Supplementary Material

Lithium and Aluminium Complexes Supported by Chelating Phosphaguanidinates

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Figure 1a ^{1}H NMR spectrum of Li(Ph$_2$PC{N^{i}Pr}$_2$(THF)$_n$ (**2a**) at 293 K

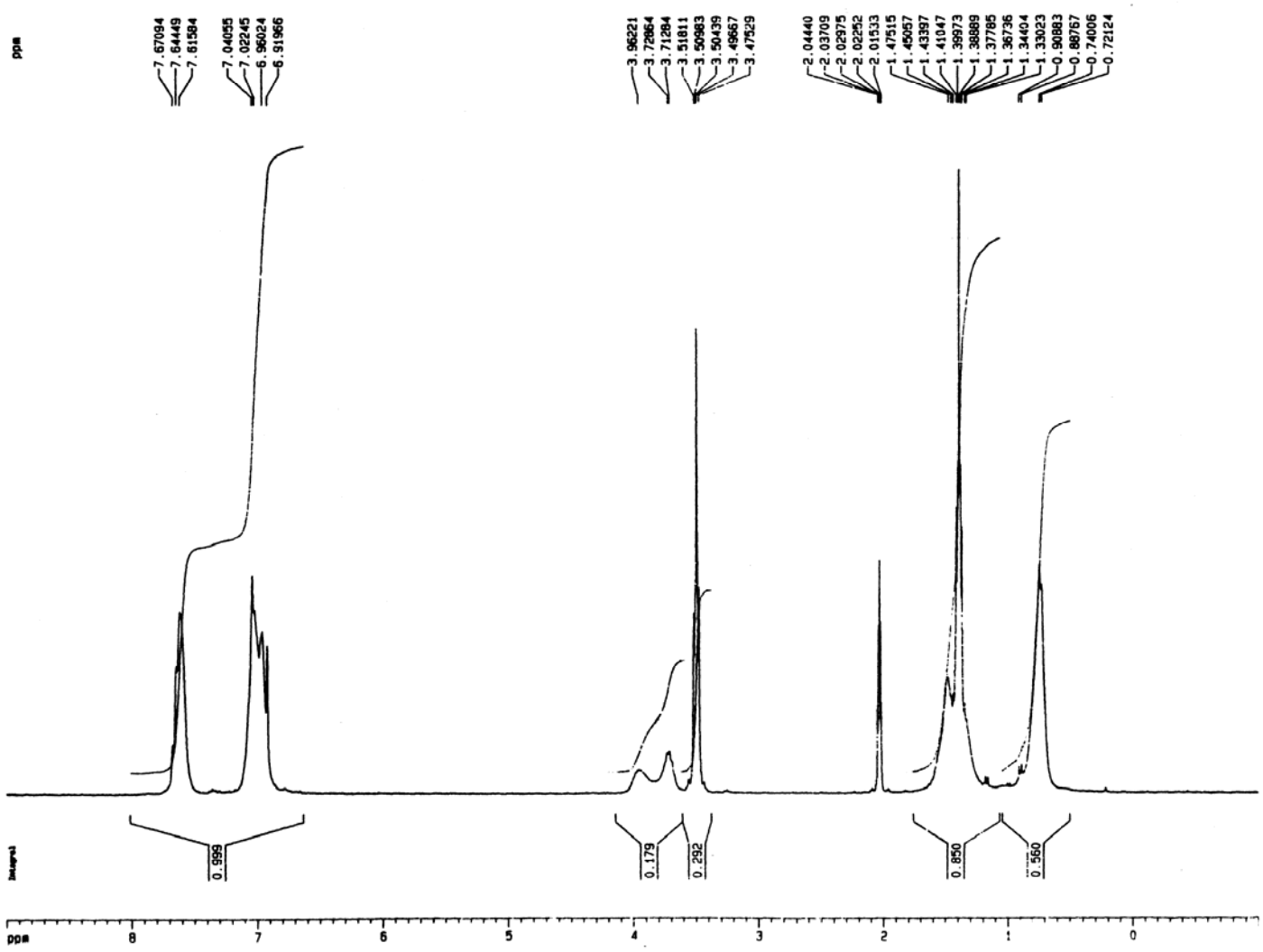

Figure 1b ^{31}P NMR spectrum of Li($Ph_2PC\{N^iPr\}_2$)$(THF)_n$ (**2a**) at 223 K

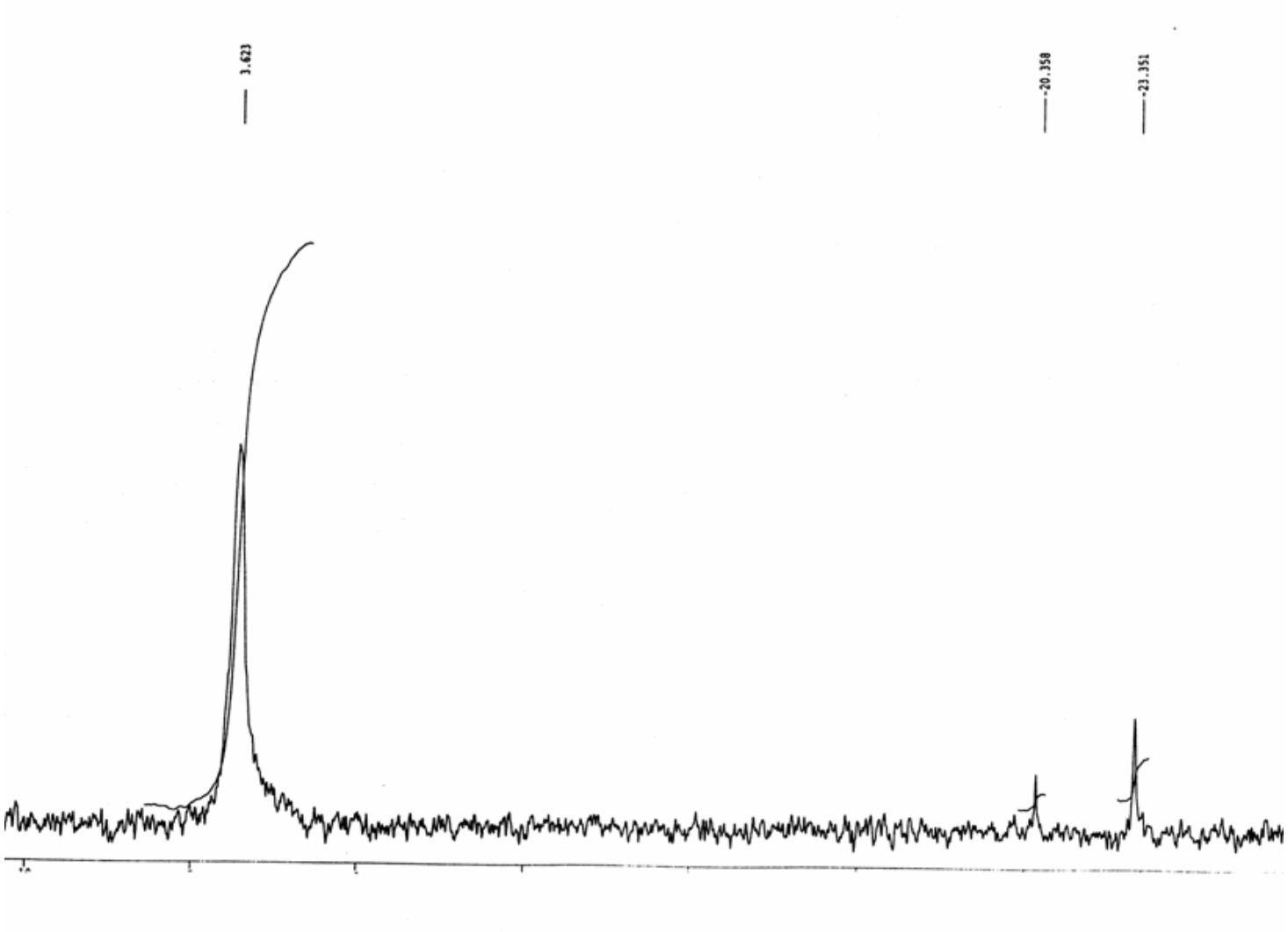

Figure 2a ^{1}H NMR spectrum of Li(Ph$_2$PC{N^{i}Pr}$_2$(TMEDA) (**3a**) at 368 K

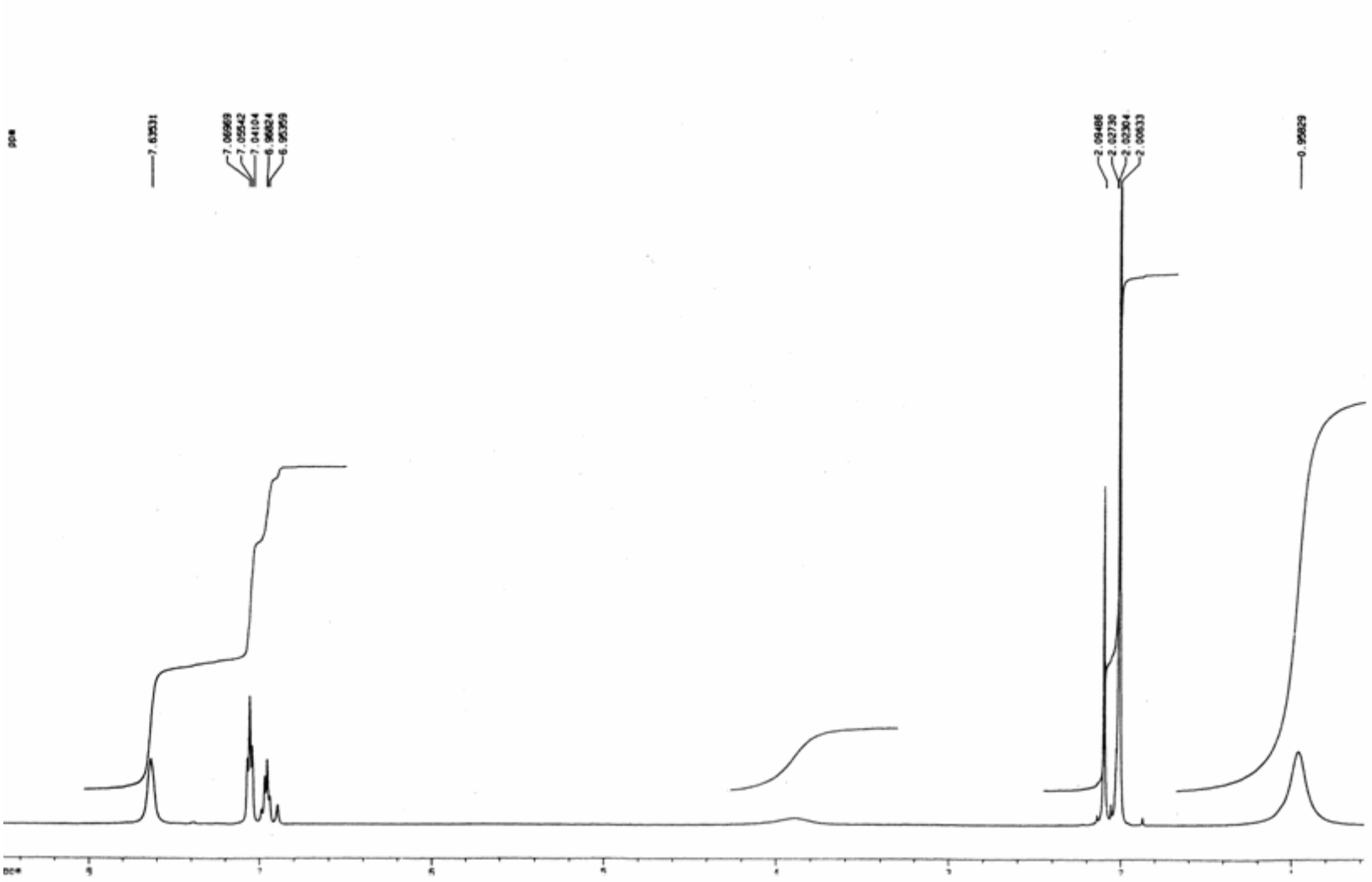

Figure 2b ^{31}P NMR spectrum of Li(Ph$_2$PC{N^{i}Pr}$_2$(TMEDA) (**3a**) at 368 K and 183 K.

