

A quarterly newsletter of unusual reports on various subjects. Published as an exchange with others of a like nature. Comments should be sent to: Gene Duplantier, 17 Shetland Street, TORONTO, Ontario, Canada M2M 1X5

*Sleep paralysis may help explain reports of supernatural events*

## When aliens steal your sleep

BY NICHOLAS D. KRISTOF

**A**bout once a week, Jean-Christophe Terrillon wakes up and senses the presence of a threatening, evil being beside his bed. Terror ripples through him, and he tries to move or call out.

But he is paralyzed, unable to raise an arm or make a sound.

"I feel an intense pressure in my head, as if it's going to explode," said Terrillon, a Canadian physicist doing research in Japan. Sometimes he finds himself transported upward and looking down on his body, or else sent hurtling through a long tunnel. These episodes are terrifying, even for a scientist who does not believe in evil spirits.

The disorder, called sleep paralysis, is the result of a disconnect between brain and body as a person is on the fringe of sleep. A growing number of scholars believe that sleep paralysis may help explain many reports of supernatural events.

"I think it can explain claims of witchcraft and alien abduction," said Kazuhiko Fukuda, a professor of psychology at Fukushima University in Japan and a leading expert on sleep paralysis. Research in Japan has had a headstart because sleep paralysis is well known to most Japanese, who call it *kanashibari*. It is little known and less studied in the West.

"We have a framework for it, but in North America there's no concept for people to understand what has happened to them," Fukuda said. "So if Americans have the experience and if they have heard of alien abductions, then they may think, 'Aha, it's alien abduction!'"

Sleep paralysis was once thought to be very rare. But recent studies in Canada, Japan, China and the United States have suggested that about half of all people have experienced it at least once.

In Newfoundland, the numbers were over 60%. There, as in Japan, people

have a name for the condition. In Newfoundland, it is called "old hag" because it is associated with visions of an old witch sitting on the chest of a paralyzed sleeper, sometimes throttling the sleeper with her hands.

Sleep paralysis seems to have been described since ancient times. What is striking is that although the symptoms of sleep paralysis are generally very similar, the images in the hallucinations and the interpretation of them vary.

Europeans interpreted ancient sleep paralysis as assaults or abductions by witches taking them on forcible rides on broomsticks. Chinese called it *gui ya*, or ghost pressure, and believed that a ghost sat on and assaulted sleepers.

In the West Indies, sleep paralysis was called *kokma* and meant a ghost baby who jumped on the sleeper's chest and attacked the throat. In old Japan, it sometimes seems to have been interpreted as a giant devil whose foot came down on the sleeper's chest.

"People will draw on the most plausible account in their repertoire to explain their experience," said Al Cheyne, an associate professor of psychology at the University of Waterloo. "Trolls or witches no longer constitute plausible interpretations of these hallucinations. The notion of aliens from outer space is more contemporary and somewhat more plausible to the modern mind. So a flight on a broomstick is replaced by a teleportation to a waiting spaceship."

Cheyne said that in a survey of more than 2,000 people who had experienced sleep paralysis, hundreds described experiences similar to alien abduction.

"A sensed presence, vague gibberish spoken in one's ear, shadowy creatures moving about the room, a strange immobility, a crushing pressure and painful sensations in various parts of the body — these are compatible not just with an assault by a primitive demon but also with probing by alien experimenters," Cheyne said.

"And the sensations of floating and flying account for the reports of levitation and transport to alien vessels."

In recent years there has been a huge increase in the number of people who insist they have been kidnapped by alien creatures from outer space, perhaps subjected to medical experiments and then released again. One study found that people who reported being abducted by aliens were no more fantasy prone than the general population and had slightly higher intelligence.

Several scholars have found that people are more likely to report alien abductions when they have been exposed to movies or books about the idea. Simon Sherwood, a researcher on sleep paralysis in England, said that in one case study he gathered, a regular sufferer of sleep paralysis

person is asleep or awake during sleep paralysis.

"In the classic definition, you are awake," said Emmanuel Mignot, director of the Center for Narcolepsy at Stanford University Medical School. "But in practice, there's a gradient between being awake and being in REM sleep." Sleep paralysis lies somewhere on that slope.

