	182	3	-1	H,K=	4,	4		-4	273	7	-9	3	596	13	-8	-7	291	5	2

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV) PAGE 6

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-5	284	5	-9	-3	685	11	-19	3	327	6	6	8	135	6	7	H,K=	5,	9	
-4	133	16	-5	-2	382	7	-13	4	897	15	-3	9	398	7	-0	-11	295	6	5
-3	326	6	5	-1	642	14	-19	5	389	8	3	11	299	5	-6	-9	400	6	-6
-2	174	7	-3	0	619	13	-7	6	639	13	-10	12	76	13	6	-7	491	8	-10
-1	331	6	3	1	649	12	2	7	222	4	-10	H,K=		5,	6	-5	562	11	-18
0	152	17	-11	2	422	8	-14	8	421	8	-5	-13	96	10	2	-4	88	11	6
1	345	6	10	4	387	8	-3	9	178	5	1	-11	92	10	2	-3	629	12	-14
2	164	13	8	5	563	15	-4	10	378	6	-4	-8	82	8	-12	-2	85	16	-2
3	284	6	4	6	358	7	-4	11	157	6	-4	-7	140	5	-2	-1	610	12	-14
4	157	11	-4	7	443	7	2	12	222	8	-0	-6	132	5	0	0	119	7	-0
5	295	5	-1	8	289	5	-3	13	112	9	-2	-5	145	4	-4	1	594	12	-5
6	87	20	1	9	363	7	1	H,K=		5,	4	-4	157	4	-3	2	129	8	-2
7	270	6	2	10	262	5	-11	-14	77	22	18	-3	102	6	-0	3	571	12	-13
8	86	12	11	11	224	5	8	-12	54	14	-3	-2	81	6	-0	4	88	10	10
9	197	7	-3	12	198	5	1	-10	113	7	9	-1	234	5	-2	5	461	8	-5
H,K=		4,	13	13	190	6	4	-9	46	15	-7	0	146	7	5	7	351	6	-3
-9	105	10	17	H,K=		5,	2	-8	151	5	-5	1	121	5	-1	8	74	23	-7
-7	107	9	10	-13	82	9	-11	-7	150	4	-2	2	167	4	4	9	282	6	-7
-5	105	9	-15	-11	137	5	6	-6	84	5	4	3	99	6	4	10	53	22	18
H,K=		4,	14	-9	114	6	-3	-5	203	4	2	9	40	30	-19	H,K=		5,	10
-6	307	6	-1	-8	95	7	3	-4	205	4	0	10	44	23	33	-8	63	13	1
-4	337	6	1	-7	162	4	-3	-3	154	4	-2	11	58	16	14	-4	56	15	10
-2	347	7	-7	-6	131	4	4	-2	324	6	13	H,K=		5,	7	-3	100	8	-5
0	320	7	-13	-4	137	3	4	-1	91	5	5	-12	284	9	2	3	116	8	9
2	327	6	2	-3	225	4	-2	0	148	5	-6	-10	408	8	-0	4	69	14	4
4	331	6	4	-2	72	7	13	1	84	7	6	-8	490	8	-10	5	124	15	-0
6	274	6	7	-1	435	8	4	2	195	4	-1	-6	536	11	4	6	83	11	8
