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FILM 4200 (Jean Hertzberg)
Team 3 Report
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The “fog “ produced by dry has always been fascinating to me. I imagine that this phenomenon is fascinating to many people in addition to myself. For the final team assignment my teammates and I decided that dry ice and the fog it produces would be a suitable phenomenon to explore. The fog creates observable fluid dynamics, the physics of which can become more accessible when manipulated by photography. As is often the case, much of the preparation for this experiment involved decisions concerning the setup of the experiment, lighting, environment and time. It was ultimately agreed that we would gather at a specific time and location and then try to manipulate the setting of the photographs in a number of ways in an attempt to produce a large variety of results. With these parameters established my team and I began the experiment.

The primary objects used in the creation of the image were a piece of black foam board approximately 3’ x 2’, and an 8 ounce beaker. My teammates and I chose black foam board because of its contrast to the light color of the chosen fluid. The beaker was filled with approximately 6 ounces of water. Several ounces of dry ice were then dropped into the water and a good quantity of fog was generated. The fog is heavier than the air around it, and it therefore tends to move downward after spilling over the lip of the beaker. The board was positioned at a slope of about 15 degrees. The fog was then poured onto the surface of the board What one will see in examining the image is the downward flow of the fog over the surface of the foam board. The widest portion of the cloud of fog is approximately 15 inches.

The dry ice used in this experiment was purchased at a local “King Soopers” grocery store. The beaker employed belonged to the ITLL Laboratory and was used with permission of course. The creation of this image required no lighting in addition to the florescent lights used to light the laboratory. The built-in camera flash was not employed. The temperature of the laboratory itself cannot, at this point, be determined to an exact degree. However, the temperature of the space was likely between 60 and 75 degrees. There were no fans in the vicinity at the time the photograph was taken and it is therefore safe to assume that the air in the laboratory was as still as could be expected with the amount of activity therein.

This photograph was taken with a Sony DSC-H3, at an f-stop of 2.7, with an exposure time of 1/20 seconds. The size of the image in pixels is 1920 x 1080. The ISO was set at 400 and no photoshop manipulations were employed in the production of the final image. As one can conclude through viewing the image, the hand-held camera was positioned just above the flow for the photograph.

I do believe that this image accomplished the original intent of the experiment. The movement of fog was captured in a way that makes the physics reasonably accessible to a viewer of the image. I would have appreciated an opportunity to experiment with different colors of light. However, I am not disappointed with the photograph and I believed that the flow is well exhibited.