

Space Shrinking by Dark Matter as the Source of Dark Energy Revealed from Shrink-and-Grow Mystery

Web Page (6)

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Abstract

There are several known Mystery Spot areas on earth surface where visitors can enjoy watching the strange Shrink-and-Grow Mystery. In such demonstration of Shrink-and-Grow Mystery, two persons stand on two ends of a level demonstration platform about 2 to 3 feet long. When the two persons switch their standing positions, their relative heights change by several inches. The taller person becomes shorter and the shorter person becomes taller. With 23 year research, I have collected 11 sets of evidences to show that such Shrink-and-Grow Mystery is not an illusion, it is real.

By visiting several Mystery Spot areas, visiting two Mystery Spot areas multiple times and doing extensive research on the Shrink-and-Grow Mystery in these Mystery Spot areas for more than 23 years; I discover that dark matter can shrink space in its vicinity. This ground breaking discovery is important because:

1. It provides a scientific explanation for the Shrink-and-Grow Mystery.
2. Dark matter can interact with ordinary matter not only through gravity but also through spacetime shrinking, and
3. It leads into the next ground breaking discovery that dark energy comes from elastic spacetime that is highly shrunk or highly compressed by the huge amount of dark matter of the entire universe in extreme high density state during the early stage of universe.

It is the space shrinking by the high concentration of Type B dark matter that is

causing such Shrink-and-Grow Mystery. In other words, people's height can change depending on his/her distance to the location of the high concentration of Type B dark matter in the Mystery Spot area. With such insight, I looked into the available astronomy data and found evidence that dark matter halo surrounding a galaxy also shrinks the space on the galactic scale. This means dark matter can interact with ordinary matter not only through gravity but also through its space shrinking capability.

Going one step further to consider all dark matter in the entire universe, these new insights imply that dark energy comes from elastic spacetime that is highly shrunk or highly compressed by the huge amount of dark matter in the universe in extreme high density state during the early stage of universe. As the universe expands, the density of dark matter in the universe is gradually decreasing and, consequently, dark matter is gradually losing its powerful grip on shrinking or compressing the elastic spacetime at any location in the universe. The elastic spacetime is, therefore, being gradually released from its highly shrunk or highly compressed state and is gradually "springing" back to its de-compressed state. Such de-compressing process of the elastic spacetime of the universe manifests as the unknown dark energy that is driving the accelerated expansion of the universe.

In this sense, dark energy is NOT an independent mystery, but is a direct consequence of elastic spacetime which has been highly shrunk by all dark matters in high density state during early stage of universe.

Note: I started presenting this Web Page (6) on January 11, 2017. (The companion Web Page (1) started on January 3, 2007.) I have been revising and updating this web page from time to time as I gain more insight and relevant information from my ongoing research on this project. Most recent update of this web page was on April 15, 2017. As of April 15, 2017, this web page has been accessed at least 144 times by my friends and strangers all over the world.

1. Observed Characteristics of Shrink-and-Grow Mystery on Earth

1.1 The Shrink-and-Grow Mystery on People

At Oregon Vortex in Oregon, USA and several other similar known Mystery Spot areas, the well known Shrink-and-Grow Mystery is the significant change (by several inches) of relative heights of two persons when they switch their standing positions on a level platform inside the Mystery Spot area as demonstrated by several sample movie recordings in the next Section.

1.2. Several Sample Movie Clips of Shrink-and-Grow Mystery

Please see the following six movie clips of demonstration of Shrink-and-Grow Mystery at four different Mystery Spot areas:

A demonstrations of Shrink-and-Grow mystery at Cosmos Mystery Area in South Dakota, USA at:

Web Page (CMA-SD-1): <https://www.youtube.com/watch?v=y6r6x4u8RmU>

A demonstration of Shrink-and-Grow mystery at Mystery Spot near Santa Cruz in California, USA at:

Web Page (MS-CA): <https://www.youtube.com/watch?v=UVGpTh66h30>

Demonstration of Shrink-and-Grow mystery at Oregon Vortex in Oregon, USA at:

Web Page (OV-OR): <https://www.youtube.com/watch?v=743oy55RqX4>

Two more demonstrations of Shrink-and-Grow mystery at Cosmos Mystery Area in South Dakota, USA at:

Web Page (CMA-SD-2): https://www.youtube.com/watch?v=lz_u5wTjPho

and

Web Page (CMA-SD-3): https://www.youtube.com/watch?v=BeoJM9LP_Lc

The demonstration of Shrink-and-Grow Mystery in Mystery Hill in North Carolina at:

Web Page (MH-NC): <https://www.youtube.com/watch?v=vSnTbgK8erI>

There are more movie clips on Shrink-and-Grow mystery posted on YouTube website by other visitors showing their excitement from their trips to watch such Shrink-and-Grow mystery.

(In such demonstrations, usually the tour guide uses a carpenter's (bubble based) level to convince the group of tourists watching this Shrink-and-Grow demonstration that the demonstration platform is level because the liquid bubble in the horizontal tube in carpenter's level is in the middle position indicating a level ground. Some visitors have also brought in their own carpenter's levels which also show that the demonstration platform is level.

However, the eleven sets of evidence in

Web Page (1): http://www.shltrip.com/Magnetic_Hill.html

indicate that the local gravity in a Mystery Spot area is usually very abnormal and has a significant horizontal component. With the understanding of such abnormal local gravity, it is misleading to use the bubble based carpenter's level to try to convince the visitors that the demonstration platform is level because of effect of significant horizontal component of gravity is such special locations.)

Notice that in these demonstrations at Cosmos Mystery Area in South Dakota, in Mystery Hill in North Carolina and at Mystery Spot in Santa Cruz, California, the two standing positions are separated by only about two feet and yet the relative heights of the two demonstration persons can change so much (2 or 3 inches) when they switch their standing positions.

Some notes quoted from Internet on Shrink-and-Grow Mystery:

"A guide instructs a person standing at the north post to look straight across and find his or her eye level on the south post. Then walk to the post. There is an overwhelming feeling, verified by onlookers, that the walker is shrinking as he or she approaches the south. Turn around and head north, and it feels like the person is growing."

Mark Cooper (one of the owners of Oregon Vortex) said: "What we're actually saying is that as you would walk towards north, you're physically condensing and thereby getting smaller. No more or less of you, just sort of taking up less space,

like if you were to squeeze a sponge or cool moist materials. And as you walk back towards the south you're physically expanding and thereby getting larger expanding. Again, no more or less of you, just taking up more space."

1.3. Is Shrink-and-Grow Mystery an Illusion or Real?

Many people believe, erroneously, that this is just an illusion and that is the end of the story of Mystery Spot for such believers of Illusion Theory.

However, the 11th set of evidence in Section 2.11 plus the additional ten sets of evidence against Illusion Theory described in my Web Page (1):

Web Page (1): http://www.shltrip.com/Magnetic_Hill.html

convince us that this is not an illusion, but is the tip of a huge iceberg. There are tons of very exciting and challenging science of dark matter underneath. We need to drill down and dig hard to discover those precious treasures. More research and experiments are necessary to understand the great mysteries in these Mystery Spot areas as related to dark matter. That is what I have been doing for 23 years and am still continuing enjoying such research.

In essence, the eleven sets of evidence in Web Page (1) and the analysis in Web Page (2) indicate that the Shrink-and-Grow Mystery is not an illusion, but is caused by very high concentration of Type B dark matter in a fountain of dark matter at the center of the Mystery Spot area with the signature of significant abnormal local gravity in the Mystery Spot area. The existence of significant abnormal local gravity at such special location can be measured and detected by several methods described in my Web Pages (1) and (2).

Web Page (2): <http://www.shltrip.com/Oregon-Vortex.html>

The existence of a fountain of Type B high density dark matter is described in Section 5.2.1 in Web Page (2).

The Type A dark matter and Type B dark matter are defined in Web Page (3):

Web Page (3): http://www.shltrip.com/Two_Populations.html

Such demonstration of Shrink-and-Grow Mystery is usually repeated many times

every day for many tour groups to see. Sometimes, a large visitor group comes with large number of visitors surrounding the demonstration. Different visitors see the demonstration from different angles, different distances and different positions. But all visitors see the same mystery of substantial change in relative height no matter what angle, what distance or what position that the visitors are looking at the demonstration. Usually, the tour guide let two visitors stand on the two positions to do the demonstration. Such two visitors as demonstrators looking at each other also see the same surprising significant change in their relative height.

It is hard for me to believe that this is an illusion because seeing this Shrink-and-Grow mystery does not require the viewer or the photographer to be at certain special angle or special distance or special position or special trick to be able to see such significant change in relative height.

It is quite entertaining to all visitors even though nobody, not even the tour guides, know why the relative height change so much when the two persons switch their standing positions on the level ground.

1.4. Several Known Mystery Spot Areas

Similar Shrink-and-Grow Mystery exists at several Mystery Spot areas such as:

Oregon Vortex at 4303 Sardine Creek Left Fork Rd, Gold Hill, in southern Oregon, USA.,

Mystery Spot at 465 Mystery Spot Rd, Santa Cruz, in California,

Cosmos Mystery Area at 24040 Cosmos Rd, Rapid City, South Dakota,

Mystery Spot at 150 Martin Lake Road, St. Ignace, Michigan,

Montana Vortex at 7800 Hwy 2 East, Columbia Falls, in Montana,

Confusion Hill at 75001 N. Hwy. 101, Piercy, in California,

Teton Mystery (Spot) at 9800 South US Highway 89, Jackson, in Wyoming,

Mystery Hill at 129 Mystery Hill Lane, Blowing Rock, North Carolina,

etc.

The typical size of such Mystery Spot area is about 100 feet in diameter but varies from one Mystery Spot to another Mystery Spot. The distance between the two standing positions on the demonstration platform may be about two feet to 10 feet. There are often more than one demonstration platform in a given Mystery Spot area.

Historically, there are several kinds of names being used for such Mystery Spot at different locations, such as Oregon Vortex, Montana Vortex, Cosmos Mystery Area, Mystery Spot, Mystery Hill, Confusion Hill, Teton Mystery, etc.

In my companion web pages on this project, I shall use Mystery Spots or Mystery Spot Areas to refer to these special locations exhibiting such Shrink-and-Grow Mystery.

1.5. My Personal First Hand Experience of Shrink-and-Grow Mystery

I visited the Mystery Spot near Santa Cruz, California three times: first time in 1993, the second time in 2012 and the third time in 2016. The main purpose of the second and the third visits was to do a simple experiment to measure my body weight on the two standing positions of the demonstration platform of Shrink-and-Grow Mystery.

I visited Oregon Vortex twice: first time in 2004 with pictures on my web page at:

http://shltrip.com/My_Personal_Experience_in_a_Mystery_Spot.html

The second time in Oregon Vortex was in June 2016. I visited Mystery Hill in North Carolina in 2014 with pictures as shown on my web page at:

http://www.shltrip.com/Mystery_Hill_NC.html

I visited Confusion Hill at Piercy, California in June 2016.

I have also been doing E-mail correspondence with Mr. Nick Nelson who has more than 30 years of experience as a tour guide in two or more Mystery Spot areas and as a researcher on Mystery Spot areas. I received lots of valuable information from Mr. Nick Nelson regarding various mysteries in Mystery Spot areas.

With such visits and with the help from Mr. Nick Nelson, I got plenty of my

personal experience and valuable information on such Shrink-and-Grow Mystery plus other mysteries in these Mystery Spot areas.

1.6. Shrink-and-Grow Mystery: Not Just on People But also on Everything in Mystery Spot Areas

I presented the highlights of my 23 year research on this project in a meeting of IEEE (Institute of Electrical and Electronics Engineers) in Monmouth County Library in Manalapan, New Jersey, USA on September 29, 2016. This meeting was co-sponsored by IEEE New Jersey Coast Life Member Group and IEEE New Jersey Coast EMC/VT/AP Chapter.

In this IEEE meeting, Dr. Ralph Wyndrum asked the following important question:

Question Q1: Did anybody use a measuring tape to measure the height of the person/demonstrator when the person moves from one standing position to the other standing position on the demonstration platform of Shrink-and-Grow Mystery?

1.6.1. Surprise, Surprise and New Discovery!

Trying to answer this question leads me into the important discovery that dark matter can shrink spacetime in its vicinity as described in the following:

The answer to Q1 is yes; such measurements have been done in Oregon Vortex as described in Section 2.2 of my Web Page (5) at:

Web Page (5): http://www.shltrip.com/Dynamics_of_Gravity-Mysteries.html

But the measurement results are quite surprising in that the measuring tape does not show such change in the height of the person. In other words, the measurement tape, or other measurement rod or measurement stick, is also doing Shrink-and-Grow as it is moved from one standing position to the other standing position. Both the people and the measurement tape Shrink-and-Grow in the same percentage such that the measurement tape cannot show such change in the height of the demonstration people. The nature is telling us that Shrink-and-Grow will happen to everything, not just people, in the Mystery Spot area. Such surprise leads me into the new discovery that dark matter can shrink spacetime in its vicinity as described in Section 2.3.1.

The following quotes from the collected information from Internet indicate that everything, not just people, in the Mystery Spot area can change height and size:

On a north-south oriented demonstration platform for Shrink-and-Grow Mystery in Oregon Vortex as shown on the movie clip on Web Page (OV-OR) in Section 1.1:

"The tour guide directs a group of visitors to two poles rising vertically from either end of a narrow wooden demonstration platform of Shrink-and-Grow Mystery. Though the tour guide claims the two poles are of the same height, the pole to the right (north side) appears several inches shorter. The tour guide uses a metal rod for measurements to show the group that both poles are exactly 7 feet in height. She holds the 7-foot rod up against the right (north side) pole. Same height. As the guide drags the 7-foot rod across the demonstration platform, the 7-foot rod appears to lengthen until it seems to be the same height as the left (south side) pole. The two poles are of identical height (as measured by the metal rod), although the south one appears much taller."

Such surprising measurement results provide us a preliminary hint that the sizes of the demonstration person and the measurement tape shrink (or expand) by the same percentage when the demonstration person and the measurement tape move from one standing position to the other standing position on the demonstration platform.

Although the measuring tape does not show such change in height of demonstration person, the human eye staying at a fixed location can see such change of height and the camera lens staying at a fixed location can also see and record such picture or movie of change of height of the demonstration person as shown on the movie clip in Web Page (MH-NC) from North Carolina and on similar sample movies in Section 1 from several other Mystery Spot areas.

Such Shrink-and-Grow Mystery does not require the viewer to be at any special distance or any special angle or any special location to see such significant change of relative height when the two persons switch their standing positions.

1.7. Mysterious Dynamics in Mystery Spot Areas:

Most visitors spend only about half hour in a Mystery Spot area and saw only a few snapshots of several different mysteries in the Mystery Spot Area.

But tour guides, owners of Mystery Spot areas and some researchers who work for

several months or several years in Mystery Spot areas see much more. They see even stranger, slow time variations of those different mysteries.

The long term slow time variations of the mysteries in Mystery Spot areas as reported on Internet are collected on my Web Page (5) at:

Web Page (5): http://www.shltrip.com/Dynamics_of_Gravity-Mysteries.html

I collected the information on dynamics of time variations of mysteries in several Mystery Spot areas from the reports available on Internet on the List in Appendix A at the end of Web Page (5).

The following reported strange dynamics of mysteries are quoted from References A to J in Appendix A of Web Page (5).

1.7.1. Shrink-and-Grow Phenomenon Varies with Time

"These anomalies are highly dynamic in that the percentage change of height in the Shrink-and-Grow phenomenon will vary over time. The change in size alters from one day to the next, during the same day, and also within three to four minutes depending on where in the vortex the effect is measured."

1.7.2. Standing at a Given Position in a Mystery Spot Area, the Height of a Person Changes Slowly with Time

People's heights are not supposed to change when they are standing still at a given location. But in a Mystery Spot area the story is very different, their heights do change slowly even when they are standing still at a given location in a Mystery Spot area.

"In the mid seventies the owner of the Oregon Vortex, Ernie Cooper, showed N. Nelson at the location of these same poles that a person standing stationary over a period of a few minutes would have his eye level view of the opposite pole automatically change."

"All tour guides after a time on the job in most of the attractions notice that the Shrink-and-Grow effect can't be counted on to be the same from one day to the next, or even from one hour to the next. Two young tour guides who worked with Nelson in 2000, Bryton and Clare, were goofing off between tours one day at the

poles and rediscovered what he (Nelson) and Vogt already knew. They excitedly showed him and the owner that if they stood very still on the pole platform staring at one another for three or four minutes, one could watch the other grow and shrink. The effect is slow enough so that the eye doesn't catch the motion, but the brain at intervals realizes that it is now looking at the other person from a different height."

1.7.3. Even the Landscape in Mystery Spot Areas Also Change over Time!

"As part of the research for his book, [N. Nelson tried to make maps of the area within the Oregon Vortex](#), but found his efforts to be scrupulously accurate thwarted by the dynamics of the field, i.e., changes in the landscape. He would carefully measure every building and other features like the demo platforms, make drawings of them based on compass readings, and then go home to turn the sketches into a carefully drawn map. The next day with the new map in hand he would check it for accuracy. No matter how careful his measurements and compass readings, he never got any of the maps to match the next day's reality check."

"I would stand in a certain spot, for instance lining up the side of a building with a fence post, and then the fence post with a tree trunk. If all three were in perfect visual alignment, I'd take a compass reading, and then mark the spot where my feet were. The next day when standing on the exact same spot and peering down the outer wall of the building the fence post might be out of alignment by a couple of degrees of arc, and worse, the tree trunk off this line that used to be straight would be off by an even greater angle. I never really got used to this sort of thing. Always, a violent shiver invariably ran up my spine. The scenery is not supposed to move!"

"Compasses when used inside the vortex to sight objects outside of it work properly, however the compass when used to sight objects inside the vortex are unreliable. A magnetic compass needle may point directly at an object, but in an hour or so will point to one side of that object by a few degrees. This effect is a larger aspect of the dynamics of the area as opposed to a direct malfunction of the compass."

"close attention shows that a compass inside these areas always points without variance to the same landscape feature outside the line of demarcation. It only diverges from its last reading when used to line up items inside the vortex."

"The only conclusion left is that ...the scenery really does move! That, of course, leaves a few rather thorny questions hanging: What does this say about the nature

of the scenery? If the scenery moves, therefore being influenced by what appears to be a very subtle force, what is it made out of? If trees and fence posts can be easily pushed around the yard inside the vortex, what about those same kind of items outside a vortex? What are we made out of?"

Please see Section 8 for the reason for such mysterious dynamics in Mystery Spot Areas described in Sections 1.7, 1.7.1, 1.7.2, and 1.7.3.

2. Trying to Understand Such Observed Behavior of Shrink-and-Grow Mystery

There are several possible factors contributing jointly to such dramatic change in relative height in Shrink-and-Grow Mystery: (1) Space shrinking by very high concentration of Type B dark matter in a fountain of dark matter in Mystery Spot area, (2) The distance of the demonstration platform to the center of Mystery Spot area, (3) the length of the demonstration platform, (4) the gravity vector in Mystery Spot is not normal, not pointing down vertically, and is tilted with the tilting angle that varies with location, (5) the demonstration platform of Shrink-and-Grow Mystery is not perfectly level, (6) the strength of gravity is not normal and varies with location and (7) the location of the fountain for Type B high density dark matter may be moving slowly as described in Section 5.8.1 in Web Page (2).

2.1. Assessment of Relative Contributions of These Factors

The Mystery Spot Area in Santa Cruz has at least three demonstration platforms of Shrink-and-Grow Mystery: One is near the entrance area and is relatively far away (may be about 100 feet) from the Mystery House and far away from the center of Mystery Spot area, and the remaining two are very close (less than 10 feet) to the Mystery House and are very close to the center of the Mystery Spot area. The relative contributions of these factors depend on whether the location of the demonstration is far away or near the center of the Mystery Spot area.

2.2. For Shrink-and-Grow Mystery Demonstration Platforms Far From Center

When we look at the movie and the associated screen-shot pictures of the Shrink-and-Grow Mystery in Mystery Hill in North Carolina in the following YouTube website:

Web Page (MH-NC): <https://www.youtube.com/watch?v=vSnTbgK8erI>

We get the impression that Factors 2 to 5 may contribute only a small fraction to

the Shrink-and-Grow Mystery because the potential tilt angles are all very small. I have also seen other similar movies and associated pictures from other Mystery Spots in other locations. They also show that factors 2 to 5 may contribute only a small fraction of the Shrink-and-Grow Mystery. (As a contrast, please see Appendix A for an example where factors 2 to 5 become significant contributors to the Shrink-and-Grow Mystery.)

The results of my body weight measurements in Mystery Spot in Santa Cruz, in Confusion Hill in northern California and in Oregon Vortex in southern Oregon imply that Factor 6 is also a minor contributor to the Shrink-and-Grow Mystery.

Therefore, we will focus on the most important contributor, Factor (1), in the following Sections 2.3 and move the detailed descriptions of minor contributors, Factors 2 to 6 to Appendix A.

2.3. Effect of Space Shrinking by High Concentration of Type B Dark Matter

Hypothesis 1 in Section 1.1. of my Web Page (2)

Web Page (2): <http://www.shltrip.com/Oregon-Vortex.html>

indicates that Type B dark matter can clump together into very high density because Type B dark matter can shed more energy through certain dissipative processes involving yet unknown dark interaction processes (such as dark radiation or dark force or dark light, or fifth fundamental force or dark photon, etc.) in the dark sector of universe as described in Sections 1 and 8 in my Web Page (3):

Web Page (3): http://www.shltrip.com/Two_Populations.html

The observed characteristics of Shrink-and-Grow Mystery in Sections 1.1 to 1.7 provide important hints and tips that the shrinking of space by very high concentration of Type B dark matter in the fountain of dark matter may be the main contributor to the Shrink-and-Grow Mystery when the demonstration platform is relatively far away from the center of the Mystery Spot area. Such hints and tips in Section 1.1 to 1.7 guided me into the formulation of the following Hypothesis 5 for the spacetime shrinking characteristics of dark matter.