H,K=		4,	15	0	148	4	-2	3	40	25	-2	-4	589	10	-20	7	109	8	-3
-2	61	50	13	1	362	6	10	4	256	4	6	-2	597	13	-10	8	87	11	-11
H,K=		5,	0	2	140	4	5	6	237	6	2	0	521	9	-3	9	84	19	-2
-14	126	7	0	3	283	6	6	8	188	5	7	2	609	13	-6	10	101	14	35
-12	78	26	-24	4	105	4	-1	10	168	6	-2	3	85	8	-7	H,K=		5,	11
-10	173	4	4	5	258	5	0	12	106	23	5	4	518	9	4	-10	220	10	-5
-8	188	4	-7	6	125	5	-9	H,K=		5,	5	6	472	11	-8	-8	303	5	-11
-6	390	7	4	7	156	4	2	-14	98	10	15	8	386	6	-7	-7	104	8	9
-4	307	5	-9	8	93	8	1	-13	255	6	-9	10	314	6	-3	-6	326	5	-3
-2	389	7	-1	9	114	6	18	-12	91	8	8	12	235	6	2	-5	106	8	4
0	284	5	-1	11	123	9	4	-11	328	5	-0	H,K=		5,	8	-4	392	6	-5
2	93	4	-3	12	60	20	27	-10	141	6	9	-12	97	10	3	-2	475	8	-15
4	34	18	-1	H,K=		5,	3	-9	383	7	-10	-10	97	20	-15	-1	76	13	20
6	44	10	16	-14	223	5	-2	-8	183	4	-3	-8	127	10	-4	0	461	7	-13
10	84	20	9	-13	158	6	7	-7	456	8	-10	-7	66	11	-3	2	385	6	10
12	68	12	20	-12	323	5	1	-6	183	5	-3	-6	134	7	-12	3	65	16	1
H,K=		5,	1	-11	127	7	-7	-5	464	9	-6	-5	93	8	-9	4	331	8	-5
-15	164	6	1	-10	405	7	-5	-4	193	4	1	-4	123	5	-8	6	326	6	5
-14	182	6	1	-9	265	5	0	-3	624	12	-5	-3	77	8	-21	7	124	16	7
-13	245	5	5	-8	505	9	-14	-2	284	5	-2	-2	162	7	4	8	229	6	-1
-12	239	5	6	-7	402	7	-3	-1	743	13	-14	-1	165	5	4	H,K=		5,	12
-11	347	6	-7	-6	642	11	-8	0	190	4	-10	0	117	6	-10	-7	114	8	-6
-10	291	7	5	-5	401	8	-1	1	625	12	3	1	132	9	3	-5	89	21	-2
-9	386	7	3	-4	856	15	-6	2	368	8	-0	2	143	7	-6	-3	102	9	-7
-8	363	6	-7	-3	431	8	-12	3	621	10	-12	3	229	5	4	6	51	22	27
-7	590	11	-11	-1	571	13	-10	4	232	4	-7	4	145	13	-3	8	57	22	37
-6	325	6	-8	0	938	17	-20	5	520	10	-5	5	182	5	1	H,K=		5,	13
-5	548	11	1	1	362	8	3	6	179	6	-0	7	165	9	14	-8	184	7	8
-4	279	5	-8	2	903	16	-12	7	414	9	-6	9	114	8	10	-7	255	6	5

