

1

00:00:00,000 --> 00:00:28,520

How can it be that this man has seen a sight that shouldn't exist, the fabulous canals

2

00:00:28,520 --> 00:00:38,840

of Mars? Can this crater on the dark side of the moon explain a mystery handwritten

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00:00:38,840 --> 00:00:46,480

in this book eight centuries ago? Does this glass plate hold the secret of the lost planet

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00:00:46,480 --> 00:00:54,480

Vulcan? And can this computer crack the oldest astronomical riddle of all, what was the star

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00:00:54,480 --> 00:01:03,000

of Bethlehem? Mysteries from the files of Arthur C. Clark, author of 2001 and inventor

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00:01:03,000 --> 00:01:08,160

of the communication satellite. Now in retreat in Sri Lanka, after a lifetime of science,

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00:01:08,160 --> 00:01:13,920

space and writing, he ponders the riddles of this and other worlds.

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00:01:13,920 --> 00:01:19,480

History is the oldest of the sciences. Since time immemorial, men have looked up at the

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00:01:19,480 --> 00:01:28,240

starry skies and tried to unravel their secrets. Even now, our giant telescopes are discovering

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00:01:28,240 --> 00:01:36,080

new and baffling phenomena at the very edge of the visible universe. I sometimes think

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00:01:36,080 --> 00:01:46,920

that the universe is a machine designed for the perpetual astonishment of astronomers.

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00:01:46,920 --> 00:01:53,200

Beside the new discoveries, there are also several classical astronomical mysteries,

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00:01:53,200 --> 00:02:18,280

as even now, intrigue and baffle scientists.

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00:02:23,200 --> 00:02:52,840

Dr. Peter Boyce is on his way to the birthplace of the

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00:02:52,840 --> 00:03:06,560

astronomical world's most sensational story. This is Mars Hill, where the drama of the

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00:03:06,560 --> 00:03:20,840

canals of Mars was nurtured and disseminated to an astonished world. It was 1894 when

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00:03:20,840 --> 00:03:26,680

construction began here on an observatory. It had been specially commissioned by Percival

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00:03:26,680 --> 00:03:35,960

Lowell, a Boston millionaire who developed a passionate taste for astronomy. These maps,

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00:03:35,960 --> 00:03:41,280

which Lowell believed showed canals on the planet Mars, were drawn a few years earlier

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00:03:41,280 --> 00:03:48,560

by an Italian astronomer Giovanni Ciapparelli. They inspired in Lowell a lifelong obsession.

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00:03:48,560 --> 00:03:52,920

He built his own observatory in the clear and steady air above the wild west town of

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00:03:52,920 --> 00:04:01,360

Flagstaff in Arizona. His aim to be ready for the close approach of Mars to the Earth due

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00:04:01,360 --> 00:04:10,000

in the autumn of 1894. Peter Boyce, an executive of the American Astronomical Society, has

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00:04:10,000 --> 00:04:28,280

come to Mars Hill because he, like Lowell, had an odd vision of Mars. In October 1894,

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00:04:28,280 --> 00:04:35,160

Percival Lowell settled down to await his encounter with the Red Planet. Night after night, Lowell

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00:04:35,160 --> 00:04:42,680

and his assistants at the telescope here sat and made drawing after drawing of the markings

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00:04:42,680 --> 00:04:49,020

that they saw on the surface of the planet. They saw the broad, dark markings that everybody

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00:04:49,020 --> 00:04:57,100

at that time saw. But in addition, they saw these marvelous, long, straight, thin lines

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00:04:57,100 --> 00:05:03,040

that Lowell called canals. We have a series of drawings made by Lowell and a number of

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00:05:03,040 --> 00:05:12,160

his associates which show these, very definitely show a number of these canals and the notation

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00:05:12,160 --> 00:05:18,680

saw no end of canals. In fact, so many could not single them out enough to draw them. Lowell

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00:05:18,680 --> 00:05:24,800

constructed globes to show the canals he saw. There were dark blobs too. These he called

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00:05:24,800 --> 00:05:33,000

Oasis. In later years, his maps became even more intricate with all the canals named.

