



1) ring inversion exchanges the environments of the Me groups

2) bond shift exchanges the environments of the ring proton

$$\frac{k_{r.i.}}{k_{b.s.}} \approx 80, \quad \text{difference in } \Delta F^\ddagger \approx 2.5 \text{ kcal/mole}$$

Transition state for bond shift I planar

" " " ring inversion II planar
 II is of lower energy than I by 2.5 kcal/mole.

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