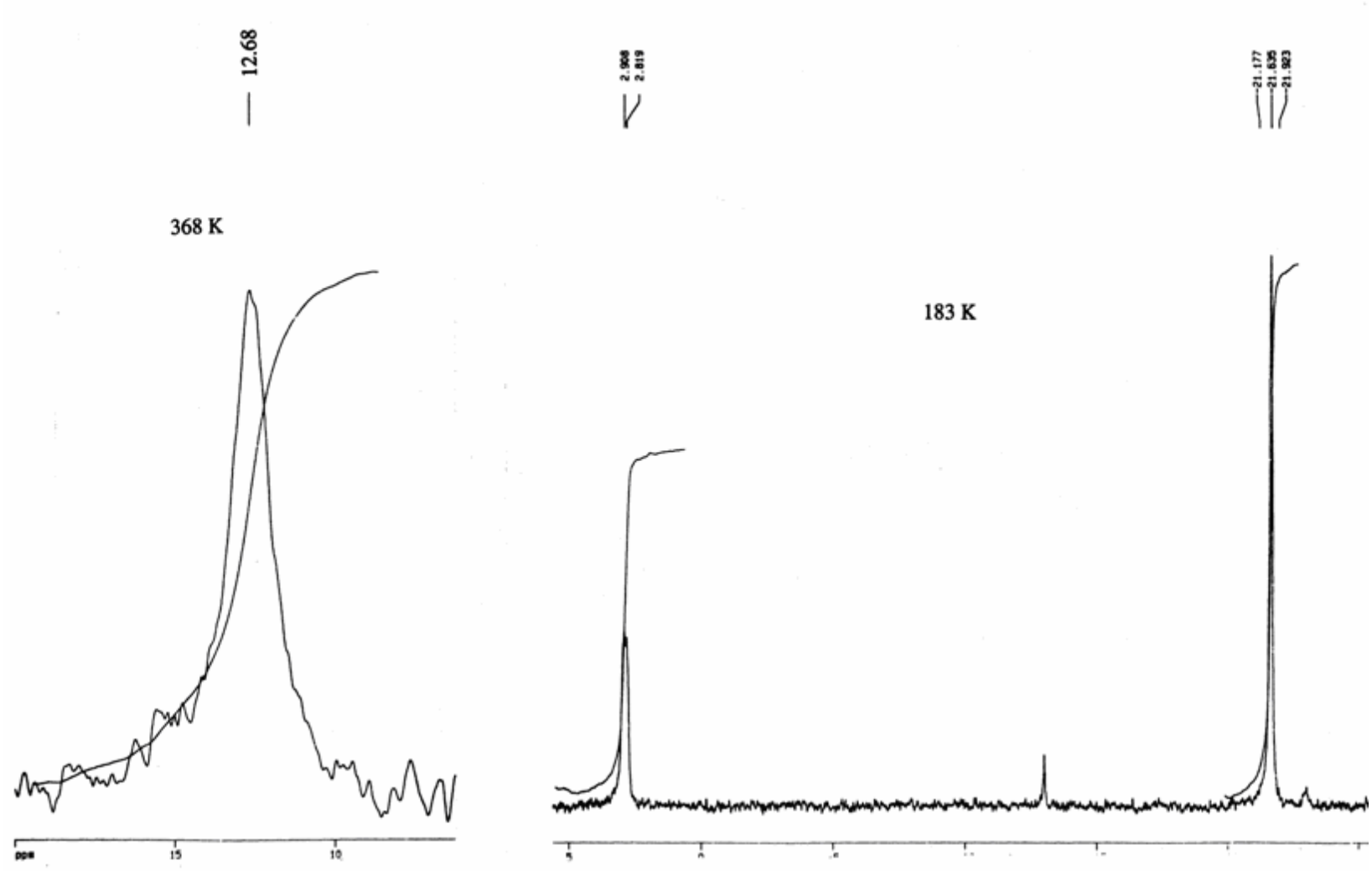

Figure 2c ^{7}Li NMR spectrum of Li(Ph$_2$PC{N^{i}Pr}$_2$(TMEDA) (**3a**) at 368 K and 183 K.

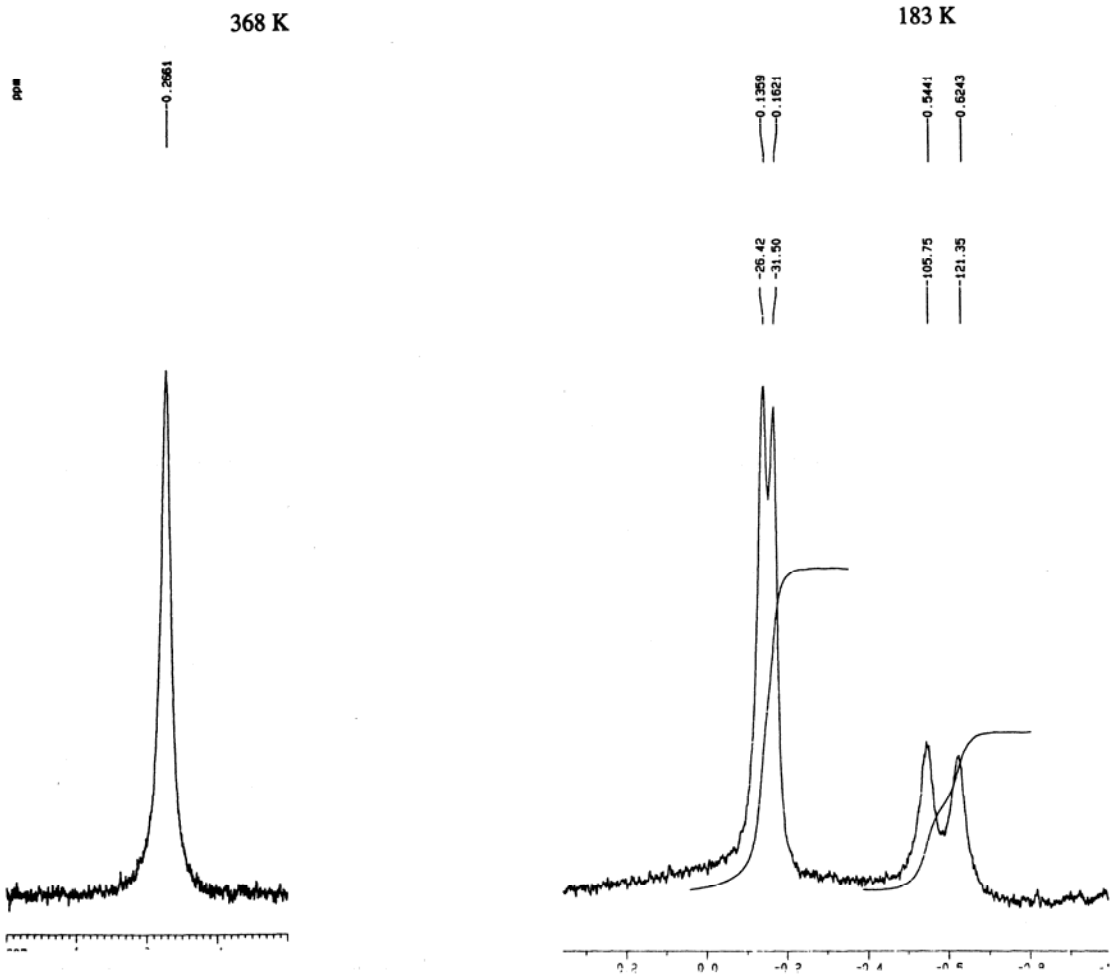

Figure 3a ^{1}H NMR spectrum of Al(Ph$_2$PC{N^{i}Pr}$_2$)Me$_2$ (**4a**)

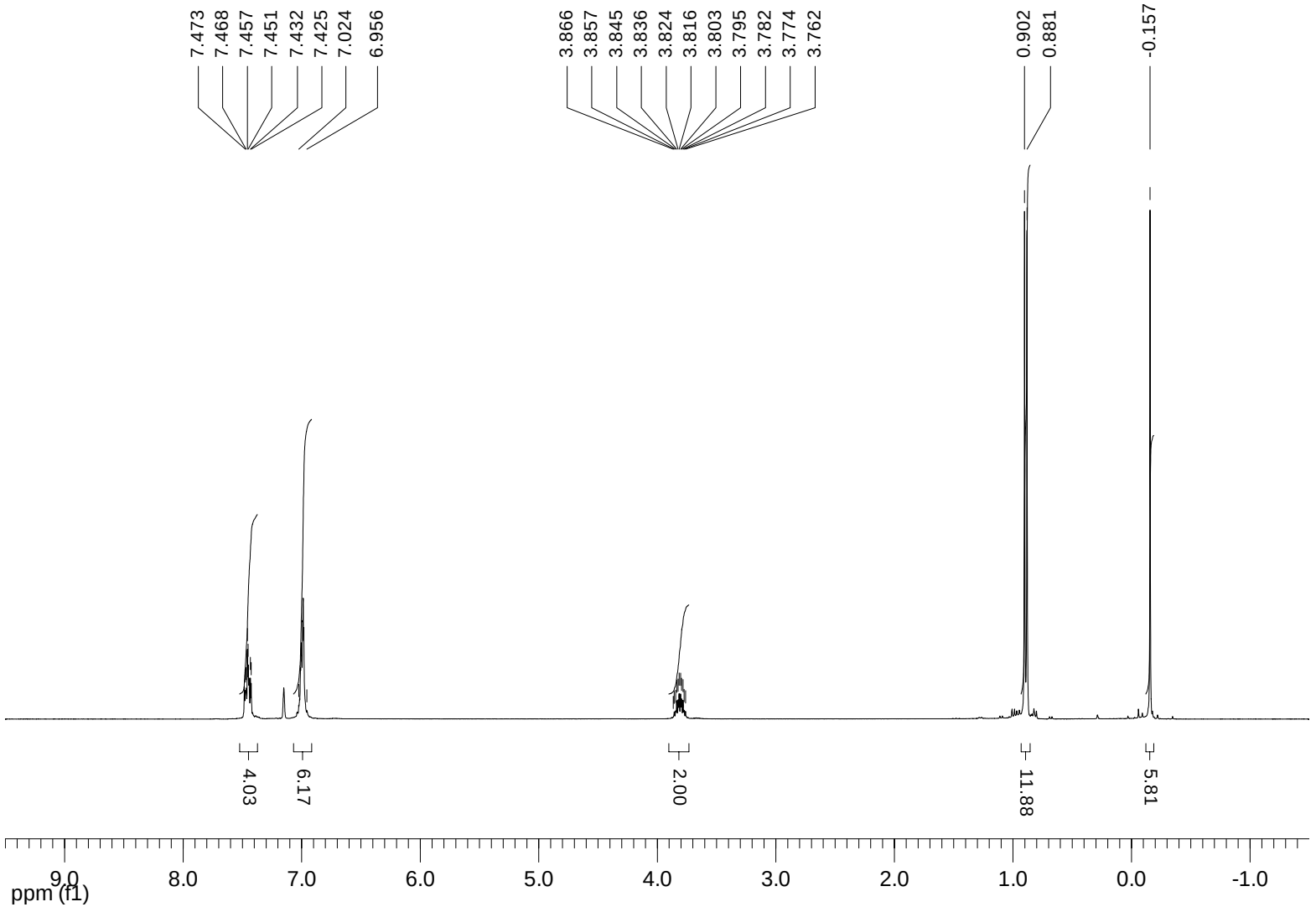

Figure 3b ^{13}C NMR spectrum of $Al(Ph_2PC\{N^iPr\}_2)Me_2$ (**4a**)