During REM sleep — the period when rapid eye movement takes place — the body essentially turns itself off and disconnects from the brain. This is a safety measure, so people do not physically act out their dreams, and it means that people are effectively paralyzed during part of their sleep. Even automatic reflexes, like kicking when the knee is tapped, do not work during REM sleep.

Sleep paralysis seems to occur when the body is in REM sleep while the brain has emerged from sleep and is either awake or semi-awake. Usually after a minute or two the spell is broken and the person is able to move again, as the brain and body re-establish their connection.

Just what is going on in the brain during sleep paralysis is unclear. The person experiencing the paralysis certainly feels completely awake and "sees" the room clearly, but laboratory experiments in Japan show that sometimes people experiencing sleep paralysis do not even open their eyes.

Aside from witchcraft and alien abduction, sleep paralysis is also sometimes mentioned as a possible link to shamanism and to dream interpretation, and even to near-death experiences. But for many sufferers, the growing research in the field is reassuring simply because it demonstrates they are not alone in their terrifying night-time paralysis and hallucinations.

"Sometimes I'm just glad that I didn't live a long time ago," said Terrillon, the Canadian physicist in Japan. "Because maybe people who had this in the olden days were put in madhouses."

### PEOPLE WHO HAD THIS USED TO BE PUT IN MADHOUSES

watched an alien film, then had a hallucination of "little blue aliens" inserting a metal probe into his forehead.

But many scholars are loath to study the connection between reports of alien abduction and sleep paralysis. And those who believe in alien abductions deny that sleep paralysis could be behind it all. John E. Mack, a Harvard University Medical School professor who is the most prominent defender of the possibility of abductions, argues that sleep paralysis simply does not fit the evidence. He notes that at least a few abduction reports come from remote places where people are not exposed to movies or tales of U.F.O.'s, and that many happen in daylight and involve people who seem to have been awake and alert.

So what is sleep paralysis?

Even after many years of study, it remains mysterious. Experts have trouble even saying definitively whether a

# New telescope may hold promise of detecting Earth-like planets

## NASA SPACE CONFERENCE

Scientists believe gas readings in other systems will reveal 'habitable zones'

BY ANDREW QUINN

SAN FRANCISCO • Somewhere, in a star system perhaps not so far away, lies a "pale blue dot" that could be a planet much like Earth. Astronomers, astrobiologists, and chemists plotting the search for that planet met this week at a NASA research centre in California, co-ordinating new research and technologies aimed at scouring the skies for alien worlds that could support life.

"We have now presented to us a technological opportunity which has great potential for telling us a lot about whether we are alone in the universe," said David Des Marais, a biogeochemist at NASA's Ames Research Center in Mountain View, Calif., about 50 kilometres south of San Francisco.

"Recent progress in detection of planets ... fuel expectations that perhaps planetary systems are really quite common in the universe," Des Marais said.

The "Pale Blue Dot" conference, borrowing a term for Earth favoured by the late astronomer Carl Sagan, was part of a broader push by NASA and its newly inaugurated Astrobiology Institute to hunt for extraterrestrial life.

Scientists meeting at Ames Research Center said that search would get a big boost with the planned deployment of a massive new telescope, dubbed the Terrestrial Planet Finder, which could be operating by 2010.

This huge orbiting telescope, which planners say should be able to provide images some 100 times clearer than those from the Hubble Space Telescope, will also provide spectroscopic analysis of distant planetary atmospheres — and offer key signs of potential human-like life.

"Life on Earth is by no means

the only kind of life that can exist," said Nick Woolf, an astronomer from the University of Arizona. "But the device that we are developing is a device that will pick up a particular subset of life. That subset will include those developments which lead to creatures in some way like ourselves."

As the search for these creatures gets underway, scientists are raising their hopes that there may well be a vast number of planets that could support them.

James Kasting, at atmospheric chemist from Penn State University, said the roughly 21 extra-solar planets discovered so far have been "big hot Jupiters" that have been detected relatively easy because of the effect their massive gravity fields have on their stars.

In the most recent discovery, in April, scientists said they had found the first solar system outside our own, with three massive, gas planets orbiting a sun-like star, Upsilon Andromedae.

Kasting said that discovery might represent the norm, with smaller, Earth-like planets in a "habitable zone" closer to their respective suns.

