

*Your lips move, but I can't hear what you are saying,*

*- Pink Floyd ( "The Wall" ).*

## **5. A MESSAGE FROM ABOVE ?**

PLuto was discovered on photographic plates. The three points in the sky where PLuto was first observed are still there, among stars. Are they marked somehow ? No they are not. Three empty points in the sky, positions of PLuto for days 21st, 23rd and 29th of January 1930.

If they are empty points in the sky, how can we know that the points are there ? We know that, simply because there are pictures taken on the discovery time in 1930. These pictures prove the location of PLuto during the discovery, on the background of stars. The stars are still in the sky, they do not move very fast fortunately. So the points in the sky where PLuto was discovered in 1930 are there. It is a well known fact in astronomical community, that PLuto was discovered very close to the star DELTA GEMINORUM in the constellation Gemini. The eclipse of eclipses by pure coincidence happened also close to the star DELTA GEMINORUM, nothing special you would say. The picture of the eclipse on the wall above my computer, that I look at the very moment of the eclipse, clearly shows the star DELTA GEMINORUM more or less half of the radii of the size of the disk of the Moon, from the edge of the black disk of the Moon. The star is visible easily. The fact that the star is visible is nothing significant. During the eclipse, stars are visible like during the night. What shocked me personally, was the fact that the star that was so close to the Sun's corona and was not covered by corona. The star was easily visible between coronal streams.

What is so special about the star ? The star like any other in the sky is around 3.5 magnitude, not very bright but visible in the sky with naked eye. Just pure coincidence, close to the Sun during the eclipse was the star, and is visible on the picture, just by accident not covered by corona. Well, on the other hand we know that PLuto was discovered close to the same star. Are these things related ? No, no way, the eclipse took place 61 years after the discovery of PLuto, and both things have nothing in common, except for the fact that both happened in the same sky maybe, and maybe that Percival Lowell lived 61 years, and the star is more or less 61 light years from Earth. One time I was playing with my computer-planetarium program, and I discovered very interesting thing. The star DELTA GEMINORUM is special. It is the brightest star from all the stars, that the Sun can eclipse. As we know the Sun moves in the sky, and makes one rotation in a year, moving in the sky the Sun eclipses some stars ( of course it is not visible, the Sun is too bright ), always the same stars year by year. The sky is like Swiss watch, well done. The brightest star that can be eclipsed by the Sun is DELTA GEMINORUM ( Wasat is its name inherited from Arabic I believe, and meaning of the word is amazingly "the middle" ). This way I discovered the first coincidence, from the long list of them. Both the eclipse, and the discovery of PLuto happened very close to Wasat, and this happens to be the brightest star in the strip of the sky eclipsable by the Sun, probably just a coincidence. This star was a starting point of my investigation, it was a kind of a "guide". If there was no star there close to corona and visible on the picture, this book would not exist. Maybe it is not a coincidence, maybe there is more. Unfortunately I did not have tools to perform a more detail kind of investigation like professional astronomers have. At that time, eight years ago there was no internet, and the internet was needed. From the internet finally I got pictures of the discovery of PLuto, very beautiful pictures of the eclipse, and also on the internet I found a very detail star atlas in a digital form that allowed me to search for more. This is amazing what the internet can be used for, right ? Without any problems I was able to match stars from the original picture of the discovery of PLuto, with stars in the atlas. I was also able to calculate precisely the position of the Sun and the Moon for the time of the eclipse, taking into account precession.