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00:05:33,120 --> 00:05:37,280

And he was fascinated by the way the canals seemed to grow from the polar ice caps each

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00:05:37,280 --> 00:05:43,400

Martian summer. Lowell evolved the grandest and most romantic of theories. The canals

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00:05:43,400 --> 00:05:49,440

were built by Martians to channel water from the ice caps because their planet was drying

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00:05:49,440 --> 00:05:57,240

up. The Martians were battling to stave off inevitable doom. Soon Mars mania was everywhere.

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00:05:57,240 --> 00:06:08,680

The newspapers vied with one another for the most realistic view of life on Mars. And this

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00:06:08,680 --> 00:06:17,000

is from a serious book on astronomy. In this desperate battle for life, signals from the

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00:06:17,000 --> 00:06:21,800

Martians were supposedly detected. From the changing shadows of the planet's surface,

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00:06:21,800 --> 00:06:29,080

an interplanetary morse code of dots and dashes. Lowell proclaimed that the earth likewise

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00:06:29,080 --> 00:06:37,200

was doomed to die from drought. His own death came as the canal craze declined, but the

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00:06:37,200 --> 00:06:49,760

idea was never quite buried. In 1964, the moment of truth with a space probe destination

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00:06:49,880 --> 00:07:03,840

Mars. It found a desolate and lifeless planet, not a trace of canals. Yet Lowell's lines

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00:07:03,840 --> 00:07:09,680

are still occasionally glimpsed. One night in 1971, Peter Boyce was observing Mars through

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00:07:09,680 --> 00:07:17,280

the Cerro Tololo telescope in Chile. On that night, the amount of detail that was visible

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00:07:17,320 --> 00:07:24,080

on the surface of Mars was just incredible. The big dark marking, Cerus Major, was darker

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00:07:24,080 --> 00:07:31,440

than I've ever seen it before. It looked like the black pit of hell. I saw many of the oases

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00:07:31,440 --> 00:07:38,160

all over the surface of the planet. You could see these small dark markings. I saw at least

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00:07:38,160 --> 00:07:45,800

one of the canals that I recognized, the Thoth Canal, was extremely visible. Without question,

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00:07:45,840 --> 00:07:51,760

it was there. It was standing out. I have to conclude that there is something on the

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00:07:51,760 --> 00:07:59,760

surface of the planet and that Lowell was indeed actually seeing something that was there.

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00:07:59,760 --> 00:08:06,640

Whether or not it was a series of dots or this network of fine lines as he actually

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00:08:06,640 --> 00:08:11,880

drew it, I think it must be one of the mysteries that remains.

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00:08:11,960 --> 00:08:16,320

We're repeating experiment here that was conducted at the turn of the century to try and settle

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00:08:16,320 --> 00:08:22,320

this question. What we have on the blackboard is a rather conventionalized drawing of Mars

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00:08:22,320 --> 00:08:28,880

showing the dark and light areas that everybody agrees exists, but no canals, no linear features.

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00:08:28,880 --> 00:08:34,600

These girls don't know what they're drawing. They haven't seen that in close-up. And we've

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00:08:34,600 --> 00:08:39,720

asked them to draw exactly what it is they see and we're waiting to see what the result

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00:08:39,720 --> 00:08:41,720

of this experiment is.

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00:08:47,720 --> 00:08:53,040

This experiment carried out in Trinkumaly, Sri Lanka, some 80 years after it was first

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00:08:53,040 --> 00:09:00,880

done in England, shows very clearly that the human eye has a tendency to link up patterns,

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00:09:00,880 --> 00:09:07,080

to create patterns where they don't exist. And some of these drawings are pretty much

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00:09:07,080 --> 00:09:15,280

like Laos. I wouldn't hear very thin lines. You aren't on the original drawing at all.

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00:09:15,280 --> 00:09:23,280

And symmetrical patterns, again nothing like the original object. So I'm sure what happened

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00:09:23,280 --> 00:09:29,160

in the case of Laos was that his eye linked together the various dots and smudges on

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00:09:29,160 --> 00:09:35,520

Mars and saw this grid work of lines which looked so artificial and which we now know

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00:09:35,520 --> 00:09:37,520

is not there at all.

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00:09:39,520 --> 00:09:44,520

The canals of Mars aren't the only thing to have gone missing in the history of astronomy.

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00:09:44,520 --> 00:09:50,520

A whole planet has disappeared. It was in central France that in a classic confrontation,

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00:09:50,520 --> 00:09:55,960

the planet Balkan was born. Now Richard Baum, an English astronomer, has come to the village

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00:09:55,960 --> 00:09:58,960

of Orgère to investigate its death.

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00:09:59,400 --> 00:10:06,400

Central characters in the drama were Edmund Lascarbeau, a country doctor who loved astronomy,

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00:10:06,400 --> 00:10:11,900

his adversary, the celebrated Professor Laverrier, honored by King Louis Philippe for predicting

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00:10:11,900 --> 00:10:17,480

the discovery of Neptune. Their meeting, which was for a time to make Orgère internationally

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00:10:17,480 --> 00:10:22,400

famous, grew out of strange irregularities in the orbit of the planet Mercury, which

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00:10:22,400 --> 00:10:27,480

was disobeying Newton's laws of physics. Professor Laverrier proposed this was due

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00:10:27,520 --> 00:10:36,520

to the pull of an unknown planet between Mercury and the Sun. And one afternoon in 1859, Dr.

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00:10:36,520 --> 00:10:42,720

Lascarbeau thought he saw it in the skies above Orgère. He was in his observatory studying

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00:10:42,720 --> 00:10:48,720

the Sun when he saw a small black spot move onto its face. It took four hours to cross

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00:10:48,720 --> 00:10:56,320

the Sun. When Laverrier heard about this, he caught the first train from Paris and marched

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00:10:56,360 --> 00:11:05,360

the 12 miles from the station to Lascarbeau's door. Now when Laverrier came up to the door,

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00:11:05,560 --> 00:11:12,080

he rapped rather imperiously on it. He was, by all accounts, a rather arrogant, haughty,

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00:11:12,080 --> 00:11:16,920

stiff sort of character, who had little time for his subordinates. Anyhow, the door was

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00:11:16,920 --> 00:11:23,920

shortly opened by a very small, meek, somewhat self-effacing fellow, Dr. Lascarbeau himself.

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00:11:24,920 --> 00:11:30,920

Without introducing himself, Laverrier said, It is you, sir, who claims to have seen or

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00:11:31,640 --> 00:11:36,920

discovered the intramacorial planet. I warn you, sir, I have come to either unask you

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00:11:36,920 --> 00:11:42,080

as an imposter or to prove you as the true discoverer of this object. He then asked to

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00:11:42,080 --> 00:11:49,080

see LaScarbeau's calculations, because LaScarbeau had mentioned something about the distance

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00:11:49,520 --> 00:11:56,520

of the planet from the Sun. And this proved to be almost farcical in its way, because LaScarbeau

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00:11:56,720 --> 00:12:02,200

admitted to being rather a poor man, and he could scarcely afford to buy paper, so that

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00:12:02,200 --> 00:12:08,200

therefore he was used to doing his calculations on pieces of wood, and to erase them, of course,

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00:12:08,200 --> 00:12:14,240

simply to plane them off, which was rather economic, I suppose. Well, this seemed to

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00:12:14,320 --> 00:12:21,320

upset Laverrier altogether. But somehow, there was something about the way in which LaScarbeau

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00:12:22,000 --> 00:12:27,120

recounted his experience, which convinced him, at least, that here was an honest man, and

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00:12:27,120 --> 00:12:33,120

that the observation had been genuinely made. Accordingly, he named the new object, which

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00:12:33,120 --> 00:12:38,120

astounded the world because of its major importance, Vulcan.

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00:12:38,120 --> 00:12:44,120

Yet from the start, Vulcan had a question mark hanging over it. Some amateurs saw it,

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00:12:44,320 --> 00:12:49,720

like this American railway engineer who wrote, a small boy asked me what was the matter with

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00:12:49,720 --> 00:12:56,720

the Sun. On looking at it, I saw a planet. But no professional observed it until 1878,

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00:12:56,960 --> 00:13:02,400

time of a great eclipse in the United States. Professor James Craig Watson's party stationed

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00:13:02,400 --> 00:13:08,840

themselves at separation in Wyoming. During totality, he spotted an unknown object near

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00:13:08,880 --> 00:13:14,880

a known star, so did one of his colleagues in Colorado. But Vulcan has never been seen

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00:13:14,880 --> 00:13:21,880

again. Vulcan officially died in 1915 with the publication

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00:13:23,120 --> 00:13:30,120

of Albert Einstein's General Theory of Relativity. His concept of gravitation predicted that

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00:13:31,760 --> 00:13:38,360

Mercury would move exactly in the way it was being observed to move. Very simply because

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00:13:38,360 --> 00:13:45,200

Albert Einstein predicted that bodies moving in a high gravitational field would move somewhat

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00:13:45,200 --> 00:13:51,800

differently to that predicted by Isaac Newton's Theory of Gravitation. So accordingly, with

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00:13:51,800 --> 00:13:58,800

the publication of his theory in 1915, Vulcan officially died and the search for the Holy

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00:13:59,240 --> 00:14:06,000

Grail, so to speak, in the skies died. But has it been buried? Dr. Henry Corton of Dowling

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00:14:06,040 --> 00:14:11,000

College on Long Island, New York, has with Professor Don Albert taken ultra-high-powered

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00:14:11,000 --> 00:14:18,000

photographs of the Sun during eclipses. Among the familiar stars on the negative plates,

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00:14:18,240 --> 00:14:23,400

they've discovered what they think are objects a few miles across swirling around the Sun.

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00:14:23,400 --> 00:14:30,400

The objects occupy essentially the same position in the sky relative to the Sun that the early

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00:14:31,280 --> 00:14:38,280

reports of Vulcan did record. Vulcan perhaps did exist. And then you have to explain what

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00:14:38,680 --> 00:14:45,680

happened to it. Why don't we see Vulcan anymore? And things just don't fly off, but they

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00:14:47,200 --> 00:14:53,360

could disintegrate. And being so close to the Sun, it would experience strong gravitational

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00:14:53,360 --> 00:14:59,160

forces and perhaps did not survive and now is in smaller fragments in that vicinity.

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00:14:59,160 --> 00:15:04,440

There was an object. It was observed by a number of people and recorded in the proper

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00:15:04,440 --> 00:15:10,720

position. And here we are on the order of a hundred years later finding a bunch of debris

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00:15:10,720 --> 00:15:17,720

in the area. It seems a straightforward conclusion to make that the two are directly related.

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00:15:17,760 --> 00:15:20,760

We're looking at the leftovers of Vulcan.

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00:15:20,760 --> 00:15:27,760

A different kind of celestial conundrum lies in the library built by Sir Christopher

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00:15:28,200 --> 00:15:35,200

Ren at Trinity College in Cambridge. It's in the Chronicle of Gervais, a book written

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00:15:36,760 --> 00:15:42,960

in the 12th century by a monk from Canterbury. Jack Hartung, an American space scientist,

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00:15:42,960 --> 00:15:47,440

discovered that on one page was a mysterious report handwritten eight centuries ago in

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00:15:47,440 --> 00:15:49,800

Latin.

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00:15:49,800 --> 00:15:55,800

What this says when translated into English is that on a particular evening in the year

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00:15:55,840 --> 00:16:02,840

1778, June 18th, to be exact, there were at least five men sitting and observing a new

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00:16:02,840 --> 00:16:09,340

moon and just after sunset the new moon was visible and they observed that the upper

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00:16:09,340 --> 00:16:15,600

horn of a new moon, the upper horn is the language that's used in the text, split.

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00:16:15,600 --> 00:16:22,600

And from this division point came fire, hot coals and sparks. Quite a remarkable thing

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00:16:22,680 --> 00:16:29,680

to observe, I think. And the text goes on to say that this moon, which they saw, writhed

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00:16:33,280 --> 00:16:39,880

as if it were a wounded snake.

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00:16:39,880 --> 00:16:42,680

Hartung followed the trail back to Kent.

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00:16:42,680 --> 00:16:49,680

The moon this evening looks much as it must have looked on that evening, June 18th, 1178,

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00:16:49,760 --> 00:16:56,760

some 802 years ago. It's a very thin crescent appearing above the western horizon just after

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00:16:56,760 --> 00:16:58,680

sunset.

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00:16:58,680 --> 00:17:03,320

The fact that it was a new moon recorded in the chronicle gave Hartung his clue.

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00:17:03,320 --> 00:17:10,320

The midpoint of the upper horn of a new moon corresponds to a latitude of 45 degrees north.

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00:17:10,840 --> 00:17:17,840

The new moon itself indicates that the longitude of the site of such an event was 90 degrees

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00:17:18,480 --> 00:17:24,980

east. From that we can predict that there should be something observable on the surface

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00:17:24,980 --> 00:17:31,280

of the moon, some scar to represent what actually happened that evening.

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00:17:31,280 --> 00:17:35,960

From the earth nothing is now visible. But wondered Hartung, could the witnesses have

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00:17:35,960 --> 00:17:40,880

seen the effects of something out of sight, just over the rim on the dark side of the

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00:17:40,880 --> 00:17:42,920

moon?

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00:17:42,920 --> 00:17:47,560

And in just the right place on pictures taken by orbiting spacecraft he found this meteor

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00:17:48,120 --> 00:17:52,600

13 miles across named Giordano Bruno.

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00:17:52,600 --> 00:17:59,600

Most significant the network of bright rays told Hartung the impact was fresh.

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00:18:00,760 --> 00:18:06,240

He's convinced this is the explanation of Gervais' story, a unique sighting.

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00:18:06,240 --> 00:18:11,480

So those five men who witnessed the formation of Giordano Bruno on that evening of June

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00:18:11,480 --> 00:18:18,480

18th in 1178 are almost certainly the only five men in recorded history to have observed

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00:18:19,520 --> 00:18:23,680

such a significant fantastic event.

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00:18:23,680 --> 00:18:29,000

I think we should take this observation seriously because after all there were many tremendous

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00:18:29,000 --> 00:18:33,240

meteor impacts on the moon in the remote past.

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00:18:33,240 --> 00:18:38,400

This is a mystery which we'll solve one day when we go back to the moon and explore it

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00:18:38,440 --> 00:18:41,560

thoroughly.

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00:18:41,560 --> 00:18:47,560

There are almost too many possible answers to the other classic astronomical mystery,

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00:18:47,560 --> 00:18:54,560

what was the star at Bethlehem?

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00:18:54,840 --> 00:18:59,360

After seeing the star in the east, according to St. Matthew, the wise men journeyed to

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00:18:59,360 --> 00:19:01,880

Jerusalem.

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00:19:01,880 --> 00:19:08,360

The star went before them and stood over where the young child was in Bethlehem.

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00:19:12,360 --> 00:19:18,520

The star is now a central image of Christmas.

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00:19:18,520 --> 00:19:21,320

But was it a miracle or a myth?

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00:19:21,320 --> 00:19:28,320

Could it have been a real astronomical event?

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00:19:29,320 --> 00:19:34,320

Chinese writings drawn up 2,000 years ago suggested one answer to astronomer Dr. Richard

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00:19:34,320 --> 00:19:40,760

Stevenson. There were star records made for the emperors of China. Scholars think that

168

00:19:40,760 --> 00:19:45,480

Christ was born sometime between 8 and 4 BC.

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00:19:45,480 --> 00:19:52,480

What I did was to cover about the range from about 10 BC to 10 AD and see whether there

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00:19:52,720 --> 00:19:59,720

were any new stars. Since a star seems to be the most obvious interpretation, visible

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00:20:01,160 --> 00:20:04,600

around this period.

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00:20:04,600 --> 00:20:09,480

And there in the Chenping period, 5 BC was an unusual entry.

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00:20:09,480 --> 00:20:16,480

Here this is what it says. In the second year of the rain period, second month, this is

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00:20:17,480 --> 00:20:24,480

a lunar month, so this is about March to April. A Huixing, that's normally a broom star,

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00:20:25,880 --> 00:20:32,880

or a common, appeared. And it gives the little constellation in which it occurred that's

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00:20:33,240 --> 00:20:40,240

in Chenyu. And it says, furthermore, it was visible for more than 70 days.

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00:20:41,240 --> 00:20:46,680

Stevenson believes the account refers not to a comet, which moves quite quickly across

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00:20:46,680 --> 00:20:53,680

the sky, but to a nova, or exploding star, since the Chinese scribes mentioned no movement.

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00:20:54,400 --> 00:20:58,760

But a rival theory has it that the Maidji were astrologers, and that the star was a

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00:20:58,760 --> 00:21:02,440

symbolic coming together of planets.

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00:21:02,440 --> 00:21:08,440

Dr. David Hughes has programmed a computer to recreate the night sky as it was 2,000

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00:21:08,640 --> 00:21:09,840

years ago.

183

00:21:09,840 --> 00:21:16,840

My theory is that the star of Bethlehem was Jupiter, and the event that Jupiter was in

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00:21:16,920 --> 00:21:23,920

at the time was a coming together with Saturn, another planet in the constellation of Pisces.

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00:21:24,320 --> 00:21:31,320

Here you see the stars in Pisces, and these stars represent the tails of the two fishes.

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00:21:32,040 --> 00:21:37,600

When anything happens in here, when any planets start to move around, the astrologers in those

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00:21:37,680 --> 00:21:43,200

days would automatically connect to this movement with events that were occurring in Palestine.

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00:21:43,200 --> 00:21:47,240

The Earth's movement around the sun makes Saturn and Jupiter appear to move strangely

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00:21:47,240 --> 00:21:53,440

in the sky. Just once, every 805 years, this causes what's known as a triple conjunction

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00:21:53,440 --> 00:21:56,680

in Pisces. This happened in 7 BC.

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00:21:56,680 --> 00:22:03,680

The planet Saturn is the one of, astrologically, the planet of the god, and Jupiter is the

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00:22:04,680 --> 00:22:07,040

planet of the new Messiah.

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00:22:07,040 --> 00:22:12,120

And what is happening in 7 BC is we're getting a coming together of these two planets, which

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00:22:12,120 --> 00:22:19,120

is indicating that the rule of that land is being transferred from the god to the new

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00:22:19,200 --> 00:22:20,400

Messiah.

196

00:22:20,400 --> 00:22:25,960

Here we have the date, and Saturn moving into the frame first of all.

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00:22:25,960 --> 00:22:30,600

Here we have Jupiter following Saturn, and of course as the date changes you can see

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00:22:30,600 --> 00:22:37,600

them moving across the screen, and you get, on the 29th of May in 7 BC, the first conjunction

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00:22:40,080 --> 00:22:43,000

where the two planets come close together.

