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00:00:00,000 --> 00:00:09,240

Chief Prosecutor of UFOs, Dr. Donald H. Menzel.

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00:00:09,240 --> 00:00:16,400

Now, if I presented Dr. Menzel as he really should be presented, we would be here for

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00:00:16,400 --> 00:00:20,640

the rest of the morning and you would never hear it.

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00:00:20,640 --> 00:00:27,040

Let me skip briefly through a career that includes a PhD from Princeton University teaching

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00:00:27,040 --> 00:00:32,760

tours at the University of Iowa and Ohio State University.

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00:00:32,760 --> 00:00:40,160

In 1926 he went to Lake Observatory as assistant astronomer.

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00:00:40,160 --> 00:00:48,680

In the fall of 1932, Dr. Menzel became associated with Harvard University where he has been

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00:00:48,680 --> 00:00:56,080

ever since except for three years of service as a commander in the U.S. Navy doing World

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00:00:56,080 --> 00:00:57,640

War II.

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00:00:57,640 --> 00:01:05,840

His studies have covered a large number of fields from pure physics to pure astronomy.

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00:01:05,840 --> 00:01:18,800

In 1936 he was the head director of the Harvard MIT Eclipse expedition to the U.S.S.R.

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00:01:18,800 --> 00:01:26,920

In 1954 he became the director of the Harvard College Observatory and only resigned that

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00:01:26,920 --> 00:01:30,840

position in 1966.

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00:01:30,840 --> 00:01:38,320

In Harvard he is paying professor of practical astronomy and professor of astrophysics.

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00:01:38,320 --> 00:01:43,600

He has been president of the American Astronomical Society.

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00:01:43,600 --> 00:01:48,520

Dr. Menzel has been a prolific writer.

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00:01:48,520 --> 00:01:55,680

His books, articles and scientific papers cover a broad field and have been translated

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00:01:55,680 --> 00:01:59,200

into many languages.

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00:01:59,200 --> 00:02:05,840

He has even ventured briefly into the realm of science fiction.

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00:02:05,840 --> 00:02:09,080

There is no end to this man's accomplishment.

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00:02:09,080 --> 00:02:15,640

I am highly honored to present Dr. Donald H. Menzel of Harvard University.

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00:02:15,640 --> 00:02:22,160

Well I too have examined the evidence and I have drawn slightly different conclusions

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00:02:22,160 --> 00:02:25,440

from those presented by the previous speaker.

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00:02:25,440 --> 00:02:31,840

Similar sightings of flying saucers go far back in history where they assume different

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00:02:31,840 --> 00:02:34,000

forms for different people.

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00:02:34,000 --> 00:02:40,960

Some records refer to them as fiery dragons, fiery chariots, will to the with jackal anders,

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00:02:40,960 --> 00:02:45,080

fire-grakes, fox fire and even the devil themselves.

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00:02:45,080 --> 00:02:54,200

And now we are having urged on us a new legend to explain a rash of mysterious sightings.

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00:02:54,200 --> 00:03:02,000

Certain UFO buffs argue that peculiar properties and maneuvers of these apparitions as reported

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00:03:02,000 --> 00:03:09,440

by reliable people of all different kinds are so remarkable that only one explanation

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00:03:09,440 --> 00:03:11,440

for them is possible.

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00:03:11,440 --> 00:03:19,200

They must be vehicles from outer space, manned by beings far more intelligent than we because

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00:03:19,200 --> 00:03:24,680

the operators have clearly built vehicles capable of something far beyond anything we

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00:03:24,680 --> 00:03:25,680

can conceive of.

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00:03:25,680 --> 00:03:32,440

This is the argument that we are asked to accept.

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00:03:32,440 --> 00:03:39,520

On the face of it it sounds much like the reasoning of Sherlock Holmes who said on several occasions

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00:03:39,520 --> 00:03:46,720

is an old maxim of mine that when you have excluded the impossible whatever remains however

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00:03:46,720 --> 00:03:49,760

improbable must be the truth.

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00:03:49,760 --> 00:03:55,920

I'm going to go along with this formula but only after we have followed Holmes and excluded

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00:03:55,920 --> 00:04:01,000

every possibility but that of manned UFOs.

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00:04:01,000 --> 00:04:06,960

And we must also show that no further possibility exists.

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00:04:06,960 --> 00:04:12,800

The believers I feel are much too easy, much too eager to reach a decision and our method

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00:04:12,800 --> 00:04:13,800

is quite simple.

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00:04:13,800 --> 00:04:19,240

They try to find someone who may can establish as an authority, someone who will support

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00:04:19,240 --> 00:04:27,120

their views, that may coach and often misquote various authorities or they misquote one another

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00:04:27,120 --> 00:04:30,040

until they believe what they are saying.

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00:04:30,040 --> 00:04:35,960

Having no real logic on their side they resort to innuendo and ridicule and try to discredit

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00:04:35,960 --> 00:04:39,000

those who failed to support their view.

