This project was divided into three experiments. In the first two experiments, trifluoromethane and nitrous oxide were adsorbed onto NaCl and KCl films and photolyzed in the range 190-300 nm. In the third experiment, trifluoromethane and nitromethane were adsorbed onto a KCl film and photolyzed in the range 190-300 nm. The photolysis was monitored by a Mattson Galaxy Series FTIR 5022. The goal of this experimentation was to induce photochemical reactions of trifluoromethane with nitrous oxide and nitromethane, or their photoproducts. While some photochemical pathways have been observed throughout the course of the experiment, trifluoromethane did not appear to participate in any photochemical reactions.