



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Anna M. Loch	Project Number S1508
Project Title Effect of UV Light on Depressions on CH Plastic Films in Different Environments Using Different Ages and Thickness	
Abstract Objectives/Goals The study of the effects of ultraviolet light on the depressions in CH (Carbon Hydrogen) plastic films takes place in this experiment. Methods/Materials I tested the CH film in a regular air atmosphere, a vacuum, an oxygen filled atmosphere, and a nitrogen filled atmosphere. There were two sets of plastic films; half of which were stored in a vacuum with no exposure to oxygen, and the other half were stored in the room. I also tested to see if thickness affects the depth of depressions as well as the effects of age. Results It was noticed that the change in the O-H bonds, which is one of the reasons of the depressions, was the smallest in the oxygen-free atmospheres, which were the nitrogen filled atmosphere and the vacuum. It was also discovered that the variables of age and thickness were not factors of the depths of depressions, but rather due to chance. Conclusions/Discussion The plastic films that were stored in the vacuum had smaller changes in the O-H bonds than the films that were stored in the room. The presence of oxygen over time has caused the film stored in the room to have a slight depression, even when in an oxygen free environment.	
Summary Statement The CH plastic films were exposed to UV light in four different environments to determine if the combination of oxygen and UV light have an effect on the depths of depressions in the films.	
Help Received Used lab equipment at General Atomics; had an internship at General Atomics	