"We think that the other 95% of the systems may be much more like our own," Kasting said.

"[In these cases, we think] the giant planets are farther away and the inner parts of the systems are like our own, with terrestrial planets like Venus or Mars."

To narrow the myriad possibilities, researchers say they will focus on atmospheric readings pulled in by the Terrestrial Planet Finder — looking for signs of oxygen, methane, and ozone that would indicate life has gained a significant foothold.

"What we're looking for, really, are gases," said Robert Chatfield, an atmospheric chemist at Ames. "They are pure and simple and interact with light radiation to give pure, simple fingerprints that we can see from tremendous distances."

Because any visible "pale blue dot" would likely be outshone in the sky by its star, the gas signatures could be one way of sensing Earth-like conditions on a planet, he said.

Reuters

## Big blasts in space could provide clues to mass extinctions

### OBSERVED FOR FIRST TIME

## Hypernovas may be source of gamma ray bursts

A team of astronomers has found the first observational evidence for a new class of staggeringly powerful cosmic explosions — blasts so intense that similar events in our own galaxy's past could help explain the mass extinctions that have dotted the history of life on Earth.

Some theorists also believe such explosions could be the source of intense yet mysterious blasts called gamma ray bursts, most of which occur at too great a distance from Earth to be observed in much detail.

The recent observations were made by astronomers at Northwestern University and the University of Illinois at Champaign-Urbana, using the Hubble Space Telescope and other star-gazing devices. They focused on the remains of two huge explosions in a galaxy called M-101, or the "Pinwheel galaxy," located 25 million light-years from Earth — too remote for these particular blasts to have any effect here. A light-year, the distance light travels in a year, equals about 6 trillion miles.

Scientists believe the blasts were among the most colossal since the creation of the universe in the Big Bang some 15 billion years ago. Although astronomers had postulated such immense explosions, called hypernovas, until now there was no direct evidence such explosions actually occurred.

"This is very important in that it demonstrates there are explosions more powerful than ordi-

nary supernovas," said Bohdan Paczynski, a professor of astrophysics at Princeton University who first coined the term hypernova in 1997.

The hypernovas the researchers observed are about 100 times more powerful than an average supernova, which happens when a massive star collapses on itself and explodes. What causes hypernovas remains a mystery, though astronomers have proposed they happen when a superdense neutron star collides with a black hole, or when a very large, rapidly rotating star collapses.

Each hypernova released a devastating barrage of X-rays, along with a shock wave that maintained abnormally high speeds, up to 100 miles a second. One, called MF83, has emitted a shell about 500 light-years across, larger than any other known remnant from a stellar explosion. Such blasts are thought to occur more rarely in our own galaxy, perhaps once every million years. Life on a planet within striking distance would be in jeopardy.

"You'd be baked — roasted," said You-Hua Chu, an astronomer at the University of Illinois who co-authored the study.

Researchers have estimated that an intense burst within 3,000 light-years of Earth could produce radiation at sea level equal to about 100 times the fatal dose for humans.

Less dramatic events may account for extinctions that happen about once every 100 million years. That's the amount of time it takes for the solar system to migrate between the Milky Way galaxy's spiral arms, where supernovas — and, presumably, hypernovas — are more likely to occur.

Princeton's Paczynski said the findings bring scientists a step closer to understanding the causes of gamma ray bursts, which have been detected at a rate of about one a day since the 1960s. Such bursts release prodigious amounts of energy during the few seconds when they are visible, briefly appearing to outshine the rest of the universe.

Knight Ridder

# Canadian astronaut believes in life on other planets

## Views shared by other scientists

BY MARINA JIMÉNEZ AND LUIZA CHWIAKOWSKA

Julie Payette, the Canadian astronaut who recently returned from her first mission to space aboard the space shuttle Discovery, believes in the existence of intelligent life beyond Earth, but is less certain extraterrestrials have graced our "little planet."

Ms. Payette says based on the law of probabilities and the vast number of planets, stars and other galaxies, it is almost impossible to conclude that humans are the only intelligent life form in the universe.

"The chances that we're alone is almost nil," Ms. Payette, 35, said in an interview yesterday with the *National Post*. "It's actually a prevalent scientific thought that statistically it makes a lot of sense that there is something else out there. We just haven't had any proof yet."

