existence of Scheme III as an additional route for $C_2H_6$ loss from **5a**,**b**. We also note from the partial $\Delta m = 3$ shifts in Figure 2d that the $CD_3$ group has become indistinguishable from the remaining $CH_3$ group. However, H/D scrambling is not operative.

Finally, in the MI mass spectrum of **7a**–$Fe^+$ elimination of $(CH_3)_4Si$ is the by far most favored reaction (90% total fragment ion current).[9] For the $CD_2$-labeled complex **7b**–$Fe^+$ losses of $(CH_3)_4Si$ and of $(CH_3)_3SiCD_2H$ are observed in a ratio of >50:1. While this isotope distribution strongly indicates that sequence a of Scheme IV is, at best, of quite minor importance, a clear-cut distinction between paths b and c is not yet possible. We note the absence of $C_2H_6$ loss from either **7a**–$Fe^+$ or **7b**–$Fe^+$.[10,11]

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(9) For the reductive elimination of $(CH_3)_4Si$ from isolable $(CO)_4Fe(CH_3)Si(CH_3)_3$ complexes in solution, see: Blakeney, A. J.; Gladysz, J. A. *Inorg. Chim. Acta* **1980**, *53*, L 25.

(10) A reviewer has suggested that the failure of **7a** and **7b** to undergo $Fe^+$-induced loss of ethane may point to the operation of yet another mechanism for loss of ethane from the $Fe^+$ complexes of **5** and **6** "in which the $Fe^+$ ion first complexes with the lone pair on the nitrogen. Following this, the metal does not insert, but the energy of complexation is sufficient to induce the elimination within the intact, complexed molecule". We leave it to the reader to decide whether this proposal is superior to the one outlined in Scheme II.

(11) A β-methyl migration has been recently uncovered to be operative in the dissociative rearrangement of $(CH_3)_3COFe^+OC(CD_3)_2$ to give rise to $(CH_3)_2CO$ and $CH_3FeO^+C(CD_3)_2$ and *not* $FeOC(CD_3)_2CH_3^+$: Schröder, D.; Schwarz, H. *Angew. Chem.*, in press.

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# *Additions and Corrections*

R. Allen Williams, Timothy P. Hanusa,* and John C. Huffman: Structures of Ionic Decamethylmetallocenes: Crystallographic Characterization of $(Me_5C_5)_2Ca$ and $(Me_5C_5)_2Ba$ and a Comparison with Related Organolanthanide Species. **1990**, *9*, 1128–1134.

The calculated value for the unit cell of $Cp^*{}_2Ca$ in Table I is incorrect. The proper value is 3684.27 Å$^3$. In Table II, the isotropic thermal parameter listed for carbon C(16) of $Cp^*{}_2Ca$ should be 18. All other values in Tables I and II are correct.