2.3.1. Hypothesis 5: Dark matter can shrink spacetime in its vicinity

The concentration of very high density Type B dark matter in the core of the

fountain of dark matter in a Mystery Spot area shrinks slightly (a few percent) of the spacetime in the vicinity area near the fountain of Type B high density dark matter. The amount of spacetime shrinking increases with the total mass of the very high concentration of Type B dark matter, but decreases as the distance increases away from the location of very high concentration of Type B dark matter.

Hypothesis 1 to 4 and the definition of Fountain of Dark Matter are in Web Page (2).

Such shrinking of spacetime is not visible to us directly. But when there are our familiar ordinary matters in the vicinity area near the very high concentration of Type B dark matter, the sizes of all molecules of all ordinary matters shrink slightly because the space where these molecules are located shrinks slightly. In this way, the shrinking of spacetime becomes shrinking of the sizes of all objects made of ordinary matter and is visible when our familiar ordinary matters are in such area.

Since the two standing positions of the demonstration platform of Shrink-and-Grow Mystery have different distances to the location of the core of fountain of very high concentration of Type B dark matter in the Mystery Spot area, the percentage shrinking of the spacetime at these two standing positions are different. Therefore, the height of a demonstration person and the length of a measuring tape can change by several inches (i.e., a few percent) when the person and the measuring tape moves from one standing position to the other standing position.

Another way to explain the Shrink-and-Grow Mystery is that many of such demonstration platforms are on the line of demarcation where the first standing position is inside the Mystery Spot area whereas the second standing position is outside of the Mystery Spot area with the line of demarcation exactly in the middle between these two standing positions. The first standing position is inside the Mystery Spot area where there are lots of Type B dark matter particles that shrink the spacetime. The second standing position is outside the Mystery Spot area where there are NO Type B dark matter and therefore very little shrinking of spacetime. Therefore, the relative height of the two persons change several inches when they switch between these two standing positions in two very different "world". The line of demarcation is explained in Section 5.2.1. in Web Page (2).

2.3.2. Warping of Spacetime vs Shrinking of Spacetime, Similarity and Difference

Notice that Hypothesis 5 is somewhat similar to warping of spacetime predicted in

Einstein's Theory of Relativity. The Theory of Relativity predicts that massive object (or energy) warps (or curves or bends) spacetime in its vicinity. But the very high concentration of Type B dark matter in Hypothesis 5 does more than just warping the spacetime, it shrinks the spacetime in the vicinity of high concentration of Type B dark matter.

Furthermore, several investigators had also made some clock speed measurements or crystal oscillation frequency measurements both inside and outside of a Mystery Spot Area as described in Section 2.6. in Web Page (1). Such measurement results also indicate that clock speed inside the Mystery Spot area is slower slightly relative to that outside of the Mystery Spot Area. Therefore, combining such clock speed measurements with Hypothesis 5 indicates that the very high concentration of Type B dark matter in the fountain of dark matter in Mystery Spot area also change or distort the fabric of spacetime, similar to the warping of spacetime predicted by Einstein's Theory of Relativity.

The warping of spacetime as predicted by Einstein's Theory of Relativity has been proven by many astronomy observations and is well known as gravitational lensing. The gravitation lensing has been used extensively in astronomy observations where the huge mass of a star (such as the sun) or of the entire galaxy or of the entire galaxy cluster bends the path of light originating from a distance star or galaxy such that the image of the light source as viewed from earth appears as distorted or as multiple light sources or as an Einstein Ring. In such gravitational lensing, the total mass (of a star, a galaxy or a galaxy cluster) is huge and the distance is often inter-galactic distance of many light years.

As a contrast, in Shrink-and-Grow Mystery involving shrinking of spacetime, the density of Type B dark matter is very high in the core of the fountain of dark matter and is greater than that of ordinary matter on earth surface by at least three orders of magnitude, but the distance of observations is quite short in the order feet. Here in Shrink-and-Grow Mystery, we are observing the shrinking or expansion of the physical size of object made of ordinary matter, such as human being or measuring tape, within a short distance of a few feet. We are not seeing the distorted image or multiple images or Einstein Ring through bending of light path through light-year of inter-galactic distance in gravitational lensing.

I am not sure if the shrinking of spacetime by the fountain of very high density Type B dark matter is the same as the warping of spacetime by huge mass of star or galaxy or galaxy cluster in gravitational lensing. May be a fountain of ordinary matter can also shrink the spacetime in its vicinity, but the density of ordinary

matter on earth surface is usually lower than that of fountain of Type B dark matter in Mystery Spot area by at least three orders of magnitude. This means that the shrinking of spacetime by a fountain of ordinary matter on earth surface may be only in the order of 0.001 percent or less and is practically negligible such that nobody gets excited about it. But the density of Type B dark matter in the core of the fountain of dark matter in the Mystery Spot area is so high that the shrinking of the spacetime becomes a few percent, becomes observable and becomes the Shrink-and-Grow Mystery that get everybody very excited.

2.3.3. Hypothesis 6: Elastic Spacetime

2.3.3.A According to Einstein's Theory of Relativity, massive object (or energy) tells the fabric of spacetime how to warp. Then the warped spacetime tells the object how to move through the warped spacetime and tells the light how to bend its path through the warped spacetime.

2.3.3.B We also know that dark energy acts like anti-gravity to accelerate the expansion of space.

