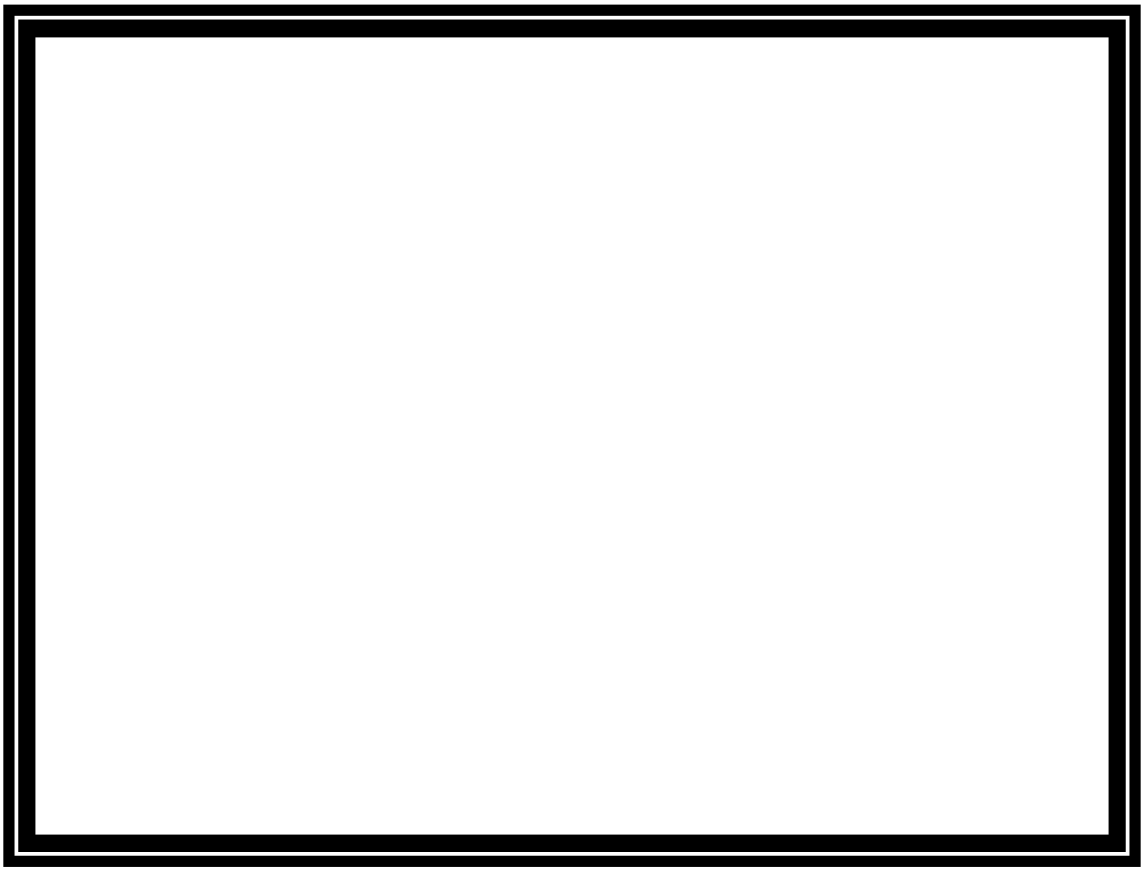
Yevgeniy Fedotov
Flow Visualization
Team Project 2