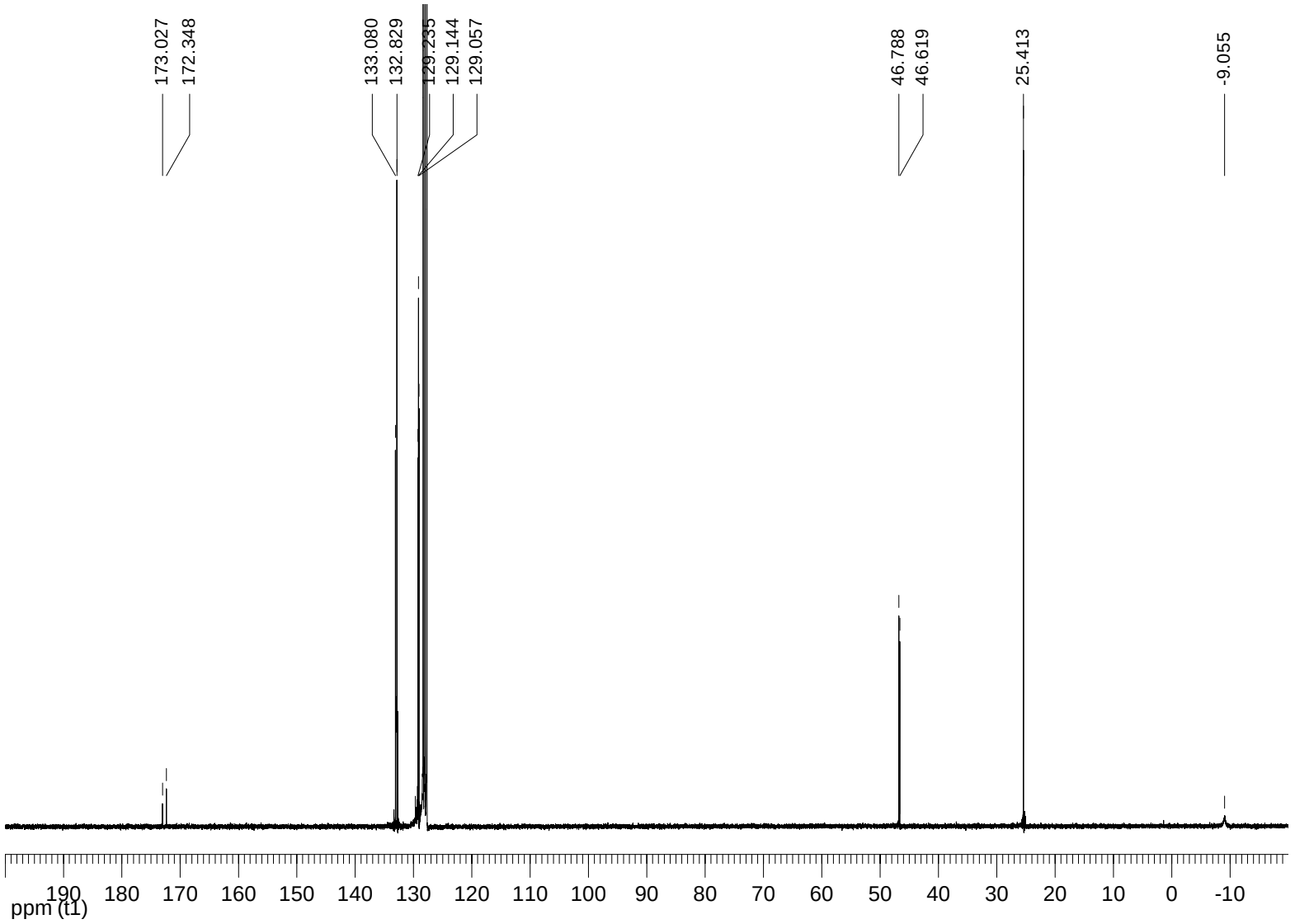

Figure 3c ^{31}P NMR spectrum of Al(Ph$_2$PC{N^{i}Pr}$_2$)Me$_2$ (**4a**)

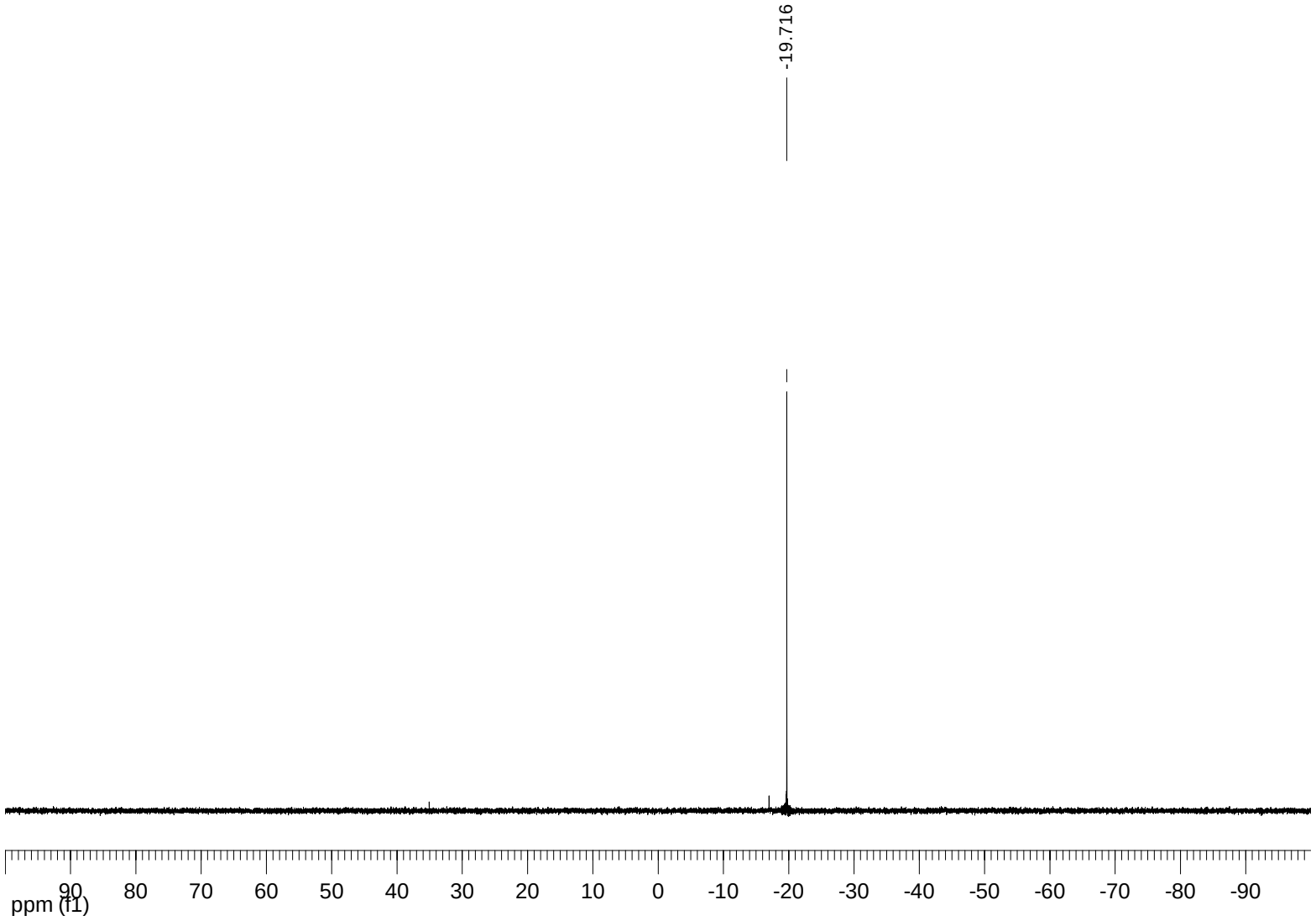

Figure 4a ^{1}H NMR spectrum of $Al(Ph_2PC\{NCy\}_2)Me_2$ (**4b**) (residual $AlMe_3$ at δ -0.310)

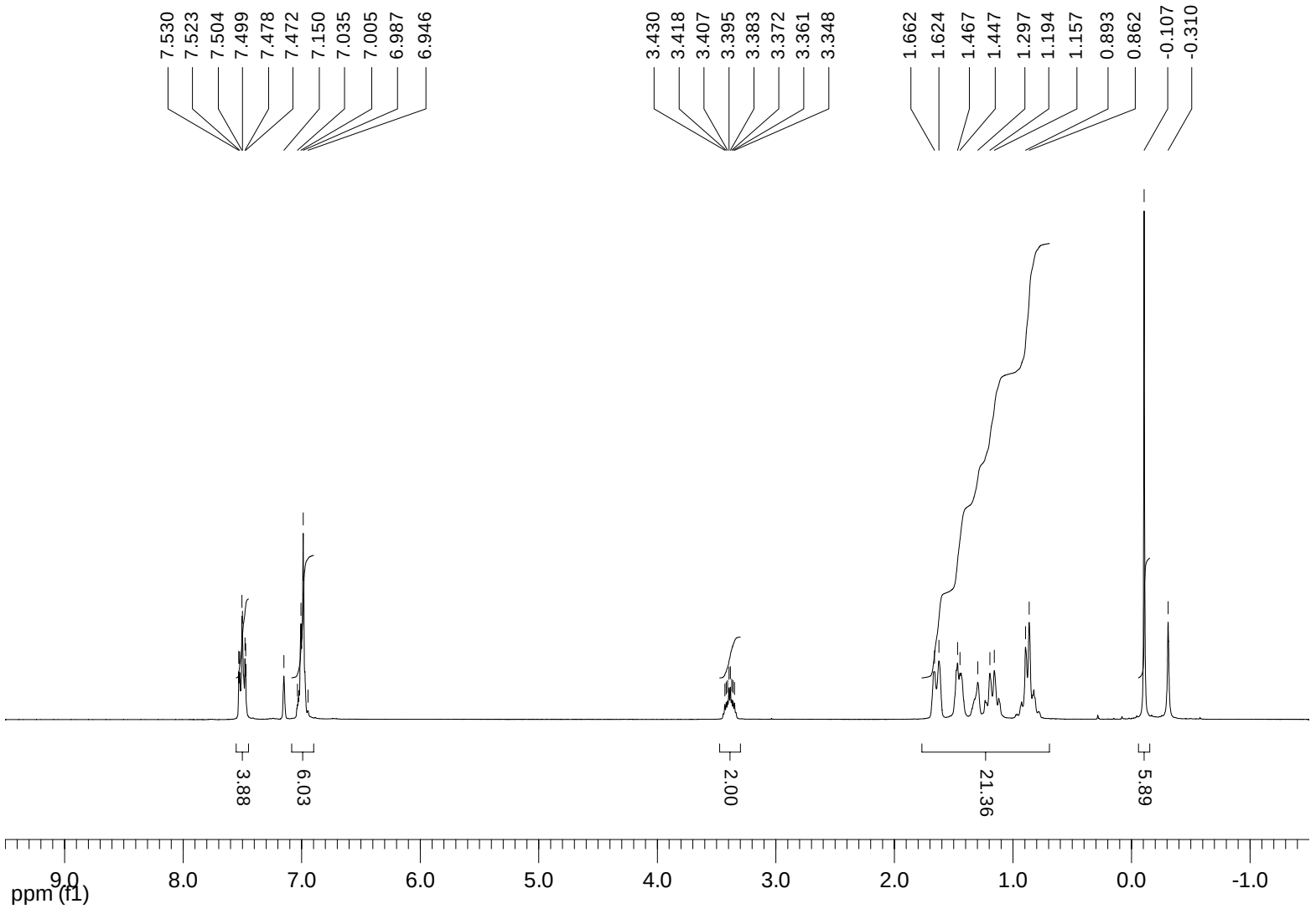

Figure 4b ^{13}C NMR spectrum of $Al(Ph_2PC\{NCy\}_2)Me_2$ (**4b**) (residual $AlMe_3$ at δ -6.847)

