

# The Dalles Circulating Lights UFO

## An Oregon MUFON Case Study

by

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### **Abstract**

Keywords: Night lights—Red—Blue—Tan/yellowish—Multiple lights—Flashing

<b>Description</b>	Two flashing/circulating lights—one red, the other one either white, blue, or tan/yellowish along with two same (or other) continuously on lights—moved overhead along in the night sky and disappeared over some nearby hills.
<b>Witnesses</b>	Deirdre McMaster (pseudonym).
<b>Date and Time</b>	January 15, 2008, at 6:30 PM PST.
<b>Place</b>	From a bedroom window and her back porch in The Dalles, Oregon.
<b>Weather</b>	Clear about 38° F with wind about 3.5 MPH out of the west.
<b>Duration</b>	About two minutes total duration.

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# INTRODUCTION

This case is a photo case with eyewitness testimony. Usually, the more evidence there is, the more certain is the case disposition assignment after all the evidence is examined and analyzed. An interesting comparison between the clearest of the UFO photos and some investigator-taken comparison photos of a regular commercial airliner is made in this report. Eyewitness testimony is the real “meat and potatoes” of UFO investigation and research, but usually having photographic evidence makes a case even more convincing that something truly anomalous has occurred. In this case, however, that has turned out not to be true. Analysis of the UFO photos *mostly* makes the case weaker and not stronger. It is on the basis of the strength of eyewitness testimony and a crucial detail in the UFO photos that a MUFON “unknown - UAV” is assigned. Read through this case and see what you think.

## SIGHTING NARRATIVE

At around 6:30 PM, on January 15, 2008, 61-year-old Deirdre McMaster was in a bedroom of her home when she noticed out a window a funny looking, slow-moving object in the sky. McMaster lives in a rural part of Oregon just southwest of The Dalles. She watched the low-flying object, which was flashing and/or circulating with red, blue, and whitish lights. It was a crisp, clear evening so she got a very good look at this strange object.

She could not tell if the lights were just flashing or whether they might also be circulating on the object. She got the impression that the lights might be going around in a circle on some object she could not see. It was hard to make out much besides the lights, but she felt like the object might be two cylinders with red lights in the middle. The red lights seemed to be the most prominent.

She decided to photograph the object and quickly walked to the kitchen, put on her coat, picked up her camera and turned it on, and proceeded out a sliding glass door to her back porch. She attached her camera to a tripod that was already set up from previous photo-taking sessions.

### Photos Taken

She turned the camera to its “Night” setting, zoomed in to the maximum extent—the longest telephoto the camera was capable of—and started taking photos. She took six exposures, of which five showed some image of the object. After she took the last one, she watched the object for a few more seconds as it disappeared behind some hills to the west of her house. McMaster heard no noise from the object at any time. The total time of the sighting was about two minutes.

See *Figure 1, Cropped and Enlarged UFO Photo* for the best image of the UFO of the six photos McMaster took. *Figure 2, Drawing of Circulating Lights UFO*, shows McMaster’s best recollection of how the UFO looked. See *Figure 3, Unretouched UFO Photo by Witness*, for exactly how the photo of the best image of the UFO looks right out of the camera.



Source: Deirdre McMaster

**Figure 1. Cropped and Enlarged UFO Photo**

*This photo is cropped and enlarged. It is also dynamically altered with the Levels command in PhotoShop to make the image of the UFO more visible. Note the three (red) "lights" on the bottom diagonal "track" along with the three (whitish) "lights" on the top diagonal "track." The dimmer track shapes are an artifact of the three second exposure.*



Source: Deirdre McMaster

**Figure 2. Drawing of Circulating Lights UFO**

*Deirdre McMaster drew this illustration of the flashing/circulating lights UFO at the request of investigator Keith Rowell. Note the (blue) oval attached to the black box/rod. The (blue) oval is partially hidden between the (red) oval and the black box/rod. Two white ovals are attached to the black box/rod at the ends. These ovals represent flashing/circulating lights of those colors.*