2.3.3.C Now, from Shrink-and-Grow Mystery, we learn that very high concentration of Type B dark matter in a fountain of dark matter tells the fabric of spacetime in its vicinity how much to shrink.

Important Finding 2.3.3.: Combing such understandings in 233A, 233B and 233C leads into:

Hypothesis 6: Spacetime is elastic. It can be warped, or shrunk (compressed) or expanded like a sponge.

But we still do not know:

Question Q2: Why massive object (or energy) can warp spacetime? How massive object (or energy) warps spacetime?

Question Q3: Why very high concentration of Type B dark matter in the fountain of dark matter can shrink spacetime? How dark matter shrinks spacetime?

We need to drill down and dig hard with more research in the future to understand the deeper level of physics in Q2 and Q3.

3. Mystery on Strong Correlation in Galactic Organizations and New Physics

We are lucky to be able to see the Shrink-and-Grow Mystery in the small Mystery Spot area of about 100 feet because of the ability of Type B dark matter to clump together into very high density in the core of the fountain of dark matter. With careful and probing study of Shrink-and-Grow Mystery I discover the space shrinking characteristics of dark matter at least on the small scale of Mystery Spot area of about 100 feet.

Based on such small scale demonstration of space shrinking by dark matter, we naturally wonder if the huge amount of dark matter in dark matter halo surrounding a galaxy also shrink the spacetime in the scale of galaxy?

The answer to this question seems to be yes from the data published by Paolo Salucci and his colleagues.

New statistical analysis of 36 mini-spiral galaxies by astrophysicist Paolo Salucci and his colleagues at Italy's International School for Advanced Studies (IISAS) revealed an unexpected strong correlation between the organization of dark matter and organization of ordinary matter in each mini-spiral galaxy. If, for example, ordinary matter was condensed at the center of a mini-spiral galaxy, so too was dark matter. If the bulk of ordinary matter was scattered across the outskirts of the galaxy, so too was dark matter.

They indicate that the Standard Model assumes that dark matter would not interact with ordinary matter except through gravity and the Standard Model of physics fails to predict such strong correlation. They believe that their observed strong correlation between organization of dark matter and organization of ordinary matter demands a new model of physics. They also believe that the analyzed 36 mini-spiral galaxies are just the tip of iceberg, and that the strong correlation also exists in many other galaxies. The relationship is easy to measure yet impossible to explain using the Standard Model of physics.

From my viewpoint, the required new model of physics to explain such strong correlation are my discovery of spacetime shrinking characteristics of dark matter (Hypothesis 5 in Section 2.3.1) and my finding of elastic spacetime (Hypothesis 6 in in Section 2.3.3.). If dark matter are condensed at the center of a mini-spiral galaxy, the condensed dark matter with higher density has stronger spacetime shrinking power and shrinks (compresses) the spacetime of the galaxy strongly such that the ordinary matter is also condensed at the center. On the other hand, if

the bulk of dark matter is scattered across the outskirts of the galaxy, the lower density of dark matter has weaker spacetime shrinking power and shrinks the spacetime of the galaxy weakly. Therefore, the ordinary matter is also scattered across the outskirts of the galaxy.

We know that most dark matter in galaxy dark matter halo are Type A dark matter and that only Type B dark matter can clump together into very high density in the core of the fountain of dark matter in a Mystery Spot area. From the spacetime shrinking capability of dark matter in both the small scale of a Mystery Spot area in Sections 2 and on galactic scale in Section 3, we learn that:

4. **Hypothesis 7:** Both Type A and Type B dark matter can shrink spacetime.

From Einstein's Theory of Relativity, we know that massive ordinary matter can warp spacetime. But so far I still do not know if massive ordinary matter can also shrink spacetime. I will watch for possible evidence to tell us if massive ordinary matter can also shrink spacetime.

We also learn that:

5. **Hypothesis 8:** Dark matter can interact with ordinary matter not only through gravity, but also through spacetime shrinking characteristics of dark matter.

6. Dark Energy comes from spacetime shrinking by Dark Matter on the Scale of Entire Universe

The estimated size of the core of the fountain of high density Type B dark matter in a Mystery Spot area on earth is small in the order of feet. This means the total mass of high density Type B dark matter in the fountain of dark matter is very small as compared to that of an entire galaxy (including the dark matter halo) or of an entire galaxy cluster (including all dark matter in it) or of the entire universe.

Since the total mass of dark matter of an entire galaxy or of galaxy cluster or of entire universe is huge as compared to that of the fountain of high density Type B dark matter in a Mystery Spot area, then according to Hypothesis 5, the spacetime shrinking power of all dark matter in a galaxy or a galaxy cluster or the entire universe is much stronger than that of the fountain of high density dark matter in a Mystery Spot area. This means that in the early stage of the universe, the very strong spacetime shrinking power of the huge mass of all dark matter in the entire

universe in high concentration state had strongly shrunk or compressed the elastic spacetime of the early universe.

As the universe expands, the density of dark matter decreases. The distance at any given location in the intergalactic space to all the dark matters in the universe is also increasing rapidly. Then according to Hypothesis 5, the spacetime shrinking power at any given location in the intergalactic space due to all dark matters is decreasing rapidly as the universe expands. In other words, as the universe expands, the dark matter in the universe is gradually losing its powerful grip on shrinking or compressing the spacetime at any location in the intergalactic space. The spacetime in the in the intergalactic space is, therefore, being gradually released from its highly shrunk or highly compressed state and is gradually "springing" back to its de-compressed state. Such de-compressing process of the spacetime of the universe manifests as the unknown dark energy that is driving the accelerated expansion of the universe.