The three empty points in the sky where PLuto was discovered, matched the eclipsed Sun in a very spectacular way. This is almost like too good to be true. According to my calculations, all three points were eclipsed during the eclipse of eclipses. This happened in the following order. When the eclipse started, the first point ( where PLuto was located on 29th of January 1930 ) was already eclipsed, and stayed eclipsed by both the Sun and the Moon for all the time of the eclipse. The point where PLuto was located on the 23rd of January 1930, was eclipsed by the Moon more or less at the time of the eclipse on Hawaii Island. It was visible from the biggest observatory on the planet. The last point where PLuto was located on 21st of January 1930, got eclipsed by the Moon more or less during the maximum phase of the eclipse in Mexico, where the eclipse was the longest in the so called greatest eclipse point. I myself was not far away at that time, on Baja California very close to the center line 100 km south from La Paz. When you look at the map of the eclipse, it looks like other than Hawaii no other islands were in the zone of the eclipse. Before the eclipse started in Mexico, Hawaiian archipelago was the only place where the eclipse took place, except for the long empty area of the Pacific Ocean. My calculations, can be wrong by two arcminutes ( +/- 1 arcmin. ) maximum ( I believe that they are much better, but I added a margin of safety ). So the match of the edge of the Sun, the edge of the Moon and the point in the sky where PLuto was located on 23rd of January 1930, took place with the accuracy of two arcminutes, above the heads of astronomers at the top of Mauna Kea. It is important to say just astronomers, because for people on Hawaii Island on that day, it was a big disappointment. People from all over the world, that paid thousands of dollars to get to the island on the eclipse day, were greeted with clouds all over the sky. Typically the weather on Hawaii is perfect ( 80% chance of clear sky was predicted ); on the eclipse day however, only astronomers high on the top were not in clouds, but none of them noticed the coincidence. I find it hard to believe, it was probably ignored, say the official line was that nothing happened. We are of course interested in the unofficial line of facts. What are the odds ? The eclipse can happen anywhere in the sky where the Sun is positioned, the “sine qua non” condition is that the Moon should be also there. The total eclipse happens on average 2 times for every three years, say it is as often as one time a year, just to simplify the calculations. The sky is 360 degrees long, and in every degree we have sixty minutes. Our calculations are as good as two arcminutes. Two divided by sixty divided by 360 gives us around one in ten thousands. The match was even more precise for the greatest eclipse point located in Mexico, where the eclipse was the longest ( 6.53 sec. ).

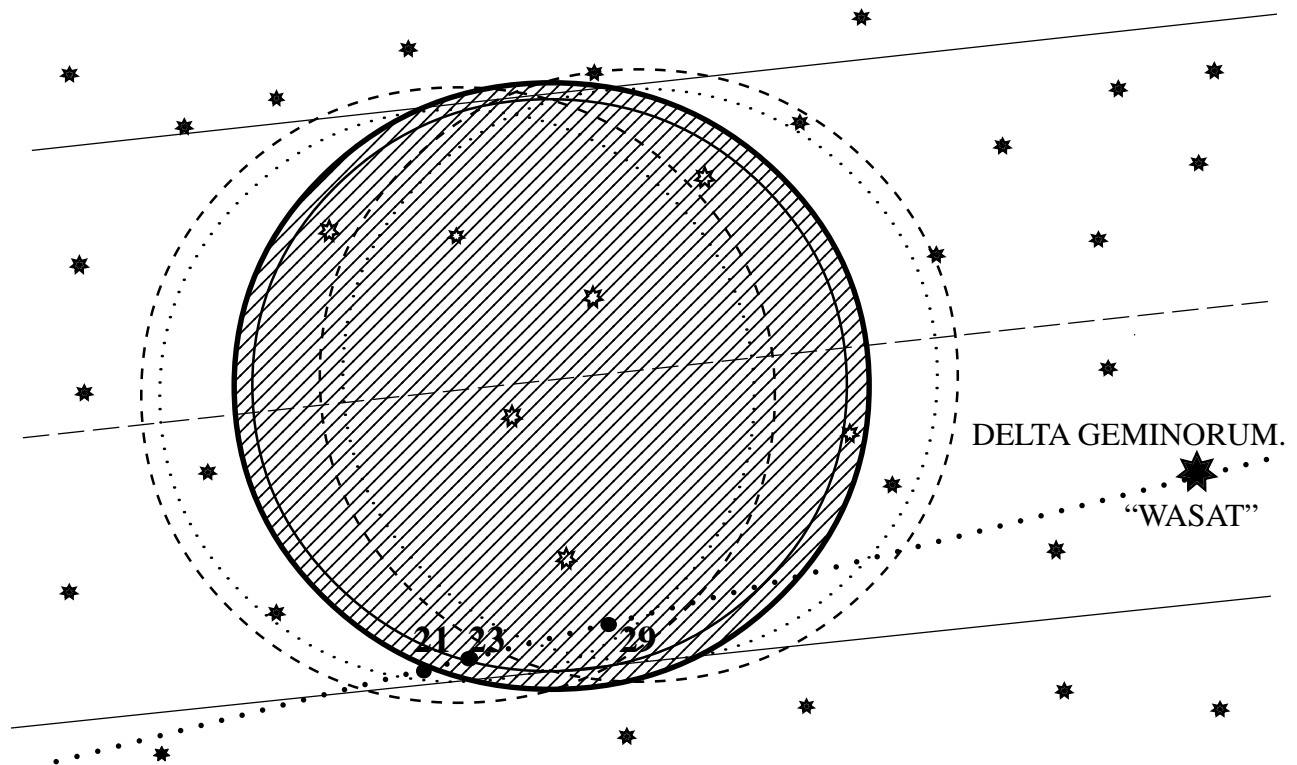
THE ODDS OF ECLIPSING A GIVEN POINT IN THE SKY ( OBVIOUSLY FROM THE ZONE ECLIPSABLE BY THE SUN ), BY BOTH THE EDGE OF THE SUN AND THE EDGE OF THE MOON, DURING THE TOTAL ECLIPSE OF THE SUN, OBSERVABLE FROM THE GREATEST ECLIPSE POINT, ARE ON AVERAGE EQUAL ONE TIME IN TEN THOUSAND YEARS.