Source: Deirdre McMaster

**Figure 3. Unretouched UFO Photo by Witness**

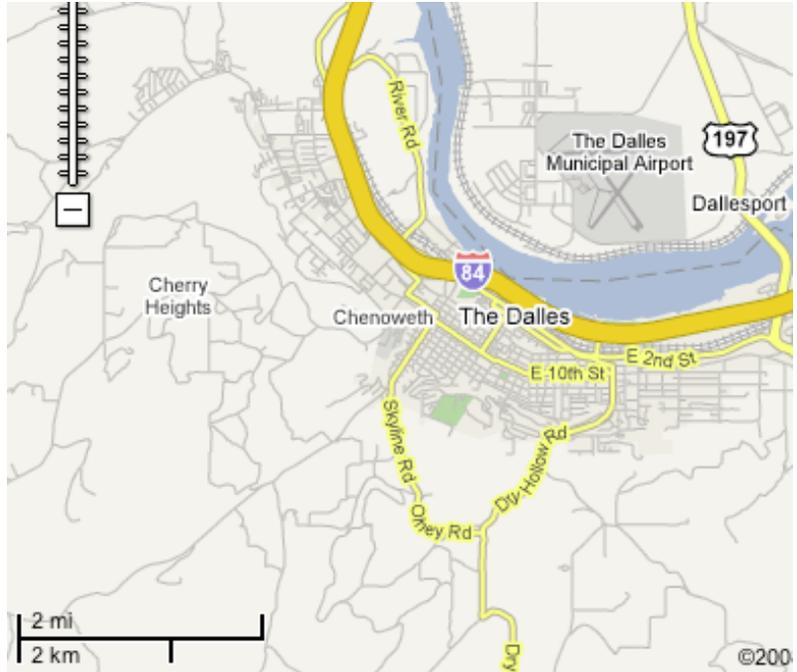
*This is an unretouched and uncropped photo of the object witnessed by Deirdre McMaster. This JPG file is right out of her Fujifilm FinePix S5200 digital camera.*

## **ENVIRONMENT**

This UFO sighting took place just to the southwest of The Dalles, Oregon, in a rural setting of country homes and small ranches. Note that The Dalles Municipal Airport is across the Columbia River and to the north of The Dalles. McMaster was looking in the directly opposite direction when she saw the UFO. She was about five miles away from the airport. See *Figure 4, The Dalles, Oregon, With Its Airport*.

### **Weather**

On January 15, 2008, at 6:30 PM, the weather in the The Dalles, Oregon, area was clear and about 38° F with wind about 3.5 MPH out of the west. Visibility was 10 miles.



Source: Google Maps

**Figure 4. The Dalles, Oregon, With Its Airport**

*Witness Deirdre McMaster saw the mostly red, flashing UFO looking south-east at a point about two miles due south of Cherry Heights. Note The Dalles Municipal Airport to the north and across the Columbia River from The Dalles. The UFO viewing spot is around five miles southeast of the airport.*

## Sighting Location

McMaster was kind enough to provide the photo illustration in *Figure 5, Illustration of UFO Flight Path*. Note that Mt. Hood is seen in the background. The UFO followed a more or less straight line path from southeast to west/northwest. The hill over which McMaster shows the UFO disappearing was located with Google Earth and is called “UFO Peak” in this report.



Source: Deirdre McMaster

### **Figure 5. Illustration of UFO Flight Path**

*This photo illustration is taken outside of Deirdre McMaster's house looking southwest toward Mt. Hood seen in the background. McMaster has drawn in the flight path of the UFO. It traveled from just below the sun in this illustration in a straight path to disappear over the hill to the west in about two minutes. (The actual sighting was at 6:30 PM in the evening in the dark and Mt. Hood and the valley could not be seen, of course.)*

# EVIDENCE

The UFO evidence in this case consists solely of the following:

- Witness Deirdre McMaster's testimony.
- Witness Deirdre McMaster's five photos of the UFO as it moved away from her to the west.

## Testimony

The testimony of Deirdre McMaster consists of her submitted text and check-offs in the MUFON CMS reporting system and numerous emails with investigator Keith Rowell to clarify parts of the testimony and how the photos were taken. McMaster has "gone beyond the call of duty" in forthrightly and quickly answering all questions. She did a drawing of her sighting at my request.