In the evolution of the expanding universe, this is known as the transition of the expanding universe from the previous Matter-Dominated Era into the current Dark Energy Dominated Era. The astronomy observation data indicates that such transition occurred about 5 billion years ago.

The bottom line is that dark energy comes from elastic spacetime that is highly shrunk or highly compressed by the huge amount of dark matter of the entire universe in extreme high density state during the early stage of universe.

In this sense, dark energy is NOT an independent mystery, but is a direct consequence of elastic spacetime being highly shrunk by all dark matters in the entire universe during the early stage of universe.

7. Measured Time Varying Hubble "Constant" and New Physics

The [precision measurements](#) of the rate of expansion of the universe, known as Hubble "Constant" by several teams of scientists indicate that the rate of expansion of the universe is not a constant but is increasing with time. For example, the measured rate of expansion in 2015 is 41.6 miles (66.9 km) per second per megaparsec whereas the measured rate of expansion in 2016 is around 44.7 miles (71.9 kilometers) per second per megaparsec. The teams of scientists in such measurements indicate that such data may possibly point towards new physics beyond our current knowledge of the Universe.

From my viewpoint, the required new physics for time varying Hubble Constant are my discovery of spacetime shrinking characteristics of dark matter (Hypothesis 5 in Section 2.3.1) and my finding of elastic spacetime (Hypothesis 6 in Section 2.3.3.) in the model described in Section 6 with the bottom line saying that dark energy comes from elastic spacetime that is highly shrunk by the huge amount of dark matter of the universe in extreme high density state during the early stage of universe.

As the universe expands, the density of dark matter is decreasing such that the dark matter in the universe is gradually losing its powerful grip on shrinking or compressing the spacetime at any location in the intergalactic space. The spacetime in the intergalactic space is, therefore, being gradually released from its highly shrunk or highly compressed state and is gradually "springing" back to its de-compressed state. Such de-compressing process of the spacetime of the universe manifests as the unknown dark energy that is driving the accelerated expansion of the universe. Therefore, the precision measured rate of expansion of universe should be increasing from 2015 to 2016 as predicted by my theory or my new physics.

8. Trying to Understand the Observed Slow Time Variations of Shrink-and-Grow Mystery

One of the key reasons for the slow time variations of Shrink-and-Grow Mystery described in Sections 1.7 is due to the slow movements of the fountain of high density Type B dark matter as described in Section 5.8.1 in Web Page (2) and in Section 3 in Web Page (5).

Web Page (5): http://www.shltrip.com/Dynamics_of_Gravity-Mysteries.html

As the fountain of high density Type B dark matter moves slowly in a limited area in the Mystery Spot area, the sizes of everything in the vicinity of this moving fountain of high density dark matter change slowly. Therefore, even the landscape can also change slightly depending on the location of this moving fountain of high density dark matter.

9. More on Shrinking of Spacetime by Type B High Density Dark Matter

9.1. Effects of High Density Dark Matter on Human Being and Other Animals

It is also noted that such shrinking of sizes of all molecules by a few percent in the

human body by the fountain of high density dark matter may be another reason that many visitors feel seasick, or motion sickness or nausea or dizzy or ringing in their ears when these visitors are in a Mystery Spot area as described in my web page at:

http://www.shltrip.com/Effect_of_Mystery_Spot_on_Human_Being.html

9.2. Strange Failures of Some Electronic Devices in Mystery Spot Area

Such shrinking of spacetime by the fountain of high density dark matter may be also one of the reasons causing strange failures or malfunction of some digital electronic devices when such devices are in the Mystery Spot area as described in Section 8.3 of my Web Page (3). Some of such digital electronic devices are using highly miniaturized Integrated Circuit (IC). The shrinking of spacetime by the fountain of high density dark matter in a Mystery Spot area may squeeze too much on these highly miniaturized IC leading into their failures or malfunction.

Appendix A - Other Contributors to Shrink-and-Grow Mystery For Cases When Shrink-and-Grow Mystery Demonstration Platforms are Closer to Mystery House

Nick Nelson has many years of experience working as a tour guide in Mystery Spot areas and has also been doing research on Mystery Spots for many years. Thanks to Dan Shaw, in-depth description of Nick Nelson's valuable experience on Shrink-and-Grow Mystery can be seen in the following Web Page (DS) of Dan Shaw:

Web Page (DS): <http://www.vortexmaps.com/pdfs/golden-vortex-chap-1.pdf>

According to Page 5 on Web Page (DS), the Shrink-and-Grow Mystery on the ten feet long demonstration platform near the Mystery House and near the center of the Mystery Spot area is much stronger and startling because the change of height of the demonstration person is as much as eight to ten inches. This is much greater than 2 to 3 inches change of height observed on the demonstration platforms of examples in Section 1 near the entrance but far away from the center of the Mystery Spot area.

Note: In Oregon Vortex and some other Mystery Spot Areas, there are more than one demonstration platforms for Shrink-and-Grow Mystery demonstration. Some

are close to the Mystery House (i.e., closer to center of Mystery Spot area) and some are far away from the Mystery House.

For convenient of discussion, I shall refer to this 10 feet long demonstration platform near the Mystery House in Oregon Vortex as Demonstration Platform C, where C denotes that it is close to the Center of the Mystery Spot area. I shall refer to those demonstration platforms far away from the Mystery House as Demonstration Platform F where F denotes that it is far away from center of the Mystery Spot area.

The several factors contributing to such greater change of height are discussed in the following:

A.1. Longer Demonstration Platform

This Demonstration Platform C near the Mystery House in Oregon Vortex is 10 feet long whereas the demonstration platforms in other samples in Section 1 are mostly only 2 to 3 feet. According to Hypothesis 5, the percentage shrinking of spacetime depends on the distance to the core of the fountain of high density Type B dark matter. The greater distance of 10 feet yields greater difference in percentage shrinking of spacetime between the two standing positions on Demonstration Platform C.

