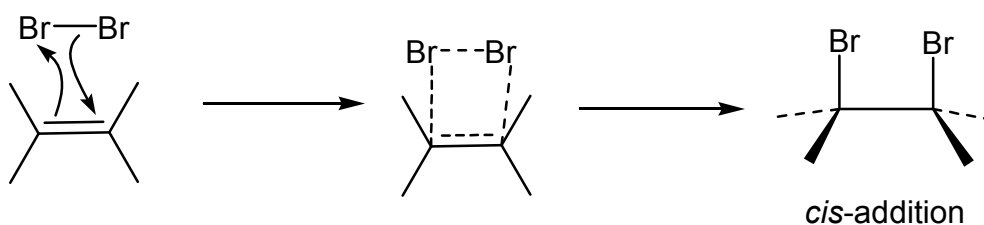


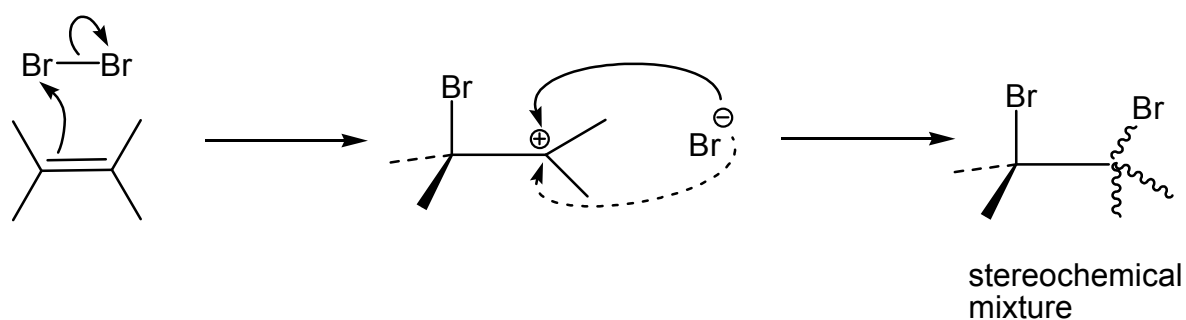
Addition Reactions at sp^2 Carbons

Consider the addition of bromine to an alkene: what are some reasonable mechanisms?

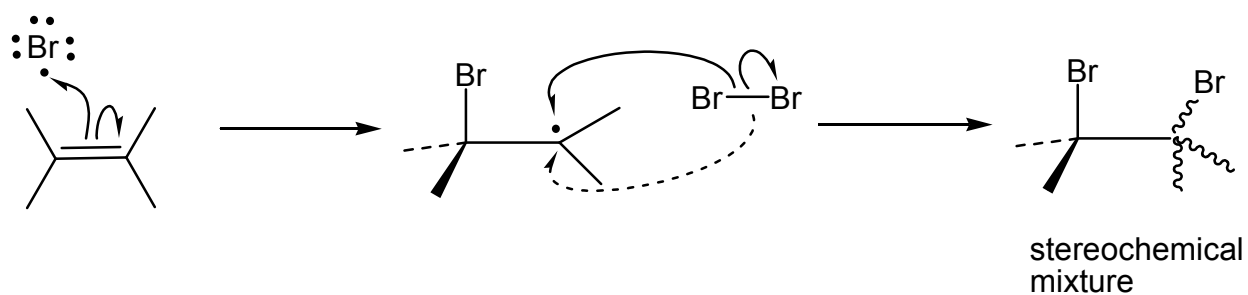
A concerted mechanism?