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV) PAGE 7

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-6	218	6	-4	8	194	4	-0	8	148	7	13	-10	236	5	-0	6	213	6	2
-5	244	6	-1	2	129	4	-1	9	82	19	12	-9	309	6	-4	7	262	5	-7
-4	247	5	2	3	163	5	-2	10	144	8	12	-8	282	5	2	8	194	6	-4
-3	264	6	0	4	194	4	1	11	71	12	11	-7	300	6	-8	9	184	6	-1
-2	214	6	-8	5	181	4	7	12	79	12	8	-6	359	8	-9	10	150	7	-4
-1	256	6	-12	6	149	6	5	H,K=		6,	4	-5	438	11	-20	H,K=		6,	9
0	204	7	-9	7	108	6	4	-14	232	6	6	-4	393	8	-7	-11	85	17	0
1	244	6	-1	9	81	9	-1	-13	51	18	-13	-3	453	8	1	-9	115	7	-2
2	144	8	-2	10	68	14	14	-12	274	5	12	-2	362	7	-1	-7	194	6	1
3	256	6	-7	11	103	8	3	-11	183	8	3	-1	404	9	-2	-5	184	5	-1
4	115	9	4	H,K=		6,	2	-10	361	6	10	0	250	4	-9	-3	203	5	2
5	251	8	-7	-13	266	6	3	-9	204	6	-8	1	481	11	5	-1	214	7	-12
6	120	10	-3	-12	100	8	1	-8	440	7	-7	2	340	9	4	1	205	6	8
7	228	6	16	-11	366	6	-3	-7	249	4	1	3	449	7	-3	3	135	7	-8
H,K=		5,	14	-10	110	7	-6	-6	467	8	4	4	330	6	6	5	112	12	-16
-4	97	11	-9	-9	462	8	-6	-5	291	7	-13	5	361	6	8	7	130	7	-0
-3	47	31	10	-8	79	7	5	-4	539	12	-5	6	219	5	1	9	119	9	8
-2	120	9	-4	-7	562	13	-25	-3	368	7	-8	7	378	8	-4	H,K=		6,	10
0	149	8	23	-6	102	5	4	-2	675	12	3	8	221	5	-1	-11	116	9	7
2	128	10	4	-5	749	13	-19	-1	388	10	-1	9	271	5	6	-10	201	6	-11
4	147	8	16	-4	113	4	-7	0	564	13	-6	10	184	10	-5	-9	130	7	2
H,K=		5,	15	-3	763	13	-16	1	302	6	-4	11	213	6	2	-8	238	5	0
-4	199	9	-0	-2	211	4	2	2	499	11	-10	H,K=		6,	7	-7	160	6	1
-3	214	7	-2	-1	761	14	-9	3	282	7	5	-12	107	12	-4	-6	272	5	1
-2	241	6	5	0	104	6	5	4	525	10	-5	-8	140	6	3	-5	177	6	-6
-1	242	7	4	1	737	14	8	5	316	5	-2	-7	71	11	3	-4	321	5	-8
0	235	7	-4	2	276	5	-8	6	424	8	-6	-6	191	5	-1	-3	230	6	4
1	226	14	4	3	667	11	-3	7	166	5	-3	-4	205	4	0	-2	359	10	-5
2	219	10	9	4	128	4	2	8	375	6	-9	-2	241	4	-2	-1	206	6	-6
H,K=		6,	0	5	636	11	7	9	186	5	-3	-1	56	24	5	0	377	9	-3
-14	212	7	5	6	113	5	-3	10	279	5	-3	0	262	6	-0	1	184	8	-10
-12	330	7	-4	7	489	8	10	11	125	17	-9	1	53	19	-14	2	376	6	3
-10	425	8	-3	8	86	9	-5	12	203	6	-3	2	225	6	0	3	175	14	7
-8	569	11	-9	9	399	6	-1	H,K=		6,	5	3	51	28	-1	4	333	6	-2
-6	732	13	-24	11	276	5	-7	-13	90	10	8	4	246	5	0	5	145	17	11
-4	693	13	-8	H,K=		6,	3	-9	121	6	-2	6	161	7	-1	6	294	8	1
-2	933	17	-6	-14	87	16	-5	-8	136	6	-9	8	128	7	3	7	138	7	19
0	666	15	-28	-12	140	6	-1	-7	106	8	2	H,K=		6,	8	8	251	6	5
2	801	14	5	-11	178	5	5	-6	109	5	4	-12	163	7	-2	9	115	10	6
4	604	11	2	-9	130	5	2	-5	147	6	1	-11	224	7	2	H,K=		6,	11
6	567	12	-4	-8	189	4	-6	-3	107	6	-5	-10	193	5	0	-8	137	7	1
8	422	8	-17	-7	122	5	1	-2	113	5	2	-9	299	5	-5	-6	122	7	2
10	288	5	-4	-6	280	5	-1	-1	93	7	8	-8	270	5	-3	-4	103	21	-5
12	253	7	4	-5	81	6	-8	0	185	5	1	-7	276	5	-3	-2	119	11	4
H,K=		6,	1	-4	166	4	-6	1	211	7	-2	-6	348	7	2	0	114	35	17
-13	90	10	-3	-3	179	4	1	2	43	14	9	-5	369	6	1	H,K=		6,	12
-10	70	9	9	-2	154	4	-3	3	156	7	0	-4	400	8	-4	-9	230	6	10
-9	125	5	4	-1	61	8	-5	4	78	9	7	-3	385	10	-13	-8	77	23	18
-8	99	5	-1	0	208	6	-8	5	169	5	2	-2	354	6	-8	-7	290	6	1
-7	131	5	5	1	86	6	5	7	139	6	-3	-1	415	7	-16	-5	318	6	-4
-6	138	4	4	2	208	4	-4	9	105	8	-17	0	372	6	-8	-4	59	17	-23
-5	206	4	2	3	141	5	3	11	84	11	17	1	454	8	-3	-3	333	6	-0
-4	116	6	3	4	208	5	-8	H,K=		6,	6	2	388	7	9	-2	93	11	6
-3	59	6	6	5	186	4	-6	-13	203	6	3	3	380	7	-1	-1	354	6	-3
-2	154	4	1	6	196	4	13	-12	161	6	8	4	296	5	2	1	342	7	-0
-1	221	5	0	7	87	12	3	-11	218	5	-1	5	316	7	4	2	84	13	-18