A.2. Closer to Mystery House and to the Center of Mystery Spot Area

The Demonstration Platform C in Oregon Vortex is close to the Mystery House which is close to the center of the Mystery Spot Area. The center of the Mystery Spot area is the location of the core of the fountain of high density dark matter.

According to Hypothesis 5, the Shrink-and-Grow Mystery becomes stronger when the demonstration platform is closer to the center of Mystery Spot Area and when the demonstration platform is pointing toward the center of the Mystery Spot area so that one standing position is very close to the center of the Mystery Spot area whereas the second standing position is 10 feet farther away from the center. Such location and configuration contribute to stronger Shrink-and-Grow Mystery with greater change of height when the two persons switch their standing positions.

A.3. Slightly Tilted Demonstration Platform

Although the tour guide or some visitors use a carpenter's level with liquid bubble

to show watching tourists that the liquid bubble is in the middle position in the carpenter's level implying that the Demonstration Platform C is "level", but we know that the Mystery Spot area has significant abnormal local gravity. The horizontal component of the abnormal local gravity in a Mystery Spot area is very strong at the locations near the Mystery House which is near the center of the Mystery Spot area.

The strong horizontal component of the significant abnormal local gravity can act on the liquid bubble such that the carpenter's level cannot tell if the demonstration platform is really level or not in such special location. In other words, the use of carpenter's level in such special location is misleading and the Demonstration Platform C may be tilted in spite of the false indication by the bubble of carpenter's level. Therefore, the tilted Demonstration Platform C may be a significant contributor to the Shrink-and-Grow Mystery at such special location.

A.4. Direction of Gravity Vector varies with location in a Mystery Spot Area

The horizontal component of the abnormal local gravity in a Mystery Spot area is very strong at locations near the Mystery House which is near the center of the Mystery Spot area.

As explained in Section 2.8 of my companion Web Page (1) at:

Web Page (1): http://www.shltrip.com/Magnetic_Hill.html

the leaning angle of free standing people in Mystery Spot varies with location. The body leaning angle may be as much as 17 degrees at the first standing position which is very close to the center of the Mystery Spot area. But the body leaning angle may be smaller on the second standing position which is 10 feet further away from the center of the Mystery Spot area. In other words, the "upright" postures of the two persons in such demonstration of Shrink-and-Grow Mystery are not perfectly upright and not perfectly parallel to each other. They have a difference in several degrees in their body leaning angles. Such difference in their body leaning angles may also contribute significantly to the Shrink-and-Grow Mystery at the location of the Demonstration Platform C very close to the Mystery House.

A.5. Body Weight varies with location in A Mystery Spot Area

A key factor to understand the contribution of this effect to the Shrink-and-Grow mystery is:

Known Fact 1: Astronauts grow taller by 2 to 3 inches when they are in space under weightless condition. This known fact is described in several sample references in Appendix B. This known fact indicates that human height is not constant, but depends strongly on the strength of local gravity pulling down on the human body (i.e., body weight).

According to Hypothesis 2 on Web Page (2), there is a very narrow stream of Type B high density dark matter as the core of fountain of dark matter at the special location of a Mystery Spot. This core of narrow stream of Type B high density dark matter is the source of the significant abnormal local gravity at such special location.

The two standing positions on the demonstration platform have different distances to the core of fountain of dark matter as the source of significant abnormal local gravity. Therefore, the strengths of abnormal gravity at these two standing positions can be different because of different distances to the powerful source of abnormal local gravity.

I went to Mystery Spot in Santa Cruz, California twice to do the experiment of measuring my body weight on the two standing positions of Demonstration Platform F of Shrink-and-Grow Mystery near the entrance of the Mystery Spot in Santa Cruz. I also did such body weight measurements in Oregon Vortex in southern Oregon and in Confusion Hill in northern California. One of the purposes for such body weight measurements is for me to estimate the contribution of gravity variation (i.e., Factor 6) to the Shrink-and-Grow Mystery. (The second purpose of this experiment is to prove the existence of significant abnormal gravity in a Mystery Spot area.)

However, my body weight measurements indicate that the body weight variation between the two standing positions is only a minor contributor to the Shrink-and-Grow Mystery because: (a) The astronauts grow taller by 2 to 3 inches when they go from normal gravity on the ground to the weightless condition in space (i.e., 100% reduction in gravity pull on their bodies.), but (b) My body weight measurements indicate that the difference in body weight on the two standing positions of Demonstration Platform F of Shrink-and-Grow Mystery is only about 2.5% and the body weight difference is negligible when near the Mystery House. (But the horizontal component of gravity is very strong when near the Mystery House). This is much less than the 100% reduction of gravity as experienced by the astronauts in space. Therefore, the contribution of body weight variation in the two

standing positions to the Shrink-and-Grow Mystery should be very small.

Appendix B - Some Sample References on Astronauts Grow Taller when they are in Space under Weightless Condition

Reference B1: Effects of Space on the Human Body at:

http://www.lpi.usra.edu/education/explore/space_health/background/

Reference B2: SPACE TRAVEL AND THE EFFECTS OF WEIGHTLESSNESS ON THE HUMAN BODY

http://media.yurisnight.net/outreach/janetsplanetcurriculum/educator-microgravity_science_stu.pdf

Reference B3: Living in Space

http://www.esa.int/Our_Activities/Human_Spaceflight/Astronauts/Living_in_space

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