



Figure S1. *Left.* Center-of-mass translational energy $P(E_T)$ flux distribution for the formation of C_5H_3 (red) and C_5HD_2 (blue) via the reactions $C_2^{35}Cl + CH_3CCH \rightarrow C_5H_3 + H^{35}Cl$ and $C_2^{35}Cl + CD_3CCH \rightarrow C_5HD_2 + D^{35}Cl$, respectively. *Right.* Associated center-of-mass angular flux distribution $T(\theta)$ for the C_5H_3 and C_5HD_2 products (black curve).