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00:04:39,000 --> 00:04:43,600

The UFO magazine all reported me as the Archdemon of Saucerdom.

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00:04:43,720 --> 00:04:52,480

To the folks all sightings are true UFOs and less proved otherwise.

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00:04:52,480 --> 00:04:59,200

I can see that the concept of manned spaceships is not an absolute impossibility.

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00:04:59,200 --> 00:05:06,200

Neither are the concepts of ghosts, spirits, witches, fairies, elves, hot goblins or the devil.

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00:05:06,200 --> 00:05:11,040

The only problem with this last list is the fact that they are someone out of date.

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00:05:11,040 --> 00:05:13,480

We live in the age of space.

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00:05:13,480 --> 00:05:17,720

Isn't it natural that the beings from outer space should exhibit a similar interest to

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00:05:17,720 --> 00:05:18,720

us?

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00:05:18,720 --> 00:05:25,600

But when we consider these beings, if indeed they are beings, have been bugging us for centuries.

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00:05:25,600 --> 00:05:31,440

Why should not one have landed on the White House lawn and shown himself as the President

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00:05:31,440 --> 00:05:37,600

of the United States to a member of the National Academy of Sciences or at least to someone

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00:05:37,600 --> 00:05:38,600

of you editors?

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00:05:39,600 --> 00:05:41,600

Now please don't misunderstand me.

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00:05:41,600 --> 00:05:47,600

I think it's very possible that intelligent life, hopefully more intelligent than we,

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00:05:47,600 --> 00:05:52,600

may exist somewhere in the vast regions of our space.

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00:05:52,600 --> 00:05:56,600

But it's the very vastness of this space that complicates the problem.

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00:05:56,600 --> 00:05:58,600

The distances are almost inconceivable.

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00:05:58,600 --> 00:06:04,600

The time required to reach the Earth, even if it speaks comparable to that of light,

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00:06:04,600 --> 00:06:09,600

is something that we have been living in hundreds, did not thousands of years for some of our

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00:06:09,600 --> 00:06:10,600

near neighbors.

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00:06:10,600 --> 00:06:15,600

And it takes like some billions of years to reach us from the most distant galaxies, times

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00:06:15,600 --> 00:06:19,600

comparable to that from the entire life history of our solar system.

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00:06:19,600 --> 00:06:24,600

The number of habitable planets in the universe is anybody's guess.

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00:06:24,600 --> 00:06:28,600

Many figures you've heard including mine are just guesses.

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00:06:28,600 --> 00:06:34,600

I have guessed that our old Milky Way may contain as many as a million such planets.

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00:06:34,600 --> 00:06:36,600

That sounds like a lot.

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00:06:36,600 --> 00:06:42,600

But the chances are that if this figure is right, the nearest inhabited planet would be

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00:06:42,600 --> 00:06:48,600

so far away that if we send out a message to it, today we would have to wait about 2,000

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00:06:48,600 --> 00:06:50,600

years to get a reply.

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00:06:50,600 --> 00:06:56,600

Alas, the evidence is poor for intelligent life in our solar system, although I would rather

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00:06:56,600 --> 00:07:00,600

expect to find some mold forms of life on the planet Mars.

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00:07:00,600 --> 00:07:06,600

With respect to UFOs, my position is simple with this, that other natural explanations

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00:07:06,600 --> 00:07:07,600

exist.

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00:07:07,600 --> 00:07:12,600

Dr. McDonald is a contrary for the unexplained settings.

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00:07:12,600 --> 00:07:15,600

The Air Force has given me full access to their vials.

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00:07:15,600 --> 00:07:21,600

I concur with Dr. McDonald that there is no vast conspiracy either at the Air Force or

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00:07:21,600 --> 00:07:28,600

CIA to conceal the facts from the public as many groups have charged.

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00:07:28,600 --> 00:07:31,600

The Air Force has made its mistakes.

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00:07:31,600 --> 00:07:34,600

They never have had enough scientists in the project.

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00:07:34,600 --> 00:07:39,600

They have failed to follow up certain sightings of special importance.

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00:07:39,600 --> 00:07:45,600

And to me, their questionnaire is amateurish, almost cleverly designed in certain cases to

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00:07:45,600 --> 00:07:48,600

get the wrong answer and lose track of the facts.

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00:07:48,600 --> 00:07:58,600

The Air Force is a clarified criticism, and at Major Quintanilla's invitation I have been

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00:07:58,600 --> 00:08:03,600

making constructive criticisms, trying to help them in revisions of the questionnaire.

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00:08:03,600 --> 00:08:05,600

And it is not an easy job.

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00:08:05,600 --> 00:08:14,600

From 1947 until 1954, a bewildered group of Air Force personnel tried honestly and sincerely

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00:08:14,600 --> 00:08:16,600

to resolve the UFO problem.