I find no reason to doubt any of McMaster's testimony. I find her to be an excellent witness to the extent that email correspondence can determine this. (It should be noted that "keystroke hoaxes" are rather quickly ferreted out when the hoaxer refuses to cooperate with an investigator. Only genuine witnesses to the closest and most personal of UFO sightings sometimes refuse to elaborate on their sighting experiences. Other witnesses behave much as McMaster has in this case. They frequently go out of their way to be helpful. They genuinely would like to know what they saw.)

Since in my investigation I determined that McMaster's photos and my comparison photos of a regular commercial airliner were similar, I specifically told her about this and asked her specifically if what she witnessed could possibly be an airplane. She assured me that her eyewitness experience rules this out since she is well-acquainted with low-flying airplanes—some in the form of crop-spraying planes for the orchards in the area, for example. Also, there were no unusual viewing conditions since it was a clear night with no clouds or other circumstances making the viewing conditions problematic.

## The Photos

McMaster took six photos with her Fujifilm FinePix S5200 digital camera—all within a space of about a minutes (57 seconds according to the time stamp data in the EXIF information in the photo files). These were all on a tripod on her back porch. Some were in focus, some not. Some were unsharp due to camera/tripod vibration, some were not. Exposure number six (the last one) turned out to be in focus and sharp.

All five of the photos shown in *Table 1, Timeline of UFO Photos With Comparison Airliner Photo*, were taken with three second exposures and ISO 200. The three second exposure shutter speed was set automatically because McMaster used the "Night" setting on the camera. The "Night" setting is intended for taking photos of lights at night. All the photos were taken at the maximum zoom extent of this 10X zoom ratio camera. This is equivalent to a 380 mm telephoto lens on the old 35 mm SLR cameras. This is also equivalent to about 8 power binoculars.

Judging just from the photos, it is difficult to tell much about the UFO except that it definitely has two lights—an obviously red one and a probably bluish/white/tan-yellowish one—that are flashing mostly at one about second intervals, possibly simultaneously. This is shown by the consistent appearance of three red and bluish/white/tan-yellowish light blobs on almost all of the exposures.

## An Airplane Photo Comparison

After examining McMaster's photos, I began to suspect that perhaps she had photographed a low-flying light plane. So, since I knew McMaster's basic camera settings (ISO, shutter speed, lens focal length), I decided to duplicate these on my Canon Rebel XT with my Canon 70-300 mm. On a clear night, I located a commercial jet airliner heading out from PDX over my West Linn, Oregon, home. I took three or four photos. I have included the best one in *Table 1, Timeline of UFO Photos With Comparison Airliner Photo*. The airliner photo looks structurally similar to the UFO photos. See *Analysis* and *Conclusion* later for some conclusions on how structurally similar the photos actually are.

## Timeline of Events

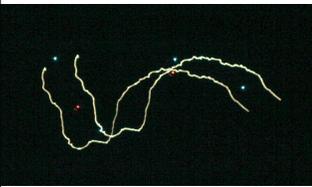
McMaster took about two minutes from the beginning of her sighting to the end when she saw the UFO disappear over the hills to the west. Here are McMaster's words after being asked to re-enact her sighting and count the seconds it took.

The tripod was already set up on the back porch. The camera was on the kitchen table. I watched the UFO as it was coming over the hill for 5 sec. I watched another 5 sec. out of the window, then walked to the kitchen in about 10 sec. Put on my coat, picked up the camera, took off the lens cover, turned on the camera, zoomed it while opening the sliding door, closed the door, and put the camera on the tripod. This all took 25 sec. After another 5 sec., I started taking pictures, and it took another 3 to 6 sec. [after the last picture] to go out of sight.

This amounts to 116 seconds all told including the 60 seconds of elapsed time for the photo exposures. Thus, the whole sighting was over in about two minutes.

**Table 1. Timeline of UFO Photos With Comparison Airliner Photo**

Photo Number	Time Stamp	Blow-Up	Comment
1	6:33:43		Note the three light blob pairs along the parallel "tracks." All of the photos exhibit this basic configuration in the three second exposures. This photo is slightly out of focus.
2	6:33:54		This is the second exposure and is more in focus but suffers from camera shake. This camera has no lens shake stabilization software or mechanisms. Note the same basic shape of the light blobs and tracks.
3	6:34:05		This is the third exposure and is seriously out of focus. However, note the same basic shape again.