This is the focal point of all coincidences described so far for the eclipse. This coincidence is the most important one. It is the link between PLuto the Moon and the Sun. Finally we have our eclipse as rare as one thousand ( Mauna Kea ) multiplied by one thousand ( big eclipse ) multiplied by ten thousand ( points in the sky ), and the total is:

**ONE IN TEN BILLION, FOR THREE DESCRIBED COINCIDENCES COMBINED.  
THAT IS ONE TIME IN 10 000 000 000 YEARS.**

This is more or less the age of the Universe, isn't it ? For me the probability is too low, as for the random thing. The trinity of coincidences is too precise. I say that this was not just a random thing. I (WN) SAY, THAT THIS WAS A MESSAGE ADDRESSED TO US DOWN HERE.

## THE TOTAL ECLIPSE OF THE SUN 11th OF JULY 1991 IN THE SKY



*This drawing shows a schematic representation of the situation in the sky, for the total eclipse of the Sun on 11th of July 1991. Bigger circles represent the Moon, while smaller circles represent the Sun ( since it was a total eclipse, the size of the Moon is of course bigger than the Sun). Two parallel lines show a portion of the area in the sky where the Sun can be placed, or in other words the path of the Sun in the sky. As you can see the star DELTA GEMINORUM is in this area. Wasat is also the brightest star of all in this strip of the sky. The line in the middle shows ecliptic.*

*The circles drawn with the dotted lines on the right side, represent positions of the Sun and the Moon at the beginning of the eclipse, at 17h 30m UT when the eclipse was visible from the Big Island of Hawaii. The observatories at the top of Mauna Kea on Hawaii Island, located very close to the center line of the eclipse were able to observe this situation, shortly after the local sunrise.*

*The circles drawn with continues line, show the positions of the Sun and the Moon at the greatest eclipse point at 19h 06m UT. At this time the eclipse was visible from Mexico around local noon. At this point, and only at this point ( greatest eclipse point ) and nowhere else, the eclipse was the longest with its 6 minutes and 53 seconds of duration time. Also at this moment because of very low GAMMA =0.004, the Sun, the Moon, the Earth were positioned almost perfectly in one line.*

*The circles drawn with the dotted lines on the left side, represent positions of the Sun and the Moon at the end of the eclipse, at 20h 50m UT. At this time the eclipse was visible from the jungle in Brazil around local sunset.*

*As you can see during its 3.5 hours of time when the total eclipse was "hosted" on Earth, the Sun moved a bit more than a quarter of its diameter. The Sun's speed is more or less two its diameters for every day, or in other words one degree for 24 hours, or in other words 360 degrees for a year. The three points marked '21', '23', '29', represent positions of PLuto in the sky in January 1930, at the discovery time ( the dotted line shows portion of PLuto's path in the sky in 1930 ). ( When I look at this, I still cannot believe it . Maybe I am dreaming then, because in the real world things like this simply do not happen ! )*

My way of thinking is clear and simple, and there is no magic here. My personal level of acceptable “improbability” is simply higher. Everybody has his own level of acceptable “improbability”. Do you remember the movie “Casino” ? Sam Rothstein ( Robert De Niro ) fired there his employee, by exactly following my way of thinking, or maybe I followed his way. He said there *“... the probability of the win for three machines in a row is in billions, this cannot happen, it would not happen ... You did not see that you were being set up on the second win ? ...”*.

I am talking about 2 minutes long piece that starts with ‘7777’ score on the gambling machine. It is very expressive, please see it. It pictures “more or less” what I try to say in my book (!).