Earlier in the day Ms. Payette, who holds two engineering degrees, told a television audience at RDI, the CBC's French all-news network, that the idea that human life is the only intelligent life form is as presumptuous as the belief 400 years ago that the Earth was at the centre of the universe.

Ms. Payette's views are shared by other scientists and astronauts, many of whom believe in life on other planets, and support the search for extraterrestrials.

Thomas McDonough, an astrophysicist, attributes this to their cosmic perspective and ability to imagine life beyond our solar system.

"Most scientists think it is quite reasonable to imagine there are other life forms in the universe and that some of them might be intelligent," said Mr. McDonough,

of the Planetary Society in Pasadena, Calif., which runs SETI, the Search for Extra-Terrestrial Intelligence. "I think astronauts are much more likely to think about the rest of the universe because they've seen it in a way that normal humans have not."

Among the society's supporters are three former astronauts, including Buzz Aldrin, Ray Bradbury, a science-fiction writer, author Arthur C. Clarke, and actor Paul Newman. Steven Spielberg, the movie producer, has donated \$100,000 to SETI.

Mr. McDonough said that no radio or light signals from other civilizations have been detected, but scientists have found molecules in space that "are the basic ingredients for life."

While scientists such as Ms. Payette are open to the idea of extraterrestrial life, many do not believe there is scientific proof they have visited Earth.

"It is presumptuous to believe that these other forms of life will come visit us, our little planet in a little solar system in a galaxy of average importance in a massive universe that consists of several billion galaxies," she said. "If they do come visit, I can assure you of one thing, we will all know."

Ms. Payette said her journey through space broadened her horizons and changed her perspective. "You do see the beauty and fragility of our planet," she said.

Dr. Roberta Bondar, the first female Canadian astronaut to go into space, also supports the idea of life elsewhere, and said her view was altered by her momentous 1992 visit into the "black void" of space.

"We're part of a tremendous spread of planets. The probability of having life out there is very high," said Dr. Bondar. "Just because we haven't seen and identified it doesn't mean it doesn't exist."

*National Post*

NATIONAL POST, MONDAY, JUNE 21, 1999

**Unknown beast attacks 13** • A mystery animal has attacked 13 people — including five children — in Cairo before escaping back into the desert, police said yesterday. The animal, which has been seen periodically since 1996, is described as being bigger than a dog, with beige fur, fangs, a long muzzle and a tail like a wolf's. Scientists are divided over whether it is a hyena, or a member of the dog family, but ordinary people have named it the *salawa*. In 1996, *salawas* killed at least four people in Cairo and Upper Egypt and injured dozens of others.

# Europe to launch space mission

LONDON • Europe has unveiled its most ambitious space project so far, a one billion euro (\$1.5-billion Cdn) unmanned mission to chase a comet through interplanetary space and put a lander on its icy nucleus.

The European Space Agency yesterday gave details of its Rosetta mission, which it is hoped will provide clues to the origins of life on Earth.

The announcement, made in London, came just two days after NASA, its American counterpart, cancelled a similar though cheaper comet landing mission, the \$240-million (US) Champollion project.

Although Rosetta is scheduled to be launched on an Ariane 5 rocket in 2003, it will not reach its fast-moving target, Comet Wirtanen, until 2011. The spacecraft will take a circuitous 5.3-billion-kilometre route around the solar system, gaining speed through a gravitational "slingshot" effect as it passes various planets.

The huge craft, 32 metres wide will then fly alongside the comet for two years as it approaches the sun, with 12 instruments observing its increasing activity. The agency is providing 700 million euros for the mission with an estimated 300 million euros coming from other research organizations for instruments and equipment.