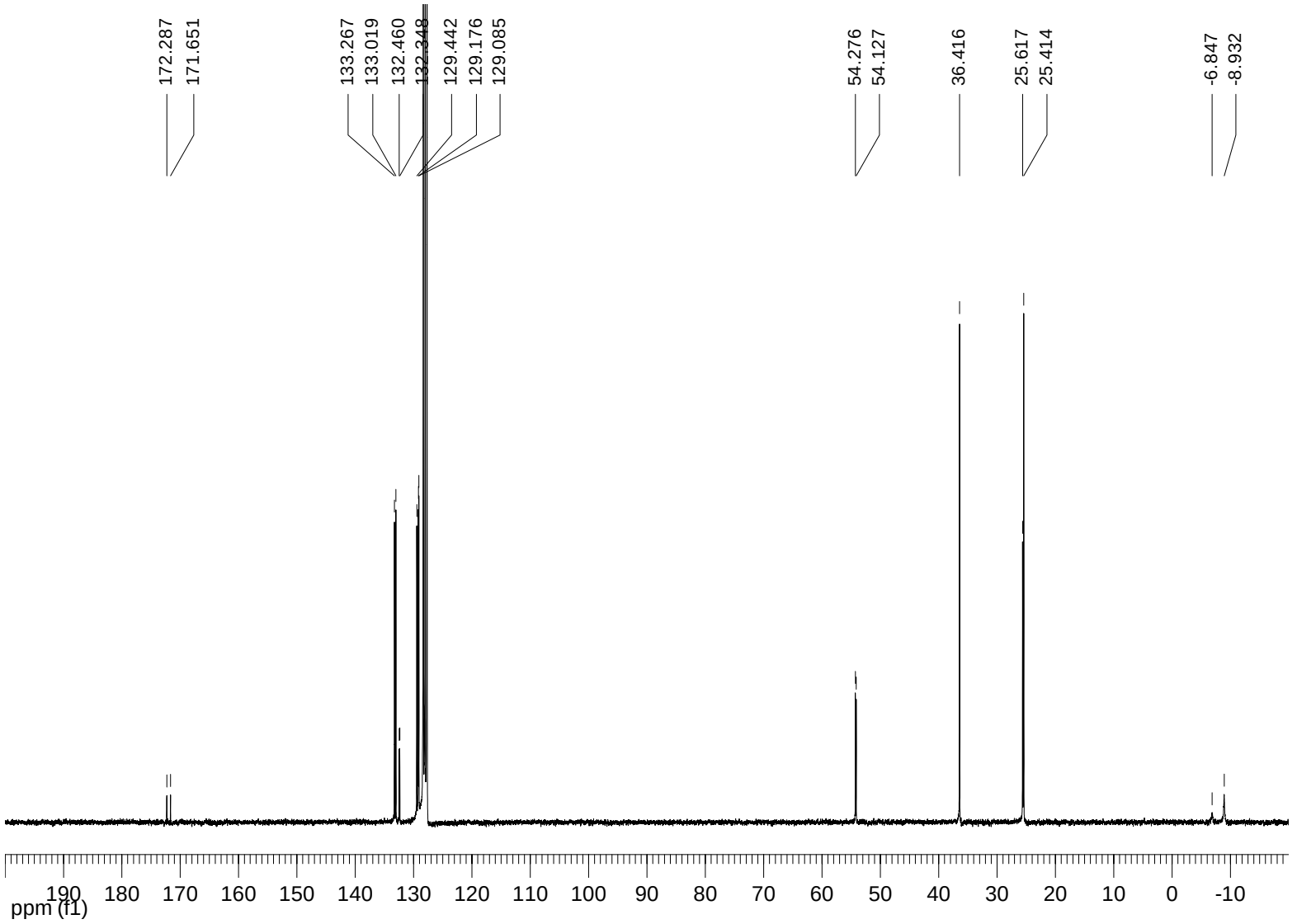

Figure 4c ^{31}P NMR spectrum of Al($Ph_2PC\{NCy\}_2$)Me_2 (**4b**)

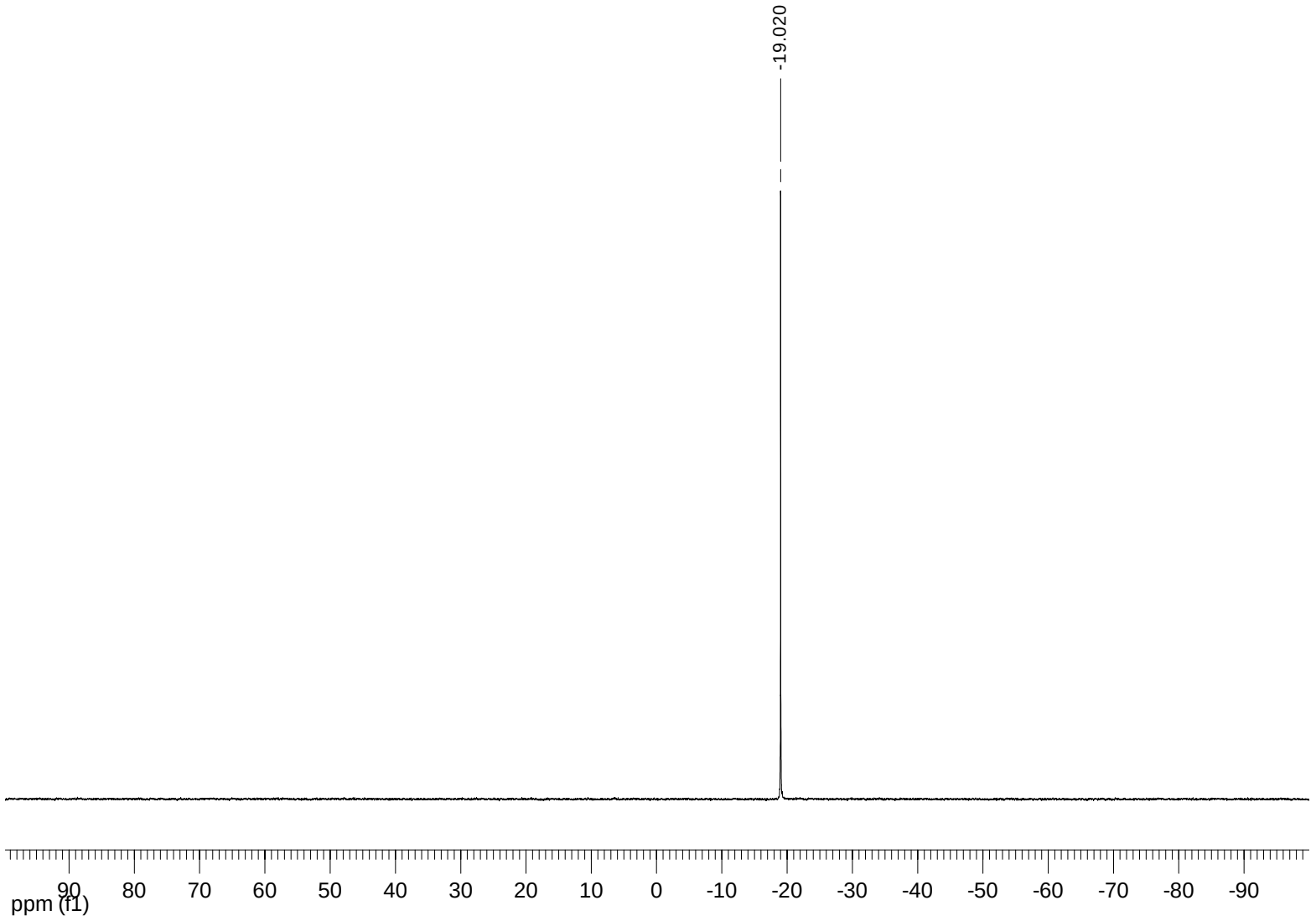

Figure 5a ^{1}H NMR spectrum of Al(Ph$_2$PC{N^{i}Pr}$_2$)Et$_2$ (**5a**)

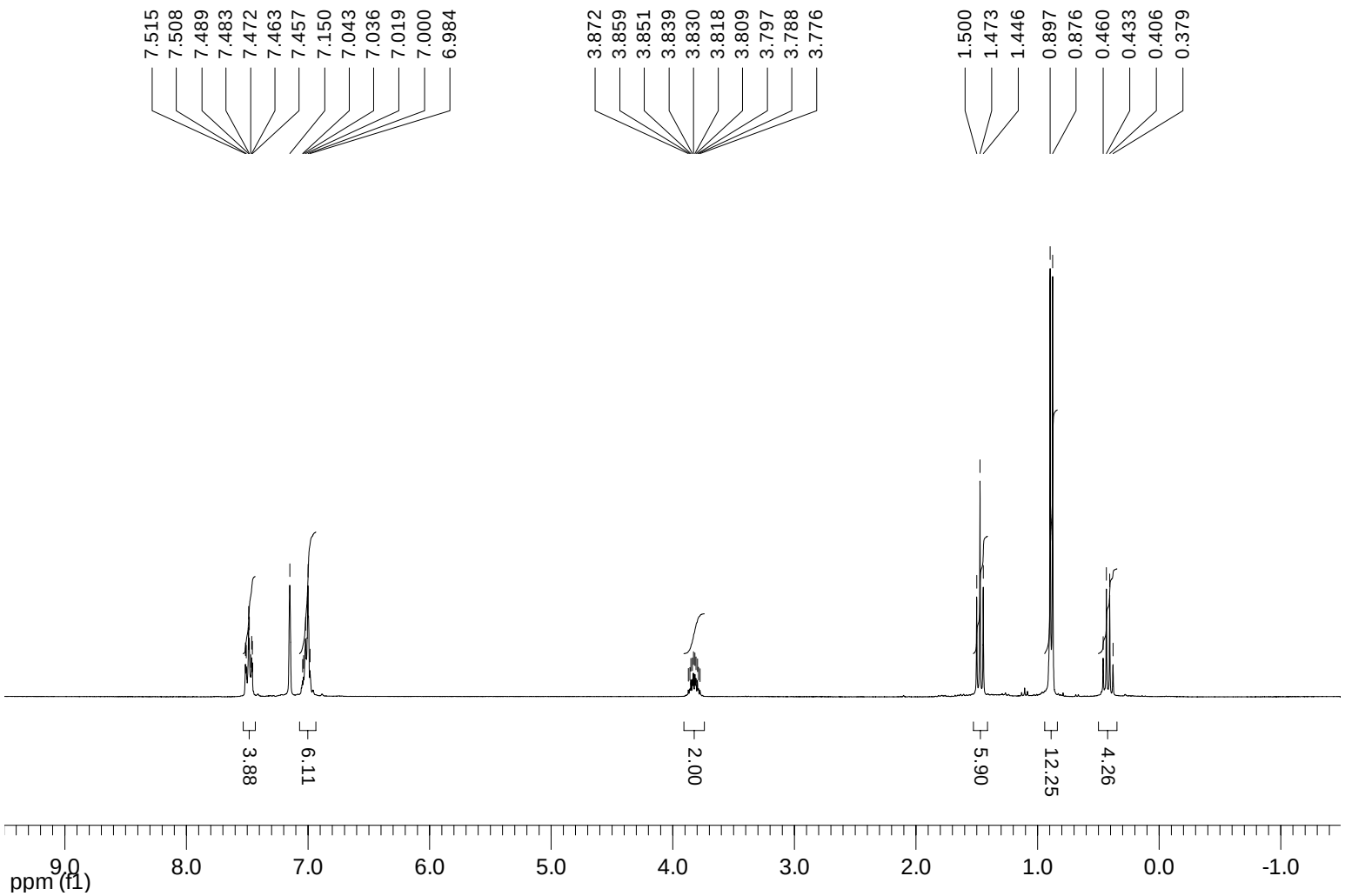

Figure 5b ^{13}C NMR spectrum of $Al(Ph_2PC\{N^iPr\}_2)Et_2$ (**5a**)