In our case, the “set up” is done in order to pass a message. Let us try to decipher the message. What is the letter about ? Should we pay a bill for sunlight ? Here a curious reader has a right to ask a few questions I think. I say that this is a message. How can I do that, if the center line of the eclipse did not pass exactly on top of Mauna Kea. Yes, that is right, let me check on the big map of the Big Island of Hawaii on the wall. The center line passed for sure less than 5 kilometers south from the top, where the biggest observatory ( The Keck telescope ) in the world is located. Probably it was only 4 kilometers south from the top. Let me explain this. Imagine that the center line passed precisely through “the middle of the hamburger” of the chief astronomer on the top, eating breakfast in the morning of July 11th. I do not think that this precise measurements are possible. In my opinion maximum accuracy of measurements is around 30 meters ( more or less one arcsecond on the ground ). Still, you can say “Why not 30 meters ?”. Please remember, the message is in the sky, not on the ground. On the ground we have the addressee. If you send a letter, do you put the address like this and this street, this and this building, room second from the left, table close to the window, the guy on the red chair ? I do not think so, or at least I do not do that. Please take a look on the map of the eclipse, the Hawaii Island was the first inhabited area on the path of the eclipse. This was a very, very precise hit. Today all observatories on top of Mauna Kea ( the biggest concentration of astronomical telescopes in the world ) are spread in the area more or less two by two kilometers. Say it was to all guys, not this dome or that dome, democratic way. However, the eclipse was not the biggest of all times ? There were bigger eclipses ( based on data from NASA around 6 eclipses for the 7000 years ). Probably you would say “Why not the biggest of all ?”. First of all there is no absolute “biggest of all”. The data for the 7000 years are for the longest period of time ever calculated. I do not think that somebody ever tried to calculate eclipses for more than 10 thousand years. There will be always a better eclipse, if we take a longer period of calculated data. Again this is not what “the thing” is about. I compared Mauna Kea to an address. By the same token the eclipse is “the envelope”. When you receive a letter, do you concentrate on the size of the envelope, or what is inside is more important for you ? For me typically the contents are more important, however on the other hand I used to collect stamps when I was a boy. Well, there is “a stamp” also, DELTA GEMINORUM. Probability of coincidental positioning of the brightest star eclipsable by the Sun this close during the eclipse is equal around 1 time in 300 years. By the way, the discoverer used the star as a reference point in his original discovery document. PLuto was extremely close to the star for the described by Clyde T. position for 12th of March 1930.

Please note, that from all described coincidences the “message coincidence” has the lowest probability, one time for 10 000 years. “The envelope coincidence” ( big eclipse ) is one time in 1000 years, as well as the “address coincidence” ( Mauna Kea ), again one time for thousand years. Still the total is ... 1 in 10 000 000 000. Maybe you would say that it would look better if it was 1 with say 20 zeroes. Please remember, this is a letter sent to astronomers on the very peak of Mauna Kea. Please, give them some credit for their intelligence and knowledge. If the probability was that low, I would call it a bomb in a package, and not a letter sent to scientists.

Yes the letter, and if I was supposed to send it, it would go something like this;  
Address: Mr. John Observer, the Chief Astronomer on top of Mauna Kea, Hawaii.  
Attention : Please deliver in the morning ( shortly after sunrise ) 11th of July 1991.

“ Hi John,

*How was your surfing yesterday ? Yes, there is definitely no better place in the world for surfing than the ocean around the Big Island. It is true that skiing is also good in the winter, but if you still do some star gazing at night, please look at PLuto. I think there is something interesting in relationship between PLuto the Sun and the Moon.*

*Greetings, WN.*

*P.S. I think number three should help you to understand it better.* “

I hope that guys on Mauna Kea will forgive me for making this kind of jokes. These fellows have a sense of humor, I know that for sure. I myself watched the eclipse from Mexico, Baja California; I was very lucky I must confess. I arranged the plane at the last possible moment from Toronto to LA. In LA took the connecting plane to La Paz a day before the eclipse, 10th of July 1991. Aboard the plane, I met an organized group from Switzerland, that I was lucky to join. There were buses waiting for the group in La Paz Mexico. Late in the evening on July 10th 1991, I was in the air-conditioned bus heading towards the very center line of the eclipse. Our destination was the place called Buena Vista 100 km south from La Paz, a very small village close to the sea-shore ( Sea of Cortez ). This is the place were on the high cliff, near an interesting monument ( monument of freedom ? ), finally at 11 h 48 m local time, very high in zenith I watched the eclipse of eclipses. Later I discovered that my observation point was almost exactly on the Tropic of Cancer. ( I only remember one similar event that was given to me to witness. It was the sunrise that I watched from the top of Mt. Sinai in Egypt. It was in July of 1985, absolutely windless air, absolute silence, on the left hand I had Asia and on the right hand there was Africa. )

Other observers were not that lucky. The organized group from Canada, went to Cabo San Lucas on the very edge of Baja California. Against all odds the weather there, on the day of the eclipse was not perfect. Some people observed only clouds during the eclipse. I was lucky.