Snow Storm Galaxy

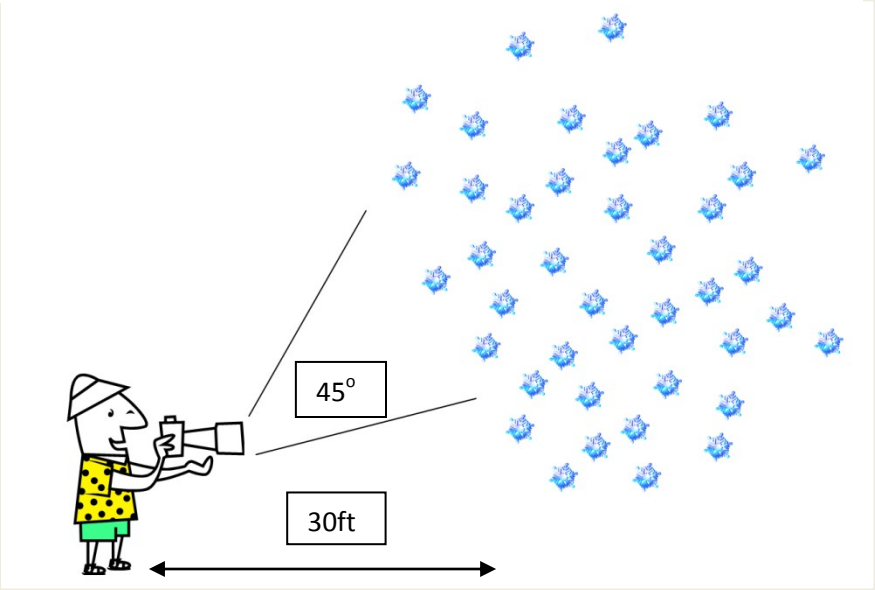


The intent of this image was to capture what seems to be infinite depth of a white out snow storm. This image shows a wall of snow and how the depth of field makes it look like a galaxy with no defined end. I chose this image for the second team project because the team decided to make the theme be “Flow Visualization during Spring Break.”

Flow Apparatus:

The flow in this image is defined by the falling snow during a strong snow storm beginning on March 23, 2010. The image was taken off the deck of my house pointing the camera approximately 45^{o} above the horizontal. The snow was coming down very strongly and creating a white out, and my goal was to see how far my flash could penetrate through the wall of blowing snow and the depth that it would capture. The photographic setup is shown on the following page

Figure 1. Photographic Technique



In order to create an effective and stunning image I experimented with various camera settings. Initially I was trying to not use the flash and create a time resolved image with streaking snow lines that would show how fast the snow was falling and the direction of the snowfall. However this did not work out because the snow was so dense that individual streaks did not stand out and I ended up having a grey image with no definition. I then started using the flash and various exposures to freeze the snow in the air show the depth in a snow field.

The final image was chosen because I liked how it made the snow storm appear to have no apparent end. The image reminds me of satellite telescope images of galaxies that seem to go into the abyss. The depth in the image is very clear and you can see how big the snow was from the closer shapes and how dense the snow was from the hundreds of smaller white spots deeper in the image. The snow that was captured in the image was very heavy and wet snow. This image was taken about 2 hours after it began snowing and there was a lot of accumulation after that short time period.

Photoshop:

The image was slightly enhanced in Photoshop in order to increase the contrast and bring out the details in the image. The adjustments were made using the curves function and adjusted to the following levels seen below:

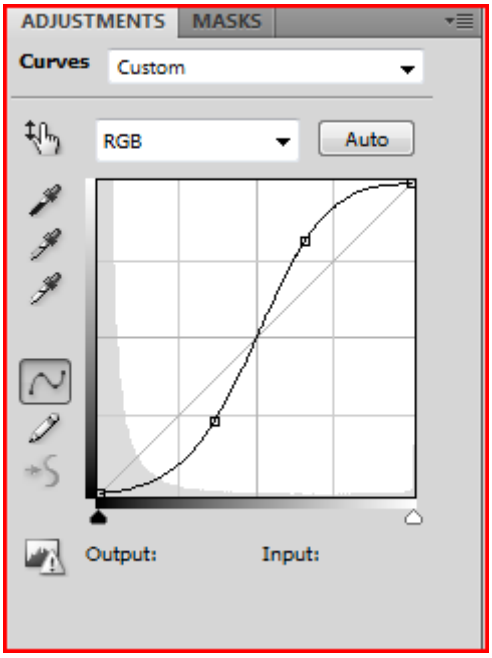
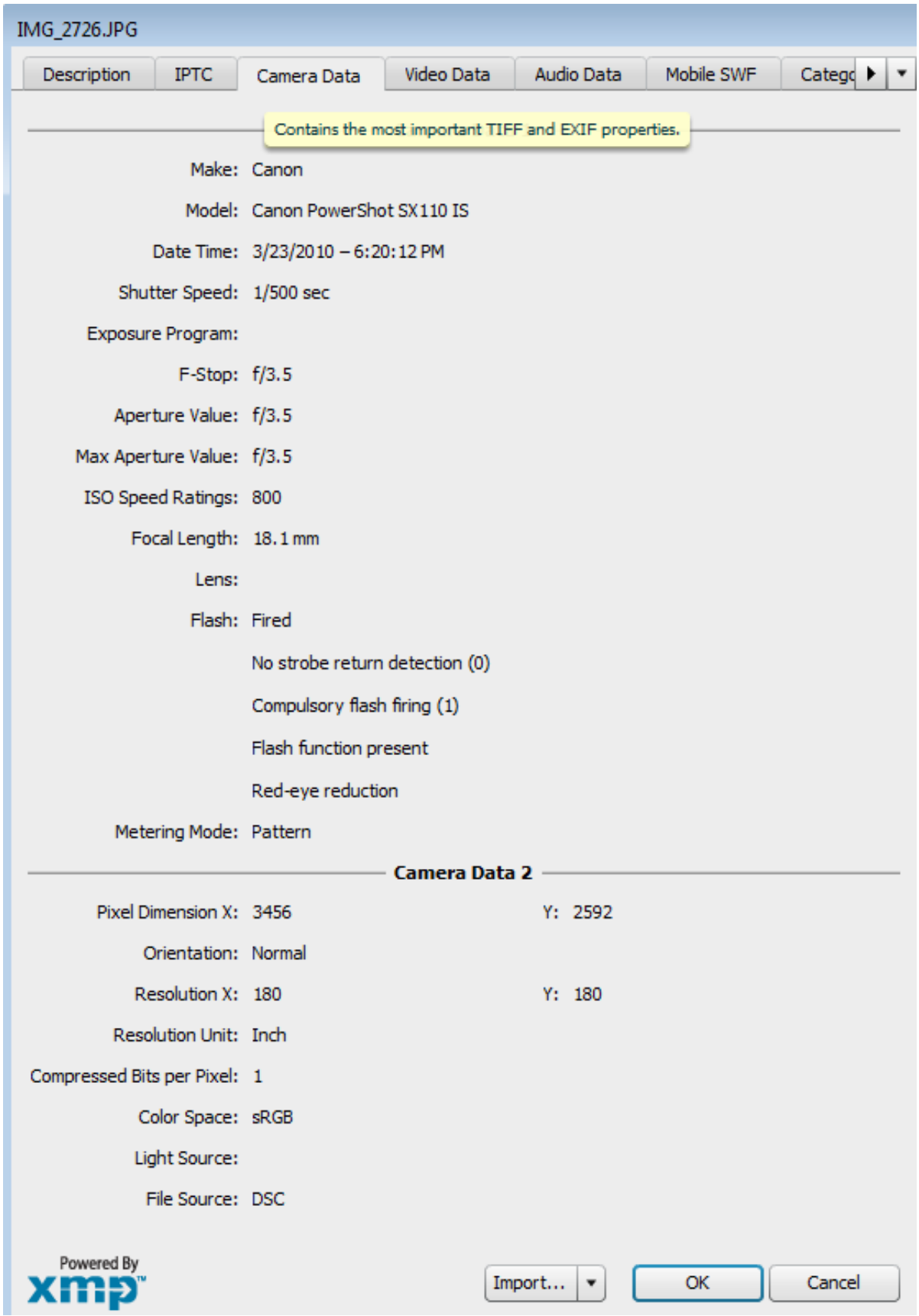


Figure 2- Photoshop curves adjustment.

After this adjustment there was a circle that changed colors on the right hand side of the image. I believe that this was a tiny water droplet that hit the lens.

Camera Settings:

The camera setting can be seen on the chart below.


IMG_2726.JPG
Description
IPTC
Camera Data
Video Data
Audio Data
Mobile SWF
Contains the most important TIFF and EXIF properties.
Make: Canon
Model: Canon PowerShot SX110 IS
Date Time: 3/23/2010 – 6:20:12 PM
Shutter Speed: 1/500 sec
Exposure Program:
F-Stop: f/3.5
Aperture Value: f/3.5
Max Aperture Value: f/3.5
ISO Speed Ratings: 800
Focal Length: 18.1 mm
Lens:
Flash: Fired
No strobe return detection (0)
Compulsory flash firing (1)
Flash function present
Red-eye reduction
Metering Mode: Pattern
Camera Data 2
Pixel Dimension X: 3456
Y: 2592
Orientation: Normal
Resolution X: 180
Y: 180
Resolution Unit: Inch
Compressed Bits per Pixel: 1
Color Space: sRGB
Light Source:
File Source: DSC
Powered By
xmp
Import...
OK
Cancel