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Flow Visualization
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Group Delta Project 3

This image was taken in the Fleming building using warm water, and dry ice, a 32 oz cup and a carboard tube.

The scene was lit with two Visitec Solo 1600 strobe heads, one with a soft box and the other bounced off an umbrella. The backdrop was a roll of black paper. We repeatedly dropped numerous small pieces of crushed dry ice into the plastic cup. Once in the water, the ice began to quickly sublimate, releasing carbon dioxide to the surface of the water, causing a rapid release of smoke-like gas. For the photographs, the camera was placed about 18 inches from the edge of the cup.

The settings used in this image are 1/60 at f/5.6 using a Canon Rebel Xti. The film speed was set at 1600 with the lens set at 135mm on a 28–135 image stabalized lens. The field of view is approximately 6 inches. The 10 megapixel image was adjusted in photoshop by increasing the contrast, and removing distracting marks from the image backgraoud.

Similar to our previous dry ice experiment, I was most impressed with effects created by the simple mixture of dry ice and water. Using studio lighting with added on camera flash, the resulting image was dramatically lit and allowed fast enough speeds to get the shapes produced by the swirling smoke.