Addendum

Reaction of $[Os_5(CO)_{15}H_2]$ with Acetylenes; X-Ray Crystal Structures of $[Os_5(CO)_{15}H_2(CCPh)]$ and $[Os_5(CO)_{13}(PhCCPh)_2]$

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As specified the compound ' $H_2Os_5(CO)_{15}(PhC=C)$ ' appears to be an odd-electron molecule and is best formulated as ' $H_3Os_5(CO)_{15}(PhC=C)$ '. However, we have not been able to detect an additional hydrogen atom in either the metal hydrogen or carbon regions by ¹H n.m.r. spectroscopy. The compound appears to be diamagnetic and we have examined the e.s.r. spectrum down to -77 °C; no evidence for an odd electron was found. In order to establish the position of the 'extra' hydrogen we are carrying out a neutron diffraction study on the complex.