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV) PAGE 8

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
3	285	6	3	10	195	6	-2	-8	233	5	-0	-8	396	7	-6	2	151	12	8
5	268	8	9	11	172	7	-7	-6	253	5	-6	-6	431	8	1	4	96	10	2
6	89	13	-10	12	137	8	-2	-5	52	11	-1	-4	609	11	12	H,K=		7,	11
7	216	11	2	H,K=		7,	2	-4	305	6	-3	-3	140	6	-1	-9	71	16	-20
H,K=		6,	13	-13	98	9	-4	-2	210	5	-1	-2	571	10	0	-8	234	6	-2
-7	92	14	2	-11	157	7	1	0	168	4	-2	-1	123	7	-7	-7	117	8	-10
-5	76	15	-26	-10	98	7	13	2	198	5	-5	0	625	16	-16	-6	258	5	4
-4	79	13	-11	-9	178	5	5	3	111	6	10	1	148	6	-1	-5	154	6	16
-3	78	13	-2	-8	137	5	2	4	142	5	5	2	591	14	3	-4	308	5	1
1	93	24	3	-7	213	4	-3	5	110	8	2	3	149	11	0	-3	142	7	1
2	79	17	5	-6	197	4	-10	6	137	6	5	4	476	9	-2	-2	305	6	-4
3	101	12	15	-5	214	4	-1	7	88	9	9	5	117	8	20	-1	176	6	8
5	78	16	-5	-4	149	4	-2	8	111	11	-1	6	386	6	-1	0	291	6	-4
H,K=		6,	14	-3	274	5	1	9	63	13	12	8	299	6	5	1	181	7	-5
-4	270	6	0	-2	82	6	3	H,K=		7,	5	10	230	6	-6	2	317	7	-0
-2	291	6	-3	-1	271	5	-13	-13	210	6	-1	H,K=		7,	8	3	141	8	3
0	289	7	-9	0	72	7	9	-12	80	11	-3	-12	61	38	14	4	332	6	7
2	284	7	-1	1	240	5	-3	-11	293	5	-2	-11	106	9	8	5	132	8	7
H,K=		7,	0	3	193	4	0	-10	84	17	-4	-9	119	7	3	6	264	6	0
-10	148	7	-7	5	176	5	-8	-9	431	7	-5	-7	184	5	-6	7	110	18	12
-8	113	7	-6	6	72	10	4	-8	74	10	15	-6	136	6	-3	H,K=		7,	12
-6	130	4	2	7	118	7	-12	-7	518	9	-3	-5	158	5	10	-5	106	9	-2
-4	265	4	0	9	131	7	-1	-5	563	10	-11	-4	166	6	2	-3	142	9	13
-2	378	7	-3	11	124	7	14	-3	646	17	-25	-3	211	5	-2	1	144	9	7
0	235	5	-5	H,K=		7,	3	-1	510	13	-22	-2	205	5	-3	3	155	8	15
2	146	5	7	-14	216	6	13	1	497	10	-5	-1	148	7	1	5	131	9	12
4	333	6	-6	-13	127	8	9	2	128	6	-13	0	165	6	3	6	53	27	44
6	248	6	2	-12	272	5	5	3	556	12	-14	1	106	9	-3	H,K=		7,	13
8	171	5	0	-11	150	5	3	4	96	8	1	2	170	6	-2	-6	134	9	-1
10	159	6	-2	-10	369	6	-2	5	455	9	-2	3	120	12	6	-5	261	6	3
12	147	7	18	-9	220	5	-3	6	126	7	2	4	109	9	1	-4	169	8	11
H,K=		7,	1	-8	423	9	-5	7	360	6	-4	5	74	27	-2	-3	277	11	-1
-14	139	7	8	-7	198	4	-4	8	104	14	-3	6	84	12	-2	-2	164	8	-5
-13	210	5	7	-6	419	8	-12	9	311	6	-9	7	93	27	4	-1	282	8	4
-12	187	5	-1	-5	178	4	3	10	66	15	-7	8	113	8	10	0	173	8	2
-11	253	5	-3	-4	442	8	-12	11	224	6	-4	H,K=		7,	9	1	289	7	6
-10	273	5	-5	-3	311	7	-1	H,K=		7,	6	-11	237	6	0	2	135	10	4
-9	328	5	-1	-2	558	10	9	-13	78	13	-2	-9	281	6	5	3	293	7	9
-8	389	7	-4	-1	315	6	-5	-7	106	7	14	-8	66	13	-6	4	134	14	-3
-7	439	7	-4	0	552	10	4	-3	178	5	-4	-7	271	5	-6	H,K=		7,	14
-6	487	9	-14	1	250	5	3	-2	60	11	1	-5	307	5	-1	-2	117	15	10
-5	401	7	-5	2	425	8	-2	-1	231	5	2	-3	391	7	-1	0	142	9	7
-4	558	10	-0	3	211	4	3	0	172	5	5	-1	369	6	-7	H,K=		8,	0
-3	601	11	-4	4	427	9	-13	1	227	8	-2	1	406	7	5	-12	242	5	-6
-2	532	13	-2	5	211	5	3	2	200	6	1	3	400	7	-5	-10	280	5	-1
-1	678	12	9	6	339	5	-1	3	196	6	-5	5	334	6	-3	-8	435	7	-10
0	510	10	-16	7	168	5	4	4	172	7	2	7	274	6	-4	-6	577	10	3
1	534	13	-3	8	315	5	-2	5	174	6	4	9	230	7	-2	-4	558	10	-11
2	507	9	9	9	175	5	4	6	165	6	1	H,K=		7,	10	-2	738	14	0
3	455	8	7	10	255	5	-9	7	129	13	-4	-9	63	18	-26	0	663	14	-13
4	487	11	-8	12	174	7	1	8	127	10	6	-8	92	10	-6	2	627	12	-8
5	310	5	0	H,K=		7,	4	9	75	13	-21	-6	129	14	21	4	481	8	7
6	337	6	-5	-12	144	6	2	10	81	13	-2	-5	128	7	3	6	437	7	-10
7	320	6	3	-11	74	10	-6	H,K=		7,	7	-2	140	8	6	8	313	5	-1
8	255	5	-3	-10	217	6	1	-12	239	6	-5	0	144	7	2	10	208	5	-6
9	202	6	-1	-9	71	10	6	-10	338	6	6	1	111	15	0	H,K=		8,	1

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV)