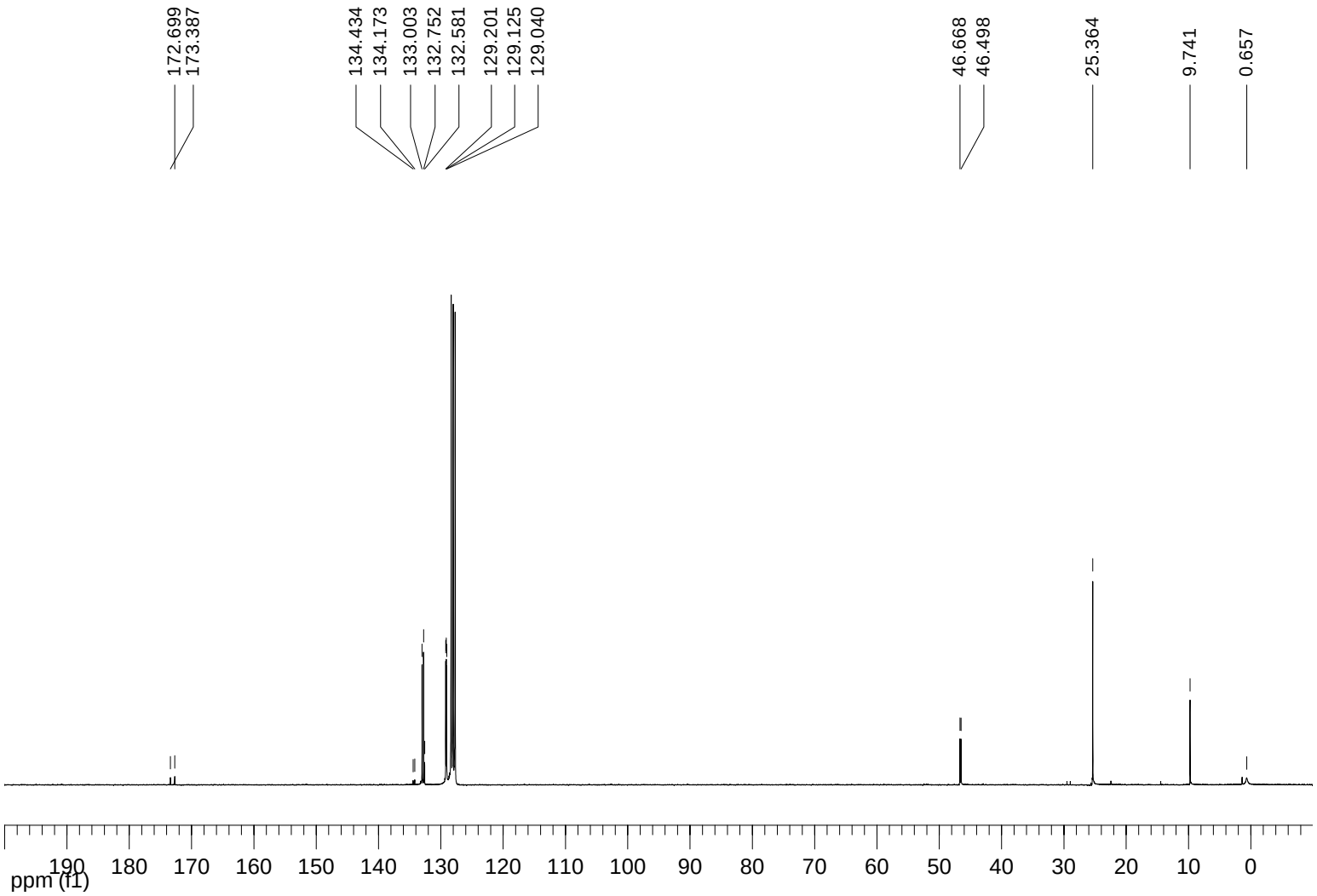

Figure 5c ^{31}P NMR spectrum of Al(Ph$_2$PC{N^{i}Pr}$_2$)Et$_2$ (**5a**)

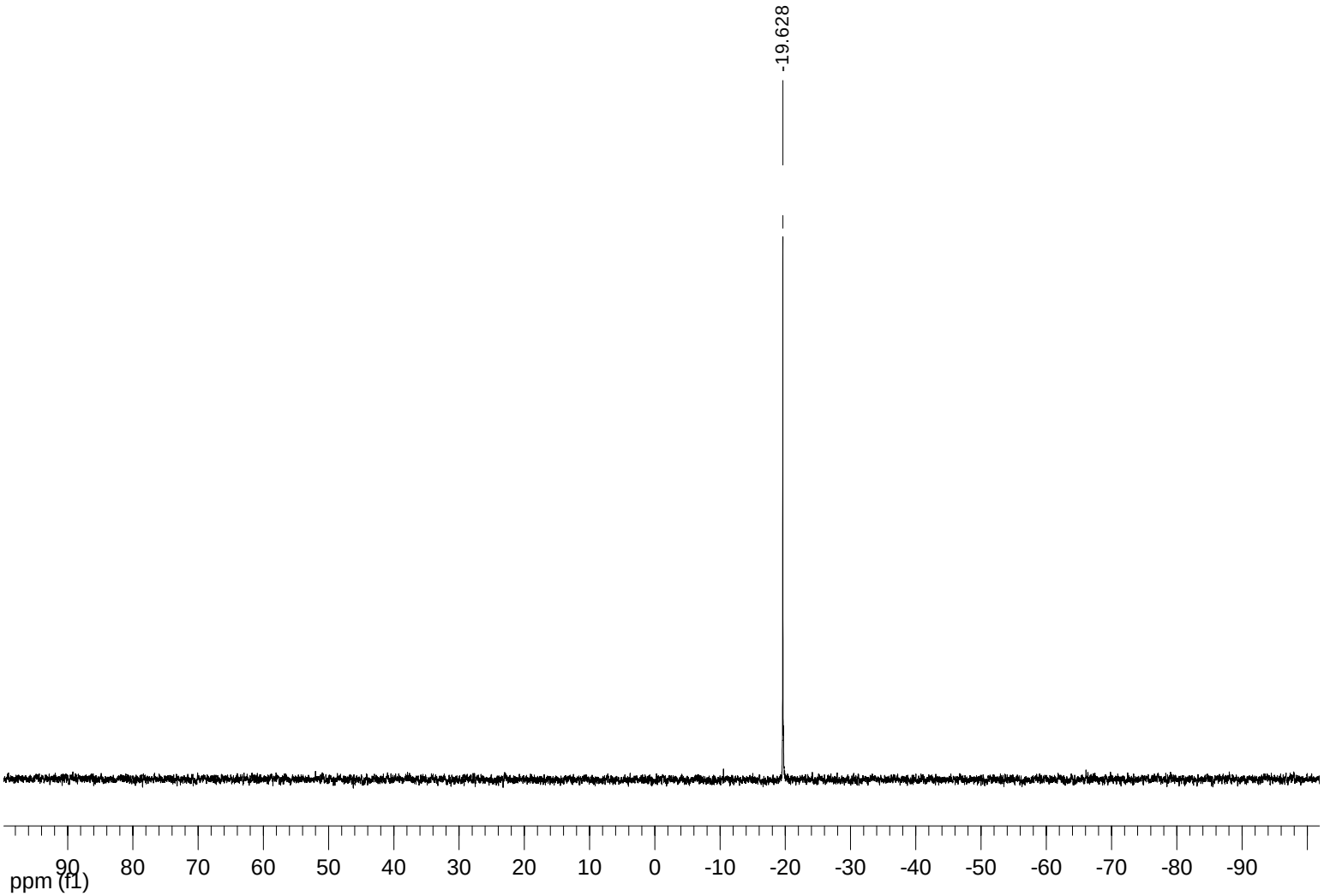

Figure 6a ^{1}H NMR spectrum of Al($Ph_2PC\{NCy\}_2$)Et_2 (**5b**)

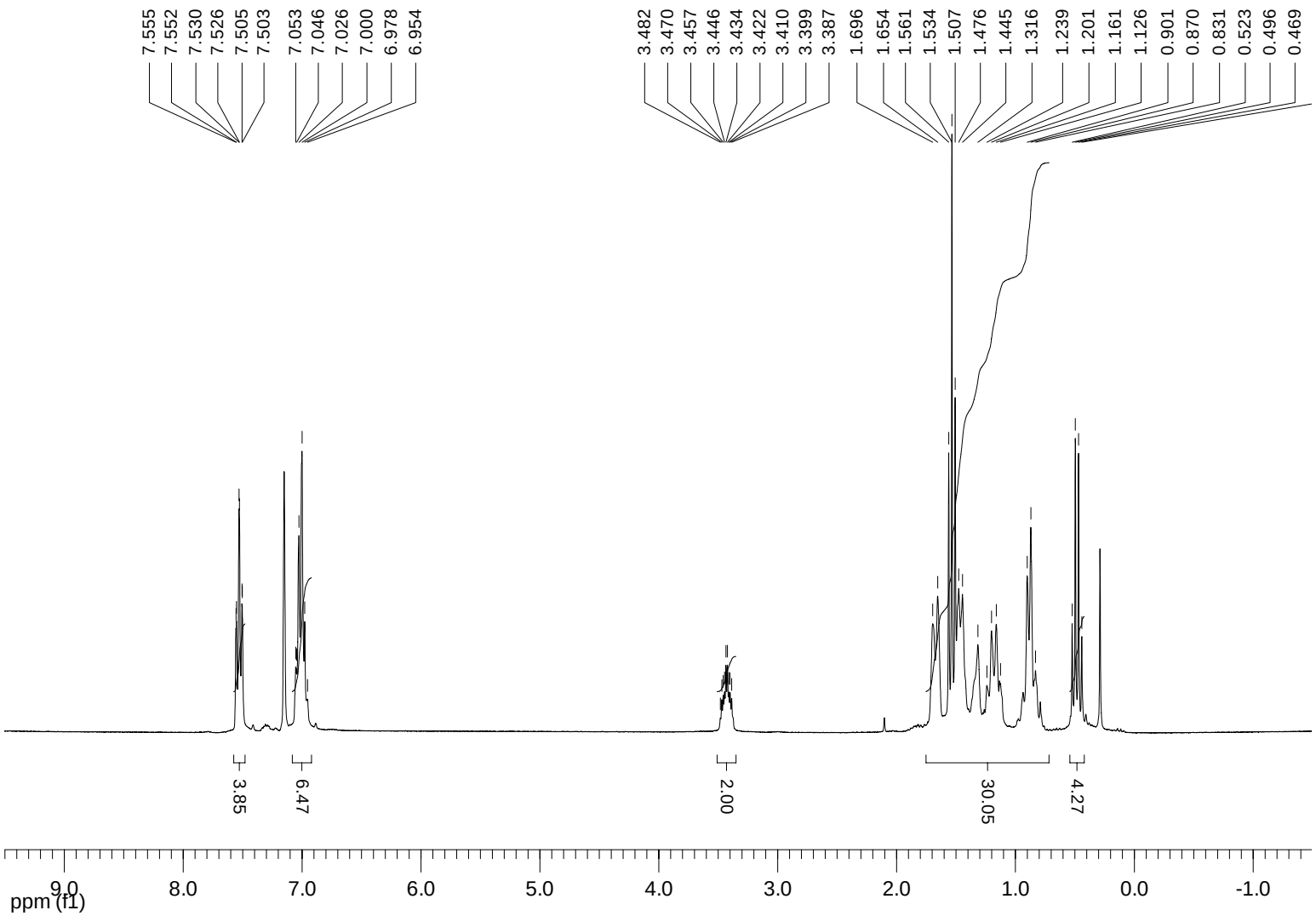

Figure 6b ^{13}C NMR spectrum of $Al(Ph_2PC\{NCy\}_2)Et_2$ (**5b**)

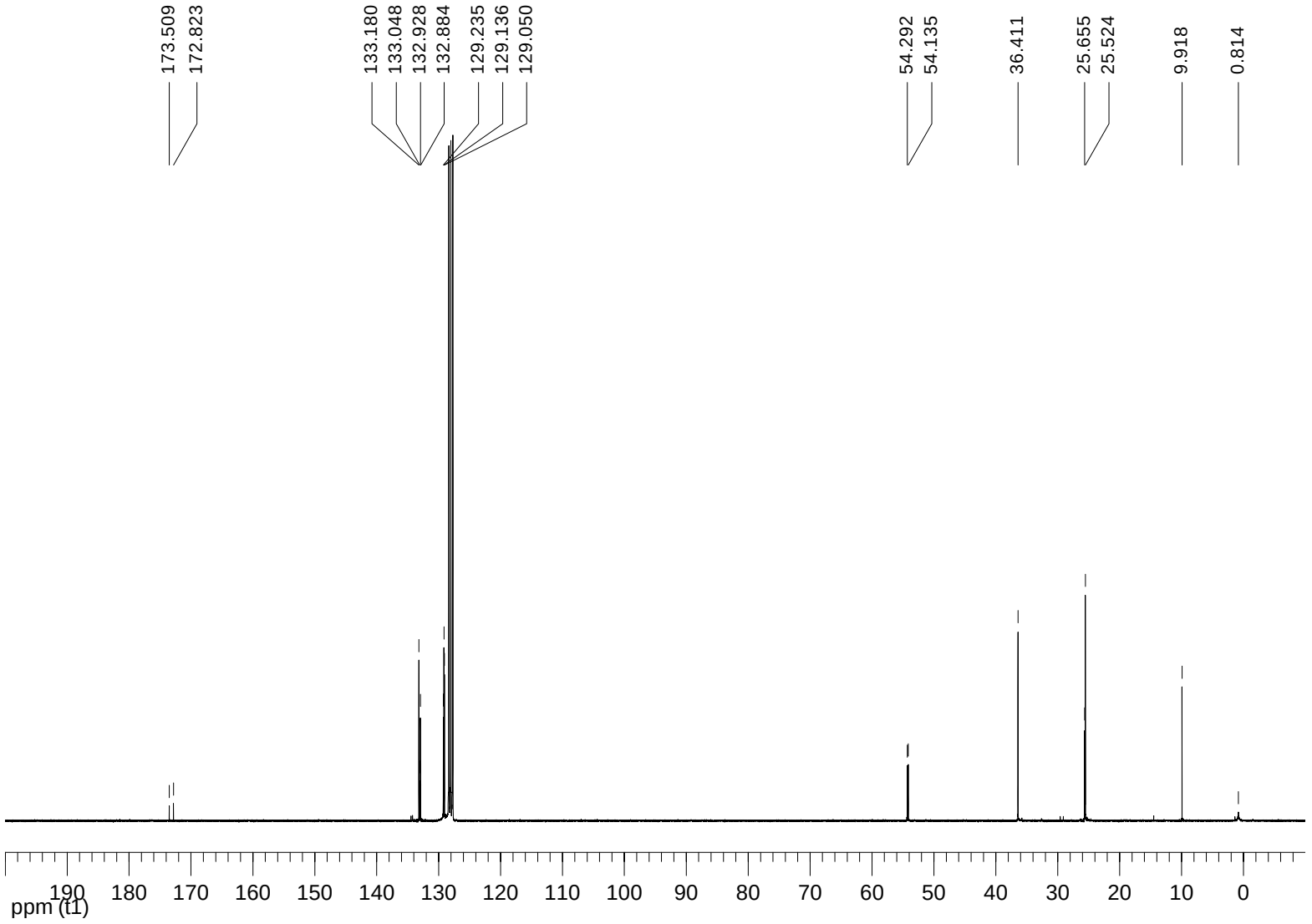

Figure 6c ^{31}P NMR spectrum of Al($Ph_2PC\{NCy\}_2$)Et_2 (**5b**)