Photo Number	Time Stamp	Blow-Up	Comment
4	6:34:17		<p>This is the fourth exposure and is pretty well in focus again, but suffers from camera shake/vibration.</p>
5	[Blank]	[Blank]	<p>McMaster missed getting any image for this fifth exposure so she deleted the photo from her camera and computer.</p>
6	6:34:40		<p>This is the sixth and last exposure that McMaster made. This is the best of them all since it is camera/ tripod vibration free and seems to be in focus. This is the clearest image of them all.</p>
7			<p>This is a commercial jet airliner flying around 2000 feet over West Linn, Oregon, after taking off from PDX. It was a three second exposure, ISO 200 photo taken with a 450 mm telephoto lens (a Canon 70-300 mm designed for 35 mm SLR film cameras) with image stabilization on. Note the basic similarity of two tracks and red and green light blobs.</p>

# ANALYSIS

This case consists of witness testimony, five photos, and environmental facts gathered after the event. Some comments will be made regarding consistency of environmental and weather evidence. The usual questions about UFO size, distance, speed, etc., are addressed here, but as usual only calculations based on educated guesses as assumptions are possible.

An aside here: As long as amateurs (UFO witnesses) are forced to supply the basic physical evidence of UFOs such as photos and videos with consumer grade equipment and the occasional soil sample taken in unscientific ways, UFO investigators (who are mostly amateurs, too) will continue to struggle with technical analysis. Only when the scientific establishment finally decides to actually study UFOs as a matter of routine investigation of a natural world phenomenon will we get the kind of analysis that the phenomenon needs for final resolution of its reality status for the society as a whole. In the meantime, you have to put up with people like me struggling to do our heroic best. You get what you pay for.

Extensive use of the invaluable Google Earth program made accurate measurements of terrain easy. However, figuring out the relationship between known objects and the UFO in question is elusive at best.

## Consistency with Environmental Facts

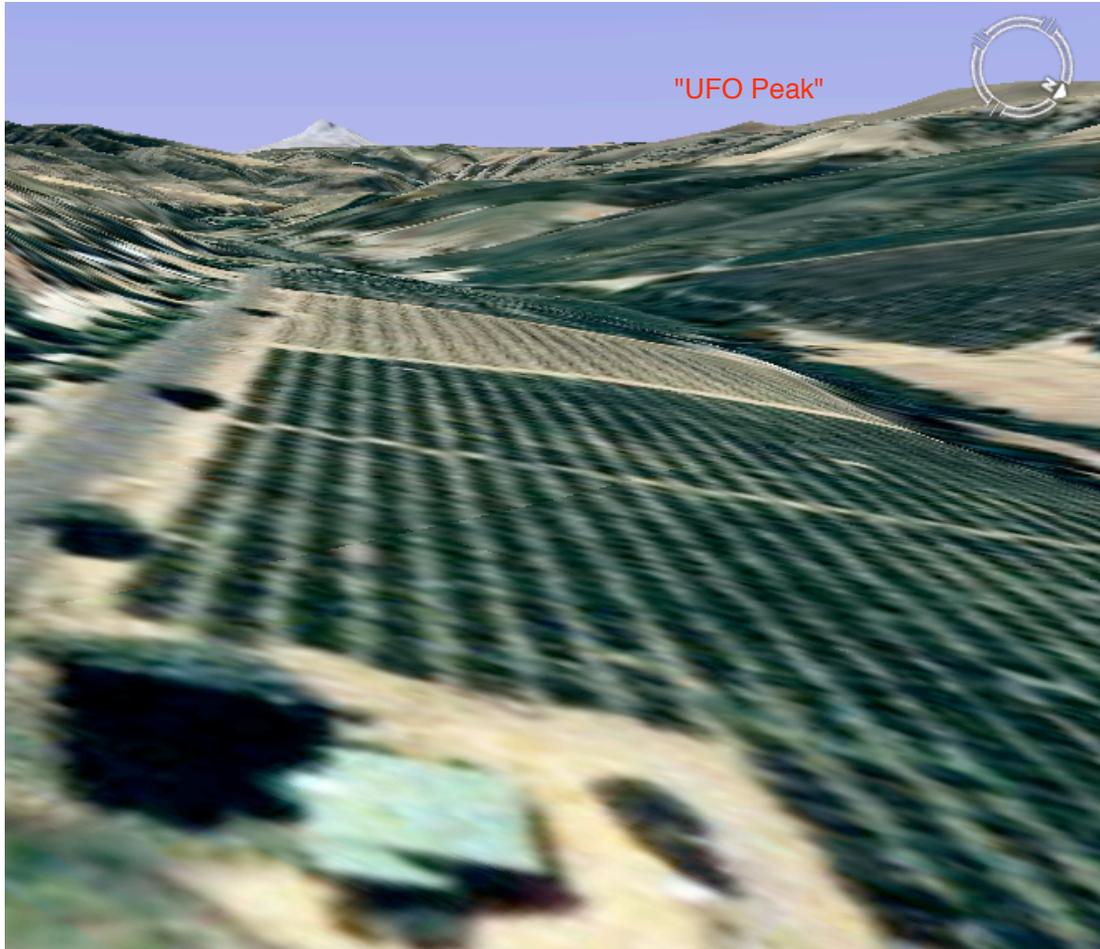
I found McMaster's testimony to be entirely consistent with environmental and weather-related facts gathered after the event.