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-13	59	38	-2	4	118	9	4	-5	474	8	-4	1	154	7	2	2	260	5	-4
-11	83	18	7	5	91	9	4	-4	314	6	3	2	58	59	23	4	298	6	-11
-9	195	5	4	6	99	14	15	-3	437	9	-19	3	148	7	-3	6	231	5	5
-8	98	18	1	10	44	32	-15	-2	311	7	-7	7	87	16	-6	8	222	5	-3
-7	196	4	-1	H,K=	8,	4		-1	458	8	9	8	50	61	39	10	175	7	5
-6	70	8	4	-12	214	6	-2	0	308	7	-11	H,K=	8,	10		H,K=	9,	1	
-5	222	4	5	-11	146	6	3	1	475	11	4	-8	236	7	6	-13	158	6	4
-4	62	9	-1	-10	291	7	-5	2	334	6	-2	-7	96	10	-4	-12	160	8	-6
-3	245	4	0	-9	125	11	0	3	387	7	1	-6	258	5	-6	-11	208	5	4
-2	193	5	-3	-8	361	7	-9	4	247	7	2	-4	271	5	-1	-10	196	9	-8
-1	304	7	-3	-7	227	7	-8	5	350	6	-3	-3	114	8	4	-9	227	5	0
0	218	4	-5	-6	379	8	-1	6	181	6	-11	-2	260	5	-5	-8	211	6	-3
1	108	7	-10	-5	259	6	-2	7	273	5	0	-1	86	11	12	-7	256	5	6
2	209	4	-5	-4	346	6	-6	8	163	6	-7	0	274	6	2	-6	271	6	-3
3	161	7	-8	-3	256	5	-5	9	206	6	10	2	283	7	-1	-5	310	5	8
4	253	6	-4	-2	318	5	-2	H,K=	8,	7		3	128	9	-1	-4	314	6	-7
5	163	5	2	-1	263	10	-11	-12	120	8	14	4	228	6	-3	-3	367	7	-4
6	200	5	2	0	272	7	-1	-8	183	5	-2	5	137	10	5	-2	365	6	-9
7	123	12	12	1	242	5	3	-6	126	7	-1	6	217	6	2	-1	363	9	4
8	132	6	2	2	329	5	3	-4	169	6	-2	7	136	9	16	0	413	8	-5
9	102	8	-10	3	264	5	3	-2	243	7	-5	H,K=	8,	11		1	348	6	5
10	131	7	17	4	312	9	1	0	196	6	-6	-8	108	10	-3	2	377	7	-5
11	90	11	-6	5	175	5	7	2	224	6	7	-6	136	8	-4	3	338	7	-1
H,K=	8,	2		5	310	5	7	3	124	8	12	-4	171	12	-3	4	303	7	-2
-13	240	6	11	7	125	7	1	4	206	7	4	-2	153	7	-4	5	276	6	-2
-11	291	5	2	8	283	5	9	5	72	26	12	-1	83	12	8	6	229	5	-2
-9	313	5	-0	9	125	7	-3	6	183	6	2	0	151	7	-5	7	253	5	-1
-7	418	8	-10	10	203	8	-5	8	175	8	9	1	64	17	-14	8	207	5	4
-5	467	10	-7	H,K=	8,	5		H,K=	8,	8		2	165	7	-2	9	198	6	2
-4	68	8	-6	-13	78	13	-13	-11	158	8	4	3	64	25	4	10	119	9	-6
-3	438	7	-5	-12	81	13	-11	-10	180	6	-1	4	166	8	3	H,K=	9,	2	
-1	532	9	-2	-11	98	8	3	-9	207	5	-2	5	107	11	-3	-13	101	10	-13
1	493	10	-4	-10	68	14	-9	-8	217	5	-6	H,K=	8,	12		-11	115	7	8
3	481	9	7	-9	129	7	-14	-7	214	6	4	-7	248	6	-2	-9	121	7	4
5	409	7	-5	-8	164	5	-10	-6	236	5	-1	-6	96	12	-6	-7	175	5	1
7	349	6	2	-7	123	6	-6	-5	232	6	-6	-5	286	7	4	-6	70	10	12
8	41	51	5	-6	112	7	-2	-4	312	5	-6	-3	315	6	-2	-5	174	5	-5
9	282	5	-1	-5	165	5	3	-3	212	5	-1	-2	89	13	-10	-3	187	5	-11
11	201	7	15	-4	132	7	-11	-2	368	7	-9	-1	327	6	-9	-2	64	15	-1
H,K=	8,	3		-3	146	5	-6	-1	251	5	-7	0	82	16	3	-1	256	5	-4
-13	70	14	-12	-2	133	6	11	0	316	7	-4	1	302	10	2	0	77	9	-5
-12	130	7	3	-1	240	5	1	1	241	7	2	2	98	15	-8	1	236	5	-7
-11	112	8	5	1	268	5	-4	2	306	6	0	3	277	7	7	2	40	26	-4
-10	188	5	-1	3	261	5	-2	3	185	6	7	4	103	12	18	3	181	5	0
-9	146	13	5	4	76	11	2	4	277	6	4	H,K=	8,	13		5	180	6	4
-8	255	5	-5	5	228	5	-17	5	201	6	-5	-3	75	18	-25	7	119	7	-6
-7	109	6	4	7	197	6	5	6	223	6	-3	-1	139	9	5	9	115	9	8
-6	303	6	-6	9	144	7	5	7	182	6	2	0	72	18	17	H,K=	9,	3	
-5	84	11	3	H,K=	8,	6		8	160	7	-1	1	133	11	14	-12	231	6	-2
-4	244	5	-8	-12	141	7	5	9	158	7	11	2	80	17	23	-11	114	7	1
-3	95	8	-2	-11	203	5	11	H,K=	8,	9		H,K=	9,	0		-10	274	5	-3
-2	272	6	0	-10	178	5	4	-9	172	8	3	-8	128	6	-7	-9	152	8	1
-1	90	7	1	-9	307	5	-7	-7	187	6	-6	-6	224	5	-4	-8	245	5	-7
0	218	4	1	-8	177	8	-10	-5	196	5	3	-4	269	5	-5	-7	159	6	-6
1	94	7	7	-7	343	5	4	-3	189	11	-0	-2	256	7	-6	-6	336	6	-4
2	137	5	4	-6	260	5	4	-1	180	10	13	0	279	5	-2	-5	189	5	-5