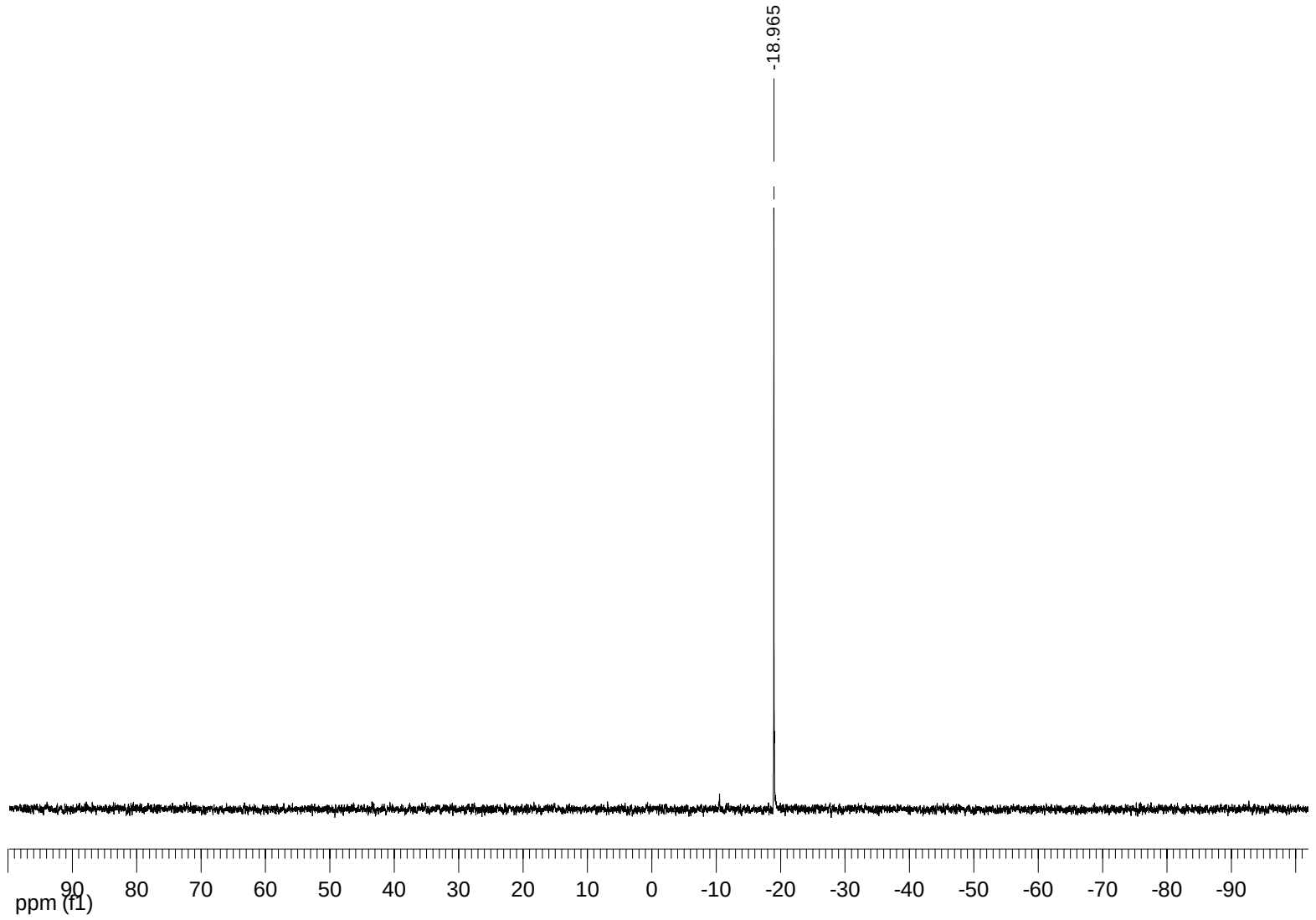

Figure 7a ^{1}H NMR spectrum of Al(Ph$_2$PC{N^{i}Pr}$_2$)^{i}Bu$_2$ (**6a**)

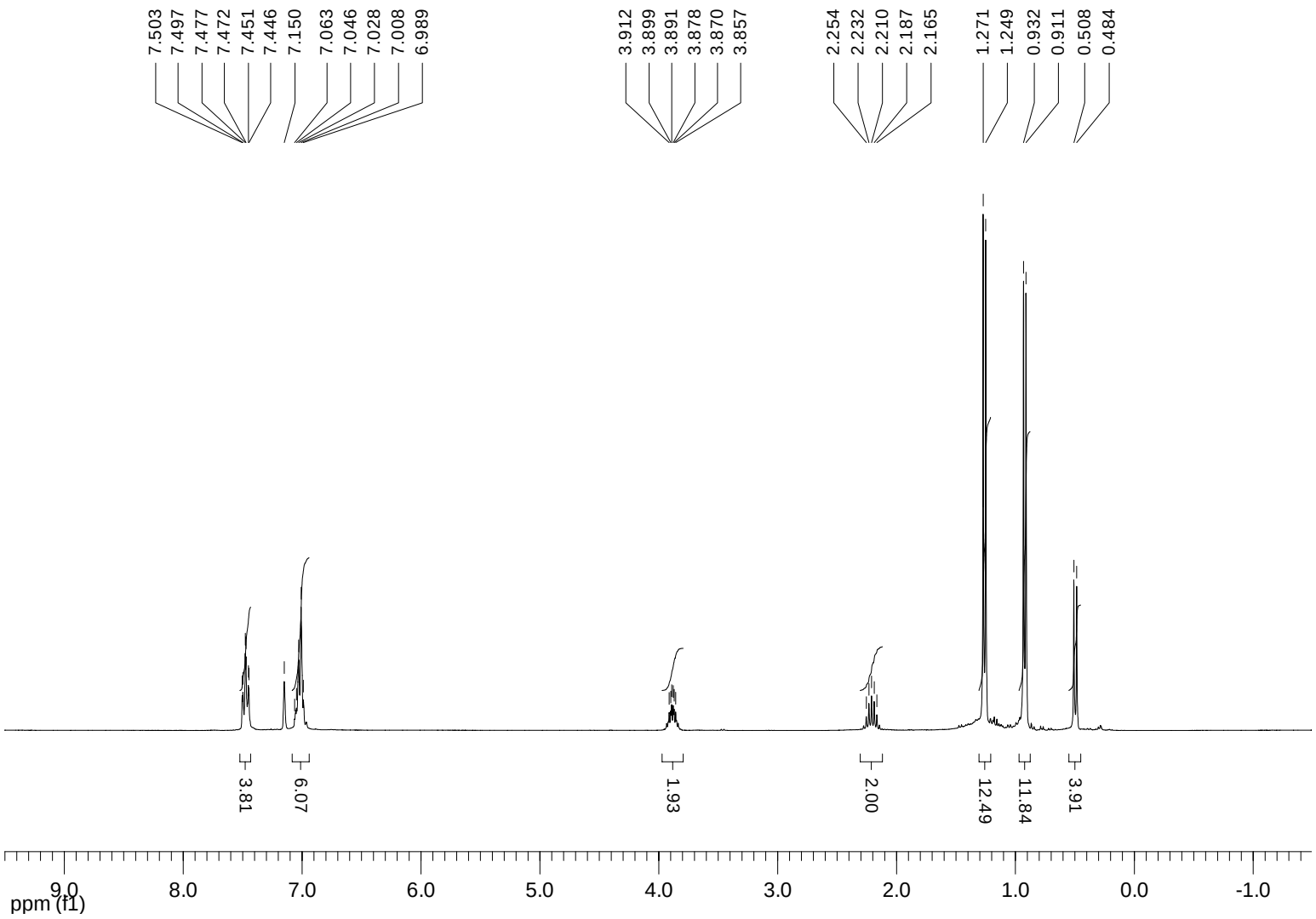

Figure 7b ^{13}C NMR spectrum of $Al(Ph_2PC\{N^iPr\}_2)^iBu_2$ (**6a**)

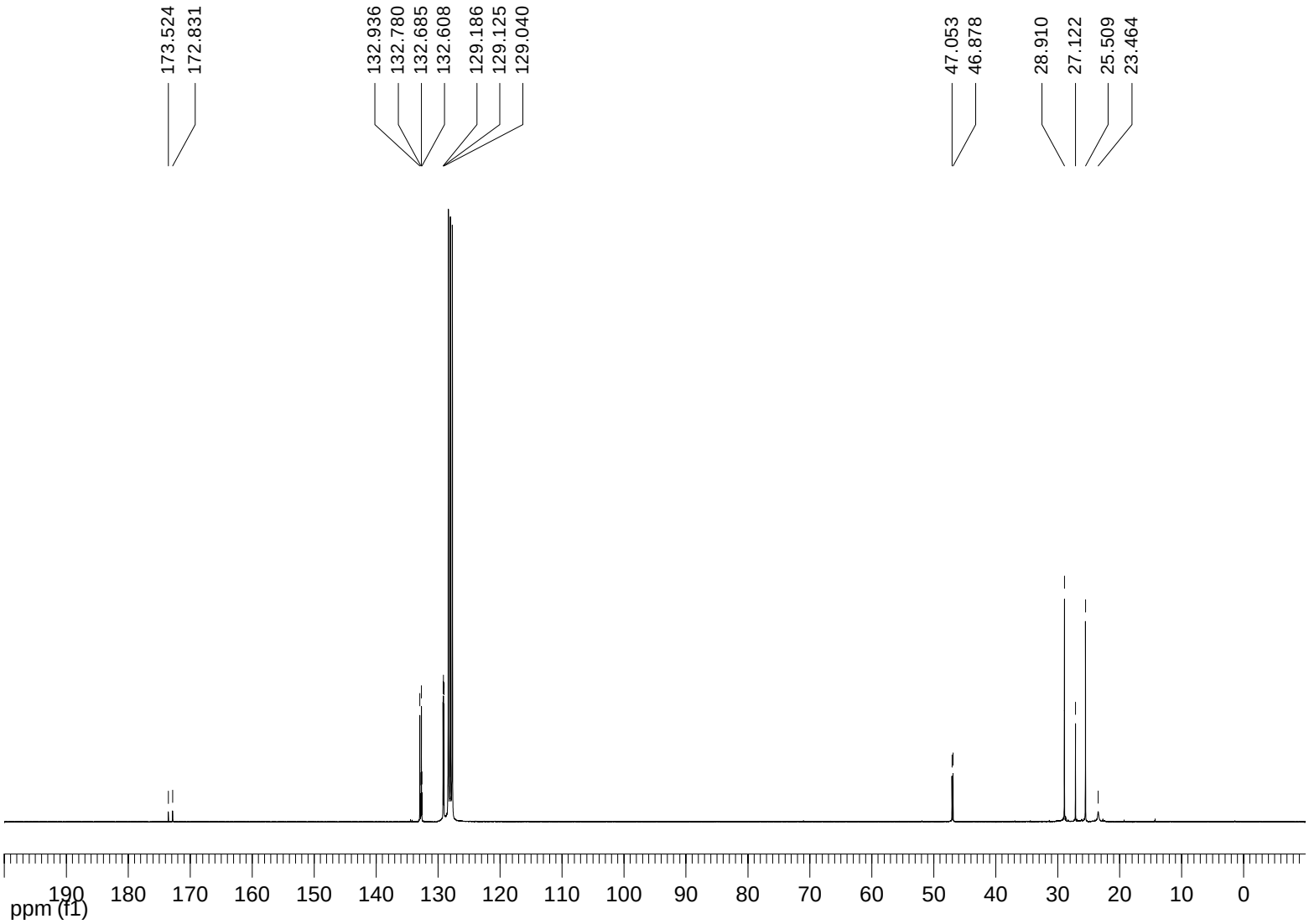

Figure 7c ^{31}P NMR spectrum of Al(Ph$_2$PC{N^{i}Pr}$_2$)^{i}Bu$_2$ (**6a**)

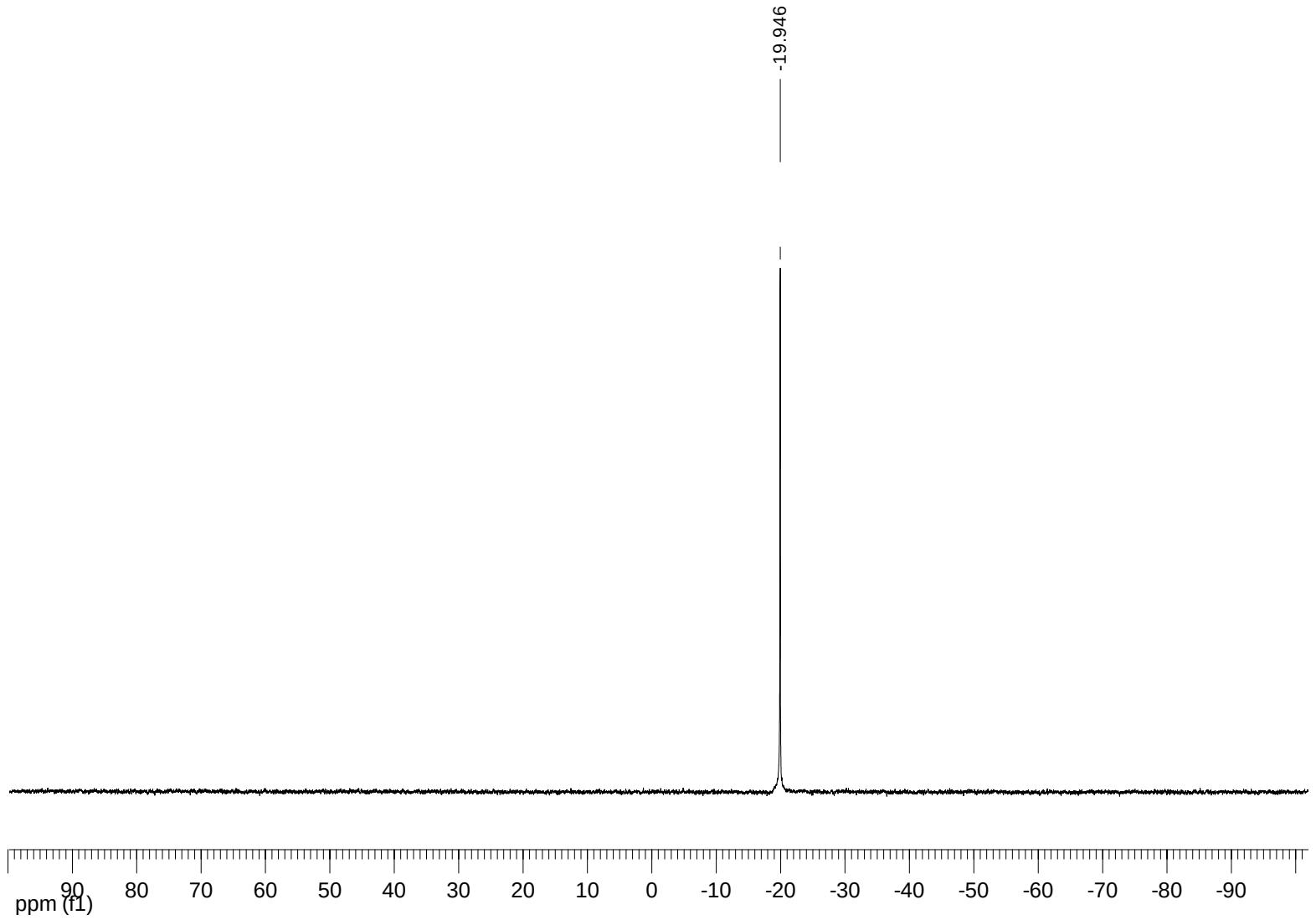

Figure 8a ^{1}H NMR spectrum of Al(Ph$_2$PC{NCy}$_2$)^{i}Bu$_2$ (**6b**)

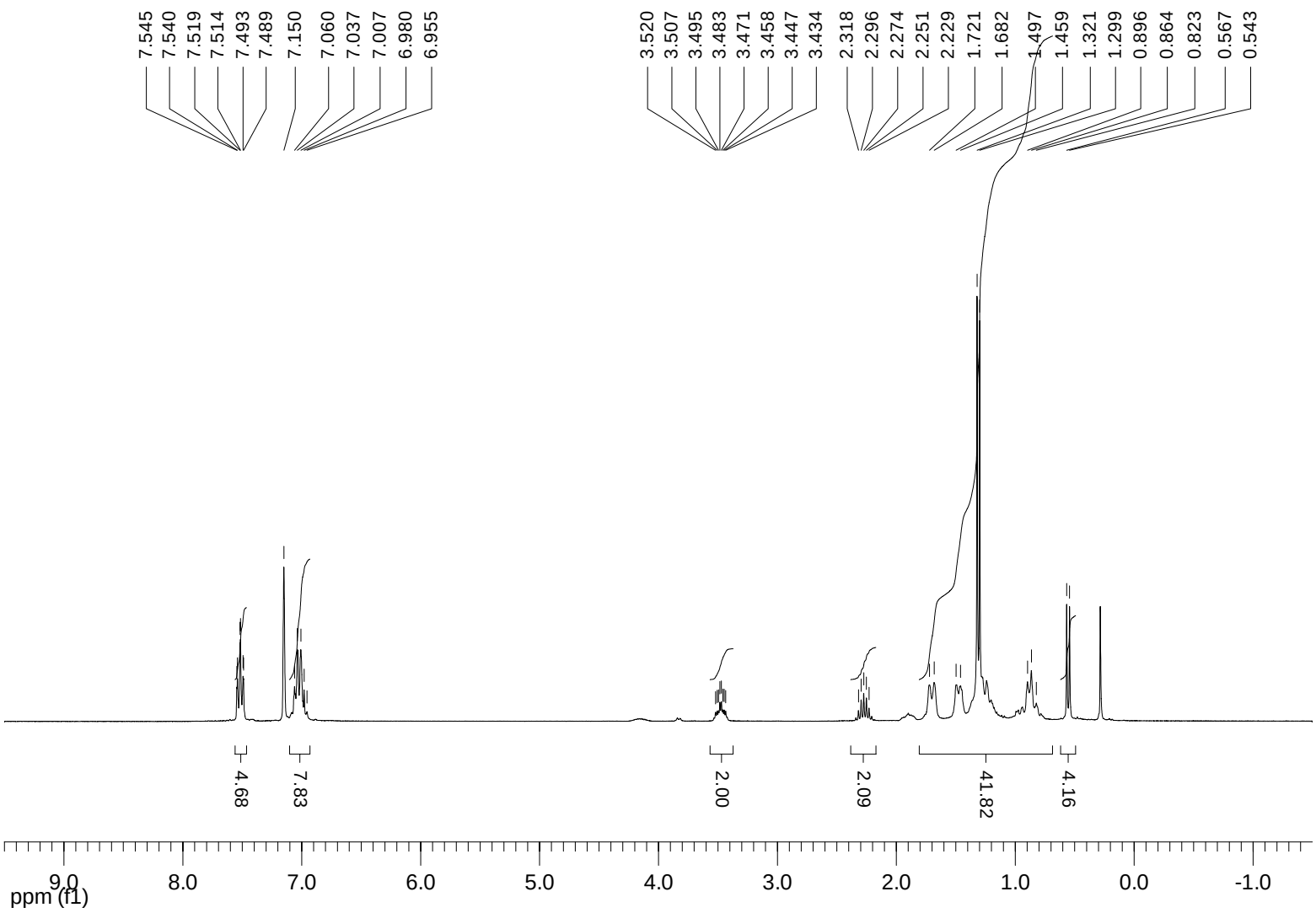

Figure 8b ^{13}C NMR spectrum of $Al(Ph_2PC\{NCy\}_2)^iBu_2$ (**6b**)

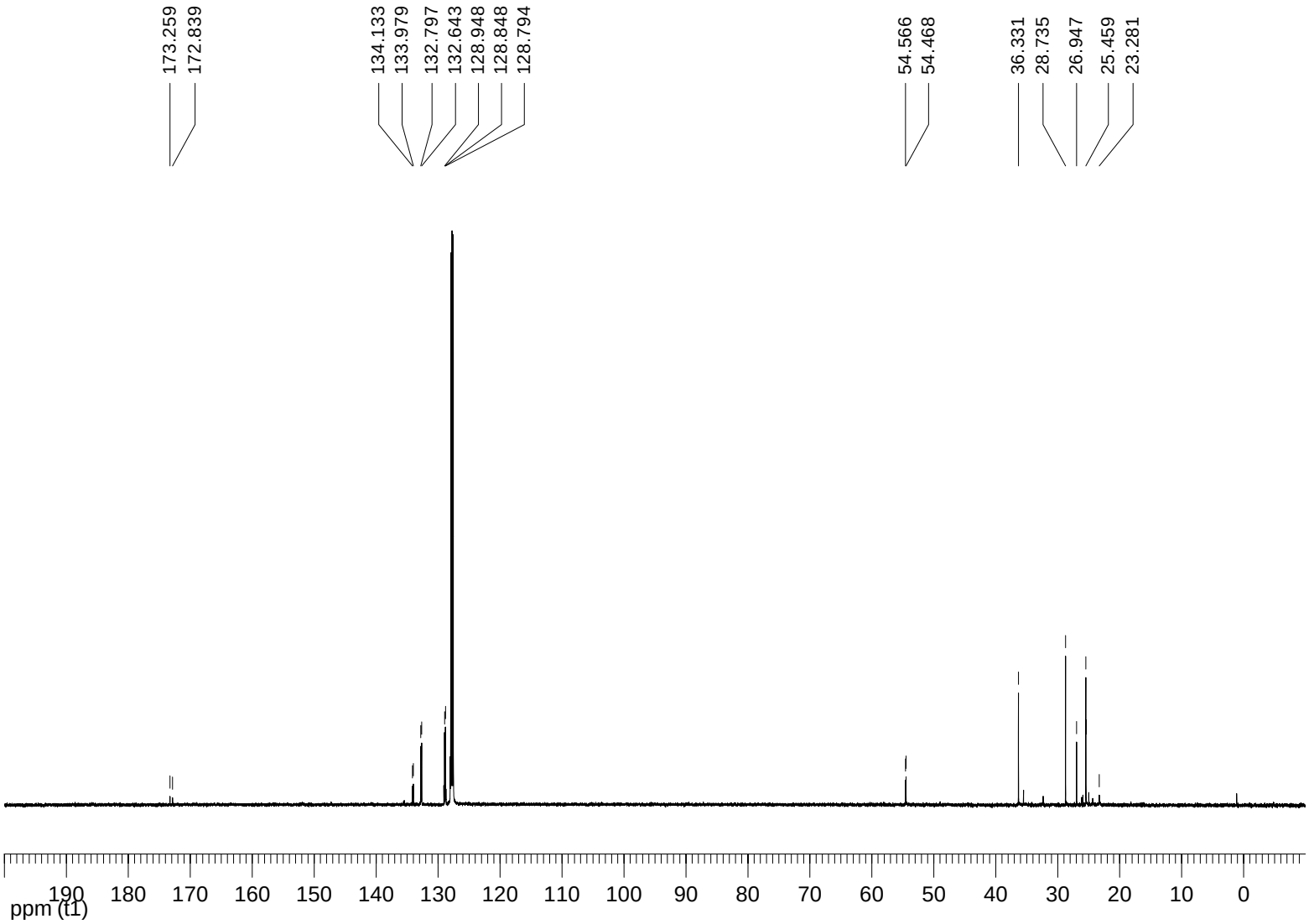

Figure 8c ^{31}P NMR spectrum of Al(Ph$_2$PC{NCy}$_2$)^{i}Bu$_2$ (**6b**)

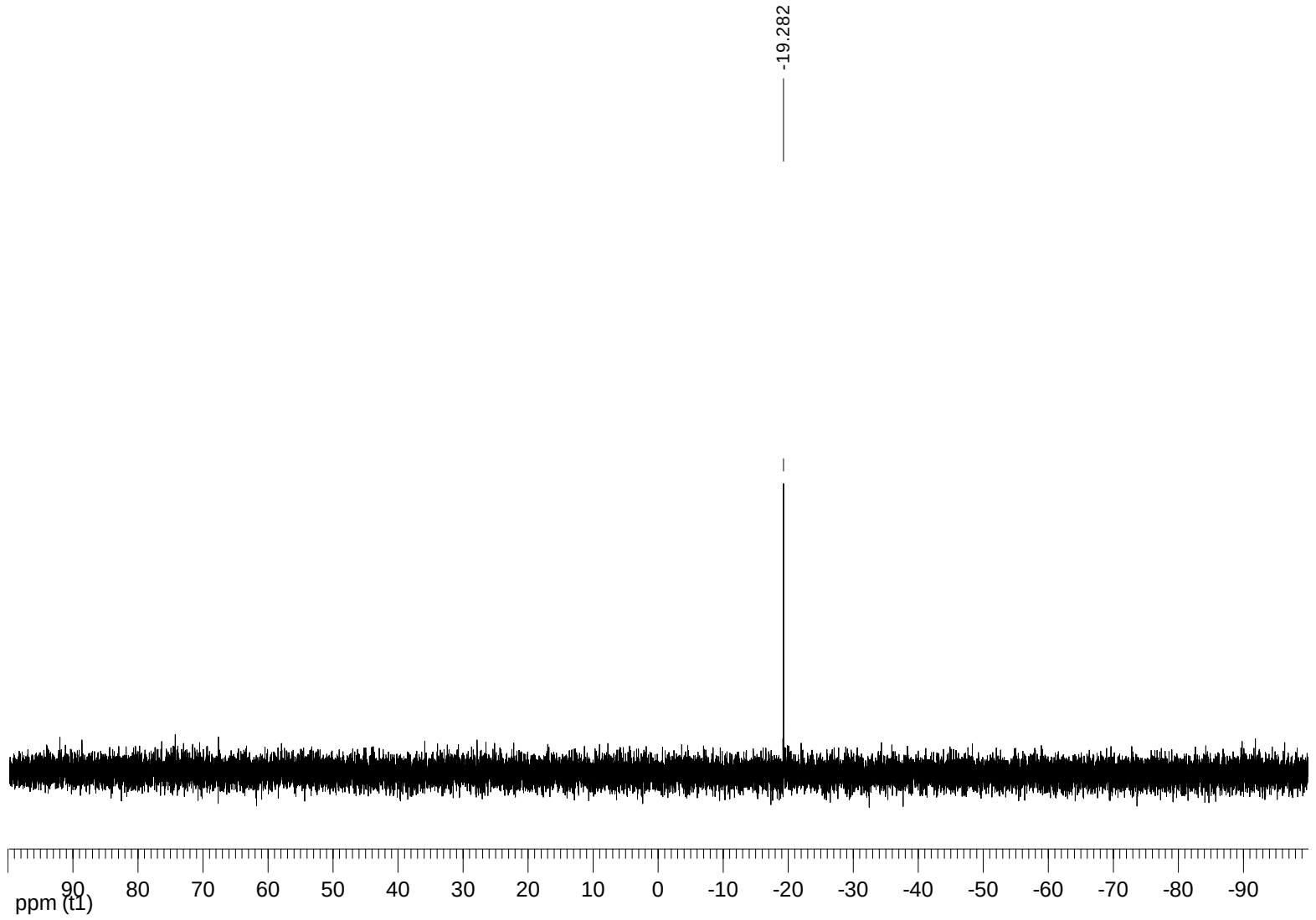

Figure 9a ^{1}H NMR spectrum of Al($Ph_2PC\{N^iPr\}_2$)Ph_2 (**7a**)

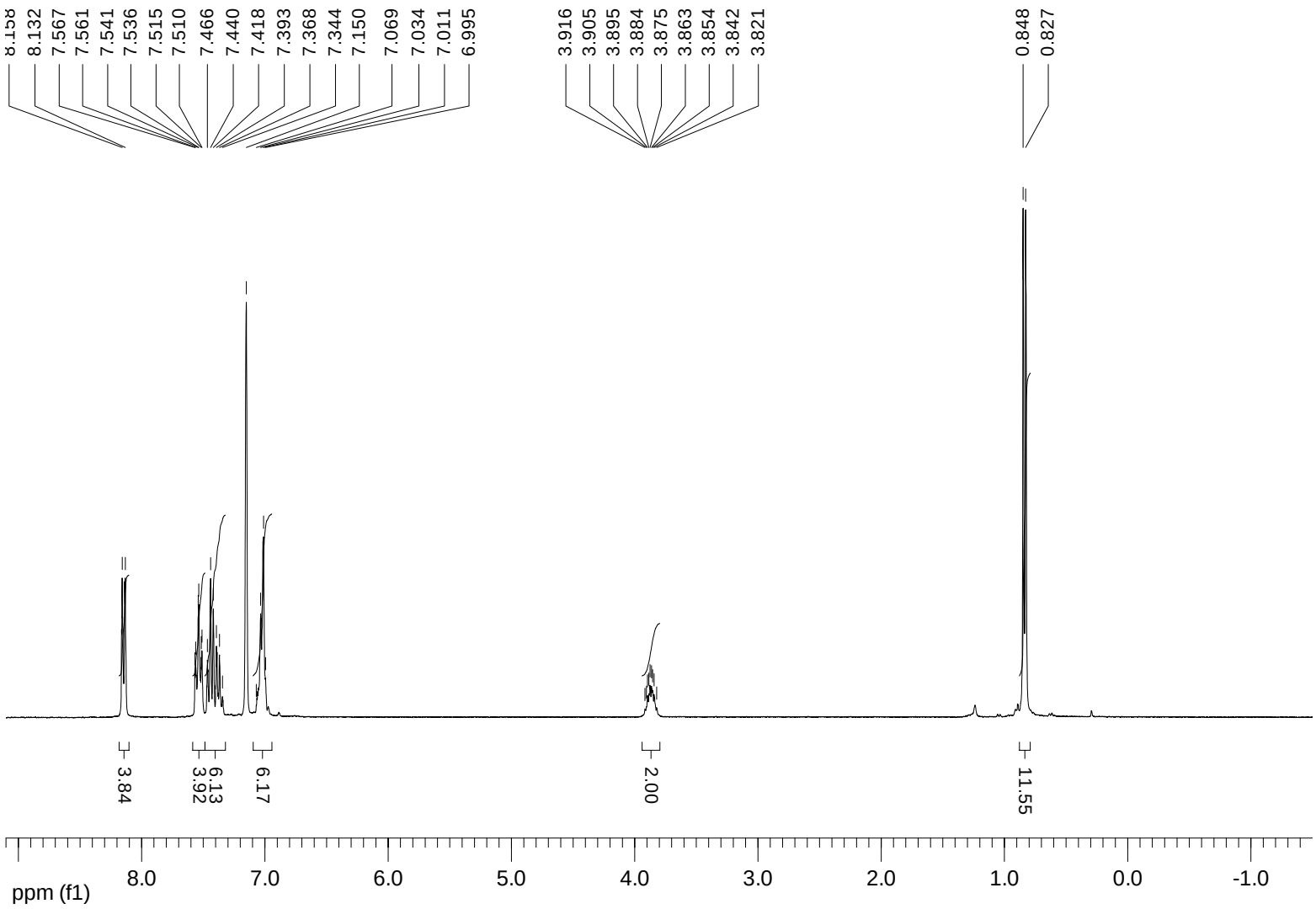

Figure 9b ^{13}C NMR spectrum of $Al(Ph_2PC\{N^iPr\}_2)Ph_2$ (**7a**)

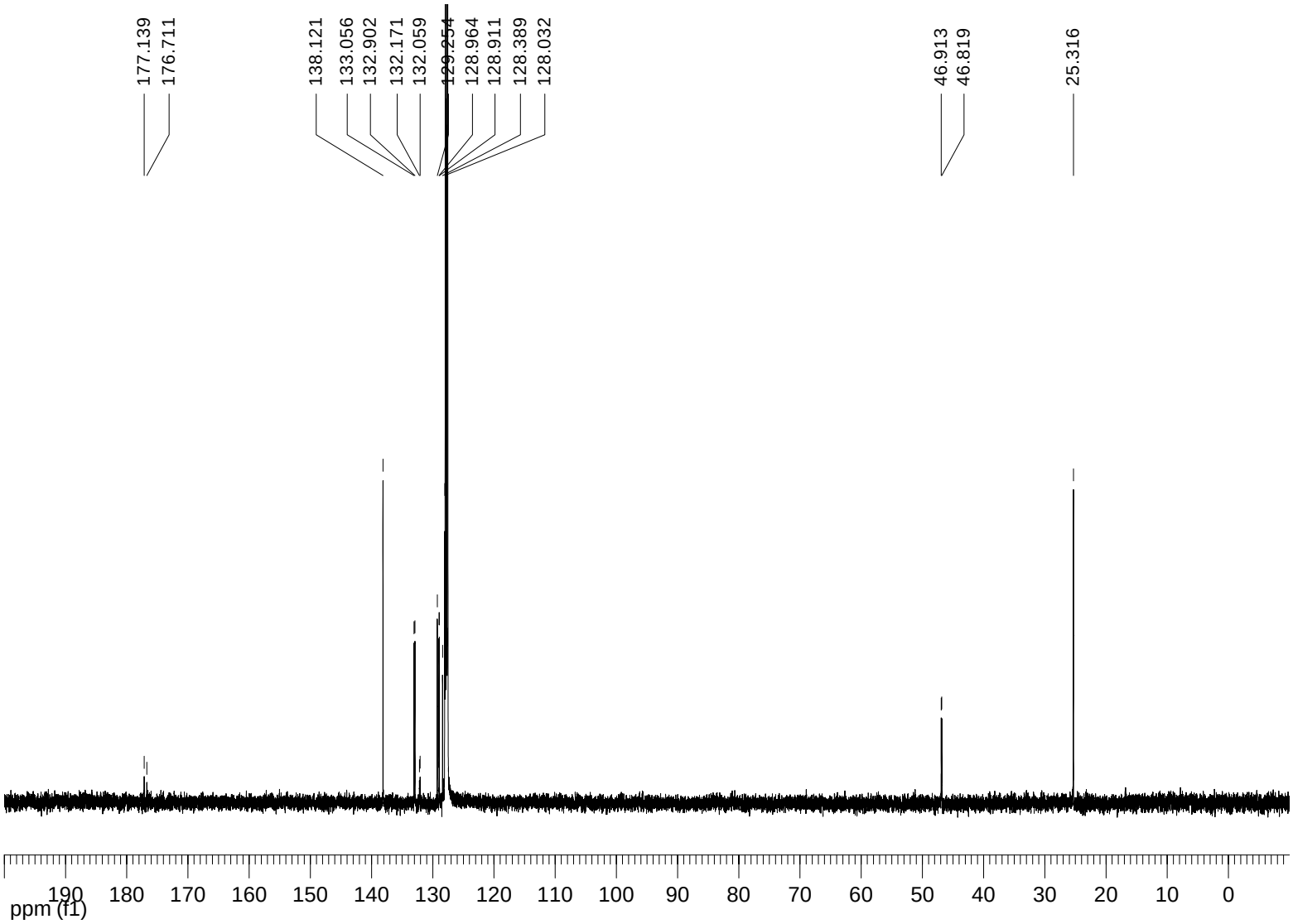

Figure 9c ^{31}P NMR spectrum of Al(Ph$_2$PC{N^{i}Pr}$_2$)Ph$_2$ (**7a**)