## Terrain Measurements

McMaster went out of her way to provide an illustration in the daytime of the basic scene in which she photographed the UFO. Her illustration shows Mt. Hood and the basic flight path of the UFO from the southeast to the west/northwest. See *Figure 5, Illustration of UFO Flight Path*. In order to calculate a probable altitude for the UFO, I used Google Earth and McMaster's illustration to find the low "peak" that in McMaster's illustration the UFO disappears over. The measurements for this peak and McMaster's house are the following.

- The elevation of the peak over which McMaster's UFO disappears in her illustration is about 420 meters. We call it "UFO Peak" here. It is about 4.2 miles away.
- The elevation of McMaster's house is 120 meters.

McMaster's illustration allowed me to locate the hill over which she indicates in the illustration the UFO disappeared off to the west. The focal length EXIF data in the illustration photo in *Figure 5* allowed me to calculate the angle between Mt. Hood and the hill as about 21°. I then used Google Earth to plot a line 21° clockwise from McMaster's house. I moved along the line till I found the nearest large elevation, which was about 420 meters. I then tilted the landscape and, sure enough, the terrain matched McMaster's illustration pretty well. See *Figure 6, Mt. Hood and "UFO Peak."*



Source: Google Earth

**Figure 6. Mt. Hood and “UFO Peak”**

*This illustration was created with Google Earth and shows the view (above) McMaster’s house looking southwest toward Mt. Hood seen in the background. The probable peak that McMaster shows the UFO disappearing over in Figure 5 is labeled as “UFO Peak” here.*

## UFO Image Colors

The UFO images are shown for the five photos in *Table 1, Timeline of UFO Photos With Comparison Airliner Photo*. A simple visual color observation was made of the five UFO photos and the comparison airliner (along with two other airliner photos not shown in this report because of poorer exposures).

For the UFO photos, we noted that the red blobs of light remain essentially unchanged in color throughout the 60 seconds time the photos were taken, but the light blob adjacent to the red blobs apparently changes color some. (Let’s call this the “adjacent” light blob.)

In the first three UFO photos, the adjacent light blob color is predominantly blue with hints of greenish. In the fourth UFO photo, the bluish light blob goes to predominantly whitish. In the fifth and final UFO photo, the adjacent light blob turns a curious yellowish/tan color for three seconds. The reddish light blob remains more or less the same orangish/red color throughout the five exposures.

The airliner shows a definite reddish light and a definite greenish light in addition to other position or anti-collision lights. The relevant lights do not change color like the “adjacent” light does in the UFO photos.

## UFO Distance Traveled

To calculate the distance that the UFO traveled while it was being observed, a few assumptions were made.