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV) PAGE10

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-4	346	6	4	1	195	6	9	-1	107	11	4	5	199	5	1	5	95	10	-1
-3	233	5	5	2	156	7	-4	0	152	7	1	6	107	8	1	6	252	6	-1
-2	309	9	-2	3	158	10	4	2	149	8	6	7	137	7	-1	7	119	9	24
-1	184	5	-7	4	97	13	-18	4	99	12	-8	8	97	10	4	8	187	7	12
0	294	5	-5	5	156	6	5	5	75	16	23	H,K=	10,	2		H,K=	10,	5	
1	202	7	-1	6	96	14	-15	H,K=	9,	11		-11	233	6	-1	-9	158	6	-1
2	384	7	4	7	161	6	14	-7	112	10	11	-10	74	11	-4	-8	85	10	3
3	165	6	11	8	126	8	22	-6	236	6	6	-9	294	5	1	-7	192	7	2
4	366	6	3	9	134	9	12	-5	127	9	7	-7	348	6	-6	-5	244	5	-8
5	141	6	-1	H,K=	9,	7		-4	254	6	-2	-6	95	9	-7	-3	241	5	-4
6	249	5	-7	-10	246	6	5	-3	133	9	-3	-5	364	7	2	-2	132	9	15
7	140	11	2	-9	44	25	11	-2	256	7	-3	-4	124	7	8	-1	267	5	-2
8	260	5	-2	-8	295	5	-2	-1	130	9	6	-3	367	10	-5	1	236	5	-9
9	97	10	-2	-6	316	5	-1	0	251	6	-13	-2	89	9	-2	2	71	28	-8
10	195	8	2	-5	75	23	18	1	125	10	1	-1	393	8	8	3	226	8	-9
H,K=	9,	4		-4	441	7	-5	2	234	7	0	1	357	6	5	5	162	11	-3
-12	138	14	4	-3	137	7	5	3	97	17	1	3	381	6	4	7	148	8	-4
-10	162	6	6	-2	405	7	-3	4	192	9	-6	4	84	10	-1	H,K=	10,	6	
-8	175	7	-1	-1	147	7	7	H,K=	9,	12		5	318	6	1	-10	112	19	-20
-6	241	5	-2	0	454	7	-4	-5	81	15	-13	7	263	7	2	-9	220	8	12
-5	97	8	-3	1	88	14	21	-4	64	20	-16	9	207	6	11	-8	145	6	3
-4	249	7	-2	2	368	6	0	-3	116	11	6	H,K=	10,	3		-7	207	8	-2
-3	40	25	-1	4	334	6	-4	-1	121	11	-9	-12	116	8	20	-6	150	7	-3
-2	231	6	-4	6	278	6	4	0	79	29	3	-10	127	7	-3	-5	271	5	-6
-1	116	7	1	9	215	7	-0	1	138	16	3	-9	91	9	0	-4	176	6	0
0	189	5	-7	H,K=	9,	9		2	65	29	14	-8	131	6	4	-3	302	7	2
1	142	7	-9	-10	99	11	-1	H,K=	10,	0		-7	86	9	1	-2	187	6	3
2	138	8	-13	-9	189	16	7	-12	185	7	2	-6	141	6	-5	-1	305	6	-5
3	110	8	-7	-8	122	14	-3	-10	291	6	-1	-5	95	9	8	0	195	8	2
4	133	8	1	-7	128	7	-12	-8	361	6	2	-4	209	6	-2	1	315	6	6
6	120	7	1	-6	123	9	3	-6	327	6	-3	-3	115	7	-2	2	207	6	-1
8	87	12	2	-5	107	8	4	-4	362	6	5	-2	232	5	-2	3	241	6	2
H,K=	9,	5		-4	93	10	-10	-2	416	7	-7	-1	109	8	-3	4	185	7	6
-12	51	22	7	-3	142	7	-1	0	350	6	-4	0	236	5	-5	5	232	8	4
-11	258	6	-1	-2	114	18	13	2	325	6	4	2	224	5	-10	6	161	7	4
-9	301	7	-3	3	69	19	5	4	332	6	2	3	112	8	18	7	169	7	16
-8	102	8	2	6	104	11	9	6	305	5	0	4	214	5	-3	H,K=	10,	7	
-7	317	5	-3	7	68	17	11	8	229	6	2	6	143	7	1	-10	155	7	5
-5	428	8	-4	H,K=	9,	3		H,K=	10,	1		7	63	15	19	-9	46	27	10
-4	126	7	-3	-9	211	6	-3	-12	102	9	12	8	115	10	2	-8	191	6	2
-3	499	10	-2	-7	249	6	-3	-11	154	6	6	H,K=	10,	4		-6	169	6	-0
-1	445	9	6	-6	284	7	-4	-10	128	7	5	-11	134	8	8	-4	208	6	-5
0	116	7	12	-4	94	10	-6	-9	176	5	9	-10	247	6	8	-2	166	7	-5
1	496	9	-1	-3	295	6	1	-8	150	7	2	-9	128	7	-2	0	125	8	3
3	430	7	-3	-1	239	6	-1	-7	106	10	-6	-8	291	5	5	2	205	6	7
5	318	6	6	0	66	16	-12	-6	159	5	8	-7	139	9	0	4	150	10	10
7	268	5	-0	1	275	6	-1	-5	185	9	-3	-6	312	5	-3	6	141	14	10
9	204	6	-9	3	273	6	11	-4	182	5	2	-5	125	10	6	H,K=	10,	8	
H,K=	9,	6		5	221	8	5	-3	189	5	-5	-4	366	7	-3	-9	170	7	-7
-11	64	16	-18	H,K=	9,	10		-2	185	5	-1	-3	175	6	-0	-8	127	10	-18
-7	188	10	4	-7	68	16	-16	-1	181	5	2	-2	372	7	-7	-7	202	6	5
-6	93	16	2	-6	140	8	10	0	178	5	5	-1	194	7	1	-6	155	15	-13
-5	132	6	7	-5	107	9	-2	1	204	5	-3	0	335	6	-4	-5	220	7	-3
-3	220	5	-5	-4	143	10	6	2	174	6	2	2	343	6	-5	-4	174	6	-4
-1	149	7	-9	-3	105	9	12	3	268	5	3	3	153	8	6	-3	257	6	-1
0	193	11	-3	-2	130	9	-13	4	149	8	-4	4	278	5	-1	-2	131	10	-20