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00:08:16,600 --> 00:08:23,600

Many highly reliable persons had reported seeing objects moving at fantastic speeds, and apparently

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00:08:23,600 --> 00:08:28,600

taking evasive action in a manner impossible for known terrestrial craft.

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00:08:28,600 --> 00:08:34,600

By 1952, a sizable number of those in the Air Force group had concluded that extraterrestrial

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00:08:34,600 --> 00:08:37,600

vehicles were the only explanation.

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00:08:37,600 --> 00:08:39,600

Some of this unrest leaked out.

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00:08:40,600 --> 00:08:47,600

Popular writers exploited these ideas, and soon various UFOs clubs came into existence.

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00:08:47,600 --> 00:08:55,600

In 1953, as you heard, a committee of scientists headed by H.P. Robertson of Caltech met at CIA

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00:08:55,600 --> 00:09:00,600

to consider a number of Air Force's most convincing cases.

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00:09:00,600 --> 00:09:08,600

These cases were, supposedly, the ones that had convinced the Air Force personnel who had

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00:09:08,600 --> 00:09:14,600

worked on them, just the 20 or 30 most outstanding cases.

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00:09:14,600 --> 00:09:22,600

The ones that looked as if they were absolutely no other explanation except UFOs from outer space

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00:09:22,600 --> 00:09:25,600

to account for the sightings.

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00:09:25,600 --> 00:09:32,600

The Robertson committee immediately solved a number of them, and the rest they could not

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00:09:32,600 --> 00:09:36,600

be called only because of poor or insufficient data.

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00:09:36,600 --> 00:09:44,600

The questioner again, that included the fall cases, had a natural solution, and the report states

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00:09:44,600 --> 00:09:51,600

that there is no evidence to support the idea that UFOs are vehicles from another world.

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00:09:51,600 --> 00:09:58,600

Nevertheless, the UFO buffs believe almost as an article of faith that special observers

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00:09:58,600 --> 00:10:06,600

such as military or airline pilots couldn't possibly mistake a meteor or a planet or a star,

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00:10:06,600 --> 00:10:09,600

a sundial or a mirage for a UFO.

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00:10:09,600 --> 00:10:16,600

This viewpoint is absolutely non-sense, and the Air Force files bear witness to its falsity.

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00:10:16,600 --> 00:10:26,600

They get thousands of solved cases, sightings by the same kind of reliable individuals like the pilots,

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00:10:26,600 --> 00:10:31,600

but such persons have often made huge errors in the identification.

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00:10:31,600 --> 00:10:34,600

A huge meteor flashes by in the sky.

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00:10:34,600 --> 00:10:39,600

The copilot thinks it is going to strike the plane and takes the basic action.

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00:10:39,600 --> 00:10:45,600

You may even imagine that the plane is hit by the backwash from this UFO.

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00:10:45,600 --> 00:10:48,600

The pilot disagrees, and the pilot is right.

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00:10:48,600 --> 00:10:53,600

The UFO proves to be a prank fireball or meteor a hundred miles away.

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00:10:53,600 --> 00:10:55,600

Such occurrences are frequent.

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00:10:55,600 --> 00:10:57,600

Not rare.

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00:10:57,600 --> 00:11:02,600

Distances, especially in space are hard to estimate.

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00:11:02,600 --> 00:11:10,600

If you are up in the air, things that you see may be, you may think that they are a hundred feet away from you,

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00:11:10,600 --> 00:11:18,600

and they actually may be a star that is sort of, and clear up back in the firmament.

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00:11:18,600 --> 00:11:23,600

A bird sped their shining in the sun to someone on the ground.

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00:11:23,600 --> 00:11:25,600

A gloomy, a mere twenty feet overhead.

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00:11:25,600 --> 00:11:29,600

They seem to be a distant object moving at a very high speed.

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00:11:29,600 --> 00:11:40,600

Conversely, a pilot may think that the bright object on the horizon, just beyond his wing tip, is a UFO.

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00:11:40,600 --> 00:11:45,600

And a layer of warm air sandwiched between two layers of coal air,

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00:11:45,600 --> 00:11:48,600

can sometimes act as a layer,

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00:11:48,600 --> 00:11:54,600

protecting a pulsing spinning, vividly colored, software-like image of a planet.

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00:11:54,600 --> 00:11:57,600

I have seen this phenomenon myself,

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00:11:57,600 --> 00:12:06,600

despite the fact that my previous speaker and his LinkedIn manuscript tries to discredit my setting.

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00:12:06,600 --> 00:12:13,600

Pilots thinking they were dealing with a nearby flying object have often tried to intersect such images,

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00:12:13,600 --> 00:12:17,600

which of course all attempts to cut it off.

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00:12:17,600 --> 00:12:24,600

The distance may seem to change rapidly as the star fades or increases in intensity,

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00:12:24,600 --> 00:12:38,600

because as the pilot flies along, the star may even be completely cut off at times by a mountain or by a forest,

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00:12:38,600 --> 00:12:45,600

and will seem to buzz in and out from the plane, attacking the plane.