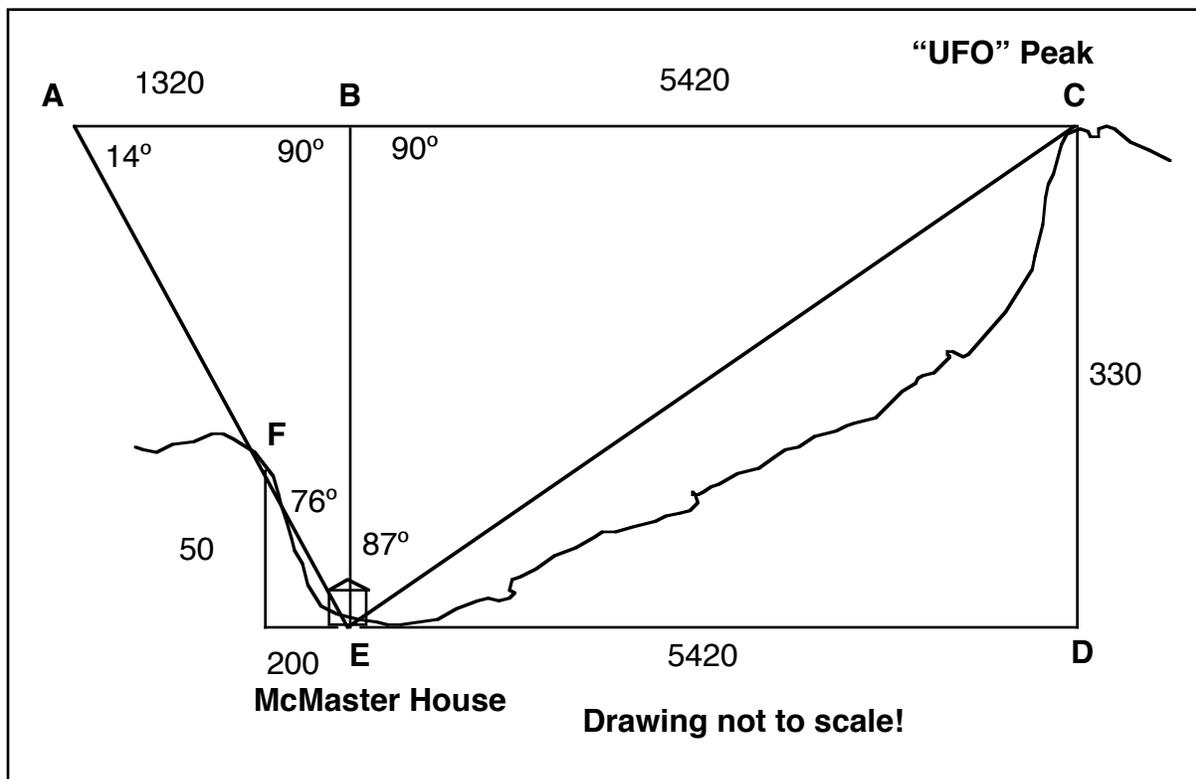
- (1) The UFO traveled in a straight line path—more or less.
- (2) The UFO traveled at an altitude equal to or greater than the elevation of the “UFO Peak.”

McMaster’s testimony backs up (1) and (2) as reasonable assumptions. For (2), the UFO would have hit the ground unless it traveled at an altitude of about the elevation of the “UFO Peak” or higher.

McMaster stated that the UFO seemed to be flying at low-level. To calculate a minimum distance traveled, we assume that the UFO just cleared the “UFO Peak” as shown in *Figure 6, Mt. Hood and “UFO Peak”* and *Figure 7, Illustration of UFO Distance Traveled*.

From the illustration in *Figure 7*, we can see that the UFO traveled a distance of around  $AB + BC$ , which equals 6740 meters. Note that the “UFO Peak” elevation, McMaster’s house elevation, and the hill’s elevation immediately adjacent to McMaster’s house are all known from Google Earth. The rest of the values are calculated with some simple trigonometry.

So, McMaster’s UFO traveled a minimum distance of 6740 meters, which is about 4.2 miles at a minimum altitude of about 420 meters (1380 feet). This means the UFO was about 330 meters or about 1080 feet above McMaster. These calculations accord well with McMaster’s testimony of a low-flying object.



Source: Google Earth

**Figure 7. Illustration of UFO Distance Traveled**

*This drawing (not to scale!) shows how a distance traveled for the UFO was determined. Distances are in meters. The irregular line represents a cross-section of the land elevation from the hill off to the SE from McMaster’s house to the “UFO Peak” off to the NW.*

## UFO Altitude

A minimum altitude for the UFO was assumed to be the elevation of the “UFO Peak” as discussed earlier in *UFO Distance Traveled* as part of the reasoning and calculations for getting a handle on how far McMaster’s UFO traveled during the time she sighted it. The elevation of “UFO Peak” is about 440 meters (1440 feet). Thus, the UFO altitude was 1440 feet.

## UFO Size

We cannot measure or calculate the size of this UFO from the photos since the UFO images just reveal a periodically flashing red light along with a bluish/whitish/yellowish light in addition to a continuously on yellowish/white light at a brightness level somewhat lower than the light blobs.

However, we can assume that the UFO was actually a light plane and calculate the distance between the light blobs assuming they were the red and green wing tip lights as specified for general aviation airplanes. Only UFO photos #2, #4, and #6 are sharp enough to do these calculations.

- For UFO photo #2, we have an average pixel distance of 27.5.
- For UFO photo #4, we have an average pixel distance of 26.
- For UFO photo #6, we have an average pixel distance of 25.5.

Let’s take 26 as the average pixel distance between the light blobs in these three photos.

Now let’s assume that the photographed UFO was an average distance away from McMaster of about half way between overhead and the distance of “UFO Peak” away, which is 5420/2 meters away, or 8890 feet. With a little trigonometry, we have:

$$\left(\frac{5420m}{2}\right)^2 + (330m)^2 = d^2 \Rightarrow d = \sqrt{\left(\frac{5420m}{2}\right)^2 + (330m)^2} = 2730m$$

So, the line of sight distance away for our assumed light plane is 2730 meters or 8960 feet.

From the lens angle of view data in Appendix B, we know that angle of view across the field of view of McMaster’s zoomed in lens is about 5.5°. Using this and a ratio and proportion, we have for the angle of separation of the lights:

$$\frac{5.5^\circ}{2592\text{pix}} = \frac{x}{26\text{pix}} \Rightarrow x = \frac{(26\text{pix})(5.5^\circ)}{2592\text{pix}} = 0.05^\circ$$

Finally, we can do a little more trigonometry to obtain the average length in feet between the red light blob and the blue/white/yellow light blob:

$$\tan(0.05^\circ) = \frac{x}{8960\text{ft}} \Rightarrow x = (8960\text{ft})(\tan(0.05^\circ)) \approx 7.8\text{ft}$$

So, is this close enough to the distance between a light plane’s wing tip red and green position lights at this distance? We will pick a Cessna 150 as an average light plane. Wikipedia says the wing span of the Cessna 150 is 33 feet. This means the UFO was not a Cessna 150 or comparable light plane flying directly away from McMaster, in which case the UFO calculation above would have come out close to 33 feet. A more likely explanation is a small plane seen at an oblique angle flying away. So the question is: Is the 7.8 feet too small a distance between the red and green lights for a Cessna 150 seen at the oblique angle that it would be at that 8960 feet distance? I will leave that question to be solved by the reader. My feeling is that the discrepancy is too great for the UFO to be a light plane.

## UFO Speed

In *UFO Distance Traveled*, we calculated a minimum distance traveled as about 6740 meters or about 4.2 miles. Referring to *Table 1, Timeline of UFO Photos With Comparison Airliner Photo*, we see that McMas-

ter witnessed the UFO for at least 60 seconds time. We also know from her re-enactment testimony that she spotted the UFO from a bedroom window, grabbed her camera, and ran to her back porch where she photographed the UFO. So, the total time that the UFO was visible to her was about two minutes. Thus, we have the following reasonable assumptions:

- The UFO was visible for about two minutes.
- The UFO traveled at a uniform speed all of the time that it was visible—not just the 60 seconds that she took photos of the UFO. This is a reasonable assumption since the photos show three light blobs per three second exposure. See under *Evidence* earlier.