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00:22:43,000 --> 00:22:46,320

The wise men would have been convinced at this time that something really important was

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00:22:46,320 --> 00:22:53,320

happening in Palestine, and that the ruler of the Jews, the new ruler of the Jews, is

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00:22:54,800 --> 00:22:55,840

going to come.

203

00:22:55,960 --> 00:23:02,960

Continue, and you will now see the date moving, the planets move apart, and will then come

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00:23:03,680 --> 00:23:09,480

together again in September, and this will be the second conjunction.

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00:23:09,480 --> 00:23:13,000

And during that time between May and September, the major eye would have been moving from

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00:23:13,000 --> 00:23:19,080

Babylon across the desert, and would be continually looking at these stars in the sky with the

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00:23:19,080 --> 00:23:21,160

planets moving among them.

208

00:23:21,480 --> 00:23:26,280

These two coming together would be reinforcing their predictions.

209

00:23:26,280 --> 00:23:31,720

Now we can continue on to the third conjunction, and you will notice that again as time progresses

210

00:23:31,720 --> 00:23:37,040

the two planets move slightly apart, and then in December will come together again for the

211

00:23:37,040 --> 00:23:42,000

third time, and here on the 4th of December we have them again separated by about one

212

00:23:42,000 --> 00:23:44,120

degree.

213

00:23:44,120 --> 00:23:49,000

Hughes believes that just before this third conjunction the wise men saw Herod, and that

214

00:23:49,040 --> 00:23:52,080

his priests said the Messiah would be born in Bethlehem.

215

00:23:52,080 --> 00:23:57,240

Now of course the interesting thing here is that you are really dealing all the time with

216

00:23:57,240 --> 00:24:04,240

two very normal planets moving against a very normal constellation, and the astrologers,

217

00:24:04,480 --> 00:24:09,560

the wise men of Babylon would have regarded this as very significant, but Herod and the

218

00:24:09,560 --> 00:24:15,680

man in the street would have just thought two planets moving, and Herod was very surprised

219

00:24:15,720 --> 00:24:20,560

when the major eye came to him and said, we have seen his star in the east, where is

220

00:24:20,560 --> 00:24:24,120

this new Messiah?

221

00:24:24,120 --> 00:24:31,120

Such a celestial line-up is of no particular astronomical importance, but it may have been

222

00:24:31,160 --> 00:24:36,840

of great significance to the astrologers who thirst in those days, as unfortunately they

223

00:24:36,840 --> 00:24:39,840

still do.

224

00:24:39,840 --> 00:24:45,040

For a serious astronomical explanation of the star of Bethlehem, well my favorite theory

225

00:24:45,040 --> 00:24:52,040

is that it was a supernova. Occasionally a star may explode with a violence so great

226

00:24:52,880 --> 00:24:59,240

that for a few weeks it outshines all the other stars in the sky. No human eye has seen

227

00:24:59,240 --> 00:25:02,080

such a thing for 350 years.

228

00:25:02,080 --> 00:25:09,080

The next supernova is rather overdue. As its furies fade, a supernova may become a pulsar,

229

00:25:09,640 --> 00:25:15,640

a tiny star emitting immensely powerful radio waves. Now as it happens, quite recently a

230

00:25:15,640 --> 00:25:22,640

pulsar has been located with the rather glamorous name of PSR 1913 plus 16B has been discovered,

231

00:25:25,680 --> 00:25:30,680

which seems to fit the specifications of the star of Bethlehem.

232

00:25:30,680 --> 00:25:37,680

Herod-Lomantic, if even now we can hear the dying voice of the star of Bethlehem.

233

00:25:39,080 --> 00:25:46,080

The star which heralded the Christian era.

234

00:26:09,080 --> 00:26:16,080

Next week the end of our journey through the mysterious world.