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00:12:45,600 --> 00:12:49,600

It's realistic and very frank.

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00:12:49,600 --> 00:12:57,600

The observations of this type fortified the UFO legend that these objects maneuver as if under intelligent control.

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00:12:57,600 --> 00:13:04,600

But the pilots failed to realize that the intelligent control came from within themselves.

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00:13:04,600 --> 00:13:12,600

And I think that the Air Force personnel of Project Blue Book still do not appreciate the this important UFO phenomenon.

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00:13:12,600 --> 00:13:16,600

Merages aren't the only apparitions that appear to maneuver.

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00:13:16,600 --> 00:13:24,600

I think I was the first person to point out that a spacial kind of reflection of the sun or moon from ice crystals,

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00:13:24,600 --> 00:13:31,600

sometimes called a sun dog or a moon dog, can also perform evasive action.

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00:13:31,600 --> 00:13:36,600

Layers of ice crystals are necessary, like those found in cirrus clouds.

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00:13:36,600 --> 00:13:43,600

An aviator flying through cirrus sometimes sees a peculiar metallic appearing reflection.

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00:13:43,600 --> 00:13:49,600

Reflection often has a reddish tinge on one side, a reflection of the sun or moon.

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00:13:49,600 --> 00:13:51,600

Even the electric chases.

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00:13:51,600 --> 00:13:53,600

The apparition will recede.

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00:13:53,600 --> 00:14:02,600

The approach, the pilot reverses course and the object seems to execute evasive action.

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00:14:02,600 --> 00:14:09,600

As the pilot runs out of ice crystals, the UFO will seep into the foot on a bridge to speed and disappear to the distance.

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00:14:09,600 --> 00:14:17,600

It's the ice crystal...analyze of a rainbow.

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00:14:17,600 --> 00:14:30,600

But such behavior does not imply, as the UFO addicts try to imply, the presence of an intelligent pilot to guide it.

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00:14:30,600 --> 00:14:42,600

As we look over the Air Force files, we find that some 90% of the solved cases result from the presence of material objects in the atmosphere,

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00:14:42,600 --> 00:14:46,600

reflections from planes making in the sun.

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00:14:46,600 --> 00:14:50,600

They...

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00:14:50,600 --> 00:15:00,600

Then balloons, child balloons, weather balloons, lighted or unlighted, especially those enormous plastic balloons,

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00:15:00,600 --> 00:15:06,600

as large as a 10 storey building which carries scientific instruments, sometimes to 100,000 feet,

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00:15:06,600 --> 00:15:11,600

reflecting full sunlight while the earth below lies in dim sunlight.

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00:15:11,600 --> 00:15:14,600

Such balloons shine more brilliantly than Venus.

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00:15:14,600 --> 00:15:22,600

Advertising planes or illuminated blades, birds by day or night often reflect light from their shiny backs.

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00:15:22,600 --> 00:15:30,600

Windblown kites, hats, paper, plastic sacks, feathers, spider webs, seed pods, dust devils,

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00:15:30,600 --> 00:15:34,600

have all contributed their share of UFO sightings.

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00:15:34,600 --> 00:15:42,600

Insects, single insects or insects in swarms, saucer shaped clouds, reflections of searching life on clouds,

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00:15:42,600 --> 00:15:48,600

special space experiments such as rocket launch, sodium vapor releases,

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00:15:48,600 --> 00:15:57,600

or balloon launch from rockets from Wallops Island have also produced spectacular apparitions,

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00:15:57,600 --> 00:16:00,600

visible all up and down the east coast.

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00:16:00,600 --> 00:16:04,600

Ball lightning and the aurora borealis occasionally contribute.

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00:16:04,600 --> 00:16:12,600

Reflections from power lines, insulators, televisions and antennas, radars, radio telescopes, even apartment windows.

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00:16:12,600 --> 00:16:20,600

These two have on their turn produced realistic UFOs, and I can go on adding almost indefinitely to this list.

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00:16:20,600 --> 00:16:25,600

But the key point that I want to make is that a simple phenomenon, like any of the above,

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00:16:26,600 --> 00:16:30,600

tricked intelligent people into reporting a UFO.

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00:16:30,600 --> 00:16:36,600

But there are still a few other phenomena that can produce UFOs of a type that as far as I know,

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00:16:36,600 --> 00:16:44,600

the Air Force still does not recognize, and I think I'm bringing them to the public's attention for the first time today.

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00:16:44,600 --> 00:16:52,600

You'll see a cage of reference to some of these phenomena, but totally indirectly.

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00:16:52,600 --> 00:17:01,600

Let me quote from an article on Dagen in McGraw-Hill encyclopedia of science and technology.

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00:17:01,600 --> 00:17:08,600

Any observant person can detect swirling clouds or spots of light in total darkness,

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00:17:08,600 --> 00:17:14,600

or while looking at a homogeneous field such as a bright blue sky.

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00:17:14,600 --> 00:17:21,600

So if you want to see flying saucer, just look up, and you don't see them, you probably aren't observant.

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00:17:22,600 --> 00:17:26,600

I see them, or I can't see them, most clearly in a dark room or on a moonless night,

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00:17:26,600 --> 00:17:29,600

with a sky even darker with heavy clouds.

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00:17:29,600 --> 00:17:33,600

I find the background of the stars really clear, and I accept what's distracting.

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00:17:33,600 --> 00:17:39,600

But just lie down on your back, open your eyes, and see the saucer spin.

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00:17:39,600 --> 00:17:45,600

You'll almost surely see regular patches of light, form.

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00:17:45,600 --> 00:17:52,600

Some of them seem gray-green, but I occasionally see silver or gold, and occasionally red.

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00:17:52,600 --> 00:17:55,600

I can even imagine windows in some of them.

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00:17:55,600 --> 00:18:00,600

As you move your eyes, they will move across the sky.

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00:18:00,600 --> 00:18:06,600

They'll come forth across the sky to speed up the action, just rub your eyes like a person coming out of the suite.

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00:18:06,600 --> 00:18:10,600

And occasionally the whole field will become large and luminous.

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00:18:11,600 --> 00:18:20,600

Now I ask you, how can you be sure that the UFO reported by an airline pilot is not just one of these spurious images?

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00:18:20,600 --> 00:18:27,600

And even if an alerted co-pilot confirms that he might also be responding to a similar effect in his own eyes,

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00:18:27,600 --> 00:18:32,600

since you don't know that he is seeing exactly the same thing that the other man is reporting,

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00:18:32,600 --> 00:18:39,600

the chemistry and physiology of the human eye are certainly responsible for many UFO sightings.

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00:18:39,600 --> 00:18:44,600

The eye responds in a different way to different kinds of stimuli.

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00:18:44,600 --> 00:18:49,600

A sudden burst of bright light like that coming from a flash bulb.

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00:18:49,600 --> 00:18:56,600

You newspaper editors, especially the photographers down here in the first row, know that,

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00:18:56,600 --> 00:19:05,600

but you look at a sudden flash, they will have an enduring effect on the eye.

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00:19:05,600 --> 00:19:12,600

The light produces immediate change in the so-called visual purple of the retina, in a sense,

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00:19:12,600 --> 00:19:17,600

the retinal spot where the light fell on the eye becomes fatigued.

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00:19:17,600 --> 00:19:23,600

And for some minutes after the flash, you'll be able to see a bright, usually greenish floating

spot,

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00:19:23,600 --> 00:19:28,600

which could be mistaken for a UFO by someone unfamiliar with the problem.

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00:19:28,600 --> 00:19:35,600

But let me take an actual case, which is typical of a large number in the files of Project Blubom.

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00:19:35,600 --> 00:19:41,600

A child going to the bathroom turns on a bright light and accidentally awakens what it is parents,

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00:19:41,600 --> 00:19:44,600

who is blinded by the sudden illumination.

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00:19:44,600 --> 00:19:51,600

The child turns off the light and the parent, for some reason, also gets up and just happens to glance out of the window.

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00:19:51,600 --> 00:19:58,600

He is startled to see a peculiar spot of light floating over the trees and making irregular, jerky motions.

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00:19:58,600 --> 00:20:02,600

He watches the UFO for a minute or two until it finally disappears.

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00:20:02,600 --> 00:20:09,600

He can't be blamed for failing to realize that the erratic and often rapid movements of the UFO

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00:20:09,600 --> 00:20:12,600

are due to the similar movements of his own eye.

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00:20:12,600 --> 00:20:17,600

The UFO simply appears in the direction in which he happens to be looking, and that's all.

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00:20:17,600 --> 00:20:23,600

And yet he may describe it graphically as a luminous object cavorting across the sky.

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00:20:23,600 --> 00:20:28,600

Many such stimuli are possible by day and night.

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00:20:28,600 --> 00:20:31,600

A few weeks ago I was driving towards the setting sun.

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00:20:31,600 --> 00:20:35,600

I came to a stop light and looked out the side window of the car.

219

00:20:35,600 --> 00:20:43,600

I was startled to see a large black object shape something like a irrigable, surrounded by dozens of small black balloons.

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00:20:43,600 --> 00:20:46,600

I suddenly realized that these were after images of the sun.

221

00:20:46,600 --> 00:20:53,600

The big one, where I've been looking most fixedly, the spot for images where my eyes have wandered.

222

00:20:53,600 --> 00:21:01,600

A UFO's buff could have sworn that he was seeing a mothership and the swarm of UFOs had rapid flight.

223

00:21:01,600 --> 00:21:03,600

I once had a very similar experience.

224

00:21:03,600 --> 00:21:10,600

I suddenly glanced up and was surprised to see a whole float killer of UFOs in formation across the sky.

225

00:21:10,600 --> 00:21:17,600

They looked like after images, but I hadn't been conscious of the visual stimulus responsible.

226

00:21:17,600 --> 00:21:19,600

I quickly retraced my steps and found it.

227

00:21:19,600 --> 00:21:25,600

Sunlight reflected from the shiny surface of the fender of a parked car.

228

00:21:25,600 --> 00:21:30,600

I'm sure that many UFOs still unknowns belong in this class.

229

00:21:30,600 --> 00:21:36,600

Sometimes look fixedly at the moon for at least 30 seconds, and then turn away.

230

00:21:36,600 --> 00:21:43,600

The greenish balloon will swim over your head and perform maneuvers, startling or impossible for any real object.

231

00:21:43,600 --> 00:21:50,600

I have been able to obtain the same effect with a planet Venus when near maximum brightness.

232

00:21:50,600 --> 00:21:56,600

Yet most observers will swear that such UFOs are true objects.

233

00:21:56,600 --> 00:22:03,600

And the Air Force questionnaire, failing to recognize even the existence of this kind of UFO,

234

00:22:03,600 --> 00:22:07,600

remains not a single question that would help them identify it.

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00:22:07,600 --> 00:22:13,600

In fact, the words, signifying UFOs, unidentified flying objects,

236

00:22:13,600 --> 00:22:18,600

show the state of mind of the Air Force personnel who invented this abbreviation.

237

00:22:18,600 --> 00:22:22,600

What I'm saying is that the UFOs are not unidentifiable.

238

00:22:22,600 --> 00:22:27,600

They are often not flying, and many are not even objects.

239

00:22:27,600 --> 00:22:34,600

It is this point of view to regard the apparition that actually will solid out that it retarded the solution so long.

240

00:22:34,600 --> 00:22:40,600

After images was that still another complicated characteristic.

241

00:22:40,600 --> 00:22:46,600

A colored light tends to produce an after image of complementary color.

242

00:22:46,600 --> 00:22:50,600

A green flash will cause a red after image and vice versa.

243

00:22:51,600 --> 00:23:00,600

Colorblind persons and persons with defective vision will often experience effects different from those of people with normal eyesight.

244

00:23:00,600 --> 00:23:03,600

Another phenomenon to produce an illusion.

245

00:23:03,600 --> 00:23:10,600

You may forget that the eyeball jumps a little every time that you blink.

246

00:23:10,600 --> 00:23:14,600

Walking transmits vibrations to the eye at every step.

247

00:23:14,600 --> 00:23:18,600

Many individuals think they see stars, planets or satellites oscillating.

248

00:23:18,600 --> 00:23:22,600

When the movement is actually about the eye itself.

249

00:23:22,600 --> 00:23:26,600

Let me give you this quotation from a book.

250

00:23:26,600 --> 00:23:37,600

On our return across Minnesota, we had an experience of which I always remembered as illustrative of the fallacy of all human testimony about ghosts.

251

00:23:37,600 --> 00:23:39,600

Rappings and other phenomena of that character.

252

00:23:39,600 --> 00:23:42,600

We spent two nights and a day at Fort Snelling.

253

00:23:43,600 --> 00:23:51,600

Some of the officers were greatly surprised by a celestial phenomenon of a very extraordinary character which had been observed for several nights past.

254

00:23:51,600 --> 00:23:58,600

A star had been seen night after night, rising in the east as usual and starting on its course

towards the south.

255

00:23:58,600 --> 00:24:05,600

But instead of continuing that course across the meridian as stars invariably had done from the remotest antiquity,

256

00:24:05,600 --> 00:24:11,600

it took a turn toward the north, sunk towards the horizon and finally sat near the north point of the horizon.

257

00:24:11,600 --> 00:24:14,600

Of course an explanation was wanted.

258

00:24:14,600 --> 00:24:26,600

My assurance there must be some mistake in this observation could not be accepted because this erratic course of the heavenly body had been seen by all of them so plainly that no doubt could exist on the subject.

259

00:24:26,600 --> 00:24:36,600

The men who saw it were now the ordinary, untrained kind but graduates of West Point who if anyone ought to be free from optical dissections.

260

00:24:37,600 --> 00:24:44,600

I was myself, confidently invited to look out that night and say, we all want to visit the greatest manorist.

261

00:24:44,600 --> 00:24:49,600

In do time the planet Mars was seen in the east making its way toward the south.

262

00:24:49,600 --> 00:24:52,600

There it is with the exclamation.

263

00:24:52,600 --> 00:24:53,600

Yes, there it is.

264

00:24:53,600 --> 00:24:56,600

And I know that planet is going to keep right on its course towards the south.

265

00:24:56,600 --> 00:24:58,600

No, it is not.

266

00:24:58,600 --> 00:25:02,600

It says, hey, you will see a turnaround and go down towards the north.

267

00:25:02,600 --> 00:25:11,600

Hour after hour passed and as the planet began and continued on its regular course, the other watchers began to get a little nervous.

268

00:25:11,600 --> 00:25:14,600

It showed no signs of deviating from its course.

269

00:25:14,600 --> 00:25:17,600

We went out from time to time to look at the sky.

270

00:25:17,600 --> 00:25:24,600

There it is, said one of the observers at length, 40 to Capella, which was now just rising a little to the east of north.

271

00:25:24,600 --> 00:25:26,600

There is the star setting.

272

00:25:26,600 --> 00:25:31,600

The point is, said I, there was the star we've been looking at now quite inconspicuous near the

meridian.

273

00:25:31,600 --> 00:25:35,600

And that star that you think is setting is really rising and will soon be higher up.

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00:25:35,600 --> 00:25:41,600

A viral official watching shows that no deviation of the general laws of nature had occurred,

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00:25:41,600 --> 00:25:49,600

but that the observers of previous nights had jumped at the conclusion that two objects widely apart in the heavens were the same.

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00:25:49,600 --> 00:25:57,600

Those words came from a book called Reminiscences of Astronomer, published in 1903 by Simon Newcomb,

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00:25:57,600 --> 00:26:03,600

who was in charge of the American Monarchal Monarch Office from 1877 until 1897.

278

00:26:03,600 --> 00:26:07,600

This event actually occurred in 1860.

279

00:26:07,600 --> 00:26:13,600

The similarity between modern U.S. overpowering a star from working across the sky.

280

00:26:13,600 --> 00:26:18,600

Military officers as reliable and responsible witnesses.

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00:26:18,600 --> 00:26:22,600

For you who wear eyeglasses, there's still another way of seeing a UFO.

282

00:26:22,600 --> 00:26:26,600

Look directly at some bright light. There's a lot of them around the room here.

283

00:26:26,600 --> 00:26:35,600

You keep your head turned slightly to the left or right, and you undoubtedly see a pain-grounding autofocus spot.

284

00:26:35,600 --> 00:26:43,600

This is light reflected from the front surface of your eyeball back to the lens, and then back into the pupil of your eye.

285

00:26:43,600 --> 00:26:47,600

A bright source to one side and slightly behind you can also reach your eye,

286

00:26:47,600 --> 00:26:52,600

through reflection from the internal surface of the spectacle lens.

287

00:26:52,600 --> 00:26:57,600

To this moment, I haven't mentioned there's still another method of detecting saucers.

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00:26:57,600 --> 00:27:02,600

One not so big because of the vanguardies of the human eye. I mean radar.

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00:27:02,600 --> 00:27:09,600

Radar is a machine. It can't make mistakes, or at least that is a common argument advanced by the UFO buffs.

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00:27:09,600 --> 00:27:22,600

The previous speaker in the document referred to violently discredits my work and reveals his ignorance of the phenomenon of radio propagation of the radar waves.

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00:27:22,600 --> 00:27:28,600

So happens that very much three years service in the Navy, which has already been referred to,

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00:27:28,600 --> 00:27:37,600

and 22 years since then as consultant to the Radio Central Radio Propagation Laboratory of the National Bureau of Standards.

293

00:27:37,600 --> 00:27:46,600

I have had a little experience with this particular phenomenon and the conditions.

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00:27:46,600 --> 00:27:54,600

All the radar is cursed with all the potential of the plethora of any complicated electrical gadget can suffer.

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00:27:54,600 --> 00:27:59,600

There is one specific thing that can affect this greatly, moronic.

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00:27:59,600 --> 00:28:05,600

Let me explain briefly what a radar does. It sends out a pulse of radio waves.

297

00:28:05,600 --> 00:28:12,600

We know the direction, northeast. We know the elevation of the horizon and echo return.

298

00:28:12,600 --> 00:28:21,600

From the interval between the transmission and the return of the signal, we know how far away the object is that reflects the pulse.

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00:28:21,600 --> 00:28:28,600

We think therefore we will take the plane or a UFO in flight because the radar directs its pulse over.

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00:28:28,600 --> 00:28:32,600

But we haven't any way of following the pulse in its path toward the target.

301

00:28:32,600 --> 00:28:41,600

A layer of warm dry air or even a layer to change a few bubbles of warm air will bend the radar beam back to Earth.

302

00:28:41,600 --> 00:28:50,600

This is what we call partial trapping. This was, for example, what happened in Washington at the famous sighting in 1952.

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00:28:51,600 --> 00:29:01,600

The reflection of the beam after it has been directed backwards comes back from a distant building, a train or a ship.

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00:29:01,600 --> 00:29:10,600

No wonder that planes that were sent out to intercept the radar UFO found in nothing.