On my way back to Toronto, I was forced to spend a few days in La Paz, since all connecting planes were completely booked. Now the story about scientists from Mauna Kea. After a few days in La Paz, while waiting for the luggage in LA at the international airport, I met an optician working on Mauna Kea, at the biggest telescope in the world ( coincidence ? ). Later he sent me a video tape from the eclipse. He told me also an interesting story. Together with astronomers he came to Mexico in order to measure the intensity of light of the sky during the eclipse. They could not do that, these guys brought with them equipment, prepared for measurements for completely ( much dimmer I think ) different intensity of light. He joked about it. That is why I say that fellows from Mauna Kea have a sense of humor. Here I must add a few words of explanation. A month before the eclipse, an explosion of the Mt. Pinatubo volcano took place on the other side of the globe in Philippines. The ashes from the volcano were injected into the lower layer of the atmosphere, and a few weeks later they were present all over the world at low latitudes, also above the Hawaii Island and in Mexico. This is probably the reason why the intensity of light of the sky during the eclipse was higher than expected.

Let us look again on the message from yet another perspective. How was it possible, if it was almost miraculous. Let us concentrate again on the trinity. First the great eclipse ( my “envelope” , one time in thousand years ), for sure eclipses could not be “fixed” or changed. There are physical laws like for example gravity, that govern in the sky. This is true, for sure it was obvious

one hundred thousand years ago, or maybe even more, that on July 11th 1991 there would be an eclipse. So it cannot be changed without breaking the laws of nature. There is no way, I hope that everybody agrees on that.

However, if PLuto was discovered in 1905, or 1911, or 1916 there would be no difference ( but no “message “ ! ). The laws of physics would not be broken, even if PLuto was not discovered as of today. In this case it is completely opposite situation, perfect freedom of choice of the moment of discovery without breaking laws of physics (!).

What about the location then ? Mauna Kea, or as I call it “the addressee”. One would say that the mountain was there long, long time ago, and probably like in the case of the eclipse it could not be “fixed” , or changed. Not true ! Mauna Kea is only 1 million years old. It could have been “placed” there without breaking laws of physics. Please take a look. On the gigantic empty area of the Pacific Ocean ( in the middle of nowhere ) there is gigantic volcano, and also the biggest mountain on Earth ( more than 10 km from the bottom to the top ). Doesn’t it look a bit “artificial” ? ( Hawaiian archipelago is actually only one hot spot ref. “Scientific American” Sep. 1992 issue ). By the way Mauna Kea was active the last time only 2000 years ago! However it looks like the “construction” is finished ( just at the right time !), now the energy from the hot spot is being released by Mauna Loa and Kilauea volcanoes that are located a bit more on the southwest and southeast side of the island. I assume that if astronomers were not sure that the volcano was dormant, they would not construct observatories. The island could have been somewhere else on the Pacific Ocean, and nobody would say anything. It just happened, that the hot spot is here, and not there. There are other volcanic islands, it is true, but not this far from continents, and not this big. Please take a good look in the geographic atlas. Like the Moon, or the Solar System, in the “middle of nothing” there is “big something”, and there is no “similar something” around. Yes, that is what I want to say, from strictly probabilistic point of view, it looks like the only reason, why there is this huge island in the middle of the Pacific Ocean is ...

## THE TOTAL ECLIPSE OF THE SUN ON JULY 11th 1991.

I am afraid that you are smiling, so I decided to go back to my coincidences and visualize it with a very expressive ( in my opinion ) example. Please imagine for a moment that this was not a big eclipse. Not one in thousand years, but just the total eclipse of the Sun, an average one, say like the one in Europe on 11.08.1999, nothing special. Such an eclipse happens somewhere on Earth two times for every three years on average. Please also imagine that the eclipse did not eclipse any special points in the sky, nothing like this took place. The only thing that happened was this perfect pass of the center line on top of Mauna Kea. We want to have this match as perfect as one time in ten billion years ( the same rare event as for my three coincidences combined). How perfect would be the match of the center line with the top of the mountain ? It is very easy to calculate. I said that the hit with accuracy of 10 km happens every 1000 years. In such a case, the match that happens every ten thousand thousand thousand years must be ten thousand thousand times better, and it is as precise as ... ONE MILLIMETER , and here it is ‘..’. I hope these two points are more or less one millimeter apart. As I said before, there is no need for such a perfect hit on the target, since we are not able to measure it this precisely, in the first place. And of course no information would be passed to us in such a perfect case, ... except for the information, that probably Mauna Kea is special. And this is what I wanted to visualize. Because of the extreme rarity of the event, Mauna Kea is special. Mauna Kea was “placed” for the eclipse, since the eclipse could not be “placed” for Mauna Kea without breaking laws of physics.

By the way, Hawaiian archipelago is also special from the point of view of its extreme beauty of its flora and fauna, and it is well known as a kind of little paradise on Earth. Is this a coincidence ? Maybe not, nobody knows where from the hot spot that the Hawaiian Islands are located on originates from. One of the theories says, that the hot spot was created at the point opposite to the place where the Earth was hit by an asteroid millions of years ago. The seismic waves created by the impact, concentrate in the focal point opposite to the place of impact on the other side of the globe, and accumulated energy is sufficient for creation of a hot spot. There are examples of similar kinds of “hot spots” on other bodies in our Solar System. The most famous ones are located on our Moon, and planet Mercury. Our planet must have had many violent encounters with asteroids and comets in the past. The most famous one is said to be responsible for the extinction of dinosaurs more or less sixty five million years ago. This was a big hit. The one potentially responsible for the creation of Hawaiian hot spot probably was not this big. Assuming the creation of Hawaii by the asteroid from space this would be the third one in a row. One for creation of our Moon ( a huge one) one for creation of PLuto and Charon ( about that later ), and finally the third one for creation of Hawaii.

Summarizing, a miracle did not take place, but the trinity of coincidences that I described, belongs to the “grey area” somewhere between common events and things that never happen. On the other hand maybe I simply do not want to use the word “miracle”. I did not take into account in my estimation of the probability a simple fact, that two “one time only” events that took place in this Universe ( the eclipse of eclipses and discovery of Pluto ) happen to be ... only 61 years apart ! What is the probability of random placements of two independent events within 10 billion years time-span of the existence of this Universe, 61 years one from the other, in the right order ( first discovery then eclipse and not opposite ) ? I guess it is less than

...ONE IN ONE HUNDRED MILLION !

And what about the fact that PLuto was discovered in the area eclipsable by the Sun ? The probability here is equal ONE IN ONE HUNDRED. This is an important factor. This book would have never been created provided that Pluto was discovered somewhere else in the sky.

What about the simple fact that apparent sizes of the Moon and the Sun happen to match each other, again ONE IN ONE HUNDRED ( I analyze this later in the book ). This is obviously a well known fact, necessary for eclipses to take place. However it is a coincidence, please think about it.

So again, back to our question; was it a miracle or not ? The problem is that I do not know the definition of a miracle, and I am afraid that I am not the only one. Should I multiply my already low probability that I estimated earlier by these additional factors ? Maybe, but I will not do that, say that I do not know what comes after billions, and my gut feeling is that an average imagination of the reader also breaks down somewhere close to billions.

One can argue that there were cases of incredible coincidences before, and what I try to portray as a kind of miracle happened before. For example the Great Schism of the Western and Eastern Churches took place in the year 1054 A.D.. In the same year on 4th of July Chinese astronomers observed a supernova star, a very bright one that was visible during the day. This is probably the brightest known supernova ever observed by human beings in our Galaxy. So definitely we have a coincidence. Both events were kind of “one time only events”, and they happened in the same year ! This is also a kind of miracle one can say. However it is not true. From observation of other galaxies we know that the probability of a supernova in any galaxy is more or less equal one time in four hundred years. In our Milky Way probably we do not see supernovas that happen on the other side of the Galaxy, because the light is blocked by dark matter.

Still we can easily say that it must be at least one time in thousand years ( This is done on assumption that we see only less than half of all supernovas ). A very bright supernova , very close to us ? Say one time in a few thousand years, as a minimum. So it was not a “miracle”. The probability is reasonably high, and equal to one in a few thousand. In the case of the eclipse of eclipses and the discovery of PLuto, we have two “one time only” events. It is much, much closer to a “miracle”, than in the case of the coincidence of 1054 A.D..

The fact is that laws of physics as we know them today were not broken, and that is why I call it **EXTREMELY LOW PROBABILITY EVENT**, instead of a miracle. However, after all maybe it was supposed to be a “bomb in a package” as I called it earlier, and not a regular letter.