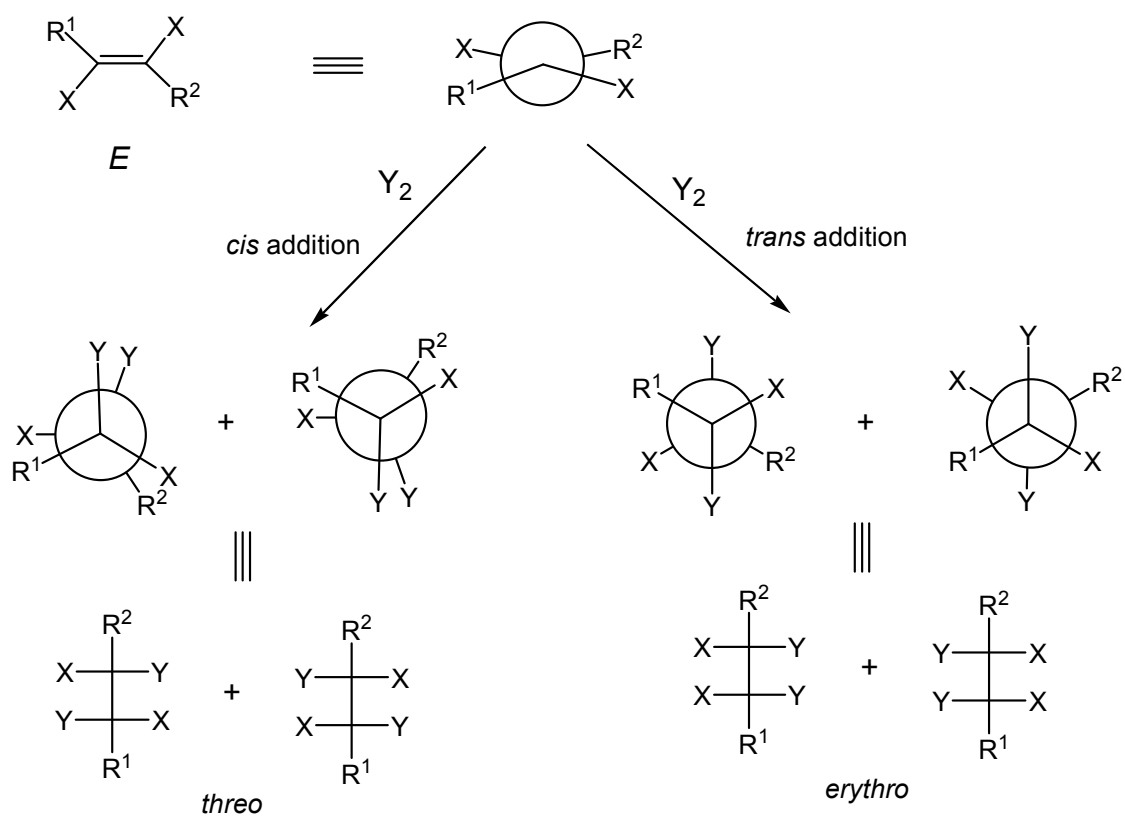
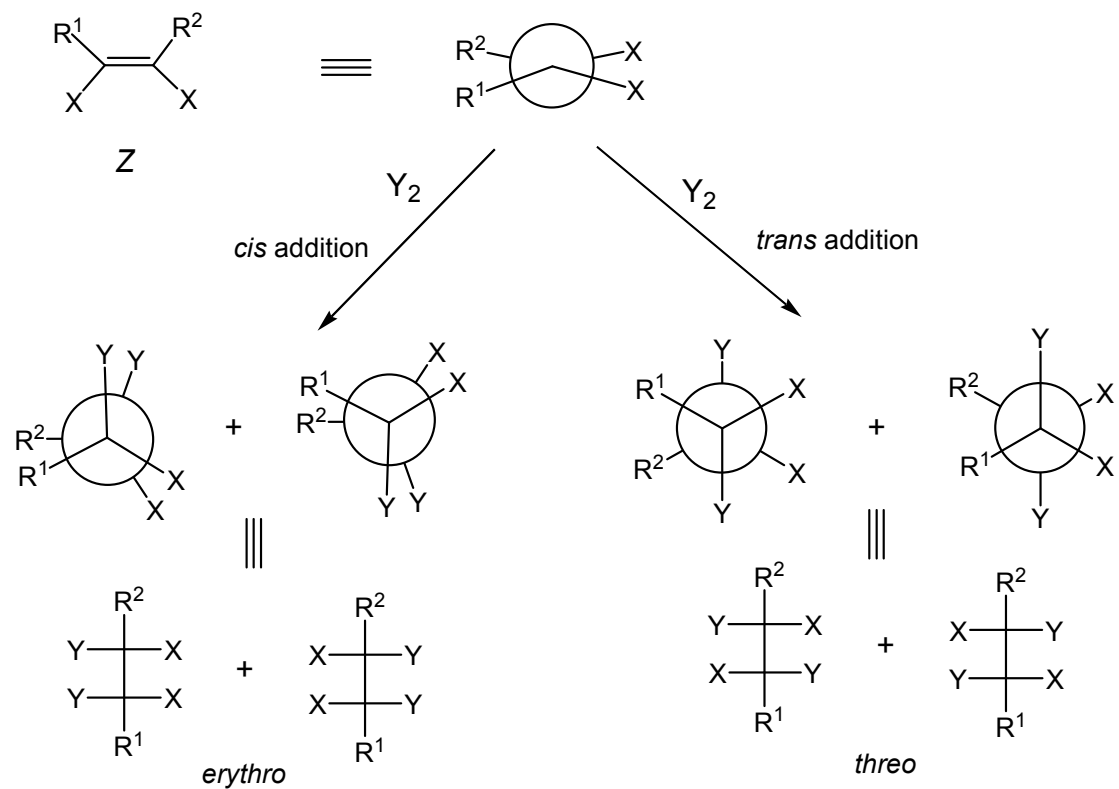
A stepwise polar mechanism?