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00:29:10,600 --> 00:29:18,600

In one such case, a well-known writer on flying saucers said the discovery of visible saucers had been serious enough.

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00:29:18,600 --> 00:29:26,600

The discovery of invisible flying saucers would be a mouthful to fright anyone.

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00:29:26,600 --> 00:29:31,600

I know of no reliable cases of simultaneous visual and radar sightings.

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00:29:31,600 --> 00:29:40,600

In view of the physical properties of the eye, the surprising fact is that so few cases have been reported.

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00:29:40,600 --> 00:29:45,600

Time won't permit me to elaborate on still another relevant phenomenon.

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00:29:45,600 --> 00:29:54,600

The Earthworks appears to have neglected completely the psychological angle of mass hallucination.

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00:29:54,600 --> 00:29:59,600

Back in 1919 in Spain, a not unrelated phenomenon occurred.

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00:29:59,600 --> 00:30:06,600

Thousands of people, reliable people, swore that they had seen the images of saints rolling their eyes,

313

00:30:06,600 --> 00:30:11,600

holding their hands, gripping, drops of blood, even stepping out of their panels.

314

00:30:11,600 --> 00:30:17,600

A person would call out, look, there it goes, and everyone else would look at it and they would see this phenomenon.

315

00:30:17,600 --> 00:30:20,600

There are many similar events recorded through history.

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00:30:20,600 --> 00:30:28,600

There are hundreds and thousands, perhaps of hoaxes, like that the University of Colorado

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00:30:28,600 --> 00:30:34,600

and some enterprising pranksters made hot air balloons from candles and plastic bags.

318

00:30:34,600 --> 00:30:46,600

And it gave the university officials who were investigating the UFO phenomenon the opportunity to see how poor the evidence can be.

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00:30:46,600 --> 00:30:48,600

A fact well known to the legal profession.

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00:30:48,600 --> 00:30:53,600

This is another point that the Air Force has sometimes failed to realize.

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00:30:53,600 --> 00:30:59,600

Moreover, their poor questionnaire has only further confused and already confused pictures.

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00:30:59,600 --> 00:31:05,600

Several times during this talk I have used the phrase UFOs cavorting across the sky.

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00:31:05,600 --> 00:31:11,600

I did so deliberately because it seems to be a favorite phrase of my good friend, Dr. J. Allen Heineck,

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00:31:11,600 --> 00:31:16,600

of Northwestern University and consultant to the Air Force, Project Blue Cook.

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00:31:16,600 --> 00:31:24,600

He has sometimes expressed doubts about the UFOs because stars don't cavort across the sky.

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00:31:24,600 --> 00:31:31,600

What I have tried to show today is that many kinds of optical stimuli can produce weird effects

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00:31:31,600 --> 00:31:36,600

with all these kinds of phenomena masquerading as UFOs.

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00:31:36,600 --> 00:31:43,600

Many of them, like those related to the physiology of the human eye, still practically not investigated,

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00:31:43,600 --> 00:31:48,600

I think I can reasonably claim, applying the criterion of Sherlock Holmes,

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00:31:48,600 --> 00:31:51,600

that we have not excluded all of the impossible.

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00:31:51,600 --> 00:31:59,600

I have shown that the arguments advanced in favor of the interplanetary nature of UFOs are fallacious.

332

00:31:59,600 --> 00:32:03,600

They are at high speeds in the ability to maneuver.

333

00:32:03,600 --> 00:32:09,600

They are at short distances, are completely underestimated.

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00:32:09,600 --> 00:32:13,600

And they have natural explanations.

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00:32:13,600 --> 00:32:19,600

I think it is time for the Air Force to wrap up Project Blue Cook.

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00:32:19,600 --> 00:32:24,600

It has produced a level of scientific value, keeping it going only fosters the belief of persons

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00:32:24,600 --> 00:32:30,600

that the Air Force must have found something to substantiate the belief in the UFOs.

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00:32:30,600 --> 00:32:37,600

In making this recommendation, I am not criticizing the present or recent administration of the project.

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00:32:37,600 --> 00:32:46,600

But it is time that we put an end to chasing ghosts, hot goblins, visions and hallucinations.

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00:32:46,600 --> 00:32:52,600

And as for the true believers, blessed are their hearts, let them go on believing in UFOs,

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00:32:52,600 --> 00:32:55,600

fairies or sandy claws if they want to.

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00:32:55,600 --> 00:32:57,600

Nothing will change their minds.

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00:32:57,600 --> 00:33:02,600

They will go on forever demanding more dollars for investigation

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00:33:02,600 --> 00:33:07,600

and more congressional investigation of the UFOs and the Air Force.

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00:33:07,600 --> 00:33:13,600

Incidentally, we did get, I would like to mention that a complete discussion

346

00:33:13,600 --> 00:33:24,600

of many of these phenomenal, it appears in my book, The World of Flying Saucers, by Mrs. Boyd and myself.