*Financial Times*

FINANCIAL POST, MONDAY, JUNE 28, 1999

## McUFOS & SCOTTISH SIGHTINGS

Believers and the curious making the trek to Falkirk, Scotland, for a glimpse of an unidentified flying object are being offered an extraterrestrial weekend package from the local Comfort Inn. Since 1992, there have been about 350 recorded UFO sightings in the area located in central Scotland. In nearby Bonnybridge, half the town has claimed to have seen a UFO. One 68-year-old Bonnybridge woman apparently took a 45-minute video recording of a pulsating, half-moon-shaped object in the sky, "that was definitely not an airplane, helicopter or balloon," according to her account. The Sci-Fi weekends are planned for September 24 to 26, and November 19 to 21. Guests will hear lectures by extraterrestrial experts, and personal accounts of sightings. A night visit to Bonnybridge is also planned. The two-night weekend package includes entertainment and food and drink. It costs about \$426 a person. Those wanting to stay Sunday night pay only about \$95, with breakfast and dinner included in the price. Children under the age of five stay free, while kids age five to 14 stay for half price. To book the Sci-Fi weekend, call Choice Hotels' toll-free reservations line, 1-800-4-CHOICE, or call the hotel directly, at 011 44 181 233 2031. *Deborah Stokes, Financial Post*

# Ancient stellar blast would have lit up the night sky

Astronomers have found evidence of a stellar explosion that would have lit up the night sky 700 years ago — yet no mediaeval stargazer recorded it.

Readings from space show that a star 15 times as massive as the sun and just 500 light-years away — right in our neighbourhood, by galactic standards — must have collapsed and exploded in a huge supernova.

Wan Chen and Neil Gehrels of NASA's Goddard Space Flight Center in Greenbelt, Md, said the supernova would have been as bright as the moon in the night sky.

"It's a real mystery," Chen said. "This supernova was very bright. People had to have seen it, but we haven't found any written records yet."

The pair found out about the explosion in an unusual way. Using X-ray scans, they detected both radioactive titanium and aluminum coming from the same source.

Previously, astronomers assumed they could only see one element or the other in the remnant of an explosion.

They named the newly discovered supernova remnant GRO/RX J0852, they reported in the *Astronomical Journal*.

*Reuters*

NATIONAL POST, SATURDAY, APRIL 10, 1999

## Exiled planets might be capable of supporting life

Atmosphere could make up for lack of sun-like star

BY DEBORAH ZABARENKO

Earth-like planets that were ejected from our infant solar system might just be warm and wet enough to support life, scientists reported yesterday.

Even without a sun-like star to heat them up, these exiled interstellar bodies could be wrapped

in dense hydrogen atmospheres that would trap the warmth generated by the planets' natural radioactivity, David Stevenson wrote in the current edition of the journal *Nature*.

"They don't so much warm up as fail to cool down completely," Stevenson said in a telephone interview from the California Institute of Technology in Pasadena.

"They may have started hot by processes of formation of the solar system."

Astronomers have theorized for decades that such exiled bod-

ies could exist in interstellar space as the natural byproduct of the creation of the solar system.

Bodies with about the same mass as Earth's were thought to follow two paths in those early times: either they would slam into a large planet, such as Jupiter, and add to its mass, or come within range of a large planet's gravitational pull and be catapulted out into the void.

Stevenson concentrated on the ones that got flung into space a few million years — an instant in cosmological terms — after the solar system coalesced some 4.5 billion years ago.

Because hydrogen would have been abundant at that stage of solar system development, any ejected planets would have been swathed in hydrogen, presumably allowing them to retain surface temperatures comparable to

Earth, and possibly water oceans. Without sunlight, the radioactivity inside an Earth-like interstellar planet would only raise the temperature to a bit above absolute zero (-204°C). But a thick blanket of hydrogen would prevent much of that internally generated heat from escaping, keeping the exiled planet comfortably cosy, Stevenson said.

Liquid water is seen as a requirement but not a guarantee of Earth-type life. But Stevenson said these bodies may also have volcanoes and lightning, causing temperature variations that might foster life and maintain it. Still, the available energy would be about 5,000 times less than that on Earth, he said, which might mean less development of life and less complexity in any life forms that developed. What might it look like on the

surface of such a planet? "If you happened to be standing near a volcanic eruption, instead of pitch darkness, you would see a landscape lit up with a dull-red glow and the sky would most likely be cloudy, with water, ammonia and methane clouds in layers," he said. "You might not actually see a beautiful starry sky."

In any event, Stevenson acknowledged that interstellar planets are virtually impossible to detect from Earth with current technology, making the theory of their existence very hard to test.

"To be frank, I debated whether to submit this [for publication]," he said. "In the end, I decided that ideas play an important role in science, even when they don't have an immediately testable aspect."

Reuters

## Message to alien life contains errors

Cosmic transmission indicates Earthlings are sloppy

CORBIN ANDREWS

A collection of unlikely news stories

Canadian scientists made an error of astronomical proportions last month when attempting to contact other life forms in the universe.

Astronomers Yvan Dutil and Stéphane Dumas of the Defence Research Establishment Valcartier in Courcellette, Que., sent a cosmic message to alien life forms in the universe, but, much to their embarrassment, it contained two mathematical errors.

The scientists say they knew about the errors before the message was transmitted, but couldn't correct them because of a technical glitch.

The Ukrainian observatory that handled the transmission does not have an Internet connection, so it could not receive the corrections in time.

Mr. Dutil and Mr. Dumas drafted a 23-page document containing facts about the Earth's makeup and inhabitants, using a special coded system of symbols. But they zipped when they should have zagged, said Paul Houx, the Dutch computer programmer who found the errors — two instances where the Canadian astronomers used an incorrect symbol.

Mr. Dutil said he lost a couple of nights' sleep over the slip-up. Mr. Houx is more concerned the mistakes will give extraterrestrials the impression Earthlings are "a sloppy species."

The transmission was the second attempt ever to talk with other life forms in the universe. The

first effort was made in 1974.

Now that we've attempted to contact alien life forms, what are the chances they've already tried to contact us?

Robin Corbet, a National Aeronautics & Space Administration astrophysicist, thinks finding evidence of alien communication is as simple as using common sense.

He says the most obvious place to look for signals from other planets is on the tail of something like a gamma ray burst.

Gamma ray bursts occur when two super-dense stars — known as neutron stars — collide. The enormous explosion that results literally causes a ripple in the universe.

The blasts that are detected daily by scientists on Earth likely take billions of years to reach our galaxy.

But critics, such as Carl Akkerlof, a physicist at the University of Michigan, and Seth Shostak of the Search for Extraterrestrial Life & Intelligence program, point out that to guess how other beings might contact us is to assume we are on an equal intellectual plane with them, something we cannot expect.

Despite competing theories, however, most scientists in the field agree that discovering life on the planets is inevitable.

Robert Shapiro, a New York University chemistry professor, has been extremely vocal in asserting this modern mantra.

The quaint belief that life could only have evolved on our planet, he says, will one day seem as absurd as creationism.

Like most other scientists, Prof. Shapiro suggests, in his new book *Planetary Dreams*, it's only a matter of time before we find evidence of creatures living on other planets.

National Post

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TECHNOLOGY

# Internet on its way to becoming interplanetary

## PLANS TO EXTEND IT TO MARS

### Communication system needed to control devices

BY DAVID WILLIAMS

TOKYO • The World Wide Web may have to change its name to something a little more out of this world, if a NASA project goes according to plan.

The so-called father of the Internet, Vint Cerf, yesterday outlined plans for the Web to spread to Mars within 10 years to support exploration.

"At this stage of the game, the interplanetary Internet design is a part of the NASA Mars mission program," said Cerf, the co-designer of the TCP/IP protocols that gave birth to the Internet (by enabling computers programmed with different languages to communicate).

"We may be able to launch a test mission as early as 2001 to test the interplanetary protocols between the Earth and the moon," he told a Tokyo information technology seminar. And "by 2008, we will have seven satellites in orbit around Mars operating the interplanetary system. So in less than 10 years, we will have a two-planet Internet in operation."

Cerf, senior vice-president of Internet architecture and technology for MCI WorldCom, an international telecommunications firm, said a major problem with past NASA missions was that each had its own communica-

tions system that would not connect with each other.

In discussions with NASA's Jet Propulsion Laboratory researchers, it was agreed to create a standard allowing "each mission to support future missions by creating an interplanetary Internet backbone in space," he said.

The plan was to build an interplanetary "gateway system" under which ordinary Internet services were run on each planet, but a "special interplanetary protocol" would carry traffic from one planet to another.

The new system was required because the distance meant there could be delays of up to 40 minutes one way for a message being sent between Earth and Mars, Cerf said.

"I don't think anyone wants to interact with the World Wide Web with an 80-minute round-trip time," he said, adding that such lags would get even worse further out toward Jupiter, Saturn, and Pluto.

The Internet guru said missions to Mars were expected to depart every 26 months under current

### WE MAY BE ABLE TO LAUNCH A TEST MISSION AS EARLY AS 2001

plans, "so it stands to reason that we need to have a communication system to control the devices that are out there."

Cerf said a manned landing on Mars could be expected as early as 2030. "We believe that we are not too early in working through the design of an interplanetary Internet."

The plan is part of a mission proposal called the Mars Network, according to a spokesperson for the NASA Jet Propulsion Laboratory in Pasadena. The funding for the project has yet to be finalized.

Agence France-Presse

life, a New Zealand member of the group said yesterday. "It has a probable mass range between that of the Earth and that of the planet Neptune. Probably it would be a little bit heavier than the Earth," researcher Ian Bond said. Mr. Bond, an Auckland University fellow, said that the planet was the right distance from the nearest star to sustain life.

NATIONAL POST

TUESDAY, JANUARY 12, 1999

## New planet may sustain life

WELLINGTON • An international team of scientists has discovered an Earth-size planet in the middle of the Milky Way believed to have the potential to support

## NESSIE SEEN ON INTERNET

Nessie, the shy and retiring Loch Ness monster and national mascot of Scotland, has been spotted by a couple watching via the Internet from Galveston, Texas. Nora and Mike Jones said they spied the elusive beast on June 5 on live pictures transmitted via the Web from a fixed camera on the shore of the narrow highland lake. "We saw a head and neck appear in front of the castle and it was travelling fairly fast, with a V-shaped wake behind it. We watched till it swam off screen," Ms. Jones said on the Web site ([www.lochness.scotland.net](http://www.lochness.scotland.net)). Then on June 7, the Joneses saw "a large white hump" that "surfaced like a whale." Scotland Online, which runs the site, said the couple were the first ever to have seen Nessie on the Internet. "Experts on the Nessie phenomena believe that this sighting ties in with past incidents," the page read. "Most previous sightings have occurred during the longer days of June. It is believed Nessie may be disoriented by the later daylight hours and emerge while it is still possible to see her." More than 3,000 people claim to have witnessed something bizarre emerging from the murky depths of the 40-kilometre-long lake. The first sighting is said to have happened in 565 AD, when St. Columba reported a strange beast in the waters. *Reuters, with a file from BBC News Online*

NATIONAL POST, THURSDAY, JUNE 3, 1999

ASTRONOMY

# BAD-BOY STAR STUMPS SCIENTISTS

BY DAN FALK

CHICAGO • Astronomers have a pretty good idea of how stars work. But they admit they're stumped by Eta Carinae, the bad boy of the southern sky — a star that seems to break all the rules. In the past year and a half, the star has doubled in brightness; it's now blazing away more brilliantly than it has in over a century.

"We don't understand it," lamented Kris Davidson of the University of Minnesota in Minneapolis. The recent brightening is "an extraordinary event." Davidson joined a panel of astronomers to discuss the latest observations of this unusual star yesterday at a meeting of the American Astronomical Society in Chicago.

Eta Carinae is located about 7,500 light years from Earth, in the direction of the constellation Carina. It's surrounded by a

dumbbell-shaped nebula or cloud of space dust visible through telescopes.

In the early 1800s, Eta was just a dim, ordinary-looking star. But it quickly acquired a track record of unusual behaviour. It flared up in the mid-1800s; for 20 years it was one of the very brightest stars. Then it began to fade, until by 1900 a telescope was needed to see it. But since about 1950 it's been brightening again — and in the last 18 months the change became even more dramatic. The star is once again visible to the naked eye for Southern Hemisphere observers.

New data from the Hubble Space Telescope, which looked at the spectrum of Eta's light, has only compounded the mystery. The spectrum shows the breakdown of the star's light into its component colours. Changes in Eta's spectrum have been unlike that of any known star, indicating unusual changes in Eta's temperature.

"There is no theoretical explanation for this," said Davidson. "This star is one in a billion."

Eta Carinae is one of the most luminous stars in the galaxy, with a mass about a hundred times that of our sun. The astronomers speculated that it could eventually explode in a "hypernova," an explosion even more powerful than a supernova. But that may not happen for several thousand years.

National Post