Let's now calculate a speed for the UFO as it passed over McMaster's house and moved off to disappear over "UFO Peak."

- *The UFO speed is distance traveled divided by time taken or 4.2 miles divided by 1/30 of an hour (2 minutes). This is 126 mph.*

This speed certainly puts the UFO flight behavior within the capabilities of many light planes.

## CONCLUSION

A good strategy for identifying a possible UFO is to propose a list of possible identifying objects or phenomena. Then a good faith effort is made to see how many of the typical identifying characteristics of known objects and phenomena do actually fit the facts developed in the presentation of the evidence and analysis of the UFO case. If too many of the identifying characteristics of known objects or phenomena are not a good enough fit, then the investigator is left with a reasonable "identification" of a case as a MUFON "unknown."

## Possible Candidates for Identification

The most reasonable identification candidates for this case are the following:

- **General aviation light airplane.** This is the most likely identification candidate for McMaster's UFO. The Dalles Municipal Airport is only five miles away and could be a convenient source for the UFO and certainly the comparison photo that I took of a PDX commercial airliner at night definitely has characteristics similar enough to be seriously considered as an identification. But consider the following points.
  1. McMaster's house is not in the normal landing and taking off flight paths for airplanes in and out of the The Dalles Municipal Airport.
  2. The color of the "adjacent" light showed a change of color between the first and last photos from distinctly blue, to whitish with hints of green, to finally yellowish/tan. This did not show up in the greenish light for the jet airliner comparison photo that we took. See *UFO Image Colors* earlier.
  3. The UFO size was probably about half the size it should have been if it was a light plane and any larger plane would make this comparison even worse. See *UFO Size* earlier.
  4. And, most importantly, McMaster's testimony emphasizes the absence of sound, the very low altitude, the very odd *circulating* light pattern, and the red, white, and *blue* flashing lights. McMaster could be mistaken about these things, but the viewing conditions were about ideal for perceiving these characteristics clearly.

We believe that her eyewitness testimony and the strange color change in one of the lights is stronger evidence than the comparison airliner photo evidence in this case. *For these reasons, the general aviation airplane hypothesis is rejected as an identification of McMaster's UFO.*

- **Helicopter.** McMaster testifies to no sound and the odd circulating lights, which makes this identification untenable. *For these reasons, the helicopter hypothesis is rejected as an identification of McMaster's UFO.*

- **Crop Spraying Airplane.** McMaster is well-acquainted with crop spraying airplanes flying low over the orchards next door to her home. This is the wrong season and these planes fly in daylight hours. *For these reasons, the crop spraying airplane hypothesis is rejected as an identification of McMaster's UFO.*
- **Balloon.** Some sort of very unusually lighted balloon is a possibility here. However, the balloon would have to be powered, which is probably more of a rarity than a genuine UFO! Also, the prevailing winds at this time of evening were only 3.5 mph and *out of the west, which is against the direction of the UFO. For these reasons, the balloon hypothesis is rejected as an identification of McMaster's UFO.*

### ***Final Resolution***

*Since the identification candidates fail for the reasons just given, we believe that McMaster has witnessed a genuine MUFON "Unknown - UAV."*

## APPENDIX A: Weather Data

The following weather data for January 15, 2008, in The Dalles, Oregon, was taken from the excellent Weather Underground site (*wunderground.com*).

**Table 2. The Dalles Area Weather January 15, 2008**

Time	Temp. (°F)	Visibility (miles)	Wind Direction	Wind Speed	Precip.	Conditions
5:53 PM	37	10.0	WNW	4.6 mph	None	Clear
6:53 PM	37.9	10	West	3.5 mph	None	Clear

## APPENDIX B: Lens Data

The following table provides the correspondence between 35 mm camera lens focal lengths and the angle of view of those lenses.

**Table 3. 35 mm Lens Focal Length and Angle of View**

<b>Focal Length (mm)</b>	<b>Angle of View (°)</b>
12	113
17	93
21	81
24	74
28	65
35	54
50	40
75	27
90	23
135	15
200	10
300	7
500	4