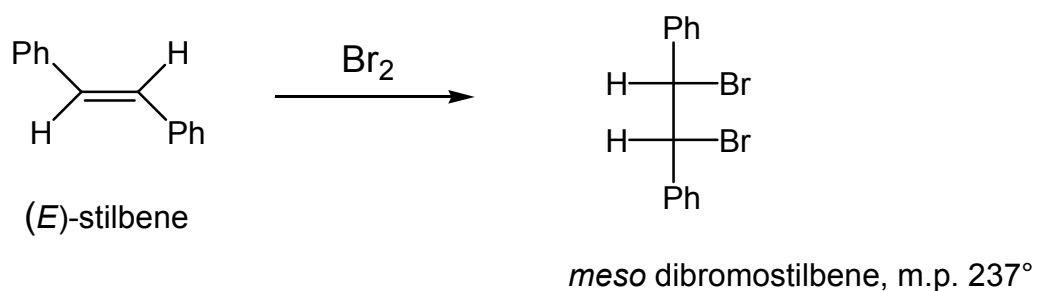
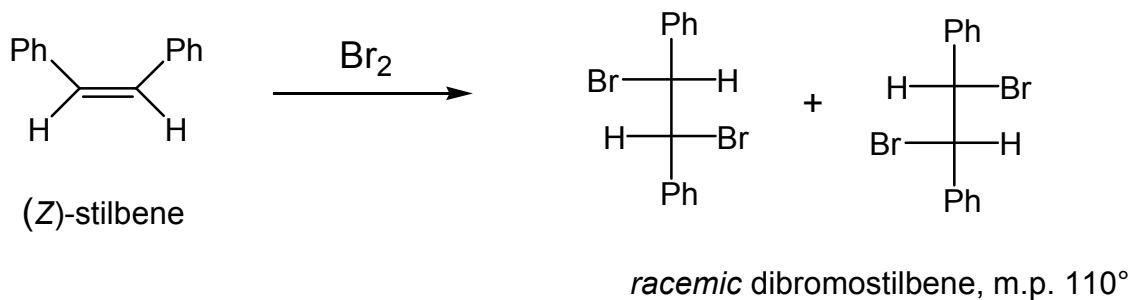
A stepwise radical mechanism?



Stereochemical Possibilities



Example



Mechanism of Bromine Addition to Alkenes

Two step reaction – first formation of a cyclic bromonium ion intermediate, then S_N2 ring opening. Formation of the cyclic bromonium ion is **concerted**:

