

The Lake Grove Spherical UFOs

An Oregon MUFON Case Study

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Abstract

Keywords: Balloons—Spherical UFOs—Daylight Sighting—Luminescent UFOs

| | |
|------------------------|--|
| UFO Description | Six individual UFO sightings of luminescent blue, gold, or pink, mostly spherical, objects are seen “drifting” in daylight. |
| Witnesses | Two people: Keith Rowell and friend, Tony; Tony saw at least one other UFO that Keith did not. Tony may not have seen all six of Keith’s UFOs. |
| Time and Date | About 2:00 to 4:30 PM PST; March 24, 1996. |
| Place | Lake Grove, Oregon. |
| Weather | Fair weather cumulus with sun, no rain showers. |
| Duration | Total duration for all six sightings: almost 30 minutes. |

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Introduction

This case is actually a sighting by me—the author of this case report. Since beginning my UFO studies in the mid 1970s, I have actually seen in the 1990s some of these things that I've been studying most of my adult life. In ufology, in a sense, what separates the men from the boys, so to speak, is the witnessing of the actual phenomenon that you are studying. Since at this time UFOs are a transient and elusive phenomenon, you cannot study the actual phenomenon entirely at will. You must wait for the phenomenon to happen to you. While this may not be entirely a matter of random good luck, for the most part it seems that way for most people.

I saw the six UFOs described in this case study at my good friend Tony's house. ("Tony" is a pseudonym. At this time, "Tony" prefers to remain anonymous.) He began seeing in the summer of 1995 more than a few UFOs. I asked him if he'd like to formally report these to MUFON, but he declined. So, we have never done a report on any of his many UFO sightings.

In those days, we talked every few weeks and he would occasionally tell me about some of his sightings. Many, but not all, were balloon-like UFOs. They somewhat resembled and generally behaved like drifting balloons, but not exactly—especially if you observed these UFOs up close, which Tony did over time.

I encouraged him to start videotaping his more or less frequently seen UFOs. At the beginning in the summer of 1995, he had only a 35 mm camera and an old 8 mm movie camera from his dad. Within a few years, he was videotaping his UFOs with a specially purchased color video camera attached to a telescope rigged to a hand-operated tracking device (constructed by Tony) with the video feed captured on super VHS.

Today, Tony has probably around 100 *hours* of UFO video recordings that he has made at various fortuitous moments in the last ten years. He is working his way slowly to creating and eventually selling a self-produced video documentary featuring the best of his many hours of UFO video. Today, Tony still sees occasionally UFOs similar to the ones described in this case study.

The Sightings

On March 24, 1996, at around 1:30 PM, Tony called me and said that UFO activity seemed very good already for him that day and that I should come over immediately. I hung up the phone, packed my Nikon camera gear and lenses and a Sony Hi8 video camera and gear, and headed over to his house on Pilkington Road, Lake Grove, Oregon, which is about a 25 minute drive from my house in West Linn, Oregon. I arrived at about 2 PM and parked along Pilkington in front of his place. I got out of the car and took along my Nikon Travelite II 9 X 25 binoculars and walked around to his backyard.

Tony was up on his roof where he was accustomed to videotaping his UFO sightings. We greeted each other and he called my attention to a UFO directly overhead. I looked up and saw a vaguely bluish-white "smudge" about the size of a high flying airplane. This very indistinct object in the sky would easily have been ignored by someone who happened to catch sight of it, but who did not have the curiosity or means to examine it more closely. It was so small that it required binoculars or a telescope to see clearly what the object actually was.

The following descriptions are what I observed in about two and a half hours at Tony's house from his backyard. The descriptions are taken from the chronology of the observations that I wrote up from my notes taken on the day of observation. The slightly edited chronology of the observations is reproduced here under *Chronology of Observations* later in this case study.

Sighting #1

At about 2:10 PM, I quickly raised the binoculars to my eyes and was astonished by what I saw. The object was a complex mix of golden yellow and cobalt blue spheres—not unlike a cluster of party balloons. But these "balloons" were different. They were all a beautiful, luminescent, glowing color. As I observed the cluster of luminescent spheres moving to my right, which was more or less north to south, there was

moderately active movement within the cluster of the spheres, but the basic shape persisted. There were two blue spheres in the cluster with the rest golden-yellow. One blue sphere was on top and one was on the left side. See *Figure 1, Sighting #1*.

Perhaps the most curious thing about this UFO sighting was a distinct, but hard-to-see, very small black object, possibly connected to the sphere cluster by an even harder to see black line. The small black object fell away and downward from the sphere cluster as the cluster moved along in the sky. The small black object eventually, over the minute or so duration of the sighting, descended below the field of view of the binoculars. I chose to keep viewing the sphere cluster and, thus, lost track of what happened to the small black object.

The surfaces of the spheres themselves were difficult to resolve because of the distinct luminescent quality these all had. I kept wanting to resolve more detail in the individual spheres but could not.

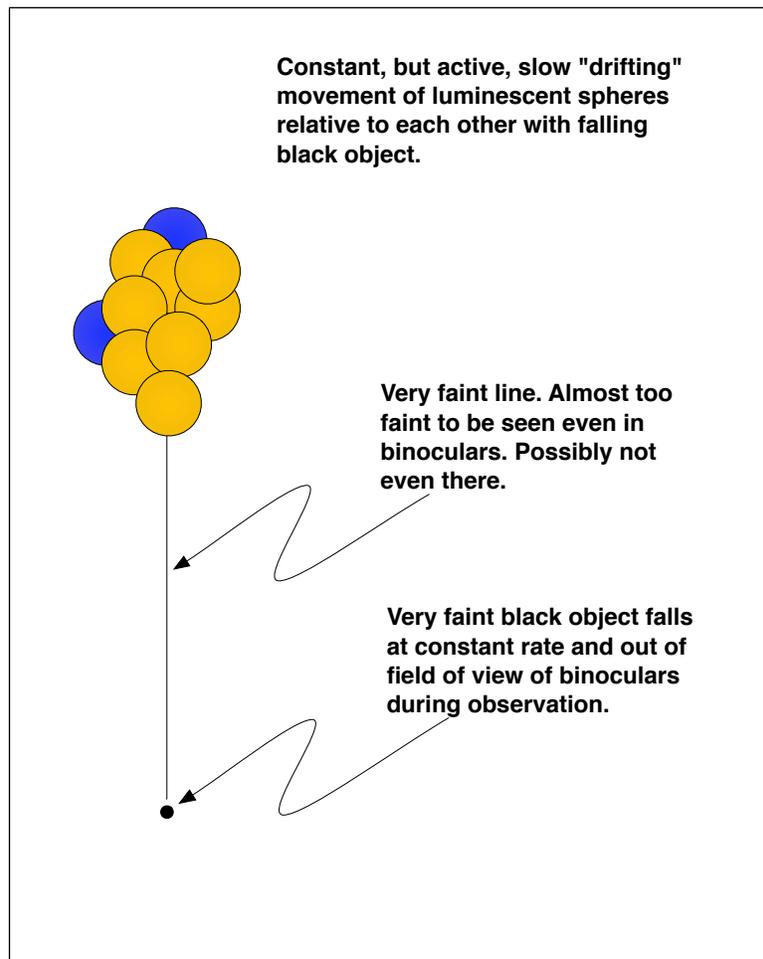


Figure 1. Sighting #1

Sighting #2

This sighting consisted of two UFOs observed near the Moon, probably above and to the right (or south). The Moon was about 40° above the SSE horizon. My notes do not give the colors of the two luminescent spheres. The observation was at about 2:15 PM. See *Figure 2, Sighting #2*.

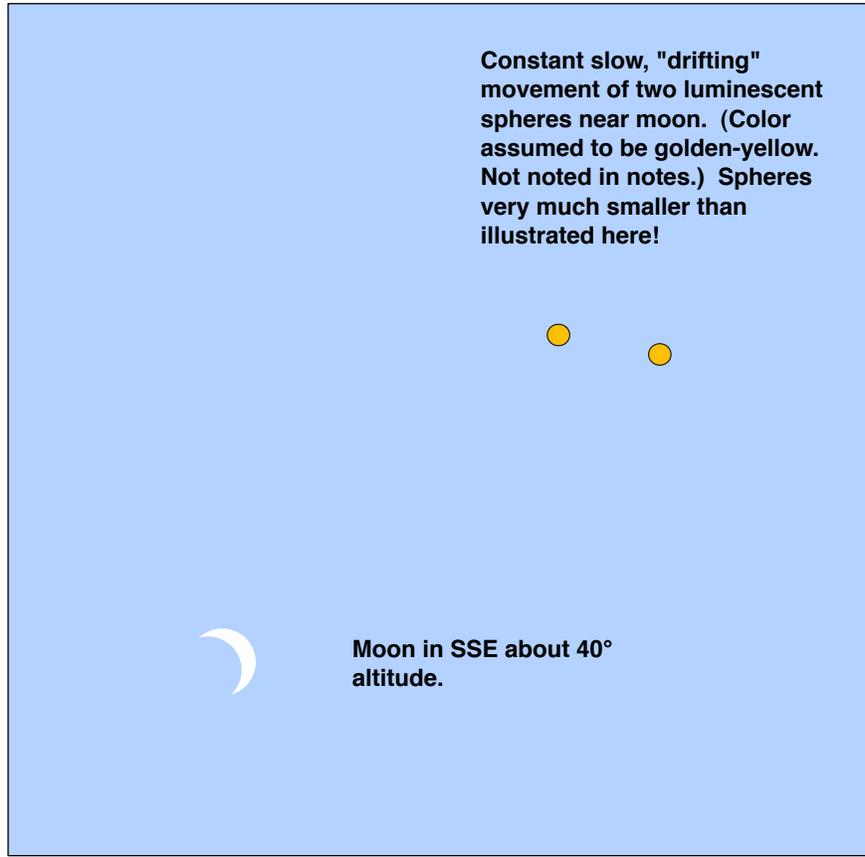


Figure 2. Sighting #2

Sighting #3

At about 2:30 PM, I spotted two golden-yellow, luminescent spheres, maybe a degree or so apart. They drifted along north to south. This UFO object also had the curious very tiny black object falling downward away from the main two spherical objects. The black object seemed to be "hanging" between the two spheres. I don't remember if the extremely faint line seemingly connecting with the black object was also visible in Sighting #3. See *Figure 3, Sighting #3*.

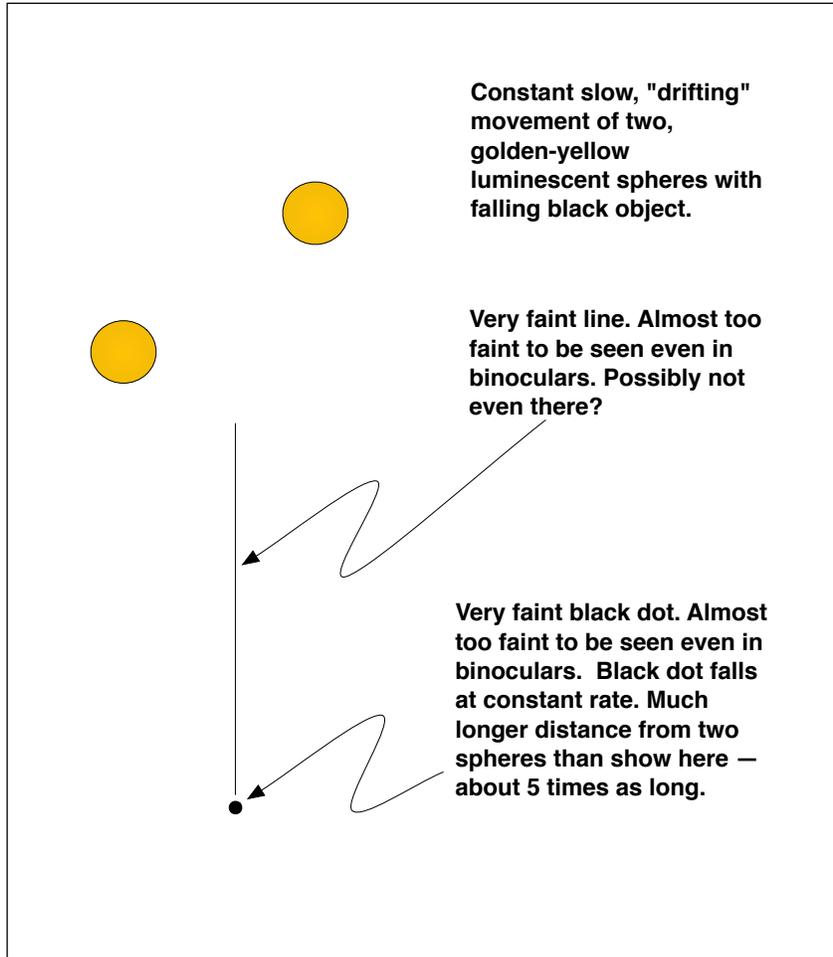


Figure 3. Sighting #3

Sighting #4

At about 3:22 PM, I spotted a fourth object. This was a single luminescent golden-yellow sphere object, seeming to be somewhat larger in the binoculars than the previous ones. It "drifted" from north to south and seemed to continue around to the west since I lost this object due to the haze of a cloud bank. See *Figure 4, Sighting #4*.

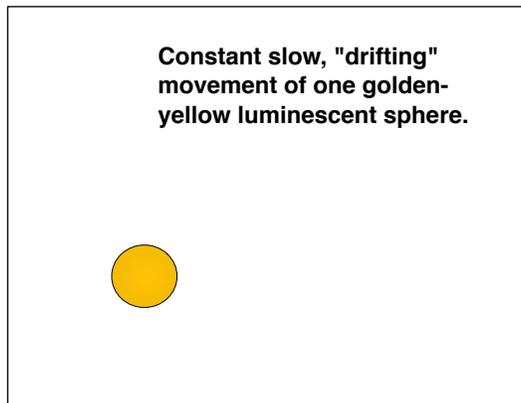


Figure 4. Sighting #4

Sighting #5

At about 3:28 PM, I spotted a fifth UFO object. This was a single luminescent golden-yellow sphere object within about 10° of the Moon. I lost it after I took the binoculars off it to readjust in the backyard because I thought I might lose the object behind some nearby Douglas Fir trees. The duration of this sighting was about two minutes. See *Figure 5, Sighting #5*.

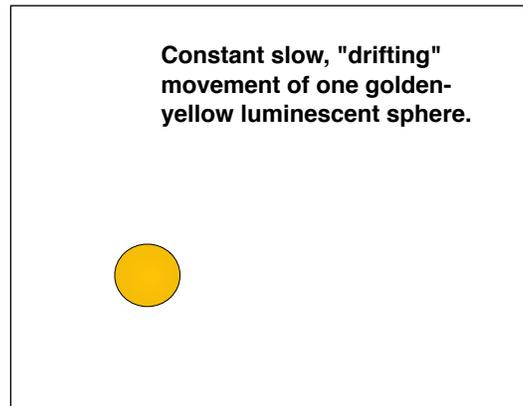


Figure 5. Sighting #5

Sighting #6

At about 3:59 PM, I spotted a sixth and final object. It was different from the previous ones. It was not spherical or a cluster. It was sort of an irregular, upside-down, roughly kidney bean shape. The interior of the object glowed a brilliant, luminescent pink. The outline of the pinkish, glowing object graded off into a whitish color. This object also "drifted" along in the sky. At the beginning of the sighting, I observed once again the strange black object falling downward from the object. The duration of this sighting was a good 8 minutes. Since I had lost some of the other sightings prematurely due to trees or roof line getting in the way, I had positioned myself before the sighting in the most open place in the backyard. And this strategy paid off. See *Figure 6, Sighting #6*.

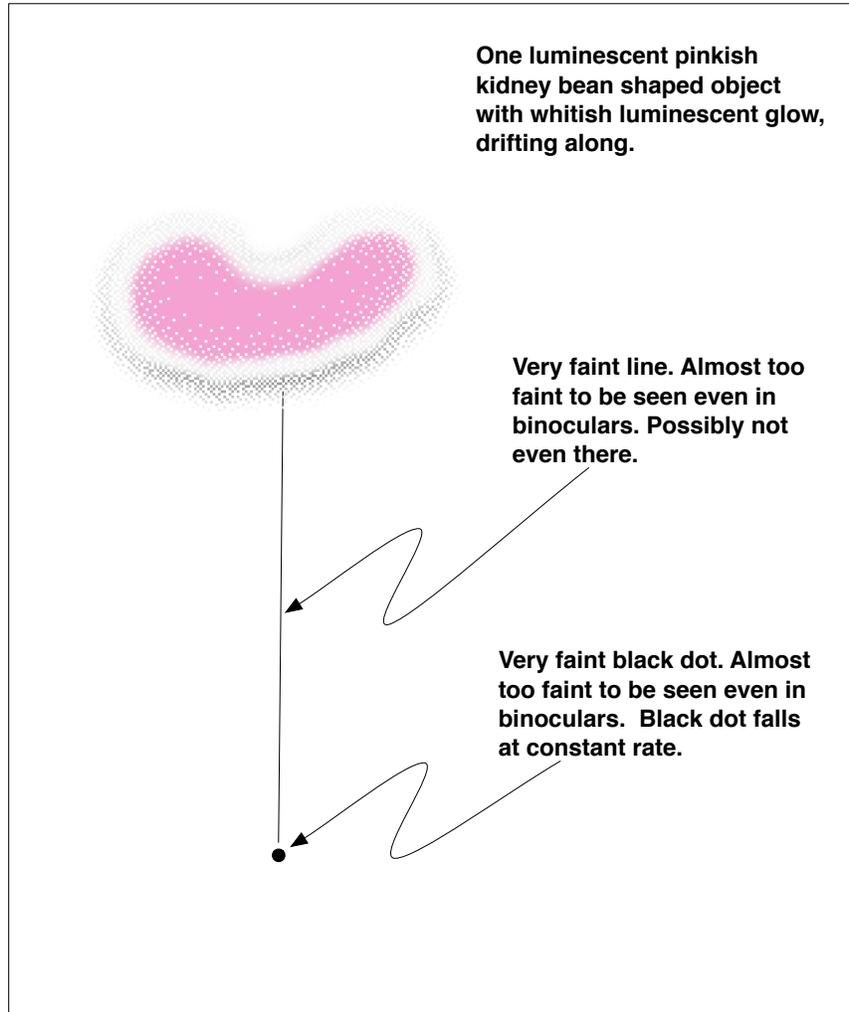


Figure 6. Sighting #6

Through the Binoculars

All six of these UFO sightings could easily have been missed by a casual observer because the UFOs were very tiny in angular size. They were essentially comparable to a commercial jetliner at cruising altitude of 20 thousand feet. A very small object—a plane—is often seen at the head of a high altitude condensation trail. This is the approximate angular size of all the UFOs except for the first one, which was somewhat larger.

To give a sense of how the UFOs looked in the Nikon Travelite II binoculars, see *Figure 7, Sighting #1 in Binoculars Field of View*. These binoculars are 9 X 25 with a 5.6° field of view. The spheres in the other sightings were about the size of the individual spheres in the cluster UFO in Sighting #1. The pinkish object in Sighting #6 was somewhat larger than the spheres but smaller than the cluster UFO in Sighting #1.

Approximate size of UFO #1
in binoculars field of view.
Black dot object fell out of
field of view during
observation.

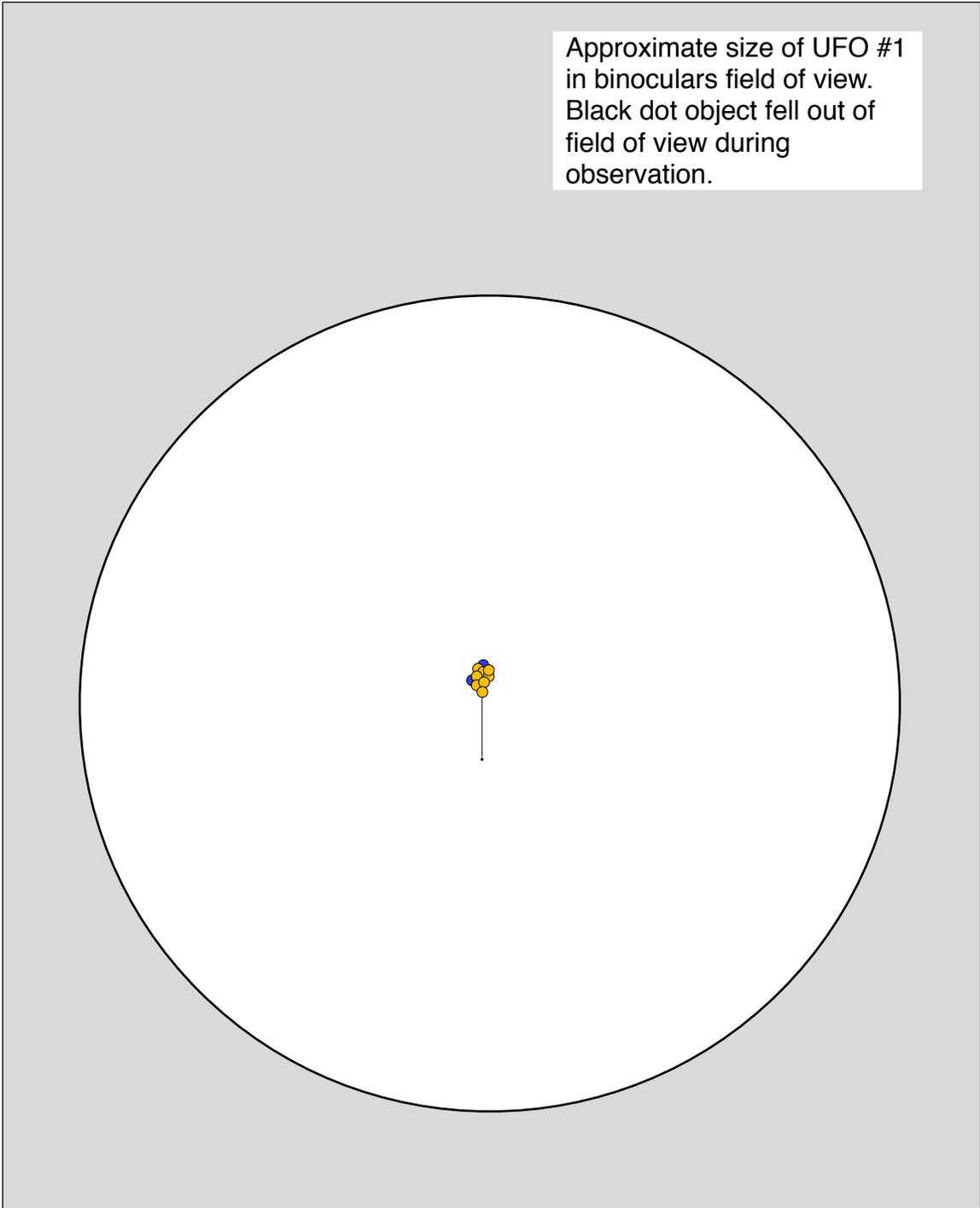


Figure 7. Sighting #1 in Binoculars Field of View

Chronology of Observations

The observation information in *Table 1, Chronology of UFO Observations*, is taken from a 1996 document that I wrote up describing my March 24, 1996, sightings. This chronology includes some additional information about the individual sightings but also includes the context of ordinary, easily identifiable objects that we saw that day in the same observational direction as the UFOs.

Perhaps unfortunately, we did not see any balloons of any description that day to compare them with the UFOs that we saw. I have since seen a number of party balloons and they look nothing like the UFOs that we saw. In the year following my March sightings, I spent perhaps a couple of hours on my deck in West Linn specifically waiting for more balloon-like (or other!) genuine UFOs to appear. None did. However, within a month of my March sightings, I did see, fortuitously, an escaped party balloon floating by my house from my backyard deck. My first thought was to make this into one of my March sighting UFOs. But within a second or two at the most, I identified the party balloon for what it was. There was no luminescent quality at all to the party balloon. In fact, it was a metallic and red style party balloon.

Table 1. Chronology of UFO Observations

| Time (PM PST) | Observation |
|------------------|---|
| 2:10 | <p>I saw my first UFO of the day immediately after I got out of the car. It was almost straight overhead in a clear blue sky with beautiful clouds nearby. There were two layers of cumulus type clouds, one at around 6000 feet and the other around 10,000. The UFO was prominent and had the angular size of a commercial jet at 20,000 feet. However, it was much brighter and more prominent than a jet. I could not tell what the amorphous shape was without binoculars. I trained my 9 x 25, 5.6 degree field binoculars on the object, and saw a truly beautiful, even stunning, sight.</p> <p>Before my eyes was an odd sight. Imagine a small cluster of spheres, perhaps eight to ten total. All but two were orange-yellow. The other two were blue. As I watched, the two blue ones maintained a fairly constant position on the left and partly obscured at the top. The spheres showed movement within the group. They were all bunched together tightly so that no sky was visible among the spheres. This assemblage drifted along as if with the prevailing wind. The clouds at 6000 feet were traveling generally from north to south. So was the UFO. In the field of view of the binoculars, the top to bottom length of the cluster of spheres was an estimated 1/40 of the field diameter.</p> <p>Tony and I watched this assemblage drift along for a full five minutes. We lost it in the distance behind some trees near the horizon. So far, just a group of balloons, right? Yes, but each "balloon" glowed with a beautiful, luminescent light like a neon sign. This light did not look like a reflection effect. Many planes passed through the area during our two and a half hour vigil. No surface of any of the planes looked at all like the sphere's glowing light.</p> |
| 2:15 | <p>I spotted two golden, glowing spheres within ten degrees of the moon. I failed to take sufficient notes for this sighting and began taking more extensive notes. This sighting lasted an estimated one or two minutes. Tony videotaped this sighting as he was to do with nearly all of our total of eight separate sightings.</p> <p>During the next sighting, at some point we realized we were describing two different UFOs simultaneously, thinking that we were viewing the same UFO. This is easy to do if you both have eyes glued to binoculars and one is on the roof and the other is on the ground!</p> |

| Time (PM PST) | Observation |
|------------------|---|
| 2:30 | I spotted another object near the moon. Without binoculars, the estimated angular size would be that of a very high altitude commercial jet, like the ones you see with condensation trails. In the binoculars, it was actually three objects — two golden, luminescent spheres and a tiny, darkish sphere below the two spheres above. The distance between the two and the tiny one was, at the beginning of the sighting, about five diameters of a circle drawn around the two golden, glowing spheres. I failed to note the duration of this sighting, but I estimate it at two to three minutes. As I watched this drift along, the tiny sphere increased its distance, going straight down from the other two till I lost sight of it about half way through the sighting, I would guess. I kept the two golden spheres in the center of the field of view. The sighting was lost in clouds. |
| 2:47 | Tony spotted three white spheres in some sort of assemblage. I failed to locate this one in the sky and never saw it. This was, I assume, about the same angular size at the second sighting. These, I found out, are very hard to spot and easy to lose if you lose it and have to locate it again with the naked eye. Tony has video tape. I assume this lasted a minute or two at the most. Tony and I had trouble pointing out sightings to each other since I was on the ground and he was on his roof for the duration of our two and a half hour watch. |
| 2:53 | A light plane passed directly overhead going from south to north at about 800 feet. It was low and loud. |
| 2:58 | A twin-engine business plane passed over at about 2000 feet going from southeast to northeast. |
| 3:00 | A commercial jet at about 10 to 15 thousand feet from generally south to north passed by at about ten degrees above the moon. |
| 3:22 | I spotted a single yellow-orange, glowing sphere, a bit bigger than the previous double sphere sighting at 2:30. This sighting lasted about two minutes and was lost in haze off to the west. |
| 3:28 | Tony spotted a single yellow-orange, glowing sphere and began videotaping it. This sphere was first spotted about ten degrees away from the moon to the south. It drifted generally from north to south. The sighting lasted till about 3:36 when Tony finally lost it. I had lost it earlier when I took the binoculars off it to reposition myself for a better angle. I failed to relocate it with the naked eye or by scanning with my binoculars. |
| 3:41 | I saw a red-tailed hawk. A wonderful sight. It's the kind of hawk we have around here that soars at about 500 or so feet. No, I didn't see its red tail. I saw a black silhouette, of course. |
| 3:47 | Tony spotted a double sphere UFO of a light blue glowing color. This was first spotted over one of his backyard conifer trees. This one traveled faster than all our others and accelerated till it got too fast for Tony to track with his camcorder. He lost it at 3:49. |
| 3:51 | I first see a commercial jet flying low in the landing approach to our international airport (PDX). This was near the trees in Tony's backyard looking east. I lose it within seconds behind some trees in the distance. |
| 3:59 | I spot another commercial jet flying low. This one passes quite low and is fairly noisy. |

| Time (PM PST) | Observation |
|------------------|--|
| 3:59 | I spot the most beautiful of all the UFOs. It is a single, bumpy, glowing spheroid. This one, however, is a stunning pink with a whitish appearance around its periphery. Since I had lost the last few UFOs prematurely by taking my binoculars off them, I was determined to follow this one as long as I could. This I did. The total duration was around eight minutes. Tony actually lost this one in his camcorder before I did. This UFO sailed into the clouds at 6000 feet and traveled in a generally north to south direction, starting in the vicinity of the trees in Tony's backyard, pretty much straight overhead. This UFO like some of the others had a tiny sphere hanging or dropping from the bottom, the sphere descending farther and farther over time. This UFO was a most beautiful sight! |
| 4:13 | A commercial jet with a red and shiny aluminum fuselage traveled in the same general north to southwest direction as the pink UFO. I remember thinking how utterly different looking these two sky objects appeared. The airliner had specular sunlight glint from its shiny aluminum skin. Our UFOs at no time showed any specular lighting effects, only the luminescent glow in gold, pink, blue, and white. Our UFOs showed no hints of structural effects "holding" them together. The multiple sphere sightings always showed mutual sphere movement as they sailed along. Tony has described very energetic multiple sphere movement in some sightings as if the spheres are tethered by rubber bands. |
| 4:33 | We broke off our UFO watch. Tony said this was a very good day. I was very lucky. I had to agree. |

Environment

For a full assessment of many UFO sightings, the general environment should be described. This is too often omitted in many UFO cases. This environment is important here because perfectly ordinary terrestrial circumstances *could* account for these UFO sightings. My March 24, 1996, UFO sightings took place in the following environment.

Neighborhood

Tony's house was in a mixed business and residential neighborhood. There were plenty of tall trees around the area — some over 100 feet — both Douglas Firs (the most common conifer in Oregon) and Oregon oaks and some other ornamental trees. (Today, Tony's house has been demolished and an assisted living center for the elderly has been erected on the property and surrounding properties.)

In the greater neighborhood within a few miles is the following terrain and environment:

- To the north is Lower Boones Ferry Road and beyond it is residential neighborhood and then a public park, Waluga Park.
- To the east is residential neighborhood and the west end of Lake Oswego, a private lake for the residents of nearby Lake Oswego, the city.
- To the south is residential neighborhood and the Tualatin River.
- To the west is a mixed residential and business neighborhood becoming solid business next to I-5, the major north/south freeway in Oregon.

See the map in *Figure 8, The Sighting Neighborhood*. The map is about a mile and a half wide. Tony's house was where the (red) star is on the map.

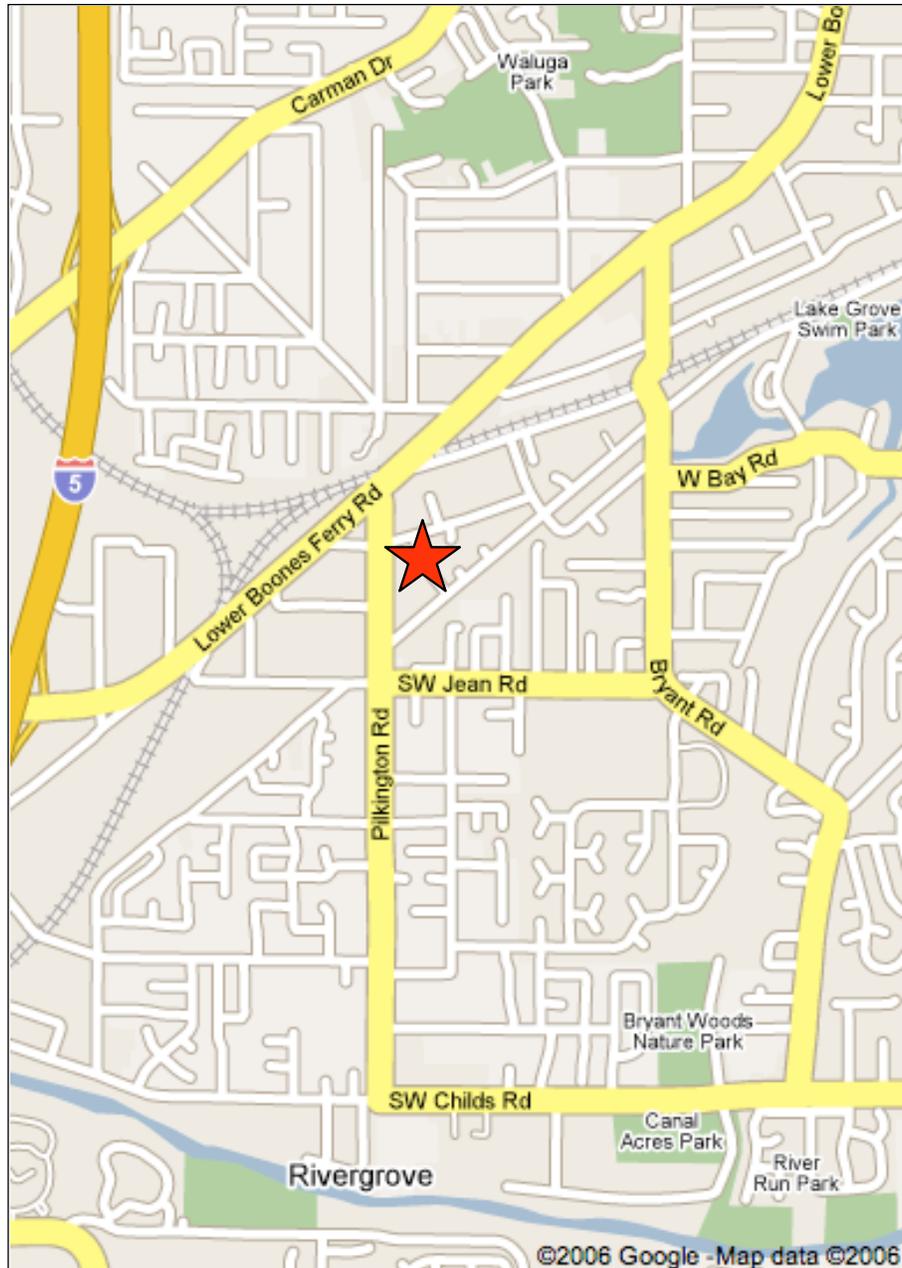


Figure 8. The Sighting Neighborhood

Weather

A check with the PDX weather office at the time revealed that in the Portland, Oregon, area in the afternoon there were two strata of fair weather cumulus clouds at 6000 and 10,000 feet. I saw, on more than one of my six UFOs sightings, the UFOs become obscured by clouds at the end of the sighting. But on some sightings, we lost the UFOs in the distant haze and not in the clouds.

Evidence

The evidence in this case consists of my own testimony. I am a MUFON field investigator and more recently the Assistant State Director for MUFON Oregon. There is also the testimony of Tony, a long time friend of mine. Tony, however, prefers to remain anonymous at this time, so his credibility and reliability is not at issue here, nor is his testimony.

I have not discussed this series of sightings with Tony much more than whatever discussion we had in the aftermath of the day of the sightings. Tony later did say that March 24, 1996, was a very good day for him, too. However, he has had probably more than 200 sightings since that time and has some very impressive video that he has taken of many other UFOs.

This case report has been compiled from the following information:

- My two and a half steno pad pages of notes taken down at the time of the sightings.
- A drawing and brief description of my sightings of that day done within a week of March 24, 1996. See *Appendix A: Drawings of Five Lake Grove UFOs*.
- A chronology of sightings written up from my notes within a few months of March 24, 1996.

See the appendices for this information. This is the only evidence for this series of sightings. I have no photos, video, or other sources of information formal (possible business or government information) or informal (other witnesses besides Tony) for this series of sightings.

Direct Observation

Some bits of evidence we are very certain of from my direct observation of the facts of the situation and from consulting authoritative sources about my observed facts. These facts are the following:

- Facts about the Moon at the time and place of observation.
- Facts about the clouds at the time and place of observation.
- Facts about the binoculars I used.

Moon Position

From the observation notes, we know that some of the UFOs were first seen within 20 to 30 degrees from the zenith. We also know that some of the UFOs were within ten degrees of the Moon. I remember this as being *above and/or to the right* of the Moon, though this is not in the notes.

- From an astronomy program, on March 24, 1996, the Moon was at approximately 40° above the SSE horizon right around 2 PM.

Cloud Heights

As noted above from a call to the PDX weather office, we have the elevations of the bases of two cloud strata:

- One cloud strata base at 6000 feet.
- Another cloud strata base at 10,000 feet.

The Binoculars

From the specifications of the Nikon Travelite II 9 X 25, 5.6° binoculars, we have:

- Nine power magnification, which means that objects appear nine times bigger than to the naked eye.
- 25 mm diameter of the front element, which means a relatively small light gathering power compared to many binoculars. This would only come into play in low light levels, however, and not in the bright sunny conditions of my UFO sightings.

- A 5.6° angle of view. This turns out to be about average for most binoculars. Another common way to state angle of view is how many *feet* across the field of view is at 1000 *yards*. The 5.6° angle of view converts to about 294 feet at 1000 yards. A standard angle of view for many binoculars is 300 feet at 1000 yards.

Summary of UFO Attributes

The following facts about the UFO observations are gathered in *Table 2, Summary of UFO Attributes*, for consulting convenience.

Table 2. Summary of UFO Attributes

| UFO Attribute | UFO #1 | UFO #2 | UFO #3 | UFO #4 | UFO #5 | UFO #6 |
|--------------------------------------|--------------------------|-----------------------|-----------------------|--------|------------|-----------------------|
| Pink color | No | No | No | No | No | Yes |
| Blue color | Yes | No | No | No | No | No |
| Golden-yellow color | Yes | Yes | Yes | Yes | Yes | No |
| White color | No | No | No | No | No | Yes |
| Clustered | Yes | No | No | No | No | No |
| Spherical shapes | Yes | Yes | Yes | Yes | Yes | No |
| Multiple spheres | Yes | No | No | Yes | No | No |
| “Drifting” | Yes | Yes | Yes | Yes | Yes | Yes |
| Small black object | Yes | ? | ? | Yes | ? | Yes |
| Small black object “falling” | Yes | ? | ? | Yes | ? | Yes |
| Connecting “line” to small black dot | Yes | ? | ? | Yes | ? | Yes |
| Appeared near Moon | ? | Yes | ? | ? | ? | ? |
| Disappeared into clouds | ? | ? | ? | ? | ? | Yes |
| Direction first seen | Almost directly overhead | High up and to the SE | High up and to the SE | ? | In the SSE | High up and to the SE |
| Direction last seen | S | ? | S? | SW | SW? | SW |
| Approx. duration | 5 min. | 1-2 min. | 2-3? min. | 2 min. | 8 min. | 8 min. |

The attributes generally common to all the UFOs are the following:

- The “drifting” movement.
- The luminescent quality of the UFOs.
- The generally north to south movement.
- The somewhat long duration of the sightings compared to ordinary airborne objects.
- The appearance first overhead or high up.
- The disappearance to the distant south or southwest.
- The generally spherical shape of the UFOs or UFO components.

The variable attributes are the following:

- The colors.
- The general configurations (single spheres, or grape cluster, or two spherical UFOs as a unit, or the last “kidney bean” shaped UFO).
- The range of sighting durations. (It should be noted that at least one of Tony’s UFO sightings appeared to accelerate and disappeared from view. Unfortunately, I did not witness this fast acceleration and disappearance.)

Absent Attributes

It may be instructive to consider for a moment what attributes the UFOs did *not* have.

- No UFO had a shiny, specular reflective surface.
- No UFO had a clearly discernible ordinary surface structure or appearance.
- No UFO had wings.
- No UFO had any smoky, hazy, misty, etc., surrounding or interior appearance.
- No UFO had internally moving parts except for the clustered UFO #1 with its small spheres actively moving with respect to each other.
- No UFO had any external lights, protuberances, superstructures, etc.

Analysis

The evidence in this case does not (as usual) allow much technical analysis, but we are somewhat lucky in that a few “hard numbers” are actually available to us. These hard numbers and some reasonable estimates about other numbers allow some useful calculations to give us some new knowledge about the observed UFOs, specifically their approximate size and speed.

The “hard numbers” are the following:

- Nikon Travelite II binoculars are 9 X25 with 5.6° angle of view.
- The moon was at about 40° altitude in the SSE on the day and place in question.
- The cumulus cloud strata as stated above were at 6000 and 10,000 feet.

The “soft numbers” for the following calculations are the following:

- The elevation of the UFOs above the horizon when first seen.
- The general direction of the UFOs when first seen and in their subsequent travel.
- The proximity of the UFOs to the moon.
- The apparent size of the UFOs to the naked eye and in the binoculars.
- The duration of the UFO sightings.

Measurements and Calculations

A real problem with many UFO sightings is: “Just how big is the darned thing?”

It turns out that because we know the cloud heights and because some of the UFOs were seen to disappear into them and because we know the specifications of the binoculars, we can calculate a probable size range.

The big proviso here, of course, as with virtually all UFO sightings is that the measurements and numbers we know are usually only very approximate. Thus, the following calculations should only be taken as rough estimates in the end. But at least we can get some order of magnitude ideas about sizes here. (Order of magnitude means that we can know that a UFO size (or distance) is likely in the 10s range rather than, say, the 100s or 1000s range. For example, we can know that a UFO size is in the 60 or 70 foot range rather than the 600 or 700 foot range. Or in the 6 or 7 foot range rather than the 60 or 70 foot range.)

The ultimate cure for this sad state of affairs in UFO measurement is to stop relying on citizen observations and encourage modern science and engineering to acknowledge and openly study the UFO. Science and engineering would bring to bear on the problem all the incredibly precise instrumentation they have for physical measurement, and we'd have precise knowledge about many of the physical reality aspects of UFOs. But this isn't going to happen anytime soon because of the serious national security implications of UFOs, which entails the extreme secrecy surrounding the physical reality aspects of the phenomenon. But this is another topic.

UFO Distance

We can calculate a reasonable distance to the UFOs with the following measurements, assumptions, and methods.

- We know the cloud height bases of two of the visible fair weather cumulus cloud strata: 6000 feet for one, 10,000 feet for the other.
- We know from the notes that most of the UFOs were seen approximately 20 to 30 degrees down from the zenith.
- Only one UFO sighting specified the cloud bank that a UFO disappeared into. This was the lower, 6000 foot cloud bank on the last pink UFO. For my “average” UFO, I'll pick the lower, 6000 foot altitude for the sake of illustration. (All the numbers are unfortunately quite inexact anyway.)

From this information, we can calculate an approximate distance for an “average” UFO since most of them were also down from the zenith 20 to 30 degrees. See *Figure 9, Distance of “Average” UFO*.

To calculate the distance to the UFO, we have the following:

- The unknown UFO distance d .
- Cloud ceiling $c = 6000$ ft.
- Viewing angle up from the horizon $\theta = 60^\circ$.

Using the following formula, we can determine the approximate distance to an “average” UFO at its disappearance into the lower cloud bank.

$$\begin{aligned}d &= \frac{c}{\sin(\theta)} \\ &= \frac{6000 \text{ ft}}{\sin(60)} \\ &= \frac{6000 \text{ ft}}{0.866} \\ &= 6928 \text{ ft} \\ &\approx 7000 \text{ ft}\end{aligned}$$

(1)

We will take the “average” UFO distance to be 7000 ft in the following analysis.

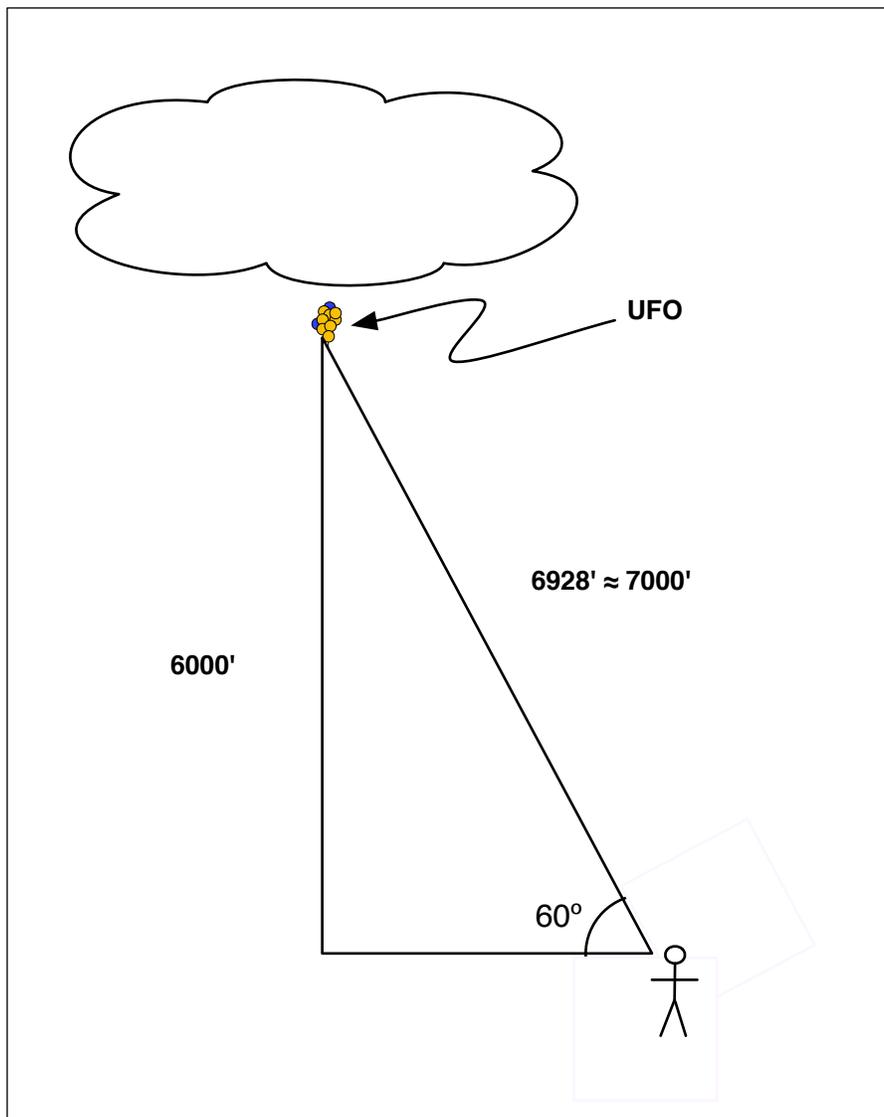


Figure 9. Distance of “Average” UFO

UFO Size

With the distance to an average UFO calculated at about 7000 feet, we can calculate the approximate absolute size of the largest (by angular size) UFO. This is the cluster UFO in Sighting #1. See *Figure 1, Sighting #1* and *Figure 7, Sighting #1 in Binoculars Field of View*. What allows us to do this calculation is the specifications of the binoculars and my memory of how big the Sighting #1 UFO was in the field of view.

The following facts will be used in the calculations of an approximate size for the Sighting #1 UFO.

- The binoculars have a 5.6° angle of view.
- The angular size of the Sighting #1 UFO is 1/40 of the field of view of the binoculars. I did not measure in any way the size of the UFO in the field of view of the binoculars while I was observing the UFO. But judging from the kinds of details I was able to see and descriptions I was able to give, 1/40 seems like a good estimate. Remember that my descriptions in the Chronology of Observations gives 1/20 as an angular size guess for the clustered UFO *from top to bottom*. See *Figure 7, Sighting #1 in Binoculars Field of View*.

Using this information, we can calculate an approximate absolute size for the Sighting #1 UFO by a simple ratio and proportion calculation.

- The diameter of the field of view at 7000 feet, d .
- The angular size of the full field of view, b_{ang} .
- The absolute size across the Sighting #1 UFO, UFO_{ab} , the unknown.
- The angular size of the Sighting #1 UFO in the binoculars, UFO_{ang} .

The ratio and proportion equation is:

$$\frac{d}{b_{ang}} = \frac{UFO_{ab}}{UFO_{ang}}$$

Where the unknown UFO_{ab} is:

$$UFO_{ab} = \frac{UFO_{ang} \cdot d}{b_{ang}} \tag{2}$$

But we need the diameter of the field of view at 7000 feet d . (Seven thousand feet is the farthest distance to the Sighting #1 UFO and our other UFOs. See calculation (1) above.)

Another ratio and proportion will work here.

- The diameter of the field of view at 1000 yards is 294 feet.
- The diameter of the field of view at 7000 feet is d feet.

Thus, the equation is:

$$\begin{aligned} d &= \frac{294 \text{ ft} \cdot 7000 \text{ ft}}{(1000 \cdot 3) \text{ ft}} \\ &= 686 \text{ ft} \end{aligned} \tag{3}$$

Now we can calculate (2) above.

- The diameter of the field of view at 7000 feet d is 686 feet.
- The angular size of the full field of view b_{ang} is 5.6°.
- The angular size of the Sighting #1 UFO in the field of view of the binoculars UFO_{ang} is $5.6^\circ/40 = 0.28^\circ$.

$$\begin{aligned}
\frac{d}{b_{ang}} &= \frac{UFO_{ab}}{UFO_{ang}} \\
UFO_{ab} &= \frac{UFO_{ang} \cdot d}{b_{ang}} \\
&= \frac{5.6 \cdot \left(\frac{1}{40}\right) \cdot 686 \text{ ft}}{5.6} \\
&= 17.2 \text{ ft}
\end{aligned}$$

The size of 17.2 feet turns out to be a reasonable size for this UFO. This size is for Sighting #1, which is the *clustered* UFO. See *Figure 1, Sighting #1*. The object seems to be composed of a number of small spherical UFOs, which were seen as individuals in subsequent sightings. Let's say the clustered UFO of Sighting #1 is two and a half to three small spherical UFOs across. This would make the small spherical UFOs around 3.5 to 4 feet across.

This size makes them bigger than party balloons and smaller than weather balloons. It also makes them a size that would not particularly interfere with general aviation. Thus, there would likely be no reports to any airport or other officials (National Guard?). And they certainly would not rise to the level of publication in the local metropolitan (and largest) newspaper in Oregon, *The Oregonian*. (However, *The Oregonian* has a policy of *not* reporting "routine" UFO sightings. Peter Davenport of the National UFO Reporting Center tried to interest *The Oregonian* staff in coverage of a multiple witness UFO case that occurred over downtown Portland in April 2006, but failed because of what he felt was their non-reporting policy on UFO sightings. UFOs as a cultural, gee-whiz, life style issue is OK, however. This "non-reporting policy" idea accords well with our local MUFON experience with *The Oregonian* and UFOs over the years.)

UFO Velocity

With the exception of the one UFO that Tony saw, which apparently accelerated to a fast speed and disappeared rapidly, all the UFOs appeared to "drift" along in the sky. ("Drift" is in quotes since we do not know what the mechanism is if these UFOs are genuine UFOs.) We will assume here that some type of "drifting on the winds" or at least some more or less constant low speed movement whether internally (or externally) controlled was in effect for all my UFOs.

Conclusion

So, what were these UFOs? We can use Allan Hendry's *The UFO Handbook* as a basis for evaluating the UFO descriptions. Hendry's excellent study discusses many IFOs and among them only the balloon category stands out as a reasonable candidate for identification. All other IFO categories just don't compare favorably to the descriptions presented here.

Thus, there are essentially five possibilities for what these UFOs were:

- Some type of balloon.
- Some type of conventional natural or man-made object of very low probability of occurrence according to Hendry's study in *The UFO Handbook*.
- An unknown natural effect or object.
- A secret, man-made object.
- A genuine UFO — something that should not be in our skies according to modern, mainstream science and scholarship.

These five possibilities are discussed here.

Balloons

Research on the Internet turns up a wealth of balloon types and styles. Here are some of the main types:

- **Standard weather balloons.** These objects are about the right size and have the right behavioral characteristics (except that they do not rapidly accelerate). The problem here is that weather balloons are launched near airport facilities generally and the closest airport to Lake Grove is PDX at about ten miles away. Besides a weather balloon would ascend out of sight before it got ten miles away from its launch point. (The closest official site of weather balloon launch is actually Salem, Oregon, and not at PDX in Portland. Salem is 40 miles to the south of Lake Grove, Oregon. And besides, no weather balloons are luminescent in the sunny daytime light.)
- **Various research balloons.** These are launched very sporadically from various research facilities around the U.S. They are generally very high altitude balloons and not launched in bunches. No research balloons are luminescent in sunny, daytime light. There are no research balloon launch facilities in or around metropolitan Portland, Oregon.
- **Various party balloons.** This is actually a reasonable candidate for identification for my sightings. There definitely are illuminated party balloons in plentiful existence. However, their illumination is clearly of an internally illuminated ordinary balloon, and they do not look like they are completely luminescent. And more importantly, their illumination is much too weak to show up in sunny daylight conditions.
- **Hot air balloons.** These balloons can be of various shapes and colors, are generally twenty and thirty feet in diameter and as much or more in height and they always have a large gondola underneath with the flame generator below to control buoyancy. At night, the flaming generator can illuminate them, but they do not appear entirely luminescent. My objects did not show a large gondola hanging beneath the luminescent spheroid object.
- **Prank balloons.** Prank balloons are generally small (less than five feet in diameter), but can be creative in design and may be illuminated with candles or battery operated lights. This illumination is, however, not enough to be seen as clearly luminescent in sunny, daytime light. Also, prank balloons are generally a one or two balloon affair.

The basic descriptions of these various types of balloons pretty well eliminates the standard weather balloons, research balloons, and hot air balloons. However, the party balloons and prank balloons are reasonable candidates for identification of my UFOs.

However, here again, as noted in the descriptions of the party balloons and prank balloons, the question of powerful enough illumination argues against the likelihood that these balloons are the answer to the identification of my UFO objects. Also, the likelihood of so many prank balloons in one afternoon argues against prank balloons. However, one can imagine a number of illuminated party balloons being accidentally or possibly on purpose released as part of some wedding or other celebration.

What argues strongly against all balloons, however, is the fact that Tony saw at least one of our UFOs accelerate away from him so that he lost it in the distance. It is safe to say that no balloon can do that.

Thus, any kind of conventional, "usual or unusual," wind-borne balloon is rejected as an identification for my UFO sightings.

Low probability Conventional Objects

In this category, might be something like a model airship. A search of the Internet turned up some radio controlled airship models and some model "hot air" balloons.

- <http://www.modellballone.com/modellballon/english/welcome.html>
- http://www.diynetwork.com/diy/rc_other/article/0,2033,DIY_14223_2276183,00.html

These low probability conventional objects in any case do not have the distinct uniformly luminescent quality that all six of the my sightings had.

Thus, this category is rejected as an identification of my sightings.

Unknown Natural Object

Ball lightning is a moderately well-known physically real phenomenon, but is not well-understood at this time. Its existence is well established by well documented reports, but the physics of ball lightning is still in its infancy. Even so, we know enough about ball lightning that we can say that this phenomenon has the requisite distinct luminescent quality of my sightings, but it does not have the persisting minutes at a time, fair weather, and high altitude characteristics of my sightings. Thus, ball lightning is rejected as a likely explanation of my sightings.

Of course, since this category is “unknown natural object” it could easily be an explanation, but it would not be an identification, which requires a specific object or phenomenon.

Thus, unknown natural object is rejected as a likely explanation of my sightings.

Secret Man-Made Object

Since military research and development has been most likely working on remotely piloted vehicles (PRVs) for at least twenty years, my sightings could be explained by this category. However, it took place over ten years ago now and presumably research was not as far along as now. Thus, we can get some sense of reasonableness of this possible identification from the various RPVs that have become known in the last ten years. None of these generally winged craft remotely match my UFO descriptions.

There is also the problem of secret craft being flown and tested over populated areas in the daytime. Overflights by still secret craft over populated areas are conducted generally at extremely high altitudes (above commercial airliner cruising height). My sightings were below 10,000 feet.

Thus, secret man-made craft/objects are rejected as a likely explanation of my sightings.

Genuine UFOs

Not much is left to explain or certainly identify any of my six sightings. Some type of illuminated and *luminescent* party or prank balloon that is clearly visible in bright, daylight sunshine is the most likely candidate. People who choose to believe this can if they like. Since I did not personally see the object that Tony assured me accelerated out of his view (see *More Recent Testimony* later), I would have to say that there is, *from my observations alone*, let's say, a 1% likelihood that some kid(s) or young men were playing an elaborate prank with an expensive type of very bright luminescent balloons on the day of my sighting, perhaps out of Waluga Park to the north. However, if I had seen the accelerating object, I would say there is a 0% chance that my sightings were anything but genuine UFOs. I find it difficult to believe there exist rapidly accelerating balloons. My Internet research did not turn up anything fitting the description of “rapidly accelerating balloon(s),” “rapidly traveling balloon(s),” etc.

The following facts taken together make highly probable the identification of this series of sightings as *genuine UFOs*:

- Six separate sightings of broadly similar objects were made in a two and a half hour period—thereby reducing the errors of perception. Because of repetition, I *know* what I saw!
- All spherical objects and the last irregularly shaped object glowed with a bright luminescent quality in broad, blue sky daylight. Only a *highly* unusual conventional or natural object would have this quality.
- Not all sightings were of the same configuration. A hoaxer would have to be imaginative and resourceful to produce all these configurations.
- At least three of the sightings included a strange black object that fell downward and away from the objects. A balloon's dangling cord would not likely fall away in three separate objects.
- The last sighting was not a spherical object. Again, a hoaxer would have to be imaginative and resourceful.
- Some sightings viewed by Tony did not “drift” along in the sky. At least one accelerated and disappeared. No wind-borne balloons exhibit this fast acceleration behavior.

- Tony has seen and videotaped over 100 hours of similar objects in the last ten years. Only a truly fanatic and obsessed hoaxer would create balloon hoaxing over a period of ten years in two cities over 15 miles apart. (Tony lives in a different city today and still sees similar UFOs.)
- Balloon research on the Internet has not turned up any balloons that fit the exact descriptions of the UFO objects. (However, a firm in Germany offers a luminescent material for sale that could be made into “luminescent” balloons for night time viewing.)
- If these UFO objects are in fact a strange new kind of balloon, this has not been made public in the last ten years. (Readers are invited to send their Internet or other research candidates for identification to the author of this case study.)
- The logistics of launching at least seven different balloons matching the descriptions for the UFO objects makes the balloon hypothesis highly unlikely. A hoaxer would have to be dedicated, indeed.

Hoaxers, UFO researchers, hoaxer sympathizers, et al, are invited to send the author of this case study any properly documented cases they know about of hoaxers launching at least seven daylight luminescent balloons in a period of two and a half hours. The balloons need to have a minimum diameter of around five feet. Good luck to you!

More Recent Testimony

During the preparation of this case report, I had occasion to talk to Tony a bit more about our sightings that day. He added some information that significantly changes how we should interpret the sightings as a whole.

Tony said that some of the UFOs he saw were traveling from generally west to east instead of the generally north to south and southwest that I observed for my UFOs. Multiple paths across the sky argues, of course, against the idea that all of these UFOs were actually wind-borne balloons of some kind. Tony’s descriptions of his UFOs agree with my descriptions, leading us to believe that all of our UFOs were of the same generally anomalous objects.

Appendix A: Drawing of Five Lake Grove UFOs

The drawing in Figure 10, Original Drawing of Five Lake Grove UFOs, is the original drawing of five of the most prominent that I saw through 9x25 power binoculars on March 24, 1996. This drawing was done within a month of the sighting. (Note that Lake Oswego and Lake Grove are adjacent urban communities.)

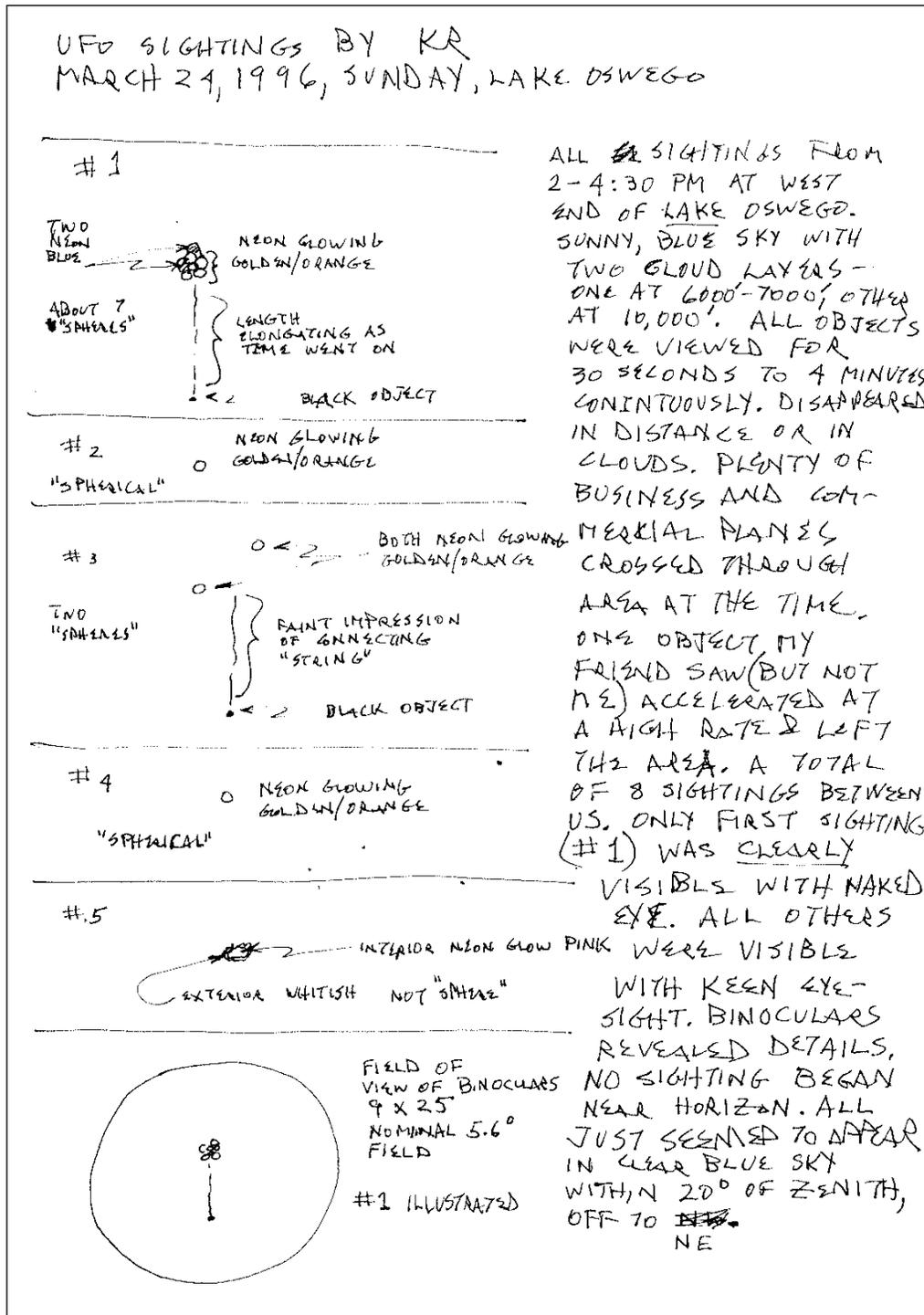


Figure 10. Original Drawing of Five Lake Grove UFOs