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV)

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-1	236	7	-1	4	124	7	-4	3	218	6	-3	-7	122	9	-10	-3	153	7	-14
0	131	12	-7	5	189	6	5	5	208	6	9	-6	143	6	8	-1	173	6	-3
1	201	6	8	6	136	8	3	H,K=	11,	6		-5	150	8	-8	0	82	12	-3
2	184	7	-4	7	172	7	0	-9	134	8	8	-4	156	6	11	1	148	15	-4
3	174	7	-2	H,K=	11,	2		-8	113	11	-17	-3	128	7	8	2	119	9	8
4	162	8	4	-11	118	13	13	-7	167	6	14	-2	145	7	-3	3	151	11	7
5	182	7	5	-9	170	6	-7	-6	136	7	-5	-1	159	6	0	H,K=	12,	6	
6	149	8	12	-7	192	6	3	-5	148	7	5	0	128	7	2	-7	145	8	12
H,K=	10,	9		-5	168	6	-4	-4	132	9	8	1	159	8	0	-5	144	8	-3
-7	126	8	1	-3	217	5	-4	-3	189	6	-1	3	125	8	2	-4	131	8	7
-5	140	8	-11	-1	213	5	-7	-2	131	7	-12	5	92	19	-16	-3	133	8	9
-3	149	7	-4	1	176	6	5	-1	126	8	-14	H,K=	12,	2		-2	116	9	2
-1	152	7	4	3	169	6	4	1	160	7	-15	-9	196	6	16	0	135	8	12
1	155	7	5	5	178	6	2	3	130	8	-3	-7	244	6	15	1	142	8	-12
3	125	10	-12	H,K=	11,	3		5	125	9	10	-6	104	9	-3	2	138	8	5
5	121	10	20	-10	171	7	2	6	58	22	7	-5	269	5	3	3	157	8	3
H,K=	10,	10		-8	238	5	2	H,K=	11,	7		-4	134	7	7	H,K=	12,	7	
-6	192	7	-7	-7	112	8	5	-8	183	7	-0	-3	281	5	9	-6	160	7	5
-5	124	10	2	-6	308	5	4	-6	195	6	1	-2	139	7	9	-4	178	7	5
-4	235	6	-9	-5	124	11	-7	-4	219	6	-0	-1	301	6	5	-2	152	8	-8
-3	113	11	3	-4	303	5	2	-2	186	6	-2	0	128	7	-4	0	167	7	-0
-2	249	7	-3	-3	170	6	2	-1	57	24	12	1	306	6	5	2	163	9	-5
-1	114	11	-3	-2	364	6	11	0	235	6	10	2	138	7	13	H,K=	12,	8	
0	237	6	4	-1	193	6	5	2	206	6	4	3	260	6	-0	-4	126	9	16
1	129	10	-15	0	345	6	2	4	210	8	3	4	96	13	7	-3	195	8	-1
2	210	7	-0	1	183	6	3	H,K=	11,	8		5	196	7	4	-2	92	18	5
H,K=	10,	11		2	280	5	-2	-4	104	19	-19	H,K=	12,	3		-1	176	10	8
-4	146	8	3	3	120	8	13	-3	133	11	4	-8	114	9	2	H,K=	13,	0	
-2	162	8	-4	4	221	8	3	-2	120	12	27	-6	139	7	4	-6	200	6	5
0	173	8	3	5	114	9	5	-1	91	12	-3	-5	80	11	0	-4	210	6	5
H,K=	11,	0		6	190	7	2	0	72	17	-20	-4	145	12	-0	-2	186	7	-3
-10	265	7	12	7	99	11	1	1	132	9	7	-3	124	7	12	0	173	8	-8
-8	260	5	11	H,K=	11,	4		2	106	11	-1	-2	148	7	-3	2	162	7	-3
-6	240	5	-10	-10	85	12	-4	3	105	14	8	0	188	6	0	H,K=	13,	1	
-4	253	10	-3	-8	146	6	5	H,K=	11,	9		1	90	10	0	-7	151	7	6
-2	227	5	2	-6	165	8	-4	-6	58	22	15	2	162	6	3	-6	106	10	4
0	154	10	-9	-4	202	5	5	-5	242	7	10	3	103	10	-9	-5	186	6	19
2	141	6	-3	-2	226	8	-13	-3	240	6	0	4	148	8	6	-4	105	11	3
4	190	5	0	-1	64	46	-13	-1	234	6	9	5	77	15	-3	-3	180	7	-1
6	145	7	1	0	190	10	-2	0	52	28	2	H,K=	12,	4		-2	113	9	7
H,K=	11,	1		2	165	6	-11	1	262	9	22	-8	200	6	8	-1	197	6	14
-11	144	18	2	4	179	7	-3	H,K=	11,	10		-7	83	12	7	0	107	9	12
-10	104	26	4	5	46	35	-5	-2	137	10	7	-6	229	6	-1	1	161	7	3
-9	198	5	6	6	134	11	-9	0	155	8	1	-5	118	10	21	2	84	12	2
-8	121	10	-7	H,K=	11,	5		H,K=	12,	0		-4	266	6	-0	3	166	7	7
-7	251	5	1	-5	173	7	3	-8	197	11	1	-2	282	6	4	H,K=	13,	2	
-6	160	6	3	-5	42	39	-18	-6	255	6	1	-1	81	12	3	-7	146	8	0
-5	281	6	6	-7	210	5	0	-4	252	5	5	0	287	6	7	-5	182	7	5
-4	125	7	11	-6	64	16	-6	-2	217	6	2	2	262	6	3	-3	203	6	7
-3	286	5	12	-5	248	5	5	0	219	5	5	3	94	11	2	-1	184	6	3
-2	126	14	5	-4	108	12	-13	2	236	5	-1	4	205	7	7	1	183	7	-4
-1	281	6	2	-3	247	5	-0	4	212	10	-4	H,K=	12,	5		2	67	16	18
0	152	7	1	-1	269	7	2	6	186	7	7	-8	51	23	38	3	172	7	-1
1	240	5	11	0	134	7	3	H,K=	12,	1		-7	187	6	16	H,K=	13,	3	
2	138	6	3	1	287	6	5	-9	120	12	10	-5	177	7	-0	-7	93	15	1
3	198	7	5	2	99	9	11	-8	148	7	7	-4	65	14	29	-6	178	7	14

STRUCTURE FACTORS CONTINUED FOR
BIS(DIMETHYLPHOSPHINOETHANE) TRI(BENZYL) METHYL URANIUM(IV) PAGE12

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-5	95	24	-3																
-4	191	6	-0																
-3	107	10	-13																
-2	205	9	2																
-1	115	9	3																
0	193	6	8																
1	74	26	-4																
2	186	7	12																
H, K=		13,	4																
-6	147	8	9																
-5	66	17	-7																
-4	156	7	-3																
-2	143	8	0																
0	133	8	5																
2	165	8	-3																
H, K=		13,	5																
-5	168	7	-1																
-3	175	9	-3																
-1	168	9	8																
0	63	19	-8																
1	154	8	10																
H, K=		13,	6																
-1	131	9	13																
H, K=		14,	0																
-2	178	8	-0																

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