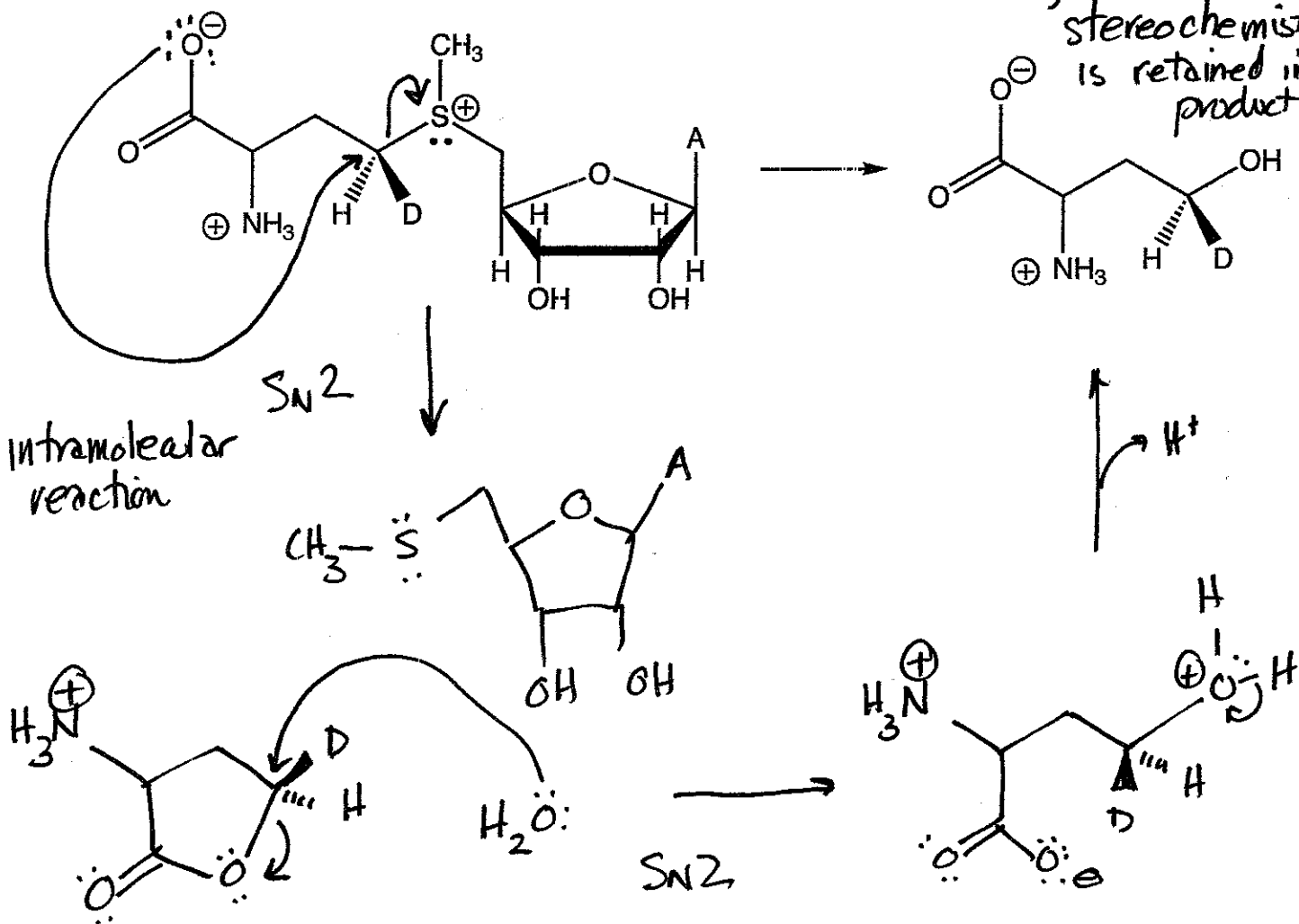


Quiz #3

If aqueous solutions (at neutral pH) of SAM are left to stand at room temperature for several hours, they decompose as shown in the reaction below, which is not balanced.

Draw a mechanism which explains how the product forms, including why it has the stereochemistry that it does. Be sure to include lone pairs where they are involved in bond-breaking/making, and show all formal charges on the atoms that bear them. Your mechanism should also give the other product of the reaction (it will automatically, but be sure to draw it out).

Key observation:
stereochemistry
is retained in
product!



2 S_N2 rxns, each proceeding with inversion, leads to overall retention.